

**SPECIFICATIONS FOR**

**TRUCKEE TAHOE AIRPORT DISTRICT**  
**TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**MARCH 2025**



**PREPARED BY:**

**BRANDLEY ENGINEERING, INC.**  
**LOOMIS, CALIFORNIA**

**SPECIFICATIONS FOR  
TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**TABLE OF CONTENTS**

| <b><u>SECTION NAME</u></b>   | <b><u>PAGE/SECTION</u></b> |
|--|----------------------------|
| <b>ORGANIZATION OF SPECIFICATIONS</b>  |                            |
| <b><u>PART A – BID AND CONTRACT DOCUMENTS</u></b>  |                            |
| <b><u>Division I – Advertisement and Information for Bids</u></b>  |                            |
| Advertisement for Bids .....   | AI-1                       |
| Instructions to Bidders .....  | AI-5                       |
| <b><u>Division II – Bid Proposal</u></b>   |                            |
| Proposal Form .....  | AII-1                      |
| Bid Schedule – Schedule A .....  | AII-3                      |
| Bid Schedule – Schedule B .....  | AII-9                      |
| Bidder’s List Collection Form .....  | AII-17                     |
| Fostering Small Business Participation – Schedule A .....  | AII-19                     |
| Fostering Small Business Participation – Schedule B .....  | AII-20                     |
| Non-Certified Small Business Identification Form .....   | AII-21                     |
| Designation of Subcontractors – Schedule A .....   | AII-22                     |
| Designation of Subcontractors – Schedule B .....   | AII-23                     |
| Certification of Bidder’s Experience and Qualifications .....  | AII-24                     |
| Bidder's Statement on Previous Contracts   |                            |
| Subject to EEO Clause .....  | AII-27                     |
| Prohibition of Segregated Facilities .....   | AII-28                     |
| Certificates Regarding Debarment .....   | AII-29                     |
| Trade Restriction Certification .....  | AII-30                     |
| Certification of Compliance with FAA Buy American Preference .....   | AII-32                     |
| Certification Regarding Domestic Preferences for Procurements .....  | AII-35                     |
| Certification Regarding Lobbying .....   | AII-36                     |
| Certification of Offeror/Bidder Regarding Tax Delinquency and<br>Felony Convictions .....                        | AII-37                     |
| Certification of Prohibition of Certain Telecommunications and Video<br>Surveillance Services or Equipment ..... | AII-38                     |
| Non-Collusion Affidavit .....  | AII-39                     |
| Iran Contracting Act Certification (Public Contract Code § 2204) .....   | AII-40                     |
| Fleet Compliance Certification .....   | AII-41                     |
| Bidder's Bond .....  | AII-42                     |

## TABLE OF CONTENTS (Continued)

| <u>SECTION NAME</u>   | <u>PAGE/SECTION</u> |
|---|---------------------|
| <u>Division III – Contract Documents</u>  |                     |
| Notice of Award .....   | AIII-1              |
| Contract Agreement.....   | AIII-3              |
| Performance Bond .....  | AIII-8              |
| Labor and Materials Bond .....  | AIII-10             |
| Notice to Proceed .....   | AIII-12             |
| Federal Wage Rates and State Wage Rates.....  | AIII-14             |
| <br><b><u>PART B – CONTRACT PROVISIONS</u></b>  |                     |
| <br><i><u>Division I – Federal Provisions</u></i>   |                     |
| <br><u>Section 1 - FAA General Contract Provisions – Advisory Circular 150/5370-10H</u>                             |                     |
| 10 Definition of Terms.....   | BI-1                |
| 20 Proposal Requirements and Conditions.....  | BI-9                |
| 30 Award and Execution of Contract .....  | BI-13               |
| 40 Scope of Work .....  | BI-15               |
| 50 Control of Work.....   | BI-19               |
| 60 Control of Materials.....  | BI-25               |
| 70 Legal Relations and Responsibility to Public .....   | BI-29               |
| 80 Execution and Progress.....  | BI-39               |
| 90 Measurement and Payment.....   | BI-45               |
| <br><u>Section 2 – FAA General Construction Items – Advisory Circular 150/5370-10H</u>                              |                     |
| C-100 Contractor Quality Control Program (CQCP).....  | BII-1               |
| C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control.....                                   | BII-9               |
| C-103 Storm Water Pollution Prevention Plan (SWPPP) .....   | BII-13              |
| C-105 Mobilization.....   | BII-15              |
| C-106 Marking and Lighting of Closed Airport Facilities.....  | BII-17              |
| C-110 Method of Estimating Percentage of Material Within Specification<br>Limits (PWL).....                         | BII-19              |
| <br><u>Section 3 - Contract Provisions for Obligated Sponsors and Airport<br/>Improvement Program Projects.....</u> |                     |
|   | BIII-1 thru BIII-20 |
| <br><i><u>Division II – Special Provisions</u></i> .....SC-1 thru SC-28   |                     |
| <br><b><u>PART C – TECHNICAL PROVISIONS</u></b>   |                     |

## **APPENDICES**

Appendix A      Construction Safety and Phasing Plan (CSPP)

Appendix B      Construction Management Plan

## **ORGANIZATION OF SPECIFICATIONS**

These specifications include the required F.A.A. General Provisions in Section 1 of Division I of Part B, which are taken from Advisory Circular 150/5370-10H, "Standards for Specifying Construction of Airports." Also included in Division I of Part B are Section 2, FAA General Construction Items, and Section 3, Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects. The Special Provisions are included in Division II of Part B. The Bid and Contract Documents are included in Part A of these specifications.

The Technical Provisions of this specification are included in Part C of these specifications and are based on Advisory Circular 150/5370-10H, "Standards for Specifying Construction of Airports." Those sections of these standard specifications applicable to the project have been included.

An Airport Construction Safety and Phasing Plan (CSPP) has been prepared to outline all safety issues related to the proposed construction. This CSPP is included in these specifications as Appendix A. The Contractor will be required to submit all reports designated in the CSPP and implement all safety measures set forth in this plan.

The Contractor is responsible for all Quality Control (QC) during the construction of this project, including testing and inspection. A Construction Management Plan has been prepared and is included in Appendix B of these specifications. This plan outlines how this project will be managed during construction and includes construction management personnel and resumes, inspection procedures and frequencies, submittal process, quality control testing, quality assurance testing, and test result documentation.

*PART A*

*BID AND CONTRACT DOCUMENTS*

**PART A**

**DIVISION I**

**ADVERTISEMENT AND INSTRUCTIONS TO BIDDERS**

## **ADVERTISEMENT FOR BIDS**

NOTICE IS HEREBY GIVEN that sealed bids for **RECONSTRUCT APRON A2**, will be received by the **Truckee Tahoe Airport District Administration Building** at **10356 Truckee Airport Road, Truckee, California 96161** until **1:00 p.m., local time, Thursday, April 16, 2025**, and then said bids will be publicly opened and read aloud.

The proposed work includes the following:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

**Obtaining Contract Documents:** Bid documents (plans/specifications) may be obtained beginning, Wednesday, March 12, 2025, online at <https://truckeetahoeairport.com/administration/doing-business>. The bid shall be in accordance with the CONTRACT DOCUMENTS.

All addenda will be posted through <https://truckeetahoeairport.com/administration/doing-business>.

After the award of bid, if a bid is awarded, bid results may be obtained from the Truckee Tahoe Airport District.

Any questions regarding the materials contained in the Contract Documents should be directed to the Design Engineer, Damon Brandley, Brandley Engineering, [Damon@BrandleyEng.com](mailto:Damon@BrandleyEng.com), Telephone (916) 652-4725.

**Submitting Bids:** Bids submitted by the date and time indicated above and made upon the forms provided with these documents. Each bidder must supply all the information required by the Bid Documents and Specifications. Each bid must be submitted in a sealed envelope and the envelope should bear on the outside the bidder's name, address, and license number, if applicable. All bids sent by mail must be posted so as to be in the hands of the Truckee Tahoe Airport District by the date and hour set forth above for the bid opening. Mailed sealed bids must be enclosed in another envelope. All bids shall be addressed to:

Truckee Tahoe Airport District  
10356 Truckee Airport Road  
Truckee, CA 96161

And marked:

### **TRUCKEE TAHOE AIRPORT DISTRICT RECONSTRUCT APRON A2**

Bidders are solely responsible for ensuring that bids are received by the date and time indicated herein. The Truckee Tahoe Airport District will not be responsible for late submittal of bids.

**Federal Provisions.** The work to be done is being financed in whole or in part by means of a grant made by the United States acting through the Federal Aviation Administration of the Department



of Transportation. This project is subject to the Federal provisions, statutes and regulations as set forth in the project specifications.

This project is under and subject to the Equal Opportunity Clause, the Federal Fair Labor Standards Act, and Wage Rate Decision contained in the contract documents.

The requirements of 49 CFR Part 26 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. The Sponsor encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

**Small Business Participation:** The Sponsor has established a Small Business Element in accordance with 49 CFR Part 26 to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation and to create a level playing field on which small businesses can compete fairly. While there is no specific numerical goal assigned to small business participation the prime contractor should make every effort to solicit small business concerns (as defined in 13 CFR Part 121) to participate as subcontractors, service providers, suppliers, etc.

The Bidder must submit the Small Business Participation information with its proposal on the forms provided herein (Fostering Small Business Participation & Non-Certified Small Business Verification Form).

**Socially/Economically Disadvantaged Financial Institutions:** The Sponsor encourages Contractors and Subcontractors to utilize the services of financial institutions owned and controlled by socially and economically disadvantaged individuals in the community. You can find a link to Minority-Owned Financial Institutions and their branches on the FDIC website: <https://www.fdic.gov/regulations/resources/minority/mdi.html> or the U. S. Department of Treasury – Bureau of the Fiscal Service <https://fiscal.treasury.gov/mbdp/>.

**Title IV – Civil Rights Act** – The Truckee Tahoe Airport, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that for 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 no businesses will be discriminated against on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in consideration for an award.

**CARB Contracting Requirements.** The California Air Resources Board (“CARB”) implemented amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulations (“Regulation”) which are effective on January 1, 2024 and apply broadly to all self-propelled off road diesel vehicles 25 horsepower or greater and other forms of equipment used in California. A copy of the Regulation is available at <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/off-roaddiesel/appa-1.pdf>. Bidders are required to comply with all CARB and Regulation requirements, including, without limitation, all applicable sections of the Regulation, as codified in Title 13 of the California Code of Regulations section 2449 *et seq.* throughout the duration of the Project. Bidders must provide, with their Bid, copies of Bidder’s and all listed subcontractors’ most recent, valid Certificate of

Reported Compliance (“CRC”) issued by CARB. Failure to provide valid CRCs as required herein may render the Bid non-responsive.

**Bonding Requirements.** The successful bidder shall file with the Truckee Tahoe Airport District, at the time of execution of the Contract, a Performance Bond in an amount of not less than 100 percent of the contract price and a Labor and Material Bond in an amount of not less than 100 percent of the contract price with a surety or sureties company(s) authorized and licensed to do business in the State of California in accordance with the laws and statutes of the State of California providing for bonds for public works.

**Bidder’s Bond:** Each Bid must be accompanied by a certified check, cashier’s check, or bid bond payable to Truckee Tahoe Airport District in an amount not less than ten percent (10%) of the highest bid for either Schedule A or Schedule B

The above mentioned cash, check or bond shall be given as a guarantee that the bidder will enter into the Contract if awarded to him, and will be declared forfeited if the successful bidder refuses to enter into said contract after being notified to do so by the Truckee Tahoe Airport District.

**Award of Contract:** The contract will be awarded on the basis of adding the unit bid prices with the lump sum bid prices and will provide for progressive payments and liquidated damages as fixed in the specifications. All bids must be made on the forms as contained in the specifications for the previously described project and shall in all respects comply with the Information to Bidders and Contract Documents. Bids must be in writing and signed by or on behalf of the bidder.

This project is being bid with two separate Bid Schedules. Contractors may submit bids for only Schedule A, only Schedule B, or both Schedules A and B.

The Owner reserves the right to award the contract for Schedule A or for Schedule B as set forth in the Bid Form.

Schedule A provides for construction of the total project in two phases within 60 working days. Schedule B provides for construction of the total project in one phase within 45 working days. The lowest responsible bidder will be determined based on the lowest total bid for Schedule A or the lowest total bid for Schedule B as follows:

1. If the lowest total bid for Schedule B is a minimum of 5% less than the lowest total bid for Schedule A, the low bidder will be based on Schedule B.
2. Otherwise, the low bidder will be based on Schedule A.

**Contractor’s License Classification:** The contractor must at the time of the award of the contract have a valid California Contractor’s License of the classification required for work proposed under this contract by the California Contractor State License Board, and the value of the Contract may not exceed the limit on the license.

**DIR Registration:** In accordance with Senate Bill 854 (SB 854), all contractors submitting a bid for this project must be registered with the Department of Industrial Relations (DIR). All contractors and subcontractors who bid and work on any District-awarded public works project must be registered.

**Bid Acceptance:** After the bids have been opened and declared, no bid shall be withdrawn except with the approval of the Truckee Tahoe Airport District, and each shall remain open and be subject to acceptance by the Truckee Tahoe Airport District for a period of ninety (90) calendar days after the date bids are opened. The District anticipates award of the contract after the April 23, 2025, Board meeting and is targeting a mid-May construction start, weather permitting.

Truckee Tahoe Airport District reserves the right to reject any or all bids and to waive any informality in such bids.

**Working Days and Liquidated Damages:** The total project shall be completed within sixty (60) working days if Schedule A is accepted. The total project shall be completed within forty five (45) working days if Schedule B is accepted. Liquidated damages of \$5,000 per calendar day will be charged should the Contractor fail to complete the work within the time allowed.

**Wage Rates:** All labor on the project shall be paid no less than the minimum wage rates as established by the U.S. Secretary of Labor. Further, pursuant to California Labor Code Section §1773, the California Director of Industrial Relations has specified the general prevailing wage rates for all public projects in California. The wages to be paid to all workers on such projects shall not be less than those specified in such wage rate determination. The higher of the two rates shall be paid.

**Pre-bid Conference:** A pre-bid conference will be held on Thursday, March 27, 2025 at 10:00 a.m. at the following location: Truckee Tahoe Airport – Downstairs Board Conference Room.

## **INSTRUCTIONS TO BIDDERS**

Notice is hereby given that sealed bids will be received by the Truckee Tahoe Airport District (“District” or “Owner”), 10356 Truckee Airport Road, Truckee, California 96161, at the time set forth in the Invitation for Bids for the furnishing of all required tax, labor, material, transportation, and equipment necessary for the construction of all work covered by

### **TRUCKEE TAHOE AIRPORT DISTRICT RECONSTRUCT APRON A2**

all in accordance with the Contract Documents (including plans and specifications), which are available to bidders and to which bidders are particularly referred.

Bids must be submitted to 10356 Truckee Airport Road, Truckee, California 96161 no later than 1:00 PM on Thursday, April 16, 2025.

#### **1. SCOPE OF PROJECT / COMPLETE BIDS**

The work to be done under this contract consists of furnishing all materials, plant and equipment, and performing all necessary labor in accordance with the Contract Documents as directed by the District or its authorized representative, as follows:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75’ x 60’)

All bids must complete utilizing the forms provided by the District in the Contract Documents, including, without limitation, completing all certifications on the forms provided in the Bid Form.

#### **2. INTERPRETATION OF DRAWINGS AND DOCUMENTS**

If any person contemplating submitting a Bid for the proposed Contract is in doubt as to the true meaning of any part of the Contract Documents, or finds discrepancies in, or omissions from, the drawings or specifications, he/she may submit his/her questions or request for clarification to the Design Engineer (Damon Brandley, Brandley Engineering) such that the Design Engineer receives said submittal not later than 5:00 PM Friday, April 11, 2025. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction will be made only by Addendum and shall be mailed or delivered to each person receiving a set of such documents. The District will not be responsible for any other explanation or interpretation of the Contract Documents prior to the submittal of bids.

#### **3. PRE-BID CONFERENCE**

A pre-bid conference will be held on Thursday, March 27, 2025 at 10:00 a.m. at the following location: Truckee Tahoe Airport – Downstairs Board Conference Room.

#### **4. REQUIREMENTS FOR BIDS FOR AIP CONTRACTS**

The work done under this contract is being financed in part by a grant from the U.S. Government under the Airport Improvement Program. The Federal Requirements included in Part B, Division I, Section 3, Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects, must be adhered to by the Contractor.

#### **5. INSURANCE**

Bidder's attention is called to Article 70-21, Insurance Requirements, of Part B, Division I, Section 1 of these specifications, for insurance requirements.

The Contractor shall provide worker's compensation insurance, as required under the laws of the State of California, protecting the employees on the work, and shall pay all premiums due thereunder.

#### **6. FAILURE TO COMPLETE ON TIME**

Time is of the essence hereof. The Contractor shall begin work within ten (10) calendar days after the date set in the written Notice to Proceed by the Owner and shall diligently prosecute same to completion for all the proposed construction.

There are 60 working days allowed for completion of this project in two phases if Schedule A is accepted. There are 45 working days allowed for the completion of the project in a single phase if Schedule B is accepted.

For each working day that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in Section 80-7 DETERMINATION AND EXTENSION OF CONTRACT TIME of Division I, Federal General Provisions of the Specifications) it is understood that Owner will suffer damage; and it being impracticable and infeasible to determine the amount of actual damage, it is agreed that Contractor shall pay the Owner as fixed and liquidated damages, and not as penalty, the sum of Five Thousand Dollars (\$5,000) for each calendar day of delay until the Work is completed and accepted, and Contractor and his/her surety shall be liable for the amount thereof; and the Owner may deduct said sums from any money due or to become due the Contractor; provided, however, that Contractor shall not be charged liquidated damages because of any delays in the completion of Work due to unforeseeable causes beyond the control and without the fault or negligence of Contractor (including, but not restricted to, Acts of God or of the public enemy, acts of the Government, acts of Owner, fires, floods, epidemics, quarantine restrictions, strikes, and freight embargoes).

Contractor shall, within ten (10) days from the beginning of any such delay, notify Owner in writing of the cause of the delay; whereupon Owner shall ascertain the facts and the extent of the delay and extend the time for completing the Work when in their judgment the findings of fact justify such an extension. Owner's findings of fact thereon shall be final and conclusive on the parties hereto.

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 waiver on the part of the Owner of any of its rights under the contract.

See Part B, Division II, Special Provisions, Article 8, LIQUIDATED DAMAGES, for Liquidated Damages related to contract completion.

## **7. CALIFORNIA CONTRACTORS LICENSE**

It is not required that bidders hold a valid contractor's license at the time of bidding. It is, however, required that prior to award of a contract a Contractor hold a valid contractor's license of a class corresponding with the work to be done in accordance with the State Contractor's License Law (Chapter 791, Business & Professions Code, 1929, as amended).

The validity of the license of the three apparent low bidders will be checked before the Notice of Award is issued. The prime Contractor for this project shall have the license classification required for the work proposed on this contract by the Contractors State License Board, which shall be maintained in force during the work.

All subcontractors or lower-tier contractors will be required to have a valid California Contractor's License before they may do any work on the project, which shall be maintained in force during the work. Material suppliers are not required to have a contractor's license.

## **8. CALIFORNIA AIR RESOURCES BOARD ("CARB") REGULATIONS**

The District is a Public Works Awarding Body, as defined under Title 13 California Code of Regulations section 2449(c)(46). Accordingly, Bidders must submit, with their Bids, valid Certificates of Reported Compliance ("CRC") for the Bidder's fleet and for the fleet(s) of its listed subcontractors (including any applicable leased equipment or vehicles). Bidder must additionally complete and submit the Fleet Compliance Certification, included in the Bid Documents. Failure to provide a CRC for the Bidder, and for all listed subcontractors, or failure to complete the Fleet Compliance Certification, may render the Bid non-responsive.

## **9. SITE INVESTIGATION**

Each bidder should inspect the site before submitting his/her bid. No allowance will be made for unusual surface or subsurface conditions in the Specifications and the Contractor shall not make any claims for unusual surface or subsurface conditions discovered during construction. They must also examine and judge for themselves as to the location and character of the proposed work, the amounts and quality of the materials to be required, the work to be done, the probable soil classification, and other features to be encountered. No allowance will be made to any bidder because of lack of such examination or knowledge.

Test borings and test pits have been excavated throughout the site and the results of these tests are available for inspection at the Airport or the office of Brandley Engineering. These borings show the conditions prior to the start of any construction on the Airport property.

The soil boring data presented accurately show the soil classification at explored depth at the location of the boring. The Owner assumes no responsibility for uniformity of soil conditions between borings. The Contractor shall be responsible for obtaining and verifying any and all soils and subsoil data required to prepare his/her bid.

The Contractor shall be fully responsible for handling any water or water-related problems that may arise during the construction of this project without additional compensation over and above that provided for in the contract prices bid.

## **10. METHOD OF AWARD**

The Owner will award the Contract to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The Owner reserves the right to reject any or all bids, to waive irregularities.

This project is being bid with two separate Bid Schedules. Contractors may submit bids for only Schedule A, only Schedule B, or both Schedules A and B.

The Owner reserves the right to award the contract for Schedule A or for Schedule B as set forth in the Bid Form.

Schedule A provides for construction of the total project in two phases within 60 working days. Schedule B provides for construction of the total project in one phase within 45 working days. The lowest responsible bidder will be determined based on the lowest total bid for Schedule A or the lowest total bid for Schedule B as follows:

1. If the lowest total bid for Schedule B is a minimum of 5% less than the lowest total bid for Schedule A, the low bidder will be based on Schedule B.
2. Otherwise, the low bidder will be based on Schedule A.

In case of conflict in the bid between unit price bid and the extended total, the unit price bid shall govern. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The basis of the award is subject to all conditions as contained in the Contract Documents. It is understood and agreed that all equipment and material items shall be in stockpile under immediate control of the Contractor prior to the time they will be needed to complete the work at the Airport.

The contract award will be made within ninety (90) calendar days after the date set for the opening of the bids and bids shall remain open for that time. The Contractor shall commence work within ten (10) calendar days after the date set by the District in the written Notice to Proceed to the Contractor. The date established as the start date in the Notice to Proceed will be based on when the Award is completed. The District anticipates award of the contract after the April 23, 2025, Board meeting and is targeting a mid-May construction start, weather permitting.

## **11. WAGE RATES**

All labor on the project shall be paid no less than the minimum wage rates as established by the U.S. Secretary of Labor. Further, pursuant to California Labor Code Section §1773, the California Director of Industrial Relations has specified the general prevailing wage rates for all public projects in California. The wages to be paid to all workers on such projects shall not be less than those specified in such wage rate determination. The higher of the two rates shall be paid.

A copy of the California Labor Code prevailing rate of per diem wages is on file in the principal office of the Owner, to which reference is hereby made for further particulars. Said prevailing rate of per diem wages will be made available to any interested party upon request, and a copy thereof shall be posted at each job site. A copy of the U.S. Secretary of Labor prevailing rate of per diem wages and of the general prevailing wage rates of the California Director of Industrial Relations is included in these specifications.

## **12. STATUTORY PENALTY FOR FAILURE TO PAY MINIMUM WAGES**

In accordance with §1775 of the California Labor Code, the Contractor shall as a penalty to the State or political subdivision on whose behalf a Contract is made or awarded, forfeit twenty-five dollars (\$25.00) for each calendar day or portion thereof, for each worker paid less than the stipulated prevailing rate for any public work done under the Contract by the Contractor or by any Subcontractor under the Contractor.

## **13. STATUTORY PENALTY FOR UNAUTHORIZED OVERTIME WORK**

In accordance with §1813 of the California Labor Code, the Contractor shall as a penalty to the State or political subdivision on whose behalf the Contract is made or awarded, forfeit twenty-five dollars (\$25.00) for each worker employed in the execution of the Contract by the Contractor or by any Subcontractor for each calendar day during which said worker is required or permitted to work more than eight hours in any one calendar day and forty hours in any one calendar week in violation of §1810-§1815 of the California Labor Code.

## **14. APPRENTICESHIP REQUIREMENTS**

Contractor agrees to comply with §1777.5, §1777.6, and §1777.7 of the California Labor Code relating to the employment of apprentices. The responsibility for compliance with these provisions is fixed with the prime Contractor for all apprenticeship occupations. Under these sections of the law, Contractors and Subcontractors must employ apprentices in apprenticeship occupations, where journeymen in the craft are employed on the public work, in a ratio of not less than one apprentice for each five journeymen (unless an exemption is granted in accordance with §1777.5) and Contractors and Subcontractors shall not discriminate among otherwise qualified employees as indentured apprentices on any public work solely on the ground of race, religious creed, color, national origin, ancestry, sex, or age, except as provided in §3077 of the Labor Code. Only apprentices, as defined in §3077, who are in training under apprenticeship standards and who have



signed written apprentice agreements will be employed on public works in apprenticeship occupations.

## **15. NONDISCRIMINATION**

The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Owner 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 contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. 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 District deems appropriate.

## **16. IDENTIFICATION OF SUBCONTRACTORS**

In accordance with Section 4104 of the California Public Contract Code, each Bidder in his/her Bid shall set forth: 1) the name, location of the place of business, and California contractor's license number of each Subcontractor who will perform work or labor, or render services to the Contractor in or about the construction of the work, or improvement, in an amount in excess of one-half of 1 percent of the Contractor's total Bid; and 2) the portion of the work which will be done by each such contractor. In accordance with Section 4107 of the California Public Contract Code, no Contractor whose bid is accepted shall without consent of the Owner either: 1) substitute any person as a Subcontractor in place of the Subcontractor designated in the original Bid; or 2) permit any such subcontract to be assigned or transferred, or allow it to be performed by anyone other than the original Subcontractor listed in the Bid; or 3) sublet or subcontract any portion of the work in excess of one-half of 1 percent of the Contractor's total bid as to which his/her original bid did not designate a Subcontractor. Penalties for failure to comply with the foregoing sections of the California Public Contract Code are set forth in Section 4106, 4110, and 4111 of the Public Contract Code.

## **17. BIDDER'S RESPONSIBILITY**

Bidders are notified that they must carefully examine the Plans and Specifications, annexed forms Bid Form, General Conditions, and Contract and thoroughly familiarize themselves with all State and other laws pertaining to this improvement.

Any addenda issued before the time in which to submit bids expires shall form a part of the Contract Documents and shall be covered in the bid. Each bidder shall confirm receipt of any and all addenda in the space provided at the bottom of Page AII-11 of the Bid Form.

No person, firm, or corporation shall be allowed to make or file or be interested in more than one bid for the same work, unless alternate bids are called for.

## **18. PREPARATION OF BID**

All bids must be submitted on the form furnished herewith and bound herein, and in addition to the necessary unit price items to make a complete bid, all blanks giving general information must be filled in and the bid signed by the Contractor or his/her duly authorized agent.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his/her address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

Each bid must be accompanied by cash, a certified check or cashier's check upon a bank in good standing, payable to Truckee Tahoe Airport District, or an acceptable Bid Bond to Truckee Tahoe Airport District, in the amount of at least ten percent (10%) of the total amount of the highest bid for either Schedule A or Schedule B construction cost. Such check or bond shall be forfeited and become the property of the District if the bidder fails or refuses to enter into a contract and furnish satisfactory bonds within fifteen (15) calendar days after due notification that his/her bid has been accepted. The check or bond accompanying the accepted bid will be retained until the contract documents have been signed by the successful bidder and approved by the District and the Federal Aviation Administration.

The bids may be rejected if they show any alteration of forms, additions not called for, conditional or alternative bids, incomplete bids, erasures or irregularities of any kind.

The District reserves the right to retain the checks or bonds of the three lowest bidders until an approved contract has been signed. All other bidders' bonds or checks will be returned by Truckee Tahoe Airport District.

## **19. EXISTING FACILITIES**

The Contractor's attention is directed to the fact that the existing airport facilities must be kept in operation with an absolute minimum of interference, except as specified in the Special Provisions section of these specifications, in order that no delays or hazards affect the using of this airport facility. The Contractor shall be required to plan and coordinate his/her work with the Engineer in such a manner as to ensure safety and a minimum of hindrance to the public using the facilities. All construction and access to the construction must be confined to the limits designated by the Engineer.

There are utilities on the site of the project. Some utilities will be abandoned, some will be left in place, some will be concrete capped, and some will be replaced with new.

## **20. SUBLETTING OF CONTRACT**

The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of the contract or contracts or any portion thereof, or of his/her right, title, or interest therein, without written consent of the Owner. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his/her own organization not less than 30 percent of the total contract

cost, except that any items designated by the Contractor and approved by the Owner as "specialty items" may be performed by subcontract and the cost of any such specialty items so performed by subcontract may be deducted from the total cost before computing the amount of work to be performed by the Contractor with his/her own organization. No subcontracts or transfer of contract shall release the Contractor of his/her liability under contracts and bonds.

## **21. APPLICABLE FEDERAL PROVISIONS**

### **Federal Labor Standards Act (Federal Minimum Wage)**

All contracts and subcontracts that result from this bid incorporate by reference the provisions of 29 CFR part 201, et seq, 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.

### **Occupational Safety & Health Act of 1970**

All contracts and subcontracts that result from this bid incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer 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 (29 CFR Part 1910). The employer 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.

### **Notice of Requirements for Affirmative Action to Ensure Equal Opportunity**

1. The bidders attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth in the Contract Documents.

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**

Goals for minority participation for each trade: 24.6%

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 nonfederally 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 Truckee Tahoe Airport District, Nevada County, California.

### **Department of Labor Posters**

U.S. Department of Labor Posters, Form SOL-155 (10-54), together with the applicable minimum wage rates, as determined by the Secretary of Labor for this project, shall be posted in a prominent place at the site of the work. The name of the FAA District Airport Engineer whom workers may contact in the event they have reason for complaint shall be placed in the box in the middle of the poster. Copies of this poster can be obtained from local Labor Department offices.

## **22. PAYMENTS**

Progress payments shall be made at least once each month as the work progresses. These progress payments shall be based on work accomplished during the previous working month, based on the various contract bid items and the unit bid prices included in the Bid Schedule submitted by the Contractor with his/her bid. In applying for payments, the Contractor shall submit a statement based on this schedule. Payment will be made only for material and work actually incorporated in the work, except as allowed in Article 90-07, Payment for Materials on Hand, of the Federal General Provisions.

## **23. INVOICING AND PAYMENT MONITORING**

Progress payments are made in accordance with Section 22 of this document and are proactively monitored to ensure compliance with local, state, and federal Prompt Payment requirements. Each payment application will include a list of all subcontractors and the amount to be paid to the subcontractors from the pay application. With the exception of the initial payment application each subsequent payment application must be submitted with prime contractor prompt payment certification to be deemed complete, accurate, and acceptable. A suggested form for the Payment Application and Prime Contractor Prompt Payment Certification follows

[illegible]

**PRIME CONTRACTOR PROMPT PAYMENT CERTIFICATION**

In accordance with 49 CFR §26.29(a), the Sponsor requires prime contractors to pay subcontractors for satisfactory performance of their contracts no later than 10 days from the prime contractor's receipt of each payment from the Sponsor. Any delay or postponement of payment among the parties may take place only for good cause with the Sponsor's prior written approval. This requirement applies to both DBE and non-DBE subcontractors. List all subcontractors/subconsultants. If the actual DBE utilization was different than that approved at the time of award, provide comments.

| Prime Contractor/Consultant | Project Number | Total Contract Amount (\$) | Total DBE Commitment Amount (\$) | DBE Commitment (%) | DBE Accomplishment % | Billing Period (MM/DD/YYYY - MM/DD/YYYY) |
|-----------------------------|----------------|----------------------------|----------------------------------|--------------------|----------------------|--|
|                             |                | \$ -                       | \$ -                             | 0%                 | 0%                   |  |

| DBE Subcontractor/Subconsultant Information |                                |                              |                   |                            |                                       |                      |  |   |                                |  |
|---|--------------------------------|------------------------------|-------------------|----------------------------|---------------------------------------|----------------------|--|---|--------------------------------|--|
| DBE Subcontractor/Subconsultant Name        | Date Payment Received by Prime | Date of Prime Payment to Sub | Amount of Payment | Amount Paid to Sub to Date | Total Committed to this Subcontractor | Promptly Paid? (Y/N) | Incremental Retainage Paid? (Y/N or N/A) | % Applicable to DBE Goal (100%, 60%, 40%) | Dollars Applicable to DBE Goal | Comments or Reason for Non-Prompt Payment including Payment of Incremental Retainage |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |
| Totals                                      |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |   | \$ -                           |  |

| Non-DBE Subcontractor/Subconsultant Information |                                |                              |                   |                            |                                       |                      |  |  |  |
|---|--------------------------------|------------------------------|-------------------|----------------------------|---------------------------------------|----------------------|--|--|--|
| Subcontractor/Subconsultant Name                | Date Payment Received by Prime | Date of Prime Payment to Sub | Amount of Payment | Amount Paid to Sub to Date | Total Committed to this Subcontractor | Promptly Paid? (Y/N) | Incremental Retainage Paid? (Y/N or N/A) | Comments or Reason for Non-Prompt Payment including Payment of Incremental Retainage |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
|   |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |
| Totals  |                                |                              | \$ -              | \$ -                       | \$ -                                  |                      |  |  |  |

| Certification   |   |
|---|---|
| <p>The prime contractor or consultant hereby certifies that the foregoing Prompt Payment Certification is true and correct. Documents of these payments are available for inspection upon request.</p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Title: _____</p> <p>Company Name: _____</p> <p>Date: _____</p> | <p>The Sponsor certifies that all information in this form is complete and verified.</p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Title: _____</p> <p>Company Name: _____</p> <p>Date: _____</p> |

## **24. WITHHOLDING**

Owner shall withhold from each payment due the Contractor five percent (5%) of the amount claimed. This 5% of the payment shall be withheld until final acceptance of the total project is given by the Owner, by the Engineer, and by the FAA. After final acceptance of the project is given and the Contractor has submitted acceptable release of all liens and furnished the Engineer acceptable red-lined drawings showing the "as-built" condition of the completed project, then the Owner shall release for payment the 5% retention. Owner will make such final payment of retention within thirty-five (35) days of final acceptance of the project and submittal of release of liens and red-lined as-built drawings.

Pursuant to Government Code Section 4590, at the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the District or with a state or federally chartered bank as the escrow agent, who shall pay such monies to the Contractor upon satisfactory completion and acceptance of the contract.

Securities eligible for investment under this section shall include those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit.

The Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

## **25. DEFINITIONS**

Whenever in the specifications or on the drawings the word directed, required, permitted, designated, ordered, or words of like import are used, it shall be understood that the direction, requirement, permission, designation or order of the District is intended; and, similarly, the words approved, satisfactory, suitable, acceptable, or words of like import, shall mean approved by the representative of the District authorized to express such approval.

## **26. TAXES**

Bidders shall have included in their bids any and all Federal, State and local taxes of whatever nature in connection with material to be furnished to the District. Absolutely no extras shall be allowed for such by the District.

## **27. CONTRACT DOCUMENTS**

The form of agreement which the successful bidder, as Contractor, will be required to execute and the form of bonds which he/she will be required to furnish are included in the Contract Documents and should be carefully examined by each bidder. The agreement and bonds will be executed in three (3) original counterparts. The complete contract consists of the Contract Documents as defined in the agreement, and are intended to cooperate and be complementary so that any work called for in one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents. The intention of the documents is to include all labor, materials, equipment, transportation and services necessary for the proper execution of the work.



## **28. DECLARATION FOR FINAL PAYMENT**

After the completion of the work of this contract, the Contractor shall file with the District his/her declaration under penalty of perjury stating that all workers and persons employed, all firms supplying the materials and all subcontractors on the project, have been paid in full and that there are no bills outstanding against the project for either labor or materials except certain items, if any, to be set forth in detail in the declaration. The filing of such declaration by the Contractor and the submittals referred to in the General Provisions shall be a condition precedent to Contractor's receipt of the final payment on this contract.

## **29. ADMONITION**

All bidders hereby are advised that the District has adopted General Provisions for this work which differ substantially from the general provisions provided for private projects or projects undertaken by other governmental agencies. Contractors are admonished to carefully read the General Provisions, as well as the special provisions and technical provisions, and are advised that the General Provisions shall be enforced strictly.

## **30. SMALL BUSINESS PARTICIPATION**

The Sponsor has established a Small Business Element in accordance with 49 CFR Part 26 to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation and to create a level playing field on which small businesses can compete fairly. While there is no specific numerical goal assigned to small business participation the prime contractor should make every effort to solicit small business concerns (as defined in 13 CFR Part 121) to participate as subcontractors, service providers, suppliers, etc.

The Sponsor has identified work categories conducive to small business participation on the form entitled Fostering Small Business Participation – List Defining Work Categories Conducive to Small Business Participation. Prime contractors are encouraged to solicit small business participation for the work items referenced.

The Bidder must submit the Small Business Participation information with its proposal on the forms provided herein (Fostering Small Business Participation & Non-Certified Small Business Verification Form).

FOSTERING SMALL BUSINESS PARTICIPATION - LIST DEFINING WORK CATEGORIES CONDUCIVE TO SMALL BUSINESS PARTICIPATION

**Background 49 CFR §23.26 and §26.39**

The Sponsor has established a Small Business Element in accordance with 49 CFR Part 23 and 26 to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation and to create a level playing field on which small businesses can compete fairly. While there is no specific numerical goal assigned to small business participation the prime contractor/concessionaire should make every effort to solicit small business concerns (as defined in 13 CFR Part 121 or 49 CFR Part 23.33).

The Sponsor has identified the below work categories that are conducive to small business participation for the referenced project. As per the agreement, prime contractors are encouraged to solicit small business participation for the work items referenced below.

**Project Information**

Project #: \_\_\_\_\_ Project Name/Description: Truckee Tahoe Airport - Reconstruction of Apron A2

**Identified Work Categories Conducive to Small Business**

| Work Category/Bid Line Item | NAICS Code | Estimated Total Cost of Work |
|-----------------------------|------------|------------------------------|
| Airfield Marking            | 237310     | \$ 15,600.00                 |
| Reflective Media            | 237310     | \$ 2,900.00                  |
| Electrical Items            | 23710      | \$ 43,500.00                 |
|                             |            | \$ -                         |
|                             |            | \$ -                         |
|                             |            | \$ -                         |
|                             |            | \$ -                         |
|                             |            | \$ -                         |

**Signature of Consulting Engineer (if applicable)**

Signature: \_\_\_\_\_ Company Name: Brandley Engineering, Inc.  
 Print Name: Damon Brandley, P.E. Date: \_\_\_\_\_  
 Title: Project Manager/Principal Engineer

**Signature of Sponsor's Representative**

Signature: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

**\*\* END OF SECTION \*\***

**PART A**

**DIVISION II**

**BID PROPOSAL**

**PROPOSAL FORM**

**TRUCKEE TAHOE AIRPORT DISTRICT  
RECONSTRUCT APRON A2  
AIP NO. 3-06-0262-0\_\_-2025**

***Pre-Bid Meeting Date: Thursday, March 27, 2025 at 10:00 a.m.***

Place of Pre-Bid Meeting: Truckee Tahoe Airport, Downstairs Board Conference Room

***Bid Opening Date: Thursday, April 16, 2025 at 1:00 p.m.***

Place of Bid Opening:

Truckee Tahoe Airport District, 10356 Truckee Airport Road, Truckee, California 96161

FROM:

NAME OF BIDDER: \_\_\_\_\_

BUSINESS \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP CODE: \_\_\_\_\_

PHONE: \_\_\_\_\_

TO: Truckee Tahoe Airport District  
10356 Truckee Airport Road  
Truckee, California 96161

The undersigned bidder declares that he/she has carefully examined the location of the proposed work; that he/she has examined the all Contract Documents, including, without limitation, the Plans and Specifications, and read the accompanying instructions to bidders; and hereby proposes to furnish all materials, machinery, tools, labor, and services and do all work necessary to complete the project in accordance with said Contract Documents, for the unit and lump sum prices stated herein.

The undersigned agrees that he/she will order all materials and equipment under this contract and will commence work within ten (10) days after receiving written notice to proceed and that he/she will complete the work of the various phases of construction as follows:

There are sixty (60) working days allowed for completion of the total project if Schedule A is accepted. There are forty-five (45) working days allowed for completion of the total project if Schedule B is accepted.

***SUBMIT THIS SHEET AS PART OF YOUR BID***

Bidder further agrees that should he/she fail to complete any segment of work in the time specified, he/she will pay liquidated damages in the amount of \$5,000 to the District for each consecutive calendar day thereafter as prescribed in these specifications.

Bidder further agrees that it has specifically reviewed the contractual provisions in the Contract Documents concerning insurance, indemnity, and claims resolution and agrees to be bound thereto.

The proposed work includes the following:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

Bidder agrees that the District reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of ninety (90) calendar days. It is further understood that the District anticipates award of the contract after the April 23, 2025, Board meeting and is targeting a mid-May construction start, weather permitting.

Bidder has attached to this Bid Form the completed certifications and bid bond. The bid bond is an amount not less than ten percent (10%) of the highest bid for either Schedule A or Schedule B

Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), the District will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud, and the Contractor may be subject to criminal prosecution.

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**TRUCKEE TAHOE AIRPORT  
TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**BID SCHEDULE A**

| Item No.  | Estimated Quantity | Item Description and Unit Price (written in words)   | Unit Price | Item Total |
|---|--------------------|--|------------|------------|
| <b><i>SCHEDULE A – CONSTRUCTION IN TWO PHASES (60 WORKING DAYS)</i></b>   |                    |  |            |            |
| A1  | 1 LS               | SWPPP Prepared by Qualified SWPPP Developer (QSD) and SWPPP Implementation and Monitoring (C-103)<br>____ Dollars<br>and _____ Cents<br>Lump Sum | Lump Sum   | \$ _____   |
| A2  | 1 LS               | Mobilization (C-105)<br>____ Dollars<br>and _____ Cents<br>Lump Sum  | Lump Sum   | \$ _____ * |
| A3  | 1 LS               | Marking and Lighting of Closed Airport Facilities (C-106)<br>____ Dollars<br>and _____ Cents<br>Lump Sum   | Lump Sum   | \$ _____   |
| A4  | 7,550 CY           | Unclassified Excavation (P-152)<br>____ Dollars<br>and _____ Cents<br>per Cubic Yard   | \$ _____   | \$ _____   |
| *Mobilization shall be limited to 10 percent of the total Bid Schedule A. |                    |  |            |            |

***SUBMIT THIS SHEET AS PART OF YOUR BID***

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)  | Unit Price | Item Total |
|----------|--------------------|---|------------|------------|
| A5       | 5,300 CY           | Muck Excavation (P-152)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard   | \$ _____   | \$ _____   |
| A6       | 31,000 SY          | Scarify and Recompect Subgrade (P-152)<br>_____ Dollars<br>and _____ Cents<br>per Square Yard   | \$ _____   | \$ _____   |
| A7       | 1 LS               | Removal of Slot Drain (P-152)<br>_____ Dollars<br>and _____ Cents<br>Lump Sum   | Lump Sum   | \$ _____   |
| A8       | 4,460 CY           | Subbase Course (P-154)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard  | \$ _____   | \$ _____   |
| A9       | 8,000 SY           | Geogrid (P-154)<br>_____ Dollars<br>and _____ Cents<br>per Square Yard  | \$ _____   | \$ _____   |
| A10      | 7,800 CY           | In-Place Full Depth Recycled (FDR) Asphalt Aggregate Subbase Course – Pulverize, Mix, Excavate, Stockpile, Haul, Place, and Compact (P-207)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard | \$ _____   | \$ _____   |

***SUBMIT THIS SHEET AS PART OF YOUR BID***



| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)   | Unit Price | Item Total |
|----------|--------------------|--|------------|------------|
| A11      | 5,200 CY           | Crushed Aggregate Base Course (P-209)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard    | \$ _____   | \$ _____   |
| A12      | 7,150 Tons         | Asphalt Surface Course (P-401)<br>_____ Dollars<br>and _____ Cents<br>per Ton                  | \$ _____   | \$ _____   |
| A13      | 25 Tons            | Emulsified Asphalt Prime Coat (P-602)<br>_____ Dollars<br>and _____ Cents<br>per Ton           | \$ _____   | \$ _____   |
| A14      | 13 Tons            | Emulsified Asphalt Tack Coat (P-603)<br>_____ Dollars<br>and _____ Cents<br>per Ton            | \$ _____   | \$ _____   |
| A15      | 650 LF             | Concrete Cap Existing Utilities (P-610)<br>_____ Dollars<br>and _____ Cents<br>per Linear Foot | \$ _____   | \$ _____   |
| A16      | 45 LF              | Concrete Curb (P-610)<br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                   | \$ _____   | \$ _____   |
| A17      | 280 SY             | Concrete – Snow Melt Apron (P-610)<br>_____ Dollars<br>and _____ Cents<br>per Square Yard      | \$ _____   | \$ _____   |

***SUBMIT THIS SHEET AS PART OF YOUR BID***

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)  | Unit Price | Item Total |
|----------|--------------------|---|------------|------------|
| A18      | 2,000 SF           | Temporary Airfield Marking, 1 Coat, No Beads (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Square Foot                 | \$ _____   | \$ _____   |
| A19      | 2,000 SF           | Remove Temporary Airfield Marking, including Fog Seal (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Square Foot        | \$ _____   | \$ _____   |
| A20      | 4,650 SF           | Airfield Marking (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Square Foot   | \$ _____   | \$ _____   |
| A21      | 410 Lbs.           | Reflective Media (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Pound   | \$ _____   | \$ _____   |
| A22      | 1 LS               | 18-inch High-Density, Polyethylene (HDPE) 4-foot Pipe Stub with Cap (D-701)<br>_____ Dollars<br>and _____ Cents<br>Lump Sum | Lump Sum   | \$ _____   |
| A23      | 65 LF              | 12-inch C900 Pipe, Concrete Encased (D-701)<br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                          | \$ _____   | \$ _____   |

*SUBMIT THIS SHEET AS PART OF YOUR BID*

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)   | Unit Price | Item Total |
|----------|--------------------|--|------------|------------|
| A24      | 545 LF             | Trench Drain (D-701)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot  | \$ _____   | \$ _____   |
| A25      | 2 EA               | Inlets (D-751)<br><br>_____ Dollars<br>and _____ Cents<br>per Each   | \$ _____   | \$ _____   |
| A26      | 84 LF              | Concrete Encased Electrical Conduit, 1-way, 2-inch (L-110)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                                | \$ _____   | \$ _____   |
| A27      | 110 LF             | Concrete Encased Electrical Conduit, 2-way, 3-inch (L-110)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                                | \$ _____   | \$ _____   |
| A28      | 305 LF             | Concrete Encased Electrical Conduit, 2-way, 4-inch (L-110)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                                | \$ _____   | \$ _____   |
| A29      | 4 EA               | Electrical Junction Structure L-867, Class 1, Size D, with Steel Lid and Concrete Collar (L-115)<br><br>_____ Dollars<br>and _____ Cents<br>per Each | \$ _____   | \$ _____   |

*SUBMIT THIS SHEET AS PART OF YOUR BID*

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)   | Unit Price | Item Total |
|----------|--------------------|--|------------|------------|
| A30      | 24 EA              | New Retroreflective Marker, L-853, 24-inch (L-125)<br><br>_____ Dollars<br>and _____ Cents<br>per Each | \$ _____   | \$ _____   |
| A31      | 1 LS               | Mechanical Snow Melt System (M-100)<br><br>_____ Dollars<br>and _____ Cents<br>Lump Sum                | \$ _____   | \$ _____   |
| A32      | 1 LS               | New Gate Loop (Sheet No. 19)<br><br>_____ Dollars<br>and _____ Cents<br>Lump Sum                       | \$ _____   | \$ _____   |
|          |                    | <b><i>TOTAL BID AMOUNT – SCHEDULE A</i></b>  |            | \$ _____   |

**Total Bid Amount in Words – Schedule A**

---



---

***SUBMIT THIS SHEET AS PART OF YOUR BID***

**TRUCKEE TAHOE AIRPORT  
TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**BID SCHEDULE B**

| <b>Item No.</b>   | <b>Estimated Quantity</b> | <b>Item Description and Unit Price (written in words)</b>  | <b>Unit Price</b> | <b>Item Total</b> |
|---|---------------------------|--|-------------------|-------------------|
| <b><i>SCHEDULE B – CONSTRUCTION IN ONE PHASE (45 WORKING DAYS)</i></b>    |                           |  |                   |                   |
| B1  | 1 LS                      | SWPPP Prepared by Qualified SWPPP Developer (QSD) and SWPPP Implementation and Monitoring (C-103)<br>____ Dollars<br>and _____ Cents<br>Lump Sum | Lump Sum          | \$ _____          |
| B2  | 1 LS                      | Mobilization (C-105)<br>____ Dollars<br>and _____ Cents<br>Lump Sum  | Lump Sum          | \$ _____ *        |
| B3  | 1 LS                      | Marking and Lighting of Closed Airport Facilities (C-106)<br>____ Dollars<br>and _____ Cents<br>Lump Sum   | Lump Sum          | \$ _____          |
| B4  | 7,550 CY                  | Unclassified Excavation (P-152)<br>____ Dollars<br>and _____ Cents<br>per Cubic Yard   | \$ _____          | \$ _____          |
| *Mobilization shall be limited to 10 percent of the total Bid Schedule B. |                           |  |                   |                   |

***SUBMIT THIS SHEET AS PART OF YOUR BID***

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)  | Unit Price | Item Total |
|----------|--------------------|---|------------|------------|
| B5       | 5,300 CY           | Muck Excavation (P-152)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard   | \$ _____   | \$ _____   |
| B6       | 31,000 SY          | Scarify and Recompect Subgrade (P-152)<br>_____ Dollars<br>and _____ Cents<br>per Square Yard   | \$ _____   | \$ _____   |
| B7       | 1 LS               | Removal of Slot Drain (P-152)<br>_____ Dollars<br>and _____ Cents<br>Lump Sum   | Lump Sum   | \$ _____   |
| B8       | 4,460 CY           | Subbase Course (P-154)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard  | \$ _____   | \$ _____   |
| B9       | 8,000 SY           | Geogrid (P-154)<br>_____ Dollars<br>and _____ Cents<br>per Square Yard  | \$ _____   | \$ _____   |
| B10      | 7,800 CY           | In-Place Full Depth Recycled (FDR) Asphalt Aggregate Subbase Course – Pulverize, Mix, Excavate, Stockpile, Haul, Place, and Compact (P-207)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard | \$ _____   | \$ _____   |

*SUBMIT THIS SHEET AS PART OF YOUR BID*

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)   | Unit Price | Item Total |
|----------|--------------------|--|------------|------------|
| B11      | 5,200 CY           | Crushed Aggregate Base Course (P-209)<br>_____ Dollars<br>and _____ Cents<br>per Cubic Yard    | \$ _____   | \$ _____   |
| B12      | 7,150 Tons         | Asphalt Surface Course (P-401)<br>_____ Dollars<br>and _____ Cents<br>per Ton                  | \$ _____   | \$ _____   |
| B13      | 25 Tons            | Emulsified Asphalt Prime Coat (P-602)<br>_____ Dollars<br>and _____ Cents<br>per Ton           | \$ _____   | \$ _____   |
| B14      | 13 Tons            | Emulsified Asphalt Tack Coat (P-603)<br>_____ Dollars<br>and _____ Cents<br>per Ton            | \$ _____   | \$ _____   |
| B15      | 650 LF             | Concrete Cap Existing Utilities (P-610)<br>_____ Dollars<br>and _____ Cents<br>per Linear Foot | \$ _____   | \$ _____   |
| B16      | 45 LF              | Concrete Curb (P-610)<br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                   | \$ _____   | \$ _____   |
| B17      | 280 SY             | Concrete – Snow Melt Apron (P-610)<br>_____ Dollars<br>and _____ Cents<br>per Square Yard      | \$ _____   | \$ _____   |

***SUBMIT THIS SHEET AS PART OF YOUR BID***

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)  | Unit Price | Item Total |
|----------|--------------------|---|------------|------------|
| B18      | 2,000 SF           | Temporary Airfield Marking, 1 Coat, No Beads (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Square Foot                 | \$ _____   | \$ _____   |
| B19      | 2,000 SF           | Remove Temporary Airfield Marking, including Fog Seal (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Square Foot        | \$ _____   | \$ _____   |
| B20      | 4,650 SF           | Airfield Marking (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Square Foot   | \$ _____   | \$ _____   |
| B21      | 410 Lbs.           | Reflective Media (P-620)<br>_____ Dollars<br>and _____ Cents<br>per Pound   | \$ _____   | \$ _____   |
| B22      | 1 LS               | 18-inch High-Density, Polyethylene (HDPE) 4-foot Pipe Stub with Cap (D-701)<br>_____ Dollars<br>and _____ Cents<br>Lump Sum | Lump Sum   | \$ _____   |
| B23      | 65 LF              | 12-inch C900 Pipe, Concrete Encased (D-701)<br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                          | \$ _____   | \$ _____   |

*SUBMIT THIS SHEET AS PART OF YOUR BID*



| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)   | Unit Price | Item Total |
|----------|--------------------|--|------------|------------|
| B24      | 545 LF             | Trench Drain (D-701)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot  | \$ _____   | \$ _____   |
| B25      | 2 EA               | Inlets (D-751)<br><br>_____ Dollars<br>and _____ Cents<br>per Each   | \$ _____   | \$ _____   |
| B26      | 84 LF              | Concrete Encased Electrical Conduit, 1-way, 2-inch (L-110)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                                | \$ _____   | \$ _____   |
| B27      | 110 LF             | Concrete Encased Electrical Conduit, 2-way, 3-inch (L-110)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                                | \$ _____   | \$ _____   |
| B28      | 305 LF             | Concrete Encased Electrical Conduit, 2-way, 4-inch (L-110)<br><br>_____ Dollars<br>and _____ Cents<br>per Linear Foot                                | \$ _____   | \$ _____   |
| B29      | 4 EA               | Electrical Junction Structure L-867, Class 1, Size D, with Steel Lid and Concrete Collar (L-115)<br><br>_____ Dollars<br>and _____ Cents<br>per Each | \$ _____   | \$ _____   |

*SUBMIT THIS SHEET AS PART OF YOUR BID*

| Item No. | Estimated Quantity | Item Description and Unit Price (written in words)   | Unit Price | Item Total |
|----------|--------------------|--|------------|------------|
| B30      | 24 EA              | New Retroreflective Marker, L-853, 24-inch (L-125)<br><br>_____ Dollars<br>and _____ Cents<br>per Each | \$ _____   | \$ _____   |
| B31      | 1 LS               | Mechanical Snow Melt System (M-100)<br><br>_____ Dollars<br>and _____ Cents<br>Lump Sum                | \$ _____   | \$ _____   |
| B32      | 1 LS               | New Gate Loop (Sheet No. 19)<br><br>_____ Dollars<br>and _____ Cents<br>Lump Sum                       | \$ _____   | \$ _____   |
|          |                    | <b><i>TOTAL BID AMOUNT – SCHEDULE B</i></b>  |            | \$ _____   |

**Total Bid Amount in Words – Schedule B**

---



---

**NOTES**

1. In the event the product of a unit price and an estimated quantity do not equal the extended amount stated, the unit price will govern, and the correct product of the unit price and the estimated quantity shall be deemed to be the amount bid. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.
2. Contractor may submit bids for Schedule A only, Schedule B only, or both Schedules A and B.
3. The Owner reserves the right to award the contract for Schedule A or for Schedule B, as follows:
  - a. If the lowest total bid for Schedule B is a minimum of 5% less than the lowest total bid for Schedule A, the low bidder will be based on Schedule B.
  - b. Otherwise, the low bidder will be based on Schedule A.

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**BID SCHEDULE**  
AIP No. 3-06-0262-0\_\_-2025

The undersigned certifies that the bid has been arrived at by the bidder independently and has been submitted without any collusion designed to limit independent bidding or competition. Bidder hereby certifies to the District that all representations, certifications, and statements made by bidder, as set forth in this bid form, and the documents attached thereto, are true and correct and are made under penalty of perjury.

NAME OF FIRM\_\_\_\_\_

\_\_\_\_\_

ADDRESS:\_\_\_\_\_

CITY, STATE ZIP:\_\_\_\_\_

BY:\_\_\_\_\_

(Signature of Authorized Official)

NAME:\_\_\_\_\_

TITLE:\_\_\_\_\_

TELEPHONE NO. (\_\_\_\_)\_\_\_\_\_ EMAIL ADDRESS\_\_\_\_\_

DATE: \_\_\_\_ day of \_\_\_\_\_, 2025

STATE IN WHICH INCORPORATED:\_\_\_\_\_

CALIFORNIA CONTRACTOR'S LICENSE NO. \_\_\_\_\_

IF FIRM IS A CORPORATION:

Name of Corporation: \_\_\_\_\_

President: \_\_\_\_\_

Secretary: \_\_\_\_\_

Treasurer: \_\_\_\_\_

*SUBMIT THIS SHEET AS PART OF YOUR BID*

MEMBERS OF FIRM IF PARTNERSHIP:

ADDRESS:

---

---

---

---

---

---

**Acknowledgement of Receipt of Addenda**

Acknowledgment is hereby made of receipt and incorporation of Addendum No. \_\_\_\_ through Addendum No. \_\_\_\_ into this Bid.

Initials of Above Signatory: \_\_\_\_\_

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**BIDDERS LIST COLLECTION FORM**

| Prime Contractor   |   |   |  |
|--|---|---|--|
| Firm Name: _____   | Certified DBE: <input type="checkbox"/> Yes <input type="checkbox"/> No |   |  |
| Firm Address: _____  | City: _____   | State: _____                                | Zip Code: _____                                |
| Contact Name: _____  | Email Address: _____  |   | Phone: _____                                   |
| NAICS Code(s) associated with Bid Project  | Race of Majority Owner  | Age of Firm                                 | Annual Gross Receipts                          |
|  | <input type="checkbox"/> Black American                                 | <input type="checkbox"/> Non-minority       | <input type="checkbox"/> Less than 1 year      |
|  | <input type="checkbox"/> Hispanic American                              | <input type="checkbox"/> Other              | <input type="checkbox"/> 1 - 3 years           |
|  | <input type="checkbox"/> Asian-Pacific American                         |   | <input type="checkbox"/> 4 - 7 years           |
|  | <input type="checkbox"/> Subcontinent Asian American                    |   | <input type="checkbox"/> 8 - 10 years          |
| Gender of Majority Owner   |   | <input type="checkbox"/> More than 10 years | <input type="checkbox"/> Less than \$1 million |
| <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other | <input type="checkbox"/> Native American                                |   | <input type="checkbox"/> \$1 - \$3 million     |
|  |   |   | <input type="checkbox"/> \$3 - \$6 million     |
|  |   |   | <input type="checkbox"/> \$6 - \$10 million    |
|  |   |   | <input type="checkbox"/> Over \$10 million     |

| Sub Contractor   |   |   |  |
|--|---|---|--|
| Firm Name: _____   | Certified DBE: <input type="checkbox"/> Yes <input type="checkbox"/> No |   |  |
| Firm Address: _____  | City: _____   | State: _____                                | Zip Code: _____                                |
| Contact Name: _____  | Email Address: _____  |   | Phone: _____                                   |
| NAICS Code(s) associated with Bid Project  | Race of Majority Owner  | Age of Firm                                 | Annual Gross Receipts                          |
|  | <input type="checkbox"/> Black American                                 | <input type="checkbox"/> Non-minority       | <input type="checkbox"/> Less than 1 year      |
|  | <input type="checkbox"/> Hispanic American                              | <input type="checkbox"/> Other              | <input type="checkbox"/> 1 - 3 years           |
|  | <input type="checkbox"/> Asian-Pacific American                         |   | <input type="checkbox"/> 4 - 7 years           |
|  | <input type="checkbox"/> Subcontinent Asian American                    |   | <input type="checkbox"/> 8 - 10 years          |
| Gender of Majority Owner   |   | <input type="checkbox"/> More than 10 years | <input type="checkbox"/> Less than \$1 million |
| <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other | <input type="checkbox"/> Native American                                |   | <input type="checkbox"/> \$1 - \$3 million     |
|  |   |   | <input type="checkbox"/> \$3 - \$6 million     |
|  |   |   | <input type="checkbox"/> \$6 - \$10 million    |
|  |   |   | <input type="checkbox"/> Over \$10 million     |

| Sub Contractor   |   |   |  |
|--|---|---|--|
| Firm Name: _____   | Certified DBE: <input type="checkbox"/> Yes <input type="checkbox"/> No |   |  |
| Firm Address: _____  | City: _____   | State: _____                                | Zip Code: _____                                |
| Contact Name: _____  | Email Address: _____  |   | Phone: _____                                   |
| NAICS Code(s) associated with Bid Project  | Race of Majority Owner  | Age of Firm                                 | Annual Gross Receipts                          |
|  | <input type="checkbox"/> Black American                                 | <input type="checkbox"/> Non-minority       | <input type="checkbox"/> Less than 1 year      |
|  | <input type="checkbox"/> Hispanic American                              | <input type="checkbox"/> Other              | <input type="checkbox"/> 1 - 3 years           |
|  | <input type="checkbox"/> Asian-Pacific American                         |   | <input type="checkbox"/> 4 - 7 years           |
|  | <input type="checkbox"/> Subcontinent Asian American                    |   | <input type="checkbox"/> 8 - 10 years          |
| Gender of Majority Owner   |   | <input type="checkbox"/> More than 10 years | <input type="checkbox"/> Less than \$1 million |
| <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other | <input type="checkbox"/> Native American                                |   | <input type="checkbox"/> \$1 - \$3 million     |
|  |   |   | <input type="checkbox"/> \$3 - \$6 million     |
|  |   |   | <input type="checkbox"/> \$6 - \$10 million    |
|  |   |   | <input type="checkbox"/> Over \$10 million     |

***SUBMIT THIS SHEET AS PART OF YOUR BID***

**Sub Contractor**

Firm Name: \_\_\_\_\_ Certified DBE: ☐ Yes ☐ No  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

| NAICS Code(s) associated with Bid Project   | Race of Majority Owner   | Age of Firm   | Annual Gross Receipts   |
|---|--|---|---|
|   | <input type="checkbox"/> Black American<br><input type="checkbox"/> Hispanic American<br><input type="checkbox"/> Asian-Pacific American<br><input type="checkbox"/> Subcontinent Asian American<br><input type="checkbox"/> Native American | <input type="checkbox"/> Non-minority<br><input type="checkbox"/> Other   | <input type="checkbox"/> Less than 1 year<br><input type="checkbox"/> 1 - 3 years<br><input type="checkbox"/> 4 - 7 years<br><input type="checkbox"/> 8 - 10 years<br><input type="checkbox"/> More than 10 years |
| <b>Gender of Majority Owner</b><br><input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other |  | <input type="checkbox"/> Less than \$1 million<br><input type="checkbox"/> \$1 - \$3 million<br><input type="checkbox"/> \$3 - \$6 million<br><input type="checkbox"/> \$6 - \$10 million<br><input type="checkbox"/> Over \$10 million |   |

**Sub Contractor**

Firm Name: \_\_\_\_\_ Certified DBE: ☐ Yes ☐ No  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

| NAICS Code(s) associated with Bid Project   | Race of Majority Owner   | Age of Firm   | Annual Gross Receipts   |
|---|--|---|---|
|   | <input type="checkbox"/> Black American<br><input type="checkbox"/> Hispanic American<br><input type="checkbox"/> Asian-Pacific American<br><input type="checkbox"/> Subcontinent Asian American<br><input type="checkbox"/> Native American | <input type="checkbox"/> Non-minority<br><input type="checkbox"/> Other   | <input type="checkbox"/> Less than 1 year<br><input type="checkbox"/> 1 - 3 years<br><input type="checkbox"/> 4 - 7 years<br><input type="checkbox"/> 8 - 10 years<br><input type="checkbox"/> More than 10 years |
| <b>Gender of Majority Owner</b><br><input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other |  | <input type="checkbox"/> Less than \$1 million<br><input type="checkbox"/> \$1 - \$3 million<br><input type="checkbox"/> \$3 - \$6 million<br><input type="checkbox"/> \$6 - \$10 million<br><input type="checkbox"/> Over \$10 million |   |

**Sub Contractor**

Firm Name: \_\_\_\_\_ Certified DBE: ☐ Yes ☐ No  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

| NAICS Code(s) associated with Bid Project   | Race of Majority Owner   | Age of Firm   | Annual Gross Receipts   |
|---|--|---|---|
|   | <input type="checkbox"/> Black American<br><input type="checkbox"/> Hispanic American<br><input type="checkbox"/> Asian-Pacific American<br><input type="checkbox"/> Subcontinent Asian American<br><input type="checkbox"/> Native American | <input type="checkbox"/> Non-minority<br><input type="checkbox"/> Other   | <input type="checkbox"/> Less than 1 year<br><input type="checkbox"/> 1 - 3 years<br><input type="checkbox"/> 4 - 7 years<br><input type="checkbox"/> 8 - 10 years<br><input type="checkbox"/> More than 10 years |
| <b>Gender of Majority Owner</b><br><input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other |  | <input type="checkbox"/> Less than \$1 million<br><input type="checkbox"/> \$1 - \$3 million<br><input type="checkbox"/> \$3 - \$6 million<br><input type="checkbox"/> \$6 - \$10 million<br><input type="checkbox"/> Over \$10 million |   |

Please copy page if you need to add more subcontractors.

**SUBMIT THIS SHEET AS PART OF YOUR BID**

**Background 49 CFR §23.26 and §26.39**

The Sponsor has established a Small Business Element in accordance with 49 CFR Part 23 and 26 to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation and to create a level playing field on which small businesses can compete fairly. While there is no specific numerical goal assigned to small business participation the prime contractor/concessionaire should make every effort to solicit small business concerns (as defined in 13 CFR Part 121 or 49 CFR Part 23.33) to participate as sub-contractors/sub-concessionaries, service providers, suppliers, etc.

The Sponsor encourages small business participation, including AC/DBE certified firms and SBA certified Small Disadvantaged Business (SDB), Women-Owned Small Business/Economically Disadvantaged Women-Owned Small Businesses (ED/WOSB), Veteran-Owned Small Business/Service-Disabled Veteran-Owned Small Business (SD/VOSB), 8(a) Small Business Development Program (8(a)), SBA Mentor-Protégé Program (SBA MP), and HUBZone Program (HUBZone).

AC/DBE certified firms can be located through the State's UCP website and SBA certified firms can be located through the Small Business Search Tool (<https://beta-search.certify.sba.gov/advanced> and [https://dsbs.sba.gov/search/dsp\\_dsbs.cfm](https://dsbs.sba.gov/search/dsp_dsbs.cfm)).

**Prime Information**

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

**Small Business Firms to be Utilized**

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Is the firm currently certified? If yes, check the appropriate box(es) and provide proof of certification. If no, complete the non-certified small business verification form.

☐ AC/DBE ☐ SDB ☐ ED/WOSB ☐ SD/VOSB ☐ 8(a) ☐ SBA MP ☐ HUBZone ☐ No, Verification Form Attached

| NAICS Code   | Description of Work to be Performed | Estimated Total Cost of Work |
|--------------|-------------------------------------|------------------------------|
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
| Total Amount |                                     | \$ -                         |

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Is the firm currently certified? If yes, check the appropriate box(es) and provide proof of certification. If no, complete the non-certified small business verification form.

☐ AC/DBE ☐ SDB ☐ ED/WOSB ☐ SD/VOSB ☐ 8(a) ☐ SBA MP ☐ HUBZone ☐ No, Verification Form Attached

| NAICS Code   | Description of Work to be Performed | Estimated Total Cost of Work |
|--------------|-------------------------------------|------------------------------|
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
| Total Amount |                                     | \$ -                         |

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Is the firm currently certified? If yes, check the appropriate box(es) and provide proof of certification. If no, complete the non-certified small business verification form.

☐ AC/DBE ☐ SDB ☐ ED/WOSB ☐ SD/VOSB ☐ 8(a) ☐ SBA MP ☐ HUBZone ☐ No, Verification Form Attached

| NAICS Code   | Description of Work to be Performed | Estimated Total Cost of Work |
|--------------|-------------------------------------|------------------------------|
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
| Total Amount |                                     | \$ -                         |

**Prime Signature**

Signature: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

**Reviewer Certification (For use by Sponsor Only)**

Signature: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

***SUBMIT THIS SHEET AS PART OF YOUR BID***

**Background 49 CFR §23.26 and §26.39**

The Sponsor has established a Small Business Element in accordance with 49 CFR Part 23 and 26 to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation and to create a level playing field on which small businesses can compete fairly. While there is no specific numerical goal assigned to small business participation the prime contractor/concessionaire should make every effort to solicit small business concerns (as defined in 13 CFR Part 121 or 49 CFR Part 23.33) to participate as sub-contractors/sub-concessionaries, service providers, suppliers, etc.

The Sponsor encourages small business participation, including AC/DBE certified firms and SBA certified Small Disadvantaged Business (SBD), Women-Owned Small Business/Economically Disadvantaged Women-Owned Small Businesses (ED/WOSB), Veteran-Owned Small Business/Service-Disabled Veteran-Owned Small Business (SD/VOSB), 8(a) Small Business Development Program (8(a)), SBA Mentor-Protégé Program (SBA MP), and HUBZone Program (HUBZone).

AC/DBE certified firms can be located through the State's UCP website and SBA certified firms can be located through the Small Business Search Tool (<https://beta-search.certify.sba.gov/advanced> and [https://dsbs.sba.gov/search/dsp\\_dsbs.cfm](https://dsbs.sba.gov/search/dsp_dsbs.cfm)).

**Prime Information**

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

**Small Business Firms to be Utilized**

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Is the firm currently certified? If yes, check the appropriate box(es) and provide proof of certification. If no, complete the non-certified small business verification form.

☐ AC/DBE ☐ SBD ☐ ED/WOSB ☐ SD/VOSB ☐ 8(a) ☐ SBA MP ☐ HUBZone ☐ No, Verification Form Attached

| NAICS Code   | Description of Work to be Performed | Estimated Total Cost of Work |
|--------------|-------------------------------------|------------------------------|
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
| Total Amount |                                     | \$ -                         |

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Is the firm currently certified? If yes, check the appropriate box(es) and provide proof of certification. If no, complete the non-certified small business verification form.

☐ AC/DBE ☐ SBD ☐ ED/WOSB ☐ SD/VOSB ☐ 8(a) ☐ SBA MP ☐ HUBZone ☐ No, Verification Form Attached

| NAICS Code   | Description of Work to be Performed | Estimated Total Cost of Work |
|--------------|-------------------------------------|------------------------------|
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
| Total Amount |                                     | \$ -                         |

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Is the firm currently certified? If yes, check the appropriate box(es) and provide proof of certification. If no, complete the non-certified small business verification form.

☐ AC/DBE ☐ SBD ☐ ED/WOSB ☐ SD/VOSB ☐ 8(a) ☐ SBA MP ☐ HUBZone ☐ No, Verification Form Attached

| NAICS Code   | Description of Work to be Performed | Estimated Total Cost of Work |
|--------------|-------------------------------------|------------------------------|
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
|              |                                     | \$ -                         |
| Total Amount |                                     | \$ -                         |

**Prime Signature**

Signature: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

**Reviewer Certification (For use by Sponsor Only)**

Signature: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

***SUBMIT THIS SHEET AS PART OF YOUR BID***



**NON-CERTIFIED SMALL BUSINESS VERIFICATION FORM**

**Background 49 CFR 523.26 AND 526.39**

Firms seeking to participate under the Sponsor's Small Business Element who are not certified under one of the pre-qualified certifications listed on the Fostering Small Business Participation Form but believe their firm meets the small business requirements per 13 CFR Part 121 or 49 CFR 23.33 should complete the attached form and provide the requested documentation. Firms meeting the requirements as verified by the Sponsor are eligible to participate in the Small Business Participation Plan.

**Firm Information**

Firm Name: \_\_\_\_\_  
 Firm Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Email Address: \_\_\_\_\_ Phone: \_\_\_\_\_

**Business Profile**

|   |                         |
|---|-------------------------|
| Describe the primary activities of your firm: | Associated NAICS Codes: |
|---|-------------------------|

**Number of Employees**

Full-time: \_\_\_\_\_ Part-time: \_\_\_\_\_ Total: \_\_\_\_\_

**Gross Receipts of Firm**

|  |             |                      |   |
|--|-------------|----------------------|---|
|  | Year: _____ | Total Receipts: \$   | - |
| Gross Receipts of Firm for the last 5 years: | Year: _____ | Total Receipts: \$   | - |
|  | Year: _____ | Total Receipts: \$   | - |
|  | Year: _____ | Total Receipts: \$   | - |
| Attach tax returns for the last five years.  | Year: _____ | Total Receipts: \$   | - |
|  | Year: _____ | Total Receipts: \$   | - |
|  | Year: _____ | Average Receipts: \$ | - |

**Gross Receipts for all Affiliates\***

|   |             |                      |   |
|---|-------------|----------------------|---|
|   | Year: _____ | Total Receipts: \$   | - |
| Gross Receipts of Affiliates for the last 5 years:  | Year: _____ | Total Receipts: \$   | - |
|   | Year: _____ | Total Receipts: \$   | - |
|   | Year: _____ | Total Receipts: \$   | - |
| Affiliates are defined in accordance with the Small Business Administration (SBA) definition. | Year: _____ | Total Receipts: \$   | - |
|   | Year: _____ | Total Receipts: \$   | - |
|   | Year: _____ | Total Receipts: \$   | - |
| Attach tax returns for all affiliate firms for the last five years.                           | Year: _____ | Average Receipts: \$ | - |

**Firm Signature**

The firm attests that the presented information is accurate and correct.

|                   |                     |
|-------------------|---------------------|
| Signature: _____  | Company Name: _____ |
| Print Name: _____ | Date: _____         |
| Title: _____      |                     |

**Reviewer Certification (For use by Sponsor Only)**

The above presented information and attachments have been reviewed and it is concluded that: ☐ Meets the requirements of a Small Business ☐ Does not meet the requirements of a Small Business

|                   |                 |
|-------------------|-----------------|
| Signature: _____  | Employer: _____ |
| Print Name: _____ | Date: _____     |
| Title: _____      |                 |

***SUBMIT THIS SHEET AS PART OF YOUR BID***

## DESIGNATION OF SUBCONTRACTORS

In compliance with the provisions of Section 4100 et seq. of the Government Code of the State of California, and any amendments thereof, the undersigned bidder has set forth below:

(a) The name and location of the place of business of each subcontractor who will perform work or labor, or render service to the undersigned in or about the construction of the work to be performed hereunder, or a subcontractor licensed by the State of California, who, under subcontract to the undersigned, will specifically fabricate and install a portion of said work according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent (0.5%) of the undersigned's total bid; and

(b) The portion of the work which will be done by each subcontractor for each subcontract in excess of one-half of one percent (0.5%) of the undersigned's total bid. The undersigned shall list only one subcontractor for each such portion.

Note: When there is a failure to list a subcontractor, the law provides that the prime Contractor agrees to do the work himself, and that said prime Contractor certifies that Contractor is fully qualified to perform such work.

| Portion of Work | Percent of Total Contract | Subcontractor | Address | License No.* | DIR No. |
|-----------------|---------------------------|---------------|---------|--------------|---------|
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |

I certify that I am duly authorized to legally bind the bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

By \_\_\_\_\_  
(Bidder's Signature)

\*An inadvertent error in California Contractor license number shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive as long as the corrected Contractor's license number is submitted to the District by the prime contractor within 24 hours of the bid opening.

***SUBMIT THIS SHEET AS PART OF YOUR BID***

**DESIGNATION OF SUBCONTRACTORS**

In compliance with the provisions of Section 4100 et seq. of the Government Code of the State of California, and any amendments thereof, the undersigned bidder has set forth below:

(a) The name and location of the place of business of each subcontractor who will perform work or labor, or render service to the undersigned in or about the construction of the work to be performed hereunder, or a subcontractor licensed by the State of California, who, under subcontract to the undersigned, will specifically fabricate and install a portion of said work according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent (0.5%) of the undersigned's total bid; and

(b) The portion of the work which will be done by each subcontractor for each subcontract in excess of one-half of one percent (0.5%) of the undersigned's total bid. The undersigned shall list only one subcontractor for each such portion.

Note: When there is a failure to list a subcontractor, the law provides that the prime Contractor agrees to do the work himself, and that said prime Contractor certifies that Contractor is fully qualified to perform such work.

| Portion of Work | Percent of Total Contract | Subcontractor | Address | License No.* | DIR No. |
|-----------------|---------------------------|---------------|---------|--------------|---------|
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |
|                 |                           |               |         |              |         |

I certify that I am duly authorized to legally bind the bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

By \_\_\_\_\_  
(Bidder's Signature)

\*An inadvertent error in California Contractor license number shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive as long as the corrected Contractor's license number is submitted to the District by the prime contractor within 24 hours of the bid opening.

***SUBMIT THIS SHEET AS PART OF YOUR BID***

**CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS  
(SEE SECTION 20-02 OF THE FAA GENERAL CONTRACT PROVISIONS)**

The undersigned bidder certifies that he/she is, at the time of bidding, and shall be, throughout the period of the contract, licensed by the State of California to do the type of work required under terms of the contract documents. Bidder further certifies that he/she is skilled and regularly engaged in the general class and type of work called for in the contract documents.

In accordance with the requirements, the bidder represents that he/she is competent, knowledgeable and has special skills on the nature, extent and inherent conditions of the work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the particular facilities which may create, during the construction program, unusual or peculiar unsafe conditions hazardous to persons and property. Bidder expressly acknowledges that he/she is aware of such peculiar risks and that he/she has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the construction with the respect to such hazards.

**LIST OF SIMILAR PROJECTS:**

1. Project Name: \_\_\_\_\_  
Owner: \_\_\_\_\_  
Construction Cost: \_\_\_\_\_  
Construction Time: \_\_\_\_\_ Calendar Days  
Owner's Representative: \_\_\_\_\_  
Owner's Telephone No.: (\_\_\_\_) \_\_\_\_\_  
Date of substantial or final completion: \_\_\_\_\_
2. Project Name: \_\_\_\_\_  
Owner: \_\_\_\_\_  
Construction Cost: \_\_\_\_\_  
Construction Time: \_\_\_\_\_ Calendar Days  
Owner's Representative: \_\_\_\_\_  
Owner's Telephone No.: (\_\_\_\_) \_\_\_\_\_  
Date of substantial or final completion: \_\_\_\_\_
3. Project Name: \_\_\_\_\_  
Owner: \_\_\_\_\_  
Construction Cost: \_\_\_\_\_  
Construction Time: \_\_\_\_\_ Calendar Days  
Owner's Representative: \_\_\_\_\_  
Owner's Telephone No.: (\_\_\_\_) \_\_\_\_\_  
Date of substantial or final completion: \_\_\_\_\_

***SUBMIT THIS SHEET AS PART OF YOUR BID***

4. Project Name: \_\_\_\_\_  
Owner: \_\_\_\_\_  
Construction Cost: \_\_\_\_\_  
Construction Time: \_\_\_\_\_ Calendar Days  
Owner's Representative: \_\_\_\_\_  
Owner's Telephone No.: (\_\_\_\_) \_\_\_\_\_  
Date of substantial or final completion: \_\_\_\_\_
5. Project Name: \_\_\_\_\_  
Owner: \_\_\_\_\_  
Construction Cost: \_\_\_\_\_  
Construction Time: \_\_\_\_\_ Calendar Days  
Owner's Representative: \_\_\_\_\_  
Owner's Telephone No.: (\_\_\_\_) \_\_\_\_\_  
Date of substantial or final completion: \_\_\_\_\_
6. Project Name: \_\_\_\_\_  
Owner: \_\_\_\_\_  
Construction Cost: \_\_\_\_\_  
Construction Time: \_\_\_\_\_ Calendar Days  
Owner's Representative: \_\_\_\_\_  
Owner's Telephone No.: (\_\_\_\_) \_\_\_\_\_  
Date of substantial or final completion: \_\_\_\_\_
7. Project Name: \_\_\_\_\_  
Owner: \_\_\_\_\_  
Construction Cost: \_\_\_\_\_  
Construction Time: \_\_\_\_\_ Calendar Days  
Owner's Representative: \_\_\_\_\_  
Owner's Telephone No.: (\_\_\_\_) \_\_\_\_\_  
Date of substantial or final completion: \_\_\_\_\_

*SUBMIT THIS SHEET AS PART OF YOUR BID*

LIST OF EQUIPMENT TO BE USED ON THE PROJECT:

|       |       |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

LIST OF KEY PERSONNEL AVAILABLE FOR THE WORK:

| <u>Name</u> | <u>Job Responsibility</u> |
|-------------|---------------------------|
| _____       | _____                     |
| _____       | _____                     |
| _____       | _____                     |
| _____       | _____                     |
| _____       | _____                     |
| _____       | _____                     |
| _____       | _____                     |
| _____       | _____                     |

I certify that I am duly authorized to legally bind the bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

\_\_\_\_\_  
Name of Bidder

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Contractor's License No.

\_\_\_\_\_  
Title of Signator

\_\_\_\_\_  
Date

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**BIDDER'S STATEMENT ON PREVIOUS  
CONTRACTS SUBJECT TO EEO CLAUSE**

The Bidder shall complete the following statement by checking the appropriate lines:

\*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-I," prior to the award of contract:

\*NOTE: Failure to complete these boxes may be grounds for rejecting bid.

I certify that I am duly authorized to legally bind the bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
(Name of Bidder)

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Name & Title of Signing Official)

Business Address \_\_\_\_\_  
\_\_\_\_\_

*SUBMIT THIS SHEET AS PART OF YOUR BID*

## 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 Employment 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, sexual orientation, gender identity, 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 Employment Opportunity clause of this contract.

I certify that I am duly authorized to legally bind the bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

---

Name and Title of Signer (Please type)

---

Signature

---

Date

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

*SUBMIT THIS SHEET AS PART OF YOUR BID*



## **CERTIFICATES REGARDING DEBARMENT**

### **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 confirm 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 Certification of Offeror /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration 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.

I certify that I am duly authorized to legally bind the bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

DATE \_\_\_\_\_ SIGNED BY \_\_\_\_\_

***SUBMIT THIS SHEET AS PART OF YOUR BID***

## **TRADE RESTRICTION CERTIFICATION**

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

- 1) 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 (USTR);
- 2) 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 USTR; and
- 3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

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 USC § 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 USTR; or
- 2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list; or
- 3) who incorporates in the public works project any product of a foreign country on such USTR 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 all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign

***SUBMIT THIS SHEET AS PART OF YOUR BID***

country included on the list of countries that discriminate against U.S. firms as published by USTR, 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 (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

DATE \_\_\_\_\_ SIGNED BY \_\_\_\_\_

*SUBMIT THIS SHEET AS PART OF YOUR BID*

## **CERTIFICATION OF COMPLIANCE WITH FAA BUY AMERICAN PREFERENCE**

The Contractor certifies that its bid/offer is in compliance with 49 USC § 50101, BABA and other related Made in America Laws,<sup>1</sup> U.S. statutes, guidance, and FAA policies, which provide that Federal funds may not be obligated unless all iron, steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration 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.

The bidder or offeror must complete and submit the certification of compliance with FAA's Buy American Preference, BABA and Made in America laws included herein with their bid or offer. The Airport Sponsor/Owner will reject as nonresponsive any bid or offer that does not include a completed certification of compliance with FAA's Buy American Preference and BABA.

The bidder or offeror certifies that all constructions materials, defined to mean an article, material, or supply other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall used in the project are manufactured in the U.S.

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, and other Made in America Laws, U.S. statutes, guidance, and FAA policies 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, BABA and other related U.S. statutes, guidance, and policies of the FAA by:
- a) Only installing steel and manufactured products produced in the United States;
  - b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.
  - c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or

---

<sup>1</sup> Per Executive Order 14005 "Made in America Laws" means all statutes, regulations, rules, and Executive Orders relating to federal financial assistance awards or federal procurement, including those that refer to "Buy America" or "Buy American," that require, or provide a preference for, the purchase or acquisition of goods, products, or materials produced in the United States, including iron, steel, and manufactured products offered in the United States.

***SUBMIT THIS SHEET AS PART OF YOUR BID***

- d) 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:

- a) To provide to the Airport Sponsor or FAA evidence that documents the source and origin of the steel and manufactured product.
- b) To faithfully comply with providing U.S. domestic product.
- c) To furnish U.S. domestic product for any waiver request that the FAA rejects.
- d) 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 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

- a) To submit to the Airport Sponsor or FAA within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.
- b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.
- c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
- d) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

### **Required Documentation**

**Type 2 Waiver (Nonavailability)** - The iron, steel, manufactured goods or construction materials are not available in sufficient quantity or quality in the United States. The required documentation for the Nonavailability waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire
- b) Record of thorough market research, consideration where appropriate of qualifying alternate items, products, or materials including;
- c) A description of the market research activities and methods used to identify domestically manufactured items capable of satisfying the requirement, including the timing of the research and conclusions reached on the availability of sources.

**Type 3 Waiver** – The cost of the item components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the “item”. The required documentation for a Type 3 waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
- b) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. 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).

***SUBMIT THIS SHEET AS PART OF YOUR BID***

- c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
- d) 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 (Unreasonable Costs)** - Applying this provision for iron, steel, manufactured goods or construction materials, would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire from
- b) At minimum two comparable equal bidders and/or offerors;
- c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
- d) Completed waiver applications for each comparable bid and/or offer.

**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

***SUBMIT THIS SHEET AS PART OF YOUR BID***

**CERTIFICATION REGARDING DOMESTIC PREFERENCES FOR  
PROCUREMENTS**

The Bidder or Offeror certifies by signing and submitting this bid or proposal that, to the greatest extent practicable, the Bidder or Offeror has provided a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to, iron, aluminum, steel, cement, and other manufactured products) in compliance with 2 CFR § 200.322.

---

Date

---

Signature

---

Company Name

---

Title

*SUBMIT THIS SHEET AS PART OF YOUR BID*

### **CERTIFICATION REGARDING LOBBYING**

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, subgrants, 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.

DATE \_\_\_\_\_ SIGNED BY \_\_\_\_\_

***SUBMIT THIS SHEET AS PART OF YOUR BID***



## CERTIFICATION OF OFFEROR/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

### Certifications

- 1) The applicant represents that it is (    ) is not (    ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
- 2) The applicant represents that it is (    ) is not (    ) a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

### Note

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the Sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

### Term Definitions

**Felony conviction:** Felony conviction means a conviction within the preceding twenty four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. Code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 USC § 3559.

**Tax Delinquency:** A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

---

Date

---

Signature

---

Company Name

---

Title

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO  
SURVEILLANCE SERVICES OR EQUIPMENT**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [Public Law 115-232 § 889(f)(1)].

DATE \_\_\_\_\_ SIGNED BY \_\_\_\_\_

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**NON-COLLUSION AFFIDAVIT**  
**(To be executed by Bidder and Submitted with Bid)**

State of California

County of \_\_\_\_\_

\_\_\_\_\_, being first duly sworn, deposes and says that he or she is \_\_\_\_\_ of \_\_\_\_\_, the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid or that anyone shall refrain from bidding; that 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, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the bid are true; and, further, that 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, or paid and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member of agent thereof to effectuate a collusive or sham bid.

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 is true and correct and that this declaration is executed on the following date:

DATE \_\_\_\_\_ SIGNED BY \_\_\_\_\_

***SUBMIT THIS SHEET AS PART OF YOUR BID***

**IRAN CONTRACTING ACT CERTIFICATION (Public Contract Code § 2204)**

**TRUCKEE TAHOE AIRPORT - RECONSTRUCT APRON A2** (“Project” or “Contract”)

Pursuant to Public Contract Code (PCC) section 2204, an Iran Contracting Act certification is required for solicitations of goods or services of one million dollars (\$1,000,000) or more.

Bidder shall complete **ONLY ONE** of the following three paragraphs.

- ☐ 1. Bidder’s total bid is less than one million dollars (\$1,000,000).

**OR**

- ☐ 2. Bidder’s total bid is one million dollars (\$1,000,000) or more, but Bidder is **not** on the current list of persons engaged in investment activities in Iran created by the California Department of General Services (“DGS”) pursuant to Public Contract Code § 2203(b), and Bidder is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

**OR**

- ☐ 3. Bidder’s total bid one million dollars (\$1,000,000) or more, but the District has given prior written permission to Bidder to submit a proposal pursuant to PCC 2203(c) or (d). **A copy of the written permission from the District is included with Bid.**

I certify that I am duly authorized to legally bind the bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

**DATE**

**SIGNED BY**

---

*SUBMIT THIS SHEET AS PART OF YOUR BID*

## FLEET COMPLIANCE CERTIFICATION

Bidder hereby acknowledges that they have reviewed the California Air Resources Board's policies, rules and regulations and are familiar with the requirements of Title 13, California Code of Regulations, Division 3, Chapter 9, effective on January 1, 2024 (the "Regulation"). Bidder hereby certifies, subject to penalty for perjury, that the option checked below relating to the Bidder's fleet, and/or that of their subcontractor(s) ("Fleet") is true and correct:

- ☐ The Fleet is subject to the requirements of the Regulation, and the appropriate Certificate(s) of Reported Compliance have been attached hereto.
- ☐ The Fleet is exempt from the Regulation under section 2449.1(f)(2), and a signed description of the subject vehicles, and reasoning for exemption has been attached hereto.
- ☐ Bidder and/or their subcontractor is unable to procure R99 or R100 renewable diesel fuel as defined in the Regulation pursuant to section 2449.1(f)(3). Bidder shall keep detailed records describing the normal refueling methods, their attempts to procure renewable diesel fuel and proof that shows they were not able to procure renewable diesel (i.e. third party correspondence or vendor bids).
- ☐ The Fleet is exempt from the requirements of the Regulation pursuant to section 2449(i)(4) because this Project has been deemed an Emergency, as defined under section 2449(c)(18). Bidder shall only operate the exempted vehicles in the emergency situation and records of the exempted vehicles must be maintained, pursuant to section 2449(i)(4).
- ☐ The Fleet does not fall under the Regulation or are otherwise exempted and a detailed reasoning is attached hereto.

DATE \_\_\_\_\_ SIGNED BY \_\_\_\_\_

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**BIDDER'S BOND**

**Based on Schedule \_\_\_\_**

KNOW ALL MEN BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety, are held and firmly bound unto Truckee Tahoe Airport District, State of California, (hereinafter called "District") in the sum of ten percent (10%) of the total aggregate amount of the bid of the Principal above named, submitted by said Principal to District for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, 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 a bid to District for certain construction specifically described as follows, for which bids are to be opened on \_\_\_\_\_, \_\_\_\_\_, 2025, has been submitted by Principal to District:

(Copy here the exact description of work, including location, from bid form):

\_\_\_\_\_  
\_\_\_\_\_

NOW, THEREFORE, if the aforesaid Principal shall not withdraw said bid within the period specified therein after the opening of the same, or, if no period be specified, within ninety (90) days after said opening, and shall within the period specified therefor, or, if no period be specified, within five (5) days after the prescribed forms are presented to him/her for signature, enter into a written contract with District, in the prescribed form, in accordance with the bid as accepted, and file the two bonds with Owner, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by the Contract Documents, then this obligation shall be null and void; otherwise, it shall be and remain in full force, virtue 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 said contract or to the work to be performed thereunder or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

In the event suit is brought upon said bond by District and Judgment is recovered, then Surety shall pay all costs incurred by District in such suit, including a reasonable attorneys' fee to be fixed by the Court. Death of the Principal shall not relieve Surety of its obligations hereunder.

***SUBMIT THIS SHEET AS PART OF YOUR BID***

IN WITNESS WHEREOF, we have hereunder set our hands and seals on this \_\_\_\_\_  
day of \_\_\_\_\_, 2025.

\_\_\_\_\_(SEAL)

\_\_\_\_\_(SEAL)

\_\_\_\_\_(SEAL)

\_\_\_\_\_(SEAL)

\_\_\_\_\_(SEAL)

\_\_\_\_\_(SEAL)

SURETY

PRINCIPAL

NOTE:

Signatures of those executing for Surety must be properly acknowledged, and a power of attorney attached.

*SUBMIT THIS SHEET AS PART OF YOUR BID*

**PART A**

**DIVISION III**

**CONTRACT DOCUMENTS**



**NOTICE OF AWARD**

TO: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROJECT DESCRIPTION:**

**TRUCKEE TAHOE AIRPORT DISTRICT  
RECONSTRUCT APRON A2  
FAA AIP NO. 3-06-0262-0\_\_-2025**

The proposed work includes the following:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

The Owner has considered the Bid submitted by you for the above described Work in response to its Advertisement for Bids dated March 12, 2025, and the Instructions to Bidders.

You are hereby notified that your Bid has been accepted in the amount of \$\_\_\_\_\_.

You are required by the Instructions to Bidders to execute the Agreement and furnish the required Contractor's Performance Bond, Labor and Materials Bond, and certificates of insurance within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bonds within fifteen (15) days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned and as a forfeiture of your Bid Bond.

The Owner will be entitled to such other rights as may be granted by law. You are required to return an acknowledged copy of this Notice of Award to the Owner.

DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2025.

TRUCKEE TAHOE AIRPORT DISTRICT

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**ACCEPTANCE OF NOTICE**

Receipt of the above Notice of Award is hereby acknowledged by

\_\_\_\_\_

This the \_\_\_\_\_ day of \_\_\_\_\_, 2025

Name: \_\_\_\_\_

Title: \_\_\_\_\_

## **CONTRACT AGREEMENT**

THIS AGREEMENT, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2025, by and between Truckee Tahoe Airport District hereinafter sometimes called "SPONSOR" or "OWNER", and \_\_\_\_\_ hereinafter called "CONTRACTOR".

### **WITNESSETH:**

WHEREAS Truckee Tahoe Airport District initiated proceedings for the **RECONSTRUCT APRON A2, FAA AIP NO. 3-06-0262-0\_\_-2025**, said improvements to consist of:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

WHEREAS on the 12th day of March 2025 Truckee Tahoe Airport District requested bids for construction of said improvements;

WHEREAS on the 16th day of April 2025 the day fixed for opening and considering such bids, the Contractor submitted a proposal for said improvements, which Proposal is attached hereto and made a part hereof, said Proposal having been regularly and duly accepted on the \_\_\_\_\_ day of \_\_\_\_\_, 2025 all in full compliance with the Contract Documents for total bid amount.

NOW, THEREFORE, in consideration of the Mutual covenants, herein contained, the parties hereto mutually covenant and agree as follows:

### **SCOPE OF WORK**

Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor and materials necessary to perform and complete in a good workmanlike manner the project as described:

### **TRUCKEE TAHOE AIRPORT RECONSTRUCT APRON A2 FAA AIP NO. 3-06-0262-0\_\_-2025**

### **TIME OF COMPLETION**

The work shall be commenced within ten (10) calendar days and the total project completed within [\_\_\_\_\_] (\_\_\_\_) working days from the date set in the "Notice to Proceed" issued by the Owner.

### CONTRACT PRICE

Owner shall pay Contractor for the full and complete performance of this Contract at unit prices bid the approximately sum of : \_\_\_\_\_  
\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_).

### PAYMENTS

Payment for the work will be made in accordance with the provisions in the Specifications – General Contract Provisions.

### ACCESS TO DOCUMENTS, RECORDS, ETC.

The Sponsor, the FAA, the Comptroller General of the United States, or any of their duly authorized representatives, shall be allowed access to any books, documents, papers, and records of the Contractor which are directly pertinent to an AIP project(s) for the purpose of making audit, examination, excerpts, and transcriptions.

### BONDS

The Contractor agrees to furnish a Performance Bond for 100 percent (100%) of the Contract Price. This bond is one that is executed in connection with a Contract to secure fulfillment of all the Contractor's obligations under such Contract.

The Contractor agrees to furnish a Labor and Materials Bond for 100 percent (100%) of the Contract Price. This bond is one that is executed in connection with a Contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the Contract.

### ENTIRE CONTRACT

No verbal agreement or conversation with an officer, agent or employee of Owner, either before, during or after the execution of this Contract, shall affect or modify any of the terms or obligations contained in the Contract Documents, nor shall such verbal agreement or conversation entitle Contractor to any additional payment whatsoever under the terms of this Contract.

### CONTRACT DOCUMENTS

The Contract Documents shall consist of this Contract Agreement and the following documents, each of which is on file in the office of the Owner and all of which are incorporated herein and made a part hereof by reference thereto:

- a. Advertisement for Bids
- b. Instructions to Bidders
- c. The accepted proposal documents including only:
  - (1) Bid Schedule
  - (2) Acknowledgement of Receipt of Addenda

- (3) Bidder Affidavit
- (4) Assurance of Disadvantaged Business Enterprise Participation
- (5) DBE Participation List
- (6) DBE Subcontractor Attestation
- (7) Designation of Subcontractors
- (8) Certification of Bidder's Experience and Qualifications
- (9) Bidder's Statement on Previous Contracts Subject to EEO Clause
- (10) Prohibition of Segregated Facilities
- (11) Certificates Regarding Debarment
- (12) Trade Restriction Certification
- (13) Certification of Buy American Compliance
- (14) Certification Regarding Domestic Preferences for Procurements
- (15) Certification Regarding Lobbying
- (16) Certification of Offeror/Bidder Regarding Tax Delinquency and Felony Convictions
- (17) Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment
- (18) Non-Collusion Affidavit
- (19) Iran Contracting Act Certification
- (20) Fleet Compliance Certification
- (21) Bidder's Bond
- d. This Contract Agreement
- e. Acknowledgements and Bonds
  - (1) Performance Bond
  - (2) Labor and Materials Bond
  - (3) Contractor's Acknowledgement
- f. Federal Aviation Administration General Provisions
- g. Federal Aviation Administration General Construction Items
- h. Special Provisions within the Project Manual
- i. Technical Provisions within the Project Manual
- j. Construction Safety and Phasing Plan (CSPP)
- k. Construction Management Plan
- l. Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects
- m. Federal Wage Rates
- n. State Wage Rates
- o. Contract Drawings and Plans
- p. Duly issued addenda and/or clarifications
- q. Supplemental Drawings issued
- r. Approved Change Orders

This contract is not assignable by the Contractor without the express written consent of the Owner and the Federal Aviation Administration.

## FAILURE TO COMPLETE ON TIME

Time is of the essence hereof. There shall be [ \_\_\_\_\_ ( ) ] working days in which to complete the work for the total project. For each working day, as specified in the Contract, that any work in any phase of the contract remains uncompleted after the Contract time (including all extensions and adjustments as provided in Section 80-7, DETERMINATION AND EXTENSION OF CONTRACT TIME of Part B, Division I, Federal General Contract Provisions of the Specifications) it is understood that Owner will suffer damage; and it being impracticable and infeasible to determine the amount of actual damage, it is agreed that Contractor shall pay the Owner as fixed and liquidated damages, and not as penalty, the sum of Five Thousand Dollars (\$5,000) for each calendar day of delay until the Work is completed and accepted, and Contractor and his surety shall be liable for the amount thereof; and the Owner may deduct said sums from any money due or to become due the Contractor; provided, however, that Contractor shall not be charged liquidated damages because of any delays in the completion of Work due to unforeseeable causes beyond the control and without the fault or negligence of Contractor (including, but not restricted to, Acts of God or of the public enemy, acts of the Government, acts of Owner, fires, floods, epidemics, quarantine restrictions, strikes, and freight embargoes).

Contractor shall, within ten (10) days from the beginning of any such delay, notify Owner in writing of the cause of the delay; whereupon Owner shall ascertain the facts and the extent of the delay and extend the time for completing the Work when in his judgment the findings of fact justify such an extension. Owner's findings of fact thereon shall be final and conclusive on the parties hereto.

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 waiver on the part of the Owner of any of its rights under the CONTRACT.

See Part B, Division II, Special Provisions, Article 8, LIQUIDATED DAMAGES for Liquidated Damages related to contract completion.

IN WITNESS WHEREOF, we, the parties hereto each herewith subscribe this \_\_\_\_ day of \_\_\_\_\_, 2025.

TRUCKEE TAHOE AIRPORT DISTRICT

By:\_\_\_\_\_

Name:\_\_\_\_\_

Title:\_\_\_\_\_

ATTEST:

By:\_\_\_\_\_

Name:\_\_\_\_\_

Title:\_\_\_\_\_

CONTRACTOR:

By:\_\_\_\_\_

Name:\_\_\_\_\_

Address:\_\_\_\_\_

\_\_\_\_\_

ATTEST:

By:\_\_\_\_\_

Name:\_\_\_\_\_

Title:\_\_\_\_\_

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: That

\_\_\_\_\_  
(NAME OF CONTRACTOR)

\_\_\_\_\_  
(ADDRESS OF CONTRACTOR)

a \_\_\_\_\_, hereinafter called Principal, and  
(CORPORATION, PARTNERSHIP, INDIVIDUAL)

\_\_\_\_\_  
(NAME OF SURETY)

\_\_\_\_\_  
(ADDRESS OF SURETY)

HEREINAFTER called Surety, are held and firmly bound unto Truckee Tahoe Airport District, hereinafter called OWNER, in the total aggregate penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_).

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain CONTRACT with the OWNER dated the \_\_\_\_\_ day of \_\_\_\_\_, 2025, a copy of which is hereto attached and made a part hereof for the construction of the:

**TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
AIP NO. 3-06-0262-0\_\_-2025**

NOW, THEREFORE, if the PRINCIPAL shall well, truly and faithfully perform its duties, all undertakings, covenants, terms, conditions and agreements of said CONTRACT during the original term hereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the SURETY and during the one (1) year guaranty period, and if the PRINCIPAL shall satisfy all claims and demands incurred under such CONTRACT, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expenses which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect. Should the PRINCIPAL fail to perform as above set forth, then the SURETY agrees to and shall cause the obligations and duties of the PRINCIPAL, as set forth in the CONTRACT referred to herein, to be carried out in full.

PROVIDED, FURTHER, that the said SURETY for the value received hereby stipulates and agrees that no change, extension of time, addition or alteration to the terms of the CONTRACT or to work to be performed thereunder or to the SPECIFICATIONS, accompanying the same shall in any



way affect its obligation 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 instruction is executed in 4 counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 2025.

**PRINCIPAL:**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

(SEAL)

ATTEST:

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

**SURETY:**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

(SEAL)

ATTEST:

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

**IMPORTANT:**

- SURETY companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.
- Date of BOND must not be prior to date of CONTRACT.
- If CONTRACTOR is partnership, all partners should execute BOND.

**LABOR AND MATERIALS BOND**

KNOW ALL MEN BY THESE PRESENTS: That

\_\_\_\_\_  
(NAME OF CONTRACTOR)\_\_\_\_\_  
(ADDRESS OF CONTRACTOR)a \_\_\_\_\_, hereinafter called Principal, and  
(CORPORATION, PARTNERSHIP, INDIVIDUAL)\_\_\_\_\_  
(NAME OF SURETY)\_\_\_\_\_  
(ADDRESS OF SURETY)

HEREINAFTER called Surety, are held and firmly bound unto Truckee Tahoe Airport District, hereinafter called OWNER, in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) an amount not less than one hundred percent (100%) of the Contract Amount in lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain CONTRACT with the OWNER dated the \_\_\_\_\_ day of \_\_\_\_\_, 2025, a copy of which is hereto attached and made a part hereof for the construction of the:

**TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
AIP NO. 3-06-0262-0\_\_-2025**

NOW, THEREFORE, if the PRINCIPAL shall well, truly and faithfully perform its duties, all undertakings, covenants, terms, conditions and agreements of said CONTRACT during the original term hereof, and any extensions thereof which may be granted by the OWNER, from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY for the value received hereby stipulates and agrees that no change, extension of time, addition or alteration to the terms of the CONTRACT or to work to be performed thereunder or to the SPECIFICATIONS, accompanying the same shall in any way affect its obligation 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 instruction is executed in 4 counterparts, each one of which shall be deemed an original, this the \_\_\_\_ day of \_\_\_\_\_, 2025.

**PRINCIPAL:**

By:\_\_\_\_\_

Name:\_\_\_\_\_

Title:\_\_\_\_\_

Address:\_\_\_\_\_

\_\_\_\_\_

(SEAL)

ATTEST:

By:\_\_\_\_\_

Name:\_\_\_\_\_

Title:\_\_\_\_\_

Address:\_\_\_\_\_

\_\_\_\_\_

**SURETY:**

By:\_\_\_\_\_

Name:\_\_\_\_\_

Title:\_\_\_\_\_

Address:\_\_\_\_\_

\_\_\_\_\_

(SEAL)

ATTEST:

By:\_\_\_\_\_

Name:\_\_\_\_\_

Title:\_\_\_\_\_

Address:\_\_\_\_\_

\_\_\_\_\_

**IMPORTANT:** SURETY companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

**NOTICE TO PROCEED**

TO: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROJECT DESCRIPTION:**

**TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
FAA AIP NO. 3-06-0262-0\_\_-2025**

The proposed work includes the following:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

You are hereby notified to commence work in accordance with the agreement dated \_\_\_\_\_, 2025, within ten (10) calendar days of the date on this Notice to Proceed. You are to complete the work within [\_\_\_\_\_] (\_\_\_\_\_) working days from the date of the Notice to Proceed for the total project. The date of completion of all work is therefore \_\_\_\_\_, 2025.

You are required to return an acknowledged copy of this Notice of Proceed to the Owner.

DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2025.

TRUCKEE TAHOE AIRPORT DISTRICT

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**ACCEPTANCE OF NOTICE**

Receipt of the above Notice to Proceed is hereby acknowledged by

\_\_\_\_\_

This the \_\_\_\_\_ day of \_\_\_\_\_, 2025

Name: \_\_\_\_\_

Title: \_\_\_\_\_

# **FEDERAL WAGE RATES AND STATE WAGE RATES**

The Federal and State Wage Rates applicable to this Project are included hereinafter.

# **FEDERAL WAGE RATES**

"General Decision Number: CA20250007 03/07/2025

Superseded General Decision Number: CA20240007

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

Counties: Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Marin, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sonoma, Sutter, Tehama, Trinity, Yolo and Yuba Counties in California.

BUILDING CONSTRUCTION PROJECTS (excluding Amador County only);  
DREDGING CONSTRUCTION PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); AND HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|   |  |  |  |
|---|--|--|--|
| If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: |  | Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.  |  |
| If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:         |  | Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025. |  |



The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0                   | 01/03/2025       |
| 1                   | 01/10/2025       |
| 2                   | 02/07/2025       |
| 3                   | 02/21/2025       |
| 4                   | 02/28/2025       |
| 5                   | 03/07/2025       |

ASBE0016-001 01/01/2024

AREA 1: MARIN, NAPA, SAN BENITO, SAN FRANCISCO, SOLANO, & SONOMA COUNTIES

AREA 2: ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHEMA, TRINITY, YOLO, & YUBA COUNTIES

|   | Rates    | Fringes |
|---|----------|---------|
| Asbestos Workers/Insulator<br>(Includes the application of<br>all insulating materials,<br>Protective Coverings,<br>Coatings, and Finishes to all<br>types of mechanical systems) |          |         |
| Area 1.....   | \$ 84.76 | 25.07   |
| Area 2.....   | \$ 64.56 | 25.07   |

-----  
ASBE0016-007 05/01/2024

AREA 1 : ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO, SONOMA, SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

AREA 2: MARIN & NAPA COUNTIES

|   | Rates | Fringes |
|---|-------|---------|
| Asbestos Removal<br>worker/hazardous material |       |         |

handler (Includes  
preparation, wetting,  
stripping, removal,  
scrapping, vacuuming, bagging  
and disposing of all  
insulation materials from  
mechanical systems, whether  
they contain asbestos or not)

|             |          |       |
|-------------|----------|-------|
| AREA 1..... | \$ 34.56 | 11.40 |
| AREA 2..... | \$ 36.53 | 9.27  |

-----  
BOIL0549-002 01/01/2021

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

BOILERMAKER

|                               |          |       |
|-------------------------------|----------|-------|
| (1) Marin & Solano Counties.. | \$ 49.62 | 41.27 |
| (2) Remaining Counties.....   | \$ 45.60 | 38.99 |

-----  
BRCA0003-001 08/01/2024

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

|                      |          |       |
|----------------------|----------|-------|
| MARBLE FINISHER..... | \$ 42.06 | 19.80 |
|----------------------|----------|-------|

-----  
BRCA0003-004 05/01/2024

AREA 1: ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN,  
LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA,  
SIERRA, SUTTER, TEHAMA, YOLO AND YUBA COUNTIES

AREA 2: MARIN, NAPA, SISKIYOU, SOLANO, SONOMA AND TRINITY  
COUNTIES

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

BRICKLAYER

|             |          |       |
|-------------|----------|-------|
| AREA 1..... | \$ 52.76 | 25.01 |
| AREA 2..... | \$ 57.02 | 28.50 |

SPECIALTY PAY:

(A) Underground work such as tunnel work, sewer work,  
manholes, catch basins, sewer pipes and telephone conduit  
shall be paid \$1.25 per hour above the regular rate. Work  
in direct contact with raw sewage shall receive \$1.25 per  
hour in addition to the above.

(B) Operating a saw or grinder shall receive \$1.25 per hour  
above the regular rate.

(C) Guniting nozzle person shall receive \$1.25 per hour above  
the regular rate.

-----  
BRCA0003-008 07/01/2024

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

|                             |          |       |
|-----------------------------|----------|-------|
| TERRAZZO FINISHER.....      | \$ 44.93 | 20.98 |
| TERRAZZO WORKER/SETTER..... | \$ 60.58 | 29.79 |

-----  
BRCA0003-010 04/01/2024

|               | Rates    | Fringes |
|---------------|----------|---------|
| TILE FINISHER |          |         |
| Area 1.....   | \$ 35.00 | 17.44   |
| Area 2.....   | \$ 34.76 | 19.22   |
| Area 3.....   | \$ 37.75 | 19.28   |
| Area 4.....   | \$ 35.78 | 19.23   |
| Tile Layer    |          |         |
| Area 1.....   | \$ 55.55 | 21.08   |
| Area 2.....   | \$ 55.17 | 22.52   |
| Area 3.....   | \$ 59.92 | 22.62   |
| Area 4.....   | \$ 56.79 | 22.54   |

AREA 1: Butte, Colusa, El Dorado, Glenn, Lassen, Modoc,  
Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter,  
Tehama, Yolo, Yuba  
AREA 2: Alpine, Amador  
AREA 3: Marin, Napa, Solano, Siskiyou  
AREA 4: Sonoma

-----  
BRCA0003-014 08/01/2024

|                   | Rates    | Fringes |
|-------------------|----------|---------|
| MARBLE MASON..... | \$ 61.72 | 30.31   |

-----  
CARP0034-001 07/01/2021

|                                       | Rates     | Fringes |
|---------------------------------------|-----------|---------|
| Diver                                 |           |         |
| Assistant Tender, ROV                 |           |         |
| Tender/Technician.....                | \$ 54.10  | 34.69   |
| Diver standby.....                    | \$ 60.51  | 34.69   |
| Diver Tender.....                     | \$ 59.51  | 34.69   |
| Diver wet.....                        | \$ 103.62 | 34.69   |
| Manifold Operator (mixed<br>gas)..... | \$ 64.51  | 34.69   |
| Manifold Operator (Standby).\$        | 59.51     | 34.69   |

DEPTH PAY (Surface Diving):  
050 to 100 ft \$2.00 per foot  
101 to 150 ft \$3.00 per foot  
151 to 220 ft \$4.00 per foot  
221 ft.-deeper \$5.00 per foot

#### SATURATION DIVING:

The standby rate shall apply until saturation starts. The  
saturation diving rate applies when divers are under

pressure continuously until work task and decompression are complete. The diver rate shall be paid for all saturation hours.

#### DIVING IN ENCLOSURES:

Where it is necessary for Divers to enter pipes or tunnels, or other enclosures where there is no vertical ascent, the following premium shall be paid: Distance traveled from entrance 26 feet to 300 feet: \$1.00 per foot. When it is necessary for a diver to enter any pipe, tunnel or other enclosure less than 48" in height, the premium will be \$1.00 per foot.

#### WORK IN COMBINATION OF CLASSIFICATIONS:

Employees working in any combination of classifications within the diving crew (except dive supervisor) in a shift are paid in the classification with the highest rate for that shift.

-----  
CARP0034-003 07/01/2021

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| Piledriver..... | \$ 54.10 | 34.69   |

-----  
CARP0035-001 08/01/2020

AREA 1: MARIN, NAPA, SOLANO & SONOMA

AREA 3: SACRAMENTO, WESTERN EL DORADO (Territory west of and including highway 49 and the territory inside the city limits of Placerville), WESTERN PLACER (Territory west of and including highway 49), & YOLO

AREA 4: ALPINE, BUTTE, COLUSA, EASTERN EL DORADO, GLENN, LASSEN, MODOC, NEVADA, EASTERN PLACER, PLUMAS, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, & YUBA

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| Drywall Installers/Lathers: |          |         |
| Area 1.....                 | \$ 52.65 | 31.26   |
| Area 3.....                 | \$ 47.27 | 31.26   |
| Area 4.....                 | \$ 45.92 | 31.26   |
| Drywall Stocker/Scraper     |          |         |
| Area 1.....                 | \$ 26.33 | 18.22   |
| Area 3.....                 | \$ 23.64 | 18.22   |
| Area 4.....                 | \$ 22.97 | 18.22   |

-----  
CARP0035-009 07/01/2020

Marin County

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

## CARPENTER

|   |          |       |
|---|----------|-------|
| Bridge Builder/Highway<br>Carpenter.....  | \$ 52.65 | 30.82 |
| Hardwood Floorlayer,<br>Shingler, Power Saw<br>Operator, Steel Scaffold &<br>Steel Shoring Erector, Saw<br>Filer..... | \$ 52.80 | 30.82 |
| Journeyman Carpenter.....   | \$ 52.65 | 30.82 |
| Millwright.....   | \$ 52.75 | 32.41 |

-----  
CARP0035-010 07/01/2020

AREA 1: Marin, Napa, Solano & Sonoma Counties

AREA 2: Monterey, San Benito and Santa Cruz

AREA 3: Alpine, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc,  
Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou,  
Sutter, Tehama, Trinity, Yolo & Yuba counties

Rates      Fringes

### Modular Furniture Installer

|                       |          |       |
|-----------------------|----------|-------|
| Area 1                |          |       |
| Installer.....        | \$ 28.76 | 22.53 |
| Lead Installer.....   | \$ 32.21 | 23.03 |
| Master Installer..... | \$ 36.43 | 23.03 |
| Area 2                |          |       |
| Installer.....        | \$ 26.11 | 22.53 |
| Lead Installer.....   | \$ 29.08 | 23.03 |
| Master Installer..... | \$ 32.71 | 23.03 |
| Area 3                |          |       |
| Installer.....        | \$ 25.16 | 22.53 |
| Lead Installer.....   | \$ 27.96 | 23.03 |
| Master Installer..... | \$ 31.38 | 23.03 |

-----  
CARP0046-001 07/01/2023

El Dorado (West), Placer (West), Sacramento and Yolo Counties

Rates      Fringes

### Carpenters

|   |          |       |
|---|----------|-------|
| Bridge Builder/Highway<br>Carpenter.....  | \$ 60.39 | 33.52 |
| Hardwood Floorlayer,<br>Shingler, Power Saw<br>Operator, Steel Scaffold &<br>Steel Shoring Erector, Saw<br>Filer..... | \$ 54.66 | 33.52 |
| Journeyman Carpenter.....   | \$ 54.51 | 33.52 |
| Millwright.....   | \$ 57.01 | 35.11 |

Footnote: Placer County (West) includes territory West of and including Highway 49 and El Dorado County (West) includes territory West of and including Highway 49 and territory inside the city limits of Placerville.

---

CARP0046-002 07/01/2023

Alpine, Colusa, El Dorado (East), Nevada, Placer (East),  
Sierra, Sutter and Yuba Counties

|   | Rates    | Fringes |
|---|----------|---------|
| Carpenters  |          |         |
| Bridge Builder/Highway<br>Carpenter.....  | \$ 60.39 | 33.52   |
| Hardwood Floorlayer,<br>Shingler, Power Saw<br>Operator, Steel Scaffold &<br>Steel Shoring Erector, Saw<br>Filer..... | \$ 53.31 | 33.52   |
| Journeyman Carpenter.....   | \$ 53.16 | 33.52   |
| Millwright.....   | \$ 55.66 | 35.11   |

---

CARP0152-003 07/01/2020

Amador County

|   | Rates    | Fringes |
|---|----------|---------|
| Carpenters  |          |         |
| Bridge Builder/Highway<br>Carpenter.....  | \$ 52.65 | 30.82   |
| Hardwood Floorlayer,<br>Shingler, Power Saw<br>Operator, Steel Scaffold &<br>Steel Shoring Erector, Saw<br>Filer..... | \$ 45.57 | 30.82   |
| Journeyman Carpenter.....   | \$ 45.42 | 30.82   |
| Millwright.....   | \$ 47.92 | 32.41   |

---

CARP0180-001 07/01/2021

Solano County

|   | Rates    | Fringes |
|---|----------|---------|
| Carpenters  |          |         |
| Bridge Builder/Highway<br>Carpenter.....  | \$ 54.85 | 31.49   |
| Hardwood Floorlayer,<br>Shingler, Power Saw<br>Operator, Steel Scaffold &<br>Steel Shoring Erector, Saw<br>Filer..... | \$ 55.00 | 31.49   |

|                           |          |       |
|---------------------------|----------|-------|
| Journeyman Carpenter..... | \$ 54.85 | 31.49 |
| Millwright.....           | \$ 54.95 | 33.08 |

-----

CARP0751-001 07/01/2021

Napa and Sonoma Counties

|  |       |         |
|--|-------|---------|
|  | Rates | Fringes |
|--|-------|---------|

Carpenters

|   |          |       |
|---|----------|-------|
| Bridge Builder/Highway<br>Carpenter.....  | \$ 54.85 | 31.49 |
| Hardwood Floorlayer,<br>Shingler, Power Saw<br>Operator, Steel Scaffold &<br>Steel Shoring Erector, Saw<br>Filer..... | \$ 55.00 | 31.49 |
| Journeyman Carpenter.....   | \$ 54.85 | 31.49 |
| Millwright.....   | \$ 54.95 | 33.08 |

-----

CARP1599-001 07/01/2020

Butte, Glenn, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama  
and Trinity Counties

|  |       |         |
|--|-------|---------|
|  | Rates | Fringes |
|--|-------|---------|

Carpenters

|   |          |       |
|---|----------|-------|
| Bridge Builder/Highway<br>Carpenter.....  | \$ 52.65 | 30.82 |
| Hardwood Floorlayer,<br>Shingler, Power Saw<br>Operator, Steel Scaffold &<br>Steel Shoring Erector, Saw<br>Filer..... | \$ 45.57 | 30.82 |
| Journeyman Carpenter.....   | \$ 45.42 | 30.82 |
| Millwright.....   | \$ 47.92 | 32.41 |

-----

ELEC0180-001 06/01/2024

NAPA AND SOLANO COUNTIES

|  |       |         |
|--|-------|---------|
|  | Rates | Fringes |
|--|-------|---------|

|                    |          |          |
|--------------------|----------|----------|
| CABLE SPLICER..... | \$ 66.44 | 3%+27.84 |
| ELECTRICIAN.....   | \$ 59.06 | 3%+27.83 |

-----

ELEC0180-003 12/01/2023

NAPA AND SOLANO COUNTIES

|  |       |         |
|--|-------|---------|
|  | Rates | Fringes |
|--|-------|---------|

Sound & Communications

|                |          |       |
|----------------|----------|-------|
| Installer..... | \$ 48.44 | 27.60 |
|----------------|----------|-------|

Technician.....\$ 55.71      27.82

**SCOPE OF WORK INCLUDES-**

SOUND & VOICE TRANSMISSION (Music, Intercom, Nurse Call, Telephone); FIRE ALARM SYSTEMS [excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs], TELEVISION & VIDEO SYSTEMS, SECURITY SYSTEMS, COMMUNICATIONS SYSTEMS that transmit or receive information and/or control systems that are intrinsic to the above.

**EXCLUDES-**

Excludes all other data systems or multiple systems which include control function or power supply; excludes installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excludes energy management systems.

-----  
ELEC0340-002 02/01/2018

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, NEVADA, PLACER, PLUMAS, SACRAMENTO, TRINITY, YOLO, YUBA COUNTIES

Rates      Fringes

**Communications System**

|                        |          |          |
|------------------------|----------|----------|
| Sound & Communications |          |          |
| Installer.....         | \$ 29.35 | 3%+15.35 |
| Sound & Communications |          |          |
| Technician.....        | \$ 33.75 | 3%+15.35 |

**SCOPE OF WORK**

Includes the installation testing, service and maintenance, of the following systems which utilize the transmission and/or transference of voice, sound, vision and digital for commercial, education, security and entertainment purposes for the following TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call system, radio page, school intercom and sound, burglar alarms, and low voltage master clock systems.

**A. SOUND AND VOICE TRANSMISSION/TRANSFERENCE SYSTEMS**

Background foreground music Intercom and telephone interconnect systems, Telephone systems, Nurse call systems, Radio page systems, School intercom and sound systems, Burglar alarm systems, Low voltage master clock systems, Multi-media/multiplex systems, Sound and musical entertainment systems, RF systems, Antennas and Wave Guide.



## B. FIRE ALARM SYSTEMS

Installation, wire pulling and testing

C. TELEVISION AND VIDEO SYSTEMS    Television monitoring and surveillance systems, Video security systems, Video entertainment systems, Video educational systems, Microwave transmission systems, CATV and CCTV

D. SECURITY SYSTEMS    Perimeter security systems  
Vibration sensor systems    Card access systems    Access control systems    Sonar/infrared monitoring equipment

E. COMMUNICATIONS SYSTEMS THAT TRANSMIT OR RECEIVE INFORMATION AND/OR CONTROL SYSTEMS THAT ARE INTRINSIC TO THE ABOVE LISTED SYSTEMS    SCADA (Supervisory Control and Data Acquisition)    PCM (Pulse Code Modulation)  
Inventory Control Systems    Digital Data Systems  
Broadband and Baseband and Carriers    Point of Sale Systems    VSAT Data Systems    Data Communication Systems    RF and Remote Control Systems    Fiber Optic Data Systems  
WORK EXCLUDED Raceway systems are not covered (excluding Ladder-Rack for the purpose of the above listed systems). Chases and/or nipples (not to exceed 10 feet) may be installed on open wiring systems. Energy management systems. SCADA (Supervisory Control and Data Acquisition) when not intrinsic to the above listed systems (in the scope). Fire alarm systems when installed in raceways (including wire and cable pulling) shall be performed at the electrician wage rate, when either of the following two (2) conditions apply:

1. The project involves new or major remodel building trades construction.
2. The conductors for the fire alarm system are installed in conduit.

-----  
ELEC0340-003 08/01/2022

ALPINE (West of Sierra Mt. Watershed), AMADOR, BUTTE, COLUSA, EL DORADO (West of Sierra Mt. Watershed), GLENN, LASSEN, NEVADA (West of Sierra Mt. Watershed), PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA (West of Sierra Mt. Watershed), SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

### ELECTRICIAN

|                              |          |       |
|------------------------------|----------|-------|
| Remaining area.....          | \$ 45.06 | 34.09 |
| Sierra Army Depot, Herlong.. | \$ 48.83 | 18.54 |
| Tunnel work.....             | \$ 41.01 | 18.54 |

CABLE SPLICER: Receives 110% of the Electrician basic hourly rate.

-----  
ELEC0401-005 01/01/2025

ALPINE (east of the main watershed divide), EL DORADO (east of the main watershed divide), NEVADA (east of the main watershed), PLACER (east of the main watershed divide) and SIERRA (east of the main watershed divide) COUNTIES:

|                  | Rates    | Fringes |
|------------------|----------|---------|
| ELECTRICIAN..... | \$ 48.50 | 23.04   |

ZONE RATE:

70-90 miles - \$10.00 per hour  
91+ miles - \$15.00 per hour

-----  
ELEC0551-004 06/01/2024

MARIN AND SONOMA COUNTIES

|                  | Rates    | Fringes |
|------------------|----------|---------|
| ELECTRICIAN..... | \$ 59.17 | 32.04   |

-----  
ELEC0551-005 12/01/2024

MARIN & SONOMA COUNTIES

|                        | Rates    | Fringes |
|------------------------|----------|---------|
| Sound & Communications |          |         |
| Installer.....         | \$ 51.59 | 28.20   |
| Technician.....        | \$ 59.33 | 28.43   |

SCOPE OF WORK INCLUDES-  
SOUND & VOICE TRANSMISSION (Music, Intercom, Nurse Call, Telephone); FIRE ALARM SYSTEMS [excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs],  
TELEVISION & VIDEO SYSTEMS, SECURITY SYSTEMS, COMMUNICATIONS SYSTEMS that transmit or receive information and/or control systems that are intrinsic to the above.

EXCLUDES-  
Excludes all other data systems or multiple systems which include control function or power supply; excludes installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excludes energy management systems.

-----  
ELEC0659-006 01/01/2025

MODOC and SISKIYOU COUNTIES

|                  | Rates    | Fringes |
|------------------|----------|---------|
| ELECTRICIAN..... | \$ 45.58 | 20.70   |

-----

ELEC0659-008 02/01/2023

DEL NORTE, MODOC & SISKIYOU COUNTIES

|  | Rates    | Fringes    |
|--|----------|------------|
| Line Construction  |          |            |
| (1) Cable Splicer.....                                     | \$ 67.80 | 4.5%+22.15 |
| (2) Lineman, Pole Sprayer,<br>Heavy Line Equipment Man.... | \$ 60.54 | 4.5%+22.15 |
| (3) Tree Trimmer.....                                      | \$ 37.84 | 4.5%+14.30 |
| (4) Line Equipment Man.....                                | \$ 53.82 | 4.5%+19.40 |
| (5) Powdermen,<br>Jackhammermen.....                       | \$ 40.37 | 4.5%+14.30 |
| (6) Groundman.....   | \$ 33.37 | 4.5%+14.30 |

-----

ELEC1245-004 01/01/2025

ALL COUNTIES EXCEPT DEL NORTE, MODOC & SISKIYOU

|  | Rates    | Fringes |
|--|----------|---------|
| LINE CONSTRUCTION  |          |         |
| (1) Lineman; Cable splicer..   | \$ 70.16 | 24.71   |
| (2) Equipment specialist<br>(operates crawler<br>tractors, commercial motor<br>vehicles, backhoes,<br>trenchers, cranes (50 tons<br>and below), overhead &<br>underground distribution<br>line equipment)..... | \$ 53.30 | 22.26   |
| (3) Groundman.....   | \$ 40.76 | 21.76   |
| (4) Powderman.....   | \$ 51.87 | 18.79   |

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day,  
Independence Day, Labor Day, Veterans Day, Thanksgiving Day  
and day after Thanksgiving, Christmas Day

-----  
ELEV0008-001 01/01/2025

|                        | Rates    | Fringes    |
|------------------------|----------|------------|
| ELEVATOR MECHANIC..... | \$ 84.05 | 38.435+a+b |

FOOTNOTE:

- a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
- b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

-----  
 ENGI0003-008 08/01/2024

Rates      Fringes

Dredging: (DREDGING:  
 CLAMSHELL & DIPPER DREDGING;  
 HYDRAULIC SUCTION DREDGING:)

AREA 1:

|   |          |       |
|---|----------|-------|
| (1) Leverman.....   | \$ 60.61 | 39.55 |
| (2) Dredge Dozer; Heavy<br>duty repairman.....  | \$ 55.65 | 39.55 |
| (3) Booster Pump<br>Operator; Deck<br>Engineer; Deck mate;<br>Dredge Tender; Winch<br>Operator..... | \$ 54.53 | 39.55 |
| (4) Bargeman; Deckhand;<br>Fireman; Leveehand; Oiler..  | \$ 51.23 | 39.55 |

AREA 2:

|   |          |       |
|---|----------|-------|
| (1) Leverman.....   | \$ 62.61 | 39.55 |
| (2) Dredge Dozer; Heavy<br>duty repairman.....  | \$ 57.65 | 39.55 |
| (3) Booster Pump<br>Operator; Deck<br>Engineer; Deck mate;<br>Dredge Tender; Winch<br>Operator..... | \$ 56.53 | 39.55 |
| (4) Bargeman; Deckhand;<br>Fireman; Leveehand; Oiler..  | \$ 53.23 | 39.55 |

AREA DESCRIPTIONS

AREA 1: ALAMEDA,BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED,  
 NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN,  
 SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS,  
 SUTTER, YOLO, AND YUBA COUNTIES

AREA 2: MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2  
 AS NOTED BELOW:

ALPINE COUNTY:

Area 1: Northernmost part  
 Area 2: Remainder

CALAVERAS COUNTY:

Area 1: Remainder

Area 2: Eastern part

COLUSA COUNTY:

Area 1: Eastern part

Area 2: Remainder

ELDORADO COUNTY:

Area 1: North Central part

Area 2: Remainder

FRESNO COUNTY:

Area 1: Remainder

Area 2: Eastern part

GLENN COUNTY:

Area 1: Eastern part

Area 2: Remainder

LASSEN COUNTY:

Area 1: Western part along the Southern portion of border  
with Shasta County

Area 2: Remainder

MADERA COUNTY:

Area 1: Except Eastern part

Area 2: Eastern part

MARIPOSA COUNTY

Area 1: Except Eastern part

Area 2: Eastern part

MONTERREY COUNTY

Area 1: Except Southwestern part

Area 2: Southwestern part

NEVADA COUNTY:

Area 1: All but the Northern portion along the border of  
Sierra County

Area 2: Remainder

PLACER COUNTY:

Area 1: All but the Central portion

Area 2: Remainder

PLUMAS COUNTY:

Area 1: Western portion

Area 2: Remainder

SHASTA COUNTY:

Area 1: All but the Northeastern corner

Area 2: Remainder

SIERRA COUNTY:

Area 1: Western part

Area 2: Remainder

SISKIYOU COUNTY:

Area 1: Central part

Area 2: Remainder

SONOMA COUNTY:

Area 1: All but the Northwestern corner

Area 2: Remainder

TEHAMA COUNTY:

Area 1: All but the Western border with Mendocino & Trinity  
Counties

Area 2: Remainder

TRINITY COUNTY:

Area 1: East Central part and the Northeastern border with  
Shasta County

Area 2: Remainder

TUOLUMNE COUNTY:

Area 1: Except Eastern part

Area 2: Eastern part

-----  
ENGI0003-019 07/01/2024

SEE AREA DESCRIPTIONS BELOW

|  | Rates    | Fringes |
|--|----------|---------|
| OPERATOR: Power Equipment<br>(LANDSCAPE WORK ONLY) |          |         |
| GROUP 1  |          |         |
| AREA 1.....  | \$ 52.40 | 28.52   |
| AREA 2.....  | \$ 54.40 | 28.52   |
| GROUP 2  |          |         |
| AREA 1.....  | \$ 48.80 | 28.52   |
| AREA 2.....  | \$ 50.80 | 28.52   |
| GROUP 3  |          |         |
| AREA 1.....  | \$ 44.19 | 28.52   |
| AREA 2.....  | \$ 46.19 | 28.52   |

GROUP DESCRIPTIONS:

GROUP 1: Landscape Finish Grade Operator: All finish grade work regardless of equipment used, and all equipment with a rating more than 65 HP.

GROUP 2: Landscape Operator up to 65 HP: All equipment with a manufacturer's rating of 65 HP or less except equipment covered by Group 1 or Group 3. The following equipment shall be included except when used for finish work as long as manufacturer's rating is 65 HP or less: A-Frame and Winch Truck, Backhoe, Forklift, Hydragraphic Seeder Machine, Roller, Rubber-Tired and Track Earthmoving Equipment, Skiploader, Straw Blowers, and Trencher 31 HP up to 65 HP.

GROUP 3: Landscae Utility Operator: Small Rubber-Tired  
Tractor, Trencher Under 31 HP.

AREA DESCRIPTIONS:

AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED,  
NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN,  
SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS,  
SUTTER, YOLO, AND YUBA COUNTIES

AREA 2 - MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS  
NOTED BELOW:

ALPINE COUNTY:

Area 1: Northernmost part

Area 2: Remainder

CALAVERAS COUNTY:

Area 1: Except Eastern part

Area 2: Eastern part

COLUSA COUNTY:

Area 1: Eastern part

Area 2: Remainder

DEL NORTE COUNTY:

Area 1: Extreme Southwestern corner

Area 2: Remainder

ELDORADO COUNTY:

Area 1: North Central part

Area 2: Remainder

FRESNO COUNTY

Area 1: Except Eastern part

Area 2: Eastern part

GLENN COUNTY:

Area 1: Eastern part

Area 2: Remainder

HUMBOLDT COUNTY:

Area 1: Except Eastern and Southwestern parts

Area 2: Remainder

LAKE COUNTY:

Area 1: Southern part

Area 2: Remainder

LASSEN COUNTY:

Area 1: Western part along the Southern portion of border  
with Shasta County

Area 2: Remainder

MADERA COUNTY

Area 1: Remainder

Area 2: Eastern part

MARIPOSA COUNTY

Area 1: Remainder

Area 2: Eastern part

MENDOCINO COUNTY:

Area 1: Central and Southeastern parts

Area 2: Remainder

MONTEREY COUNTY

Area 1: Remainder

Area 2: Southwestern part

NEVADA COUNTY:

Area 1: All but the Northern portion along the border of  
Sierra County

Area 2: Remainder

PLACER COUNTY:

Area 1: All but the Central portion

Area 2: Remainder

PLUMAS COUNTY:

Area 1: Western portion

Area 2: Remainder

SHASTA COUNTY:

Area 1: All but the Northeastern corner

Area 2: Remainder

SIERRA COUNTY:

Area 1: Western part

Area 2: Remainder

SISKIYOU COUNTY:

Area 1: Central part

Area 2: Remainder

SONOMA COUNTY:

Area 1: All but the Northwestern corner

Area 2: Reaminder

TEHAMA COUNTY:

Area 1: All but the Western border with mendocino & Trinity  
Counties

Area 2: Remainder

TRINITY COUNTY:

Area 1: East Central part and the Northeaster border with  
Shasta County

Area 2: Remainder



TULARE COUNTY;  
Area 1: Remainder  
Area 2: Eastern part

TUOLUMNE COUNTY:  
Area 1: Remainder  
Area 2: Eastern Part

-----  
ENGI0003-038 06/28/2023

""AREA 1"" WAGE RATES ARE LISTED BELOW

""AREA 2"" RECEIVES AN ADDITIONAL \$2.00 PER HOUR ABOVE AREA 1 RATES.

SEE AREA DEFINITIONS BELOW

|                           | Rates    | Fringes |
|---------------------------|----------|---------|
| OPERATOR: Power Equipment |          |         |
| (AREA 1:)                 |          |         |
| GROUP 1.....              | \$ 60.72 | 31.03   |
| GROUP 2.....              | \$ 59.19 | 31.03   |
| GROUP 3.....              | \$ 57.71 | 31.03   |
| GROUP 4.....              | \$ 56.33 | 31.03   |
| GROUP 5.....              | \$ 55.06 | 31.03   |
| GROUP 6.....              | \$ 53.74 | 31.03   |
| GROUP 7.....              | \$ 52.60 | 31.03   |
| GROUP 8.....              | \$ 51.46 | 31.03   |
| GROUP 8-A.....            | \$ 49.25 | 31.03   |
| OPERATOR: Power Equipment |          |         |
| (Cranes and Attachments - |          |         |
| AREA 1:)                  |          |         |
| GROUP 1                   |          |         |
| Cranes.....               | \$ 52.30 | 31.15   |
| Oiler.....                | \$ 43.79 | 31.15   |
| Truck crane oiler.....    | \$ 46.08 | 31.15   |
| GROUP 2                   |          |         |
| Cranes.....               | \$ 50.54 | 31.15   |
| Oiler.....                | \$ 42.83 | 31.15   |
| Truck crane oiler.....    | \$ 45.07 | 31.15   |
| GROUP 3                   |          |         |
| Cranes.....               | \$ 48.80 | 31.15   |
| Hydraulic.....            | \$ 44.44 | 31.15   |
| Oiler.....                | \$ 42.55 | 31.15   |
| Truck crane oiler.....    | \$ 44.83 | 31.15   |
| GROUP 4                   |          |         |
| Cranes.....               | \$ 45.76 | 31.15   |
| OPERATOR: Power Equipment |          |         |
| (Piledriving - AREA 1:)   |          |         |
| GROUP 1                   |          |         |
| Lifting devices.....      | \$ 52.64 | 31.15   |
| Oiler.....                | \$ 43.38 | 31.15   |
| Truck Crane Oiler.....    | \$ 45.66 | 31.15   |

|                              |          |       |
|------------------------------|----------|-------|
| GROUP 2                      |          |       |
| Lifting devices.....         | \$ 50.82 | 31.15 |
| Oiler.....                   | \$ 43.11 | 31.15 |
| Truck Crane Oiler.....       | \$ 45.41 | 31.15 |
| GROUP 3                      |          |       |
| Lifting devices.....         | \$ 49.14 | 31.15 |
| Oiler.....                   | \$ 42.89 | 31.15 |
| Truck Crane Oiler.....       | \$ 45.12 | 31.15 |
| GROUP 4                      |          |       |
| Lifting devices.....         | \$ 47.37 | 31.15 |
| GROUP 5                      |          |       |
| Lifting devices.....         | \$ 44.73 | 31.15 |
| GROUP 6                      |          |       |
| Lifting devices.....         | \$ 42.50 | 31.15 |
| OPERATOR: Power Equipment    |          |       |
| (Steel Erection - AREA 1:)   |          |       |
| GROUP 1                      |          |       |
| Cranes.....                  | \$ 53.27 | 31.15 |
| Oiler.....                   | \$ 43.72 | 31.15 |
| Truck Crane Oiler.....       | \$ 45.95 | 31.15 |
| GROUP 2                      |          |       |
| Cranes.....                  | \$ 51.50 | 31.15 |
| Oiler.....                   | \$ 43.45 | 31.15 |
| Truck Crane Oiler.....       | \$ 45.73 | 31.15 |
| GROUP 3                      |          |       |
| Cranes.....                  | \$ 50.02 | 31.15 |
| Hydraulic.....               | \$ 45.07 | 31.15 |
| Oiler.....                   | \$ 43.23 | 31.15 |
| Truck Crane Oiler.....       | \$ 45.46 | 31.15 |
| GROUP 4                      |          |       |
| Cranes.....                  | \$ 48.00 | 31.15 |
| GROUP 5                      |          |       |
| Cranes.....                  | \$ 46.70 | 31.15 |
| OPERATOR: Power Equipment    |          |       |
| (Tunnel and Underground Work |          |       |
| - AREA 1:)                   |          |       |
| SHAFTS, STOPES, RAISES:      |          |       |
| GROUP 1.....                 | \$ 56.82 | 31.03 |
| GROUP 1-A.....               | \$ 49.99 | 31.15 |
| GROUP 1A.....                | \$ 59.29 | 31.03 |
| GROUP 2.....                 | \$ 55.56 | 31.03 |
| GROUP 3.....                 | \$ 54.23 | 31.03 |
| GROUP 4.....                 | \$ 53.09 | 31.03 |
| GROUP 5.....                 | \$ 51.95 | 31.03 |
| UNDERGROUND:                 |          |       |
| GROUP 1.....                 | \$ 47.42 | 31.15 |
| GROUP 1-A.....               | \$ 49.89 | 31.15 |
| GROUP 2.....                 | \$ 46.16 | 31.15 |
| GROUP 3.....                 | \$ 44.83 | 31.15 |
| GROUP 4.....                 | \$ 43.69 | 31.15 |
| GROUP 5.....                 | \$ 42.55 | 31.15 |

FOOTNOTE: Work suspended by ropes or cables, or work on a Yo-Yo Cat: \$.60 per hour additional.

## POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Operator of helicopter (when used in erection work); Hydraulic excavator, 7 cu. yds. and over; Power shovels, over 7 cu. yds.

GROUP 2: Highline cableway; Hydraulic excavator, 3-1/2 cu. yds. up to 7 cu. yds.; Licensed construction work boat operator, on site; Power blade operator (finish); Power shovels, over 1 cu. yd. up to and including 7 cu. yds. m.r.c.

GROUP 3: Asphalt milling machine; Cable backhoe; Combination backhoe and loader over 3/4 cu. yds.; Continuous flight tie back machine assistant to engineer or mechanic; Crane mounted continuous flight tie back machine, tonnage to apply; Crane mounted drill attachment, tonnage to apply; Dozer, slope brd; Gradall; Hydraulic excavator, up to 3 1/2 cu. yds.; Loader 4 cu. yds. and over; Long reach excavator; Multiple engine scraper (when used as push pull); Power shovels, up to and including 1 cu. yd.; Pre-stress wire wrapping machine; Side boom cat, 572 or larger; Track loader 4 cu. yds. and over; Wheel excavator (up to and including 750 cu. yds. per hour)

GROUP 4: Asphalt plant engineer/box person; Chicago boom; Combination backhoe and loader up to and including 3/4 cu. yd.; Concrete batch plant (wet or dry); Dozer and/or push cat; Pull- type elevating loader; Gradesetter, grade checker (GPS, mechanical or otherwise); Grooving and grinding machine; Heading shield operator; Heavy-duty drilling equipment, Hughes, LDH, Watson 3000 or similar; Heavy-duty repairperson and/or welder; Lime spreader; Loader under 4 cu. yds.; Lubrication and service engineer (mobile and grease rack); Mechanical finishers or spreader machine (asphalt, Barber-Greene and similar); Miller Formless M-9000 slope paver or similar; Portable crushing and screening plants; Power blade support; Roller operator, asphalt; Rubber-tired scraper, self-loading (paddle-wheels, etc.); Rubber- tired earthmoving equipment (scrapers); Slip form paver (concrete); Small tractor with drag; Soil stabilizer (P & H or equal); Spider plow and spider puller; Tubex pile rig; Unlicensed constuction work boat operator, on site; Timber skidder; Track loader up to 4 yds.; Tractor-drawn scraper; Tractor, compressor drill combination; Welder; Woods-Mixer (and other similar Pugmill equipment)

GROUP 5: Cast-in-place pipe laying machine; Combination slusher and motor operator; Concrete conveyor or concrete pump, truck or equipment mounted; Concrete conveyor, building site; Concrete pump or pumpcrete gun; Drilling equipment, Watson 2000, Texoma 700 or similar; Drilling and boring machinery, horizontal (not to apply to waterliners, wagon drills or jackhammers); Concrete mixer/all; Person and/or material hoist; Mechanical finishers (concrete)

(Clary, Johnson, Bidwell Bridge Deck or similar types); Mechanical burm, curb and/or curb and gutter machine, concrete or asphalt); Mine or shaft hoist; Portable crusher; Power jumbo operator (setting slip-forms, etc., in tunnels); Screed (automatic or manual); Self-propelled compactor with dozer; Tractor with boom D6 or smaller; Trenching machine, maximum digging capacity over 5 ft. depth; Vermeer T-600B rock cutter or similar

GROUP 6: Armor-Coater (or similar); Ballast jack tamper; Boom- type backfilling machine; Assistant plant engineer; Bridge and/or gantry crane; Chemical grouting machine, truck-mounted; Chip spreading machine operator; Concrete saw (self-propelled unit on streets, highways, airports and canals); Deck engineer; Drilling equipment Texoma 600, Hughes 200 Series or similar up to and including 30 ft. m.r.c.; Drill doctor; Helicopter radio operator; Hydro-hammer or similar; Line master; Skidsteer loader, Bobcat larger than 743 series or similar (with attachments); Locomotive; Lull hi-lift or similar; Oiler, truck mounted equipment; Pavement breaker, truck-mounted, with compressor combination; Paving fabric installation and/or laying machine; Pipe bending machine (pipelines only); Pipe wrapping machine (tractor propelled and supported); Screed (except asphaltic concrete paving); Self- propelled pipeline wrapping machine; Tractor; Self-loading chipper; Concrete barrier moving machine

GROUP 7: Ballast regulator; Boom truck or dual-purpose A-frame truck, non-rotating - under 15 tons; Cary lift or similar; Combination slurry mixer and/or cleaner; Drilling equipment, 20 ft. and under m.r.c.; Firetender (hot plant); Grouting machine operator; Highline cableway signalperson; Stationary belt loader (Kolman or similar); Lift slab machine (Vagtborg and similar types); Maginnes internal full slab vibrator; Material hoist (1 drum); Mechanical trench shield; Pavement breaker with or without compressor combination); Pipe cleaning machine (tractor propelled and supported); Post driver; Roller (except asphalt); Chip Seal; Self-propelled automatically applied concrete curing machine (on streets, highways, airports and canals); Self-propelled compactor (without dozer); Signalperson; Slip-form pumps (lifting device for concrete forms); Tie spacer; Tower mobile; Trenching machine, maximum digging capacity up to and including 5 ft. depth; Truck- type loader

GROUP 8: Bit sharpener; Boiler tender; Box operator; Brakeperson; Combination mixer and compressor (shotcrete/gunite); Compressor operator; Deckhand; Fire tender; Forklift (under 20 ft.); Generator; Gunite/shotcrete equipment operator; Hydraulic monitor; Ken seal machine (or similar); Mixermobile; Oiler; Pump operator; Refrigeration plant; Reservoir-debris tug (self-propelled floating); Ross Carrier (construction site); Rotomist operator; Self-propelled tape machine; Shuttlecar; Self-propelled power sweeper operator (includes vacuum

sweeper); Slusher operator; Surface heater; Switchperson; Tar pot firetender; Tugger hoist, single drum; Vacuum cooling plant; Welding machine (powered other than by electricity)

GROUP 8-A: Elevator operator; Skidsteer loader-Bobcat 743 series or smaller, and similar (without attachments); Mini excavator under 25 H.P. (backhoe-trencher); Tub grinder wood chipper

---

## ALL CRANES AND ATTACHMENTS

GROUP 1: Clamshell and dragline over 7 cu. yds.; Crane, over 100 tons; Derrick, over 100 tons; Derrick barge pedestal-mounted, over 100 tons; Self-propelled boom-type lifting device, over 100 tons

GROUP 2: Clamshell and dragline over 1 cu. yd. up to and including 7 cu. yds.; Crane, over 45 tons up to and including 100 tons; Derrick barge, 100 tons and under; Self-propelled boom-type lifting device, over 45 tons; Tower crane

GROUP 3: Clamshell and dragline up to and including 1 cu. yd.; Cranes 45 tons and under; Self-propelled boom-type lifting device 45 tons and under;

GROUP 4: Boom Truck or dual purpose A-frame truck, non-rotating over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) - under 15 tons;

---

## PILEDRIVERS

GROUP 1: Derrick barge pedestal mounted over 100 tons; Clamshell over 7 cu. yds.; Self-propelled boom-type lifting device over 100 tons; Truck crane or crawler, land or barge mounted over 100 tons

GROUP 2: Derrick barge pedestal mounted 45 tons to and including 100 tons; Clamshell up to and including 7 cu. yds.; Self-propelled boom-type lifting device over 45 tons; Truck crane or crawler, land or barge mounted, over 45 tons up to and including 100 tons; Fundex F-12 hydraulic pile rig

GROUP 3: Derrick barge pedestal mounted under 45 tons; Self-propelled boom-type lifting device 45 tons and under; Skid/scow piledriver, any tonnage; Truck crane or crawler, land or barge mounted 45 tons and under

GROUP 4: Assistant operator in lieu of assistant to engineer;  
Forklift, 10 tons and over; Heavy-duty repairperson/welder

GROUP 5: Deck engineer

GROUP 6: Deckhand; Fire tender

---

## STEEL ERECTORS

GROUP 1: Crane over 100 tons; Derrick over 100 tons; Self-propelled boom-type lifting device over 100 tons

GROUP 2: Crane over 45 tons to 100 tons; Derrick under 100 tons; Self-propelled boom-type lifting device over 45 tons to 100 tons; Tower crane

GROUP 3: Crane, 45 tons and under; Self-propelled boom-type lifting device, 45 tons and under

GROUP 4: Chicago boom; Forklift, 10 tons and over; Heavy-duty repair person/welder

GROUP 5: Boom cat

---

## TUNNEL AND UNDERGROUND WORK

GROUP 1-A: Tunnel bore machine operator, 20' diameter or more

GROUP 1: Heading shield operator; Heavy-duty repairperson; Mucking machine (rubber tired, rail or track type); Raised bore operator (tunnels); Tunnel mole bore operator

GROUP 2: Combination slusher and motor operator; Concrete pump or pumpcrete gun; Power jumbo operator

GROUP 3: Drill doctor; Mine or shaft hoist

GROUP 4: Combination slurry mixer cleaner; Grouting Machine operator; Motorman

GROUP 5: Bit Sharpener; Brakeman; Combination mixer and compressor (gunite); Compressor operator; Oiler; Pump operator; Slusher operator

---

## AREA DESCRIPTIONS:

POWER EQUIPMENT OPERATORS, CRANES AND ATTACHMENTS, TUNNEL AND UNDERGROUND [These areas do not apply to Piledrivers and Steel Erectors]

AREA 1: DEL NORTE, HUMBOLDT, LAKE, MENDOCINO  
AREA 2 -NOTED BELOW

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS  
NOTED BELOW:

DEL NORTE COUNTY:  
Area 1: Extreme Southwest corner  
Area 2: Remainder

HUMBOLDT COUNTY:  
Area 1: Except Eastern and Southwestern parts  
Area 2: Remainder

LAKE COUNTY:  
Area 1: Southern part  
Area 2: Remainder

MENDOCINO COUNTY:  
Area 1: Central and Southeastern Parts  
Area 2: Remainder

-----  
IRON0118-012 01/01/2025

ALPINE, LASSEN, MODOC, SISKIYOU and TRINITY COUNTIES

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| IRONWORKER..... | \$ 43.75 | 34.45   |

-----

IRON0118-013 01/01/2025

AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, MARIN, NAPA, NEVADA,  
PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SOLANO, SONOMA,  
SUTTER, TEHAMA, YOLO and YUBA COUNTIES

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| IRONWORKER..... | \$ 50.70 | 35.15   |

-----

LABO0067-003 07/01/2024

AREA ""1"" - MARIN and NAPA COUNTIES

AREA ""2"" - ALPINE, AMADOR, BUTTE COLUSA EL DORADO, GLENN,  
LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA,  
SIERRA, SISKIYOU, SOLANO, SONOMA, SUTTER, TEHAMA, TRINITY,  
YOLO, AND YUBA COUNTIES

|                             | Rates | Fringes |
|-----------------------------|-------|---------|
| LABORER (ASBESTOS/MOLD/LEAD |       |         |

LABORER)

|                                      |       |
|--------------------------------------|-------|
| Marin and Napa Counties.....\$ 37.75 | 29.69 |
| Remaining Counties.....\$ 36.75      | 29.69 |

-----  
LABO0067-005 01/01/2024

AREA ""A"" - ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES

AREA ""B"" - ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA, DEL NORTE, EL DORADO, FRESNO, GLENN, HUMBOLDT, KINGS, LAKE, LASSEN, MADERA, MARIPOSA, MENDOCINO, MERCED, MODOC, MONTEREY, NEVADA, PLACER, PLUMAS, SACRAMENTO, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, SIERRA, SHASTA, SISKIYOU, STANISLAUS, TEHAMA, TRINITY, TULARE, TUOLUMNE, YOLO AND YUBA COUNTIES

| Rates | Fringes |
|-------|---------|
|-------|---------|

LABORER (TRAFFIC CONTROL/LANE CLOSURE)

|                            |       |
|----------------------------|-------|
| Escort Driver, Flag Person |       |
| Area A.....\$ 37.26        | 27.32 |
| Area B.....\$ 36.26        | 27.32 |
| Traffic Control Person I   |       |
| Area A.....\$ 37.56        | 27.32 |
| Area B.....\$ 36.56        | 27.32 |
| Traffic Control Person II  |       |
| Area A.....\$ 35.06        | 27.32 |
| Area B.....\$ 34.06        | 27.32 |

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

-----  
LABO0185-002 07/01/2023

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

| Rates | Fringes |
|-------|---------|
|-------|---------|

LABORER

|                                 |       |
|---------------------------------|-------|
| Mason Tender-Brick.....\$ 36.29 | 25.55 |
|---------------------------------|-------|

-----  
LABO0185-005 06/26/2023

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES



|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

Tunnel and Shaft Laborers:

|                           |          |       |
|---------------------------|----------|-------|
| GROUP 1.....              | \$ 45.89 | 27.72 |
| GROUP 2.....              | \$ 45.66 | 27.72 |
| GROUP 3.....              | \$ 45.41 | 27.72 |
| GROUP 4.....              | \$ 44.96 | 27.72 |
| GROUP 5.....              | \$ 44.42 | 27.72 |
| Shotcrete Specialist..... | \$ 46.41 | 27.72 |

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Guniting and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickers - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Guniting & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

-----  
LABO0185-006 06/26/2023

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO, YUBA COUNTIES

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

LABORER (CONSTRUCTION CRAFT

LABORERS - AREA B:)

|                         |          |       |
|-------------------------|----------|-------|
| Construction Specialist |          |       |
| Group.....              | \$ 36.20 | 27.30 |
| GROUP 1.....            | \$ 35.50 | 27.30 |
| GROUP 1-a.....          | \$ 35.72 | 27.30 |
| GROUP 1-c.....          | \$ 35.55 | 27.30 |
| GROUP 1-e.....          | \$ 36.05 | 27.30 |

|                |          |       |
|----------------|----------|-------|
| GROUP 1-f..... | \$ 30.37 | 23.20 |
| GROUP 2.....   | \$ 35.35 | 27.30 |
| GROUP 3.....   | \$ 35.25 | 27.30 |
| GROUP 4.....   | \$ 28.94 | 27.30 |

See groups 1-b and 1-d under laborer classifications.

LABORER (GARDENERS,  
HORTICULTURAL & LANDSCAPE  
LABORERS - AREA B:)

|   |          |       |
|---|----------|-------|
| (1) New Construction.....                 | \$ 35.25 | 27.30 |
| (2) Establishment Warranty<br>Period..... | \$ 28.94 | 27.30 |

LABORER (GUNITE - AREA B:)

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 36.46 | 27.30 |
| GROUP 2..... | \$ 35.96 | 27.30 |
| GROUP 3..... | \$ 35.37 | 27.30 |
| GROUP 4..... | \$ 35.25 | 27.30 |

LABORER (WRECKING - AREA B:)

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 35.50 | 27.30 |
| GROUP 2..... | \$ 35.35 | 27.30 |

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

-----

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and buckler; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite,

epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. ""Sewer cleaner"" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shall receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:  
A: at demolition site for the salvage of the material.  
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.  
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

---

## GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

---

## WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

-----  
LABO0185-008 07/01/2023

|                       | Rates    | Fringes |
|-----------------------|----------|---------|
| Plasterer tender..... | \$ 39.77 | 28.54   |

Work on a swing stage scaffold: \$1.00 per hour additional.

-----  
LABO0261-002 07/01/2023

## MARIN COUNTY

|  | Rates    | Fringes |
|--|----------|---------|
| LABORER (TRAFFIC CONTROL/LANE CLOSURE) |          |         |
| Escort Driver, Flag Person..           | \$ 37.26 | 27.30   |
| Traffic Control Person I....           | \$ 37.56 | 27.30   |
| Traffic Control Person II...           | \$ 35.06 | 27.30   |

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

-----  
LABO0261-004 06/26/2023

## MARIN COUNTY

|                            | Rates    | Fringes |
|----------------------------|----------|---------|
| Tunnel and Shaft Laborers: |          |         |
| GROUP 1.....               | \$ 45.89 | 27.72   |
| GROUP 2.....               | \$ 45.66 | 27.72   |
| GROUP 3.....               | \$ 45.41 | 27.72   |
| GROUP 4.....               | \$ 44.96 | 27.72   |
| GROUP 5.....               | \$ 44.42 | 27.72   |
| Shotcrete Specialist.....  | \$ 46.41 | 27.72   |

## TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Guniting & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

-----  
LABO0261-007 07/01/2023

MARIN COUNTY

|                         | Rates    | Fringes |
|-------------------------|----------|---------|
| LABORER                 |          |         |
| Mason Tender-Brick..... | \$ 37.54 | 25.55   |

-----  
LABO0261-010 06/26/2023

MARIN COUNTY

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| LABORER (CONSTRUCTION CRAFT |          |         |
| LABORERS - AREA A:)         |          |         |
| Construction Specialist     |          |         |
| Group.....                  | \$ 37.20 | 27.30   |
| GROUP 1.....                | \$ 36.50 | 27.30   |
| GROUP 1-a.....              | \$ 36.72 | 27.30   |
| GROUP 1-c.....              | \$ 36.55 | 27.30   |
| GROUP 1-e.....              | \$ 37.05 | 27.30   |
| GROUP 1-f.....              | \$ 31.37 | 23.20   |
| GROUP 2.....                | \$ 36.35 | 27.30   |
| GROUP 3.....                | \$ 36.25 | 27.30   |
| GROUP 4.....                | \$ 29.94 | 27.30   |

See groups 1-b and 1-d under laborer classifications.

LABORER (GARDENERS,  
HORTICULTURAL & LANDSCAPE  
LABORERS - AREA A:)

|                            |          |       |
|----------------------------|----------|-------|
| (1) New Construction.....  | \$ 36.25 | 27.30 |
| (2) Establishment Warranty |          |       |
| Period.....                | \$ 29.94 | 27.30 |

|                              |          |       |
|------------------------------|----------|-------|
| LABORER (GUNITE - AREA A:)   |          |       |
| GROUP 1.....                 | \$ 37.46 | 27.30 |
| GROUP 2.....                 | \$ 36.96 | 27.30 |
| GROUP 3.....                 | \$ 36.37 | 27.30 |
| GROUP 4.....                 | \$ 36.25 | 27.30 |
| LABORER (WRECKING - AREA A:) |          |       |
| GROUP 1.....                 | \$ 36.50 | 27.30 |
| GROUP 2.....                 | \$ 36.35 | 27.30 |

#### FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

-----

#### LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and buckler; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete

chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. ""Sewer cleaner"" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shall receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling



of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:  
A: at demolition site for the salvage of the material.  
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.  
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

---

## GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Guniting laborer

---

## WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

---

LABO0261-015 07/01/2023

|   | Rates    | Fringes |
|---|----------|---------|
| Plasterer tender.....                                       | \$ 39.77 | 28.54   |
| Work on a swing stage scaffold: \$1.00 per hour additional. |          |         |

-----  
LABO0324-004 07/01/2023

#### NAPA, SOLANO, AND SONOMA, COUNTIES

|  | Rates    | Fringes |
|--|----------|---------|
| LABORER (TRAFFIC CONTROL/LANE CLOSURE) |          |         |
| Escort Driver, Flag Person..           | \$ 36.26 | 27.30   |
| Traffic Control Person I....           | \$ 36.56 | 27.30   |
| Traffic Control Person II...           | \$ 34.06 | 27.30   |

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

-----  
LABO0324-008 06/26/2023

#### NAPA, SOLANO, AND SONOMA COUNTIES

|                            | Rates    | Fringes |
|----------------------------|----------|---------|
| Tunnel and Shaft Laborers: |          |         |
| GROUP 1.....               | \$ 45.89 | 27.72   |
| GROUP 2.....               | \$ 45.66 | 27.72   |
| GROUP 3.....               | \$ 45.41 | 27.72   |
| GROUP 4.....               | \$ 44.96 | 27.72   |
| GROUP 5.....               | \$ 44.42 | 27.72   |
| Shotcrete Specialist.....  | \$ 46.41 | 27.72   |

#### TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and

setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

-----  
LABO0324-010 07/01/2023

SOLANO AND SONOMA COUNTIES

|                         | Rates    | Fringes |
|-------------------------|----------|---------|
| LABORER                 |          |         |
| Mason Tender-Brick..... | \$ 36.84 | 26.24   |

-----  
LABO0324-013 06/26/2023

NAPA, SOLANO, AND SONOMA COUNTIES

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| LABORER (CONSTRUCTION CRAFT |          |         |
| LABORERS - AREA B:)         |          |         |
| Construction Specialist     |          |         |
| Group.....                  | \$ 36.20 | 27.30   |
| GROUP 1.....                | \$ 35.50 | 27.30   |
| GROUP 1-a.....              | \$ 35.72 | 27.30   |
| GROUP 1-c.....              | \$ 35.55 | 27.30   |
| GROUP 1-e.....              | \$ 36.05 | 27.30   |
| GROUP 1-f.....              | \$ 36.08 | 27.30   |
| GROUP 2.....                | \$ 35.35 | 27.30   |
| GROUP 3.....                | \$ 35.25 | 27.30   |
| GROUP 4.....                | \$ 28.94 | 27.30   |

See groups 1-b and 1-d under laborer classifications.

LABORER (GARDENERS,  
HORTICULTURAL & LANDSCAPE

LABORERS - AREA B:)

|                            |          |       |
|----------------------------|----------|-------|
| (1) New Construction.....  | \$ 35.25 | 27.30 |
| (2) Establishment Warranty |          |       |
| Period.....                | \$ 28.94 | 27.30 |

LABORER (GUNITE - AREA B:)

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 36.46 | 27.30 |
| GROUP 2..... | \$ 35.96 | 27.30 |
| GROUP 3..... | \$ 35.37 | 27.30 |
| GROUP 4..... | \$ 35.25 | 27.30 |

LABORER (WRECKING - AREA B:)

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 35.50 | 27.30 |
| GROUP 2..... | \$ 35.35 | 27.30 |

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging

scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

-----

## LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and buckler; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types

regardless of type or method of power; Blaster and powder;  
All work of loading, placing and blasting of all powder and  
explosives of whatever type regardless of method used for  
such loading and placing; High scalers (including drilling  
of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above  
Group 1 wage rates. ""Sewer cleaner"" means any worker who  
handles or comes in contact with raw sewage in small  
diameter sewers. Those who work inside recently active,  
large diameter sewers, and all recently active sewer  
manholes shall receive \$5.00 per day above Group 1 wage  
rates.

GROUP 1-c: Burning and welding in connection with laborers'  
work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All  
employees performing work covered herein shall receive \$  
.25 per hour above their regular rate for all work  
performed on underground structures not specifically  
covered herein. This paragraph shall not be construed to  
apply to work below ground level in open cut. It shall  
apply to cut and cover work of subway construction after  
the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts  
thereof, and work on and in deep footings. (A deep footing  
is a hole 15 feet or more in depth.) In the event the  
depth of the footing is unknown at the commencement of  
excavation, and the final depth exceeds 15 feet, the deep  
footing wage rate would apply to all employees for each and  
every day worked on or in the excavation of the footing  
from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting  
or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry  
cement or gypsum; Choke-setter and rigger (clearing work);  
Concrete bucket dumper and chute; Concrete chipping and  
grinding; Concrete laborer (wet or dry); Driller tender,  
chuck tender, nipper; Guinea chaser (stake), grout crew;  
High pressure nozzle, adductor; Hydraulic monitor (over 100  
lbs. pressure); Loading and unloading, carrying and hauling  
of all rods and materials for use in reinforcing concrete  
construction; Pittsburgh chipper and similar type brush  
shredders; Sloper; Single foot, hand-held, pneumatic  
tamper; All pneumatic, air, gas and electric tools not  
listed in Groups 1 through 1-f; Jacking of pipe - under 12  
inches

GROUP 3: Construction laborers, including bridge and general  
laborer; Dump, load spotter; Flag person; Fire watcher;  
Fence erector; Guardrail erector; Gardener, horticultural  
and landscape laborer; Jetting; Limber, brush loader and

piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:  
A: at demolition site for the salvage of the material.  
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.  
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

---

#### GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Guniting laborer

---

#### WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

---

LABO0324-019 07/01/2023

|                       | Rates    | Fringes |
|-----------------------|----------|---------|
| Plasterer tender..... | \$ 39.77 | 28.54   |

Work on a swing stage scaffold: \$1.00 per hour additional.

---

PAIN0016-004 01/01/2025

#### MARIN, NAPA, SOLANO & SONOMA COUNTIES

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

Painters:.....\$ 53.38          28.04

PREMIUMS:

EXOTIC MATERIALS - \$1.25 additional per hour.

SPRAY WORK: - \$0.50 additional per hour.

INDUSTRIAL PAINTING - \$0.25 additional per hour

[Work on industrial buildings used for the manufacture and processing of goods for sale or service; steel construction (bridges), stacks, towers, tanks, and similar structures]

HIGH WORK:

over 50 feet - \$2.00 per hour additional

100 to 180 feet - \$4.00 per hour additional

Over 180 feet - \$6.00 per hour additional

-----  
\* PAIN0016-005 01/01/2025

ALPINE, BUTTE, COLUSA, EL DORADO (west of the Sierra Nevada Mountains), GLENN, LASSEN (west of Hwy. 395, excluding Honey Lake); MARIN, MODOC, NAPA, NEVADA (west of the Sierra Nevada Mountains), PLACER (west of the Sierra Nevada Mountains), PLUMAS, SACRAMENTO, SHASTA, SIERRA (west of the Sierra Nevada Mountains), SISKIYOU, SOLANO, SONOMA, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

Rates          Fringes

DRYWALL FINISHER/TAPER.....\$ 59.63          31.29

-----  
PAIN0016-007 01/01/2025

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO (west of the Sierra Nevada Mountains), GLENN, LASSEN (west of Highway 395, excluding Honey Lake), MODOC, NEVADA (west of the Sierra Nevada Mountains), PLACER (west of the Sierra Nevada Mountains), PLUMAS, SACRAMENTO, SHASTA, SIERRA (west of the Sierra Nevada Mountains), SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

Rates          Fringes

Painters:.....\$ 43.45          22.80

SPRAY/SANDBLAST: \$0.50 additional per hour.

EXOTIC MATERIALS: \$1.25 additional per hour.

HIGH TIME: Over 50 ft above ground or water level \$2.00 additional per hour. 100 to 180 ft above ground or water level \$4.00 additional per hour. Over 180 ft above ground or water level \$6.00 additional per hour.

-----  
PAIN0016-008 01/01/2024

# MARIN, NAPA, SOLANO AND SONOMA COUNTIES

|                       | Rates    | Fringes |
|-----------------------|----------|---------|
| SOFT FLOOR LAYER..... | \$ 59.00 | 33.03   |

-----  
PAIN0169-004 01/01/2024

MARIN , NAPA & SONOMA COUNTIES; SOLANO COUNTY (west of a line defined as follows: Hwy. 80 corridor beginning at the City of Fairfield, including Travis Air Force Base and Suisun City; going north of Manakas Corner Rd., continue north on Suisun Valley Rd. to the Napa County line; Hwy. 80 corridor south on Grizzly Island Rd. to the Grizzly Island Management area)

|              | Rates    | Fringes |
|--------------|----------|---------|
| GLAZIER..... | \$ 56.22 | 34.00   |

-----  
\* PAIN0567-001 07/01/2024

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains); AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

|                              | Rates    | Fringes |
|------------------------------|----------|---------|
| Painters:                    |          |         |
| Brush and Roller.....        | \$ 36.87 | 15.82   |
| Spray Painter & Paperhanger. | \$ 38.87 | 15.82   |

PREMIUMS:  
Special Coatings (Brush), and Sandblasting = \$0.50/hr  
Special Coatings (Spray), and Steeplejack = \$1.00/hr  
Special Coating Spray Steel = \$1.25/hr  
Swing Stage = \$2.00/hr

\*A special coating is a coating that requires the mixing of 2 or more products.

-----  
PAIN0567-007 07/01/2022

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains) AND SIERRA COUNTY (east of the Sierra Nevada Mountains)



|                       | Rates    | Fringes |
|-----------------------|----------|---------|
| SOFT FLOOR LAYER..... | \$ 34.27 | 16.47   |

-----  
PAIN0567-010 07/01/2024

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains); AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

|  | Rates    | Fringes |
|--|----------|---------|
| Drywall  |          |         |
| (1) Taper.....   | \$ 42.79 | 16.12   |
| (2) Steeplejack - Taper,<br>over 40 ft with open space<br>below..... | \$ 44.29 | 16.12   |

-----  
PAIN0767-004 01/01/2024

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO (Remainder), SUTTER, TEHAMA, TRINITY, YOLO, YUBA

|              | Rates    | Fringes |
|--------------|----------|---------|
| GLAZIER..... | \$ 43.25 | 35.62   |

PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

Employee required to wear a body harness shall receive \$1.50 per hour above the basic hourly rate at any elevation.

-----  
PAIN1176-001 07/01/2022

#### HIGHWAY IMPROVEMENT

|                                       | Rates    | Fringes |
|---------------------------------------|----------|---------|
| Parking Lot Striping/Highway Marking: |          |         |
| GROUP 1.....                          | \$ 40.83 | 17.62   |
| GROUP 2.....                          | \$ 34.71 | 17.62   |
| GROUP 3.....                          | \$ 35.11 | 17.62   |

#### CLASSIFICATIONS

GROUP 1: Striper: Layout and application of painted traffic

stripes and marking; hot thermo plastic; tape, traffic stripes and markings

GROUP 2: Gamecourt & Playground Installer

GROUP 3: Protective Coating, Pavement Sealing

-----  
PAIN1237-001 01/01/2024

ALPINE; COLUSA; EL DORADO (west of the Sierra Nevada Mountains); GLENN; LASSEN (west of Highway 395, beginning at Stacey and including Honey Lake); MODOC; NEVADA (west of the Sierra Nevada Mountains); PLACER (west of the Sierra Nevada Mountains); PLUMAS; SACRAMENTO; SHASTA; SIERRA (west of the Sierra Nevada Mountains); SISKIYOU; SUTTER; TEHAMA; TRINITY; YOLO AND YUBA COUNTIES

|                       | Rates    | Fringes |
|-----------------------|----------|---------|
| SOFT FLOOR LAYER..... | \$ 48.54 | 26.59   |

-----

PLAS0300-003 07/01/2018

|  | Rates    | Fringes |
|--|----------|---------|
| PLASTERER  |          |         |
| AREA 295: Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sutter, Tehema, Trinity, Yolo & Yuba Counties..... | \$ 32.70 | 31.68   |
| AREA 355: Marin.....   | \$ 36.73 | 31.68   |
| AREA 355: Napa & Sonoma Counties.....  | \$ 32.70 | 31.68   |

-----

PLAS0300-005 07/01/2016

|                                   | Rates    | Fringes |
|-----------------------------------|----------|---------|
| CEMENT MASON/CONCRETE FINISHER... | \$ 32.15 | 23.27   |

-----

PLUM0038-002 07/01/2022

MARIN AND SONOMA COUNTIES

|  | Rates | Fringes |
|--|-------|---------|
| PLUMBER (Plumber, Steamfitter, Refrigeration Fitter) |       |         |
| (1) Work on wooden frame                             |       |         |

structures 5 stories or less excluding high-rise buildings and commercial work such as hospitals, prisons, hotels, schools, casinos, wastewater treatment plants, and resarch facilities as well as refrigeration pipefitting, service and repair work - MARKET RECOVERY RATE.....\$ 69.70 46.38  
 (2) All other work - NEW CONSTRUCTION RATE.....\$ 82.00 48.18

-----  
 PLUM0038-006 07/01/2022

MARIN & SONOMA COUNTIES

|  | Rates    | Fringes |
|--|----------|---------|
| Landscape/Irrigation Fitter<br>(Underground/Utility Fitter)..... | \$ 69.70 | 33.15   |

-----  
 PLUM0228-001 01/01/2025

BUTTE, COLUSA, GLENN, LASSEN, MODOC, PLUMAS, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY & YUBA COUNTIES

|              | Rates    | Fringes |
|--------------|----------|---------|
| PLUMBER..... | \$ 50.00 | 40.34   |

-----  
 PLUM0343-001 07/01/2024

NAPA AND SOLANO COUNTIES

|                       | Rates    | Fringes |
|-----------------------|----------|---------|
| PLUMBER/PIPEFITTER    |          |         |
| Light Commercial..... | \$ 30.85 | 20.40   |
| All Other Work.....   | \$ 69.60 | 36.63   |

DEFINITION OF LIGHT COMMERCIAL:  
 Work shall include strip shopping centers, office buildings, schools and other commercial structures which the total plumbing bid does not exceed Two Hundred and Fifty Thousand (\$250,000) and the total heating and cooling does not exceed Two Hundred Fifty Thousand (\$250,000); or Any projects bid in phases shall not qualify unless the total project is less than Two Hundred Fifty Thousand (\$250,000) for the plumbing bid; and Two Hundred Fifty Thousand (\$250,000) for the heating and cooling bid. Excluded are hospitals, jails, institutions and industrial projects, regardless size of the project

FOOTNOTES: While fitting galvanized material: \$.75 per hour additional. Work from trusses, temporary staging, unguarded structures 35' from the ground or water: \$.75 per hour additional. Work from swinging scaffolds, boatswains chairs or similar devices: \$.75 per hour additional.

-----  
 PLUM0350-001 08/01/2023

EL DORADO COUNTY (Lake Tahoe area only); NEVADA COUNTY (Lake Tahoe area only); AND PLACER COUNTY (Lake Tahoe area only)

|                         | Rates    | Fringes |
|-------------------------|----------|---------|
| PLUMBER/PIPEFITTER..... | \$ 52.14 | 18.71   |

-----

PLUM0355-001 07/01/2024

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NAPA, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO, SUTTER, TEHAMA, TRINITY, YOLO, AND YUBA COUNTIES

|  | Rates    | Fringes |
|--|----------|---------|
| Underground Utility Worker<br>/Landscape Fitter..... | \$ 34.51 | 18.30   |

-----

PLUM0442-003 01/01/2025

AMADOR (South of San Joaquin River) and ALPINE COUNTIES

|              | Rates    | Fringes |
|--------------|----------|---------|
| PLUMBER..... | \$ 55.95 | 37.64   |

-----

PLUM0447-001 07/01/2024

AMADOR (north of San Joaquin River), EL DORADO (excluding Lake Tahoe area), NEVADA (excluding Lake Tahoe area); PLACER (excluding Lake Tahoe area), SACRAMENTO AND YOLO COUNTIES

|                            | Rates    | Fringes |
|----------------------------|----------|---------|
| PLUMBER/PIPEFITTER         |          |         |
| Journeyman.....            | \$ 64.37 | 29.25   |
| Light Commercial Work..... | \$ 53.08 | 23.52   |

-----

ROOF0081-006 08/01/2023

MARIN, NAPA, SOLANO AND SONOMA COUNTIES

|             | Rates    | Fringes |
|-------------|----------|---------|
| Roofer..... | \$ 52.47 | 22.31   |

---

ROOF0081-007 08/01/2023

ALPINE, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA,  
PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER,  
TEHAMA, TRINITY, YOLO, AND YUBA COUNTIES

|             | Rates    | Fringes |
|-------------|----------|---------|
| Roofer..... | \$ 46.73 | 21.36   |

---

SFCA0483-003 01/01/2025

MARIN, NAPA, SOLANO AND SONOMA COUNTIES

|  | Rates    | Fringes |
|--|----------|---------|
| SPRINKLER FITTER (Fire<br>Sprinklers)..... | \$ 78.94 | 39.10   |

---

SFCA0669-003 01/01/2025

ALPINE, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA,  
PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER,  
TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

|                       | Rates    | Fringes |
|-----------------------|----------|---------|
| SPRINKLER FITTER..... | \$ 48.65 | 28.56   |

---

SHEE0104-006 06/29/2020

MARIN, NAPA, SOLANO SONOMA & TRINITY COUNTIES

|  | Rates    | Fringes |
|--|----------|---------|
| Sheet Metal Worker<br>Mechanical Contracts<br>\$200,000 or less..... | \$ 55.92 | 45.29   |
| All other work.....  | \$ 64.06 | 46.83   |

---

SHEE0104-009 07/01/2021

AMADOR, COLUSA, EL DORADO, NEVADA, PLACER, SACRAMENTO, SUTTER,  
YOLO AND YUBA COUNTIES

|                         | Rates    | Fringes |
|-------------------------|----------|---------|
| SHEET METAL WORKER..... | \$ 47.85 | 41.90   |

---

SHEE0104-010 07/01/2020

AIPINE COUNTY

|                         | Rates    | Fringes |
|-------------------------|----------|---------|
| SHEET METAL WORKER..... | \$ 43.50 | 37.42   |

-----  
SHEE0104-011 07/01/2020

BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER,  
PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA,  
YOLO AND YUBA COUNTIES

|  | Rates    | Fringes |
|--|----------|---------|
| Sheet Metal Worker (Metal<br>decking and siding only)..... | \$ 44.45 | 35.55   |

-----  
SHEE0104-014 07/01/2020

MARIN, NAPA, SOLANO, SONOMA AND TRINITY COUNTIES

|  | Rates    | Fringes |
|--|----------|---------|
| SHEET METAL WORKER (Metal<br>Decking and Siding only)..... | \$ 44.45 | 35.55   |

-----  
SHEE0104-019 07/01/2020

BUTTE, GLENN, LASSEN, MODOC, PLUMAS, SHASTA, SIERRA, SISKIYOU  
AND TEHAMA COUNTIES

|   | Rates    | Fringes |
|---|----------|---------|
| SHEET METAL WORKER<br>Mechanical Jobs \$200,000 &<br>under..... | \$ 35.16 | 35.88   |
| Mechanical Jobs over<br>\$200,000.....                          | \$ 46.60 | 40.21   |

-----  
TEAM0094-001 07/01/2024

|                | Rates    | Fringes |
|----------------|----------|---------|
| Truck drivers: |          |         |
| GROUP 1.....   | \$ 41.54 | 33.25   |
| GROUP 2.....   | \$ 41.84 | 33.25   |
| GROUP 3.....   | \$ 42.14 | 33.25   |
| GROUP 4.....   | \$ 42.49 | 33.25   |
| GROUP 5.....   | \$ 42.84 | 33.25   |

FOOTNOTES:

Articulated dump truck; Bulk cement spreader (with or without

auger); Dumpcrete truck; Skid truck (debris box); Dry pre-batch concrete mix trucks; Dumpster or similar type; Slurry truck: Use dump truck yardage rate. Heater planer; Asphalt burner; Scarifier burner; Industrial lift truck (mechanical tailgate); Utility and clean-up truck: Use appropriate rate for the power unit or the equipment utilized.

## TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Dump trucks, under 6 yds.; Single unit flat rack (2-axle unit); Nipper truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump machine; Fork lift and lift jitneys; Fuel and/or grease truck driver or fuel person; Snow buggy; Steam cleaning; Bus or personhaul driver; Escort or pilot car driver; Pickup truck; Teamster oiler/greaser and/or serviceperson; Hook tender (including loading and unloading); Team driver; Tool room attendant (refineries)

GROUP 2: Dump trucks, 6 yds. and under 8 yds.; Transit mixers, through 10 yds.; Water trucks, under 7,000 gals.; Jetting trucks, under 7,000 gals.; Single-unit flat rack (3-axle unit); Highbed heavy duty transport; Scissor truck; Rubber-tired muck car (not self-loaded); Rubber-tired truck jumbo; Winch truck and "A" frame drivers; Combination winch truck with hoist; Road oil truck or bootperson; Buggymobile; Ross, Hyster and similar straddle carriers; Small rubber-tired tractor

GROUP 3: Dump trucks, 8 yds. and including 24 yds.; Transit mixers, over 10 yds.; Water trucks, 7,000 gals. and over; Jetting trucks, 7,000 gals. and over; Vacuum trucks under 7500 gals. Trucks towing tilt bed or flat bed pull trailers; Lowbed heavy duty transport; Heavy duty transport tiller person; Self-propelled street sweeper with self-contained refuse bin; Boom truck - hydro-lift or Swedish type extension or retracting crane; P.B. or similar type self-loading truck; Tire repairperson; Combination bootperson and road oiler; Dry distribution truck (A bootperson when employed on such equipment, shall receive the rate specified for the classification of road oil trucks or bootperson); Ammonia nitrate distributor, driver and mixer; Snow Go and/or plow

GROUP 4: Dump trucks, over 25 yds. and under 65 yds.; Water pulls - DW 10's, 20's, 21's and other similar equipment when pulling Aqua/pak or water tank trailers; Helicopter pilots (when transporting men and materials); Lowbed Heavy Duty Transport up to including 7 axles; DW10's, 20's, 21's and other similar Cat type, Terra Cobra, LeTourneau Pulls, Tournorocker, Euclid and similar type equipment when pulling fuel and/or grease tank trailers or other miscellaneous trailers; Vacuum Trucks 7500 gals and over

and truck repairman

GROUP 5: Dump trucks, 65 yds. and over; Holland hauler; Low bed Heavy Duty Transport over 7 axles

-----

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

-----

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA?", or "SC?" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers.



0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

#### State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME

refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

-----

## WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to [davisbaconinfo@dol.gov](mailto:davisbaconinfo@dol.gov) or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210.

=====

END OF GENERAL DECISION"

# STATE WAGE RATES

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

FOR LANDSCAPE CONSTRUCTION PROJECTS

**CRAFT: OPERATING ENGINEER<sup>#</sup>**

**Determination:**

NC-63-3-75-2024-1

**Issue Date:**

August 22, 2024

**Expiration date of determination:**

June 29, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415)703-4774.

**Localities:**

All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties

**AREA 1** - Alameda, Butte, Contra Costa, Kings, Marin, Merced, Napa, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, Stanislaus, Sutter, Yolo and Yuba counties; and portions of Alpine, Amador, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Lake, Lassen, Madera, Mariposa, Mendocino, Monterey, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sonoma, Tehama, Trinity, Tulare, and Tuolumne Counties (Portions of counties falling in each area detailed in the Operating Engineer (Heavy and Highway Work) determination).

**Wages and Employer Payments (Area 1):**

| Classification <sup>a</sup><br>(Journey person) | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension | Vacation<br>and<br>Holiday <sup>b</sup> | Training | Other  | Hours | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly Rate<br>(1½ X) | Saturday<br>Overtime<br>Hourly Rate<br>(1½ X) <sup>c</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly Rate<br>(2 X) |
|---|-------------------------|--------------------------|---------|---|----------|--------|-------|-------------------------|--|--|--|
| Group I   | \$52.40                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$83.87                 | \$110.07                                   | \$110.07   | \$136.27   |
| Group II  | \$48.80                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$80.27                 | \$104.67                                   | \$104.67   | \$129.07   |
| Group III                                       | \$44.19                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$75.66                 | \$97.755                                   | \$97.755   | \$119.85   |
| Group IV  | \$41.48                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$72.95                 | \$93.69                                    | \$93.69  | \$114.43   |

**AREA 2** - Modoc, and portions of Alpine, Amador, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Lake, Lassen, Madera, Mariposa, Mendocino, Monterey, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sonoma, Tehama, Trinity, Tulare, and Tuolumne Counties (Portions of counties falling in each area detailed in the Operating Engineer (Heavy and Highway Work) determination).

**Wages and Employer Payments (Area 2):**

| Classification <sup>a</sup><br>(Journey person) | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension | Vacation<br>and<br>Holiday <sup>b</sup> | Training | Other  | Hours | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly Rate<br>(1½ X) | Saturday<br>Overtime<br>Hourly Rate<br>(1½ X) <sup>c</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly Rate<br>(2 X) |
|---|-------------------------|--------------------------|---------|---|----------|--------|-------|-------------------------|--|--|--|
| Group I   | \$54.40                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$85.87                 | \$113.07                                   | \$113.07   | \$140.27   |
| Group II  | \$50.80                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$82.27                 | \$107.67                                   | \$107.67   | \$133.07   |
| Group III                                       | \$46.19                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$77.66                 | \$100.755                                  | \$100.755  | \$123.85   |
| Group IV  | \$43.48                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$74.95                 | \$96.69                                    | \$96.69  | \$118.43   |

**Recognized holidays**

Holidays upon which the general prevailing hourly wage rate for Holiday work shall be paid, shall be all holidays in the collective bargaining agreement, applicable to the particular craft, classification, or type of worker employed on the project, which is on file with the Director of Industrial Relations. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code. You may obtain the holiday provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Holiday provisions for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

**Travel and/or subsistence payment:**

In accordance with Labor Code Sections 1773.1 and 1773.9, contractors shall make travel and/or subsistence payments to each worker to execute the work. You may obtain the travel and/or subsistence provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Travel and/or subsistence requirements for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

FOR LANDSCAPE CONSTRUCTION PROJECTS

**CRAFT: OPERATING ENGINEER#**  
**(SPECIAL SINGLE AND SECOND SHIFT)**

**Determination:**

NC-63-3-75-2024-1

**Issue Date:**

August 22, 2024

**Expiration date of determination:**

June 29, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415)703-4774.

**Localities:**

All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

**AREA 1** - Alameda, Butte, Contra Costa, Kings, Marin, Merced, Napa, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, Stanislaus, Sutter, Yolo and Yuba counties; and portions of Alpine, Amador, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Lake, Lassen, Madera, Mariposa, Mendocino, Monterey, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sonoma, Tehama, Trinity, Tulare, and Tuolumne Counties (Portions of counties falling in each area detailed in the Operating Engineer (Heavy and Highway Work) determination).

**Wages and Employer Payments (Area 1):**

| Classification <sup>a</sup><br>(Journey person) | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension | Vacation<br>and<br>Holiday <sup>b</sup> | Training | Other  | Hours | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly Rate<br>(1½ X) | Saturday<br>Overtime<br>Hourly Rate<br>(1½ X) <sup>c</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly Rate<br>(2 X) |
|---|-------------------------|--------------------------|---------|---|----------|--------|-------|-------------------------|--|--|--|
| Group I   | \$58.40                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$89.87                 | \$119.07                                   | \$119.07   | \$148.27   |
| Group II  | \$54.80                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$86.27                 | \$113.67                                   | \$113.67   | \$141.07   |
| Group III                                       | \$50.19                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$81.66                 | \$106.755                                  | \$106.755  | \$131.85   |
| Group IV  | \$47.48                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$78.95                 | \$102.69                                   | \$102.69   | \$126.43   |

**AREA 2** - Modoc, and portions of Alpine, Amador, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Lake, Lassen, Madera, Mariposa, Mendocino, Monterey, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sonoma, Tehama, Trinity, Tulare, and Tuolumne Counties (Portions of counties falling in each area detailed in the Operating Engineer (Heavy and Highway Work) determination).

**Wages and Employer Payments (Area 2):**

| Classification <sup>a</sup><br>(Journey person) | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension | Vacation<br>and<br>Holiday <sup>b</sup> | Training | Other  | Hours | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly Rate<br>(1½ X) | Saturday<br>Overtime<br>Hourly Rate<br>(1½ X) <sup>c</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly Rate<br>(2 X) |
|---|-------------------------|--------------------------|---------|---|----------|--------|-------|-------------------------|--|--|--|
| Group 1   | \$60.40                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$91.87                 | \$122.07                                   | \$122.07   | \$152.27   |
| Group 2   | \$56.80                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$88.27                 | \$116.67                                   | \$116.67   | \$145.07   |
| Group 3   | \$52.19                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$83.66                 | \$109.755                                  | \$109.755  | \$135.85   |
| Group 4   | \$49.48                 | \$13.38                  | \$10.85 | \$4.56                                  | \$1.25   | \$1.43 | 8     | \$80.95                 | \$105.69                                   | \$105.69   | \$130.43   |

**Recognized holidays**

Holidays upon which the general prevailing hourly wage rate for Holiday work shall be paid, shall be all holidays in the collective bargaining agreement, applicable to the particular craft, classification, or type of worker employed on the project, which is on file with the Director of Industrial Relations. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code. You may obtain the holiday provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Holiday provisions for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

**Travel and/or subsistence payment:**

In accordance with Labor Code Sections 1773.1 and 1773.9, contractors shall make travel and/or subsistence payments to each worker to execute the work. You may obtain the travel and/or subsistence provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Travel and/or subsistence requirements for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.



## CLASSIFICATIONS:

### Group I

Landscape Finish Grade Operator. All finish grade work regardless of the equipment used, and all equipment with a horsepower rating of more than 65.

### Group II

Landscape Operator up to 65 H.P. All equipment with a manufacturer's horsepower rating of 65 or less except equipment covered by Group I or Group III. The following equipment shall be included in Group II except when used for finish work so long as its manufacturer's horsepower rating is 65 or less.

A-Frame and Winch Truck

Backhoe

Forklift (Jobsite)

HDR Welder - Landscape - Operating Engineer's Equipment

Hydro Seeder Machine

Roller

Rubber-Tired and Track Earthmoving Equipment

Skiploader

Straw Blowers

Trencher - 35 Horsepower up to 65 Horsepower

### Group III

Landscape Utility Operator

Small Rubber-Tired Tractor

Trencher - Under 35 Horsepower

### Group IV

Assistant Landscape Utility Operator Oiler

---

# Indicates an apprenticeable craft. The current apprentice wage rates are available on the [Prevailing Wage Apprentice Determinations Website](http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp) (<http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp>).

<sup>a</sup> For classifications within each group, see Page 5.

<sup>b</sup> Includes an amount for Supplemental Dues.

<sup>c</sup> Saturday in the same workweek may be worked at straight-time if a job is shut down during the normal workweek due to inclement weather, major mechanical breakdown or shortage of materials beyond the control of the Individual Employer.

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE  
DIRECTOR OF INDUSTRIAL RELATIONS PURSUANT TO CALIFORNIA LABOR CODE  
PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

**Craft: LABORER AND RELATED CLASSIFICATIONS<sup>#</sup>**

**Determination:**

NC-23-102-1-2024-2

**Issue Date:**

August 22, 2024

**Expiration date of determination:**

June 29, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415) 703-4774.

**Localities:**

All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Mariposa, Marin, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

**AREA 1** - Alameda, Contra Costa, Marin, San Francisco, San Mateo, And Santa Clara Counties.

**AREA 2** - Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Joaquin, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo And Yuba Counties.

**WAGE RATES AND TOTAL HOURLY RATES (AREA 1):**

| Classification <sup>a</sup> (Journey person) | Basic Hourly Rate <sup>b</sup> | Hours <sup>c</sup> | Total Hourly Rate | Daily/ Saturday Overtime Hourly Rate <sup>d</sup> | Sunday/ Holiday Overtime Hourly Rate |
|--|--------------------------------|--------------------|-------------------|---|--------------------------------------|
| Construction Specialist                      | \$38.45                        | 8                  | \$68.36           | \$87.59   | \$106.81                             |
| Group 1; Group 1(B) <sup>e</sup>             | \$37.75                        | 8                  | \$67.66           | \$86.54   | \$105.41                             |
| Group 1 (A)                                  | \$37.97                        | 8                  | \$67.88           | \$86.87   | \$105.85                             |
| Group 1 (C)                                  | \$37.80                        | 8                  | \$67.71           | \$86.61   | \$105.51                             |
| Group 1 (E)                                  | \$38.30                        | 8                  | \$68.21           | \$87.36   | \$106.51                             |
| Group 1 (G)                                  | \$37.95                        | 8                  | \$67.86           | \$86.84   | \$105.81                             |
| Group 2                                      | \$37.60                        | 8                  | \$67.51           | \$86.31   | \$105.11                             |
| Group 3; Group 3 (A)                         | \$37.50                        | 8                  | \$67.41           | \$86.16   | \$104.91                             |
| Group 4; Group 6 (B)                         | \$31.19                        | 8                  | \$61.10           | \$76.70   | \$92.29                              |
| Group 6                                      | \$38.71                        | 8                  | \$68.62           | \$87.98   | \$107.33                             |
| Group 6 (A)                                  | \$38.21                        | 8                  | \$68.12           | \$87.23   | \$106.33                             |
| Group 6 (C)                                  | \$37.62                        | 8                  | \$67.53           | \$86.34   | \$105.15                             |
| Group 6 (D)                                  | \$38.33                        | 8                  | \$68.24           | \$87.41   | \$106.57                             |
| Group 6 (E)                                  | \$37.35                        | 8                  | \$67.26           | \$85.94   | \$104.61                             |
| Group 7 – Stage 1 (1 <sup>st</sup> 6 months) | \$26.25                        | 8                  | \$56.16           | \$69.29   | \$82.41                              |
| Group 7 – Stage 2 (2 <sup>nd</sup> 6 months) | \$30.00                        | 8                  | \$59.91           | \$74.91   | \$89.91                              |
| Group 7 – Stage 3 (3 <sup>rd</sup> 6 months) | \$33.75                        | 8                  | \$63.66           | \$80.54   | \$97.41                              |

WAGE RATES AND TOTAL HOURLY RATES (AREA 2):

| Classification <sup>a</sup> (Journey person) | Basic Hourly Rate <sup>b</sup> | Hours <sup>c</sup> | Total Hourly Rate | Daily/ Saturday Overtime Hourly Rate <sup>d</sup> | Sunday/ Holiday Overtime Hourly Rate |
|--|--------------------------------|--------------------|-------------------|---|--------------------------------------|
| Construction Specialist                      | \$37.45                        | 8                  | \$67.36           | \$86.09   | \$104.81                             |
| Group 1; Group 1(B) <sup>e</sup>             | \$36.75                        | 8                  | \$66.66           | \$85.04   | \$103.41                             |
| Group 1 (A)                                  | \$36.97                        | 8                  | \$66.88           | \$85.37   | \$103.85                             |
| Group 1 (C)                                  | \$36.80                        | 8                  | \$66.71           | \$85.11   | \$103.51                             |
| Group 1 (E)                                  | \$37.30                        | 8                  | \$67.21           | \$85.86   | \$104.51                             |
| Group 2                                      | \$36.60                        | 8                  | \$66.51           | \$84.81   | \$103.11                             |
| Group 3; Group 3 (A)                         | \$36.50                        | 8                  | \$66.41           | \$84.66   | \$102.91                             |
| Group 4; Group 6 (B)                         | \$30.19                        | 8                  | \$60.10           | \$75.20   | \$90.29                              |
| Group 6                                      | \$37.71                        | 8                  | \$67.62           | \$86.48   | \$105.33                             |
| Group 6 (A)                                  | \$37.21                        | 8                  | \$67.12           | \$85.73   | \$104.33                             |
| Group 6 (C)                                  | \$36.62                        | 8                  | \$66.53           | \$84.84   | \$103.15                             |
| Group 6 (D)                                  | \$37.33                        | 8                  | \$67.24           | \$85.91   | \$104.57                             |
| Group 6 (E)                                  | \$36.35                        | 8                  | \$66.26           | \$84.44   | \$102.61                             |
| Group 7 – Stage 1 (1 <sup>st</sup> 6 months) | \$25.55                        | 8                  | \$55.46           | \$68.24   | \$81.01                              |
| Group 7 – Stage 2 (2 <sup>nd</sup> 6 months) | \$29.20                        | 8                  | \$59.11           | \$73.71   | \$88.31                              |
| Group 7 – Stage 3 (3 <sup>rd</sup> 6 months) | \$32.85                        | 8                  | \$62.76           | \$79.19   | \$95.61                              |

EMPLOYER PAYMENTS:

| Type of Fund         | Amount per Hour Worked |
|----------------------|------------------------|
| Health & Welfare     | \$10.60                |
| Pension              | \$14.96                |
| Vacation and Holiday | \$3.51                 |
| Training             | \$0.52                 |
| Other                | \$0.32                 |

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE  
DIRECTOR OF INDUSTRIAL RELATIONS PURSUANT TO CALIFORNIA LABOR CODE  
PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

**Craft: LABORER AND RELATED CLASSIFICATIONS (Special Single and Second Shift)#**

**Determination:**

NC-23-102-1-2024-2A

**Issue Date:**

August 22, 2024

**Expiration date of determination:**

June 29, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415) 703-4774.

**Localities:**

All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Mariposa, Marin, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

**AREA 1** - Alameda, Contra Costa, Marin, San Francisco, San Mateo, And Santa Clara Counties.

**AREA 2** - Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Joaquin, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo And Yuba Counties.

**WAGE RATES AND TOTAL HOURLY RATES (AREA 1):**

| Classification <sup>a</sup> (Journeyperson)  | Basic Hourly Rate <sup>b</sup> | Hours | Total Hourly Rate | Daily/ Saturday Overtime Hourly Rate <sup>d</sup> | Sunday/ Holiday Overtime Hourly Rate |
|--|--------------------------------|-------|-------------------|---|--------------------------------------|
| Construction Specialist                      | \$41.45                        | 8     | \$71.36           | \$92.09   | \$112.81                             |
| Group 1; Group 1(B) <sup>e</sup>             | \$40.75                        | 8     | \$70.66           | \$91.04   | \$111.41                             |
| Group 1 (A)                                  | \$40.97                        | 8     | \$70.88           | \$91.37   | \$111.85                             |
| Group 1 (C)                                  | \$40.80                        | 8     | \$70.71           | \$91.11   | \$111.51                             |
| Group 1 (E)                                  | \$41.30                        | 8     | \$71.21           | \$91.86   | \$112.51                             |
| Group 1 (G)                                  | \$40.95                        | 8     | \$70.86           | \$91.34   | \$111.81                             |
| Group 2                                      | \$40.60                        | 8     | \$70.51           | \$90.81   | \$111.11                             |
| Group 3; Group 3 (A)                         | \$40.50                        | 8     | \$70.41           | \$90.66   | \$110.91                             |
| Group 4; Group 6 (B)                         | \$34.19                        | 8     | \$64.10           | \$81.20   | \$98.29                              |
| Group 6                                      | \$41.71                        | 8     | \$71.62           | \$92.48   | \$113.33                             |
| Group 6 (A)                                  | \$41.21                        | 8     | \$71.12           | \$91.73   | \$112.33                             |
| Group 6 (C)                                  | \$40.62                        | 8     | \$70.53           | \$90.84   | \$111.15                             |
| Group 6 (D)                                  | \$41.33                        | 8     | \$71.24           | \$91.91   | \$112.57                             |
| Group 6 (E)                                  | \$40.35                        | 8     | \$70.26           | \$90.44   | \$110.61                             |
| Group 7 – Stage 1 (1 <sup>st</sup> 6 months) | \$29.25                        | 8     | \$59.16           | \$73.79   | \$88.41                              |
| Group 7 – Stage 2 (2 <sup>nd</sup> 6 months) | \$33.00                        | 8     | \$62.91           | \$79.41   | \$95.91                              |
| Group 7 – Stage 3 (3 <sup>rd</sup> 6 months) | \$36.75                        | 8     | \$66.66           | \$85.04   | \$103.41                             |

WAGE RATES AND TOTAL HOURLY RATES (AREA 2):

| Classification <sup>a</sup> (Journey person)<br>Group | Basic<br>Hourly<br>Rate <sup>b</sup> | Hours | Total<br>Hourly<br>Rate | Daily/<br>Saturday<br>Overtime<br>Hourly<br>Rate <sup>d</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly<br>Rate |
|---|--------------------------------------|-------|-------------------------|---|--|
| Construction Specialist                               | \$40.45                              | 8     | \$70.36                 | \$90.59   | \$110.81   |
| Group 1; Group 1(B) <sup>e</sup>                      | \$39.75                              | 8     | \$69.66                 | \$89.54   | \$109.41   |
| Group 1 (A)   | \$39.97                              | 8     | \$69.88                 | \$89.87   | \$109.85   |
| Group 1 (C)   | \$39.80                              | 8     | \$69.71                 | \$89.61   | \$109.51   |
| Group 1 (E)   | \$40.30                              | 8     | \$70.21                 | \$90.36   | \$110.51   |
| Group 2   | \$39.60                              | 8     | \$69.51                 | \$89.31   | \$109.11   |
| Group 3; Group 3 (A)                                  | \$39.50                              | 8     | \$69.41                 | \$89.16   | \$108.91   |
| Group 4; Group 6 (B)                                  | \$33.19                              | 8     | \$63.10                 | \$79.70   | \$96.29  |
| Group 6   | \$40.71                              | 8     | \$70.62                 | \$90.98   | \$111.33   |
| Group 6 (A)   | \$40.21                              | 8     | \$70.12                 | \$90.23   | \$110.33   |
| Group 6 (C)   | \$39.62                              | 8     | \$69.53                 | \$89.34   | \$109.15   |
| Group 6 (D)   | \$40.33                              | 8     | \$70.24                 | \$90.41   | \$110.57   |
| Group 6 (E)   | \$39.35                              | 8     | \$69.26                 | \$88.94   | \$108.61   |
| Group 7 – Stage 1 (1 <sup>st</sup> 6 months)          | \$28.55                              | 8     | \$58.46                 | \$72.74   | \$87.01  |
| Group 7 – Stage 2 (2 <sup>nd</sup> 6 months)          | \$32.20                              | 8     | \$62.11                 | \$78.21   | \$94.31  |
| Group 7 – Stage 3 (3 <sup>rd</sup> 6 months)          | \$35.85                              | 8     | \$65.76                 | \$83.69   | \$101.61   |

EMPLOYER PAYMENTS:

| Type of Fund         | Amount per Hour Worked |
|----------------------|------------------------|
| Health & Welfare     | \$10.60                |
| Pension              | \$14.96                |
| Vacation and Holiday | \$3.51                 |
| Training             | \$0.52                 |
| Other                | \$0.32                 |

## **CLASSIFICATIONS**

### **Construction Specialist**

ASPHALT IRONERS AND RAKERS

CHAINSAW

CONCRETE DIAMOND CHAINSAW

LASER BEAM IN CONNECTION WITH

LABORER'S WORK

MASONRY AND PLASTER TENDER

MECHANICAL PIPE LAYER-ALL TYPES

REGARDLESS OF TYPE OR METHOD OF

POWER

CAST IN PLACE MANHOLE FORM SETTERS

PRESSURE PIPELAYERS

DAVIS TRENCHER – 300 OR SIMILAR TYPE

(AND ALL SMALL TRENCHERS)

STATE LICENSED BLASTERS AS DESIGNATED

DIAMOND DRILLERS

DIAMOND CORE DRILLER

MULTIPLE UNIT DRILLS

HIGH SCALERS (INCLUDING DRILLING OF

SAME)

HYDRAULIC DRILLS

CERTIFIED WELDER

### **GROUP 1** (FOR CONTRA COSTA COUNTY

ONLY, USE GROUP 1 (G) FOR SOME OF THE

FOLLOWING CLASSIFICATIONS)

ASPHALT SPREADER BOXES (ALL TYPES)

BARKO, WACKER AND SIMILAR TYPE

TAMPERS

BIOHAZARD CLEANUP WORKER

BUGGYMOBILE

CAULKERS, BANDERS, PIPEWRAPPERS,

CONDUIT LAYERS, PLASTIC PIPE LAYERS

CERTIFIED ASBESTOS AND MOLD REMOVAL

WORKER

CERTIFIED HAZARDOUS WASTE WORKER

(INCLUDING LEAD ABATEMENT)

COMPACTORS OF ALL TYPES

CONCRETE AND MAGNESITE MIXER AND ½

YARD

CONCRETE PAN WORK

CONCRETE SANDERS, CONCRETE SAW

CRIBBERS AND/OR SHORING

CUT GRANITE CURB SETTER

DRI PAK-IT MACHINE

FALLER, LOGLOADER AND BUCKER

FORM RAISERS, SLIP FORMS

GREEN CUTTERS

HEADERBOARD MEN, HUBSETTERS,

ALIGNERS BY ANY METHOD

HIGH PRESSURE BLOW PIPE (1-1/2" OR OVER,

100 LBS. PRESSURE/OVER)

HYDRO SEEDER AND SIMILAR TYPE

JACKHAMMER OPERATORS

JACKING OF PIPE OVER 12 INCHES

JACKSON AND SIMILAR TYPE COMPACTORS

KETTLEMEN, POTMEN, AND MEN APPLYING

ASPHALT, LAY KOLD, CREOSOTE, LIME,

CAUSTIC AND SIMILAR TYPE MATERIALS

(APPLYING MEANS APPLYING DIPPING, OR

HANDLING OF SUCH MATERIALS)

LAGGING, SHEETING, WHALING, BRACING,

TRENCH-JACKING, LAGGING HAMMER

MAGNESITE, EPOXY RESIN, FIBER GLASS AND

MASTIC WORKERS (WET/DRY)

NO JOINT PIPE AND STRIPPING OF SAME,

INCLUDING REPAIR OF VOIDS

PAVEMENT BREAKERS AND SPADERS,

INCLUDING TOOL GRINDER

PERMA CURBS

PRECAST-MANHOLE SETTERS

PIPELAYERS (INCLUDING GRADE CHECKING

IN CONNECTION WITH PIPELAYING)

PRESSURE PIPE TESTER

POST HOLE DIGGERS-AIR, GAS, AND

ELECTRIC POWER BROOM SWEEPERS

POWER TAMPERS OF ALL TYPES, EXCEPT AS

SHOWN IN GROUP 2

RAM SET GUN AND STUD GUN

RIPRAP-STONEPAVER AND ROCK-SLINGER,

INCLUDING PLACING OF SACKED

CONCRETE AND/OR SAND (WET OR DRY)

AND GABIONS AND SIMILAR TYPE

ROTARY SCARIFIER OR MULTIPLE HEAD

CONCRETE CHIPPING SCARIFIER

ROTO AND DITCH WITCH

ROTOTILLER

SAND BLASTERS, POTMEN, GUNMEN, AND

NOZZLEMEN

SIGNALING AND RIGGING

SKILLED WRECKER (REMOVING AND

SALVAGING OF SASH, WINDOWS,

DOORS, PLUMBING AND ELECTRIC

FIXTURES)

TANK CLEANERS

TREE CLIMBERS

TRENCHLESS TECHNOLOGY LABORER- PIPE

INSTALLATION, BURSTING, RELINING, OR

SIMILAR

TRENCHLESS LABORER'S WORK, CAMERA

CONTROLLER, CCTV

TURBO BLASTER

VIBRA-SCREED-BULL FLOAT IN CONNECTION

WITH LABORER'S WORK  
VIBRATORS

**GROUP 1 (A)**

ALL WORK OF LOADING, PLACING AND  
BLASTING OF ALL POWDER &  
EXPLOSIVES OF WHATEVER TYPE,  
REGARDLESS OF METHOD USED FOR  
LOADING AND PLACING  
JOY DRILL MODEL TWM-2A  
GARDENER-DENVER MODEL DH 143 AND  
SIMILAR TYPE DRILLS  
TRACK DRILLERS  
JACK LEG DRILLERS  
WAGON DRILLERS  
MECHANICAL DRILLERS-ALL TYPES  
REGARDLESS OF TYPE OR METHOD  
OF POWER  
BLASTERS AND POWDERMAN  
TREE TOPPER  
BIT GRINDER

**GROUP 1 (B)** -- SEE GROUP 1 RATES

SEWER CLEANERS (ANY WORKMEN WHO  
HANDLE OR COME IN CONTACT WITH RAW  
SEWAGE IN SMALL DIAMETER SEWERS)  
SHALL RECEIVE \$4.00 PER DAY ABOVE  
GROUP 1 WAGE RATES. THOSE WHO WORK  
INSIDE RECENTLY ACTIVE, LARGE  
DIAMETER SEWERS, AND ALL RECENTLY  
ACTIVE SEWER MANHOLES SHALL RECEIVE  
\$5.00 PER DAY ABOVE GROUP 1 WAGE  
RATES.

**GROUP 1 (C)**

BURNING AND WELDING IN CONNECTION  
WITH LABORER'S WORK  
SYNTHETIC THERMOPLASTICS AND SIMILAR  
TYPE WELDING

**GROUP 1 (D)**

SEE FOOTNOTE A ON PAGE 8

**GROUP 1 (E)**

WORK ON AND/OR IN BELL HOLE FOOTINGS  
AND SHAFTS THEREOF, AND WORK ON AND  
IN DEEP FOOTINGS (DEEP FOOTINGS IS A  
HOLE 15 FEET OR MORE IN DEPTH)  
SHAFT IS AN EXCAVATION OVER FIFTEEN (15)  
FEET DEEP OF ANY TYPE

**GROUP 1 (G) APPLIES ONLY TO WORK IN  
CONTRA COSTA COUNTY**

PIPELAYERS (INCLUDING GRADE CHECKING  
IN CONNECTION WITH PIPELAYING),  
CAULKERS, BANDERS, PIPEWRAPPERS,  
CONDUIT LAYERS, PLASTIC PIPE LAYER,  
PRESSURE PIPE TESTER, NO JOINT PIPE  
AND STRIPPING OF SAME, INCLUDING  
REPAIR OF VOIDS, PRECAST MANHOLE  
SETTERS, CAST IN PLACE MANHOLE FORM  
SETTERS IN CONTRA COSTA COUNTY ONLY

**GROUP 1(H)**

SEE FOOTNOTE A ON PAGE 8

**GROUP 2**

ASPHALT SHOVELERS  
CEMENT DUMPERS AND HANDLING DRY  
CEMENT OR GYPSUM  
CHOKE-SETTER AND RIGGER (CLEARING  
WORK)  
CONCRETE BUCKET DUMPER AND  
CHUTEMAN  
CONCRETE CHIPPING AND GRINDING  
CONCRETE LABORERS (WET OR DRY)  
DRILLERS HELPER, CHUCK TENDER, NIPPER  
(ONE CHUCKTENDER ON SINGLE MACHINE  
OPERATION WITH MINIMUM OF ONE  
CHUCKTENDER FOR EACH TWO MACHINES  
ON MULTIPLE MACHINE OPERATION.  
JACKHAMMERS IN NO WAY INVOLVED IN  
THIS ITEM.)  
GUINEA CHASER (STAKEMAN), GROUT CREW  
HIGH PRESSURE NOZZLEMAN, ADDUCTORS  
HYDRAULIC MONITOR (OVER 100 LBS.  
PRESSURE)  
LOADING AND UNLOADING, CARRYING AND  
HANDLING OF ALL RODS AND MATERIALS  
FOR USE IN REINFORCING CONCRETE  
CONSTRUCTION  
PITTSBURGH CHIPPER, AND SIMILAR TYPE  
BRUSH SHREDDERS  
SEMI-SKILLED WRECKER (SALVAGING OF  
OTHER BUILDING MATERIALS) – SEE ALSO  
SKILLED WRECKER (GROUP 1)  
SLOPER  
SINGLEFOOT, HAND HELD, PNEUMATIC  
TAMPER  
ALL PNEUMATIC, AIR, GAS AND ELECTRIC  
TOOLS NOT LISTED IN GROUPS 1 THROUGH  
1 (F)  
JACKING OF PIPE-UNDER 12 INCHES

**GROUP 3**

CONSTRUCTION LABORERS INCLUDING  
BRIDGE LABORERS, GENERAL LABORERS  
AND CLEANUP LABORERS  
DEMOLITION WORKER  
DUMPMAN, LOAD SPOTTER  
FLAGPERSON/PEDESTRIAN MONITOR  
FIRE WATCHER  
FENCE ERECTORS, INCLUDING TEMPORARY  
FENCING  
GUARDRAIL ERECTORS  
GARDENER, HORTICULTURAL AND  
LANDSCAPE LABORERS (SEE GROUP 4, FOR  
LANDSCAPE MAINTENANCE ON NEW  
CONSTRUCTION DURING PLANT  
ESTABLISHMENT PERIOD)  
JETTING  
LIMBERS, BRUSH LOADERS, AND PILERS  
PAVEMENT MARKERS (BUTTON SETTERS)  
PAVERS/INTERLOCKING PAVERS (ALL TYPES)  
AND INTERLOCKING PAVER MACHINES  
MAINTENANCE, REPAIR TRACKMEN AND  
ROAD BEDS  
STREETCAR AND RAILROAD CONSTRUCTION  
TRACK LABORERS  
TEMPORARY AIR AND WATER LINES,  
VICTAULIC OR SIMILAR  
TOOL ROOM ATTENDANT (JOBSITE ONLY)  
TREE REMOVAL  
WHEELBARROW, INCLUDING POWER DRIVEN

**GROUP 3 (A)** -- SEE GROUP 3 RATES  
COMPOSITE CREW PERSON (OPERATION OF  
VEHICLES, WHEN IN CONJUNCTION WITH  
LABORER'S DUTIES)

**GROUP 4**

ALL FINAL CLEANUP OF DEBRIS, GROUNDS  
AND BUILDINGS NEAR THE COMPLETION OF  
THE PROJECT INCLUDING BUT NOT LIMITED  
TO STREET CLEANERS (NOT APPLICABLE  
TO ENGINEERING OR HEAVY HIGHWAY  
PROJECTS)  
CLEANING AND WASHING WINDOWS (NEW  
CONSTRUCTION ONLY), SERVICE  
LANDSCAPE LABORERS (SUCH AS  
GARDENER, HORTICULTURE, MOWING,  
TRIMMING, REPLANTING, WATERING  
DURING PLANT ESTABLISHMENT PERIOD)  
ON NEW CONSTRUCTION  
BRICK CLEANERS (JOB SITE ONLY)  
MATERIAL CLEANERS (JOB SITE ONLY)

**NOTE:** AN ADDITIONAL DETERMINATION FOR  
LANDSCAPE MAINTENANCE WORK AFTER  
THE PLANT ESTABLISHMENT PERIOD OR  
WARRANTY PERIOD IS PUBLISHED IN THE  
NORTHERN CALIFORNIA LANDSCAPE  
MAINTENANCE LABORER DETERMINATION.

**GROUP 6**

STRUCTURAL NOZZLEMAN

**GROUP 6 (A)**

NOZZLEMAN (INCLUDING GUNMAN, POTMAN)  
RODMAN  
GROUNDMAN

**GROUP 6 (B)** -- SEE GROUP 4 RATES GUNITE  
TRAINEE (ONE GUNITE LABORER SHALL BE  
ALLOWED FOR EACH THREE (3)  
JOURNEYMAN (GROUP 6, 6A, 6C, OR  
GENERAL LABORER) ON A CREW. IN THE  
ABSENCE OF THE JOURNEYMAN, THE  
GUNITE TRAINEE RECEIVES THE  
JOURNEYMAN SCALE.).

NOTE: THIS RATIO APPLIES ONLY TO WORK  
ON THE SAME JOB SITE.

**GROUP 6 (C)**

REBOUNDMAN

**GROUP 6 (D)**

ALIGNER OF WIRE WINDING MACHINE IN  
CONNECTION WITH GUNITING OR SHOT  
CRETE

**GROUP 6 (E)**

ALIGNER HELPER OF WIRE WINDING  
MACHINE IN CONNECTION WITH GUNITING  
OR SHOT CRETE

**GROUP 7**

ENTRY LEVEL LANDSCAPE LABORER (RATIO  
FOR ENTRY LEVEL IS ONE IN THREE. AT  
LEAST ONE SECOND PERIOD ENTRY LEVEL  
AND AT LEAST ONE THIRD PERIOD ENTRY  
LEVEL MUST BE EMPLOYED BEFORE  
EMPLOYING ANOTHER FIRST PERIOD  
TRAINEE).

NOTE: THIS RATIO APPLIES ONLY TO WORK  
ON THE SAME JOB SITE



**Recognized holidays:**

Holidays upon which the general prevailing hourly wage rate for Holiday work shall be paid, shall be all holidays in the collective bargaining agreement, applicable to the particular craft, classification, or type of worker employed on the project, which is on file with the Director of Industrial Relations. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code. You may obtain the holiday provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Holiday provisions for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

**Travel and/or subsistence payment:**

In accordance with Labor Code Sections 1773.1 and 1773.9, contractors shall make travel and/or subsistence payments to each worker to execute the work. You may obtain the travel and/or subsistence provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Travel and/or subsistence requirements for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

# Indicates an apprenticeable craft. The current apprentice wage rates are available on the [Prevailing Wage Apprentice Determinations Website](http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp) (<http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp>).

<sup>a</sup> GROUP 1(D) - MAINTENANCE OR REPAIR TRACKMEN AND ROAD BEDS AND ALL EMPLOYEES PERFORMING WORK COVERED BY THIS CLASSIFICATION SHALL RECEIVE \$0.25 PER HOUR ABOVE THEIR REGULAR RATE FOR ALL WORK PERFORMED ON UNDERGROUND STRUCTURES NOT SPECIFICALLY COVERED HEREIN. THIS SHALL NOT APPLY TO WORK BELOW GROUND LEVEL IN OPEN CUT. THIS SHALL APPLY TO CUT AND COVER WORK OF SUBWAY CONSTRUCTION AFTER TEMPORARY COVER HAS BEEN PLACED.

GROUP 1(H) - ALL LABORERS WORKING OFF OR WITH OR FROM BOS'N CHAIRS, SWINGING SCAFFOLDS, BELTS RECEIVE \$0.50 PER HOUR ABOVE THEIR APPLICABLE WAGE RATE. THIS SHALL NOT APPLY TO LABORERS ENTITLED TO RECEIVE THE WAGE RATE SET FORTH IN GROUP 1(A).

<sup>b</sup> ZONE PAY AT THREE DOLLARS (\$3.00) PER HOUR, FACTORED AT THE APPLICABLE OVERTIME MULTIPLE, WILL BE ADDED TO THE BASE RATE FOR WORK PERFORMED OUTSIDE THE FREE ZONE DESCRIBED BY THE BOUNDARIES ALONG TOWNSHIP AND RANGE LINES. PLEASE SEE TRAVEL AND SUBSISTENCE PROVISION FOR MAP DESCRIPTION AND EXCEPTIONS.

<sup>c</sup> WHEN THREE SHIFTS ARE EMPLOYED FOR FIVE (5) OR MORE CONSECUTIVE DAYS, SEVEN AND ONE-HALF (7 ½) CONSECUTIVE HOURS (EXCLUSIVE OF MEAL PERIOD), SHALL CONSTITUTE A DAY OF WORK, FOR WHICH EIGHT (8) TIMES THE STRAIGHT TIME HOURLY RATE SHALL BE PAID AT THE NON-SHIFT WAGE RATE FOR THE SECOND SHIFT. THE THIRD SHIFT SHALL BE SEVEN (7) HOURS OF WORK FOR EIGHT (8) HOURS PAY AT THE NON-SHIFT WAGE RATE.

<sup>d</sup> RATE APPLIES TO THE FIRST 4 DAILY OVERTIME HOURS WORKED ON MONDAY THROUGH FRIDAY AND THE FIRST 12 HOURS WORKED ON SATURDAY; ALL OTHER TIME IS PAID AT THE SUNDAY AND HOLIDAY OVERTIME HOURLY RATE. SATURDAYS IN THE SAME WORK WEEK MAY BE WORKED AT STRAIGHT-TIME IF JOB IS SHUT DOWN DURING THE NORMAL WORK WEEK DUE TO INCLEMENT WEATHER, MAJOR MECHANICAL BREAKDOWN OR LACK OF MATERIALS BEYOND THE CONTROL OF THE EMPLOYER.

<sup>e</sup> GROUP 1(B) RECEIVES AN ADDITIONAL AMOUNT EACH DAY. SEE PAGE 6 FOR DETAILS

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

**Craft: Cement Mason<sup>#</sup>**

**Determination:**

NC-23-203-1-2024-1

**Issue Date:**

August 22, 2024

**Expiration date of determination:**

June 30, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415) 703-4774.

**Localities:**

All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba counties.

**Wages and Employer Payments:**

| Classification<br>(Journey person)  | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension | Vacation<br>and<br>Holiday <sup>a</sup> | Training | Other  | Hours <sup>b</sup> | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly<br>Rate<br>(1 ½<br>X) <sup>cd</sup> | Saturday<br>Overtime<br>Hourly<br>Rate<br>(1 ½ X) <sup>cd</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly<br>Rate<br>(2 X) |
|---|-------------------------|--------------------------|---------|---|----------|--------|--------------------|-------------------------|---|---|---|
| Cement Mason  | \$47.00                 | \$9.42                   | \$12.36 | \$7.00                                  | \$0.91   | \$0.12 | 8.0                | \$76.81                 | \$100.31  | \$100.31  | \$123.81  |
| Mastic Magnesite Gypsum,<br>Epoxy, Polyester, Resin, and all<br>composition masons, swing or<br>slip form scaffolds | \$48.00                 | \$9.42                   | \$12.36 | \$7.00                                  | \$0.91   | \$0.12 | 8.0                | \$77.81                 | \$101.81  | \$101.81  | \$125.81  |

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

Craft: Cement Mason (Special Single Shift)#

Determination:  
NC-23-203-1A-2024-1

Issue Date:  
August 22, 2024

Expiration date of determination:  
June 30, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415) 703-4774.

Localities:  
All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba counties.

Wages and Employer Payments:

| Classification<br>(Journeyman)  | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension | Vacation<br>and<br>Holiday<br>a | Training | Other  | Hours | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly<br>Rate<br>(1 ½ X)<br>cd | Saturday<br>Overtime<br>Hourly<br>Rate<br>(1 ½ X)<br>cd | Sunday/<br>Holiday<br>Overtime<br>Hourly<br>Rate<br>(2 X) |
|---|-------------------------|--------------------------|---------|---------------------------------|----------|--------|-------|-------------------------|--|---|---|
| Cement Mason  | \$50.00                 | \$9.42                   | \$12.36 | \$7.00                          | \$0.91   | \$0.12 | 8.0   | \$79.81                 | \$104.81   | \$104.81  | \$129.81  |
| Mastic Magnesite Gypsum,<br>Epoxy, Polyester, Resin, and all<br>composition masons, swing or<br>slip form scaffolds | \$51.00                 | \$9.42                   | \$12.36 | \$7.00                          | \$0.91   | \$0.12 | 8.0   | \$80.81                 | \$106.31   | \$106.31  | \$131.81  |

**Recognized holidays:**

Holidays upon which the general prevailing hourly wage rate for Holiday work shall be paid, shall be all holidays in the collective bargaining agreement, applicable to the particular craft, classification, or type of worker employed on the project, which is on file with the Director of Industrial Relations. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code. You may obtain the holiday provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Holiday provisions for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

**Travel and/or subsistence payment:**

In accordance with Labor Code Sections 1773.1 and 1773.9, contractors shall make travel and/or subsistence payments to each worker to execute the work. You may obtain the travel and/or subsistence provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Travel and/or subsistence requirements for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

---

# Indicates an apprenticeable craft. The current apprentice wage rates are available on the [Prevailing Wage Apprentice Determinations Website](http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp) (<http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp>).

<sup>a</sup> Includes an amount for supplemental dues.

<sup>b</sup> Where multiple shifts are worked, the day shift shall work eight (8) hours and for such work they shall be paid the regular straight time rate for eight (8) hours; the second (2nd) shift shall work seven and one-half (7 ½) hours, and for such work they shall be paid the regular straight time rate for eight (8) hours; if a third (3rd) shift is worked, they shall work seven (7) hours and for such work they shall be paid eight (8) hours regular straight time pay. No multiple shift shall be started for less than five (5) consecutive days.

<sup>c</sup> Rate applies to the first 4 daily overtime hours and the first 8 hours worked on Saturday. All other time is paid at the double time (2X) rate.

<sup>d</sup> Saturdays may be worked at straight time if job is shut down during normal work week due to inclement weather or major mechanical breakdown (limited to curb and gutter machine, concrete pump, and concrete plant).

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

**Craft: #TRAFFIC CONTROL/LANE CLOSURE (LABORER)  
AND  
#PARKING AND HIGHWAY IMPROVEMENT PAINTER (LABORER)**

**Determination:**  
NC-23-102-13-2025-1

**Issue Date:**  
February 22, 2025

**Expiration date of determination:**

June 30, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415) 703-4774.

**Localities:**

All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

**AREA 1** - Alameda, Contra Costa, Marin, San Francisco, San Mateo and Santa Clara Counties.

**AREA 2** - Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Joaquin, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo and Yuba Counties.

**Wages and Employer Payments (Area 1):**

| Classification<br><b>TRAFFIC CONTROL AND<br/>RELATED CLASSIFICATIONS</b> | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension <sup>a</sup> | Vacation<br>and<br>Holiday <sup>b</sup> | Training | Other  | Hours | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly<br>Rate<br>(1 ½ X) <sup>c</sup> | Saturday<br>Overtime<br>Hourly<br>Rate<br>(1 ½ X) <sup>cd</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly<br>Rate<br>(2 X) <sup>e</sup> |
|--|-------------------------|--------------------------|----------------------|---|----------|--------|-------|-------------------------|---|---|--|
| Traffic Control Person I   | \$38.81                 | \$10.60                  | \$14.96              | \$3.51                                  | \$0.52   | \$0.32 | 8     | \$68.72                 | \$88.125  | \$88.125  | \$107.53   |
| Traffic Control Person II  | \$36.31                 | \$10.60                  | \$14.96              | \$3.51                                  | \$0.52   | \$0.32 | 8     | \$66.22                 | \$84.375  | \$84.375  | \$102.53   |
| Construction Zone Traffic<br>Control Pilot Car, Flag Person              | \$38.51                 | \$10.60                  | \$14.96              | \$3.51                                  | \$0.52   | \$0.32 | 8     | \$68.42                 | \$87.675  | \$87.675  | \$106.93   |

**Wages and Employer Payments (Area 2):**

| Classification<br><b>TRAFFIC CONTROL AND<br/>RELATED CLASSIFICATIONS</b> | Basic<br>Hourly<br>Rate | Health<br>and<br>Welfare | Pension <sup>a</sup> | Vacation<br>and<br>Holiday <sup>b</sup> | Training | Other  | Hours | Total<br>Hourly<br>Rate | Daily<br>Overtime<br>Hourly<br>Rate<br>(1 ½ X) <sup>c</sup> | Saturday<br>Overtime<br>Hourly<br>Rate<br>(1 ½ X) <sup>cd</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly<br>Rate<br>(2 X) <sup>e</sup> |
|--|-------------------------|--------------------------|----------------------|---|----------|--------|-------|-------------------------|---|---|--|
| Traffic Control Person I   | \$37.81                 | \$10.60                  | \$14.96              | \$3.51                                  | \$0.52   | \$0.32 | 8     | \$67.72                 | \$86.625  | \$86.625  | \$105.53   |
| Traffic Control Person II  | \$35.31                 | \$10.60                  | \$14.96              | \$3.51                                  | \$0.52   | \$0.32 | 8     | \$65.22                 | \$82.875  | \$82.875  | \$100.53   |
| Construction Zone Traffic<br>Control Pilot Car, Flag Person              | \$37.51                 | \$10.60                  | \$14.96              | \$3.51                                  | \$0.52   | \$0.32 | 8     | \$67.42                 | \$86.175  | \$86.175  | \$104.93   |

**Determination:**

NC-23-102-13-2025-1A

**Issue Date:**

February 22, 2025

**Expiration date of determination:**

June 30, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director - Research Unit for specific rates at (415) 703-4774.

**Localities:**

All localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

**AREA 1** - Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, and Yuba Counties.

**AREA 2** – San Joaquin, Tuolumne, and Yolo Counties.

**Wages and Employer Payments (Area 1):**

| Classification<br><b>STRIPER AND RELATED CLASSIFICATIONS</b> | Basic Hourly Rate | Health and Welfare | Pension <sup>a</sup> | Vacation and Holiday <sup>b</sup> | Training | Other  | Hours | Total Hourly Rate | Daily Overtime Hourly Rate (1 ½ X) <sup>c</sup> | Saturday Overtime Hourly Rate (1 ½ X) <sup>cd</sup> | Sunday/ Holiday Overtime Hourly Rate (2 X) <sup>e</sup> |
|--|-------------------|--------------------|----------------------|-----------------------------------|----------|--------|-------|-------------------|---|---|---|
| Group 1  | \$41.70           | \$10.60            | \$14.35              | \$3.51                            | \$0.52   | \$0.29 | 8     | \$70.97           | \$91.820  | \$91.820  | \$112.67  |
| Group 2  | \$40.20           | \$10.60            | \$14.35              | \$3.51                            | \$0.52   | \$0.29 | 8     | \$69.47           | \$89.570  | \$89.570  | \$109.67  |
| Group 3  | \$38.45           | \$10.60            | \$14.35              | \$3.51                            | \$0.52   | \$0.29 | 8     | \$67.72           | \$86.945  | \$86.945  | \$106.17  |
| Group 4  | \$36.35           | \$10.60            | \$14.35              | \$3.51                            | \$0.52   | \$0.29 | 8     | \$65.62           | \$83.795  | \$83.795  | \$101.97  |

**Wages and Employer Payments (Area 2):**

| Classification<br><b>STRIPER AND RELATED CLASSIFICATIONS</b> | Basic Hourly Rate | Health and Welfare | Pension <sup>a</sup> | Vacation and Holiday <sup>b</sup> | Training | Other  | Hours | Total Hourly Rate | Daily Overtime Hourly Rate (1 ½ X) <sup>c</sup> | Saturday Overtime Hourly Rate (1 ½ X) <sup>cd</sup> | Sunday/ Holiday Overtime Hourly Rate (2 X) <sup>e</sup> |
|--|-------------------|--------------------|----------------------|-----------------------------------|----------|--------|-------|-------------------|---|---|---|
| Group 1  | \$42.69           | \$7.10             | \$10.21              | \$3.30                            | \$0.50   | \$0.27 | 8     | \$64.07           | \$85.415  | \$85.415  | \$106.76  |
| Group 2  | \$38.95           | \$7.10             | \$10.21              | \$3.30                            | \$0.50   | \$0.27 | 8     | \$60.33           | \$79.805  | \$79.805  | \$99.28   |
| Group 3  | \$37.20           | \$7.10             | \$10.21              | \$3.30                            | \$0.50   | \$0.27 | 8     | \$58.58           | \$77.180  | \$77.180  | \$95.78   |
| Group 4  | \$36.62           | \$7.10             | \$10.21              | \$3.30                            | \$0.50   | \$0.27 | 8     | \$58.00           | \$76.310  | \$76.310  | \$94.62   |

**Group 1**

Traffic Striping Applicator

**Group 2**

Traffic Delineating Device

Applicator

Traffic Protective System

Installer

Pavement Markings Applicator

Decorative Asphalt Surfacing

Applicator

**Group 3**

Traffic Surface Abrasive

Blaster

Pot Tender

**Group 4**

Parking Lots, Game Courts &amp;

Playground Striping

Applicator

Decorative Asphalt Surfacing

Laborer

**Recognized holidays:**

Holidays upon which the general prevailing hourly wage rate for Holiday work shall be paid, shall be all holidays in the collective bargaining agreement, applicable to the particular craft, classification, or type of worker employed on the project, which is on file with the Director of Industrial Relations. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code. You may obtain the holiday provisions for the current determinations on the

[Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Holiday provisions for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

**Travel and/or subsistence payment:**

In accordance with Labor Code Sections 1773.1 and 1773.9, contractors shall make travel and/or subsistence payments to each worker to execute the work. You may obtain the travel and/or subsistence provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Travel and/or subsistence requirements for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

---

# Indicates an apprenticeable craft. The current apprentice wage rates are available on the [Prevailing Wage Apprentice Determinations Website](http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp) (<http://www.dir.ca.gov/OPRL/PWAppWage/PWAppWageStart.asp>).

<sup>a</sup> Includes an amount for the Annuity Trust Fund.

<sup>b</sup> Includes an amount for Supplemental Dues.

<sup>c</sup> One and one-half (1-1/2) the straight time hourly rate of pay shall be paid for all work performed in excess of forty hours (40) a week or eight hours (8) a day and the sixth (6th) consecutive day worked or Saturdays.

<sup>d</sup> Saturdays or scheduled sixth (6th) consecutive work day in the same work week may be worked at straight-time if the job is shut down during the normal work week due to inclement weather, major mechanical breakdown or lack of materials beyond the control of the employer.

<sup>e</sup> Two times (2x) the straight time hourly rate of pay shall be paid for all work performed on the seventh (7th) consecutive day worked, or Sundays and holidays.



GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

**Craft: TEAMSTER (APPLIES ONLY TO WORK ON THE CONSTRUCTION SITE)**

**Determination:**

NC-23-261-1-2024-1

**Issue Date:**

August 22, 2024

**Expiration date of determination:**

June 30, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director – Research Unit for specific rates at (415) 703-4774.

**Localities:**

All Localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

**WAGE RATES AND TOTAL HOURLY RATES (including employer payments):**

| Classification <sup>a</sup><br>(Journey person)   | Basic Hourly<br>Rate  | Hours | Total Hourly<br>Rate | Daily<br>Overtime<br>Hourly Rate<br>(1 ½ X) | Saturday<br>Overtime<br>Hourly Rate<br>(1 ½ X) <sup>b</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly Rate<br>(2 X) |
|---|---|-------|----------------------|---|---|--|
| Group 1   | \$41.54   | 8     | \$75.57              | \$96.34                                     | \$96.34   | \$117.11   |
| Group 2   | \$41.84   | 8     | \$75.87              | \$96.79                                     | \$96.79   | \$117.71   |
| Group 3   | \$42.14   | 8     | \$76.17              | \$97.24                                     | \$97.24   | \$118.31   |
| Group 4   | \$42.49   | 8     | \$76.52              | \$97.77                                     | \$97.77   | \$119.01   |
| Group 5   | \$42.84   | 8     | \$76.87              | \$98.29                                     | \$98.29   | \$119.71   |
| Group 6   | USE DUMP TRUCK YARDAGE RATE                                       |       |                      |   |   |  |
| Group 7   | USE APPROPRIATE RATE FOR THE POWER UNIT OR THE EQUIPMENT UTILIZED |       |                      |   |   |  |
| Group 8 (Trainee) <sup>c</sup><br><sup>d</sup> Step I – 1 <sup>st</sup> 1000 Hours<br><sup>e</sup> Step II – 2 <sup>nd</sup> 1000 Hours<br><sup>f</sup> Step III – 3 <sup>rd</sup> 1000 Hours |   |       |                      |   |   |  |

**EMPLOYER PAYMENTS:**

| Type of Fund         | Amount per Hour Worked |
|----------------------|------------------------|
| Health & Welfare     | \$20.49                |
| Pension              | \$9.26                 |
| Vacation and Holiday | \$2.30                 |
| Training             | \$1.20                 |
| Other <sup>9</sup>   | \$0.78                 |

GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1770, 1773 AND 1773.1  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DREDGING PROJECTS

**Craft: TEAMSTER (SPECIAL SINGLE SHIFT RATE)**  
**(APPLIES ONLY TO WORK ON THE CONSTRUCTION SITE)**

**Determination:**

NC-23-261-1-2024-1A

**Issue Date:**

August 22, 2024

**Expiration date of determination:**

June 30, 2025\*\* The rate to be paid for work performed after this date has been determined. If work will extend past this date, the new rate must be paid and should be incorporated in contracts entered into now. Contact the Office of the Director – Research Unit for specific rates at (415) 703-4774.

**Localities:**

All Localities within Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

**WAGE RATES AND TOTAL HOURLY RATES (including employer payments):**

| Classification <sup>a</sup><br>(Journey person) | Basic Hourly<br>Rate  | Hours | Total Hourly<br>Rate | Daily Overtime<br>Hourly Rate<br>(1 ½ X) | Saturday<br>Overtime<br>Hourly Rate<br>(1 ½ X) <sup>b</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly Rate<br>(2 X) |
|---|---|-------|----------------------|--|---|--|
| Group 1   | \$43.54   | 8     | \$77.57              | \$99.34                                  | \$99.34   | \$121.11   |
| Group 2   | \$43.84   | 8     | \$77.87              | \$99.79                                  | \$99.79   | \$121.71   |
| Group 3   | \$44.14   | 8     | \$78.17              | \$100.24                                 | \$100.24  | \$122.31   |
| Group 4   | \$44.49   | 8     | \$78.52              | \$100.77                                 | \$100.77  | \$123.01   |
| Group 5   | \$44.84   | 8     | \$78.87              | \$101.29                                 | \$101.29  | \$123.71   |
| Group 6   | USE DUMP TRUCK YARDAGE RATE                                       |       |                      |  |   |  |
| Group 7   | USE APPROPRIATE RATE FOR THE POWER UNIT OR THE EQUIPMENT UTILIZED |       |                      |  |   |  |

| Classification <sup>a</sup><br>(Journeyperson)  | Basic Hourly<br>Rate | Hours | Total Hourly<br>Rate | Daily Overtime<br>Hourly Rate<br>(1 ½ X) | Saturday<br>Overtime<br>Hourly Rate<br>(1 ½ X) <sup>b</sup> | Sunday/<br>Holiday<br>Overtime<br>Hourly Rate<br>(2 X) |
|---|----------------------|-------|----------------------|--|---|--|
| Group 8 (Trainee) <sup>c</sup><br><sup>d</sup> Step I – 1 <sup>st</sup> 1000 Hours<br><sup>e</sup> Step II – 2 <sup>nd</sup> 1000 Hours<br><sup>f</sup> Step III – 3 <sup>rd</sup> 1000 Hours |                      |       |                      |  |   |  |

**EMPLOYER PAYMENTS:**

| Type of Fund         | Amount per Hour Worked |
|----------------------|------------------------|
| Health & Welfare     | \$20.49                |
| Pension              | \$9.26                 |
| Vacation and Holiday | \$2.30                 |
| Training             | \$1.20                 |
| Other <sup>g</sup>   | \$0.78                 |

## **CLASSIFICATIONS:**

### **GROUP 1**

Dump Trucks under 6 yards  
Single Unit Flat Rack (2 axle unit)  
Nipper Truck (When Flat Rack Truck is used appropriate Flat Rack shall apply)  
Concrete pump truck (When Flat Rack Truck is used appropriate Flat Rack shall apply)  
Concrete pump machine  
Snow Buggy  
Steam Cleaning  
Bus or Manhaul Driver  
Escort or Pilot Car Driver  
Pickup Truck  
Teamster Oiler/Greaser/and or Serviceman  
Hook Tenders  
Team Drivers  
Warehouseman  
Tool Room Attendant (Refineries)  
Fork Lift and Lift Jitneys  
Warehouse Clerk/Parts Man  
Fuel and/or Grease Truck Driver or Fuelman  
Truck Repair Helper  
Fuel Island Attendant, or Combination Pit and/or Grease Rack and Fuel Island Attendant

### **GROUP 2**

Dump Trucks 6 yards Under 8 yards  
Transit Mixers through 10 yards  
Water Trucks Under 7000 gals.  
Jetting Trucks Under 7000 gals.  
Single Unit flat rack (3 axle unit)  
Highbed Heavy Duty Transport  
Scissor Truck  
Rubber Tired Muck Car (not self-loaded)  
Rubber Tired Truck Jumbo  
Winch Truck and "A" Frame Drivers  
Combination Winch Truck With Hoist  
Road Oil Truck or Bootman

Buggymobile  
Ross, Hyster and similar Straddle Carrier  
Small Rubber Tired Tractor  
Truck Dispatcher

### **GROUP 3**

Dump Trucks 8 yards and including 24 yards  
Transit Mixers Over 10 yards  
Water Trucks 7000 gals and over  
Jetting Trucks 7000 gals and over  
Vacuum Trucks under 7500 gals  
Trucks Towing Tilt Bed or Flat Bed Pull Trailers  
Heavy Duty Transport Tiller Man  
Tire Repairman  
Truck Mounted Self Propelled Street Sweeper with or without Self-Contained Refuse Bin and or Vacuum Unit  
Boom Truck - Hydro-Lift or Swedish Type Extension or Retracting Crane  
P.B. or Similar Type Self Loading Truck  
Combination Bootman and Road Oiler  
Dry Distribution Truck (A Bootman when employed on such equipment, shall receive the rate specified for the classification of Road Oil Trucks or Bootman)  
Ammonia Nitrate Distributor, Driver and Mixer  
Snow Go and/or Plow

### **GROUP 4**

Dump Trucks over 25 yards and under 65 yards  
Vacuum Trucks 7500 gals and over.  
Truck Repairman  
Water Pulls - DW 10s, 20s, 21s and other similar equipment when pulling Aqua/pak or Water Tank Trailers  
Helicopter Pilots  
Lowbed Heavy Duty Transport (up to and including 7 axles)  
DW 10s, 20s, 21s and other similar Cat type, Terra Cobra, LeTourneau Pulls, Tournorocker, Euclid and similar type Equipment when pulling fuel and/or grease tank trailers or other miscellaneous trailers

**GROUP 5**

Dump Truck 65 yards and over  
Holland Hauler  
Lowbed Heavy Duty Transport (over 7 axles)

**GROUP 6** (Use dump truck yardage rate)

Articulated Dump Truck  
Bulk Cement Spreader (w/ or w/o Auger)  
Dumpcrete Truck  
Skid Truck (Debris Box)  
Dry Pre-Batch Concrete Mix Trucks  
Dumpster or Similar Type  
Slurry Truck

**GROUP 7** (Use appropriate Rate for the Power Unit or the Equipment Utilized)

Heater Planer  
Asphalt Burner  
Scarifier Burner  
Fire Guard  
Industrial Lift Truck (mechanical tailgate)  
Utility and Clean-up Truck  
Composite Crewman

**GROUP 8**

Trainee

**Recognized holidays:**

Holidays upon which the general prevailing hourly wage rate for Holiday work shall be paid, shall be all holidays in the collective bargaining agreement, applicable to the particular craft, classification, or type of worker employed on the project, which is on file with the Director of Industrial Relations. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code. You may obtain the holiday provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Holiday provisions for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

**Travel and/or subsistence payment:**

In accordance with Labor Code Sections 1773.1 and 1773.9, contractors shall make travel and/or subsistence payments to each worker to execute the work. You may obtain the travel and/or subsistence provisions for the current determinations on the [Director's General Prevailing Wage Determinations Website](http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm) (<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>). Travel and/or subsistence requirements for current or superseded determinations may be obtained by contacting the Office of the Director – Research Unit at (415) 703-4774.

---

<sup>a</sup> For classifications within each group, see Pages 5 and 6.

<sup>b</sup> Saturday in the same work week may be worked at straight-time hourly rate if a job is shut down during the normal work week due to inclement weather or major mechanical breakdown, or lack of materials beyond the control of the Employer.

<sup>c</sup> An individual employer may employ one (1) trainee for every four (4) journey level Teamsters actively employed. Individual employers with less than four (4) journey level Teamsters may utilize one (1) trainee; thereafter, one (1) for every four (4) journey level Teamsters.

<sup>d</sup> Sixty-five percent (65%) of the Journey level wage for the type of equipment operated, plus full fringes without Vacation/Holiday.

<sup>e</sup> Seventy-five percent (75%) of the Journey level wage for the type of equipment operated, plus full fringes without Vacation/Holiday.

<sup>f</sup> Eighty-five percent (85%) of the Journey level wage for the type of equipment operated, plus full fringes without Vacation/Holiday.

<sup>g</sup> Supplemental Dues and Contract Administration.

*PART B*

*CONTRACT PROVISIONS*

**PART B**

**DIVISION I**

**FEDERAL PROVISIONS**

**SECTION 1 – FAA GENERAL PROVISIONS**  
**ADVISORY CIRCULAR 150/5370-10H**



**PART B  
DIVISION I  
FEDERAL PROVISIONS**

**SECTION 1 – FAA GENERAL CONTRACT PROVISIONS – AC 150/5370-10H**

**TABLE OF CONTENTS**

|            |  |             |
|------------|--|-------------|
| <b>10.</b> | <b>DEFINITION OF TERMS.....</b>                              | <b>BI-1</b> |
| <b>20.</b> | <b>PROPOSAL REQUIREMENTS AND CONDITIONS .....</b>            | <b>BI-9</b> |
|            | 20-01 Advertisement (Invitation for Bids) .....              | 9           |
|            | 20-02 Qualification of Bidders .....                         | 9           |
|            | 20-03 Contents of Proposal Forms .....                       | 9           |
|            | 20-04 Issuance of Proposal Forms.....                        | 9           |
|            | 20-05 Interpretation of Estimated Proposal Quantities .....  | 10          |
|            | 20-06 Examination of Plans, Specifications, and Site.....    | 10          |
|            | 20-07 Preparation of Proposal .....                          | 10          |
|            | 20-08 Responsive and Responsible Bidder .....                | 10          |
|            | 20-09 Irregular Proposals.....                               | 10          |
|            | 20-10 Bid Guaranty.....                                      | 11          |
|            | 20-11 Delivery of Proposal.....                              | 11          |
|            | 20-12 Withdrawal or Revision of Proposals.....               | 11          |
|            | 20-13 Public Opening of Proposals .....                      | 11          |
|            | 20-14 Disqualification of Bidders.....                       | 11          |
|            | 20-15 Discrepancies and Omissions.....                       | 11          |
| <b>30.</b> | <b>AWARD AND EXECUTION OF CONTRACT.....</b>                  | <b>13</b>   |
|            | 30-01 Consideration of Proposals.....                        | 13          |
|            | 30-02 Award of Contract .....                                | 13          |
|            | 30-03 Cancellation of Award.....                             | 13          |
|            | 30-04 Return of Proposal Guaranty.....                       | 13          |
|            | 30-05 Requirements of Contract Bonds .....                   | 13          |
|            | 30-06 Execution of Contract.....                             | 13          |
|            | 30-07 Approval of Contract .....                             | 13          |
|            | 30-08 Failure to Execute Contract.....                       | 14          |
| <b>40.</b> | <b>SCOPE OF WORK.....</b>                                    | <b>15</b>   |
|            | 40-01 Intent of Contract.....                                | 15          |
|            | 40-02 Alteration of Work and Quantities .....                | 15          |
|            | 40-03 Omitted Items .....                                    | 15          |
|            | 40-04 Extra Work .....                                       | 15          |
|            | 40-05 Maintenance of Traffic .....                           | 16          |
|            | 40-06 Removal of Existing Structures.....                    | 16          |
|            | 40-07 Rights in and Use of Materials Found in the Work ..... | 17          |
|            | 40-08 Final Clean Up.....                                    | 17          |

|                |   |               |
|----------------|---|---------------|
| <b>50.</b>     | <b>CONTROL OF WORK.....</b>   | <b>BI-19</b>  |
| 50-01          | Authority of the Engineer .....   | 19            |
| 50-02          | Conformity with Plans and Specifications.....                                 | 19            |
| 50-03          | Coordination of Contract, Plans and Specifications .....                      | 19            |
| 50-04          | List of Special Provisions .....  | 20            |
| 50-05          | Cooperation of Contractor.....  | 20            |
| 50-06          | Cooperation Between Contractors .....   | 20            |
| 50-07          | Construction Layout and Stakes.....   | 20            |
| 50-08          | Authority and Duties of Quality Assurance (QA) Inspectors.....                | 21            |
| 50-09          | Inspection of the Work .....  | 21            |
| 50-10          | Removal of Unacceptable and Unauthorized Work .....                           | 21            |
| 50-11          | Load Restrictions .....   | 22            |
| 50-12          | Maintenance During Construction .....   | 22            |
| 50-13          | Failure to Maintain the Work .....  | 22            |
| 50-14          | Partial Acceptance .....  | 22            |
| 50-15          | Final Acceptance .....  | 23            |
| 50-16          | Claims for Adjustment and Disputes .....                                      | 23            |
| <br><b>60.</b> | <br><b>CONTROL OF MATERIALS .....</b>   | <br><b>25</b> |
| 60-01          | Source of Supply and Quality Requirements.....                                | 25            |
| 60-02          | Samples, Tests, and Cited Specifications.....                                 | 25            |
| 60-03          | Certification of Compliance/Analysis (COC/COA) .....                          | 25            |
| 60-04          | Plant Inspection .....  | 26            |
| 60-05          | Engineer/Resident Project Representative (RPR) Field Office .....             | 26            |
| 60-06          | Storage of Materials.....   | 26            |
| 60-07          | Unacceptable Materials .....  | 27            |
| 60-08          | Owner-Furnished Materials.....  | 27            |
| <br><b>70.</b> | <br><b>LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC .....</b>                 | <br><b>29</b> |
| 70-01          | Laws to be Observed .....   | 29            |
| 70-02          | Permits, Licenses, and Taxes .....  | 29            |
| 70-03          | Patented Devices, Materials and Processes.....                                | 29            |
| 70-04          | Restoration of Surfaces Disturbed by Others.....                              | 29            |
| 70-05          | Federal Participation.....  | 29            |
| 70-06          | Sanitary, Health, and Safety Provisions .....                                 | 29            |
| 70-07          | Public Convenience and Safety .....   | 30            |
| 70-08          | Construction Safety and Phasing Plan (CSPP) .....                             | 30            |
| 70-09          | Use of Explosives .....   | 30            |
| 70-10          | Protection and Restoration of Property and Landscape .....                    | 30            |
| 70-11          | Responsibility for Damage Claims .....  | 30            |
| 70-12          | Third Party Beneficiary Clause .....  | 31            |
| 70-13          | Opening Sections of the Work to Traffic.....                                  | 31            |
| 70-14          | Contractor's Responsibility for Work .....                                    | 31            |
| 70-15          | Contractor's Responsibility for Utility Service and Facilities of Others..... | 31            |
| 70-15.1        | FAA Facilities and Cable Runs .....   | 33            |

|            |   |           |
|------------|---|-----------|
| <b>70.</b> | <b>LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC (Continued)</b> |           |
| 70-16      | Furnishing Rights of Way .....                                  | BI-33     |
| 70-17      | Personal Liability of Public Officials .....                    | 33        |
| 70-18      | No Waiver of Legal Rights .....                                 | 33        |
| 70-19      | Environmental Protection .....                                  | 33        |
| 70-20      | Archaeological and Historical Findings .....                    | 34        |
| 70-21      | Insurance Requirements .....                                    | 34        |
| <b>80.</b> | <b>EXECUTION AND PROGRESS .....</b>                             | <b>39</b> |
| 80-01      | Subletting of Contract .....                                    | 39        |
| 80-02      | Notice to Proceed (NTP) .....                                   | 39        |
| 80-03      | Execution and Progress .....                                    | 39        |
| 80-04      | Limitation of Operations .....                                  | 40        |
| 80-04.1    | Operational Safety on Airport During Construction .....         | 40        |
| 80-05      | Character of Workers, Methods, and Equipment .....              | 41        |
| 80-06      | Temporary Suspension of the Work .....                          | 41        |
| 80-07      | Determination and Extension of Contract Time .....              | 42        |
| 80-07.1    | Contract Time Based on Working Days .....                       | 42        |
| 80-08      | Failure to Complete on Time .....                               | 43        |
| 80-09      | Default and Termination of Contract .....                       | 43        |
| 80-10      | Termination for National Emergencies .....                      | 44        |
| 80-11      | Work Area, Storage Area, and Sequence of Operations .....       | 44        |
| <b>90.</b> | <b>MEASUREMENT AND PAYMENT .....</b>                            | <b>45</b> |
| 90-01      | Measurement of Quantities .....                                 | 45        |
| 90-02      | Scope of Payment .....  | 47        |
| 90-03      | Compensation for Altered Quantities .....                       | 47        |
| 90-04      | Payment for Omitted Items .....                                 | 47        |
| 90-05      | Payment for Extra Work .....                                    | 48        |
| 90-06      | Partial Payments .....  | 48        |
| 90-07      | Payment for Materials on Hand .....                             | 49        |
| 90-08      | Payment of Withheld Funds .....                                 | 49        |
| 90-09      | Acceptance and Final Payment .....                              | 50        |
| 90-10      | Construction Warranty .....                                     | 50        |
| 90-11      | Contractor Final Project Determination .....                    | 51        |

## **PART B – CONTRACT PROVISIONS**

### **SECTION 1 – FAA GENERAL CONTRACT PROVISIONS – AC 150/5370-10H**

#### **Section 10 Definition of Terms**

When 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 defined as follows:

| <b>Paragraph Number</b> | <b>Term</b>                              | <b>Definition</b>   |
|-------------------------|--|---|
| <b>10-01</b>            | <b>AASHTO</b>                            | The American Association of State Highway and Transportation Officials.   |
| <b>10-02</b>            | <b>Access Road</b>                       | The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.  |
| <b>10-03</b>            | <b>Advertisement</b>                     | A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.  |
| <b>10-04</b>            | <b>Airport</b>                           | 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; airport buildings and facilities located in any of these areas, and a heliport.  |
| <b>10-05</b>            | <b>Airport Improvement Program (AIP)</b> | A grant-in-aid program, administered by the Federal Aviation Administration (FAA).  |
| <b>10-06</b>            | <b>Air Operations Area (AOA)</b>         | 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. |
| <b>10-07</b>            | <b>Apron</b>                             | Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.   |
| <b>10-08</b>            | <b>ASTM International (ASTM)</b>         | Formerly known as the American Society for Testing and Materials (ASTM).  |
| <b>10-09</b>            | <b>Award</b>                             | The Owner's notice to the successful bidder of the acceptance of the submitted bid.   |

| <b>Paragraph Number</b> | <b>Term</b>                            | <b>Definition</b>  |
|-------------------------|--|--|
| <b>10-10</b>            | <b>Bidder</b>                          | Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.  |
| <b>10-11</b>            | <b>Building Area</b>                   | 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.   |
| <b>10-12</b>            | <b>Calendar Day</b>                    | Every day shown on the calendar.   |
| <b>10-13</b>            | <b>Certificate of Analysis (COA)</b>   | The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.  |
| <b>10-14</b>            | <b>Certificate of Compliance (COC)</b> | The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.   |
| <b>10-15</b>            | <b>Change Order</b>                    | 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 work within the scope of the contract and necessary to complete the project.   |
| <b>10-16</b>            | <b>Contract</b>                        | <p>A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.</p> <p>The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.</p> |
| <b>10-17</b>            | <b>Contract Item (Pay Item)</b>        | A specific unit of work for which a price is provided in the contract.   |
| <b>10-18</b>            | <b>Contract Time</b>                   | 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.  |
| <b>10-19</b>            | <b>Contractor</b>                      | 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.  |

| <b>Paragraph Number</b> | <b>Term</b>  | <b>Definition</b>   |
|-------------------------|--|---|
| <b>10-20</b>            | <b>Contractors Quality Control (QC) Facilities</b> | The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).  |
| <b>10-21</b>            | <b>Contractor Quality Control Program (CQCP)</b>   | Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.                |
| <b>10-22</b>            | <b>Control Strip</b>                               | A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.   |
| <b>10-23</b>            | <b>Construction Safety and Phasing Plan (CSPP)</b> | 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.                                |
| <b>10-24</b>            | <b>Drainage System</b>                             | The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.   |
| <b>10-25</b>            | <b>Engineer</b>                                    | The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.  |
| <b>10-26</b>            | <b>Equipment</b>                                   | All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.  |
| <b>10-27</b>            | <b>Extra Work</b>                                  | 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 Owner's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified. |
| <b>10-28</b>            | <b>FAA</b>   | The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.   |
| <b>10-29</b>            | <b>Federal Specifications</b>                      | The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.  |

| <b>Paragraph Number</b> | <b>Term</b>                            | <b>Definition</b>   |
|-------------------------|--|---|
| <b>10-30</b>            | <b>Force Account</b>                   | <p><b>a.</b> Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p><b>b.</b> Owner Force Account - Work performed for the project by the Owner's employees.</p>   |
| <b>10-31</b>            | <b>Intention of Terms</b>              | <p>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 and/or Resident Project Representative (RPR) 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 and/or RPR, subject in each case to the final determination of the Owner.</p> <p>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.</p> |
| <b>10-32</b>            | <b>Lighting</b>                        | 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.  |
| <b>10-33</b>            | <b>Major and Minor Contract Items</b>  | 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.  |
| <b>10-34</b>            | <b>Materials</b>                       | Any substance specified for use in the construction of the contract work.   |
| <b>10-35</b>            | <b>Modification of Standards (MOS)</b> | Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.   |
| <b>10-36</b>            | <b>Notice to Proceed (NTP)</b>         | 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.   |
| <b>10-37</b>            | <b>Owner</b>                           | 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. The Owner for this project is the Truckee Tahoe Airport District.  |

| <b>Paragraph Number</b> | <b>Term</b>                              | <b>Definition</b>  |
|-------------------------|--|--|
| <b>10-38</b>            | <b>Passenger Facility Charge (PFC)</b>   | Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.  |
| <b>10-39</b>            | <b>Pavement Structure</b>                | The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.   |
| <b>10-40</b>            | <b>Payment bond</b>                      | The approved form of security furnished by the Contractor and their own 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.   |
| <b>10-41</b>            | <b>Performance bond</b>                  | The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.  |
| <b>10-42</b>            | <b>Plans</b>                             | 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. Plans may also be referred to as 'contract drawings.'  |
| <b>10-43</b>            | <b>Project</b>                           | The agreed scope of work for accomplishing specific airport development with respect to a particular airport.  |
| <b>10-44</b>            | <b>Proposal</b>                          | 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.   |
| <b>10-45</b>            | <b>Proposal guaranty</b>                 | The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.   |
| <b>10-46</b>            | <b>Quality Assurance (QA)</b>            | Owner's responsibility to assure that construction work completed complies with specifications for payment.  |
| <b>10-47</b>            | <b>Quality Control (QC)</b>              | Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.  |
| <b>10-48</b>            | <b>Quality Assurance (QA) Inspector</b>  | An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor. |
| <b>10-49</b>            | <b>Quality Assurance (QA) Laboratory</b> | The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer   |



| <b>Paragraph Number</b> | <b>Term</b>                                   | <b>Definition</b>  |
|-------------------------|---|--|
|                         |   | or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.  |
| <b>10-50</b>            | <b>Resident Project Representative (RPR)</b>  | The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.  |
| <b>10-51</b>            | <b>Runway</b>                                 | The area on the airport prepared for the landing and takeoff of aircraft.  |
| <b>10-52</b>            | <b>Runway Safety Area (RSA)</b>               | A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.  |
| <b>10-53</b>            | <b>Safety Plan Compliance Document (SPCD)</b> | Details how the Contractor will comply with the CSPP.  |
| <b>10-54</b>            | <b>Specifications</b>                         | 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.  |
| <b>10-55</b>            | <b>Sponsor</b>                                | 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.  |
| <b>10-56</b>            | <b>Structures</b>                             | 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; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.   |
| <b>10-57</b>            | <b>Subgrade</b>                               | The soil that forms the pavement foundation.   |
| <b>10-58</b>            | <b>Superintendent</b>                         | The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.  |
| <b>10-59</b>            | <b>Supplemental Agreement</b>                 | A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that |

| <b>Paragraph Number</b> | <b>Term</b>                               | <b>Definition</b>   |
|-------------------------|---|---|
|                         |   | is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.   |
| <b>10-60</b>            | <b>Surety</b>                             | The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.   |
| <b>10-61</b>            | <b>Taxilane</b>                           | A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.  |
| <b>10-62</b>            | <b>Taxiway</b>                            | 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.  |
| <b>10-63</b>            | <b>Taxiway/Taxilane Safety Area (TSA)</b> | A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.   |
| <b>10-64</b>            | <b>Work</b>                               | 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.   |
| <b>10-65</b>            | <b>Working day</b>                        | 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. |
| <b>10-66</b>            | <b>Owner Defined terms</b>                | <b>None</b>   |

## END OF SECTION 10

Page Intentionally Left Blank

## Section 20 Proposal Requirements and Conditions

**20-01 Advertisement (Notice to Bidders).** The advertisement can be found in Part A – Bid and Contract Documents, Division I, as the Advertisement for Bids.

**20-02 Qualification of bidders.** Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. 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 their 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 they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

**20-03 Contents of proposal forms.** The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

A prebid conference is required on this project to discuss as a minimum, the following items: material requirements; submittals; Quality Control/Quality Assurance requirements; the construction safety and phasing plan including airport access and staging areas; and unique airfield paving construction requirements. This pre-bid meeting will be held at 10:00 a.m. on Thursday, March 27, 2025, at the Truckee Tahoe Airport – Downstairs Board Conference Room, 10356 Truckee Airport Road, Truckee, California.

**20-04 Issuance of proposal forms.** The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is 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 provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, 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 to the character, quality, and quantities of work to be performed, materials to be furnished, and 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 to the conditions to be encountered in performing the work and 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 their own 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 their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, 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 which they propose 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 correctly sign the proposal in ink. If the proposal is made by an individual, their 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 where 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 their 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 Owner's invitation for bid. It is the Owner'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 2 CFR § 200.318(h). 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.

f. If the applicable Disadvantaged Business Enterprise information is incomplete.

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 bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, 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 by email ([Kelly.Woo@truckeeatahoeairport.com](mailto:Kelly.Woo@truckeeatahoeairport.com)) 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 paragraph 20-04, *Issuance of Proposal Forms*, of this section.

**20-15 Discrepancies and Omissions.** A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than 7 calendar days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

**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 bid 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 Section 20, paragraph 20-09, *Irregular Proposals*.

b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

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 90 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

**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 paragraph 30-07 *Approval of Contract*.

**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 paragraph 30-01, *Consideration of Proposals*. 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 paragraph 30-05, *Requirements of Contract Bonds*.

**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 paragraph 30-05, *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 period specified in paragraph 30-06, *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 liquidated 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 the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. 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.

**40-03 Omitted items.** The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. 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 Section 90, paragraph 90-04, *Payment for Omitted Items*.

**40-04 Extra work.** Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for 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 RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. 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 Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

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. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

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 their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. 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 Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their 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 in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of 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 the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions 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 Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, 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 embankment, the Contractor may at their own option either:

- a. Use such material in another contract item, providing such use is approved by the RPR 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 RPR; 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 RPR's approval in advance of such use.

Should the RPR 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 their 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 RPR 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 their own 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 the property Owner.

## **END OF SECTION 40**

Page Intentionally Blank

## Section 50 Control of Work

**50-01 Authority of the Resident Project Representative (RPR).** The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to 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 RPR 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 their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR 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. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR 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 RPR's written orders.

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 RPR'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 RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR 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. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. 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 RPR for an interpretation and decision, and such decision shall be final.

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, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

**50-04 List of Special Provisions.** The Special Provisions are listed below in the order of preference. These documents shall govern in the following order:

- |     |   |
|-----|---|
| 1st | Change Order or Supplemental Agreement    |
| 2nd | Addenda to the Plans and Specifications   |
| 3rd | Technical Provisions                      |
| 4th | Special Conditions                        |
| 5th | Construction Plans                        |
| 6th | FAA General Contract Provisions           |
| 7th | FAA General Construction Items            |
| 8th | FAA Specifications and Advisory Circulars |

**50-05 Cooperation of Contractor.** The Contractor shall be supplied with five hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard 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 RPR and their 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 their 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 RPR or their authorized representative.

**50-06 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 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 their own contract and shall protect and hold 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 their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

**50-07 Construction layout and stakes.** The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): .CSV File

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. 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.

Accuracy of surveys shall be to the thousandths of a foot.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

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

QA Inspectors are authorized to notify the Contractor or their 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 RPR 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 RPR 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 RPR 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.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

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 RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

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 Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, 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 RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against 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, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

**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 paragraph 50-12, *Maintenance during Construction*, the RPR 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 RPR'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 recovered as a liquidated damage against 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 RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR 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 RPR 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 RPR 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 RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. 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 RPR 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 RPR in writing of their 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 RPR 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 RPR 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 RPR 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**

Page Intentionally Left Blank

## 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 documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. 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 meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum*, that is in effect on the date of advertisement.

**60-02 Samples, tests, and cited specifications.** All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR 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 RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner 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.

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. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. 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 RPR.

A copy of all Contractor QC test data shall be provided to the RPR 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 RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP). All test data shall be furnished in electronic format as shown in the Construction Management Plan, Appendix B.

**60-03 Certification of compliance/analysis (COC/COA).** The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC 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. The COA is the manufacturer's COC and includes all applicable test results.

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 RPR.

When a material or assembly is specified by “brand name or equal” and the Contractor elects to furnish the specified “or equal,” 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.

The RPR shall be the sole judge as to whether the proposed “or equal” is suitable for use in the work.

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

**60-04 Plant inspection.** The RPR or their 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 RPR conduct plant inspections, the following conditions shall exist:

- a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.
- b. The RPR 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 RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location 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 RPR 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/ Resident Project Representative (RPR) field office.** An Engineer/RPR field office is not required.

**60-06 Storage of materials.** Materials shall be stored 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 RPR. 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 and/or CSPP, the storage of materials and the location of the Contractor’s plant and parked equipment or vehicles shall be as directed by the RPR. 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 RPR 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 their 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 RPR.

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 RPR 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**

Page Intentionally Left Blank

## 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 their 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) must be shown on the plans and is indicated as follows:

NOT APPLICABLE.

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 RPR.

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 RPR, 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 Participation.** The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States 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's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.



**70-07 Public convenience and safety.** The Contractor shall control their operations and those of their 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 their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic*, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

**70-08 Construction Safety and Phasing Plan (CSPP).** The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is on sheet(s) 2 through 3 of the project plans.

**70-09 Use of explosives.** The use of explosives is not permitted on this project.

**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/RPR 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 their 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 hold harmless the Engineer/RPR and the Owner and their officers, agents, 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 their own 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, their own 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.** If it is 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 must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, 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 their expense.

The Contractor shall make their 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.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

**70-14 Contractor’s responsibility for work.** Until the RPR’s final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, 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 their own 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 paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, 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/or in the contract documents.

| Utility Service<br>or Facility                                   | Person to Contact<br>(Name, Title, Address & Phone)           | Owner's Emergency<br>Contact (Phone) |
|--|---|--------------------------------------|
| Truckee Sanitary District<br>(Sewer)                             | 12304 Joerger Drive<br>Truckee, CA 96161<br>(530) 587-3804    | (530) 587-3804                       |
| Truckee Donner Public Utility District<br>(Electrical and Water) | 11570 Donner Pass Road<br>Truckee, CA 96161<br>(530) 587-3896 | (530) 587-3896                       |
| Southwest Gas Corporation  | (877) 860-6020  | (800) 772-4555                       |
| Telephone and Cable TV   | (530) 550-3900  |                                      |

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 their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

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 RPR.

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 RPR 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 RPR 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 their own surety.

**70-15.1 FAA facilities and cable runs.** The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

**a.** The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

**b.** The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport manager a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

**c.** If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

**d.** Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

**e.** If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

**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, RPR, their 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 their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their 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, asphalts, 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 their 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 RPR. The RPR 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 Section 40, paragraph 40-04, *Extra Work*, and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

**70-21 Insurance Requirements.**

- a. General: The Contractor shall not commence any work to be performed under this contract until he has obtained from responsible insurance companies, acceptable to the Owner, all insurance required under this section, nor shall Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been obtained and approved. Insurance shall be provided by companies authorized to do business in this state.
- b. Kinds of Insurance:
  - (1) Policy covering the obligations of the Contractor in accordance with the provisions of the Workers' Compensation Law.
  - (2) Public Liability and Property Damage Insurance: Contractor shall take out and maintain during the life of this Contract such public liability and property damage insurance as shall protect him and Owner from all claims for personal injury, including accidental death, as well as from all claims for property damage arising from operations under this Contract, in the amounts as hereinafter set forth.
  - (3) Subcontractors Public Liability and Property Damage Insurance: Contractor shall require his subcontractors, if any, to take out and maintain similar public liability and property damage insurance in the amounts as hereinafter set forth.
  - (4) Contingent or Protective Insurance: In case any of the work under this Contract is to be performed by a subcontractor, Contractor shall also take out and maintain such Contractors' contingent or protective insurance as will protect him and Owner from damage claims arising from the operations of any contractor in the amounts as hereinafter set forth.
  - (5) Subcontractor's Contingent or Protective Insurance: If any subcontractor shall subcontract any portion of his subcontract, Contractor shall require him to take out and maintain such contingent or protective insurance as will protect such subcontractor and Owner from damage claims arising from the operations of the second subcontractor. Such contingent or protective insurance shall be in the same amount as the primary subcontractor's public liability and property damage insurance.

- c. The Contractor will provide the following insurance coverage for himself, all subcontractors, suppliers, materialmen, and any and other others accessing the project on the Contractor's behalf.

(1) Contractor's Liability

Airport Construction Liability Insurance with a combined single limit of at least \$1,000,000 each occurrence and in the aggregate, including products, and completed operations for the following coverages:

- (a) Bodily injury liability including death of any time resulting therefrom;
- (b) Property damage liability including loss of use thereof;
- (c) Personal injury liability which means injury, other than bodily injury, arising out of one or more of, but not limited to the following offenses:
  - 1. False arrest, detention or imprisonment;
  - 2. Malicious prosecution;
  - 3. Wrongful entry into, or eviction of a person from a room, a dwelling or premises that the person occupies;
  - 4. Oral or written publication of material that slanders or libels a person's or organization's goods, products or services; or
  - 5. Oral or written publication of materials that violate a person's right of privacy.
- (d) Such coverage shall include:
  - 1. Premises and operations
  - 2. Products and completed operations
  - 3. Contractual (excluding professional liability)
  - 4. Independent contractors
  - 5. Broad form property damage (including completed operations)
  - 6. Explosion, collapses and underground hazards
  - 7. Automobiles while being operated on airport premises but not while operating on public streets or roads
  - 8. Cross liability or severability of interests clause
  - 9. Advertising injury

Completed operations and Contractual Liability coverage under this policy shall be maintained in force until three years following completion or termination of the Contract with a limit of not less than that specified above.

(2) Builder's Risk

Builder's Risk or Course of Construction Insurance insuring on an "all risk of direct physical loss" basis, with a limit equal to the full insurable value of the project covering the project and all materials and equipment to be incorporated therein, including property in transit or elsewhere and insuring the interests of the Owner, Contractors and their Subcontractors of any tier providing equipment, materials or services for the project. This insurance should be primary and non-contributory over any other insurance policy in force at the time of loss.

d. Allowable Deductibles

- Contractor's Liability \$25,000 per claim
- Builder's Risk \$5,000 per claim.

e. Additional Contractor Provided Insurance. The Contractor will provide the following additional insurance coverage:

(1) Worker's Compensation

Each Contractor and Subcontractor shall procure California Worker's Compensation Insurance covering Contractor's employees and furnish a Certificate of Insurance for Worker's Compensation Coverage at "Statutory" Limits and Employer's Liability Insurance with a minimum limit of \$1,000,000 each accident.

(2) Comprehensive Automobile Liability Coverage

The Contractor or Subcontractor shall be responsible for maintaining Automobile Coverage and furnishing the Owner with proper Certificates of Insurance for a total as indicated above for single limit for bodily injury and property damage. Full policy limits shall apply to this Contract limit in respect to operations under this Contract.

(3) Contractor's Tools and Equipment

The Contractor is responsible for its own construction tools and equipment, whether owned, leased, rented or borrowed for use at the Airport Worksite.

f. Implementation and Administration.

- (1) Contractor shall furnish the Owner with satisfactory evidence that the foregoing insurance is in force prior to commencement of Work on this Contract, including a complete copy of the policy upon request. Such policies shall provide that written notice shall be given to Owner thirty (30) days prior to cancellation or material change of any protection which said policies provide. All Contractor insurance shall be with insurance companies authorized to do business in the State of California, and with an A.M. Best rating of A- VII or better.
- (2) Said policies, except Worker's Compensation, shall name Owner, its Board, officers, employees, related entities, and representatives as insureds. The policies will be primary and any other insurance carried by Owner and/or Contractor shall be excess and not contributing therewith.
- (3) If the coverage required by the Contractor is terminated or reduced for any reason, all Work on the contract site shall stop immediately, until the required coverage is restored.
- (4) The extent of coverage or the limits of liability provided under the policies procured by the Contractor and/or Subcontractors shall not be construed to be a limitation on the nature or extent of the Contractor's obligations or to relieve the Contractor of any such obligations or representation by the Owner as to the adequacy of the insurance to protect the Contractor against the obligations imposed on him by this or any other contract.
- (5) The Contractor covenants and agrees to exonerate and hold the Owner harmless of and from all liability, claims, demands and causes of action whatsoever for injury or property damage arising out of acts of commission or omission by the Contractor, its agents, employees, subcontractors, or subordinate subcontractors or arising out of any other operation or transaction no matter by whom performed for on behalf of the Contractor.
- (6) It is the Contractor's responsibility to familiarize himself with the coverages described in this Provision.
- (7) Immediate notification must be given to the Owner and/or its agent upon receiving any knowledge or notification of claim or litigation on which the Owner may be named.

- g. Indemnity. Contractor shall keep and hold the Owner, its Board and its officers, directors, agents, servants and employees harmless from any and all liabilities, losses, suits, claims, judgments, fines, penalties, demands or expenses, including all reasonable costs for investigation and defense thereof (including, but not limited to, attorneys' fees, court costs and expert fees), claimed by anyone by reason of injury or damage to persons or property sustained in or about the Airport, as a proximate result of the acts or omissions of the Contractor, its agents, servants, or employees, or arising out of the operations of the Contractor upon and about the Airport, excepting such liability as may result from the sole negligence of the Owner, its officers, directors, servants, agents, and employees; provided, however, that upon the filing of any claim with the Owner for damages arising out of incidents for which the Contractor herein agrees to hold Owner harmless, then and in that event the Owner shall notify the Contractor of such claim and the Contractor shall have the right and duty (if requested by Owner) to settle, compromise or defend the same. Contractor shall further use legal counsel reasonably acceptable to the Owner in carrying out Contractor's obligations hereunder. Any final judgment rendered against the Owner for any cause for which Contractor is liable hereunder shall be conclusive against Contractor as to liability and amount, where the time for appeal therefrom has expired. The Indemnity provisions set forth herein shall survive the expiration or early termination of this Agreement.
- h. Costs. Costs for providing such insurance as described above shall be incidental to the work.

**END OF SECTION 70**



Page Intentionally Blank

## 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 Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least 30 percent of the total contract cost.

Should the Contractor elect to assign their 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.

**The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized 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.

**80-02 Notice to proceed (NTP).** The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within 10 days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations 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 coordinated construction schedule showing all work activities for the RPR's review and acceptance at least 10 days prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. 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 RPR'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 RPR at least 24 hours in advance of resuming operations.

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

The project 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. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule once a week, 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.

**80-04 Limitation of operations.** The Contractor shall control their operations and the operations of their 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 their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

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; and 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 satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, 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:

| AOA  | Time Periods AOA Can be Closed* | Type of Communications Required When Working in AOA | Control Authority |
|--|---------------------------------|---|-------------------|
| Runways                                      | None                            | Two-Way Radio Tuned to 118.300 MHz                  | ATCT              |
| Apron A2                                     | *                               | Two-Way Radio Tuned to 118.300 MHz                  | ATCT              |
| T/W D between T/W A & Apron, Apron Taxilanes | Phase 1                         | Two-Way Radio Tuned to 118.300 MHz                  | ATCT              |
| T/Ws E and F                                 | Phase 2                         | Two-Way Radio Tuned to 118.300 MHz                  | ATCT              |

\*See Construction Safety and Phasing Plan (Appendix A) for periods of closure.

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

**80-04.1 Operational safety on airport during construction.** All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. 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 SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan 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 SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

**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 RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR 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 not cause injury to previously completed work, adjacent property, or existing airport facilities due to 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 otherwise authorized by the RPR. 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 RPR 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 RPR 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 RPR 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 paragraph.

**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 the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time 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 written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR 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 or for any other delay provided for in the contract, plans, or specifications.

If it becomes 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 working days shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

**80-07.1 Contract time based on working days.** Contract time based on working days shall be calculated weekly by the Resident Project Representative (RPR). The RPR will furnish the Contractor a copy of their weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved Change Orders or Supplemental Agreements covering Extra Work).

The weekly statement of contract time charged is based on the following considerations:

(1) Time will be charged for days on which the Contractor could proceed with scheduled work under construction at the time for at least six (6) hours with the normal work force employed on such items. When normal work force is a double-shift, use 12 hours; and when the normal work force is on a triple-shift, use 18 hours. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the scheduled work items 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.

(2) The RPR will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The RPR will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The RPR will not make charges against the contract time after the date of final acceptance as defined in Section 50, paragraph 50-14, *Final Acceptance*.

(5) The Contractor will be allowed one (1) week in which to file a written protest setting forth their own objections to the RPR's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the Section 20, paragraph 20-05, *Interpretation of Estimated Proposal Quantities*. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, 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 contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

**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 paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own 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.

| Schedule | Liquidated Damages Cost | Allowed Construction Time |
|----------|-------------------------|---------------------------|
| A        | \$5,000/Day             | 60 Working Days           |
| B        | \$5,000/Day             | 45 Working Days           |

The maximum construction time allowed for all stages will be the sum of the time allowed for individual schedules but not more than 60 working days if Schedule A is selected or 45 working days if Schedule B is selected. 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 waiver 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 their 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 Owner consider the Contractor in default of the contract for any reason above, the Owner 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 RPR 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 RPR 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 RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their 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 RPR 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 work in accordance with the approved CSPP and SPCD.

## **END OF SECTION 80**

## Section 90 Measurement and Payment

**90-01 Measurement of quantities.** All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

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 RPR.

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.

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.

When requested by the Contractor and approved by the RPR 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 RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

### Measurement and Payment Terms

| Term  | Description   |
|---|---|
| <b>Excavation and Embankment Volume</b>     | In computing volumes of excavation, the average end area method will be used unless otherwise specified.  |
| <b>Measurement and Proportion by Weight</b> | The term "ton" will mean the short ton consisting of 2,000 pounds (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. 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 RPR directs, and each truck shall bear a plainly legible identification mark. |
| <b>Measurement by Volume</b>                | 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.   |



| <b>Term</b>                | <b>Description</b>   |
|----------------------------|--|
| <b>Asphalt Material</b>    | Asphalt 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. 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 asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.  |
| <b>Cement</b>              | Cement will be measured by the ton (kg) or hundredweight (km).   |
| <b>Structure</b>           | Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.  |
| <b>Timber</b>              | 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.  |
| <b>Plates and Sheets</b>   | 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.  |
| <b>Miscellaneous Items</b> | 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.   |
| <b>Scales</b>              | <p>Scales must be tested for accuracy and serviced before use. 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. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.</p> <p>Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR 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 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</p> <p>In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.</p> <p>In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.</p> <p>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</p> |

| Term                    | Description  |
|-------------------------|--|
|                         | <p>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.</p> <p>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.</p> |
| <b>Rental Equipment</b> | <p>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 in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 <i>Payment for Extra Work</i>.</p>  |
| <b>Pay Quantities</b>   | <p>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 RPR. 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.</p> |

**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 Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

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 Section 40, paragraph 40-02, *Alteration of Work and Quantities*, 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 their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

**90-04 Payment for omitted items.** As specified in Section 40, paragraph 40-03, *Omitted Items*, the RPR 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 RPR 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 RPR’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 RPR’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 RPR’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 Section 40, paragraph 40-04, *Extra Work*, 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 RPR, 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 paragraph 90-07, *Payment for Materials on Hand*. 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 Owner may hold retainage from prime Contractors and provide for prompt and regular incremental acceptances of portions of the prime contract, pay retainage to prime Contractors based on these acceptances, and require a contract clause obligating the prime Contractor to pay all retainage owed to the subcontractor for satisfactory completion of the accepted work within 30 days after the Owner's payment to the prime Contractor. The percent withheld may range from 0% to 5% but in no case may it exceed 5%. When establishing a suitable retainage value that protects the Owner's interests, give consideration that the performance and payment bonds also provide similar protection of Owner interests. Owner may elect to incrementally release retainage if owner is satisfied its interest with completion of the project are protected in an adequate manner.

**a.** From the total of the amount determined to be payable on a partial payment, 5 percent of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-14. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

**b.** 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. Contractor must provide the Owner evidence of prompt and full payment of retainage held by 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.

**c.** When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR 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 RPR 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 paragraph 90-09, *Acceptance and Final Payment*.

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 RPR at or on an approved site.
- b.** The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c.** The Contractor has furnished the RPR 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 stored or stockpiled.
- e.** The Contractor has furnished the Owner evidence that the material 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 their 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 paragraph.

**90-08 Payment of withheld funds.** At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 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 Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR 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 RPR 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 RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR'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 Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, 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 Section 50, paragraph 50-16, *Claims for Adjustments and Disputes*, or under the provisions of this paragraph, 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, except as noted. 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. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.

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 the Contractor's failure to conform to contract requirements; or 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 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.

**90-11 Contractor Final Project Documentation.** 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 RPR 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 Section 40, paragraph 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(s).

**k.** Security for Construction Warranty.

**l.** Equipment commissioning documentation submitted, if required.

**m.** Quality Control Reports as specified in Appendix B, Construction Management Plan.

## **END OF SECTION 90**

Page Intentionally Left Blank

**PART B**

**DIVISION I**

**FEDERAL PROVISIONS**

**SECTION 2 – FAA GENERAL CONSTRUCTION ITEMS**  
**ADVISORY CIRCULAR 150/5370-10H**



**PART B  
DIVISION I  
FEDERAL PROVISIONS**

**SECTION 2 – FAA GENERAL CONSTRUCTION ITEMS – AC 150/5370-10H**

**TABLE OF CONTENTS**

|              |   |               |
|--------------|---|---------------|
| <b>C-100</b> | <b>CONTRACTOR QUALITY CONTROL PROGRAM .....</b>   | <b>BII-1</b>  |
| 100-1        | General .....   | 1             |
| 100-2        | Description of Program .....  | 2             |
| 100-3        | CQCP Organization .....   | 2             |
| 100-4        | Project Progress Schedule .....   | 3             |
| 100-5        | Submittal Schedule .....  | 3             |
| 100-6        | Inspection Requirements .....   | 4             |
| 100-7        | Contractor QC Testing Facility.....   | 4             |
| 100-8        | QC Testing Plan .....   | 4             |
| 100-9        | Documentation .....   | 5             |
| 100-10       | Corrective Action Requirements .....  | 6             |
| 100-11       | Inspection and/or Observations by the RPR.....  | 6             |
| 100-12       | Noncompliance .....   | 6             |
| 100-13       | Basis of Measurement and Payment.....   | 6             |
| <br>         |   |               |
| <b>C-102</b> | <b>TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND<br/>SILTATION CONTROL .....</b> | <b>BII-9</b>  |
| 102-1        | Description .....   | 9             |
| 102-2.1      | Grass.....  | 9             |
| 102-2.2      | Mulches.....  | 9             |
| 102-2.3      | Fertilizer .....  | 9             |
| 102-2.4      | Slope Drains .....  | 9             |
| 102-2.5      | Silt Fence.....   | 9             |
| 102-2.6      | Other.....  | 9             |
| 102-3.1      | General – Construction Requirements.....  | 9             |
| 102-3.2      | Schedule .....  | 9             |
| 102-3.3      | Construction Details.....   | 10            |
| 102-3.4      | Installation, Maintenance, and Removal of Silt Fence.....                               | 10            |
| 102-4.2      | Method of Measurement.....  | 11            |
| 102-5.1      | Basis of Payment.....   | 11            |
| <br>         |   |               |
| <b>C-103</b> | <b>STORM WATER POLLUTION PREVENTION PLAN (SWPPP) .....</b>                              | <b>BII-13</b> |
| 103-1.1      | Description .....   | 13            |
| 103-2.1      | Preparation of SWPPP.....   | 13            |
| 103-3.1      | Method of Measurement.....  | 14            |
| 103-4.1      | Basis of Payment.....   | 14            |

|  |                   |
|--|-------------------|
| <b>C-105 MOBILIZATION .....</b>  | <b>BII-15</b>     |
| 105-1 Description.....   | 15                |
| 105-2 Mobilization Limit.....  | 15                |
| 105-3 Posted Notices .....   | 15                |
| 105-4 Engineer/RPR Field Office .....  | 15                |
| 105-5 Basis of Measurement and Payment .....   | 15                |
| 105-6 Basis of Payment .....   | 15                |
| <br><b>C-106 MARKING AND LIGHTING OF CLOSED AIRPORT FACILITIES .....</b>                           | <br><b>BII-17</b> |
| 106-1.0 Description .....  | 17                |
| 106-2.1 Barricades.....  | 17                |
| 106-2.2 Airfield Guidance Sign Covers.....   | 17                |
| 106-2.3 Runway Closure Markers .....   | 17                |
| 106-3.1 Method of Measurement.....   | 18                |
| 106-4.1 Basis of Payment.....  | 18                |
| <br><b>C-110 METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN<br/>SPECIFICATION LIMITS .....</b> | <br><b>BII-19</b> |
| 110-1 General .....  | 19                |
| 110-2 Method for Computing PWL.....  | 19                |

**PART B – CONTRACT PROVISIONS**  
**DIVISION I – FEDERAL PROVISIONS**  
**Section 2 – FAA General Construction Items – AC 150/5370-10H**

**Item C-100 Contractor Quality Control Program (CQCP)**

**100-1 General.** Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

- a.** Provide qualified personnel to develop and implement the CQCP.
- b.** Provide for the production of acceptable quality materials.
- c.** Provide sufficient information to assure that the specification requirements can be met.
- d.** Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

- a.** Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.
- b.** Discussion of the QA program.
- c.** Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.
- d.** Establish regular meetings to discuss control of materials, methods and testing.
- e.** Establishment of the overall QC culture.

## **100-2 Description of program.**

**a. General description.** The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

**b. Contractor Quality Control Program (CQCP).** The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 10 calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

**100-3 CQCP organization.** The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function, and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

**a. Program Administrator.** The Contractor Quality Control Program Administrator (CQCPA) must be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must

have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

- (1) Professional Engineer with one (1) year of airport paving experience.
- (2) Engineer-in-training with two (2) years of airport paving experience.
- (3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.
- (4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

**b. QC technicians.** A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

- (1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.
- (2) Performance of all QC tests as required by the technical specifications and paragraph 100-8.
- (3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

**c. Staffing levels.** The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

**100-4 Project progress schedule.** Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, *Execution and Progress*.

**100-5 Submittals schedule.** The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal

e. Scheduled date of submittal

**100-6 Inspection requirements.** QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.

b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

**100-7 Contractor QC testing facility.**

a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, *Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials*:

- 8.1.3 Equipment Calibration and Checks;
- 8.1.9 Equipment Calibration, Standardization, and Check Records;
- 8.1.12 Test Methods and Procedures

b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, *Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation*:

- 7 Test Methods and Procedures
- 8 Facilities, Equipment, and Supplemental Procedures

**100-8 QC testing plan.** As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

a. Specification item number (e.g., P-401)

b. Item description (e.g., Hot Mix Asphalt Pavements)

c. Test type (e.g., gradation, grade, asphalt content)

d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)

e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)

f. Responsibility (e.g., plant technician)

g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

**100-9 Documentation.** The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

**a. Daily inspection reports.** Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

- (1) Technical specification item number and description
- (2) Compliance with approved submittals
- (3) Proper storage of materials and equipment
- (4) Proper operation of all equipment
- (5) Adherence to plans and technical specifications
- (6) Summary of any necessary corrective actions
- (7) Safety inspection.
- (8) Photographs and/or video

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

**b. Daily test reports.** The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

- (1) Technical specification item number and description
- (2) Test designation
- (3) Location

- (4) Date of test
- (5) Control requirements
- (6) Test results
- (7) Causes for rejection
- (8) Recommended remedial actions
- (9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

**100-10 Corrective action requirements.** The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

**100-11 Inspection and/or observations by the RPR.** All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

**100-12 Noncompliance.**

**a.** The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

**b.** When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

- (1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or
- (2) Order the Contractor to stop operations until appropriate corrective actions are taken.

## **METHOD OF MEASUREMENT**

**100-13 Basis of measurement and payment.** Not used. No separate payment will be made for the CQCP. Payment for this item will be considered incidental to the work performed in this contract and be included in the unit prices bid for this project.



## **REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

|            |  |
|------------|--|
| ASTM C1077 | Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials  |
| ASTM D3666 | Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials                              |

**END OF ITEM C-100**

Page Intentionally Left Blank

## Item C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control

### DESCRIPTION

**102-1.** This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, *Operational Safety on Airports During Construction*. 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 designed, 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

**102-2.1 Grass.** Not applicable.

**102-2.2 Mulches.** Not applicable.

**102-2.3 Fertilizer.** Not applicable.

**102-2.4 Slope drains.** Slope drains may be constructed of pipe, fiber mats, rubble, concrete, asphalt, or other materials that will adequately control erosion.

**102-2.5 Silt fence.** Silt fence 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 meet the requirements of ASTM D6461.

**102-2.6 Other.** All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project.

### CONSTRUCTION REQUIREMENTS

**102-3.1 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 RPR shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

**102-3.2 Schedule.** Prior to the start of construction, the Contractor shall submit schedules in accordance with the approved Construction Safety and Phasing Plan (CSPP) and the plans 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 RPR.

**102-3.3 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 plans and approved CSPP. 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, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR 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 RPR.

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 RPR. 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 RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR 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 erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. 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.

**102-3.4 Installation, maintenance and removal of silt fence.** Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence. The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the RPR.

## METHOD OF MEASUREMENT

**102-4.1** Not Applicable.

**102-4.2** Control work 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 but shall be considered as a subsidiary obligation of the Contractor.

## BASIS OF PAYMENT

**102-5.1** Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 *Payment for Extra Work*.

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### Advisory Circulars (AC)

AC 150/5200-33      *Hazardous Wildlife Attractants on or Near Airports*

AC 150/5370-2      *Operational Safety on Airports During Construction*

### ASTM International (ASTM)

ASTM D6461      *Standard Specification for Silt Fence Materials*

### United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

**END OF ITEM C-102**

Page Intentionally Left Blank

## **Item C-103 Storm Water Pollution Prevention Plan (SWPPP)**

### **Description**

**103-1.1** This item consists of the preparation, implementation, maintenance, and monitoring of a Storm Water Pollution Prevention Plan (SWPPP) for the construction of this project to conform to all requirements of the Federal Aviation Administration, State of California Water Resources Control Board, and local agencies.

### **Preparation of SWPPP**

**103-2.1** The Contractor is required to hire a Qualified SWPPP Developer (QSD) to develop and submit for approval a Storm Water Pollution Prevention Plan (SWPPP), which includes not only the attachments but an Erosion Control Plan. The objectives of the SWPPP as stated in Section A of the State Water Resources Control Board Order No. 2010-0014-DWQ (or latest version at time of bidding), Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity are:

- To identify pollutant sources that may affect the quality of discharges of storm water associated with construction activity (storm water discharge) from the construction site, and
- To identify, construct, and implement storm water pollution prevention measures (control practices) to reduce pollutants in storm water discharges from the construction site both during and after construction is completed.

Therefore, the SWPPP to be developed by the Contractor's Qualified SWPPP Developer (QSD) shall identify the Best Management Practices (BMPs), which are required for the Contractor's operations to meet these objectives. BMPs are measures or practices used to reduce the amount of pollution entering surface water and the storm sewer collection system. BMPs may take the form of a process, activity, or physical structure. The SWPPP shall describe in detail the methods used to comply with those BMPs.

The plan must be approved by the engineer prior to any clearing, grading or excavation work. Acceptance of the plan does not preclude the Contractor from responsibility for taking the proper actions to prevent contaminants and/or sediments from leaving the construction site should any unforeseen circumstances occur. The Contractor shall take immediate action if directed by the Engineer, or if the Contractor observes contaminants and/or sediments entering any surface or groundwater drainage, to prevent further storm water from entering the drainage.

To aid the Contractor in the preparation of the SWPPP, the SWRCB Order No. 2012-0006-DWQ (or latest version at time of bidding) can be found at the State of California Water Resources Control Board, Storm Water Program website at [http://www.swrcb.ca.gov/water\\_issues/programs/stormwater/constpermits.shtml](http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml). The SWPPP Template and Attachments are provided at the State of California Department of Transportation, Storm Water and Pollution Control website at <http://www.dot.ca.gov/hq/construc/stormwater> and should be followed by the Contractor during preparation of the SWPPP. Supporting information to be provided by the Owner for use by the Contractor during preparation of the SWPPP includes a topographic base map and a site map. Provision for Post-Construction Storm Water Management (Section A; Item 10) and Maintenance, Inspection and Repair (Section A; Item 11) shall be addressed by the Owner for incorporation into the Contractor's "approved" SWPPP.

The final SWPPP shall be submitted to the RPR for review and approval. This plan must be approved by the State of California Water Resources Control Board and the Airport. If necessary, it will be returned to the

contractor for correction and update. Once the corrections have been made to the SWPPP and all actions called for have been made, a final SWPPP shall be resubmitted to the Engineer for approval at no extra cost. All requirements set forth in the SWPPP must be adhered to by the contractor during construction.

### **Method of Measurement**

**103-3.1** The method of measurement for preparation of a Storm Water Pollution Prevention Plan (SWPPP) including installation, monitoring, and implementation of all measures during the construction of this project will be lump sum.

### **Basis of Payment**

**103-4.1** The Contractor will be paid separately for the preparation of the SWPPP at the lump sum price bid for this work. The lump sum price bid shall include all materials, equipment, time, and other work required to prepare the SWPPP and to implement, maintain, and monitor all measures required in the approved SWPPP.

Payment will be made under:

Item 103-4.1      SWPPP Submitted by Qualified SWPPP Developer (QSD) and SWPPP Implementation  
And Monitoring - Lump Sum

**\*\* END OF SECTION \*\***



## **Item C-105 Mobilization**

**105-1 Description.** This item of work shall consist of, 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.

**105-2 Mobilization limit.** Mobilization shall be limited to 10 percent of the total project cost.

**105-3 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.

**105-4 Engineer/RPR field office.** An Engineer/RPR field office is not required.

### **METHOD OF MEASUREMENT**

**105-5 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 Section 90, paragraph 90-11, *Contractor Final Project Documentation*, the final 10%.

### **BASIS OF PAYMENT**

**105-6 Payment will be made under:**

Item C-105      Mobilization - Lump Sum

## **REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

**END OF ITEM C-105**

## **Item C-106 Marking and Lighting of Closed Airport Facilities**

### **Description**

**106-1.0 General.** The construction of this project requires certain areas of the airfield to be closed to aircraft and operational traffic. Closure of these areas shall be in accordance with construction plans. Marking of closed airfield facilities, temporary facilities, and contractor haul routes shall be in accordance with these specifications and F.A.A. Advisory Circulars No. 150/5340-1, current edition, "Standards for Airport Markings", 150/5370-2, current edition, "Operational Safety on Airports During Construction" and the Construction Safety and Phasing Plan. The airport will not be closed during construction of this project and aircraft operations on Runways 11-29 and 2-20, associated taxiways, aprons, and taxilanes must be allowed and protected.

All existing runway lights, taxiway lights, nav aids, and all power, control, and communication cables shall be maintained in operation at all times for those facilities which are not closed under this contract.

### **Closed Airport Facility Marking**

**106-2.1 s.** Any area that is closed for air or vehicular traffic shall have lighted barricades placed across the pavement as shown on the plans. These barricades must be maintained in good condition at all times during the closure or they shall be repaired or replaced as directed by the Engineer.

In accordance with the Construction Safety and Phasing Plan, the Contractor shall designate haul roads to construction areas and block access to construction areas by use of suitable lighted barricades. On all airfield pavement, no part of the barricade or light shall extend ten (10) inches above the paved surface. Maximum spacing between barricades shall be four (4) feet. Each barricade shall have two solar-powered lights with red lenses each controlled by photocells such that they are on at night and off during the day. Barricades shall be painted alternate orange and white diagonal striping. These lighted barricades shall remain in place until such time as the new construction is open to traffic.

The Airport will provide up to 240 suitable lighted barricades to assure closure of portions of the Airport for all phases as shown on the plans or as directed by the RPR. The contractor shall provide all jersey style barricades as shown and called for on the plans. Contractor shall place, maintain, and remove barricades as shown on Sheet 2, Construction Safety and Phasing Plan, and Sheets 3, 4, 5, and 6, Barricade Plans.

The Contractor must place and maintain all airport furnished barricades and flashing units for this project. Contractor shall supply batteries, sand bags and all maintenance for the barricades. Airport has approximately 240 low profile barricades with lights available for use by the contractor. Contractor must furnish any additional barricades necessary, including all jersey style barricades as called for on the plans.

Barricades shall be securely fastened or weighted so that they will not be disturbed by high winds or jet blast.

Barricades shall be located as shown on the plans and as directed by the Resident Project Representative (RPR). At the completion of the project, all barricades shall be drained of water and removed from the site.

**106-2.2 Airfield Guidance Sign Covers.** When a runway and/or taxiway is closed to aircraft operations, the existing airfield guidance sign at the closed runway and/or taxiway shall be covered in such a manner that the panel is not visible during day or night operations. Covers shall be secured to the sign to resist jet or prop blast and weather conditions. All sign covers shall be placed as shown on the Construction Safety and Phasing Plan and approved in the field by the Resident Engineer.

**106-2.3 Runway Closure Markers.** Not applicable.

#### **Method of Measurement**

**106-3.1** Method of measurement for marking and lighting of closed Airport facilities shall be Lump Sum.

#### **Basis of Payment**

**106-4.1** Payment shall be made at the contract lump sum price for marking and lighting of closed airport facilities.

This lump sum price shall be full compensation for furnishing all labor, materials, tools, and incidentals necessary to perform this item of work including but not limited to placing, maintaining, and removing barricades, and covering the airfield guidance signs at closed taxiways.

Payments will be made for marking and lighting of closed airport facilities on a monthly basis with the monthly progress payments. The percentage of marking and lighting of closed airport facilities payment made will be equal to the percentage of total project, completed, as determined by the Engineer.

Payment will be made under:

|                |  |
|----------------|--|
| Item 106 – 4.1 | Marking and Lighting of Closed Airport Facilities - Lump Sum |
|----------------|--|

**END OF ITEM C-106**

## Item C-110 Method of Estimating Percentage of Material Within Specification Limits (PWL)

**110-1 General.** When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average ( $\bar{X}$ ) and sample standard deviation ( $S_n$ ) of the specified number ( $n$ ) of sublots for the lot and the specification tolerance limits,  $L$  for lower and  $U$  for upper, for the particular acceptance parameter. From these values, the respective Quality index,  $Q_L$  for Lower Quality Index and/or  $Q_U$  for Upper Quality Index, is computed and the PWL for the lot for the specified  $n$  is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

**110-2 Method for computing PWL.** The computational sequence for computing PWL is as follows:

- a. Divide the lot into  $n$  sublots in accordance with the acceptance requirements of the specification.
- b. Locate the random sampling position within the subplot in accordance with the requirements of the specification.
- c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.
- d. Find the sample average ( $\bar{X}$ ) for all subplot test values within the lot by using the following formula:

$$\bar{X} = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

Where:  $\bar{X}$  = Sample average of all subplot test values within a lot

$x_1, x_2, \dots, x_n$  = Individual subplot test values

$n$  = Number of subplot test values

- e. Find the sample standard deviation ( $S_n$ ) by use of the following formula:

$$S_n = [(d_1^2 + d_2^2 + d_3^2 + \dots + d_n^2)/(n-1)]^{1/2}$$

Where:  $S_n$  = Sample standard deviation of the number of subplot test values in the set

$d_1, d_2, \dots, d_n$  = Deviations of the individual subplot test values  $x_1, x_2, \dots$  from the average value  $\bar{X}$

that is:  $d_1 = (x_1 - X)$ ,  $d_2 = (x_2 - X)$  ...  $d_n = (x_n - X)$

$n$  = Number of subplot test values

**f.** For single sided specification limits (i.e.,  $L$  only), compute the Lower Quality Index  $Q_L$  by use of the following formula:

$$Q_L = (X - L) / S_n$$

Where:  $L$  = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with  $Q_L$ , using the column appropriate to the total number ( $n$ ) of measurements. If the value of  $Q_L$  falls between values shown on the table, use the next higher value of PWL.

**g.** For double-sided specification limits (i.e.,  $L$  and  $U$ ), compute the Quality Indexes  $Q_L$  and  $Q_U$  by use of the following formulas:

$$Q_L = (X - L) / S_n$$

and

$$Q_U = (U - X) / S_n$$

Where:  $L$  and  $U$  = specification lower and upper tolerance limits

Estimate the percentage of material between the lower ( $L$ ) and upper ( $U$ ) tolerance limits (PWL) by entering Table 1 separately with  $Q_L$  and  $Q_U$ , using the column appropriate to the total number ( $n$ ) of measurements, and determining the percent of material above  $P_L$  and percent of material below  $P_U$  for each tolerance limit. If the values of  $Q_L$  fall between values shown on the table, use the next higher value of  $P_L$  or  $P_U$ . Determine the PWL by use of the following formula:

$$PWL = (P_U + P_L) - 100$$

Where:  $P_L$  = percent within lower specification limit

$P_U$  = percent within upper specification limit

## EXAMPLE OF PWL CALCULATION

**Project:** Example Project

**Test Item:** Item P-401, Lot A.

### A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

$$A-1 = 96.60$$

$$A-2 = 97.55$$

$$A-3 = 99.30$$

$$A-4 = 98.35$$

$$n = 4$$

2. Calculate average density for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$$

$$X = 97.95\% \text{ density}$$

3. Calculate the standard deviation for the lot.

$$S_n = [((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(1.82 + 0.16 + 1.82 + 0.16) / 3]^{1/2}$$

$$S_n = 1.15$$

4. Calculate the Lower Quality Index  $Q_L$  for the lot. ( $L=96.3$ )

$$Q_L = (X - L) / S_n$$

$$Q_L = (97.95 - 96.30) / 1.15$$

$$Q_L = 1.4348$$

5. Determine PWL by entering Table 1 with  $Q_L = 1.44$  and  $n = 4$ .

$$PWL = 98$$

### B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

$$A-1 = 5.00$$

$$A-2 = 3.74$$

$$A-3 = 2.30$$

$$A-4 = 3.25$$

2. Calculate the average air voids for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$$

$$X = 3.57\%$$

3. Calculate the standard deviation  $S_n$  for the lot.

$$S_n = [((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$$

$$S_n = 1.12$$

4. Calculate the Lower Quality Index  $Q_L$  for the lot. ( $L = 2.0$ )

$$Q_L = (X - L) / S_n$$

$$Q_L = (3.57 - 2.00) / 1.12$$

$$Q_L = 1.3992$$

5. Determine  $P_L$  by entering Table 1 with  $Q_L = 1.41$  and  $n = 4$ .

$$P_L = 97$$

6. Calculate the Upper Quality Index  $Q_U$  for the lot. ( $U = 5.0$ )

$$Q_U = (U - X) / S_n$$

$$Q_U = (5.00 - 3.57) / 1.12$$

$$Q_U = 1.2702$$

7. Determine  $P_U$  by entering Table 1 with  $Q_U = 1.29$  and  $n = 4$ .

$$P_U = 93$$

8. Calculate Air Voids PWL

$$PWL = (P_L + P_U) - 100$$

$$PWL = (97 + 93) - 100 = 90$$

### EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

**Project:** Example Project

**Test Item:** Item P-401, Lot A.

#### A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A arranged in descending order.

$$A-3 = 99.30$$

$$A-4 = 98.35$$

$$A-2 = 97.55$$

$$A-1 = 96.60$$

2. From ASTM E178, Table 1, for  $n=4$  an upper 5% significance level, the critical value for test criterion = 1.463.

3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

- a. For measurements greater than the average:

If (measurement - average)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-3, check if  $(99.30 - 97.95) / 1.15$  is greater than 1.463.

Since 1.174 is less than 1.463, the value is not an outlier.



**b.** For measurements less than the average:

If  $(\text{average} - \text{measurement}) / (\text{standard deviation})$  is less than test criterion,  
then the measurement is not considered an outlier.

For A-1, check if  $(97.95 - 96.60) / 1.15$  is greater than 1.463.

Since 1.435 is less than 1.463, the value is not an outlier.

**Note:** In this example, a measurement would be considered an outlier if the density were:

Greater than  $(97.95 + 1.463 \times 1.15) = 99.63\%$

OR

less than  $(97.95 - 1.463 \times 1.15) = 96.27\%$ .

**Table 1. Table for Estimating Percent of Lot Within Limits (PWL)**

| Percent Within Limits<br>( $P_L$ and $P_U$ ) | Positive Values of Q ( $Q_L$ and $Q_U$ ) |        |        |        |        |        |        |        |
|--|--|--------|--------|--------|--------|--------|--------|--------|
|  | n=3                                      | n=4    | n=5    | n=6    | n=7    | n=8    | n=9    | n=10   |
| 99   | 1.1541                                   | 1.4700 | 1.6714 | 1.8008 | 1.8888 | 1.9520 | 1.9994 | 2.0362 |
| 98   | 1.1524                                   | 1.4400 | 1.6016 | 1.6982 | 1.7612 | 1.8053 | 1.8379 | 1.8630 |
| 97   | 1.1496                                   | 1.4100 | 1.5427 | 1.6181 | 1.6661 | 1.6993 | 1.7235 | 1.7420 |
| 96   | 1.1456                                   | 1.3800 | 1.4897 | 1.5497 | 1.5871 | 1.6127 | 1.6313 | 1.6454 |
| 95   | 1.1405                                   | 1.3500 | 1.4407 | 1.4887 | 1.5181 | 1.5381 | 1.5525 | 1.5635 |
| 94   | 1.1342                                   | 1.3200 | 1.3946 | 1.4329 | 1.4561 | 1.4717 | 1.4829 | 1.4914 |
| 93   | 1.1269                                   | 1.2900 | 1.3508 | 1.3810 | 1.3991 | 1.4112 | 1.4199 | 1.4265 |
| 92   | 1.1184                                   | 1.2600 | 1.3088 | 1.3323 | 1.3461 | 1.3554 | 1.3620 | 1.3670 |
| 91   | 1.1089                                   | 1.2300 | 1.2683 | 1.2860 | 1.2964 | 1.3032 | 1.3081 | 1.3118 |
| 90   | 1.0982                                   | 1.2000 | 1.2290 | 1.2419 | 1.2492 | 1.2541 | 1.2576 | 1.2602 |
| 89   | 1.0864                                   | 1.1700 | 1.1909 | 1.1995 | 1.2043 | 1.2075 | 1.2098 | 1.2115 |
| 88   | 1.0736                                   | 1.1400 | 1.1537 | 1.1587 | 1.1613 | 1.1630 | 1.1643 | 1.1653 |
| 87   | 1.0597                                   | 1.1100 | 1.1173 | 1.1192 | 1.1199 | 1.1204 | 1.1208 | 1.1212 |
| 86   | 1.0448                                   | 1.0800 | 1.0817 | 1.0808 | 1.0800 | 1.0794 | 1.0791 | 1.0789 |
| 85   | 1.0288                                   | 1.0500 | 1.0467 | 1.0435 | 1.0413 | 1.0399 | 1.0389 | 1.0382 |
| 84   | 1.0119                                   | 1.0200 | 1.0124 | 1.0071 | 1.0037 | 1.0015 | 1.0000 | 0.9990 |
| 83   | 0.9939                                   | 0.9900 | 0.9785 | 0.9715 | 0.9671 | 0.9643 | 0.9624 | 0.9610 |
| 82   | 0.9749                                   | 0.9600 | 0.9452 | 0.9367 | 0.9315 | 0.9281 | 0.9258 | 0.9241 |
| 81   | 0.9550                                   | 0.9300 | 0.9123 | 0.9025 | 0.8966 | 0.8928 | 0.8901 | 0.8882 |
| 80   | 0.9342                                   | 0.9000 | 0.8799 | 0.8690 | 0.8625 | 0.8583 | 0.8554 | 0.8533 |
| 79   | 0.9124                                   | 0.8700 | 0.8478 | 0.8360 | 0.8291 | 0.8245 | 0.8214 | 0.8192 |
| 78   | 0.8897                                   | 0.8400 | 0.8160 | 0.8036 | 0.7962 | 0.7915 | 0.7882 | 0.7858 |
| 77   | 0.8662                                   | 0.8100 | 0.7846 | 0.7716 | 0.7640 | 0.7590 | 0.7556 | 0.7531 |
| 76   | 0.8417                                   | 0.7800 | 0.7535 | 0.7401 | 0.7322 | 0.7271 | 0.7236 | 0.7211 |
| 75   | 0.8165                                   | 0.7500 | 0.7226 | 0.7089 | 0.7009 | 0.6958 | 0.6922 | 0.6896 |
| 74   | 0.7904                                   | 0.7200 | 0.6921 | 0.6781 | 0.6701 | 0.6649 | 0.6613 | 0.6587 |
| 73   | 0.7636                                   | 0.6900 | 0.6617 | 0.6477 | 0.6396 | 0.6344 | 0.6308 | 0.6282 |
| 72   | 0.7360                                   | 0.6600 | 0.6316 | 0.6176 | 0.6095 | 0.6044 | 0.6008 | 0.5982 |
| 71   | 0.7077                                   | 0.6300 | 0.6016 | 0.5878 | 0.5798 | 0.5747 | 0.5712 | 0.5686 |
| 70   | 0.6787                                   | 0.6000 | 0.5719 | 0.5582 | 0.5504 | 0.5454 | 0.5419 | 0.5394 |
| 69   | 0.6490                                   | 0.5700 | 0.5423 | 0.5290 | 0.5213 | 0.5164 | 0.5130 | 0.5105 |
| 68   | 0.6187                                   | 0.5400 | 0.5129 | 0.4999 | 0.4924 | 0.4877 | 0.4844 | 0.4820 |
| 67   | 0.5878                                   | 0.5100 | 0.4836 | 0.4710 | 0.4638 | 0.4592 | 0.4560 | 0.4537 |
| 66   | 0.5563                                   | 0.4800 | 0.4545 | 0.4424 | 0.4355 | 0.4310 | 0.4280 | 0.4257 |
| 65   | 0.5242                                   | 0.4500 | 0.4255 | 0.4139 | 0.4073 | 0.4030 | 0.4001 | 0.3980 |
| 64   | 0.4916                                   | 0.4200 | 0.3967 | 0.3856 | 0.3793 | 0.3753 | 0.3725 | 0.3705 |
| 63   | 0.4586                                   | 0.3900 | 0.3679 | 0.3575 | 0.3515 | 0.3477 | 0.3451 | 0.3432 |
| 62   | 0.4251                                   | 0.3600 | 0.3392 | 0.3295 | 0.3239 | 0.3203 | 0.3179 | 0.3161 |
| 61   | 0.3911                                   | 0.3300 | 0.3107 | 0.3016 | 0.2964 | 0.2931 | 0.2908 | 0.2892 |
| 60   | 0.3568                                   | 0.3000 | 0.2822 | 0.2738 | 0.2691 | 0.2660 | 0.2639 | 0.2624 |
| 59   | 0.3222                                   | 0.2700 | 0.2537 | 0.2461 | 0.2418 | 0.2391 | 0.2372 | 0.2358 |
| 58   | 0.2872                                   | 0.2400 | 0.2254 | 0.2186 | 0.2147 | 0.2122 | 0.2105 | 0.2093 |
| 57   | 0.2519                                   | 0.2100 | 0.1971 | 0.1911 | 0.1877 | 0.1855 | 0.1840 | 0.1829 |
| 56   | 0.2164                                   | 0.1800 | 0.1688 | 0.1636 | 0.1607 | 0.1588 | 0.1575 | 0.1566 |
| 55   | 0.1806                                   | 0.1500 | 0.1406 | 0.1363 | 0.1338 | 0.1322 | 0.1312 | 0.1304 |
| 54   | 0.1447                                   | 0.1200 | 0.1125 | 0.1090 | 0.1070 | 0.1057 | 0.1049 | 0.1042 |
| 53   | 0.1087                                   | 0.0900 | 0.0843 | 0.0817 | 0.0802 | 0.0793 | 0.0786 | 0.0781 |
| 52   | 0.0725                                   | 0.0600 | 0.0562 | 0.0544 | 0.0534 | 0.0528 | 0.0524 | 0.0521 |
| 51   | 0.0363                                   | 0.0300 | 0.0281 | 0.0272 | 0.0267 | 0.0264 | 0.0262 | 0.0260 |
| 50   | 0.0000                                   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| Percent Within Limits<br>( $P_L$ and $P_U$ ) | Negative Values of Q ( $Q_L$ and $Q_U$ ) |         |         |         |         |         |         |         |
|--|--|---------|---------|---------|---------|---------|---------|---------|
|  | n=3                                      | n=4     | n=5     | n=6     | n=7     | n=8     | n=9     | n=10    |
| 49   | -0.0363                                  | -0.0300 | -0.0281 | -0.0272 | -0.0267 | -0.0264 | -0.0262 | -0.0260 |
| 48   | -0.0725                                  | -0.0600 | -0.0562 | -0.0544 | -0.0534 | -0.0528 | -0.0524 | -0.0521 |
| 47   | -0.1087                                  | -0.0900 | -0.0843 | -0.0817 | -0.0802 | -0.0793 | -0.0786 | -0.0781 |
| 46   | -0.1447                                  | -0.1200 | -0.1125 | -0.1090 | -0.1070 | -0.1057 | -0.1049 | -0.1042 |
| 45   | -0.1806                                  | -0.1500 | -0.1406 | -0.1363 | -0.1338 | -0.1322 | -0.1312 | -0.1304 |
| 44   | -0.2164                                  | -0.1800 | -0.1688 | -0.1636 | -0.1607 | -0.1588 | -0.1575 | -0.1566 |
| 43   | -0.2519                                  | -0.2100 | -0.1971 | -0.1911 | -0.1877 | -0.1855 | -0.1840 | -0.1829 |
| 42   | -0.2872                                  | -0.2400 | -0.2254 | -0.2186 | -0.2147 | -0.2122 | -0.2105 | -0.2093 |
| 41   | -0.3222                                  | -0.2700 | -0.2537 | -0.2461 | -0.2418 | -0.2391 | -0.2372 | -0.2358 |
| 40   | -0.3568                                  | -0.3000 | -0.2822 | -0.2738 | -0.2691 | -0.2660 | -0.2639 | -0.2624 |
| 39   | -0.3911                                  | -0.3300 | -0.3107 | -0.3016 | -0.2964 | -0.2931 | -0.2908 | -0.2892 |
| 38   | -0.4251                                  | -0.3600 | -0.3392 | -0.3295 | -0.3239 | -0.3203 | -0.3179 | -0.3161 |
| 37   | -0.4586                                  | -0.3900 | -0.3679 | -0.3575 | -0.3515 | -0.3477 | -0.3451 | -0.3432 |
| 36   | -0.4916                                  | -0.4200 | -0.3967 | -0.3856 | -0.3793 | -0.3753 | -0.3725 | -0.3705 |
| 35   | -0.5242                                  | -0.4500 | -0.4255 | -0.4139 | -0.4073 | -0.4030 | -0.4001 | -0.3980 |
| 34   | -0.5563                                  | -0.4800 | -0.4545 | -0.4424 | -0.4355 | -0.4310 | -0.4280 | -0.4257 |
| 33   | -0.5878                                  | -0.5100 | -0.4836 | -0.4710 | -0.4638 | -0.4592 | -0.4560 | -0.4537 |
| 32   | -0.6187                                  | -0.5400 | -0.5129 | -0.4999 | -0.4924 | -0.4877 | -0.4844 | -0.4820 |
| 31   | -0.6490                                  | -0.5700 | -0.5423 | -0.5290 | -0.5213 | -0.5164 | -0.5130 | -0.5105 |
| 30   | -0.6787                                  | -0.6000 | -0.5719 | -0.5582 | -0.5504 | -0.5454 | -0.5419 | -0.5394 |
| 29   | -0.7077                                  | -0.6300 | -0.6016 | -0.5878 | -0.5798 | -0.5747 | -0.5712 | -0.5686 |
| 28   | -0.7360                                  | -0.6600 | -0.6316 | -0.6176 | -0.6095 | -0.6044 | -0.6008 | -0.5982 |
| 27   | -0.7636                                  | -0.6900 | -0.6617 | -0.6477 | -0.6396 | -0.6344 | -0.6308 | -0.6282 |
| 26   | -0.7904                                  | -0.7200 | -0.6921 | -0.6781 | -0.6701 | -0.6649 | -0.6613 | -0.6587 |
| 25   | -0.8165                                  | -0.7500 | -0.7226 | -0.7089 | -0.7009 | -0.6958 | -0.6922 | -0.6896 |
| 24   | -0.8417                                  | -0.7800 | -0.7535 | -0.7401 | -0.7322 | -0.7271 | -0.7236 | -0.7211 |
| 23   | -0.8662                                  | -0.8100 | -0.7846 | -0.7716 | -0.7640 | -0.7590 | -0.7556 | -0.7531 |
| 22   | -0.8897                                  | -0.8400 | -0.8160 | -0.8036 | -0.7962 | -0.7915 | -0.7882 | -0.7858 |
| 21   | -0.9124                                  | -0.8700 | -0.8478 | -0.8360 | -0.8291 | -0.8245 | -0.8214 | -0.8192 |
| 20   | -0.9342                                  | -0.9000 | -0.8799 | -0.8690 | -0.8625 | -0.8583 | -0.8554 | -0.8533 |
| 19   | -0.9550                                  | -0.9300 | -0.9123 | -0.9025 | -0.8966 | -0.8928 | -0.8901 | -0.8882 |
| 18   | -0.9749                                  | -0.9600 | -0.9452 | -0.9367 | -0.9315 | -0.9281 | -0.9258 | -0.9241 |
| 17   | -0.9939                                  | -0.9900 | -0.9785 | -0.9715 | -0.9671 | -0.9643 | -0.9624 | -0.9610 |
| 16   | -1.0119                                  | -1.0200 | -1.0124 | -1.0071 | -1.0037 | -1.0015 | -1.0000 | -0.9990 |
| 15   | -1.0288                                  | -1.0500 | -1.0467 | -1.0435 | -1.0413 | -1.0399 | -1.0389 | -1.0382 |
| 14   | -1.0448                                  | -1.0800 | -1.0817 | -1.0808 | -1.0800 | -1.0794 | -1.0791 | -1.0789 |
| 13   | -1.0597                                  | -1.1100 | -1.1173 | -1.1192 | -1.1199 | -1.1204 | -1.1208 | -1.1212 |
| 12   | -1.0736                                  | -1.1400 | -1.1537 | -1.1587 | -1.1613 | -1.1630 | -1.1643 | -1.1653 |
| 11   | -1.0864                                  | -1.1700 | -1.1909 | -1.1995 | -1.2043 | -1.2075 | -1.2098 | -1.2115 |
| 10   | -1.0982                                  | -1.2000 | -1.2290 | -1.2419 | -1.2492 | -1.2541 | -1.2576 | -1.2602 |
| 9  | -1.1089                                  | -1.2300 | -1.2683 | -1.2860 | -1.2964 | -1.3032 | -1.3081 | -1.3118 |
| 8  | -1.1184                                  | -1.2600 | -1.3088 | -1.3323 | -1.3461 | -1.3554 | -1.3620 | -1.3670 |
| 7  | -1.1269                                  | -1.2900 | -1.3508 | -1.3810 | -1.3991 | -1.4112 | -1.4199 | -1.4265 |
| 6  | -1.1342                                  | -1.3200 | -1.3946 | -1.4329 | -1.4561 | -1.4717 | -1.4829 | -1.4914 |
| 5  | -1.1405                                  | -1.3500 | -1.4407 | -1.4887 | -1.5181 | -1.5381 | -1.5525 | -1.5635 |
| 4  | -1.1456                                  | -1.3800 | -1.4897 | -1.5497 | -1.5871 | -1.6127 | -1.6313 | -1.6454 |
| 3  | -1.1496                                  | -1.4100 | -1.5427 | -1.6181 | -1.6661 | -1.6993 | -1.7235 | -1.7420 |
| 2  | -1.1524                                  | -1.4400 | -1.6016 | -1.6982 | -1.7612 | -1.8053 | -1.8379 | -1.8630 |
| 1  | -1.1541                                  | -1.4700 | -1.6714 | -1.8008 | -1.8888 | -1.9520 | -1.9994 | -2.0362 |

## **REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|           |  |
|-----------|--|
| ASTM E178 | Standard Practice for Dealing with Outlying Observations |
|-----------|--|

**END OF ITEM C-110**

**PART B**

**DIVISION I**

**FEDERAL PROVISIONS**

**SECTION 3 –CONTRACT PROVISIONS FOR OBLIGATED SPONSORS  
AND AIRPORT IMPROVEMENT PROGRAM PROJECTS**

**PART B – CONTRACT PROVISIONS  
DIVISION I  
FEDERAL PROVISIONS**

**SECTION 3  
CONTRACT PROVISIONS FOR OBLIGATED SPONSORS AND  
AIRPORT IMPROVEMENT PROGRAM PROJECTS**

**TABLE OF CONTENTS**

|    |   |         |
|----|---|---------|
| 1  | ACCESS TO RECORDS AND REPORTS .....   | BIII-1  |
| 2  | BREACH OF CONTRACT.....   | BIII-1  |
| 3  | CIVIL RIGHTS - GENERAL .....  | BIII-1  |
| 4  | CIVIL RIGHTS – TITLE VI LIST OF PERTINENT NONDISCRIMINATION<br>ACTS AND AUTHORITIES .....       | BIII-2  |
| 5  | CLEAN AIR AND WATER POLLUTION CONTROL .....   | BIII-4  |
| 6  | CONTRACT WORKHOURS AND SAFETY STANDARDS ACT<br>REQUIREMENTS.....                                | BIII-4  |
| 7  | COPELAND ANTI-KICKBACK ACT .....  | BIII-5  |
| 8  | DAVIS-BACON REQUIREMENTS .....  | BIII-5  |
| 9  | DISADVANTAGED BUSINESS ENTERPRISE .....   | BIII-10 |
| 10 | DISTRACTED DRIVING – TEXTING WHILE DRIVING.....   | BIII-11 |
| 11 | PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND<br>VIDEO SURVEILLANCE SERVICES OR EQUIPMENT ..... | BIII-11 |
| 12 | EQUAL EMPLOYMENT OPPORTUNITY (E.E.O.) .....   | BIII-11 |
| 13 | PROHIBITION OF SEGREGATED FACILITIES .....  | BIII-17 |
| 14 | OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970.....   | BIII-17 |
| 15 | PROCUREMENT OF RECOVERED MATERIALS.....   | BIII-17 |
| 16 | TERMINATION OF CONTRACT .....   | BIII-18 |
| 17 | VETERAN’S PREFERENCE .....  | BIII-19 |
| 18 | RIGHTS TO INVENTIONS.....   | BIII-19 |

## **PART B – CONTRACT PROVISIONS**

### **DIVISION I – FEDERAL PROVISIONS**

#### **SECTION 3 - CONTRACT PROVISIONS FOR OBLIGATED SPONSORS AND AIRPORT IMPROVEMENT PROGRAM PROJECTS**

##### **1. ACCESS TO RECORDS AND REPORTS**

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, 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. BREACH OF CONTRACT**

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 the 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.

##### **3. CIVIL RIGHTS - GENERAL**

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

The above provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract.

---

#### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

#### **4. 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 USC § 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 USC § 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 USC § 794 *et seq.*), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq.*) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-259) (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 (42 USC § 12101, *et seq.*) (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) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 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 (ensures nondiscrimination 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. 74087 (2005)];
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC § 1681, *et seq.*).



### **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. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability 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.

## **5. CLEAN AIR AND WATER POLLUTION CONTROL**

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC §§ 7401-7671q) and the Federal Water Pollution Control Act as amended (33 USC §§ 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 exceed \$150,000.

## **6. CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS**

### **(a) 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.

### **(b) Violation; Liability for Unpaid Wages; Liquidated Damages.**

In the event of any violation of the clause set forth in paragraph (a) 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 (a) of this clause, in the sum of \$29 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 (a) of this clause.

### **(c) 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 (b) of this clause.

(d) Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (a) through (d) 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 (a) through (d) of this clause.

## **7. COPELAND “ANTI-KICKBACK” ACT**

Contractor must comply with the requirements of the Copeland “Anti-Kickback” Act (18 USC 874 and 40 USC 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.

## **8. DAVIS-BACON REQUIREMENTS**

### **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 § 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;
- (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, U.S. Department of Labor, Washington, DC 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,

---

#### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

Issued on May 24, 2023

Part B – Division I – Section 3

BIII-6

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 the 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 that 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 <https://www.dol.gov/agencies/whd/government-contracts/construction/payroll-certification> 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).

---

### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

(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, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, 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 Office of Apprenticeship Training, Employer and Labor Services 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

---

#### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

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 Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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 that 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.

---

#### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

Issued on May 24, 2023

Part B – Division I – Section 3

BIII-9

## 6. Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR §§ 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 § 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 USC § 1001.

# 9. DISADVANTAGED BUSINESS ENTERPRISE

## Contract Assurance

The Contractor, subrecipient 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, which may include, but is not limited to:

- 1) Withholding monthly progress payments;
- 2) Assessing sanctions;
- 3) Liquidated damages; and/or

## Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects



- 4) Disqualifying the Contractor from future bidding as non-responsible.

#### **Prompt Payment (49 CFR § 26.29)**

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 7 days from the receipt of each payment the prime contractor receives from Truckee Tahoe Airport District. The prime contractor agrees further to return retainage payments to each subcontractor within 7 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 Truckee Tahoe Airport District. This clause applies to both DBE and non-DBE subcontractors.

### **10. DISTRACTED DRIVING – 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 Federal Aviation Administration 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 subgrant.

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 \$10,000 that involve driving a motor vehicle in performance of work activities associated with the project.

### **11. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [Public Law 115-232 § 889(f)(1)].

### **12. EQUAL EMPLOYMENT OPPORTUNITY (EEO)**

During the performance of this contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, 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 identity, 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.

---

#### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

(b) 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 consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(c) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(d) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under this section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(e) 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.

(f) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(g) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any such 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 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.

(h) The Contractor will include the provisions of paragraphs (a) through (h) 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 may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: *Provided*, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

---

#### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

Issued on May 24, 2023

Part B – Division I – Section 3

BIII-12

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY  
CONSTRUCTION CONTRACT SPECIFICATIONS**

(a). As used in these specifications:

- i. “Covered area” means the geographical area described in the solicitation from which this contract resulted;
- ii. “Director” means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
- iii. “Employer identification number” means the Federal social security number used on the Employer’s Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
- iv. “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).

(b). 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.

(c). If the Contractor is participating (pursuant to 41 CFR part 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 must 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.

(d). 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 areas where they do not have a Federal or federally assisted construction contract shall apply

---

**Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

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.

(e). 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.

(f). In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, 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.

(g). 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:

i. 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.

ii. 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.

iii. 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 therefor, along with whatever additional actions the Contractor may have taken.

iv. 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 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.

v. 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

---

**Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

vi. 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.

vii. 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 as 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.

viii. 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.

ix. 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.

x. 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 work force.

xi. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.

xii. 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.

xiii. 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.

xiv. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

---

**Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

xv. 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.

xvi. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

(h) 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 group 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.

(i) 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, the Contractor may be in violation of the Executive Order if a 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).

(j) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

(l) 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.

(m) 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 part 60-4.8.

(n) 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

---

**Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

hereof as may be required by the Government, 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 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.

(o) 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).

### **13. 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 Employment 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, sexual orientation, gender identity, 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 Employment Opportunity clause of this contract.

### **14. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970**

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. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer 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 (29 CFR Part 1910). The employer 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.

### **15. PROCUREMENT OF RECOVERED MATERIALS**

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

---

#### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**

are to use 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/smm/comprehensive-procurement-guidelines-construction-products](http://www.epa.gov/smm/comprehensive-procurement-guidelines-construction-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.

## **16. TERMINATION OF CONTRACT**

### **TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)**

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:

- 1. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
- 2. 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;
- 3. Reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

---

### **Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects**



4. 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 CAUSE (CONSTRUCTION)**

Section 80-09 of FAA Advisory Circular 150/5370-10, as set forth in Part B, Contract Provisions, Division I, Section 1 – FAA General Contract Provisions, establishes standard language for conditions, rights, and remedies associated with Owner termination of this contract for cause due to default of the Contractor.

## **17. VETERAN'S PREFERENCE**

### **VETERAN'S PREFERENCE**

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 USC § 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.

## **18. RIGHTS TO INVENTIONS**

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within 37 CFR § 401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental, or research work.

Page Intentionally Left Blank

**PART B**

**DIVISION II**

**SPECIAL PROVISIONS**

**PART B**  
**DIVISION II**  
**SPECIAL PROVISIONS FOR**  
**TRUCKEE TAHOE AIRPORT**  
**RECONSTRUCT APRON A2**

**TABLE OF CONTENTS**

|      |   |       |
|------|---|-------|
| (1)  | Location.....   | SP-1  |
| (2)  | Work To Be Done.....  | SP-1  |
| (3)  | Plans and Specifications.....   | SP-1  |
| (4)  | Laws to be Observed.....  | SP-1  |
| (5)  | California Air Resources Board (“CARB”) Regulations.....                    | SP-3  |
| (6)  | Laws Affecting Public Works.....  | SP-3  |
| (7)  | Limits of Construction .....  | SP-3  |
| (8)  | Progress of Work and Time of Completion.....                                | SP-4  |
| (9)  | Liquidated Damages .....  | SP-4  |
| (10) | Construction Schedule .....   | SP-4  |
| (11) | Closures of Runways, Taxiways and Aprons.....                               | SP-5  |
| (12) | Hauling Routes on Airport Property.....                                     | SP-7  |
| (13) | Contractor's Storage, Staging, and Stockpile Areas .....                    | SP-7  |
| (14) | Watering.....   | SP-8  |
| (15) | Marking of Construction Equipment.....                                      | SP-8  |
| (16) | Aircraft Right of Way and Access.....                                       | SP-8  |
| (17) | Protection of Cables, Controls, NAVAIDs and Weather Bureau Facilities ..... | SP-9  |
| (18) | Airport Security.....   | SP-10 |
| (19) | Aviation Safety Requirements During Construction.....                       | SP-10 |
| (20) | Submittals and/or Shop Drawings .....                                       | SP-17 |
| (21) | Submittal and Shop Drawing Approvals.....                                   | SP-18 |
| (22) | Videotaping .....   | SP-19 |
| (23) | Construction Management Plan.....   | SP-19 |
| (24) | U.S. Department of Labor Posters .....                                      | SP-20 |
| (25) | Payments .....  | SP-20 |
| (26) | Withholding .....   | SP-20 |
| (27) | Wage Rates.....   | SP-20 |
| (28) | Contractor's Record Drawings .....  | SP-21 |

**TABLE OF CONTENTS CONTINUED**

(29) Operation and Maintenance Manuals .....SP-21

(30) Anti-Trust Assignment.....SP-22

(31) Contractor Not Agent, Nor Employee.....SP-22

(32) Contractor’s Guarantee .....SP-22

(33) Surety Company Bond.....SP-23

(34) Existing Conditions.....SP-23

(35) Coordination Meeting .....SP-24

(36) Testing and Acceptance of Materials.....SP-24

(37) Determination of In-Place Density .....SP-24

(38) Project Closeout .....SP-24

## **SPECIAL PROVISIONS**

### **(1) LOCATION**

The site of the work is at Truckee Tahoe Airport in Truckee, California. Prior to the submission of his/her bid, each bidder shall visit the site and acquaint himself/herself with local conditions, including but not limited to roads available, source of materials, water, electric power, the relation of the finished grade to the existing grade, and conditions of existing pavements, including haul routes.

### **(2) WORK TO BE DONE**

The work to be done under this contract consists of furnishing all materials, plant and equipment, and performing all necessary labor in accordance with the prepared plans, specifications, and special provisions as directed by the Owner or its authorized representative, as follows:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

### **(3) PLANS AND SPECIFICATIONS**

The work shall conform to the plans and specifications marked, "*Truckee Tahoe Airport District, Truckee, California, Reconstruct Apron A2, AIP No. 3-06-0262-0\_\_-2025.*"

In case of conflict between the plans, specifications and other contract documents, these documents shall govern in the following order:

- 1<sup>st</sup> - Change Order or Supplemental Agreement
- 2<sup>nd</sup> - Addendum to the Plans and Specifications
- 3<sup>rd</sup> - Technical Provisions
- 4<sup>th</sup> - Special Provisions
- 5<sup>th</sup> - Construction Plans
- 6<sup>th</sup> - FAA General Provisions
- 7<sup>th</sup> - FAA General Construction Items
- 8<sup>th</sup> - FAA Specifications and Advisory Circulars

### **(4) LAWS TO BE OBSERVED**

In addition to the general requirements included in Item 70-01 of the Federal General Provisions, Contractor's attention is directed to, and Contractor shall be responsible for conducting the project in compliance with all laws of the State of California governing the construction of public works, including, without limitation, the following:

- a. The California Health and Safety Code and all applicable administrative code regulations adopted pursuant thereto.

- b. All laws governing the employment of labor, qualifications for employment of aliens, payment of employees, convict-made materials, domestic and foreign materials, and accident prevention.
- c. Title XIX of the California Code of Regulations entitled, "Public Safety," Chapter 1, State Fire Marshal, subchapter 1, "General Fire and Panic Safety".
- d. General Industrial Safety Orders. Contractor, and all subcontractors, shall observe and conform to the provisions of Title VIII of the California Code of Regulations relating to safe and proper use, construction, disposal, etc., of materials, machinery, and building appurtenances as therein set forth.
- e. Rules and regulations of local utilities.
- f. Local City and/or County ordinances.
- g. Code rules and safety orders. All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshal; the National Board of Fire Underwriters; the National Electrical Code; State Industrial Accident Commission's Safety Orders; the safety orders of the Division of Industrial Safety; and Department of Industrial Relations.
- h. The Contractor shall conform to the requirements of Section 4216 of the Government Code, as latest amended, relating to subsurface installations.

All of the above laws and regulations are expressly incorporated in this contract, and are as much a part of the Contract Documents as if they were incorporated in their entirety in these general provisions.

Nothing in the specifications is to be construed to permit work not conforming to the above, and expense in compliance with the above work shall be borne by the Contractor. Whenever the specifications and working details require higher standards or larger sizes than those required by the ordinances, codes and statutes, the specifications and working details shall take priority over the ordinances, codes and statutes.

The Contractor shall not interpret the enumeration set forth above as being a complete listing of all applicable laws. It is the Contractor's responsibility to keep informed regarding the requirements of all applicable laws and to obey them, and Contractor agrees by execution of the Contract Documents to do so at his/her sole cost, expense, and risk.

All work, materials, work safety procedures and equipment shall be in full accordance with the latest Cal/OSHA rules and regulations.

Contractor warrants that Contractor and each of his/her subcontractors shall, in performance of this contract, comply with each and every compliance order issued pursuant to Cal/OSHA. The Contractor assumes full and total responsibility for compliance with Cal/OSHA standards by his/her subcontractors as well as by the Contractor.

The cost of complying with any compliance order and/or payment of any penalty assessed pursuant to Cal/OSHA shall be borne by the Contractor. Contractor shall save, keep and hold harmless the Owner, and all officers, employees, and agents thereof, from all liabilities, costs, or expenses, in law or in equity, that may at any time arise or be set up because of Contractor's or a subcontractor's non-compliance or alleged non-compliance with Cal/OSHA requirements. Nothing contained herein shall be deemed to prevent the Contractor and his/her subcontractors from otherwise allocating between themselves responsibility for compliance with Cal/OSHA requirements; provided, however, that the Contractor shall not thereby be, in any manner whatsoever, relieved of his/her responsibility to the Owner as hereinabove set forth.

#### **(5) CALIFORNIA AIR RESOURCES BOARD ("CARB") REGULATIONS**

Contractor shall comply, and shall ensure all subcontractors comply, with all applicable requirements of the most current version of the regulations imposed by California Air Resources Board ("CARB") including, without limitation, all applicable terms of Title 13, California Code of Regulations Division 3, Chapter 9 and all pending amendments ("Regulation").

Throughout the Project, and for three (3) years thereafter, Contractor shall make available for inspection and copying any and all documents or information associated with Contractor's and its subcontractors' fleets including, without limitation, the Certificates of Reported Compliance ("CRCs"), fuel/refueling records, maintenance records, emissions records, and any other information the Contractor is required to produce, keep or maintain pursuant to the Regulation upon two (2) calendar days' notice from the District.

Contractor shall be solely liable for any and all costs associated with compliance with the Regulation as well as for any and all penalties, fines, damages, or costs associated with any and all violations, or failures to comply with the Regulation. Contractor shall defend, indemnify and hold harmless the District, its officials, officers, employees and authorized volunteers free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Regulation.

#### **(6) LAWS AFFECTING PUBLIC WORKS**

Attention to bidders is called to necessity of being familiar with the various Federal, state and local laws affecting public work, especially (but not limited to) those laws relating to hours of employment, minimum wages, payment of wages, sanitary and safety conditions for workers, worker's compensation insurance, type and kind of materials that can be used, non-discrimination in employment and affirmative action programs. Federal monies are to be utilized by Owner for this Project, and Contractor shall comply with applicable regulations and hold harmless the Owner for its failure to comply. Certain of those provisions are set forth herein. The existence of these provisions does not excuse the Contractor from complying with other statutory requirements or provisions which are not set forth in these contract documents.

#### **(7) LIMITS OF CONSTRUCTION**

The Contractor's personnel and equipment shall be limited to the construction areas as shown on the plans. Contractor agrees to implement such security measures as are necessary to assure compliance with Federal Aviation Administration, State, and local airport regulations.



Access to runways, taxiways and aircraft parking aprons for any reasons other than construction will not be permitted.

#### **(8) PROGRESS OF WORK AND TIME OF COMPLETION**

Contract Time: This work shall be constructed in accordance with details as shown on the plans and described in the specifications for this project. There are 60 working days allowed for completion of this project in two phases if Schedule A is accepted. There are 45 working days allowed for the completion of the project in a single phase if Schedule B is accepted. If Schedule B is accepted, then all work in Phases 1, 1A, and 2 will be constructed together in a single phase. The contractor's staging and storage area for Phase 1 will not be available to the contractor if Schedule B is accepted. The number of working days shall begin after the date of the written Notice to Proceed issued by Truckee Tahoe Airport District to the Contractor.

If said Contractor shall be delayed in said work by the acts or neglect of said Owner, or its employees, or those under it by contract or otherwise, or by changes ordered in the work, or by strike, lockouts, fire, unusual delay in transportation, unavoidable casualties or any causes beyond the Contractor's control, or by delay authorized by the Owner, or by any cause which the Owner shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the Owner agrees to in writing.

This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

#### **(9) LIQUIDATED DAMAGES.**

Liquidated damages will be charged against the Contractor in the amount of \$5,000 per day for each consecutive calendar day after the specified construction time or incremental phase that the Contractor uses to complete the project and/or any specified segment of the work. In determining the number of days the contract, or portions thereof, remain incomplete, the completion date shall be the date of recommendation of acceptance of work and materials by the RPR. Contractor and Owner hereby agree to the assessment of liquidated damages in lieu of actual damages that are not reasonably ascertainable at the time of entering into this agreement. These liquidated damages are not a penalty.

#### **(10) CONSTRUCTION SCHEDULE**

The sequence of construction shall be as shown on the plans or as directed by the RPR. The Contractor shall develop a schedule of operations as a network diagram in Critical Path method (CPM), Program Evaluation and Review Technique (PERT), or other format acceptable to the RPR. This schedule shall show the proposed construction schedule for various items and phases of work and shall also provide space to show the current status of the work. This schedule shall show both calendar and working days on the construction time line and show the start date and end date.

The Contractor shall submit the schedule for approval. No work shall be started until the construction schedule has been approved.

The Contractor shall maintain a copy of this schedule on the project site. This schedule shall be updated and submitted to the RPR for approval weekly.

# **(11) CLOSURES OF RUNWAYS, TAXIWAYS AND APRONS**

During the construction of this project Apron A2 and portions of Taxiways D, E, and F, Apron Taxilanes and Apron A2 will be closed at various times.

All phases of construction are shown on the Construction Safety and Phasing Plan, Sheet No. 2 of the construction drawings, and as follows:

| Phase | Contractor's Work                    | Contractor's Work Area   | Facility Closure   |
|-------|--------------------------------------|--------------------------|--|
| 1     | Reconstruct West Portion of Apron A2 | West Portion of Apron A2 | West Parking on Apron A2, Taxiway D between Taxiway A and Apron, Portion of Apron Taxilanes (No thru taxi) |
| 1A    | Construct Snow Melt Apron            | Portion of Apron A2      | Portion of Apron A2. Limited pedestrian access to terminal from the west                                   |
| 2     | Reconstruct East Portion of Apron A2 | East Portion of Apron A2 | East Parking on Apron A2, Taxiways E and F, and limited pedestrian access to terminal from the east.       |

The Phase 1 Contractor Storage and Staging Area will only be available for use prior to June 30 for Schedule A. The area must be broom clean and cleaned up to the satisfaction of the Airport and RPR by June 30. Regular airport operations will require the use of this area by aircraft starting July 1. This area is not available anytime if Schedule B is awarded.

Work in Phases 1 and 1A may be performed concurrently. Work in Phases 1 and 1A will be completed before starting work in Phase 2. Work in Phase 1A may be started prior to working in Phase 1.

Drainage improvements to be constructed in Phase 1 will require the closure of the parking area, sidewalks, and landscape area just west of the terminal building. The work in this area will be completed in five (5) working days. Closure of this area will be during working hours only and all trenches will be covered with approved trench plates or backfill completed prior to opening at the end of each day's working hours.

Drainage improvements to be constructed in Phase 2 will require isolated closure of the playground and lawn area east of the terminal. Barricades will be placed around the perimeter of the work area. Closure of the playground and lawn area will only be during working hours and all trenches shall be covered with approved trench plates or backfill completed prior to opening at the end of each day's working hours.

Pedestrian traffic from the apron will be maintained by placement of barricades, as shown on the Construction Safety Drawings, but the access path will be limited to portion of Apron A2 not under reconstruction.

Facilities closed during the construction of this project during various phases will be Apron A2, Taxiways D, E, and F, portion of apron taxilanes, the terminal east lawn, and the east parking lot. The Contractor will have no access to the runways or taxiways and his/her operations will be limited to haul routes and the Contractor Storage and Staging Area as shown on the Construction Safety and Phasing Plan.

The Airport will provide up to 240 suitable lighted barricades to assure closure of portions of the Airport for all phases as shown on the plans or as directed by the RPR. The contractor shall provide all jersey style barricades as shown and called for on the plans. Contractor shall place, maintain, and remove barricades as shown on Sheet 2, Construction Safety and Phasing Plan, and Sheets 3, 4, 5, and 6, Barricade Plans. Contractor shall cover signs as shown on Sheets 4 and 5.

The contractor shall give the Airport 2 weeks' notice prior to the start of work in any area.

During the construction of all work on this project, the contractor shall provide an Airport-trained flagger to monitor Tower Ground Control frequency 118.3 MHz and observe aircraft operations when Contractor is working near active runways and taxiways. The Contractor shall maintain constant radio contact (118.3 MHz) with the contractor-furnished flagger. Contractor shall provide Contractor's qualified flagger with means to communicate directly with the designated foreman controlling work on the project. Contractor shall be in direct radio communication and shall be under guidance from the contractor's qualified flagger. Contractor's area and equipment shall be held clear of the runways and taxiways at all times when these surfaces are open for aircraft operations.

Lighted barricades shall be erected at the locations as directed by the RPR and shown on the Construction Safety and Phasing Plan and the Barricade Plans (Sheets No. 2 through 5 of the construction plans). The Owner will provide up to 240 low-profile water filled barricades to assure closure of portions of the Airport as shown on the plans or as directed by the RPR. These barricades are 10" high. Each barricade has two solar-powered lights with red lenses each controlled by photocells such that they are on at night and off during the day. Payment for the maintaining, operating, and placing of lighted barricades and airfield guidance sign covers will be made under Item C-106 of these specifications.

During the construction of Phase 1A, the Snow Melt Apron, Contractor shall furnish and install Continuous 42" Jersey Barricades as detailed on Sheet No. 3, Barricade Plan – Phase 1A. Barricades will be plastic, water-filled, Jersey-shaped barricades with red solar powered lights. The Contractor shall place and maintain barricades and lights throughout the project duration. Barricades shall be approved by the Airport prior to delivery and installation. Each barricade shall have 2 solar-powered lights with red lenses, each controlled by photocells, set to continuous "On" at night and "Off" during the day. Barricades shall be secured if necessary to resist movement from jet or prop blast. Location of Jersey barricades to be approved by Airport Operations Manager and

RPR. At the completion of construction, all barricades shall be drained of water and removed from the airport.

It shall be the Contractor's responsibility to require all personnel to observe the safety requirements of the Airport to restrict all personnel and equipment to the work and storage areas assigned to the Contractor.

Contractor shall submit a plan and schedule at the Preconstruction Conference. The submitted Staging Plan shall detail location of closed area, barricade locations, and traffic routes. For details of the proposed staging of this work, see Sheet 2, Construction Safety and Phasing Plan, of the construction drawings.

## **(12) HAULING ROUTES ON AIRPORT PROPERTY**

In order to avoid confusion with aircraft during the construction and to avoid damage to the existing pavement and to the adjacent lands, the Contractor's equipment shall be restricted to certain hauling routes as shown on the Construction Safety and Phasing Plan, Sheet No. 2, and the Barricade Plans, Sheets No. 3, 4, 5 and 6.

Access to the construction site will be off Soaring Way to Aviation Way to Chandelle Way as shown on the Construction Safety and Phasing Plan, Sheet No. 2 of the construction drawings.

The western haul route shall be utilized to access the west portion of Apron 2 (Phases 1 and 1A). Swing gate south of fuel island shall be used by the Contractor for the western haul route. Haul route shall continue north from the swing gate along a route, marked by barricades, west of the wash rack and east of the fuel island to Phase 1 work area.

The eastern haul route provides access to the east portion of Apron A2 (Phase 2). Automatic Gate #5 southeast of the fire station shall be used by the Contractor for access to the airport. Contractor shall delineate, with barricades or cones, a 30-foot wide haul route along the west edge of the jet parking ramp as shown on Sheet No. 6, Barricade Plan – Haul Roads.

The roads will be open to the Contractor at all times throughout construction. If the Contractor should find that it is desirable to improve these roads, he/she may do so but will receive no payment for any improvements that he/she may make. It shall be the responsibility of the Contractor to provide adequate safeguards, including flaggers, so that the operation of the Airport will not be hindered. In addition, it shall be the responsibility of the Contractor to repair any damage caused by his equipment to these paved areas. Vehicle loads shall not exceed legal highway load limits.

## **(13) CONTRACTOR'S STORAGE, STAGING AND STOCKPILE AREAS**

The proposed locations have been shown on the Construction Safety and Phasing Plan for the Contractor's storage and staging areas. All Contractor equipment and material stockpiles shall be stored a minimum of 250 feet from the centerline of an active runway or 65.5 feet from the centerline of an active taxiway in the areas shown on the plans. It shall be the responsibility of the

Contractor to determine the availability of water, power, gas, and electricity for these areas. He shall make all necessary arrangements to provide these services to meet his requirements.

Stockpiles will be limited to a height of 8 feet, will be graded to drain, and will be clearly marked and lighted during hours of restricted visibility or darkness. The Contractor will determine and verify that stockpiled materials are stabilized and stored at the approved location shown on the plans so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage. Contractor shall maintain dust control on all stockpiles. Stockpiles located near aircraft travel route must be protected from jet blast by maintaining a wet surface. Contractor shall make provisions to keep surface wet and protected from jet blast 7 days of the week. Contractor's Storage and Staging area for Phase 1 is only available prior to June 30 for Schedule A and will not be available for use if Schedule B is awarded

The Contractor shall provide toilet facilities for his personnel in these areas. Such facilities shall conform to the requirements of the Nevada County Health Department.

At completion of the contract, the Contractor shall remove all materials, equipment, stockpiles, etc., from the work areas. Contractor shall restore all storage and office areas and haul roads to the original condition prior to any work in the area. Contractor shall not receive any separate payment for any of this restoration or clean up.

#### **(14) WATERING**

Water, when required, shall be applied at locations, in amounts, and during hours, including nights, as directed by the Engineer. An adequate water supply shall be provided by the Contractor. The equipment used for watering shall be of ample capacity and of such design as to assure uniform application of water in the amounts directed by the Engineer.

The Contractor shall develop his/her own water supply for this project.

No separate payment shall be made for watering, but it shall be considered as a subsidiary obligation of the Contractor covered under the respective items of work.

#### **(15) MARKING OF CONSTRUCTION EQUIPMENT**

All construction equipment shall display orange and white checkered flags, 3'x3'. These flags shall be so located on the equipment as to be plainly visible to all aircraft. No equipment shall be parked on or over the paved area of the airfield or within the runway protection zone. Parking areas for equipment will be designated by the RPR.

#### **(16) AIRCRAFT RIGHT OF WAY AND ACCESS**

Aircraft shall at all times have the right of way. Aircraft shall always have access to all open airport facilities except when that part of the Airport is closed. All aircraft shall at all times be protected from all equipment, materials, and dust. Contractor will be required to initiate effective dust control measures as needed at no additional cost to Owner.

**(17) PROTECTION OF CABLES, CONTROLS, NAVAIDS AND WEATHER BUREAU FACILITIES**

Due to the critical nature of certain utilities to the operation of the Airport, the following Special Provisions for Protection of Cables, Controls, and Nav aids shall apply:

The Contractor is hereby informed that there are installed on the Airport certain structural facilities, NAVAIDS, and airfield lighting systems served by underground cable and other electric power cables. Such facilities and electric cables must be fully protected during the entire construction time. Work under this contract can be accomplished in the vicinity of these facilities and cables only at approved periods of time. Approval is subject to withdrawal at any time because of changes in weather, emergency conditions on the existing airfield areas, anticipation of emergency conditions, and for any other reason determined by the RPR acting under the orders and instructions of the airport management. Any instructions to the Contractor to clear any given area, at any time, by the RPR or Airport Management (by radio or other means) shall be immediately executed. Construction work shall be commenced in the cleared area only when additional instructions are issued by the proper authorities.

Power and control cables leading to and from any facilities will be marked in the field by the Airport or utility service provider for the information of the Contractor before any work in their general vicinity is started. Thereafter, through the entire time of this construction, they shall be protected from any possible damage, including crossing with unauthorized equipment, etc.

Not less than two full working days prior to performing any excavation, the Contractor shall notify Underground Service Alert (USA) by calling 811. The location of the subsurface installations shall be in accordance with Section 4216 of the Government Code, as latest amended. No excavation shall be performed until the subsurface installations have been located, hand-excavated and identified.

These special provisions intend to make perfectly clear the need for protection of cables and other electrical facilities by this Contractor at all times.

The Contractor shall immediately repair, with identical material by skilled workmen, any underground cables serving airport facilities that are damaged by his/her workers, equipment, or work. Prior approval of the RPR or of the representative designated by Airport Management must be obtained for the materials, workers, time of day or night, and for the method of repairs for any temporary or permanent repairs the Contractor proposes to make to any airport facilities and cables damaged by this Contractor.

It is recognized that the Owner will incur costs for employees' salaries, engineering fees and otherwise in connection with the damage, inspection and repair of any such damage caused by the Contractor; and consequently that the Owner may incur loss of income by reason of the diversion of aircraft traffic from the airport resulting from interruption of the use of airport facilities; and that such expenses and loss of income are not measurable now and may not be reasonably ascertainable at the time of any incident caused by the Contractor. The Owner and the Contractor hereby agree to the assessment of liquidated damages in lieu of such expenses or other damages incurred by the Owner. In addition to the obligation of the Contractor to immediately repair any cables or facilities

damaged by the Contractor as set forth above, the sum of \$3,000 for each day or portion of a day that the equipment is inoperable shall be deducted from any money due the Contractor; or if no money is due the Contractor, the Owner shall have the right to recover said sum or sums from the Contractor, from the surety, or from both. The amount of these deductions is not considered a penalty.

## **(18) AIRPORT SECURITY**

During the course of the contract, the Contractor shall be responsible for maintaining security against unauthorized access to the Airport. The Contractor will be held responsible for any fines, damages, or civil penalties filed against the Owner for the Contractor's failure to maintain the regulations set forth herein.

In accordance with the requirements of the Federal Aviation Administration as set forth in FAR 107.11(F), the Contractor shall take all steps necessary to assure Owner that the backgrounds of all employees have been checked to the extent necessary to assure that permitting them unescorted access to any area on the airport controlled for security reasons is appropriate. This background check, to the extent allowable by law, shall include at a minimum references and prior employment histories to the extent necessary to verify representations made by the employee relating to employment in the preceding 5 years.

All equipment, vehicle and personnel travel shall be restricted to designated work sites.

Only vehicles used for construction purposes shall enter the work boundaries. Contractor personnel may, however, be allowed to park their personal vehicles within a designated staging area as shown on the plans. All vehicles shall have identifying markings on them that show that they are authorized on the Airport. All personnel working on the airport shall wear identification such as badges or hard hats with contractor's logo to show that they are authorized on the airport.

All security measures must be coordinated with Airport Management and the RPR and must be approved prior to implementation.

Only Contractor and subcontractor employees are permitted in the work sites. They must enter and exit the airport areas restricted to public access and airport operations area only through the designated Contractor gate. The gate used by the Contractor can remain open during the day if controlled by a contractor's flagger and shall be closed at night.

In the event of an emergency, men and equipment shall be moved immediately at the direction of Airport Management or the RPR.

## **(19) AVIATION SAFETY REQUIREMENTS DURING CONSTRUCTION (AC 150/5370-2G) –**

An Airport Construction Safety and Phasing Plan (CSPP) has been prepared to outline all safety issues related to the proposed construction. This CSPP is included in these specifications as Appendix A. The Contractor will be required to submit all reports designated in the CSPP and implement all safety measures set forth in this plan.

**A. SAFETY PLAN COMPLIANCE DOCUMENT** – Prior to issuance of Notice to Proceed by the Owner, the Contractor shall complete a Safety Plan Compliance Document (SPCD) detailing how he/she will comply with the Construction Safety and Phasing Plan (CSPP). The SPCD should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, “I, Name of Contractor, have read the Title of Project CSPP, approved on Date, and will abide by it as written and with the following additions as noted:”). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, “No supplemental information,” should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP.

This SPCD shall be submitted to the Owner for approval prior to start of construction and shall include the following:

- (1) **Coordination.** Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.
- (2) **Phasing.** Discuss proposed construction schedule elements, including:
  - (a) Duration of each phase.
  - (b) Daily start and finish of construction, including “night only” construction.
  - (c) Duration of construction activities during:
    - (i) Normal runway operations.
    - (ii) Closed runway operations
    - (iii) Modified runway “Aircraft Reference Code” usage.
- (3) **Areas and operations affected by the construction activity.** These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.
- (4) **Protection of NAVAIDs.** Discuss specific methods proposed to protect operating NAVAIDs.
- (5) **Contractor access.** Provide the following:
  - (a) Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).
  - (b) Listing of individuals requiring driver training (for certificated airports and as requested).



- (c) Radio communications.
    - (i) Types of radios and backup capabilities.
    - (ii) Who will be monitoring radios.
    - (iii) Whom to contact if the ATCT cannot reach the contractor's designated person by radio.
  - (d) Details on how the contractor will escort material delivery vehicles.
- (6) **Wildlife management.** Discuss the following:
- (a) Methods and procedures to prevent wildlife attraction.
  - (b) Wildlife reporting procedures.
- (7) **Foreign Object Debris (FOD) management.** Discuss equipment and methods for control of FOD, including construction debris and dust.
- (8) **Hazardous material (HAZMAT) management.** Discuss equipment and methods for responding to hazardous spills.
- (9) **Notification of construction activities.** Provide the following:
- (a) Contractor points of contact.
  - (b) Contractor emergency contact.
  - (c) Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.
  - (d) Batch plant details, including 7460-1 submittal.
- (10) **Inspection requirements.** Discuss daily (or more frequent) inspections and special inspection procedures.
- (11) **Underground utilities.** Discuss proposed methods of identifying and protecting underground utilities.
- (12) **Penalties.** Penalties should be identified in the CSPP and should not require an entry in the SPCD.
- (13) **Special conditions.** Discuss proposed actions for each special condition identified in the CSPP.
- (14) **Runway and taxiway visual aids.** Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:
- (a) Equipment and methods for covering signage and airfield lights.
  - (b) Equipment and methods for temporary closure markings (paint, fabric, other).
  - (c) Types of temporary Visual Guidance Slope Indicators (VGSI).

- (15) **Marking and signs for access routes.** Discuss proposed methods of demarcating access routes for vehicle drivers.
- (16) **Hazard marking and lighting.** Discuss proposed equipment and methods for identifying excavation areas.
- (17) **Protection of runway and taxiway safety areas, including object free areas, obstacle free zones, and approach/departure surfaces.** Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
  - (a) Equipment and methods for maintaining Taxiway Safety Area standards.
  - (b) Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
- (18) Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

## **B. GENERAL SAFETY REQUIREMENTS**

Throughout the construction project, the following safety and operational practices shall be observed:

- Operational safety shall be a standing agenda item during progress meetings throughout the construction project.
- The contractor and airport operator shall perform onsite inspections throughout the project, with immediate remedy of any deficiencies, whether caused by negligence, oversight, or project scope change.
- Airport runways and taxiways remain in use by aircraft to the maximum extent possible
- Aircraft use of areas near the contractor's work will be controlled to minimize disturbance to the contractor's operation.
- Contractor, sub-contractor, and supplier employees or any other unauthorized persons must be restricted from entering or remaining in airport area that would be hazardous.
- Construction that is within the safety area of an active runway, taxiway, or apron that is performed under normal operational conditions must be performed when the runway, taxiway, or apron is closed or restricted and initiated only with prior permission from the airport operator.
- The contracting officer, airport operator, 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.

## **C. CONSTRUCTION MAINTENANCE AND FACILITIES MAINTENANCE**

Before beginning any construction activity, the contractor must, through the airport operator, give notice (using the Notice to Airmen (NOTAM) System) of proposed location, time, and date of commencement of construction. Upon completion of work and return of all such areas to standard conditions, the contractor must, through the

airport operator, verify the cancellation of all notices issued via the NOTAM System. Throughout the duration of the construction project, the contractor must:

- Be aware of and understand the safety problems and hazards described in AC 150/5370-2, *Operational Safety on Airports During Construction*.
- Conduct activities so as not to violate any safety standards contained in AC 150/5370-2 or any of the references therein.
- Inspect all construction and storage areas as often as necessary to be aware of conditions.
- Promptly take all actions necessary to prevent or remedy any unsafe or potentially unsafe conditions as soon as they are discovered.

#### **D. APPROACH CLEARANCE TO RUNWAYS**

Runway thresholds must provide an unobstructed approach surface ratio over equipment and materials.

#### **E. RUNWAY AND TAXIWAY SAFETY AREA (RSA and TSA)**

A runway must be closed/partially closed if construction activity will occur within the RSA. Construction activity within the TSA/obstacle-free zone is permissible when the taxiway is open to aircraft traffic if adequate wingtip clearance exists between the aircraft and equipment/material; excavations, trenches, or other conditions are conspicuously marked and lighted; and local NOTAMs are in effect for the activity.

##### **(1) Procedures for protecting runway edges**

- Limit construction to no closer than 75 feet from the Runway 11-29 centerline or 60 feet from the Runway 2-20 centerline, unless the runway is closed or restricted to aircraft operations requiring lesser standard RSA that is equal to the RSA available during the construction.
- Prevent personnel, material, and/or equipment from penetrating OFZ.
- Coordinate construction activity with the Airport Management, FAA Regional Airports Office, or Airports District Office and through the airport operator issue an appropriate NOTAM.

| Runway | Aircraft Approach Category | Airplane Design Group | RSA Width in Feet Divided by 2 |
|--------|----------------------------|-----------------------|--------------------------------|
| 2-20   | B                          | I                     | 60                             |
| 11-29  | B                          | II                    | 75                             |

##### **(2) Procedure for Protecting Runway ends**

- Maintain the RSA from the runway threshold to a point at least the distance from the runway threshold as existed before construction activity, unless the

runway is closed or restricted to aircraft operations requiring a RSA that is equal to the RSA length available during construction. This may involve the use of declared distances and partial runway closures.

- Ensure all personnel, materials, and/or equipment are clear of the applicable threshold siting criteria surface as defined in Article 3.5, “Runway End Siting Criteria,” of AC 150/5300-13B.
- Prevent personnel, material and/or equipment, from penetrating the Object Free Zone (OFZ).
- Ensure adequate distance for blast protection is provided, as needed.
- Coordinate construction activity with the Airport Management, FAA Regional Division Office, and, through the airport operator, issue an appropriate NOTAM.

| Runway<br>End<br>Number | Airplane<br>Design<br>Group | Aircraft<br>Approach<br>Category | Minimum Safety<br>Area Behind<br>Threshold | Minimum<br>Unobstructed<br>Approach Slope |
|-------------------------|-----------------------------|----------------------------------|--|---|
| 2                       | I                           | B                                | 240 ft.                                    | 20:1                                      |
| 20                      | I                           | B                                | 240 ft.                                    | 20:1                                      |
| 11                      | II                          | B                                | 300 ft.                                    | 20:1                                      |
| 29                      | II                          | B                                | 300 ft.                                    | 20:1                                      |

## **G. CLOSED RUNWAY MARKINGS AND LIGHTING**

No closed runway markings will be required during the construction of this project.

## **H. HAZARDOUS AREA MARKING AND LIGHTING**

Hazardous areas will be marked with barricades as shown on the plans. The markings restrict access and make hazards obvious to aircraft, personnel, and vehicles. During periods of low visibility and at night, identify hazardous areas with suitable lighted barricades with flashing red lights having at least five (5) candelas effective intensity for night marking. The hazardous area marking and lighting shall be supplied by the contractor, and are depicted on the plans. There will be no separate payment for hazardous area marking and lighting.

## **I. VEHICLE OPERATION MARKING AND CONTROL**

- (1) When any vehicle, other than one that has prior approval from the airport operator, must travel over any portion of an aircraft movement area, it shall be escorted and properly identified. To operate in those areas during daylight hours, the vehicle must have a flag or beacon attached to it. Any vehicle operating on the movement areas during hours of darkness or reduced visibility should be equipped with a flashing dome type light, the color of which is in accordance with local or state codes.

- (2) It may be desirable to clearly identify the vehicles for control purposes by either assigned initials or numbers that are prominently displayed on each side of the vehicle. The identification symbols should be a minimum 8-inch, block-type characters of a contrasting color, and easy to read. They may be applied either by using tape or a water-soluble paint to facilitate removal. Magnetic signs are also acceptable. In addition, all vehicles must display identification media as specified in the approved security plan.
- (3) Employee parking shall be as shown on the Construction Layout, Staging, and Safety Plan and designated by the RPR.
- (4) Access to the job site shall be as shown on the Construction Layout, Staging, and Safety Plan and as designated by the RPR.
- (5) All vehicle/equipment operators driving on the airport must have an appropriate level of knowledge of airport rules and regulations. The Contractor will be required to submit a list of authorized vehicle operators to the Airport. The vehicle operators will be required to maintain a current drivers' license. No vehicle will be allowed to cross an active pavement without an escort.
- (6) All vehicle operators will be trained on airport procedures, safety, work area limits, security, and communications. All personnel with movement area driving privileges will be trained on pedestrian and ground vehicle procedures, including consequences of noncompliance, prior to moving on foot, or operating a ground vehicle, in movement areas or safety areas.

## **J. NAVIGATIONAL AIDS**

The Contractor must not conduct any construction activity within navigational aids' restricted areas without prior approval from the Owner. Navigational aids include the non-directional beacons. Such restricted areas are depicted on construction plans.

## **K. LIMITATIONS ON CONSTRUCTION**

Additional limitations on construction shall include:

- (1) Prohibit open-flame welding or torch cutting operations unless adequate fire safety precautions are provided and these operations have been authorized by the RPR.
- (2) Prominently mark open trenches, excavations, and stockpiled materials at the construction site with alternating orange and white flags and light these obstacles during hours of restricted visibility and darkness.
- (3) Marking and lighting of closed, deceptive, and hazardous areas on airports, as appropriate.
- (4) Constrain stockpiled material to prevent its movement as a result of the maximum anticipated aircraft blast and forecast wind conditions.

## **L. RADIO COMMUNICATIONS**

Vehicular traffic located in or crossing an active movement area must have a working two-way radio in contact with the Tower Ground Control on 118.3 MHz - or be escorted

by a flag person (in radio contact with Unicom). The driver, through personal observation, should confirm that no aircraft is approaching the vehicle position. Construction personnel may operate in a movement area without two-way radio communication provided a NOTAM is issued closing the area and that the area is properly marked to prevent incursions. Contractor shall monitor radio on Tower Ground Control frequency 118.3. Continuous monitoring is required.

#### **M. DEBRIS**

Waste and loose material must not be placed in active movement areas. Materials tracked onto these areas must be removed continuously during the work project.

#### **(20) SUBMITTALS AND/OR SHOP DRAWINGS.**

- a) The specifications indicate the desired equipment and materials as to type and quality. Wherever proprietary names are listed in these specifications, it shall be interpreted that the words “or approved equal” follow, unless otherwise specified. The words “or approved equal” shall be interpreted as meaning equal in every respect as determined by the RPR.
- b) Prior to or at the Preconstruction Conference, the Contractor shall submit to the RPR for approval a complete list of all equipment and materials intended to be used on the job. The list shall include the following information for each item.

Name of Item  
FAA Specifications Number (If Any)  
Manufacturer’s Name  
Manufacturer’s Catalog Number  
Size, Type and Rating

- c) Prior to or at the Preconstruction Conference the Contractor shall submit to the RPR for approval the following:

Construction Schedule  
Safety Plan Compliance Document  
Storm Water Pollution Prevention Plan (SWPPP)

The Quality Control Program shall be submitted 10 calendar days before the Quality Control (QC)/Quality Assurance (QA) workshop, as described in Item C-100 of these specifications.

*Construction on this project cannot begin until these submittals have been reviewed and approved.*

- d) Prior to or at the Preconstruction Conference, the Contractor shall submit to the RPR for approval a Schedule of Values for all Lump Sum items included in the contract. This schedule shall include the item, description, total contract amount, and scheduled payment amounts. The schedule shall be made out in such form as the District, RPR,

and Contractor may agree upon and be supported by evidence as to its correctness. This schedule, when approved by the District and the RPR, will be used as the basis for making progress payments on all lump sum items, except for those that have a payment schedule stipulated in their respective specification sections. The Contractor shall take note of the schedules of partial payments that are included in Item C-105, Mobilization and C-106, Marking and Lighting of Closed Airport Facilities.

- e) Within five (5) calendar days after RPR's approval of the equipment and materials list, the Contractor shall submit to the RPR for written approval copies of all shop drawings and all equipment and materials submittals. The shop drawings and equipment/materials submittals shall be complete showing all details.
- f) The Contractor shall review and sign all shop drawings prior to submitting same for RPR's approval. All shop drawings received without the Contractor's signature will be subject to return without review or comment.

It shall be the responsibility of the Contractor to specifically point out any variation or discrepancy between the shop drawings or manufacturers' instructions he submits and the Contract Documents. Failure by the Contractor to identify in his/her letter of transmittal any variation, discrepancy, or conflict with the contract drawings may result in the shop drawing or submittal being returned to the Contractor for resubmittal.

- g) The shop drawings shall show completely the work to be done, but approval by the RPR shall not be construed as waiving any of the requirements of the contract and particularly shall not be construed as relieving the Contractor of full responsibility for fitting his/her equipment in the spaces provided; or from responsibility to fulfill the contract at no extra cost to the Owner, within the completion time.
- h) The Contractor shall submit electronic copies of all shop drawings and equipment and materials submittals. Fax submittals will only be acceptable as preliminary submittals and are to be followed up with electronic copies. Email submittals shall be legible.

## **(21) SUBMITTAL AND SHOP DRAWING APPROVALS**

The RPR will review all submittals and shop drawings and return them to the Contractor. If the Contractor's submittal or shop drawings are incomplete or the product submitted does not meet specification requirements, the RPR will reject the submittal or shop drawing and the Contractor will be required to resubmit. Resubmittals shall address all comments from the RPR. Partial resubmittals may be returned without action. The review of the first submittal and one resubmittal on any item will be made by the RPR at no cost to the Contractor. The Contractor will be charged for and shall reimburse the Owner for the RPR's costs of reviewing the second and each subsequent resubmittal. The RPR's costs will be charged to the Owner and deducted from the Contractor's progress payments.

## **(22) VIDEOTAPING**

A minimum of one (1) week prior to start of construction, the Contractor shall have video taken where construction is to take place. Such video records/documentation shall be provided to the RPR before construction commences. These videos shall be narrated and shall serve as a record of existing conditions for disputes arising from restoration, and should therefore be taken along the line of construction and site access and staging areas at sufficient detail and in color as necessary to clearly depict details of existing conditions. All videos shall be indexed and catalogued in such a manner that each photographed area is readily identifiable, and shall also indicate the date and time (hour, minutes, and seconds) on which the video was made. The Contractor shall also have video taken of any unusual conditions encountered during construction that are not already a matter of photographic record. In any areas where existing conditions cannot be determined by means of video, the area shall be restored as approved by the RPR at Contractor's expense. All video shall become the property of the Owner.

No separate payment will be made for video documentation.

## **(23) CONSTRUCTION MANAGEMENT PLAN**

The Contractor is responsible for all Quality Control (QC) during the construction of this project, including testing and inspection. The Owner is responsible for Quality Assurance (QA) to confirm that all work has been performed in accordance with the plans and specifications. A Construction Management Plan has been prepared and is included in Appendix B of these specifications. This plan outlines how this project will be managed during construction and includes construction management personnel and resumes, inspection procedures and frequencies, submittal process, quality control testing, quality assurance testing, and test result documentation. This plan along with Section C-100 of the FAA General Construction Items shall be used as a guide to the Contractor in preparing Contractor's Quality Control Program for the project.

The Contractor shall present his/her Quality Control Program to the RPR for review and approval. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been approved by the RPR.

For each item of work, the Contractor shall maintain a summary report of all testing and inspection results. This summary report shall tabulate the daily test results for each item of work. The summary reports shall be updated daily and formally submitted to the RPR in electronic format as requested, but not less than once per week.

If these summary reports are not received by the RPR by Monday morning of each week during construction, the work will be shut down and contractor shall not be allowed to proceed with the work until the reports have been submitted.

Simultaneously with the contractor's request for final payment, the Contractor shall submit a Quality Control Report consisting of all testing and inspections conducted during the construction of the project. This report shall be submitted in electronic format. All test results shall be included in a typed summary table to be approved by the RPR. No final payment will be made to the Contractor until this report has been received and approved by the RPR.



## **(24) U.S. DEPARTMENT OF LABOR POSTERS**

U.S. Department of Labor Posters, Form SOL-155 (10-54), together with the applicable minimum wage rates, as determined by the Secretary of Labor for this project, shall be posted in a prominent place at the site of the work. The name of the FAA District Airport Engineer whom workers may contact in the event they have reason for complaint shall be placed in the box in the middle of the poster. Copies of this poster can be obtained from local Labor Department offices.

## **(25) PAYMENTS**

Progress payments shall be made at least once each month as the work progresses. These progress payments shall be based on work accomplished during the previous working month, based on the various contract bid items and the unit bid prices included in the Bid Schedule submitted by the Contractor with his/her bid. In applying for payments, the Contractor shall submit a statement based on this schedule. Payment will be made only for material and work actually incorporated in the work, except as allowed in Article 90-07, Payment for Materials on Hand, of the F.A.A. General Contract Provisions.

## **(26) WITHHOLDING**

Owner shall withhold from each payment due the Contractor five percent (5%) of the amount claimed. This 5% of the payment shall be withheld until final acceptance of the total project is given by the Owner, by the Engineer, and by the FAA. After final acceptance of the project is given and the Contractor has submitted acceptable release of all liens and furnished the Engineer acceptable red-lined drawings showing the "as-built" condition of the completed project, then the Owner shall release for payment the 5% retention. Owner will make such final payment of retention within thirty-five (35) days of final acceptance of the project and submittal of release of liens and red-lined as-built drawings.

Pursuant to Government Code Section 4590, at the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the County or with a state or federally chartered bank as the escrow agent, who shall pay such monies to the Contractor upon satisfactory completion of the contract.

Securities eligible for investment under this section shall include those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit.

The Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

## **(27) WAGE RATES**

All labor on the project shall be paid no less than the minimum wage rates as established by the U.S. Secretary of Labor. Further, pursuant to California Labor Code Section 1770, the California Director of Industrial Relations has specified the general prevailing wage rates for all public projects in California. The wages to be paid to all workers on such projects shall not be less than those specified in such wage rate determination.

The higher of the two rates shall be paid. The prevailing wages that apply to this contract shall be those that are in effect the day of the bid plus any predetermined increases per DIR.

The wage rates specified by the U.S. Secretary of Labor are included in the Federal Provisions and are available online at <https://wdolhome.sam.gov>

## **(28) CONTRACTOR'S RECORD DRAWINGS**

The Owner shall provide the Contractor with one extra set of working plans and specifications, which Contractor shall keep at the site of the work at all times. The following information shall be inserted and dimensioned on said drawings and specifications, in RED by the Contractor: The exact location of all installations in their finished condition, including all electrical installations; all changes in construction, materials and installed equipment; adequate dimensional data, both horizontal and vertical, to allow location of covered installations; the identification of changes authorized by change order, and the number of that change order. Upon completion of the work, said drawings and specifications shall be returned to the Design Engineer prior to the final payment.

Drawings shall be subject to the inspection of the RPR at all times and shall be kept current weekly with all work instructions, change orders, and construction adjustments shown thereon and initialed by the Inspector.

Progress payments or portions thereof may be withheld if drawings are not maintained as stated above. At the final inspection the Contractor shall submit record drawings to the RPR for review and comment. The work will not be formally accepted until the record drawings are accepted by the RPR.

Prior to release of retainage by the Owner, the Contractor shall deliver to the RPR the Contractor's set of marked-up drawings as identified above for the RPR's use in preparing the project record drawings.

## **(29) OPERATION AND MAINTENANCE MANUALS**

For use in subsequent maintenance and operations, the Contractor shall furnish two (2) bound and indexed copies and an electronic .pdf file of maintenance and operation information supplied by the manufacturer covering all equipment and systems included in the contract. The submittal shall include, but not be limited to:

- Approved Equipment Submitted for the Project
- Drawings
- Illustrations
- Parts Lists
- Wiring Diagrams of Systems
- Internal Wiring Diagrams and Circuit Board Schematics and Layout
- Drawings
- Manufacturer's Recommended Spare Parts List
- Name, Address and Phone Number of Nearest Parts and Service Agency

Systems Balance Data  
Maintenance and Service Instructions, Including Recommended  
Lubrication  
Operation Instructions  
Software, Including Annotated Source Lists and Programs

This submittal is required for all mechanical, electrical, instrumentation, control, communications, sound, control or special equipment and systems. The Contractor shall submit the required data for review at least thirty (30) days prior to the final inspection date. Corrections, additions, and/or resubmittal of data shall be made as directed by the RPR.

The RPR, and other persons as he may designate, shall receive complete maintenance and operating instructions for all items included above prior to final inspection of the project.

### **(30) ANTI-TRUST ASSIGNMENT**

By execution of the Contract Documents, or any subcontract awarded by the Contractor, the Contractor or any subcontractor offers and agrees to assign and hereby does assign to the Owner all rights, title, and interest in and to all causes of action such Contractor or subcontractor may have under Section 4 of the Clayton Act (15 USC Section 15) or under the Cartright Act (Chapter 2 of Part 2 of Division 7 of the Business and Professions Code, commencing with Section 16700), arising from purchases of goods, services, or materials pursuant to this public works contract or subcontract. This assignment shall be made and shall become effective upon execution of the contract.

### **(31) CONTRACTOR NOT AGENT, NOR EMPLOYEE**

Neither the Contractor nor any subcontractor, or any officer, agent, or employee of either, is, nor shall they represent themselves to be, an officer, agent, or employee of the Owner for any purpose whatsoever.

No person employed by the Contractor, or by any subcontractors, are, nor shall they be construed to be, in any manner or for any purpose whatsoever, employees of the Owner.

### **(32) CONTRACTOR'S GUARANTEE**

The Owner shall not, in any way or manner, be answerable or suffer loss, damage, expense or liability for any loss or damage that may happen to any building, work or equipment or any part thereof, or in, on, or about the same during its construction and before acceptance. Contractor unqualifiedly guarantees the first-class quality of all workmanship and of all materials, apparatus and equipment used or installed by him or by any subcontractor or supplier in the project which is the subject of this Contract, unless a lesser quality is expressly authorized in the Plans and Specifications, in which event Contractor shall conform with the Plans and Specifications or any written authorized deviation there from. In case of any defect in work, materials, apparatus or equipment, whether latent or patent, revealed to Owner within one (1) year of the date of acceptance of completion of this Contract by the Owner, the Contractor shall forthwith remedy such defect or defects without cost to the Owner.

Contractor shall and does hereby guarantee all workmanship and materials for a period of one year, except as otherwise required in the Contract for a longer period, from and after the date of acceptance of the Work and recordation of Notice of Completion by Owner and shall repair or replace any or all workmanship and materials, together with any other work which may be displaced in so doing, that, in the opinion of the Owner, is or becomes defective during the period of said guarantee without expense whatsoever to Owner. For purposes of the Contract the date of acceptance shall be the date of the resolution of the Governing Body of Owner accepting the Work; provided, however, that as to all items of the Work which are incomplete upon the date of said resolution, the date of acceptance shall be the date of final payment under this Contract.

Guarantees in the form of written warranty shall be supplied on the Contractor's own letterhead as follows:

WARRANTY FOR \_\_\_\_\_

We hereby warrant that the \_\_\_\_\_ has been provided in accordance with the drawings and specifications and that the work as installed will fulfill the requirements of the warranty included in the specifications. We agree to repair or replace any or all of the work together with any other adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or materials for the period of one year from date of acceptance of the above mentioned structure by the Owner, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of our failure to comply with the above-mentioned conditions within seven (7) days after being notified in writing us, collectively or separately, do hereby authorize the Owner to proceed to have said defects repaired and made good at our expense, and we will honor and pay the cost and charges therefore on demand.

Signed: \_\_\_\_\_  
Contractor

### **(33) SURETY COMPANY BOND**

Contractor shall give, in addition to the bonds elsewhere required by the Contract Documents, an approved Surety Company Bond equal to five percent (5%) of the total amount of the Contract which shall hold good for a period of one year after the completion and acceptance of the Work, to protect the Owner against result of faulty material or workmanship during that time.

### **(34) EXISTING CONDITIONS**

Test borings and test pits have been excavated at various locations on the airport only and the results of these tests are available for inspection from the Owner and/or the Design Engineer. These borings show the conditions prior to the start of any construction on the airport property. The Owner and Engineer assume no responsibility for the accuracy of the data presented. The contractor shall be responsible for obtaining and verifying any and all soils and subsoil data required to prepare his bid.

The Contractor shall be fully responsible for handling any water or water-related problems that may arise during the construction of this project without additional compensation over and above that provided for in the unit prices bid.

### **(35) COORDINATION MEETING**

In order to coordinate the work, a weekly meeting will be held at Truckee Tahoe Airport District, located at 10356 Truckee Airport Road, Truckee, CA 96161.

The time of this meeting will be determined at a time convenient to the Owner, RPR and Contractor. The Contractor's superintendent must attend these meetings.

At this weekly meeting the Contractor shall submit in writing an updated progress report for the total work and a schedule defining the work for the following week. Except for emergencies or unforeseen circumstances, this schedule shall be followed.

### **(36) TESTING AND ACCEPTANCE OF MATERIALS**

All materials in which quality of the product such as gradation, Atterberg Limits, sand equivalent, CBR, etc., is specified, shall meet those specifications when in the final as-compacted condition and not the condition at the stockpile or source of supply. The Project RPR will verify that proper compaction of the fill has been achieved. Any deviation from these requirements shall be corrected by removal and replacement with materials that conform to the specifications. When the materials removed are screened and/or blended and reincorporated in the work, the materials as placed shall meet all specification requirements. It shall be the contractor's responsibility to coordinate his/her materials, production and construction procedures so that the final compacted product is acceptable.

### **(37) DETERMINATION OF IN-PLACE DENSITY**

Where the determination of in-place dry density for soil or aggregate materials is required, the Owner may determine the in-place density by the use of Nuclear Testing equipment or by the Sand Cone Method.

This testing for density and for determination of moisture content shall conform to ASTM Designation D 6938, "In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods or ASTM Designation D 1556, "Test for Density of Soil In Place by the Sand Cone Method".

In case of dispute in determination of the in-place dry density, the dry density as determined in accordance with ASTM Designation D 1556, "Test for Density of Soil In Place by the Sand Cone Method," shall govern.

### **(38) PROJECT CLOSEOUT**

The retention payment shall not be due and payable until the expiration of thirty-five (35) days from the filing and recording of the Notice of Completion of the work. The amount deducted from the final estimate and retained by the owner will be paid to the Contractor, except such

amounts as are required to be withheld by properly executed and filed notices to stop payment, or as may be authorized by the Contract.

The Contractor, Subcontractors, Materialmen, and Service Providers shall submit a **Conditional** Full Release of All Claims and Waiver Lien on the following form at such time as he completes their respective work on the project prior to the Owner recording the Notice of Completion.

The Subcontractors, Materialmen, and Service Providers shall submit an **Unconditional** Full Release of All Claims and Waiver Lien on the following form at such time as he receives final payment from the Contractor prior to the Contractor receiving final payment in the form of release of retention.

The Contractor shall complete the Construction Project and Punch List items to the satisfaction of the Owner prior to the Owner issuing the Notice of Completion which will be recorded with the County Clerk. Thirty-five Days after the Notice of Completion is recorded and no claims are received; the Owner will release all retention to the Contractor. The Contractor shall submit an **Unconditional** Full Release of All Claims and Waiver Lien on the following form at such time as he receives final payment from the Owner.

In addition to the above, Contractor shall submit the documents listed in Article 90-11 of the General Provisions prior to receiving final payment in the form of release of retention.

## FINAL PAYMENT

Upon receipt by the undersigned of a check from \_\_\_\_\_  
(General Contractor)

in the sum of \$\_\_\_\_\_ payable to \_\_\_\_\_  
(Subcontractor, Materialmen, Service Provider)

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of **Reconstruct Apron A2** located at the **Truckee Tahoe Airport**.

This release covers the final payment to the undersigned for all labor, services, equipment, or material furnished on the job, except for disputed claims for additional work in the amount of \$\_\_\_\_\_.

Before any recipient of this document relies on it, the party should verify evidence of payment to the undersigned.

Dated: \_\_\_\_\_  
(Company Name)

By: \_\_\_\_\_  
(Title)

*Note: This release is in accordance with the California Civil Code Section 3262 (d) (3)*

**UNCONDITIONAL WAIVER AND RELEASE UPON  
FINAL PAYMENT**

The undersigned has been paid in full for all labor, services, equipment, or material furnished to

\_\_\_\_\_  
(Owner)

**Reconstruct Apron A2** located at the **Truckee Tahoe Airport** and does hereby waive and release any right to a mechanic's lien, stop notice, or any right against a labor and material bond on the job, excerpt for disputed claims for additional work in the amount of \$\_\_\_\_\_.

Dated:\_\_\_\_\_

\_\_\_\_\_  
(Company Name)

By:\_\_\_\_\_  
(Title)

Each unconditional waiver in this provision shall contain the following language, in at least as large a type as the largest type otherwise on the document:

**“NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.”**

*Note: This release is in accordance with the California Civil Code Section 3262 (d) (4)*

**\*\* END OF SECTION \*\***



Page Intentionally Left Blank

*PART C*

*TECHNICAL PROVISIONS*

**PART C**  
**TECHNICAL PROVISIONS**  
**ADVISORY CIRCULAR 150/5370-10H**

**TABLE OF CONTENTS**

| <u>Item No.</u> | <u>Title</u>   | <u>Page No.</u> |
|-----------------|--|-----------------|
| P-152           | Excavation, Subgrade, and Embankment .....   | P-152-1         |
| P-154           | Subbase Course .....   | P-154-1         |
| P-207           | In-place Full Depth Reclamation (FDR) Recycled Asphalt –<br>Aggregate Subbase Course ..... | P-207-1         |
| P-209           | Crushed Aggregate Base Course .....  | P-209-1         |
| P-401           | Asphalt Mix Pavement.....  | P-401-1         |
| P-602           | Emulsified Asphalt Prime Coat .....  | P-602-1         |
| P-603           | Emulsified Asphalt Tack Coat .....   | P-603-1         |
| P-605           | Joint Sealants for Pavements.....  | P-605-1         |
| P-610           | Concrete for Miscellaneous Structures .....  | P-610-1         |
| P-620           | Runway and Taxiway Marking .....   | P-620-1         |
| D-701           | Pipe for Storm Drains and Culverts.....  | D-701-1         |
| D-751           | Manholes, Catch Basins, Inlets, and Inspection Holes.....                                  | D-751-1         |
| L-110           | Airport Underground Electrical Duct Banks and Conduits.....                                | L-110-1         |
| L-115           | Electrical Manholes and Junction Structures.....   | L-115-1         |
| L-125           | Installation of Airport Lighting Systems .....   | L-125-1         |
| M-100           | Mechanical Snow Melt System .....  | M-100-1         |

## 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, which is not otherwise classified and paid for under one of the following items .

**b. Muck excavation.** Muck excavation shall consist of the removal and disposal of deposits or mixtures of soils and organic matter not suitable for foundation material. Muck shall include materials that will decay or produce subsidence in the embankment. It may consist of decaying stumps, roots, logs, humus, or other material not satisfactory for incorporation in the embankment.

**152-1.3 Unsuitable excavation.** Unsuitable material shall be disposed in designated waste areas as shown on the plans. Materials 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 on the embankment slope when approved by the RPR.

### CONSTRUCTION METHODS

**152-2.1 General.** Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed.

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, 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.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches, to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches in their greatest dimension will not be permitted in the top 6 inches of the subgrade.

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 RPR, who shall arrange for their removal if necessary. The Contractor, at their own 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.

**a. Blasting.** Blasting shall not be allowed.

**152-2.2 Excavation.** No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Digital terrain model (DTM) files of the existing surfaces, finished surfaces, and other various surfaces were used to develop the design plans.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot of the stated elevations for ground surfaces, or within 0.04 foot for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least two weeks before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

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 RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of off-site.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be disposed of off-site or as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

**a. Selective grading.** When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

**b. Undercutting.** Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified.

Unsuitable materials shall be disposed of off the airport. Any cost associated with hauling and disposal of materials shall be considered incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard for Muck Excavation. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation.

**c. Over-break.** Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

**d. Removal of utilities.** The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

**152-2.3 Borrow excavation.** Borrow areas are not required.

**152-2.4 Drainage excavation.** Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

**152-2.5 Preparation of cut areas or areas where existing pavement has been removed.** In those areas on which a subbase or base course is to be placed, the top 6 inches of subgrade shall be compacted to not less than 95% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D 1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

**152-2.6 Preparation of embankment area.** 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 and shall then be compacted per paragraph 152-2.10.

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 and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

**152-2.7 Control Strip.** The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor's demonstration

that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

**152-2.8 Formation of embankments.** The material shall be constructed in lifts as established in the control strip, but not less than 6 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within  $\pm 2\%$  of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D 1557. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every 500 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow the methods in ASTM D1557 for correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D 1557. Under all areas to be paved, the embankments shall be compacted to a depth of 6 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

The in-place field density shall be determined in accordance with ASTM D1556 or ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance. If the specified density is not attained, the area represented by

the test or as designated by the RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches in their greatest dimensions will not be allowed in the top 12 inches of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet below the finished subgrade.

There will be no separate measurement of payment for compacted embankment created from excavated materials. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

**152-2.9 Proof rolling.** The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a fully loaded water truck in the presence of the RPR. Apply a minimum of 3 coverages, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch or show permanent deformation greater than 1 inch shall be removed to depth designated on the plans or by the RPR (muck excavation), a geogrid placed at the bottom of the muck excavation and backfilled with Subbase Course (P-207 or P-154) to subgrade level or reworked to conform to the moisture content and compaction requirements in accordance with these specifications as directed by the RPR. Removal and replacement of soft areas is paid for under muck excavation (P-152), geogrid (P-154) and subbase course (P-207 or P-154). Proof rolling shall be considered incidental to this item.

**152-2.10 Compaction requirements.** The subgrade under areas to be paved shall be compacted to a depth of 6 inches and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D1557. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 6 inches and to a density of not less than 90 percent of the maximum density as determined by ASTM D1557.

The material to be compacted shall be within  $\pm 2\%$  of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the  $\frac{3}{4}$  inch (19.0 mm) sieve, follow the methods in ASTM D1557. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.



The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

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.

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 RPR and the finished subgrade shall be maintained.

**152-2.11 Finishing and protection of subgrade.** Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

**152-2.12 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 repaired at the Contractor's expense.

The 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.

**152-2.13 Surface Tolerances.** In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

- a. **Smoothness.** The finished surface shall not vary more than  $\pm 1/2$  inch when tested with a 12-foot straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-foot (15-m) grid.
- b. **Grade.** The grade and crown shall be measured on a 50-foot grid and shall be within  $\pm 0.05$  feet of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to be placed, grade shall not vary more than 0.10 feet from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

**152-2.14 Topsoil.** Not applicable.

### **METHOD OF MEASUREMENT**

**152-3.1** Measurement for payment specified by the cubic yard shall be computed by the average end areas of design cross sections. The end area is that bound by the original ground line established by field cross-sections and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

**152-3.2** The quantity of Unclassified and Muck Excavation to be paid for shall be the number of cubic yards measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

**152-3.3** The quantity of scarify and recompact subgrade shall be the number of square yards of subgrade scarified and recompact.

**152-3.4** Measurement for the Removal of Slot drain shall be lump sum. No separate payment shall be made. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 152-2.2(d).

### **BASIS OF PAYMENT**

**152-4.1** Unclassified excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

**152-4.2** Muck excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

**152-4.3** For scarify and recompact subgrade, payment shall be made at the contract unit price per square yard of subgrade scarified and recompact. This price shall be full compensation for furnishing all materials, labor, equipment, tool, water, and incidentals necessary to complete this item.

**152-4.4** Payment shall be made at the contract lump sum bid price for the removal of the slot drain. This price shall be full compensation for all demolition, removal, hauling, and disposal off-site as necessary to complete this item. The removal of the slot drain shall include demolition and removal of an existing slot drain, including the drain, grates, inlets, surrounding concrete, reinforcing steel, and all associated materials. All removed materials shall be hauled and disposed of off-site.

Payment will be made under:

|                |  |
|----------------|--|
| Item P-152-4.1 | Unclassified Excavation - per cubic yard         |
| Item P-152-4.2 | Muck Excavation - per cubic yard                 |
| Item P-152-4.3 | Scarify and Recompact Subgrade – per square yard |
| Item P-152-4.4 | Removal of Slot Drain – Lump Sum                 |

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### American Association of State Highway and Transportation Officials (AASHTO)

|              |   |
|--------------|---|
| AASHTO T-180 | Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop |
|--------------|---|

### ASTM International (ASTM)

|            |   |
|------------|---|
| ASTM D698  | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft <sup>3</sup> (600 kN-m/m <sup>3</sup> ))  |
| 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 <sup>3</sup> (2700 kN-m/m <sup>3</sup> )) |
| ASTM D6938 | Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)                                |

### Advisory Circulars (AC)

|               |   |
|---------------|---|
| AC 150/5370-2 | Operational Safety on Airports During Construction Software |
|---------------|---|

### Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

### U.S. Department of Transportation

|              |   |
|--------------|---|
| FAA RD-76-66 | Design and Construction of Airport Pavements on Expansive Soils |
|--------------|---|

**END OF ITEM P-152**

## Item P-154 Subbase Course

### DESCRIPTION

**154-1.1** This item shall consist of a subbase course composed of granular materials constructed on a prepared subgrade or underlying course in accordance with these specifications, and in conformity with the dimensions and typical cross-section shown on the plans.

### MATERIALS

**154-2.1 Materials.** The subbase material shall consist of hard durable particles or fragments of granular aggregates and/or recycled asphalt pavement (RAP). The material may be obtained from gravel pits, stockpiles, or may be produced from a crushing and screening plant with proper blending. The materials from these sources shall meet the requirements for gradation, quality, and consistency. The material shall be free from vegetative matter, excessive amounts of clay, and other objectionable substances; uniformly blended; and be capable of being compacted into a dense, stable subbase.

The subbase material shall exhibit a California Bearing Ratio (CBR) value of at least 35 when tested in accordance with ASTM D1883. The subbase material shall meet the gradation specified in the table below.

**Subbase Gradation Requirements**

| Sieve designation    | Percentage by weight passing sieves |                                | Contractor's Final Gradation | Job Control Grading Band Tolerances <sup>1</sup> (Percent) |
|----------------------|-------------------------------------|--------------------------------|------------------------------|--|
|                      | Subbase Aggregate                   | Recycled pavement (RAP or RCO) |                              |  |
| 1 1/2 inch (37.5 mm) | 100                                 | 100                            |                              | 0  |
| 3/4 inch (19.0 mm)   | 70-100                              | 70-100                         |                              | ±10  |
| No. 10 (2.00 mm)     | 20-100                              | 20-100                         |                              | ±10  |
| No. 40 (425 µm)      | 5-60                                | 5-60                           |                              | ±5   |
| No. 200 (75 µm)      | 0-5                                 | 0-5                            |                              | ±5   |
| No. 635 (0.02 mm)    | 0-3                                 | 0-3                            |                              | ±0   |

<sup>1</sup>The "Job Control Grading Band Tolerances" shall be applied to "Contractor's Final Gradation" to establish the job control grading band.

The portion of the material passing the No. 40 (425 µm) sieve shall have a liquid limit of not more than 25 and a plasticity index of not more than six (6) when tested in accordance with ASTM D4318.

The material finer than 0.02 mm shall be limited to a maximum of 3% (0 grading band tolerances). Testing per AASHTO T88 will be required for the percentage passing the 0.02 mm particle size once per lot.

#### **154-2.2 Sampling and testing.**

**a. Aggregate subbase materials.** Samples shall be taken by the Contractor per ASTM D75 for initial aggregate subbase requirements and gradation. Material shall meet the requirements in paragraphs 154-2.1. The Contractor shall submit to the Resident Project Representative (RPR) certified test results showing that the aggregate meets the Material requirements of this section. Tests shall be representative of the material to be used for the project.

**b. Gradation requirements.** The Contractor shall take at least two aggregate subbase samples per day in the presence of the RPR to check the final gradation. Samples shall be taken from the in-place, un-compacted material at sampling locations determined by the RPR on a random basis per ASTM D3665. Sampling shall be per ASTM D75 and tested per ASTM C136 and ASTM C117. Results shall be furnished to the RPR by the Contractor each day during construction. Material shall meet the requirements in paragraph 154-2.1.

#### **154-2.3 Separation Geotextile.** Not used.

**154-2.4 Geogrid.** Geogrid shall be InterAx NX650 geogrid as manufactured by Tensar International, or approved equal. The geogrid shall be placed on the bottom of the subexcavation made for unstable subgrades if required and shall be continuous over the length of the excavation. Each geogrid section shall overlap the adjoining section by a minimum of six inches (6”).

### **CONSTRUCTION METHODS**

**154-3.1 General.** The subbase course shall be placed where designated on the plans or as directed by the RPR. The material shall be shaped and thoroughly compacted within the tolerances specified.

Granular subbases which, due to grain sizes or shapes, are not sufficiently stable to support the construction equipment without movement, shall be mechanically modified to the depth necessary to provide stability as directed by the RPR. The mechanical modification shall include the addition of a fine-grained medium to bind the particles of the subbase material sufficiently to furnish a bearing strength, so the course will not deform under construction equipment traffic.

**154-3.2 Preparing underlying course.** Prior to constructing the subbase course, clean the underlying course or subgrade of all foreign substances. The surface of the underlying course or subgrade shall meet specified compaction and surface tolerances in accordance with Item P-152. Correct ruts, soft yielding spots in the underlying courses, and subgrade areas having inadequate compaction and/or deviations of the surface from the specified requirements, by loosening and removing soft or unsatisfactory material, adding approved material, reshaping to line and grade, and recompact to specified density requirements. For cohesionless underlying courses or subgrades containing sands or gravels, as defined in ASTM D2487, the surface shall be stabilized prior to placement of the overlying course by mixing the overlying course material into the underlying course, and compacting by approved methods. The stabilized material shall be considered as part of the underlying course and shall meet all requirements for the underlying course. The finished underlying course shall not be disturbed by traffic or other operations and shall be maintained in a satisfactory condition until the overlying course is placed. The underlying course shall be checked and accepted by the RPR before placing and spreading operations are started.

To protect the subgrade and to ensure proper drainage, spreading of the subbase shall begin along the centerline of the pavement on a crowned section or on the high side of pavements with a one-way slope.

**154-3.3 Control Strip.** The first half-day of subbase construction shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

**154-3.4 Placement.** The material shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted. The material shall not be placed when the underlying course is soft or yielding.

The material shall meet gradation and moisture requirements prior to compaction. Material may be free-draining and the minimum moisture content shall be established for placement and compaction of the material.

The material shall be constructed in lifts as established in the control strip, but not less than 4 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

**154-3.5 Compaction.** The subbase material shall be compacted, adjusting moisture as necessary, to be within  $\pm 2\%$  of optimum moisture. The field density of the compacted material shall be at least 98% of the maximum density as specified in paragraph 154-3.9a. If the specified density is not attained, the area of the lift represented by the test shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

**154-3.6 Weather limitation.** Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on subbase course shall not be conducted when the subgrade is wet or frozen or the subbase material contains frozen material.

**154-3.7 Maintenance.** No base or surface course shall be placed on the subbase until the subbase has been accepted by the RPR. The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, the Contractor shall verify that materials still meet all specification requirements before placement of additional material. Equipment may be routed over completed sections of subbase course, provided the equipment does not damage the subbase course and the equipment is routed over the full width of the completed subbase course. Any damage to the subbase course from routing equipment over the subbase course shall be repaired by the Contractor at their expense.

**154-3.8 Surface tolerance.** In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and

approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

**a. Smoothness.** The finished surface shall not vary more than  $\pm 1/2$  inch when tested with a 12-foot straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-foot grid.

**b. Grade.** The grade and crown shall be measured on a 50-foot grid and shall be within  $\pm 0.05$  feet of the specified grade.

**154-3.9 Acceptance sampling and testing.** The aggregate base course shall be accepted for density and thickness on an area basis. Two test shall be made for density and thickness for each 500 square yards. Sampling locations will be determined on a random basis per ASTM D3665.

**a. Density.** The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance.

Each area shall be accepted for density when the field density is at least 98% of the maximum density of laboratory specimens compacted and tested per ASTM D1557. The in-place field density shall be determined per ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the area represented by the failed test shall be reworked and/or recompact and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

When the material has greater than 30 percent retained on the  $3/4$  inch sieve, use methods in ASTM D1557 for correction of maximum dry density and optimum moisture for oversized particles.

**b. Thickness.** The thickness of the base course shall be within  $+0$  and  $-1/2$  inch of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. At the contractor's option, thickness verification may be completed by survey of the top and bottom of the material placed using a grid with 50' section intervals. Where the thickness is deficient by more than  $1/2$ -inch, the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches, adding new material of proper gradation, and the material shall be blended and recompact to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

## METHOD OF MEASUREMENT

**154-4.1** Subbase course shall be measured by the number of cubic yards of subbase course material placed and compacted to specified density and plan thickness requirements in the completed course. The quantity of subbase course material shall be measured in final position based upon contractor's survey in the presence of the RPR of the completed work computed from elevations to the nearest 0.01 foot. On individual/surveyed depth measurements, thicknesses more than  $1/2$  inch in excess of that shown on the plans shall be considered as the specified thickness plus  $1/2$  inch in computing the yardage for payment. Subbase materials shall not be included in any other excavation quantities.

**154-4.3** Geogrid shall be measured by the number of square yards of materials placed and accepted by the RPR as complying with the plans and specifications excluding seam overlaps and edge anchoring.

### **BASIS OF PAYMENT**

**154-5.1** Payment shall be made at the contract unit price per cubic yard for subbase course. This price shall be full compensation for furnishing all materials; for all preparation, hauling, and placing of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

**154-5.3** Payment shall be made at the contract unit price per square yard for geogrid. The price shall be full compensation for furnishing all labor, equipment, material, anchors, and necessary incidentals to complete the item.

Payment will be made under:

|                |                |                   |
|----------------|----------------|-------------------|
| Item P-154-5.1 | Subbase Course | - per cubic yard  |
| Item P-154-5.3 | Geogrid        | - per square yard |



## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |  |
|------------|--|
| ASTM C117  | Standard Test Method for Materials Finer than 75- $\mu\text{m}$ (No. 200) Sieve in Mineral Aggregates by Washing   |
| ASTM C136  | Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates  |
| ASTM D75   | Standard Practice for Sampling Aggregates  |
| ASTM D698  | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft <sup>3</sup> (600 kN-m/m <sup>3</sup> ))   |
| 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 <sup>3</sup> (2,700 kN-m/m <sup>3</sup> )) |
| ASTM D2487 | Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)  |
| ASTM D4253 | Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table   |
| ASTM D4759 | Practice for Determining the Specification Conformance of Geosynthetics  |
| ASTM D4318 | Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils   |
| ASTM D6938 | Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)                                  |

### American Association of State Highway and Transportation Officials (AASHTO)

|       |   |
|-------|---|
| M 288 | Geotextile Specification for Highway Applications |
|-------|---|

**END OF ITEM P-154**

**Item P-207 In-place Full Depth Reclamation (FDR) Recycled Asphalt  
Aggregate Subbase Course**

**DESCRIPTION**

**207-1.1** This item consists of a recycled asphalt aggregate subbase course resulting from the in-place full depth reclamation (FDR) of the existing pavement section (asphalt wearing surface and aggregate base).

**MATERIALS**

**207-2.1 Aggregate.** The FDR shall consist of materials produced by recycling (pulverizing and mixing) the existing asphalt pavement, aggregate base. Material larger than 2 inches in any dimension shall not be permitted in the recycle asphalt aggregate subbase course.

The FDR shall meet the gradation in the table below.

**FDR Gradation**

| <b>Sieve</b>     | <b>Minimum Percentage by weight<br/>passing sieves</b> |
|------------------|--|
| 2 inch (51 mm)   | 100  |
| 3/4" inch (19mm) | 80-100   |
| No. 4 (4.75 mm)  | 20-60  |
| No. 50           | 10-40  |
| No. 200 (75 µm)  | 0-10   |
| 0.02 mm          | 0-3  |

**a. Deleterious substances.** Materials for aggregate subbase shall be kept free from weeds, sticks, grass, roots and other foreign matter.

**b. Uniformity.** The materials shall be thoroughly recycled (pulverized and mixed) to ensure a uniform gradation.

**c. CBR.** The FDR Subbase Course shall have a California Bearing Ratio (CBR) value of at least 35 at 0.1 inch to 0.5 inch penetration inclusive at 100% of maximum dry density as determined by ASTM D1557, Method D when tested in accordance with ASTM D1883.

**207-2.2 Stabilization.** Not applicable.

**207-2.3 Water.** Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

**207-2.4 Quality Control (QC) Sampling and testing.** The Contractor shall take at least two FDR samples per day of production in the presence of the Resident Project Representative (RPR) to check the gradation. Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 207-2.1. Samples shall be taken from the in-place, un-compacted material at random sampling locations per ASTM D3665.

**CONSTRUCTION METHODS**

**207-3.1 Milling.** Milling is not required.

**207-3.2 Control Strip.** The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

**207-3.3 Recycling (Pulverization and mixing).** The asphalt pavement shall be saw cut full depth at the perimeter of the area to be recycled as indicated on the plans. The asphalt pavement and aggregate base shall be recycled (pulverized and mixed) into a uniformly blended mixture with water to the depth indicated on the plans. All material over approximately 2 inches (50 mm) shall be removed by the Contractor. The mixture shall be brought to the desired moisture content.

The maximum lift thickness of the recycled aggregate subbase course material to be compacted shall be 8 inches.

**207-3.4 Grading and compaction.** Immediately upon completion of recycling (pulverization and mixing), the material shall be excavated, hauled, temporarily stockpiled if necessary, placed, shaped and/or graded in accordance with the project plans. The recycled asphalt aggregate subbase course shall be compacted within the same day to an in-place density of 98% as determined by ASTM D1557. The moisture content of the material during compaction shall be within  $\pm 2\%$  of the optimum moisture content as determined by ASTM D2216. The number, type and weight of rollers shall be sufficient to compact the material to the required density. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

**207-3.5 Finishing.** The surface of the aggregate subbase course shall be finished by blading or with automated equipment designed for this purpose. If the top layer is 1/2 inch or more below grade, the top layer shall be scarified to a depth of at least 3 inches, new material added, and the layer blended and re-compacted to bring it to grade. The addition of layers less than 3 inches shall not be allowed.

**207-3.6 Proof rolling.** Compacted asphalt aggregate subbase course shall be proof rolled with a fully loaded water truck in the presence of the RPR. Soft areas that deflect greater than 0.5 inch or show permanent deformation greater than 0.5 inch shall be removed and reworked at the Contractor's expense unless soft areas are a result of soft subgrade material as determined by the RPR. If soft areas are a result of soft subgrade material, they shall be removed and reworked in accordance with P-152.

**207-3.7 Weather limitations.** When weather conditions detrimentally affect the construction process and/or quality of the materials, the Contractor shall stop construction. Cement or fly ash shall not be applied when wind conditions affect the distribution of the materials. When the aggregates contain frozen materials or when the underlying course is frozen or wet, the construction shall be stopped. Construction shall not be performed unless the atmospheric temperature is above 35°F (2°C) and rising or approved by the RPR. When the temperature falls below 35°F (2°C), protect all completed areas against detrimental effects of freezing by approved methods. Correct completed areas damaged by freezing, rainfall, or other weather conditions to meet specified requirements.

**207-3.8 Maintenance.** The asphalt aggregate subbase course shall be maintained in a satisfactory condition until the work is accepted by the RPR. Equipment used in the construction of an adjoining section may be routed over completed sections of asphalt aggregate subbase course, provided that no damage results and equipment is routed over the full width of the completed asphalt aggregate subbase course. Any damage to the recycled asphalt aggregate subbase course shall be repaired by the Contractor at the Contractor's expense.

**207-3.9 Surface tolerances.** The finished surface shall be tested for smoothness and accuracy of grade. Any area failing smoothness or grade shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted by the Contractor at the Contractor's expense.

**a. Smoothness.** The finished surface shall not vary more than 3/8-inch (9 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

**b. Grade.** The grade shall be measured on a 50-foot (15-m) grid and shall be within +0 and -1/2 inch (12 mm) of the specified grade.

**207-3.10 Acceptance sampling and testing for density.** FDR subbase course shall be accepted for density and thickness on an area basis. One (1) test for density and thickness will be made for each 500 square yds. Sampling locations will be determined on a random basis in accordance with ASTM D3665.

**a. Density.** The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance.

Each area will be accepted for density when the field density is at least 98% of the maximum density of the FDR subbase course in accordance with ASTM D1557. The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the area represented by the failed test must be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

**b. Thickness.** The thickness of the subbase course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material, and recompacted to grade. The Contractor shall replace, at his expense, subbase material where depth tests have been taken.

## **METHOD OF MEASUREMENT**

**207-4.1** The quantity of FDR Asphalt Aggregate Subbase Course – Pulverize, Mix, Excavate, Stockpile, Haul, Place and Compact shall be measured by the number of cubic yards of material in the final compacted position in compliance with the plans and specifications. The quantity of Asphalt Aggregate Subbase Course material shall be measured in final position based upon contractor's survey in the presence of the RPR of the completed work computed from elevations to the nearest 0.01 foot. Subbase materials shall not be included in any other excavation quantities.

## **BASIS OF PAYMENT**

**207-5.1** Payment shall be made for In-place Full Depth Recycled (FDR) Asphalt Aggregate Subbase Course – Pulverize, Mix, Excavate, Stockpile, Haul, Place, and Compact, at the contract unit price per cubic yard for pulverizing and mixing the existing asphalt pavement with the existing aggregate base course to a depth of 8-inches (or as shown on the plans), excavating, hauling, temporary stockpiling if necessary, placing, spreading, compacting, and maintaining the FDR materials to the compacted thickness as indicated on the

drawings. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment, tools and incidentals to complete the item.

Payment will be made under:

|               |  |
|---------------|--|
| Item P207-5.1 | In-place Full Depth Recycled (FDR) Asphalt Aggregate Subbase Course<br>– Pulverize, Mix, Excavate, Stockpile, Haul, Place, and Compact - per<br>cubic yard |
|---------------|--|

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |   |
|------------|---|
| ASTM C29   | Unit Weight of Aggregate  |
| ASTM C88   | Soundness of Aggregates by Use of Sodium or Magnesium Sulfate   |
| ASTM C117  | Materials Finer than 75- $\mu$ m (No. 200) Sieve in Mineral Aggregate by Washing                            |
| ASTM C131  | Resistance to abrasion of Small Size Coarse Aggregate by Use of Los Angeles Machine                         |
| ASTM C136  | Sieve or Screen Analysis of Fine and Coarse Aggregate   |
| ASTM C150  | Standard Specification for Portland Cement  |
| ASTM C595  | Standard Specification for Blended Hydraulic Cements  |
| ASTM C1602 | Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete                 |
| ASTM D75   | Sampling Aggregate  |
| ASTM D558  | ASTM D558 Standard Test Methods for Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures        |
| ASTM D698  | Moisture Density Relations of Soils and Aggregate using 5.5 lb Rammer and 12 in drop                        |
| ASTM D977  | Standard Specification for Emulsified Asphalt   |
| ASTM D1556 | Test Method for Density and Unit Weight of Soil in Place by the Sand Cone Method                            |
| ASTM D1557 | Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort                        |
| ASTM D2216 | Test Methods for Laboratory Determination of Water (Moisture) Soil and Rock by Mass                         |
| ASTM D2419 | Test Method for Sand Equivalent Value of Soils and Fine Aggregate   |
| ASTM D2487 | Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System) |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials   |
| ASTM D4318 | Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils                        |
| ASTM D4491 | Standard Test Methods for Water Permeability of Geotextiles by Permittivity                                 |
| ASTM D4751 | Standard Test Methods for Determining Apparent Opening Size of a Geotextile                                 |
| ASTM D5821 | Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate              |

ASTM D6938                      Standard Test Method for In-Place Density and Water Content of Soil  
and Soil Aggregate by Nuclear Methods (Shallow Depth)

American Association of State Highway and Transportation Officials (AASHTO)

M288                                Standard Specification for Geosynthetic Specification for Highway  
Applications

**END OF ITEM P-207**

## Item P-209 Crushed Aggregate Base Course

### DESCRIPTION

**209-1.1** This item consists of a base course composed of crushed aggregate base constructed on a prepared course in accordance with these specifications and in conformity to the dimensions and typical cross-sections shown on the plans.

### MATERIALS

**209-2.1 Crushed aggregate base.** Crushed aggregate shall consist of clean, sound, durable particles of crushed stone or crushed gravel and shall be free from coatings of clay, silt, organic material, clay lumps or balls or other deleterious materials or coatings. The method used to produce the crushed gravel shall result in the fractured particles in the finished product as consistent and uniform as practicable. Fine aggregate portion, defined as the portion passing the No. 4 sieve shall consist of fines from the coarse aggregate crushing operation. The fine aggregate shall be produced by crushing stone or gravel, that meet the coarse aggregate requirements for wear and soundness. Aggregate base material requirements are listed in the following table.

**Crushed Aggregate Base Material Requirements**

| Material Test   | Requirement  | Standard   |
|---|--|------------|
| <b>Coarse Aggregate</b>   |  |            |
| Resistance to Degradation   | Loss: 45% maximum  | ASTM C131  |
| Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate | Loss after 5 cycles:<br>12% maximum using Sodium sulfate - or -<br>18% maximum using magnesium sulfate                     | ASTM C88   |
| Percentage of Fractured Particles                                     | Minimum 90% by weight of particles with at least two fractured faces and 98% with at least one fractured face <sup>1</sup> | ASTM D5821 |
| Flat Particles, Elongated Particles, or Flat and Elongated Particles  | 10% maximum, by weight, of flat, elongated, or flat and elongated particles <sup>2</sup>                                   | ASTM D4791 |
| Clay Lumps and Friable Particles                                      | Less than or equal to 3 percent  | ASTM C142  |
| <b>Fine Aggregate</b>   |  |            |
| Liquid limit  | Less than or equal to 25   | ASTM D4318 |
| Plasticity Index  | Not more than five (5)   | ASTM D4318 |

<sup>1</sup> The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

<sup>2</sup> A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).



The Aggregate Base Course shall have a California Bearing Ratio (CBR) value of at least 100 at 0.1 inch to 0.5 inch penetration inclusive at 100% of maximum dry density as determined by ASTM D1557, Method D when tested in accordance with ASTM D1883.

**209-2.2 Gradation requirements.** The gradation of the aggregate base material shall meet the requirements of the gradation given in the following table when tested per ASTM C117 and ASTM C136. The gradation shall be well graded from coarse to fine and shall not vary from the lower limit on one sieve to the high limit on an adjacent sieve or vice versa.

**Gradation of Aggregate Base**

| <b>Sieve Size</b>               | <b>Design Range<br/>Percentage by Weight<br/>passing</b> | <b>Contractor's Final<br/>Gradation<br/>(Control Band)</b> | <b>Job Control Grading Band<br/>Tolerances<sup>1</sup><br/>(Percent)</b> |
|---------------------------------|--|--|--|
| 2 inch<br>(50 mm)               | 100  |  | 0  |
| 1-1/2 inch<br>(37.5 mm)         | 95-100   |  | ±5   |
| 1 inch<br>(25.0 mm)             | 70-95  |  | ±8   |
| 3/4 inch<br>(19.0 mm)           | 70-85  |  | ±8   |
| No. 4<br>(4.75 mm)              | 30-60  |  | ±8   |
| No. 40<br>(425 µm)              | 10-30  |  | ±5   |
| No. 200 <sup>2</sup><br>(75 µm) | 0-4  |  | ±3   |
| No. 635<br>0.02 mm              | 0-2  |  | ±0   |

<sup>1</sup>The "Job Control Grading Band Tolerances for Contractor's Final Gradation" in the table shall be applied to "Contractor's Final Gradation" to establish a job control grading band. The full tolerance still applies if application of the tolerances results in a job control grading band outside the design range.

<sup>2</sup>The fraction of material passing the No 200 (75 µm) sieve shall not exceed two-thirds the fraction passing the No 40 (425 µm) sieve.

The material finer than 0.02 mm shall be limited to a maximum of 2% (0 grading band tolerances). Testing per AASHTO T88 will be required for the percentage passing the 0.02 mm particle size once per lot.

### **209-2.3 Sampling and Testing.**

**a. Aggregate base materials.** The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraph 209-2.1. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

**b. Gradation requirements.** The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation. Sampling shall be

per ASTM D75. Material shall meet the requirements in paragraph 209-2.2. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

**209-2.4 Separation Geotextile.** Not used.

## CONSTRUCTION METHODS

**209-3.1 Control strip.** The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved by the RPR.

**209-3.2 Preparing underlying subgrade and/or subbase.** The underlying subgrade and/or subbase shall be checked and accepted by the RPR before base course placing and spreading operations begin. Re-proof rolling of the subgrade or proof rolling of the subbase in accordance with Item P-152, at the Contractor's expense, may be required by the RPR if the Contractor fails to ensure proper drainage or protect the subgrade and/or subbase. Any ruts or soft, yielding areas due to improper drainage conditions, hauling, or any other cause, shall be corrected before the base course is placed. To ensure proper drainage, the spreading of the base shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one-way slope.

**209-3.3 Production.** The aggregate shall be uniformly blended and, when at a satisfactory moisture content per paragraph 209-3.5, the approved material may be transported directly to the placement.

**209-3.4 Placement.** The aggregate shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

The aggregate shall meet gradation and moisture requirements prior to compaction. The base course shall be constructed in lifts as established in the control strip, but not less than 4 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications at the Contractor's expense.

**209-3.5 Compaction.** Immediately after completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade.

The field density of each compacted lift of material shall be at least 100% of the maximum density of laboratory specimens prepared from samples of the base material delivered to the jobsite. The laboratory specimens shall be compacted and tested in accordance with ASTM D1557 and paragraph 209-3.9. The

moisture content of the material during placing operations shall be within  $\pm 2$  percentage points of the optimum moisture content as determined by ASTM D1557. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

**209-3.6 Weather limitations.** Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

**209-3.7 Maintenance.** The base course shall be maintained in a condition that will meet all specification requirements. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at the Contractor's expense.

**209-3.8 Surface tolerances.** After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

**a. Smoothness.** The finished surface shall not vary more than 3/8-inch when tested with a 12-foot straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-foot grid.

**b. Grade.** The grade and crown shall be measured on a 25-foot grid and shall be within +0 and -1/2 inch of the specified grade.

**209-3.9 Acceptance sampling and testing.** Crushed aggregate base course shall be accepted for density and thickness on an area basis. Two tests shall be made for density and thickness for each 1,000 square yards. Sampling locations will be determined on a random basis per ASTM D3665

**a. Density.** The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance.

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D1557. The in-place field density shall be determined per ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the area represented by the failed test must be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

When the material has greater than 30 percent retained on the 3/4 inch sieve, use methods in ASTM D1557 for correction of maximum dry density and optimum moisture for oversized particles.

**b. Thickness.** Depth tests shall be made by test holes at least 3 inches in diameter that extend through the base. The thickness of the base course shall be within +0 and -1/2 inch of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. At the contractor's option, thickness verification may be completed by survey (performed by the contractor in the presence of the RPR) of the top and bottom of the material placed using a 25' grid. Where the thickness is

deficient by more than 1/2-inch, the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches, adding new material of proper gradation, and the material shall be blended and recompact to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

#### **METHOD OF MEASUREMENT**

**209-4.1** The quantity of crushed aggregate base course will be determined by measurement of the number of cubic yards of material actually constructed and accepted by the RPR as complying with the plans and specifications. The quantity of Aggregate Base Course material shall be measured in final position based upon contractor's survey in the presence of the RPR of the completed work computed from elevations to the nearest 0.01 foot. Base materials shall not be included in any other excavation quantities.

#### **BASIS OF PAYMENT**

**209-5.1** Payment shall be made at the contract unit price per cubic yard for crushed aggregate base course. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item.

Payment will be made under:

|                |  |
|----------------|--|
| Item P-209-5.1 | Crushed Aggregate Base Course - per cubic yard |
|----------------|--|

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |   |
|------------|---|
| ASTM C29   | Standard Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate  |
| ASTM C88   | Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate  |
| ASTM C117  | Standard Test Method for Materials Finer than 75- $\mu$ m (No. 200) Sieve in Mineral Aggregates by Washing  |
| ASTM C131  | Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine                       |
| ASTM C136  | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates   |
| ASTM C142  | Standard Test Method for Clay Lumps and Friable Particles in Aggregates   |
| ASTM D75   | Standard Practice for Sampling Aggregates   |
| ASTM D698  | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft <sup>3</sup> (600 kN-m/m <sup>3</sup> ))  |
| 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 <sup>3</sup> (2700 kN-m/m <sup>3</sup> )) |
| ASTM D2167 | Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method  |
| ASTM D2419 | Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate  |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials   |
| ASTM D4318 | Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils  |
| ASTM D4491 | Standard Test Methods for Water Permeability of Geotextiles by Permittivity   |
| ASTM D4643 | Standard Test Method for Determination of Water Content of Soil and Rock by Microwave Oven Heating  |
| ASTM D4751 | Standard Test Methods for Determining Apparent Opening Size of a Geotextile   |
| ASTM D4791 | Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate   |
| ASTM D5821 | Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate  |

|            |   |
|------------|---|
| ASTM D6938 | Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)           |
| ASTM D7928 | Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis |

American Association of State Highway and Transportation Officials (AASHTO)

|      |  |
|------|--|
| M288 | Standard Specification for Geosynthetic Specification for Highway Applications |
| T88  | Standard Method of Test for Particle Size Analysis of Soils                    |

**END OF ITEM P-209**

Page Intentionally Left Blank

## Item P-401 Asphalt Mix Pavement

### DESCRIPTION

**401-1.1** This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared base or stabilized course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

### MATERIALS

**401-2.1 Aggregate.** Aggregates shall consist of crushed stone, crushed gravel, crushed slag, screenings, natural sand, and mineral filler, as required. Slag shall not be used unless it is shown to be non-expansive when submerged in water. The aggregates should have no known history of detrimental pavement staining due to ferrous sulfides, such as pyrite. Coarse aggregate is the material retained on the No. 4 (4.75 mm) sieve. Fine aggregate is the material passing the No. 4 (4.75 mm) sieve.

**a. Coarse aggregate.** Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Coarse aggregate material requirements are given in the table below.

**Coarse Aggregate Material Requirements**

| Material Test   | Requirement  | Standard   |
|---|--|------------|
| Resistance to Degradation   | Loss: 40% maximum  | ASTM C131  |
| Soundness of Aggregates<br>by Use of Sodium Sulfate or<br>Magnesium Sulfate | Loss after 5 cycles:<br>12% maximum using Sodium sulfate - or -<br>18% maximum using magnesium sulfate                           | ASTM C88   |
| Clay lumps and friable<br>particles   | 1.0% maximum   | ASTM C142  |
| Percentage of Fractured<br>Particles  | Minimum 75% by weight of particles with at least two<br>fractured faces and 85% with at least one fractured<br>face <sup>1</sup> | ASTM D5821 |
| Flat, Elongated, or Flat and<br>Elongated Particles                         | 8% maximum, by weight, of flat, elongated, or flat and<br>elongated particles at 5:1 <sup>2</sup>                                | ASTM D4791 |
| Bulk density of slag <sup>3</sup>   | Weigh not less than 70 pounds per cubic foot   | ASTM C29.  |

<sup>1</sup> The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

<sup>2</sup> A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

<sup>3</sup> Only required if slag is specified.

**b. Fine aggregate.** Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel and shall be free from coatings of clay, silt, or other objectionable matter. Natural (non-manufactured) sand may be used to obtain the gradation of the fine



aggregate blend or to improve the workability of the mix. Fine aggregate material requirements are listed in the table below.

#### Fine Aggregate Material Requirements

| Material Test   | Requirement  | Standard   |
|---|--|------------|
| Liquid limit  | 25 maximum   | ASTM D4318 |
| Plasticity Index  | 4 maximum  | ASTM D4318 |
| Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate | Loss after 5 cycles:<br>10% maximum using Sodium sulfate - or -<br>15% maximum using magnesium sulfate | ASTM C88   |
| Clay lumps and friable particles                                      | 1.0% maximum   | ASTM C142  |
| Sand equivalent   | 45 minimum   | ASTM D2419 |
| Natural Sand  | 10% maximum by weight of total aggregate   | ASTM D1073 |

**c. Sampling.** ASTM D75 shall be used in sampling coarse and fine aggregate.

**401-2.2 Mineral filler.** Mineral filler (baghouse fines) may be added in addition to material naturally present in the aggregate. Mineral filler shall meet the requirements of ASTM D242.

#### Mineral Filler Requirements

| Material Test    | Requirement | Standard   |
|------------------|-------------|------------|
| Plasticity Index | 4 maximum   | ASTM D4318 |

#### **401-2.3 Asphalt binder.**

Asphalt binder shall conform to ASTM D6373 Performance Grade (PG) 76-28 M or PM.

#### Asphalt Binder PG Plus Test Requirements

| Material Test    | Requirement | Standard                |
|------------------|-------------|-------------------------|
| Elastic Recovery | 75% minimum | ASTM D6084 <sup>1</sup> |

<sup>1</sup> Follow procedure B on RTFO aged binder

**401-2.4 Anti-stripping agent.** Any anti-stripping agent or additive (anti-strip) shall be heat stable and shall not change the asphalt binder grade beyond specifications. Anti-strip shall be an approved material of the Department of Transportation of the State in which the project is located.

### COMPOSITION

**401-3.1 Composition of mixture(s).** The asphalt mix shall be composed of a mixture of aggregates, filler and anti-strip agent if required, and asphalt binder. The aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

**401-3.2 Job mix formula (JMF) laboratory.** The laboratory used to develop the JMF shall possess a current certificate of accreditation, listing D3666 from a national accrediting authority and all test methods required for developing the JMF; and be listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Resident Project Representative (RPR) prior to start of construction.

**401-3.3 Job mix formula (JMF).** No asphalt mixture shall be placed until an acceptable mix design has been submitted to the RPR for review and accepted in writing. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

When the project requires asphalt mixtures of differing aggregate gradations and/or binders, a separate JMF shall be submitted for each mix. Add anti-stripping agent to meet tensile strength requirements.

The JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 404-3.2. The asphalt mixture shall be designed using procedures contained in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition. Samples shall be prepared and compacted using a Marshall compactor in accordance with ASTM D6926.

Should a change in sources of materials be made, a new JMF must be submitted to the RPR for review and accepted in writing before the new material is used. After the initial production JMF has been approved by the RPR and a new or modified JMF is required for whatever reason, the subsequent cost of the new or modified JMF, including a new control strip when required by the RPR, will be borne by the Contractor.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

The JMF shall be submitted in writing by the Contractor at least 30 days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates proposed for project use.

The JMF shall be dated, and stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- Manufacturer's Certificate of Analysis (COA) for the asphalt binder used in the JMF in accordance with paragraph 401-2.3. Certificate of asphalt performance grade is with modifier already added, if used and must indicate compliance with ASTM D6373. For plant modified asphalt binder, certified test report indicating grade certification of modified asphalt binder.
- Manufacturer's Certificate of Analysis (COA) for the anti-stripping agent if used in the JMF in accordance with paragraph 401-2.4.
- Certified material test reports for the course and fine aggregate and mineral filler in accordance with paragraphs 401-2.1.
- Percent passing each sieve size for individual gradation of each aggregate cold feed and/or hot bin; percent by weight of each cold feed and/or hot bin used; and the total combined gradation in the JMF.
- Specific Gravity and absorption of each coarse and fine aggregate.
- Percent natural sand.
- Percent fractured faces.
- Percent by weight of flat particles, elongated particles, and flat and elongated particles (and criteria).
- Percent of asphalt.

- Number of blows
- Laboratory mixing and compaction temperatures.
- Supplier-recommended field mixing and compaction temperatures.
- Plot of the combined gradation on a 0.45 power gradation curve.
- Graphical plots of air voids, voids in the mineral aggregate (VMA), and unit weight versus asphalt content. To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.
- Tensile Strength Ratio (TSR).
- Type and amount of Anti-strip agent when used.
- Asphalt Pavement Analyzer (APA) or Hamburg Wheel Test results.
- Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted.

**Table 1. Asphalt Design Criteria**

| Test Property                                     | Value                                      | Test Method  |
|---|--|--|
| Number of blows                                   | 75   |  |
| Air voids (%)                                     | 3.5  | ASTM D3203   |
| Percent voids in mineral aggregate (VMA), minimum | See Table 2                                | ASTM D6995   |
| Tensile Strength Ratio (TSR) <sup>1</sup>         | not less than 75 at a saturation of 70-80% | ASTM D4867   |
| Asphalt Pavement Analyzer (APA) <sup>2,3</sup>    | Less than 10 mm @ 4000 passes              | AASHTO T340 at 250 psi hose pressure at 64° C test temperature |
| Hamburg Wheel Test <sup>3</sup>                   | Less than 10mm @ 20,000 passes @50°C       | AASHTO T324  |

<sup>1</sup> Test specimens for TSR shall be compacted at  $7 \pm 1.0$  % air voids. In areas subject to freeze-thaw, use freeze-thaw conditioning in lieu of moisture conditioning per ASTM D4867.

<sup>2</sup> AASHTO T340 at 100 psi hose pressure at 64°C test temperature may be used in the interim. If this method is used the required Value shall be less than 5 mm @ 8000 passes

<sup>3</sup> Asphalt shall meet either Asphalt Pavement Analyzer or Hamburg Wheel Test Standards.

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 2 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply; be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

**Table 2. Aggregate - Asphalt Pavements**

| <b>Sieve Size</b>   | <b>Percentage by Weight Passing Sieve</b> |
|---|---|
| 1 inch (25.0 mm)  | 100                                       |
| 3/4 inch (19.0 mm)  | 90-100                                    |
| 1/2 inch (12.5 mm)  | 74-86                                     |
| 3/8 inch (9.5 mm)   | 63-75                                     |
| No. 4 (4.75 mm)   | 41-55                                     |
| No. 8 (2.36 mm)   | 30-38                                     |
| No. 16 (1.18 mm)  | 18-26                                     |
| No. 30 (600 µm)   | 12-18                                     |
| No. 50 (300 µm)   | 8-14                                      |
| No. 100 (150 µm)  | 6-11                                      |
| No. 200 (75 µm)   | 3-6                                       |
| <b>Minimum Voids in Mineral Aggregate (VMA)<sup>1</sup></b> | 14.0                                      |
| <b>Asphalt Percent:</b>                                     |   |
| Stone or gravel   | 4.5-7.0                                   |
| Slag  | N/A                                       |

<sup>1</sup>To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

**401-3.4 Reclaimed asphalt pavement (RAP).** RAP shall not be used.

**401-3.5 Control Strip.** Full production shall not begin until an acceptable control strip has been constructed and accepted in writing by the RPR. The Contractor shall prepare and place a quantity of asphalt according to the JMF. The underlying grade or pavement structure upon which the control strip is to be constructed shall be the same as the remainder of the course represented by the control strip.

The Contractor will not be allowed to place the control strip until the Contractor quality control program (CQCP), showing conformance with the requirements of paragraph 401-5.1, has been accepted, in writing, by the RPR.

The control strip will consist of at least 250 tons or 1/2 sublot, whichever is greater. The control strip shall be placed in two lanes of the same width and depth to be used in production with a longitudinal cold joint. The cold joint must be cut back in accordance with paragraph 401-4.14 using the same procedure that will be used during production. The cold joint for the control strip will be an exposed construction joint at least four (4) hours old or when the mat has cooled to less than 160°F. The equipment used in construction of the control strip shall be the same type, configuration and weight to be used on the project.

The control strip will be considered acceptable by the RPR if the gradation, asphalt content, and VMA are within the action limits specified in paragraph 401-5.5a; and Mat density greater than or equal to 94.5%, air voids 3.5% +/- 1%, and joint density greater than or equal to 92.5%.

If the control strip is unacceptable, necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made and another control strip shall be placed. Unacceptable control strips shall be removed at the Contractor's expense.

The control strip will be considered one lot for payment based upon the average of a minimum of 3 samples (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 401-8.1 using a lot pay factor equal to 100.

## CONSTRUCTION METHODS

**401-4.1 Weather limitations.** The asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 4. The temperature requirements may be waived by the RPR, if requested; however, all other requirements including compaction shall be met.

**Table 4. Surface Temperature Limitations of Underlying Course**

| Mat Thickness   | Base Temperature (Minimum) |    |
|---|----------------------------|----|
|   | °F                         | °C |
| 3 inches (7.5 cm) or greater                                  | 40 <sup>1</sup>            | 4  |
| Greater than 2 inches (50 mm) but less than 3 inches (7.5 cm) | 45                         | 7  |

**401-4.2 Asphalt plant.** Plants used for the preparation of asphalt shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 including the following items.

**a. Inspection of plant.** The RPR, or RPR's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

**b. Storage bins and surge bins.** The asphalt mixture stored in storage and/or surge bins shall meet the same requirements as asphalt mixture loaded directly into trucks. Asphalt mixture shall not be stored in storage and/or surge bins for a period greater than twelve (12) hours. If the RPR determines there is an excessive heat loss, segregation, or oxidation of the asphalt mixture due to temporary storage, temporary storage shall not be allowed.

**401-4.3 Aggregate stockpile management.** Aggregate stockpiles shall be constructed in a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the asphalt batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used.

A continuous supply of materials shall be provided to the work to ensure continuous placement.

**401-4.4 Hauling equipment.** Trucks used for hauling asphalt shall have tight, clean, and smooth metal beds. To prevent the asphalt from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the RPR. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

**401-4.4.1 Material transfer vehicle (MTV).** Material transfer vehicles are not required.

**401-4.5 Asphalt pavers.** Asphalt pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of asphalt that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface. The asphalt paver shall be equipped with a control system capable of automatically maintaining the specified screed grade and elevation.

If the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued.

The paver shall be capable of paving to a minimum width specified in paragraph 401-4.12.

**401-4.6 Rollers.** The number, type, and weight of rollers shall be sufficient to compact the asphalt to the required density while it is still in a workable condition without crushing of the aggregate, depressions or other damage to the pavement surface. Rollers shall be in good condition, clean, and capable of operating at slow speeds to avoid displacement of the asphalt. All rollers shall be specifically designed and suitable for compacting asphalt concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used.

**401-4.7 Density device.** The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall supply a qualified technician during all paving operations to calibrate the gauge and obtain accurate density readings for all new asphalt. These densities shall be supplied to the RPR upon request at any time during construction. No separate payment will be made for supplying the density gauge and technician.

**401-4.8 Preparation of asphalt binder.** The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt binder to the mixer at a uniform temperature. The temperature of unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F (160°C) when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F (175°C) when added to the aggregate.

**401-4.9 Preparation of mineral aggregate.** The aggregate for the asphalt shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F (175°C) when the asphalt binder is added. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

**401-4.10 Preparation of Asphalt mixture.** The aggregates and the asphalt binder shall be weighed or metered and mixed in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all asphalt upon discharge shall not exceed 0.5%.

**401-4.11 Application of Prime and Tack Coat.** Immediately before placing the asphalt mixture, the underlying course shall be cleaned of all dust and debris.

A prime coat in accordance with Item P-602 shall be applied to aggregate base prior to placing the asphalt mixture.

A tack coat shall be applied in accordance with Item P-603 to all vertical and horizontal asphalt and concrete surfaces prior to placement of the first and each subsequent lift of asphalt mixture.

**401-4.12 Laydown plan, transporting, placing, and finishing.** Prior to the placement of the asphalt, the Contractor shall prepare a laydown plan with the sequence of paving lanes and width to minimize the number of cold joints; the location of any temporary ramps; laydown temperature; and estimated time of completion for each portion of the work (milling, paving, rolling, cooling, etc.). The laydown plan and any modifications shall be approved by the RPR.

Deliveries shall be scheduled so that placing and compacting of asphalt is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to approximately ambient temperature. The Contractor, at their expense, shall be responsible for repair of any damage to the pavement caused by hauling operations.

Contractor shall survey each lift of asphalt surface course and certify to RPR that every lot of each lift meets the grade tolerances of paragraph 401-6.2d before the next lift can be placed.

Edges of existing asphalt pavement abutting the new work shall be saw cut and the cut off material and laitance removed. Apply a tack coat in accordance with P-603 before new asphalt material is placed against it.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Placement of the asphalt mix shall begin along the centerline of a crowned section or on the high side of areas with a one way slope unless shown otherwise on the laydown plan as accepted by the RPR. The asphalt mix shall be placed in consecutive adjacent lanes having a minimum width of 10 feet except where edge lanes require less width to complete the area. Additional screed sections attached to widen the paver to meet the minimum lane width requirements must include additional auger sections to move the asphalt mixture uniformly along the screed extension.

The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least one foot; however, the joint in the surface top course shall be at the centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet. On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the asphalt may be spread and luted by hand tools.

The RPR may at any time, reject any batch of asphalt, on the truck or placed in the mat, which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or overheated asphalt mixture. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

Areas of segregation in the surface course, as determined by the RPR, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of the construction lift thickness as specified in paragraph 401-3.3, Table 2 for the approved mix design. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet long.

**401-4.13 Compaction of asphalt mixture.** After placing, the asphalt mixture shall be thoroughly and uniformly compacted by self-propelled rollers. The surface shall be compacted as soon as possible when the asphalt has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot

mixture and be effective in compaction. Any surface defects and/or displacement occurring as a result of the roller, or from any other cause, shall be corrected at the Contractor's expense.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the asphalt to the roller, the wheels shall be equipped with a scraper and kept moistened with water as necessary.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power tampers.

Any asphalt that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

**401-4.14 Joints.** The formation of all joints shall be made to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid asphalt except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh asphalt against the joint.

Longitudinal joints which have been left exposed for more than four (4) hours; the surface temperature has cooled to less than 175°F; or are irregular, damaged, uncompacted or otherwise defective shall be cut back with a cutting wheel or pavement saw a maximum of 3 inches to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material and any laitance produced from cutting joints shall be removed from the project. Asphalt tack coat in accordance with P-603 shall be applied to the clean, dry joint prior to placing any additional fresh asphalt against the joint. The cost of this work shall be considered incidental to the cost of the asphalt.

**401-4.15 Saw-cut grooving.** Saw-cut grooving is not required.

**401-4.16 Diamond grinding.** Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive.

Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet wide. The saw blades shall be 1/8-inch wide with a sufficient number of blades to create grooves between 0.090 and 0.130 inches wide; and peaks and ridges approximately 1/32 inch higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that cause ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

**401-4.17 Nighttime paving requirements.** The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the RPR prior to the start of any nighttime work. All work shall be in accordance with the approved CSPP and lighting plan.



## **CONTRACTOR QUALITY CONTROL (CQC)**

**401-5.1 General.** The Contractor shall develop a Contractor Quality Control Program (CQCP) in accordance with Item C-100. No partial payment will be made for materials without an approved CQCP.

**401-5.2 Contractor quality control (QC) facilities.** The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The Contractor shall provide laboratory facilities and equipment for the RPR to perform QA testing in the QC laboratory with the RPR's personnel. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

**401-5.3 Contractor QC testing.** The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to these specifications and as set forth in the approved CQCP. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A QC Testing Plan shall be developed as part of the CQCP.

**a. Asphalt content.** A minimum of two tests shall be performed per day in accordance with ASTM D6307 or ASTM D2172 for determination of asphalt content. When using ASTM D6307, the correction factor shall be determined as part of the first test performed at the beginning of plant production; and as part of every tenth test performed thereafter. The asphalt content for the day will be determined by averaging the test results.

**b. Gradation.** Aggregate gradations shall be determined a minimum of twice per day from mechanical analysis of extracted aggregate in accordance with ASTM D5444, ASTM C136, and ASTM C117.

**c. Moisture content of aggregate.** The moisture content of aggregate used for production shall be determined a minimum of once per day in accordance with ASTM C566.

**d. Moisture content of asphalt.** The moisture content shall be determined once per day in accordance with AASHTO T329 or ASTM D1461.

**e. Temperatures.** Temperatures shall be checked, at least four times per day, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the asphalt at the plant, and the asphalt at the job site.

**f. In-place density monitoring.** The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

### **g. Smoothness for Contractor Quality Control.**

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues.

The Contractor may use a 12-foot "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined

by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using the FAA profile program, ProFAA, or FHWA ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

**(1) Transverse measurements.** Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

**(2) Longitudinal measurements.** Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 401-6.1d(3). Areas that have been ground shall be sealed with a surface treatment in accordance with Item P-608. To avoid the surface treatment creating any conflict with runway or taxiway markings, it may be necessary to seal a larger area.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

**h. Grade.** Grade shall be evaluated daily to allow adjustments to paving operations when grade measurements do not meet specifications. As a minimum, grade shall be evaluated prior to and after the placement of the first lift and after placement of the surface lift.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch. The documentation will be provided by the Contractor to the RPR by the end of the following working day.

Areas with humps or depressions that exceed grade or smoothness criteria and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. Grinding shall be in accordance with paragraph 401-4.16.

The Contractor shall repair low areas or areas that cannot be corrected by grinding by removal of deficient areas to the depth of the final course plus 1/2 inch and replacing with new material. Skin patching is not allowed.

**401-5.4 Sampling.** When directed by the RPR, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

**401-5.5 Control charts.** The Contractor shall maintain linear control charts for both individual measurements and range (i.e. difference between highest and lowest measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each day will be calculated and monitored by the QC laboratory.

Control charts shall be posted in a location satisfactory to the RPR and kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the RPR may suspend production or acceptance of the material.

**a. Individual measurements.** Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the job mix formula target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

**Control Chart Limits for Individual Measurements**

| Sieve                  | Action Limit | Suspension Limit |
|------------------------|--------------|------------------|
| 3/4 inch (19.0 mm)     | ±6%          | ±9%              |
| 1/2 inch (12.5 mm)     | ±6%          | ±9%              |
| 3/8 inch (9.5 mm)      | ±6%          | ±9%              |
| No. 4 (4.75 mm)        | ±6%          | ±9%              |
| No. 16 (1.18 mm)       | ±5%          | ±7.5%            |
| No. 50 (300 µm)        | ±3%          | ±4.5%            |
| No. 200 (75 µm)        | ±2%          | ±3%              |
| <b>Asphalt Content</b> | ±0.45%       | ±0.70%           |
| <b>Minimum VMA</b>     | -0.5%        | -1.0%            |

**b. Range.** Control charts shall be established to control gradation process variability. The range shall be plotted as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of  $n = 2$ . Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for  $n = 3$  and by 1.27 for  $n = 4$ .

### Control Chart Limits Based on Range

| Sieve                  | Suspension Limit |
|------------------------|------------------|
| 1/2 inch (12.5 mm)     | 11%              |
| 3/8 inch (9.5 mm)      | 11%              |
| No. 4 (4.75 mm)        | 11%              |
| No. 16 (1.18 mm)       | 9%               |
| No. 50 (300 µm)        | 6%               |
| No. 200 (75 µm)        | 3.5%             |
| <b>Asphalt Content</b> | 0.8%             |

**c. Corrective Action.** The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

- (1) One point falls outside the Suspension Limit line for individual measurements or range; or
- (2) Two points in a row fall outside the Action Limit line for individual measurements.

**401-5.6 QC reports.** The Contractor shall maintain records and shall submit reports of QC activities daily , in accordance with Item C-100.

### MATERIAL ACCEPTANCE

**401-6.1 Acceptance sampling and testing.** Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the RPR at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor.

**a. Quality assurance (QA) testing laboratory.** The QA testing laboratory performing these acceptance tests will be accredited in accordance with ASTM D3666. The QA laboratory accreditation will be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing will be listed on the lab accreditation.

**b. Lot size.** A standard lot will be equal to one day's production divided into approximately equal sublots of between 400 to 600 tons. When only one or two sublots are produced in a day's production, the sublots will be combined with the production lot from the previous or next day.

Where more than one plant is simultaneously producing asphalt for the job, the lot sizes will apply separately for each plant.

**c. Asphalt air voids.** Plant-produced asphalt will be tested for air voids on a subplot basis.

**(1) Sampling.** Material from each subplot shall be sampled in accordance with ASTM D3665. Samples shall be taken from material deposited into trucks at the plant or at the job site in accordance with ASTM D979. The sample of asphalt may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to maintain the material at or above the compaction temperature as specified in the JMF. An extra 25,000g (55 lbs) shall be taken from each subplot by the contractor and held for 18 months by the contractor. This additional held sample shall be made available for testing if necessary within 18 months.

**(2) Testing.** Air voids will be determined for each subplot in accordance with ASTM D3203 for a set of three compacted specimens prepared in accordance with ASTM D6926.

**d. In-place asphalt mat and joint density.** Each subplot will be tested for in-place mat and joint density as a percentage of the theoretical maximum density (TMD).

**(1) Sampling.** The Contractor will cut minimum 5 inch (125 mm) diameter samples in accordance with ASTM D5361. The Contractor shall furnish all tools, labor, and materials for cleaning, and filling the cored pavement. Laitance produced by the coring operation shall be removed immediately after coring, and core holes shall be filled within one day after sampling in a manner acceptable to the RPR.

**(2) Bond.** Each lift of asphalt shall be bonded to the underlying layer. If cores reveal that the surface is not bonded, additional cores shall be taken as directed by the RPR to determine the extent of unbonded areas. Unbonded areas shall be removed by milling and replaced at no additional cost as directed by the RPR.

**(3) Thickness.** Thickness of each lift of surface course will be evaluated by the RPR for compliance to the requirements shown on the plans after any necessary corrections for grade. Measurements of thickness will be made using the cores extracted for each subplot for density measurement. The maximum allowable deficiency at any point will not be more than 1/4 inch (6 mm) less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, will not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or subplot shall be corrected by the Contractor at his expense by removing the deficient area and replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the RPR to circumscribe the deficient area.

**(4) Mat density.** One core shall be taken from each subplot. Core locations will be determined by the RPR in accordance with ASTM D3665. Cores for mat density shall not be taken closer than one foot (30 cm) from a transverse or longitudinal joint. The bulk specific gravity of each cored sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each subplot sample by the TMD for that subplot.

**(5) Joint density.** One core centered over the longitudinal joint shall be taken for each subplot that has a longitudinal joint. Core locations will be determined by the RPR in accordance with ASTM D3665. The bulk specific gravity of each core sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each joint density sample by the average TMD for the lot. The TMD used to determine the joint density at joints formed between lots will be the lower of the average TMD values from the adjacent lots.

#### **401-6.2 Acceptance criteria.**

**a. General.** Acceptance will be based on the implementation of the Contractor Quality Control Program (CQCP) and the following characteristics of the asphalt and completed pavements: air voids, mat density, joint density, and grade.

**b. Air Voids and Mat density.** Acceptance of each lot of plant produced material for mat density and air voids will be based on the percentage of material within specification limits (PWL). If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment will be determined in accordance with paragraph 401-8.1.

**c. Joint density.** Acceptance of each lot of plant produced asphalt for joint density will be based on the PWL. If the PWL of the lot is equal to or exceeds 90%, the lot will be considered acceptable. If the PWL is less than 90%, the Contractor shall evaluate the reason and act accordingly. If the PWL is less than 80%, the Contractor shall cease operations and until the reason for poor compaction has been determined. If the PWL is less than 71%, the pay factor for the lot used to complete the joint will be reduced by five (5) percentage points. This lot pay factor reduction will be incorporated and evaluated in accordance with paragraph 401-8.1.

**d. Grade.** The final finished surface of the pavement shall be surveyed to verify that the grade elevations and cross-sections shown on the plans do not deviate more than 1/2 inch vertically.

Cross-sections of the pavement shall be taken at a minimum 25-foot longitudinal spacing and at all longitudinal grade breaks and at start and end of each lane placed. Minimum cross-section grade points shall include grade at centerline, crown,  $\pm 12.5'$  grid from centerline and edge of pavement.

The survey and documentation shall be stamped and signed by a licensed surveyor. Payment for sublots that do not meet grade for over 25% of the subplot shall not be more than 95%.

**e. Profilograph roughness for QA Acceptance.** Not used.

**401-6.3 Percentage of material within specification limits (PWL).** The PWL will be determined in accordance with procedures specified in Item C-110. The specification tolerance limits (L) for lower and (U) for upper are contained in Table 5.

**Table 5. Acceptance Limits for Air Voids and Density**

| Test Property                  | Pavements Specification Tolerance Limits |     |
|--------------------------------|--|-----|
|                                | L  | U   |
| Air Voids Total Mix (%)        | 2.0                                      | 5.0 |
| Surface Course Mat Density (%) | 92.8                                     | -   |
| Joint density (%)              | 90.5                                     | --  |

**a. Outliers.** All individual tests for mat density and air voids will be checked for outliers (test criterion) in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded, and the PWL will be determined using the remaining test values. The criteria in Table 5 is based on production processes which have a variability with the following standard deviations: Surface Course Mat Density (%), 1.30; Joint Density (%), 1.55.

The Contractor should note that (1) 90 PWL is achieved when consistently producing a surface course with an average mat density of at least 94.5% with 1.30% or less variability, (2) 90 PWL is achieved when consistently producing a base course with an average mat density of at least 94.0% with 1.55% or less variability, and (3) 90 PWL is achieved when consistently producing joints with an average joint density of at least 92.5% with 1.55% or less variability.

**401-6.4 Resampling pavement for mat density.**

**a. General.** Resampling of a lot of pavement will only be allowed for mat density, and then, only if the Contractor requests same, in writing, within 48 hours after receiving the written test results from the RPR. A retest will consist of all the sampling and testing procedures contained in paragraphs 401-6.1d and 401-6.2b. Only one resampling per lot will be permitted.

(1) A redefined PWL will be calculated for the resampled lot. The number of tests used to calculate the redefined PWL will include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

**b. Payment for resampled lots.** The redefined PWL for a resampled lot will be used to calculate the payment for that lot in accordance with Table 6.

**c. Outliers.** Check for outliers in accordance with ASTM E178, at a significance level of 5%.

## METHOD OF MEASUREMENT

**401-7.1 Measurement.** Asphalt shall be measured by the number of tons of asphalt used in the accepted work. Batch weights or truck scale weights will be used to determine the basis for the tonnage.

## BASIS OF PAYMENT

**401-8.1 Payment.** Payment for a lot of asphalt meeting all acceptance criteria as specified in paragraph 401-6.2 shall be made based on results of tests for mat density and air voids. Payment for acceptable lots shall be adjusted according to paragraph 401-8.1c for mat density and air voids; and paragraph 401-6.2c for joint density, subject to the limitation that:

**a.** The total project payment for plant mix asphalt pavement shall not exceed 106 percent of the product of the contract unit price and the total number of tons of asphalt used in the accepted work.

**b.** The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

**c. Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with Table 6. A pay factor shall be calculated for both mat density and air voids. The lot pay factor shall be the higher of the two values when calculations for both mat density and air voids are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either mat density or air voids is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both mat density and air voids are less than 100%. If PWL for joint density is less than 71% then the lot pay factor shall be reduced by 5% but be no higher than 95%.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 401-8.1a. Payment in excess of 100% for accepted lots of asphalt shall be used to offset payment for accepted lots of asphalt pavement that achieve a lot pay factor less than 100%.

Payment for sublots which do not meet grade in accordance with paragraph 401-6.2d after correction for over 25% of the subplot shall be reduced by 5%.

**Table 6. Price adjustment schedule<sup>1</sup>**

| Percentage of material within specification limits (PWL) | Lot pay factor (percent of contract unit price) |
|--|---|
| 96 – 100   | 106   |
| 90 – 95  | PWL + 10  |
| 75 – 89  | 0.5 PWL + 55                                    |
| 55 – 74  | 1.4 PWL – 12                                    |
| Below 55   | Reject <sup>2</sup>                             |

<sup>1</sup> Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment above 100% shall be subject to the total project payment limitation specified in paragraph 401-8.1a.

<sup>2</sup> The lot shall be removed and replaced. However, the RPR may decide to allow the rejected lot to remain. In that case, if the RPR and Contractor agree in writing that the lot shall not be removed, it shall be paid for at 50% of the contract unit price and the total project payment shall be reduced by the amount withheld for the rejected lot.

**d. Profilograph Roughness.** Not used.

#### **401-8.1 Payment.**

Payment will be made under:

Item P-401-8.1                      Asphalt Surface Course - per ton

#### **REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

##### ASTM International (ASTM)

|            |   |
|------------|---|
| ASTM C29   | Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate  |
| ASTM C88   | Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate                                      |
| ASTM C117  | Standard Test Method for Materials Finer than 75- $\mu$ m (No. 200) Sieve in Mineral Aggregates by Washing                          |
| ASTM C127  | Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate                            |
| ASTM C131  | Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine |
| ASTM C136  | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates   |
| ASTM C142  | Standard Test Method for Clay Lumps and Friable Particles in Aggregates   |
| ASTM C566  | Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying   |
| ASTM D75   | Standard Practice for Sampling Aggregates   |
| ASTM D242  | Standard Specification for Mineral Filler for Bituminous Paving Mixtures  |
| ASTM D946  | Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction                                       |
| ASTM D979  | Standard Practice for Sampling Asphalt Paving Mixtures  |
| ASTM D1073 | Standard Specification for Fine Aggregate for Asphalt Paving Mixtures   |
| ASTM D1188 | Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples                    |
| ASTM D2172 | Standard Test Method for Quantitative Extraction of Bitumen from Asphalt Paving Mixtures  |
| ASTM D1461 | Standard Test Method for Moisture or Volatile Distillates in Asphalt Paving Mixtures  |
| ASTM D2041 | Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures                             |



|            |   |
|------------|---|
| ASTM D2419 | Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate  |
| ASTM D2489 | Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures  |
| ASTM D2726 | Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures  |
| ASTM D2950 | Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods   |
| ASTM D3203 | Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures   |
| ASTM D3381 | Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction   |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials   |
| ASTM D3666 | Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials   |
| ASTM D4318 | Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils  |
| ASTM D4552 | Standard Practice for Classifying Hot-Mix Recycling Agents  |
| ASTM D4791 | Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate   |
| ASTM D4867 | Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures   |
| ASTM D5361 | Standard Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing  |
| ASTM D5444 | Standard Test Method for Mechanical Size Analysis of Extracted Aggregate  |
| ASTM D5821 | Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate  |
| ASTM D6084 | Standard Test Method for Elastic Recovery of Bituminous Materials by Durometer  |
| ASTM D6307 | Standard Test Method for Asphalt Content of Hot Mix Asphalt by Ignition Method  |
| ASTM D6373 | Standard Specification for Performance Graded Asphalt Binder  |
| ASTM D6752 | Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method                               |
| ASTM D6925 | Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the SuperPave Gyratory Compactor. |
| ASTM D6926 | Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus  |

|            |   |
|------------|---|
| ASTM D6927 | Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures   |
| ASTM D6995 | Standard Test Method for Determining Field VMA based on the Maximum Specific Gravity of the Mix (Gmm)   |
| ASTM E11   | Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves  |
| ASTM E178  | Standard Practice for Dealing with Outlying Observations  |
| ASTM E1274 | Standard Test Method for Measuring Pavement Roughness Using a Profilograph  |
| ASTM E950  | Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer Established Inertial Profiling Reference |
| ASTM E2133 | Standard Test Method for Using a Rolling Inclinator to Measure Longitudinal and Transverse Profiles of a Traveled Surface                       |

American Association of State Highway and Transportation Officials (AASHTO)

|              |   |
|--------------|---|
| AASHTO M156  | Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.                         |
| AASHTO T329  | Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method  |
| AASHTO T324  | Standard Method of Test for Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures   |
| AASHTO T 340 | Standard Method of Test for Determining the Rutting Susceptibility of Hot Mix Asphalt (APA) Using the Asphalt Pavement Analyzer (APA) |

Asphalt Institute (AI)

Asphalt Institute Handbook MS-26, Asphalt Binder  
Asphalt Institute MS-2 Mix Design Manual, 7th Edition  
AI State Binder Specification Database

Federal Highway Administration (FHWA)

Long Term Pavement Performance Binder Program

Advisory Circulars (AC)

AC 150/5320-6 Airport Pavement Design and Evaluation

FAA Orders

5300.1 Modifications to Agency Airport Design, Construction, and Equipment Standards

Software

FAARFIELD

**END OF ITEM P-401**

Page Intentionally Left Blank

## Item P-602 Emulsified Asphalt Prime Coat

### DESCRIPTION

**602-1.1** This item shall consist of an application of emulsified asphalt material on the prepared base course in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

### MATERIALS

**602-2.1 Emulsified Asphalt material.** The emulsified asphalt material shall be as specified in ASTM D3628 for use as a prime coat appropriate to local conditions. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the emulsified asphalt material. The COA shall be provided to and approved by the Resident Project Representative (RPR) before the emulsified asphalt material is applied. The furnishing of the COA for the emulsified asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

### CONSTRUCTION METHODS

**602-3.1 Weather limitations.** The emulsified asphalt prime coat shall be applied only when the existing surface is dry; the atmospheric temperature is 50°F (10°C) or above, and the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

**602-3.2 Equipment.** The equipment shall include a self-powered pressure asphalt material distributor and equipment for heating asphalt material.

Provide a distributor with pneumatic tires of such size and number that the load produced on the base surface does not exceed 65.0 psi of tire width to prevent rutting, shoving or otherwise damaging the base, surface or other layers in the pavement structure. Design and equip the distributor to spray the asphalt material in a uniform coverage at the specified temperature, at readily determined and controlled rates from 0.05 to 1.0 gallons per square yard, with a pressure range of 25 to 75 psi and with an allowable variation from the specified rate of not more than  $\pm 5\%$ , and at variable widths. Include with the distributor equipment a separate power unit for the bitumen pump, full-circulation spray bars, tachometer, pressure gauges, volume-measuring devices, adequate heaters for heating of materials to the proper application temperature, a thermometer for reading the temperature of tank contents, and a hand hose attachment suitable for applying asphalt material manually to areas inaccessible to the distributor. Equip the distributor to circulate and agitate the asphalt material during the heating process. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

A power broom and power blower suitable for cleaning the surfaces to which the asphalt coat is to be applied shall be provided.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

**602-3.3 Application of emulsified asphalt material.** Immediately before applying the prime coat, the full width of the surface to be primed shall be swept with a power broom to remove all loose dirt and other objectionable material.

The asphalt emulsion material shall be uniformly applied with an asphalt distributor at the rate of 0.15 to 0.30 gallons per square yard depending on the base course surface texture. The type of asphalt material and application rate shall be approved by the RPR prior to application.

Following application of the emulsified asphalt material and prior to application of the succeeding layer of pavement, allow the asphalt coat to cure and to obtain evaporation of any volatiles or moisture. Maintain the coated surface until the succeeding layer of pavement is placed, by protecting the surface against damage and by repairing and recoating deficient areas. Allow the prime coat to cure without being disturbed for a period of at least 48 hours or longer, as may be necessary to attain penetration into the treated course. Furnish and spread sand to effectively blot up and cure excess asphalt material. The Contractor shall remove blotting sand prior to asphalt concrete lay down operations at no additional expense to the Owner. Keep traffic off surfaces freshly treated with asphalt material. Provide sufficient warning signs and barricades so that traffic will not travel over freshly treated surfaces.

**602-3.4 Trial application rates.** The Contractor shall apply a minimum of three lengths of at least 100 feet for the full width of the distributor bar to evaluate the amount of emulsified asphalt material that can be satisfactorily applied with the equipment. Apply three different application rates of emulsified asphalt materials within the application range specified in paragraph 602-3.3. Other trial applications can be made using various amounts of material as directed by the RPR. The trial application is to demonstrate the equipment can uniformly apply the emulsified asphalt material within the rates specified and determine the application rate for the project.

**602-3.5 Freight and waybills.** The Contractor shall submit waybills and delivery tickets during the progress of the work. Before the final estimate is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

## **METHOD OF MEASUREMENT**

**602-4.1** The emulsified asphalt material for prime coat shall be measured by the ton. Volume shall be corrected to the volume at 60°F in accordance with ASTM D4311. The emulsified asphalt material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of emulsified asphalt material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the emulsified asphalt material is necessary. Water added to emulsified asphalt will not be measured for payment.

## **BASIS OF PAYMENT**

**602-5.1** Payment shall be made at the contract unit price per ton for emulsified asphalt prime coat. This price shall be full compensation for furnishing all materials and for all preparation, delivering, and applying the materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

|                |   |
|----------------|---|
| Item P-602-5.1 | Emulsified Asphalt Prime Coat - per ton |
|----------------|---|

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |  |
|------------|--|
| ASTM D2995 | Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors |
| ASTM D3628 | Standard Practice for Selection and Use of Emulsified Asphalts   |

**END OF ITEM P-602**

Page Intentionally Blank

## Item P-603 Emulsified Asphalt Tack Coat

### DESCRIPTION

**603-1.1** This item shall consist of preparing and treating an asphalt or concrete surface with asphalt material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

### MATERIALS

**603-2.1 Asphalt materials.** The asphalt material shall be an emulsified asphalt as specified in ASTM D3628 as an asphalt application for tack coat appropriate to local conditions. The emulsified asphalt shall not be diluted. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the asphalt material to the Resident Project Representative (RPR) before the asphalt material is applied for review and acceptance. The furnishing of COA for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

### CONSTRUCTION METHODS

**603-3.1 Weather limitations.** The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is 50°F or above; the temperature has not been below 35°F for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

**603-3.2 Equipment.** The Contractor shall provide equipment for heating and applying the emulsified asphalt material. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour or seven (700) feet per minute.

The equipment will be tested under pressure for leaks and to ensure proper set-up before use to verify truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application, spray-bar height and pressure and pump speed, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use.

The distributor truck shall be equipped with a minimum 12-foot spreader spray bar with individual nozzle control with computer-controlled application rates. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the emulsion, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

The distributor truck shall be equipped to effectively heat and mix the material to the required temperature prior to application as required. Heating and mixing shall be done in accordance with the manufacturer's recommendations. Do not overheat or over mix the material.

The distributor shall be equipped with a hand sprayer.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.



A power broom and/or power blower suitable for cleaning the surfaces to which the asphalt tack coat is to be applied shall be provided.

**603-3.3 Application of emulsified asphalt material.** The emulsified asphalt shall not be diluted. Immediately before applying the emulsified asphalt tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

The emulsified asphalt material shall be uniformly applied with an asphalt distributor at the rates appropriate for the conditions and surface specified in the table below. The type of asphalt material and application rate shall be approved by the RPR prior to application.

#### **Emulsified Asphalt**

| <b>Surface Type</b>     | <b>Residual Rate, gal/SY</b> | <b>Emulsion Application Bar Rate, gal/SY</b> |
|-------------------------|------------------------------|--|
| <b>New asphalt</b>      | 0.02-0.05                    | 0.03-0.07                                    |
| <b>Existing asphalt</b> | 0.04-0.07                    | 0.06-0.11                                    |

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the RPR. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed. When the tack coat has been disturbed by the Contractor, tack coat shall be reapplied at the Contractor's expense.

**603-3.4 Freight and waybills** The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

#### **METHOD OF MEASUREMENT**

**603-4.1** The emulsified asphalt material for tack coat shall be measured by the ton. Volume shall be corrected to the volume at 60°F in accordance with ASTM D1250. The emulsified asphalt material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of emulsified asphalt material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the emulsified asphalt material is necessary. Water added to emulsified asphalt will not be measured for payment.

#### **BASIS OF PAYMENT**

**603.5-1** Payment shall be made at the contract unit price per ton of emulsified asphalt material. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603-5.1              Emulsified Asphalt Tack Coat – per ton

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |  |
|------------|--|
| ASTM D1250 | Standard Guide for Use of the Petroleum Measurement Tables   |
| ASTM D2995 | Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors |
| ASTM D3628 | Standard Practice for Selection and Use of Emulsified Asphalts   |

**END ITEM P-603**

Page Intentionally Blank

## Item P-605 Joint Sealants for Pavements

### DESCRIPTION

**605-1.1** This item will consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

### MATERIALS

**605-2.1 Joint sealants.** Joint sealant materials must meet the requirements of:

ASTM D5893 Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete to Asphalt Pavements

Each lot or batch of sealant must be delivered to the jobsite in the manufacturer's original sealed container. Each container must be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and must be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

**605-2.2 Backer rod.** The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be  $25\% \pm 5\%$  larger in diameter than the nominal width of the joint.

### CONSTRUCTION METHODS

**605-3.1 Time of application.** Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

**605-3.2 Equipment.** Machines, tools, and equipment used in the performance of the work required by this section must be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, seven (7) days prior to use on the project.

**a. Tractor-mounted routing tool.** Not applicable

**b. Concrete saw.** Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

**c. Waterblasting equipment.** The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor must demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

**d. Hand tools.** Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

**e. Hot-poured sealing equipment.** The unit applicators used for heating and installing ASTM D6690 joint sealant materials must be mobile and must be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit must be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

**f. Cold-applied, single-component sealing equipment.** The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

**605-3.3 Preparation of joints.** Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor must demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

**a. Sawing.** All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

**b. Sealing.** Immediately before sealing, the joints must be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning must be accomplished by sandblasting or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge must be sandblasted clean. Sandblasting must be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. Only air compressors with operable oil and water traps must be used. The joint faces must be surface dry when the seal is applied.

**c. Backer Rod.** When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

**605-3.4 Installation of sealants.** Joints and cracks must be inspected for proper width, depth, alignment, and preparation, and must be approved by the RPR before sealing is allowed. Sealants must be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints and cracks from the bottom up and, if indicated on the plans, form a "Band-Aid" type surface section by overfilling the joint and then distributing the sealant and shaping the "Band-Aid" section as shown on the plans with a properly configured "V" shaped squeegee. No depression of the joint sealant over the joint or crack will be allowed. If the sealant subsides, leaving a depression in the top of the sealant, additional sealant must be applied within one week of original sealing operations to fill the depression. This additional sealant, if required must be included in the unit price bid for the crack or joint seal item.

Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case must gravity methods

or pouring pots be used to install the sealant material. Traffic must not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

**605-3.5 Inspection.** The Contractor must inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project must be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

**605-3.6 Clean-up.** Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

#### **METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

**605-4.1** Joint sealing shall be considered incidental to the placement of concrete for the Snow Melt Apron or trench drains. No separate payment shall be made for the installation of saw cut joints and associated joint sealant.

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |   |
|------------|---|
| ASTM D789  | Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)  |
| ASTM D5249 | Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints |
| ASTM D6690 | Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt  |

### Advisory Circulars (AC)

|                |   |
|----------------|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
|----------------|---|

**END ITEM P-605**

## Item P-610 Concrete for Miscellaneous Structures

### DESCRIPTION

**610-1.1** This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete which are cast-in-place.

### MATERIALS

**610-2.1 General.** Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

**a. Reactivity.** Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion of either or both test specimens is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix. If expansion of either the coarse or fine aggregate exceeds 0.08% at 14 days, limit the alkali of the concrete to be less than or equal to 3.0 lb per cubic yard (1.8 kg per cubic meter), calculated in accordance with FAA Engineering Brief 106.

If the expansion is greater than 0.20% the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation or aggregates that meet P-501 reactivity test requirements may be utilized.

**610-2.2 Coarse aggregate.** The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

#### Coarse Aggregate Grading Requirements

| Maximum Aggregate Size | ASTM C33, Table 3 Grading Requirements (Size No.) |
|------------------------|---|
| 1 inch (25 mm)         | 57  |
| ¾ inch (19 mm)         | 67  |

**610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking.** Not used.



**610-2.3 Fine aggregate.** The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

**610-2.4 Cement.** Cement shall conform to the requirements of ASTM C 150, Type I or II or ASTM C 595, Type IP.

**610-2.5 Cementitious materials.**

**a. Fly ash.** Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 13% and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the RPR.

**b. Slag cement (ground granulated blast furnace (GGBF)).** Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

**610-2.6 Water.** Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

**610-2.7 Admixtures.** The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

**a. Air-entraining admixtures.** Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

**b. Water-reducing admixtures.** Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

**c. Other chemical admixtures.** The use of set retarding, and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

**610-2.8 Premolded joint material.** Premolded joint material for expansion joints shall meet the requirements of ASTM D1751 or D1752.

**610-2.9 Joint filler.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.

**610-2.10 Steel reinforcement.** Reinforcing shall consist of reinforcing steel conforming to the requirements of ASTM A615.

**610-2.11 Materials for curing concrete.** Curing materials shall conform to ASTM C309 for White-Pigmented Liquid Membrane-Forming Compound, Type 2, Class B.

**610 2.12 Dowel bars.** Dowel bars shall be plain steel bars conforming to ASTM A 615, Grade 60, and shall be free from burring or other deformation restricting slippage in the concrete.

The full-length dowel bars shall be epoxy coated conforming to the requirements of AASHTO M 254 with a rust preventative epoxy. The total section of the dowel, including the cut ends, shall be epoxy coated. The minimum thickness of epoxy coating shall be 7 mils. The dowel shall be thoroughly cleaned prior to coating.

No sleeves for dowel bars used in expansion joints will be required.

## CONSTRUCTION METHODS

**610-3.1 General.** The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

**610-3.2 Concrete Mixture.** The concrete shall develop a compressive strength of 5,000 psi for the snow melt apron, all other items shall have a compressive strength of 4,000 psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard. The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches as determined by ASTM C143.

**610-3.3 Mixing.** Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F nor more than 100°F. The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

**610-3.4 Forms.** Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

**610-3.5 Placing reinforcement.** All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

**610-3.6 Embedded items.** Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or

any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

**610-3.7 Concrete Consistency.** The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

**610-3.8 Placing concrete.** All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet. Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

**610-3.9 Vibration.** Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

**610-3.10 Joints.**

**(a) General.**

(1) Longitudinal and transverse joints shall be constructed as indicated on the plans and in accordance with these requirements. All joints shall be constructed true to line with their face perpendicular to the surface of the pavement. Joints shall not vary more than 1/2 inch (13 mm) from a true line or from their designated position. The vertical surface of the pavement adjacent to all expansion joints shall be finished to a true plane and edges to a radius of 1/4 inch (6 mm) or as shown on the plans. The surface across the joints shall be tested with a 16-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. Transverse joints shall be at right angles to the centerline of the pavement and shall extend the full width of the slab. The transverse joints in succeeding lanes shall be placed in line with similar joints in the first lane. All joints shall be so prepared, finished, or cut to provide a groove of the width and depth shown on the plans.

Particular attention shall be given to dowel placement. Dowels shall be accurately and firmly placed during paving operations. Placement shall be parallel to the surface of the pavement, parallel to each other, and perpendicular to the joint. In no case will any dowel be bent.

Dowels shall be of the size as specified and placed in the locations as shown on the plans. They shall be rigidly held in the proper horizontal and vertical alignment by an approved assembly device to be left permanently in place. In the event of slip-form operations, dowels within 10 feet of the paver shall have three 1 cubic yard batches of concrete dumped directly on them before the paver reaches the dowels to assure retention of alignment during paver coverage. Dowels shall be so aligned that they will not vary more than 1/4-inch per foot of the dowel from being parallel to the surface of the pavement and perpendicular to the face of the joint after all concrete has been placed or finished. At the Contractor's option, dowels may be drilled into the edge of the concrete slab provided the above tolerances are met and the method of drilling does not damage the concrete. In no case will any dowel be bent. Dowels shall not be placed using dowel insertion equipment in any case.

If dowels are drilled in, the holes shall be filled with epoxy cement or other approved cementing material placed around the dowel to adequately fill the void between dowel and concrete.

All dowels shall be thoroughly coated with epoxy to prevent the concrete from binding to the dowel.

With either type of installation, the dowels must be placed to the tolerances specified.

(2) **Sawing of Joints.** When joints in concrete pavements are sawed, the joints shall be cut as shown on the plans. Equipment shall be as described in Section P-605. The circular cutter shall be capable of cutting a groove in a straight line and shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans. When shown on the plans or required by the specifications, the top portion of the slot or groove shall be widened by means of a second shallower cut or by suitable and approved beveling to provide adequate space for joint sealers. Sawing of the joints shall commence as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling or tearing. Sawing shall be carried on both during the day and night as required. The joints shall be sawed at the required spacing consecutively in sequence of the concrete placement, unless otherwise approved by the Engineer.

(a) Construction. Longitudinal construction joints necessary for lane construction shall be slipformed or formed against suitable side forms (usually made of steel), as indicated in the plans. These longitudinal joints necessary for lane construction shall be located and constructed in accordance with the details shown on the plans. Longitudinal construction joints shall be sawed to provide a groove at the top conforming to the details and dimensions indicated on the plans. Provisions shall be made for the installation of dowels as noted on the plans.

(b) Contraction or weakened plane type. The joints sawed in the top of the slab shall be installed where indicated on the drawings.

Contraction or weakened plane type intermediate longitudinal joints shall be saw-cut in two cuts. The first cut on all contraction or weakened plane type intermediate longitudinal or transverse joints shall be made as early as possible after the concrete has been placed to control cracking and shall be 1/8-inch wide and shall be carried to the depth as shown on the plans. The second cut shall be 3/8-inch wide and shall be centered over the first cut so as to uniformly remove 1/8-inch from both sides of the cut. The top of the joint shall be chamfered 1/8-inch on each side. The depth of the second cut shall be such as to comply with the joint sealant manufacturer's specifications. The second cut may be made no earlier than three days after the concrete is placed. Where spacers are required between saw blades to obtain the required size of cut, the spacers shall be of adequate size to prevent bending of the blades and assure that cuts are of uniform size and parallel.

The Contractor will be allowed to use a hand-controlled saw which saws full-depth with one cut only if he can produce the specified joints free of spalls, cracking, or raveling. Otherwise, the Contractor will be required to use "gang" saws which are controlled with controlled guidance. If the sawed joints are spalled, cracked, or raveled beyond the extent of the finished specified joint, that slab so damaged shall be removed and replaced at Contractor's expense.

The sawed joint shall be straight and of uniform width and depth. In either case, the joint shall be clean cut so that spalling, cracking, or raveling will be avoided. Dowels shall be installed across these joints where indicated on the plans.

**610-3.11 Finishing.** All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated. A light to medium broom finish shall be provided. Final finish shall be confirmed and approved with the RPR prior to concrete placement.

**610-3.12 Curing and protection.** All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

**610-3.13 Cold weather placing.** When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

**610-3.14 Hot weather placing.** When concrete is placed in hot weather greater than 85°F (30 °C), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

## QUALITY ASSURANCE (QA)

**610-4.1 Quality Assurance sampling and testing.** Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

**610-4.2 Defective work.** Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

## **METHOD OF MEASUREMENT**

**610-5.1** Concrete shall be considered incidental to all items unless specified herein and no separate measurement shall be made.

**610-5.2** Concrete cap for existing utilities shall be measured by the number of linear feet of concrete cap installed.

**610-5.3** Concrete curb shall be measured by the number of linear feet of curb installed.

**610-5.4** Concrete for the Snow Melt Apron shall be measured by the number of square yards based on the dimensions shown on the plans of concrete complete in place and accepted.

## **BASIS OF PAYMENT**

**610-6.1** Concrete shall be considered incidental to all items unless specified herein and no separate payment shall be made.

**610-6.2** Payment shall be made at the contract price by the number or linear feet of concrete cap existing utilities as required by the RPR.

**610-6.3** Payment shall be made at the contract price by the number of linear feet of concrete curb installed. Removal of the existing curb, exiting curb mounted fence, and reinstallation of the fence on top of the new concrete curb shall be considered incidental to this item or work and no separate payment made for these items. See plans for details.

**610-6.4** Payment shall be made at the contract price by the number of square yards of concrete for the Snow Melt Apron. Concrete used as backfill around new pipes or duct shall be considered incidental, and no separate payment shall be made. Concrete placed for the foundation of the equipment shed shall be considered incidental to that item of work. All joint seal materials and installation shall be considered incidental, and no separate payment shall be made, see Section P-605. This price shall be full compensation for furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item. All piping and elements of the snow melt system shall be included under the separate Lump Sum bid item for the Mechanical Snow Melt System (M-100).

These prices shall be full compensation for furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the items.

Payment will be made under:

|                |   |
|----------------|---|
| Item P-610-6.1 | Concrete Cap Existing Utilities – per linear foot |
| Item P-610-6.2 | Concrete Curb – per linear foot                   |
| Item P-610-6.3 | Concrete – Snow Melt Apron - per square yard      |

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |   |
|------------|---|
| ASTM A184  | Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement                            |
| ASTM A615  | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement                      |
| ASTM A704  | Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement                        |
| ASTM A706  | Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement                   |
| ASTM A775  | Standard Specification for Epoxy-Coated Steel Reinforcing Bars  |
| ASTM A884  | Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement                                |
| ASTM A934  | Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars                                    |
| ASTM A1064 | Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete    |
| ASTM C31   | Standard Practice for Making and Curing Concrete Test Specimens in the Field                                    |
| ASTM C33   | Standard Specification for Concrete Aggregates  |
| ASTM C39   | Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens                                 |
| ASTM C94   | Standard Specification for Ready-Mixed Concrete   |
| ASTM C136  | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates                                 |
| ASTM C114  | Standard Test Methods for Chemical Analysis of Hydraulic Cement   |
| ASTM C136  | Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates   |
| ASTM C143  | Standard Test Method for Slump of Hydraulic-Cement Concrete   |
| ASTM C150  | Standard Specification for Portland Cement  |
| ASTM C171  | Standard Specification for Sheet Materials for Curing Concrete  |
| ASTM C172  | Standard Practice for Sampling Freshly Mixed Concrete   |
| ASTM C231  | Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method                           |
| ASTM C260  | Standard Specification for Air-Entraining Admixtures for Concrete   |
| ASTM C309  | Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete                                |
| ASTM C311  | Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete |

|            |   |
|------------|---|
| ASTM C494  | Standard Specification for Chemical Admixtures for Concrete   |
| ASTM C618  | Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete  |
| ASTM C666  | Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing   |
| ASTM C685  | Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing   |
| ASTM C989  | Standard Specification for Slag Cement for Use in Concrete and Mortars  |
| ASTM C1017 | Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete  |
| ASTM C1077 | Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation                |
| ASTM C1157 | Standard Performance Specification for Hydraulic Cement   |
| ASTM C1260 | Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)  |
| ASTM C1365 | Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis |
| ASTM C1602 | Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete   |
| ASTM D1751 | Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)    |
| ASTM D1752 | Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction          |

American Concrete Institute (ACI)

|          |                                      |
|----------|--------------------------------------|
| ACI 305R | Hot Weather Concreting               |
| ACI 306R | Cold Weather Concreting              |
| ACI 308R | Guide to External Curing of Concrete |
| ACI 309R | Guide for Consolidation of Concrete  |

**END OF ITEM P-610**



## Item P-620 Runway and Taxiway Marking

### DESCRIPTION

**620-1.1** This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

### MATERIALS

**620-2.1 Materials acceptance.** The Contractor shall furnish manufacturer’s certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer’s surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

**620-2.2 Marking materials.**

**Table 1. Marking Materials**

| Paint <sup>1</sup> |        |                     |                                | Glass Beads <sup>2</sup> |                          |
|--------------------|--------|---------------------|--------------------------------|--------------------------|--------------------------|
| Type               | Color  | Fed Std. 595 Number | Application Rate Maximum       | Type                     | Application Rate Minimum |
| I                  | White  | 37925               | 115 ft <sup>2</sup> /gal. max. | III                      | 10 lb./gal. min.         |
| I                  | Yellow | 33538 or 33655      | 115 ft <sup>2</sup> /gal. max. | III                      | 10 lb./gal. min.         |
| I                  | Black  | 37038               | 115 ft <sup>2</sup> /gal. max. | --                       | --                       |

<sup>1</sup> See paragraph 620-2.2a

<sup>2</sup> See paragraph 620-2.2b

**a. Paint.** Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

**Waterborne.** Paint shall meet the requirements of Federal Specification TT-P-1952F, Type I or II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

**b. Reflective media.** Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type III.

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black paint.

## CONSTRUCTION METHODS

**620-3.1 Weather limitations.** Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

**620-3.2 Equipment.** Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

**620-3.3 Preparation of surfaces.** Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminants that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

**a. Preparation of new pavement surfaces.** The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

**b. Preparation of pavement to remove existing markings.** Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings.

**c. Preparation of pavement markings prior to remarking.** Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

**620-3.4 Layout of markings.** The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be as shown on the plans.

**620-3.5 Application.** A period of 3 days shall elapse between placement of surface course or seal coat and application of the first coat of paint and 30 calendar days shall elapse between the application of the surface course or seal coat and the second coat of paint and reflective media for all permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch in 50 feet, and marking dimensions and spacing shall be within the following tolerances:

| Dimension and Spacing            | Tolerance  |
|----------------------------------|------------|
| 36 inches or less                | ± 1/2 inch |
| greater than 36 inches to 6 feet | ± 1 inch   |
| greater than 6 feet to 60 feet   | ± 2 inch   |

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

**620-3.6 Application--preformed thermoplastic airport pavement markings.** Not applicable.

**620-3.7 Control strip.** Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

**620-3.8 Retro-reflectance.** Not used.

**620-3.9 Protection and cleanup.** After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

### Method of Measurement

**620-4.1** The quantity of temporary and permanent markings shall be paid for shall be measured by the number of square feet of painting.

**620-4.2** The quantity of removal of temporary markings, including fog seal, shall be measured by the number of square feet for temporary markings removed as specified in paragraph 620-3.3b.

**620-4.3** The quantity of reflective media shall be paid for by the number of pounds of reflective media.

### **Basis of Payment**

**620-5.1** This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by the RPR in accordance with these specifications.

**620-5.2** Payment for temporary and permanent markings shall be made at the contract price for the number of square feet of painting, this payment shall include all surface preparation required prior to the application of markings.

**620-5.3** Payment for removal of temporary marking, including fog seal, shall be made at the contract price for the number of square feet for temporary marking removal as specified in paragraph 620-3.3b.

**620-5.4** Payment for reflective media shall be made at the contract unit price for the number of pounds of reflective media.

Payment will be made under:

|                 |  |                   |
|-----------------|--|-------------------|
| Item P-620-5.1a | Temporary Airfield Marking, 1 Coat, No Beads           | - per square foot |
| Item P-620-5.1b | Remove Temporary Airfield Marking, including Fog Seal- | per square foot   |
| Item P-620-5.2  | Airfield Marking                                       | - per square foot |
| Item P-620-5.3  | Reflective Media                                       | - per Pound       |

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### ASTM International (ASTM)

|            |   |
|------------|---|
| ASTM D476  | Standard Classification for Dry Pigmentary Titanium Dioxide Products  |
| ASTM D968  | Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive   |
| ASTM D1652 | Standard Test Method for Epoxy Content of Epoxy Resins  |
| ASTM D2074 | Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method                             |
| ASTM D2240 | Standard Test Method for Rubber Property - Durometer Hardness   |
| ASTM D7585 | Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments   |
| ASTM E303  | Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester  |
| ASTM E1710 | Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer       |
| ASTM E2302 | Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer |
| ASTM G154  | Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials   |

### Code of Federal Regulations (CFR)

|  |  |
|--|--|
| 40 CFR Part 60, Appendix A-7, Method 24    | Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings |
| 29 CFR Part 1910.1200 Hazard Communication |  |

### Federal Specifications (FED SPEC)

|                     |   |
|---------------------|---|
| FED SPEC TT-B-1325D | Beads (Glass Spheres) Retro-Reflective          |
| FED SPEC TT-P-1952F | Paint, Traffic and Airfield Marking, Waterborne |
| FED STD 595         | Colors used in Government Procurement           |

### Commercial Item Description

|           |                               |
|-----------|-------------------------------|
| A-A-2886B | Paint, Traffic, Solvent Based |
|-----------|-------------------------------|

### Advisory Circulars (AC)

|                |  |
|----------------|--|
| AC 150/5340-1  | Standards for Airport Markings   |
| AC 150/5320-12 | Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces |

**END OF ITEM P-620**

## Item D-701 Pipe for Storm Drains and Culverts

### DESCRIPTION

**701-1.1** This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.

### MATERIALS

**701-2.1** Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

**701-2.2 Pipe.** The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

|             |  |
|-------------|--|
| AASHTO M294 | Standard Specification for Corrugated Polyethylene Pipe, 12- to 60-in. Diameter  |
| ASTM D1784  | Standard Classification System and Basis for Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds. |
| AWWA C900   | Standard Specification for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 inch through 60 inch  |

**701-2.3 Concrete.** Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

**701-2.4 Rubber gaskets.** Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477.

**701-2.5 Joint mortar.** Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

**701-2.6 Joint fillers.** Poured filler for joints shall conform to the requirements of ASTM D6690.

**701-2.7 Plastic gaskets.** Plastic gaskets shall conform to the requirements of ASTM C990.

**701-2.8. Controlled low-strength material (CLSM).** Not used.

**701-2.9 Precast box culverts.** Manufactured in accordance with and conforming to ASTM C1433.

**701-2.10 Precast concrete pipe.** Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

**701-2.11 Trench Drain.** Trench Drain shall be Dura Trench Prefabricated 8" Wide Trench Drain (DTPF8-HDBP15ZSA) and Grate (10B24DI) or approved equal. See plans for details and requirements.

## CONSTRUCTION METHODS

**701-3.1 Excavation.** The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches on each side. The trench walls shall be approximately vertical.

The Contractor shall comply with all current federal, state and local rules and regulations governing the safety of men and materials during the excavation, installation and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactory jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

**701-3.2 Bedding.** The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

**a. Rigid pipe.** Not used.

**b. Flexible pipe.** Not used.

**c. Other pipe materials.** For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of 3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 sieve. For all other areas, no more than 50% of the material shall pass the No. 200 sieve. The bedding shall have a thickness of at least 6 inches below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

**701-3.3 Laying pipe.** The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

**701-3.4 Joining pipe.** Joints shall be made with rubber gaskets.



Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

**a. Concrete pipe.** Not used.

**b. Metal pipe.** Not used.

**c. PVC, Polyethylene, or Polypropylene pipe.** Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

**701-3.5 Embedment and Overfill.** Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

#### **701-3.5-1 Embedment Material Requirements**

**a. Concrete Pipe.** Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

**b. Plastic and fiberglass Pipe.** Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

#### **701-3.5-2 Placement of Embedment Material**

The embedment material shall be compacted in layers not exceeding 6 inches on each side of the pipe and shall be brought up one foot above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches and shall be brought up evenly on each side of the pipe to one foot above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

#### **701-3.6 Overfill**

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and relaid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be placed and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D1557. The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

#### **701-3.7 Inspection Requirements**

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90 degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Flexible pipes shall be inspected for rips, tears, joint separations, soil migration, cracks, localized buckling, settlement, alignment, and deflection.

**701-3.8 Trench Drain Installation.** See details and requirements on the plans.

## **METHOD OF MEASUREMENT**

**701-4.1** The HDPE 4-foot pipe stub with cap will be measured on a lump sum basis.

**701-4.2** The length of pipe or trench drain shall be measured in linear feet of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

## **BASIS OF PAYMENT**

**701-5.0** These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, placement, backfill, and all items necessary for a complete installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

**701-5.1** Payment will be made at the contract lump sum price for 18-inch HDPE 4-foot Pipe Stub with Cap.

**701-5.2** Payment will be made at the contract unit price per linear foot for concrete encased 12-inch C900 Pipe.

**701-5.3** Payment will be made at the contract unit price per linear foot for trench drain, including all concrete, reinforcing steel, trench drain assembly, grates, frames, transverse joints, sawing and sealing of the joint between the trench drain concrete and the new or existing asphalt or concrete pavements, and all items and labor necessary to provide a complete installation of this item.

Payment will be made under:

|              |   |
|--------------|---|
| Item 701-5.1 | 18-inch High-Density Polyethylene (HDPE) 4-foot Pipe Stub with Cap – Lump Sum |
| Item 701-5.2 | 12-inch C900 Pipe, Concrete Encased – per linear foot                         |
| Item 701-5.3 | Trench Drain – per linear foot  |

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### American Association of State Highway and Transportation Officials (AASHTO)

|             |   |
|-------------|---|
| AASHTO M167 | Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches       |
| AASHTO M190 | Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches                                      |
| AASHTO M196 | Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains   |
| AASHTO M219 | Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches            |
| AASHTO M243 | Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches         |
| AASHTO M252 | Standard Specification for Corrugated Polyethylene Drainage Pipe  |
| AASHTO M294 | Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter                               |
| AASHTO M304 | Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter |
| AASHTO MP20 | Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter              |

### ASTM International (ASTM)

|           |   |
|-----------|---|
| ASTM A760 | Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains                                   |
| ASTM A761 | Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches |
| ASTM A762 | Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains                                 |
| ASTM A849 | Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe       |
| ASTM B745 | Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains   |
| ASTM C14  | Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe                                    |
| ASTM C76  | Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe                                       |
| ASTM C94  | Standard Specification for Ready Mixed Concrete   |
| ASTM C144 | Standard Specification for Aggregate for Masonry Mortar   |
| ASTM C150 | Standard Specification for Portland Cement  |

|            |   |
|------------|---|
| ASTM C443  | Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets  |
| ASTM C506  | Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe  |
| ASTM C507  | Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe                                     |
| ASTM C655  | Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe   |
| ASTM C990  | Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants   |
| ASTM C1433 | Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers             |
| ASTM D1056 | Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber  |
| ASTM D3034 | Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings   |
| ASTM D3212 | Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals                              |
| ASTM D3262 | Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe                                   |
| ASTM D3282 | Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes                       |
| ASTM D4161 | Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals |
| ASTM D6690 | Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements                              |
| ASTM F477  | Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe   |
| ASTM F667  | Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings   |
| ASTM F714  | Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter                                       |
| ASTM F794  | Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter  |
| ASTM F894  | Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe                                     |
| ASTM F949  | Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings                  |
| ASTM F2435 | Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe   |

|            |  |
|------------|--|
| ASTM F2562 | Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage                                       |
| ASTM F2736 | Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe                             |
| ASTM F2764 | Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications |
| ASTM F2881 | Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications      |

National Fire Protection Association (NFPA)

|          |   |
|----------|---|
| NFPA 415 | Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways |
|----------|---|

**END ITEM D-701**

Page Intentionally Left Blank

## Item D-751 Manholes, Catch Basins, Inlets and Inspection Holes

### DESCRIPTION

**751-1.1** This item shall consist of construction of manholes, catch basins, inlets, and inspection holes, in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

### MATERIALS

**751-2.1 Brick.** Not used.

**751-2.2 Mortar.** Mortar shall consist of one part Portland cement and two parts sand. The cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

**751-2.3 Concrete.** Plain and reinforced concrete used in structures, connections of pipes with structures, and the support of structures or frames shall conform to the requirements of Item P-610.

**751-2.4 Precast concrete pipe manhole rings.** Precast concrete pipe manhole rings shall conform to the requirements of ASTM C478. Unless otherwise specified, the risers and offset cone sections shall have an inside diameter of not less than 36 inches (90 cm) nor more than 48 inches (120 cm). There shall be a gasket between individual sections and sections cemented together with mortar on the inside of the manhole. Gaskets shall conform to the requirements of ASTM C443.

**751-2.5 Corrugated metal.** Corrugated metal shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M36.

**751-2.6 Frames, covers, and grates.** The castings shall conform to one of the following requirements:

- a. ASTM A48, Class 35B: Gray iron castings
- b. ASTM A47: Malleable iron castings
- c. ASTM A27: Steel castings
- d. ASTM A283, Grade D: Structural steel for grates and frames
- e. ASTM A536, Grade 65-45-12: Ductile iron castings
- f. ASTM A897: Austempered ductile iron castings

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings, aircraft gear configuration and/or direct loading, specified.

Each frame and cover or grate unit shall be provided with fastening members to prevent it from being dislodged by traffic but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

**751-2.7 Steps.** The steps or ladder bars shall be gray or malleable cast iron or galvanized steel. The steps shall be the size, length, and shape shown on the plans and those steps that are not galvanized shall be given a coat of asphalt paint, when directed.

**751-2.8 Precast inlet structures.** Manufactured in accordance with and conforming to ASTM C913.

**751-2.9 Trench Drain Inlet Structures.** Inlet shall be Dura Trench Prefabricated 8" I.D. Catch Basin (DTCBPF8-HDBP15ZSA-GLCP6-D60") with Grate (10B24DI) or approved equal. Depth of each structure shall be per plan requirements. Inlet, Frame, and Grate must support H2O loading, including airport fuel trucks. See plans for details and requirements.

## **CONSTRUCTION METHODS**

### **751-3.1 Unclassified excavation.**

**a.** The Contractor shall excavate for structures and footings to the lines and grades or elevations, shown on the plans, or as staked by the RPR. 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 approximately only; and the RPR may direct, in writing, changes in dimensions or elevations of footings necessary for 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 RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. Where concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing is 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 cost of bracing, sheathing, or shoring shall be included in the unit price bid for the structure.

**d.** All 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 not disturb or damage finished masonry. The cost of removal shall be included in the unit price bid for the structure.

**e.** After excavation is completed for each structure, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

### **751-3.2 Brick structures.** Not used.

**751-3.3 Concrete structures.** Concrete structures which are to be cast-in-place within the project boundaries shall be built on prepared foundations, conforming to the dimensions and shape indicated on the plans. The construction shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

All invert channels shall be constructed and shaped accurately to be smooth, uniform, and cause minimum resistance to flowing water. The interior bottom shall be sloped to the outlet.

**751-3.4 Precast concrete structures.** Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program.

Precast concrete structures shall conform to ASTM C478. Precast concrete structures shall be constructed on prepared or previously placed slab foundations conforming to the dimensions and locations shown on the plans. All precast concrete sections necessary to build a completed structure shall be furnished. The different sections shall fit together readily. Joints between precast concrete risers and tops shall be full-bedded in cement mortar and shall: (1) be smoothed to a uniform surface on both interior and exterior of the structure or (2) utilize a rubber gasket per ASTM C443. The top of the upper precast concrete section shall be suitably formed and dimensioned to receive the metal frame and cover or grate, or other cap, as



required. Provision shall be made for any connections for lateral pipe, including drops and leads that may be installed in the structure. The flow lines shall be smooth, uniform, and cause minimum resistance to flow. The metal or metal encapsulated steps that are embedded or built into the side walls shall be aligned and placed in accordance to ASTM C478. When a metal ladder replaces the steps, it shall be securely fastened into position.

**751-3.5 Corrugated metal structures.** Not applicable.

**751-3.6 Inlet and outlet pipes.** Inlet and outlet pipes shall extend through the walls of the structures a sufficient distance beyond the outside surface to allow for connections. They shall be cut off flush with the wall on the inside surface of the structure, unless otherwise directed. For concrete or brick structures, mortar shall be placed around these pipes to form a tight, neat connection.

**751-3.7 Placement and treatment of castings, frames, and fittings.** All castings, frames, and fittings shall be placed in the positions indicated on the plans or as directed by the RPR, and shall be set true to line and elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

When frames or fittings are placed on previously constructed masonry, the bearing surface of the masonry shall be brought true to line and grade and shall present an even bearing surface so the entire face or back of the unit will come in contact with the masonry. The unit shall be set in mortar beds and anchored to the masonry as indicated on the plans or as directed by the RPR. All units shall set firm and secure.

After the frames or fittings have been set in final position, the concrete or mortar shall be allowed to harden for seven (7) days before the grates or covers are placed and fastened down.

**751-3.8 Installation of steps.** Not used.

**751-3.9 Backfilling.**

a. After a structure has been completed, the area around it shall be backfilled with approved material, in horizontal layers not to exceed 8 inches (200 mm) in loose depth, and compacted to the density required in Item P-152. Each layer shall be deposited evenly around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

b. Backfill shall not be placed against any structure until approved by the RPR. For concrete structures, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill and placing methods.

c. Backfill shall not be measured for direct payment. Performance of this work shall be considered an obligation of the Contractor covered under the contract unit price for the structure involved.

**751-3.10 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 approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

**751-3.11 Trench Drain Inlet Structure Installation.** See details and requirements on the plans.

**751-4.1** Manholes, catch basins, inlets, and inspection holes shall be measured by the unit.

**751-5.1** The accepted quantities of manholes, catch basins, inlets, and inspection holes will be paid for at the contract unit price per each in place when completed. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown on the plans; and for all labor equipment, tools and incidentals necessary to complete the structure.

Item D-751-5.3 Inlets - per each

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM A27 Standard Specification for Steel Castings, Carbon, for General Application

ASTM A47 Standard Specification for Ferritic Malleable Iron Castings

ASTM A48 Standard Specification for Gray Iron Castings

ASTM A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

ASTM A283 Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates

ASTM A536 Standard Specification for Ductile Iron Castings

ASTM A897 Standard Specification for Austempered Ductile Iron Castings

ASTM C32 Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)

ASTM C144 Standard Specification for Aggregate for Masonry Mortar

ASTM C150 Standard Specification for Portland Cement

ASTM C443 Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.

ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections

ASTM C913 Standard Specification for Precast Concrete Water and Wastewater Structures.

AASHTO M36 Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains

Truckee Tahoe Airport District  
Reconstruct Apron A2

## 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 and removal of existing duct banks. 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.

### 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 RPR.

**b.** Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR 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 RPR 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 RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR 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 mils 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. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth."

**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 and Schedule 80 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 III –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.** 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 meet all requirements of P-610 of this specification.

**110-2.7 Precast concrete structures.** Not applicable.

**110-2.8 Flowable backfill.** Not applicable.

**110-2.9 Detectable warning tape.** Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable), orange (telephone/fiber optic cabling) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches 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 RPR 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 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 per 100 feet. 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. Under pavement, the top of the duct bank shall not be less than 18 inches below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches below finished grade.

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 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 recleaned 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 RPR 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 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.

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 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 sieve. Flowable backfill may alternatively be used.

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 RPR. 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.

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 RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion per federal, state, and local requirements is incidental to Item L-110.

Unless otherwise specified, excavated materials that are deemed by the RPR 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 RPR and compacted per Item P-152.

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 RPR, 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.** 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 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 beyond the edges of the pavement or 3 feet 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 thick prior to its initial set. The Contractor shall space the conduits not less than 3 inches 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 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 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 intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR 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 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 wide tape, 8 inches minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inch wide tape only for single conduit runs. Utilize the 6-inch wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches 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 RPR 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 RPR.

**110-3.3 Conduits without concrete encasement.** Trenches for single-conduit lines shall be not less than 6 inches nor more than 12 inches 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 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 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 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 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 apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (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 apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches 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 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 intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

**110-3.4 Markers.** Not applicable.

**110-3.5 Backfilling for conduits.** For conduits, 8 inches 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 per Item P-152 except that material used for back fill shall be select material not larger than 4 inches 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 RPR.

**110-3.6 Backfilling for duct banks.** After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 "Excavation and Embankment" except that the material used for backfill shall be select material not larger than 4 inches in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet 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 RPR.

**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, seeding, or mulching 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.

**110-3.8 Ownership of removed cable.** The contractor shall have ownership of any removed cable. All removed cable shall be disposed of off Airport property.

## METHOD OF MEASUREMENT

**110-4.1** Underground conduits and duct banks shall be measured by the linear feet of conduits and duct banks installed, including encasement, locator tape, trenching and backfill with designated material, and restoration, and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.



## **BASIS OF PAYMENT**

**110-5.1** Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

|                |  |
|----------------|--|
| Item L-110-5.1 | Concrete Encased Electrical Conduit, 1-way, 2-inch - per linear foot |
| Item L-110-5.2 | Concrete Encased Electrical Conduit, 2-way, 3-inch – per linear foot |
| Item L-110-5.3 | Concrete Encased Electrical Conduit, 2-way, 4-inch – per linear foot |

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### Advisory Circular (AC)

|                |   |
|----------------|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
| AC 150/5345-53 | Airport Lighting Equipment Certification Program        |

### ASTM International (ASTM)

|           |  |
|-----------|--|
| ASTM A615 | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement |
|-----------|--|

### National Fire Protection Association (NFPA)

|         |                                |
|---------|--------------------------------|
| NFPA-70 | National Electrical Code (NEC) |
|---------|--------------------------------|

### Underwriters Laboratories (UL)

|                  |   |
|------------------|---|
| UL Standard 6    | Electrical Rigid Metal Conduit - Steel                        |
| UL Standard 514B | Conduit, Tubing, and Cable Fittings                           |
| UL Standard 514C | Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers      |
| UL Standard 1242 | Electrical Intermediate Metal Conduit Steel                   |
| UL Standard 651  | Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings |
| UL Standard 651A | Type EB and A Rigid PVC Conduit and HDPE Conduit              |

**END OF ITEM L-110**

## Item L-115 Electrical Manholes and Junction Structures

### DESCRIPTION

**115-1.1** This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR.

### EQUIPMENT AND MATERIALS

#### **115-2.1 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 so requested by the RPR.

**b.** Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) 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 RPR 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 any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to 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 the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

**d.** The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR 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 the date of 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.

**115-2.2 Concrete structures.** Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. Cast-in-place concrete structures shall be as shown on the plans.

**115-2.3 Precast concrete structures.** Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program. Provide precast concrete structures where shown on the plans.

Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand 35,000 lb. single wheel aircraft loads and 100,000 lb. dual wheel aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

**115-2.4 Junction Boxes.** Junction boxes shall be L-867 Class 1 (non-load bearing) Size D airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch thickness for L-867. All junction boxes shall be provided with both internal and external ground lugs.

**115-2.5 Mortar.** The mortar shall be composed of one part of Portland cement and two parts of mortar sand, by volume. The Portland cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

**115-2.6 Concrete.** All concrete used in structures shall conform to the requirements of Item P-610, Structural Portland Cement Concrete.

**115-2.7 Frames and covers.** The frames shall conform to one of the following requirements:

- a. ASTM A48      Gray iron castings
- b. ASTM A47      Malleable iron castings
- c. ASTM A27      Steel castings
- d. ASTM A283, Grade D      Structural steel for grates and frames
- e. ASTM A536      Ductile iron castings
- f. ASTM A897      Austempered ductile iron castings

All castings specified shall withstand a maximum tire pressure of 120 psi and maximum load of 100,000 lbs. on dual aircraft loading.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word "ELECTRIC" or other approved designation cast on it as called for on the plans. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

**115-2.8 Ladders.** Ladders, if required, shall be galvanized steel or as shown on the plans.

**115-2.9 Reinforcing Steel.** All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A 615, Grade 60.

**115-2.10 Bedding/Special Backfill.** Bedding or special backfill shall be as shown on the plans.

**115-2.11 Flowable Backfill.** Not applicable.

**115-2.12 Cable Trays.** Not applicable.

**115-2.13 Plastic conduit.** Plastic conduit shall comply with Item L-110, Airport Underground Electrical Duct Banks and Conduits.

**115-2.14 Conduit terminators.** Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

**115-2.15 Pulling-in irons.** Pulling-in irons shall be manufactured with 7/8-inch (22 mm) diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch diameter with an ultimate strength of 270,000 psi). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

**115-2.16 Ground rods.** Not used.

## CONSTRUCTION METHODS

**115-3.1 Unclassified excavation.** It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and 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 RPR. All seams, crevices, 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. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be affected 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.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 inches (150 mm) of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

**115-3.2 Concrete structures.** Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

**115-3.3 Precast unit installations.** Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

**115-3.4 Placement and treatment of castings, frames and fittings.** All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written permission is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the RPR and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

**115-3.5 Installation of ladders.** Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be case in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

**115-3.6 Removal of sheeting and bracing.** In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

**115-3.7 Backfilling.** After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR. Backfill shall not be placed against any structure until approval is given by the RPR. In the case of concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR 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.

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

**115-3.8 Connection of duct banks.** To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

**115-3.9 Grounding.** Not used.

**115-3.10 Cleanup and repair.** After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer's recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

**115-3.11 Restoration.** After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, grading and restoration shall be considered incidental to the respective L-115 pay item.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials.

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.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

**115-3.12 Inspection.** Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected. The earth resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

**115-3.13 Manhole elevation adjustments.** Not applicable.

**115-3.14 Duct extension to existing ducts.** Where existing concrete encased ducts are to be extended, the duct extension shall be concrete encased plastic conduit. The fittings to connect the ducts together shall be standard manufactured connectors designed and approved for the purpose. The duct extensions shall be installed according to the concrete encased duct detail and as shown on the plans.

#### **METHOD OF MEASUREMENT**

**115-4.1** Electrical manholes and junction structures shall be measured by each unit completed in place and accepted. The following items shall be included in the price of each unit: All required excavation and dewatering; sheeting and bracing; all required backfilling with on-site materials; restoration of all surfaces and finished grading and turfing; all required connections; temporary cables and connections; and ground rod testing

**115-4.2 Manhole elevation adjustments.** Not used.

#### **BASIS OF PAYMENT**

**115-5.1** The accepted quantity of electrical manholes and junction structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

**115-5.2** Not used.

Payment will be made under:

|                |   |
|----------------|---|
| Item L-115-5.2 | Electrical Junction Structure L-867, Class 1, Size D, with steel lid and concrete collar - Per Each |
|----------------|---|



## **MATERIAL REQUIREMENTS**

|                                       |   |
|---------------------------------------|---|
| ANSI/IEEE STD 81                      | IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System |
| Advisory Circular (AC) 150/5345-7     | Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits                            |
| AC 150/5345-26                        | Specification for L-823 Plug and Receptacle, Cable Connectors   |
| AC 150/5345-42                        | Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories                  |
| AC 150/5340-30                        | Design and Installation Details for Airport Visual Aids   |
| AC 150/5345-53                        | Airport Lighting Equipment Certification Program  |
| Commercial Item Description A-A 59544 | Cable and Wire, Electrical (Power, Fixed Installation)  |
| ASTM A27                              | Standard Specification for Steel Castings, Carbon, for General Application                                    |
| ASTM A47                              | Standard Specification for Ferritic Malleable Iron Castings   |
| ASTM A48                              | Standard Specification for Gray Iron Castings   |
| ASTM A123                             | Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products                      |
| ASTM A283                             | Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates                          |
| ASTM A536                             | Standard Specification for Ductile Iron Castings  |
| ASTM A615                             | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement                    |
| ASTM A897                             | Standard Specification for Austempered Ductile Iron Castings  |
| ASTM C144                             | Standard Specification for Aggregate for Masonry Mortar   |
| ASTM C150                             | Standard Specification for Portland Cement  |
| ASTM C206                             | Standard Specification for Finishing Hydrated Lime  |
| FAA EB #83                            | In Pavement Light Fixture Bolts   |
| MIL-P-21035                           | Paint High Zinc Dust Content, Galvanizing Repair  |
| NFPA-70                               | National Electrical Code (NEC)  |

**END OF ITEM L-115**

Intentionally Left Blank

## **Item L-125 Installation of Airport Lighting Systems**

### **DESCRIPTION**

**125-1.1** This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

### **EQUIPMENT AND MATERIALS**

#### **125-2.1 General.**

**a.** Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not perform as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

**b.** Manufacturer's certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

**c.** All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly 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 clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

**d.** The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be submitted in electronic PDF format, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR's opinion, does not meet the system design and the standards and codes, specified herein.

**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 4 years 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.

**125-2.2 Conduit/Duct.** Not applicable.

**125-2.3 Cable and Counterpoise.** Not applicable.

**125-2.4 Tape.** Not applicable.

**125-2.5 Cable Connections.** Not applicable.

**125-2.6 Retroreflective Markers.** Retroreflective markers shall be type L-853 and shall conform to the requirements of AC 150/5345-39. See plans for size and details.

In this contract the Contractor shall remove the existing soil anchors and reflective markers and dispose of these materials off airport property. In areas shown the Contractor shall furnish and install new taxiway retroreflective markers with new soil anchors.

The soil anchors shall be 14-inch soil closed end anchors. The posts shall be a “Safe-Hit” Soil Mount Airport Marker, 24 inches in height, with a white post and a 14-inch wrap of blue retroreflective material (Part No. SH 624 GP3-WB-14), or approval equal to match the existing reflective markers at the airport.

**125-2.7 Runway and Taxiway Lights.** Not required.

**125-2.8 Runway and Taxiway Signs.** Not required.

**125-2.9 Runway End Identifier Light (REIL).** Not required.

**125-2.10 Precision Approach Path Indicator (PAPI).** Not required.

**125-2.11 Circuit Selector Cabinet.** Not required.

**125-2.12 Light Base and Transformer Housings.** Not required.

**125-2.13 Isolation Transformers.** Not required.

## **INSTALLATION**

**125-3.1 Installation.** The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

**125-3.2 Testing.** Not applicable.

**125-3.3 Shipping and Storage.** Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer’s recommendations.

**125-3.4 Elevated and In-pavement Lights.** Not applicable.

## **METHOD OF MEASUREMENT**

**125-4.1 Retroreflective markers** will be measured by the number installed as completed units in place, ready for operation, and accepted by the RPR.

## **BASIS OF PAYMENT**

All concrete and reinforcing steel installed for any items in the L-125 specification shall be considered incidental to each item. All concrete must conform to Item P-610, but no separate payment shall be made for concrete and/or reinforcing steel under Item P-610 of this specification.

**125-5.2** Payment will be made at the Contract unit prices for each complete retroreflective marker installed by the Contractor and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete these items.

Payment will be made under:

|                |  |
|----------------|--|
| Item L-125-5.1 | New Retroreflective Marker, L-853, 24-inch -per each |
|----------------|--|

## **REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

### Advisory Circulars (AC)

|                |  |
|----------------|--|
| AC 150/5340-18 | Standards for Airport Sign Systems   |
| AC 150/5340-26 | Maintenance of Airport Visual Aid Facilities   |
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids                                      |
| AC 150/5345-5  | Circuit Selector Switch  |
| AC 150/5345-7  | Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits           |
| AC 150/5345-26 | Specification for L-823 Plug and Receptacle, Cable Connectors                                |
| AC 150/5345-28 | Precision Approach Path Indicator (PAPI) Systems   |
| AC 150/5345-39 | Specification for L-853, Runway and Taxiway Retroreflective Markers                          |
| AC 150/5345-42 | Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories |
| AC 150/5345-44 | Specification for Runway and Taxiway Signs   |
| AC 150/5345-46 | Specification for Runway and Taxiway Light Fixtures  |
| AC 150/5345-47 | Specification for Series to Series Isolation Transformers for Airport Lighting Systems       |
| AC 150/5345-51 | Specification for Discharge-Type Flashing Light Equipment                                    |
| AC 150/5345-53 | Airport Lighting Equipment Certification Program   |

### Engineering Brief (EB)

|           |   |
|-----------|---|
| EB No. 67 | Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures |
|-----------|---|

## **END OF ITEM L-125**

Page Intentionally Left Blank

## **Item M-100 Mechanical Snow Melt System**

### **DESCRIPTION**

**100-1.1** This item shall include furnishing and installing a mechanical snow melt system at the indicated location and conforming to the lines, grades, and dimensions shown on the plans or as required by the Engineer.

### **MATERIALS AND CONSTRUCTION**

**100-2.1** See details, specifications, and installation requirements on the plan sheets.

### **METHOD OF MEASUREMENT**

**100-3.1** The method of measurement for furnishing and installing the mechanical snow melt system shall be at the contract lump sum price for this item. This item shall include all components of the snow melt system, including but not limited to, piping, connections, manifolds, sensors, pullboxes, electrical duct, mechanical equipment, boiler, pumps, concrete foundation for the mechanical shed, vehicle protection bollards, dry well, trenching and backfill, boiler, glycol feeders, hydronic separators, hydronic expansion tanks, pumps, sensors, controllers, and all other items and installations as shown on the snow melt plan sheets M1.0 to M2.1, E1.0 to E4.4, and S1.1 to S5.1 required to ensure that a complete snow melt system is installed. The new concrete apron shall be measured and paid separately under Specification P-610.

### **BASIS OF PAYMENT**

**100-4.1** Payment shall be made at the contract lump sum price for furnishing and installing a mechanical snow melt system. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, for all backfill, and for all labor, equipment, tools, and incidentals necessary to complete this item as shown in the plans and to the satisfaction of the Engineer.

Payment will be made under:

|                                     |   |          |
|-------------------------------------|---|----------|
| Mechanical Snow Melt System (M-100) | - | Lump Sum |
|-------------------------------------|---|----------|

**\*\* END OF ITEM M-100 \*\***

Page Intentionally Left Blank



*APPENDIX A*  
*CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)*

**APPENDIX A**

**TRUCKEE TAHOE AIRPORT**  
**TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)**

**Prepared by:**

**Brandley Engineering**  
**6125 King Road, Suite 201**  
**Loomis, CA 95650**  
**Telephone (916) 652-4725**  
**Fax (916) 652-9029**

**March 10, 2025**

**APPENDIX C. SAFETY AND PHASING PLAN CHECKLIST**

This appendix is keyed to Chapter 2. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not a required submittal.

**Table C-1. CSPP Checklist**

| Coordination  | Reference      | Addressed? |    |    | Remarks |
|---|----------------|------------|----|----|---------|
|   |                | Yes        | No | NA |         |
| General Considerations  |                |            |    |    |         |
| Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified. | <u>2.5</u>     | X          |    |    |         |
| Operational safety is a standing agenda item for construction progress meetings.  | <u>2.5</u>     | X          |    |    |         |
| Scheduling of the construction phases is properly addressed.  | <u>2.6</u>     | X          |    |    |         |
| Any formal agreements are established.  | <u>2.5.3</u>   |            |    | X  |         |
| Areas and Operations Affected by Construction Activity  |                |            |    |    |         |
| Drawings showing affected areas are included.   | <u>2.7.1</u>   | X          |    |    |         |
| Closed or partially closed runways, taxiways, and aprons are depicted on drawings.  | <u>2.7.1.1</u> | X          |    |    |         |
| Access routes used by ARFF vehicles affected by the project are addressed.  | <u>2.7.1.2</u> | X          |    |    |         |
| Access routes used by airport and airline support vehicles affected by the project are addressed.   | <u>2.7.1.3</u> | X          |    |    |         |
| Underground utilities, including water supplies for firefighting and drainage.  | <u>2.7.1.4</u> | X          |    |    |         |

| Coordination  | Reference                              | Addressed? |    |    | Remarks |
|---|--|------------|----|----|---------|
|   |  | Yes        | No | NA |         |
| Approach/departure surfaces affected by heights of temporary objects are addressed.   | <u>2.7.1.5</u>                         | X          |    |    |         |
| Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings. | <u>2.7.1</u>                           | X          |    |    |         |
| Temporary changes to taxi operations are addressed.   | <u>2.7.2.1</u>                         | X          |    |    |         |
| Detours for ARFF and other airport vehicles are identified.   | <u>2.7.2.2</u>                         | X          |    |    |         |
| Maintenance of essential utilities and underground infrastructure is addressed.   | <u>2.7.2.3</u>                         | X          |    |    |         |
| Temporary changes to air traffic control procedures are addressed.  | <u>2.7.2.4</u>                         | X          |    |    |         |
| <b>NAVAIDs</b>  |  |            |    |    |         |
| Critical areas for NAVAIDs are depicted on drawings.  | <u>2.8</u>                             | X          |    |    |         |
| Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.               | <u>2.8</u>                             | X          |    |    |         |
| Protection of NAVAID facilities is addressed.   | <u>2.8</u>                             | X          |    |    |         |
| The required distance and direction from each NAVAID to any construction activity is depicted on drawings.                          | <u>2.8</u>                             | X          |    |    |         |
| Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.         | <u>2.8, 2.13.1, 2.13.5.3.1, 2.18.1</u> | X          |    |    |         |
| <b>Contractor Access</b>  |  |            |    |    |         |
| The CSPP addresses areas to which contractor will have access and how   | <u>2.9</u>                             | X          |    |    |         |

| Coordination   | Reference               | Addressed? |    |    | Remarks |
|--|-------------------------|------------|----|----|---------|
|  |                         | Yes        | No | NA |         |
| the areas will be accessed.  |                         |            |    |    |         |
| The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.   | <u>2.9</u>              |            |    | X  |         |
| The location of stockpiled construction materials is depicted on drawings.   | <u>2.9.1</u>            | X          |    |    |         |
| The requirement for stockpiles in the ROFA to be approved by FAA is included.  | <u>2.9.1</u>            | X          |    |    |         |
| Requirements for proper stockpiling of materials are included.   | <u>2.9.1</u>            | X          |    |    |         |
| Construction site parking is addressed.  | <u>2.9.2.1</u>          | X          |    |    |         |
| Construction equipment parking is addressed.   | <u>2.9.2.2</u>          | X          |    |    |         |
| Access and haul roads are addressed.   | <u>2.9.2.3</u>          | X          |    |    |         |
| A requirement for marking and lighting of vehicles to comply with <u>AC 150/5210-5, Painting, Marking and Lighting of Vehicles Used on an Airport</u> , is included. | <u>2.9.2.4</u>          | X          |    |    |         |
| Proper vehicle operations, including requirements for escorts, are described.  | <u>2.9.2.5, 2.9.2.6</u> | X          |    |    |         |
| Training requirements for vehicle drivers are addressed.   | <u>2.9.2.7</u>          | X          |    |    |         |
| Two-way radio communications procedures are described.   | <u>2.9.2.9</u>          | X          |    |    |         |
| Maintenance of the secured area of the airport is addressed.   | <u>2.9.2.10</u>         | X          |    |    |         |
| <b>Wildlife Management</b>   |                         |            |    |    |         |
| The airport operator's wildlife management procedures are addressed.   | <u>2.10</u>             | X          |    |    |         |

| Coordination   | Reference                      | Addressed? |    |    | Remarks |
|--|--------------------------------|------------|----|----|---------|
|  |                                | Yes        | No | NA |         |
| Foreign Object Debris Management   |                                |            |    |    |         |
| The airport operator’s FOD management procedures are addressed.  | <u>2.11</u>                    | X          |    |    |         |
| Hazardous Materials Management   |                                |            |    |    |         |
| The airport operator’s hazardous materials management procedures are addressed.  | <u>2.12</u>                    | X          |    |    |         |
| Notification of Construction Activities  |                                |            |    |    |         |
| Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.  | <u>2.13</u>                    | X          |    |    |         |
| Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified. | <u>2.13.1</u>                  | X          |    |    |         |
| A list of local ATO/Technical Operations personnel is included.  | <u>2.13.1</u>                  |            |    | X  |         |
| A list of ATCT managers on duty is included.   | <u>2.13.1</u>                  | X          |    |    |         |
| A list of authorized representatives to the OCC is included.   | <u>2.13.2</u>                  |            |    | X  |         |
| Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.  | <u>2.8, 2.13.2, 2.18.3.3.9</u> | X          |    |    |         |
| Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.  | <u>2.13.2</u>                  |            |    | X  |         |
| Emergency notification procedures for medical, fire fighting, and police   | <u>2.13.3</u>                  | X          |    |    |         |

| Coordination   | Reference   | Addressed? |    |    | Remarks |
|--|---|------------|----|----|---------|
|  |   | Yes        | No | NA |         |
| response are addressed.  |   |            |    |    |         |
| Coordination with ARFF personnel for non-emergency issues is addressed.  | <u>2.13.4</u>   | X          |    |    |         |
| Notification to the FAA under 14 CFR parts 77 and 157 is addressed.  | <u>2.13.5</u>   | X          |    |    |         |
| Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.                      | <u>2.13.5.3.2</u>   |            |    | X  |         |
| <b>Inspection Requirements</b>   |   |            |    |    |         |
| Daily and interim inspections by both the airport operator and contractor are specified.   | <u>2.14.1</u> , <u>2.14.2</u>   | X          |    |    |         |
| Final inspections at certificated airports are specified when required.  | <u>2.14.3</u>   | X          |    |    |         |
| <b>Underground Utilities</b>   |   |            |    |    |         |
| Procedures for protecting existing underground facilities in excavation areas are described.                                       | <u>2.15</u>   | X          |    |    |         |
| <b>Penalties</b>   |   |            |    |    |         |
| Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.                         | <u>2.16</u>   | X          |    |    |         |
| <b>Special Conditions</b>  |   |            |    |    |         |
| Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed. | <u>2.17</u>   | X          |    |    |         |
| <b>Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs</b>   |   |            |    |    |         |
| The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.                               | <u>2.18.1</u>   | X          |    |    |         |
| Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.  | <u>2.18.1</u> , <u>2.18.3</u> ,<br><u>2.18.4.2</u> ,<br><u>2.20.2.4</u> | X          |    |    |         |

| Coordination  | Reference                              | Addressed? |    |    | Remarks |
|---|--|------------|----|----|---------|
|   |  | Yes        | No | NA |         |
| The requirement for markings to be in compliance with <u>AC 150/5340-1</u> , <i>Standards for Airport Markings</i> , is specified.  | <u>2.18.2</u>                          | X          |    |    |         |
| Detailed specifications for materials and methods for temporary markings are provided.  | <u>2.18.2</u>                          |            |    | X  |         |
| The requirement for lighting to conform to <u>AC 150/5340-30</u> , <i>Design and Installation Details for Airport Visual Aids</i> ; <u>AC 150/5345-50</u> , <i>Specification for Portable Runway and Taxiway Lights</i> ; and <u>AC 150/5345-53</u> , <i>Airport Lighting Certification Program</i> , is specified. | <u>2.18.3</u>                          | X          |    |    |         |
| The use of a lighted X is specified where appropriate.  | <u>2.18.2.1.2</u> ,<br><u>2.18.3.2</u> | X          |    |    |         |
| The requirement for signs to conform to <u>AC 150/5345-44</u> , <i>Specification for Runway and Taxiway Signs</i> ; <u>AC 150/5340-18</u> , <i>Standards for Airport Sign Systems</i> ; and <u>AC 150/5345-53</u> , <i>Airport Lighting Certification Program</i> , is specified.                                   | <u>2.18.4</u>                          | X          |    |    |         |
| <b>Marking and Signs For Access Routes</b>  |  |            |    |    |         |
| The CSPP specifies that pavement markings and signs intended for construction personnel should conform to <u>AC 150/5340-18</u> and, to the extent practicable, with the MUTCD and/or State highway specifications.   | <u>2.18.4.2</u>                        | X          |    |    |         |
| <b>Hazard Marking and Lighting</b>  |  |            |    |    |         |
| Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.   | <u>2.20.1</u>                          | X          |    |    |         |



| Coordination   | Reference       | Addressed? |    |    | Remarks |
|--|-----------------|------------|----|----|---------|
|  |                 | Yes        | No | NA |         |
| Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.   | <u>2.20.1</u>   |            |    | X  |         |
| The CSPP considers less obvious construction-related hazards.  | <u>2.20.1</u>   | X          |    |    |         |
| Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.   | <u>2.20.2.1</u> | X          |    |    |         |
| The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.  | <u>2.20.2.1</u> | X          |    |    |         |
| Red lights meeting the luminance requirements of the State Highway Department are specified.   | <u>2.20.2.2</u> |            |    | X  |         |
| Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 inch high. | <u>2.20.2.3</u> | X          |    |    |         |
| Barricades are specified to indicate construction locations in which no part of an aircraft may enter.   | <u>2.20.2.3</u> | X          |    |    |         |
| Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.  | <u>2.20.2.5</u> | X          |    |    |         |
| Markings for temporary closures are specified.   | <u>2.20.2.5</u> |            |    | X  |         |
| The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.  | <u>2.20.2.7</u> | X          |    |    |         |

| Coordination  | Reference                           | Addressed? |    |    | Remarks |
|---|-------------------------------------|------------|----|----|---------|
|   |                                     | Yes        | No | NA |         |
| Work Zone Lighting for Nighttime Construction   |                                     |            |    |    |         |
| If work is to be conducted at night, the CSPP identifies construction lighting units and their general locations and aiming in relationship to the ATCT and active runways and taxiways.              | <u>2.21</u>                         |            |    | X  |         |
| Protection of Runway and Taxiway Safety Areas   |                                     |            |    |    |         |
| The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.   | <u>2.22.1.1,</u><br><u>2.22.3.1</u> | X          |    |    |         |
| The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM. | <u>2.22.1.2,</u><br><u>2.22.3.2</u> |            |    | X  |         |
| Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.   | <u>2.22.3.3</u>                     |            |    | X  |         |
| The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open, subject to approved exceptions.                           | <u>2.22.1.4</u>                     | X          |    |    |         |
| Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.  | <u>2.22.1.4</u>                     |            |    | X  |         |
| The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.   | <u>2.22.1.4</u>                     | X          |    |    |         |
| Grading and soil erosion control to maintain RSA/TSA standards are  | <u>2.22.3.5</u>                     | X          |    |    |         |

| Coordination   | Reference         | Addressed? |    |    | Remarks |
|--|-------------------|------------|----|----|---------|
|  |                   | Yes        | No | NA |         |
| addressed.   |                   |            |    |    |         |
| The CSPP specifies that equipment is to be removed from the ROFA when not in use.  | <u>2.22.2</u>     | X          |    |    |         |
| The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.   | <u>2.22.3</u>     | X          |    |    |         |
| Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.  | <u>2.22.4</u>     | X          |    |    |         |
| Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included. | <u>2.22.4.3.6</u> | X          |    |    |         |
| Provisions for protection of runway approach/departure areas and clearways are included.   | <u>2.22.6</u>     | X          |    |    |         |
| <b>Other Limitations on Construction</b>   |                   |            |    |    |         |
| The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.                  | <u>2.23.1.2</u>   | X          |    |    |         |
| The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.  | <u>2.23.1.3</u>   | X          |    |    |         |

**TRUCKEE TAHOE AIRPORT  
TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**CONSTRUCTION SAFETY AND PHASING PLAN**

**TABLE OF CONTENTS**

|           |  |    |
|-----------|--|----|
|           | INTRODUCTION .....                                     | 1  |
| 1.        | COORDINATION.....                                      | 1  |
| 2.        | PHASING .....  | 2  |
| 3.        | AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION .....    | 4  |
| 4.        | NAVAID PROTECTION.....                                 | 6  |
| 5.        | CONTRACTOR ACCESS .....                                | 7  |
| 6.        | WILDLIFE MANAGEMENT.....                               | 10 |
| 7.        | FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT.....            | 10 |
| 8.        | HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT .....          | 11 |
| 9.        | NOTIFICATION OF CONSTRUCTION ACTIVITIES .....          | 11 |
| 10.       | INSPECTION REQUIREMENTS .....                          | 13 |
| 11.       | UNDERGROUND UTILITIES.....                             | 13 |
| 12.       | PENALTIES .....  | 14 |
| 13.       | SPECIAL CONDITIONS.....                                | 14 |
| 14.       | RUNWAY AND TAXIWAY VISUAL AIDS.....                    | 14 |
| 15.       | MARKING AND SIGNS FOR ACCESS ROUTES.....               | 15 |
| 16.       | HAZARD MARKING AND LIGHTING.....                       | 15 |
| 17.       | PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS .....    | 16 |
| 18.       | OTHER LIMITATIONS ON CONSTRUCTION.....                 | 18 |
| EXHIBIT 1 | CONSTRUCTION SAFETY AND PHASING PLAN                   |    |
| EXHIBIT 2 | BARRICADE PLAN – PHASE 1A                              |    |
| EXHIBIT 3 | BARRICADE PLAN – PHASE 1                               |    |
| EXHIBIT 4 | BARRICADE PLAN – PHASE 2                               |    |
| EXHIBIT 5 | BARRICADE PLAN – HAUL ROADS                            |    |
| EXHIBIT 6 | CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST |    |

**TRUCKEE TAHOE AIRPORT  
TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**CONSTRUCTION SAFETY AND PHASING PLAN**

**INTRODUCTION**

The Truckee Tahoe Airport District, with Federal assistance from the Federal Aviation Administration under the Airport Improvement Program (AIP), proposes the reconstruction of Apron A2 at Truckee Tahoe Airport, Truckee, California. The Sponsor will comply and will require all parties involved with this project to comply with the Federal Aviation Administration (FAA) requirements regarding safety and phasing of construction projects on airports.

The purpose of this Construction Safety and Phasing Plan (CSPP) is to provide the contractor and project manager guidance for compliance with FAA rules and regulations, and associated requirements of the Truckee Tahoe Airport District, with regards to access onto air operations areas of Truckee Tahoe Airport, Truckee, California, during the construction of the subject project.

This Construction Safety and Phasing Plan is based on the guidance of FAA Advisory Circular 150/5370-2G, "Operational Safety on Airports During Construction."

Prior to issuance of Notice to Proceed, the Contractor will prepare a Safety Plan Compliance Document (SPCD) specifically for this project, furnish the SPCD to the Resident Project Representative (RPR), and obtain RPR's approval of the document.

The Checklist for FAA CSPP Review is included in this CSPP. The Contractor will address all items checked on this list in his/her Safety Plan Compliance Document (SPCD) submitted prior to beginning work on this project.

**1. COORDINATION**

(a) Progress Meetings

The Sponsor will conduct predesign meetings, prebid meetings, preconstruction conferences, and weekly construction meetings to introduce and maintain the subject of airport operational safety during construction, as follows:

- **Predesign Conference:** This meeting will be held as soon as sufficient preliminary design work has been completed and prior to preparation of the final plans and specifications. This meeting will be attended by the Design

Engineer, Airport Management, Air Transport Association regional representatives, Airline Pilots Association representatives, fixed base operators, airline representatives, FAA airport certification inspector, and the Civil Engineer of the FAA Airports District Office, as appropriate for the airport.

- Prebid Conference: This meeting will be held a minimum of 10 days prior to the bid opening date. The participants in this meeting will include prospective bidders, subcontractors, material suppliers, the Design Engineer, and Airport Management.
  - Preconstruction Conference: This conference will be conducted as soon as practicable after the contract has been awarded and before issuance of notice to proceed. The participants will include the Design Engineer, Resident Project Representative (RPR), Airport Management, Air Traffic Control Tower representatives, testing laboratory representative, Contractor and subcontractors, Contractor's project superintendent, airport users, utility companies affected by the proposed construction, Federal, State or local agencies affected by the proposed construction, and the Civil Engineer of the FAA Airports District Office, as applicable.
  - Weekly Meetings: Weekly progress meetings will be held at the airport. Operational safety will be a standing agenda item for discussion during weekly progress meetings throughout the construction of this project. The Contractor will present an updated progress report for the total work and a two-week look-ahead schedule. The participants will include the RPR, Airport Management, Air Traffic Control Tower representatives, testing laboratory representative, Contractor's project superintendent, subcontractors, airport users, and the Civil Engineer of the FAA Airports District Office, as applicable.
- (b) Scope or Schedule Changes – Changes in the scope or duration of the project may necessitate revisions to the CSPP. These revisions will be submitted for review and approval by the airport operator and the FAA.
- (c) FAA ATO Coordination – There is an existing FAA-owned VASI on Runway 20, and FAA-owned REILs on Runway 11. These facilities will remain in operation during the construction of this project and no FAA ATO Coordination will be required.

## **2. PHASING**

There are 60 working days allowed for completion of this project in two phases if Schedule A is accepted. There are 45 working days allowed for the completion of the project in a single phase if Schedule B is accepted. If Schedule B is accepted, then all work in Phases 1, 1A, and 2 will be constructed together in a single phase. The contractor's staging and storage area for Phase 1 will not be available to the contractor if Schedule B is accepted.

The scope of work included in this project is as follows:

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

(a) Phasing Elements – The staging for this project is as shown on the Construction Safety and Phasing Plan, Exhibit 1, and as follows:

| Phase | Contractor's Work                    | Contractor's Work Area   | Facility Closure   |
|-------|--------------------------------------|--------------------------|--|
| 1     | Reconstruct West Portion of Apron A2 | West Portion of Apron A2 | West Parking on Apron A2, Taxiway D between Taxiway A and Apron, Portion of Apron Taxilanes (No thru taxi) |
| 1A    | Construct Snow Melt Apron            | Portion of Apron A2      | Portion of Apron A2. Limited pedestrian access to terminal from the west                                   |
| 2     | Reconstruct East Portion of Apron A2 | East Portion of Apron A2 | East Parking on Apron A2, Taxiways E and F, and limited pedestrian access to terminal from the east.       |

The Phase 1 Contractor Storage and Staging Area will only be available for use prior to June 30 for Schedule A. The area must be broom clean and cleaned up to the satisfaction of the Airport and RPR by June 30. Regular airport operations will require the use of this area by aircraft starting July 1. This area is not available anytime if Schedule B is awarded.

Work in Phases 1 and 1A may be performed concurrently. Work in Phases 1 and 1A will be completed before starting work in Phase 2. Work in Phase 1A may be started prior to working in Phase 1.

Drainage improvements to be constructed in Phase 1 will require the closure of the parking area, sidewalks, and landscape area just west of the terminal building. The work in this area will be completed in five (5) working days. Closure of this area will be during working hours only and all trenches will be covered with approved trench plates or backfill completed prior to opening at the end of each day's working hours.

Drainage improvements to be constructed in Phase 2 will require isolated closure of the playground and lawn area east of the terminal. Barricades will be placed around the perimeter of the work area. Closure of the playground and lawn area will only be during working hours and all trenches shall be covered with approved trench plates or backfill completed prior to opening at the end of each day's working hours.

Pedestrian traffic from the apron will be maintained by placement of barricades, as shown on the Construction Safety Drawings, but the access path will be limited to portion of Apron A2 not under reconstruction.

No work will be performed on Saturday or Sunday.

At the preconstruction conference or two weeks prior to start of work (whichever is greater), the Contractor will provide a detailed schedule showing limits of proposed work and the locations of barricades. All schedules will be updated and coordinated with the Airport General Manager and the RPR in order to NOTAM areas of closure. Prior to start of work the Contractor, RPR, and Airport Operations will establish emergency contact information for working days and non-working days.

At each weekly meeting the Contractor will provide a detailed two week look ahead schedule showing limits of proposed work and the locations of barricades.

- (b) Construction Safety Drawings - The scope of the project and details of the phasing are shown on the Construction Safety Drawings, as follows:

- Exhibit 1 – Construction Safety and Phasing Plan
- Exhibit 2 – Barricade Plan – Phase 1A
- Exhibit 3 – Barricade Plan – Phase 1
- Exhibit 4 – Barricade Plan – Phase 2
- Exhibit 5 - Barricade Plan – Haul Roads

### **3. AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION**

- (a) Identification of Affected Areas. All areas affected by the construction activity in this project are shown on the Construction Safety and Phasing Plan, Exhibit 1, and the Barricade Plans, Exhibits 2 through 5. Identified on these drawings are Aircraft Rescue and Fire Fighting (ARFF) access routes and access routes to be used by airport support vehicles and the contractor. Also shown are approach/departure surfaces affected by heights of construction equipment and other temporary objects. Construction areas, storage areas, and haul routes are also depicted on these drawings.

- (b) Mitigation of Effects. It is necessary to maintain the safety and efficiency of airport operations during construction operations. The establishment of the following procedures will be required:

- (1) Temporary Changes to Runway and/or Taxiway Operations:

- During the construction of this project runways, taxiways, and all aprons other than Apron A2 will be open to aircraft operations at all times.



Facilities closed during the construction of this project during various phases will be Apron A2, Taxiways D, E, and F, and portion of apron taxilanes. The Contractor will have no access to the runways or taxiways and his/her operations will be limited to haul routes and the Contractor Storage and Staging Area as shown on Exhibit 1.

Owner will furnish barricades for Contractor's use. Contractor will place, maintain, and remove barricades as shown on Exhibit 1, Construction Safety and Phasing Plan, and Exhibits 2 through 5, Barricade Plans. Contractor will cover signs as shown on the Closed Facility Signage Tables on Exhibits 3 and 4. These barricades and sign closures will be placed at the beginning of construction and removed at the conclusion of work for the project.

During operations when material, equipment or personnel are being hauled from Contractor's storage site across an active apron the contractor will provide a qualified flagger to monitor Tower Ground Control frequency 118.30 MHZ and escort the contractor to the active working area. The Contractor will maintain constant radio contact (118.30 MHZ) with the contractor-furnished flagger. Contractor will provide Contractor's qualified flagger with means to communicate directly with the designated foreman controlling work on the project.

The Airport Owner will provide a qualified flagger to monitor Tower Ground Control frequency 118.30 MHZ, escort the contractor through any area open to aircraft, and observe aircraft operations at all times when Contractor is working near active taxiways and runways.

Aircraft will have the right of way at all times.

(2) Detours for ARFF and Other Airport Vehicles:

All ARFF and other airport vehicles will have access to all areas on the airport during construction of this project other than the area being reconstructed in this project. The detour routes for these vehicles are shown in blue on Exhibit 1.

(3) Maintenance of Essential Utilities and Underground Infrastructure:

Underground infrastructure that will be affected by this project will be the electrical cable and duct and drainage facilities. It will be necessary during this project to protect all utilities and underground infrastructure. There will be no temporary utilities installed. If one of the existing utility lines is damaged, specifications require the Contractor to immediately repair it at his/her cost and to reimburse the Airport for damages due to

shutdown. If these damaged utilities cannot be immediately repaired, the Airport will immediately issue required NOTAMs.

(4) Temporary Changes to Air Traffic Control Procedures.

There will be no changes to air traffic control procedures during the construction of this project. Prior to any construction a NOTAM will be issued identifying areas of closure and times of closures. The RPR, who will be on site during construction, will be equipped with a two-way radio and will monitor Tower Ground Control frequency and notify aircraft operating in the area of facility closures or other safety related items.

#### 4. NAVAID PROTECTION

There are navigational aids (NAVAIDs) existing on this airport. These NAVAIDs and corresponding critical areas are shown on the Construction Safety and Phasing Plan, Exhibit 1. Such facilities must be fully protected during the entire construction time.

(a) NAVAIDs Affected by Construction

The only NAVAIDs on the airport consist of an FAA-owned and operated VASI on Runway 20 and FAA-owned and operated REILs on Runway 11. The VASI and REILs will not be affected by construction.

(b) NAVAIDs Placed out of Service

No NAVAIDs or other electronic equipment at the airport will be placed out of service during the proposed construction.

(c) Protection of NAVAIDs Remaining in Service

The only NAVAIDs existing on the airport are the VASI on Runway 20 and the REILs on Runway 11. The Contractor will be limited to no closer than 2,000 feet from the NAVAID facility as shown on the CSPP drawing, Exhibit 1. No work under this contract will be accomplished in the vicinity of these facilities.

(d) NOTAMs

No NOTAMs will be required pertaining to NAVAIDs during the construction of this project.

(e) Protection of Underground Cable

There are underground ducts and cable in the construction area to serve the lights and NAVAIDs. The location of these facilities will be identified by USA (811) before any work in their general vicinity is started as described in Article 11 of

this CSPP. Throughout the entire time of this construction these facilities will be protected by the Contractor from any possible damage, including crossing with unauthorized equipment.

(f) Temporary NAVAIDs

No temporary NAVAIDs will be required during the construction of this project.

## **5. CONTRACTOR ACCESS**

(a) Stockpiled Construction Materials

The Contractor will be allowed to temporarily stockpile excavation materials in the Contractor's Storage and Staging Area as shown on the CSPP Drawing, Exhibit 1, and as designated by the Airport Manager. All stockpiled materials will be removed prior to completion of the project and any damage to the pavements caused by the Contractor will be repaired at the Contractor's expense. Contractor's Storage and Staging area for Phase 1 is only available prior to June 30 for Schedule A and will not be available for use if Schedule B is awarded.

Contractor will clear and grade the area for storage. No separate payment will be made for clearing and grading. The area will be restored to its original condition once the project is complete, including hydroseeding any disturbed areas.

Contractor will barricade designated Storage and Staging Area and install BMPs as required by the SWPPP. Designated staging areas are located near aircraft travel route. Contractor will maintain dust control on all stockpiles. Stockpiles located near aircraft travel routes will be protected from jet blast by maintaining a wet surface. Contractor will make provisions to keep surface wet and protected from jet blast seven (7) days of the week.

Stockpiled materials will not be permitted within the Runway Safety Area (RSA) and Object Free Zone (OFZ). If it becomes necessary to stockpile materials in the Runway Object Free Area (ROFA), the Airport will submit a 7460-1 form to the FAA Airports District Office in Walnut Creek, California.

Stockpiles will be limited to a height of 8 feet, will be graded to drain, and will be clearly marked and lighted during hours of restricted visibility or darkness in accordance with Article 16 of this CSPP. The Contractor will determine and verify that stockpiled materials are stabilized and stored at the approved location shown on the CSPP drawings so as not to be a hazard to aircraft operations and to prevent attraction of wildlife (see Article 6) and foreign object damage (see Article 7).

Contractor will haul off and dispose of any unused unclassified excavation materials that are not used for embankment on this project.

Contractor will be responsible for maintaining the security, safety, and cleanliness of the work site and Contractor's Storage and Staging Area at all times.

(b) Vehicle and Pedestrian Operations

It is critical that all pedestrians and vehicles are prevented from unauthorized entry to the Air Operations Area (AOA). The Construction Safety and Phasing Plans clearly delineate the designated access and haul routes, employee parking areas, and construction equipment parking areas. Contractor's personnel and equipment will be limited to the construction areas, parking areas, and haul routes shown on the CSPP Drawings.

Vehicle parking areas will not impact NAVAID signals or penetrate FAR Part 77 imaginary surfaces.

Employee parking and construction vehicle parking will be restricted to the Contractor's Storage and Staging Areas as shown on the CSPP drawing, Exhibit 1. Vehicle and construction traffic will be held off from all active paved areas and not allowed to cross the active runway. Access to the construction site will be from Soaring Way to Chandelle Way. Contractor will improve roads as needed to provide access to the project site. These haul roads are shown on Exhibit 1, CSPP. The details of the haul roads are shown on Exhibits 2, 3, 4, and 5, Barricade Plans.

The western haul route will be utilized to access the west portion of Apron A2 (Phases 1 and 1A). Swing gate south of fuel island will be used by the Contractor for the western haul route. Haul route will continue north from the swing gate along a route, marked by barricades, west of the wash rack and east of the fuel island to Phase 1 work area.

The eastern haul route provides access to the east portion of Apron A2 (Phase 2). Automatic Gate #5 southeast of the fire station will be used by the Contractor for access to the airport. Contractor will delineate, with barricades or cones, a 30-foot wide haul route along the west edge of the jet parking ramp as shown on Exhibit 5, Barricade Plan – Haul Roads.

Contractor will maintain haul roads and paved surfaces clear of debris at all times. Dust control will be maintained by the contractor on all haul roads. Paved surfaces will be maintained clear of debris at all times. Runways and taxiways will be maintained broom clean. Contractor will ensure that dust is not blown onto or through the AWOS during hauling operations.

Contractor will limit all construction vehicle activity to the limits of the project and the haul road shown on the CSPP drawings. No construction traffic will be

allowed beyond the limits of the work area. Contractor's personnel and equipment are not allowed on Taxiway A or Runway 11-29 at any time.

Contractor's vehicles and equipment will include a flag on a staff attached to the vehicle so that the flag will be readily visible. The flag will be at least a 3-foot by 3-foot square having a checkered pattern of international orange and white squares at least 1 foot on each side. During periods of low visibility conditions, dawn, or dusk hours, Contractor vehicles and equipment will be equipped with an amber flashing light mounted on the uppermost part of the vehicle structure.

All vehicle/equipment operators driving on the airport must have an appropriate level of knowledge of airport rules and regulations. The Contractor will be required to submit a list of authorized vehicle operators to the Airport. The vehicle operators will be required to maintain a current drivers' license. Driver training will be limited to designating areas to be avoided and areas where free access will be available. No vehicle will be allowed to travel on any airport pavement that is used for aircraft operations.

All vehicle operators will be trained on airport procedures, safety, work area limits, security, and communications. All personnel with movement area driving privileges will be trained on pedestrian and ground vehicle procedures, including consequences of noncompliance, prior to moving on foot, or operating a ground vehicle, in movement areas or safety areas.

(c) Two-Way Radio Communications

Vehicular traffic located in or crossing an active movement area will have a working two-way radio tuned to Tower Ground Control frequency 118.3 or be escorted by a contractor-furnished flag person. The driver, through personal observation, will confirm that no aircraft is approaching the vehicle position. Construction personnel may operate in a movement area without two-way radio communication provided a NOTAM is issued closing the area and that the area is properly marked to prevent incursions and the contractor's flagger is present to control operations. Two-way radio communications are required on Tower Ground Control frequency 118.3 MHz. Continuous monitoring is required. The contractor's flagger will be trained by the Airport on all movement area procedures and Tower communication procedures.

(d) Airport Security

There is a security fence and gates around most of the property of this airport. Only Contractor and subcontractor employees will be permitted in the work sites. They will be required to enter and exit the airport areas restricted to public access and airport operations area only through the designated Contractor gates. All gates used by the Contractor will be kept locked except for entrance of approved personnel and equipment or will be manned by trained flaggers to control entrance to the airport.

The security fence, designated Contractor gate, and secure areas on the airport are shown on the CSPP Drawing.

All Contractor personnel working on airport shall wear in a prominent location identification badges on their outermost garment or identifying logo on their hard hats. The type and wording of badges or hard hats will be approved by the Airport.

In accordance with the requirements of the Federal Aviation Administration as set forth in FAR 107.11(F), the Contractor will take all steps necessary to assure Owner that the backgrounds of all employees have been checked to the extent necessary to assure that permitting them unescorted access to any area on the airport controlled for security reasons is appropriate. This background check, to the extent allowable by law, will include at a minimum references and prior employment histories to the extent necessary to verify representations made by the employee relating to employment in the preceding 5 years.

## **6. WILDLIFE MANAGEMENT**

The airport is fenced with a perimeter fence and security gates. The gate used by the Contractor can remain open during the day and closed at night as stated in Article 5 of this CSPP.

Care will be taken to prevent inadvertent incidents of wildlife hazards by ensuring access gates are properly secured to prevent wildlife entry.

The Contractor will carefully control and continuously remove waste or loose materials that might attract wildlife and be aware of and avoid construction activities that might attract wildlife such as:

- Trash – Food scraps will be collected from construction personnel activity.
- Standing water
- Disruption of existing wildlife habitat.
- Open Trenches, Excavation, and Materials and Equipment Stockpiles
- Poorly maintained fencing and gates

Should the Contractor encounter wildlife on the airport, he/she will immediately notify Airport Management.

All trash will be placed in waste containers to prevent the attraction of wildlife. Waste containers will be equipped with lids and secured at all times. No trash or debris will be left on site by the Contractor.

## **7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT**

The Contractor will not be allowed to leave or place foreign object debris (FOD) on or near active aircraft movement areas and will be required to control and monitor FOD. Materials

tracked onto these areas will be continuously removed during the construction project by broom sweeping. Ground vehicle tires will be inspected daily to ensure they are not tracking FOD onto the airfield pavements. Daily inspections of these aircraft movement areas will be made by the RPR as discussed in Article 10 of this CSPP.

Contractor will also maintain the haul road and paved surfaces clear of debris at all times.

Contractor will have on site a vacuum sweeper to keep clean all haul roads and existing airfield pavement. All sweepers used on airfield pavements will be equipped with nylon bristles. No metal bristles will be allowed.

## **8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT**

The Contractor will be required to manage and contain any hazardous materials (HAZMAT) on the airport. Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean up spills resulting from fuel or hydraulic fluid leaks. The Contractor will refrain from topping off vehicle fuel tanks and have sorbent materials available in the fueling area for when small spills occur.

It is not anticipated that there will be any hazardous materials used or encountered during the construction of this project. The Contractor will be required to keep Material Safety Data Sheets (MSDS) available for inspection for all materials delivered to the airport.

## **9. NOTIFICATION OF CONSTRUCTION ACTIVITIES**

- (a) List of Responsible Representatives. It will be necessary to keep the following people totally informed of the operations that the contractor proposes to perform at Truckee Tahoe Airport.

### **Sponsor:**

Robb Etnyre, General Manager .....(530) 587-4119, Ext. 105  
Vince Wawrzynski, Operations &  
Maintenance Director.....(530) 587-4119, Ext. 110  
Larry Finney, Air Traffic Manager, Truckee NFCT.....(530) 414-1641

### **F.A.A.**

Roy Ambrose, Civil Engineer/Program Manager.....(925) 546-6442  
[roy.g.ambrose@faa.gov](mailto:roy.g.ambrose@faa.gov)

### **Resident Project Representative**

Damon Brandley, Project Manager..... (916) 652-4725 Office  
.....(916) 316-0544 Cell  
David Baltazar, RPR..... (916) 652-4725 Office  
.....(916) 600-2418 Cell

At the start of construction, the Contractor will be required to provide the RPR with the names, telephone numbers, cell phone numbers, and e-mail addresses of all Contractor personnel that are responsible for on-call 24/7 services if necessary.

(b) NOTAMs

The Airport Management will issue Notices to Airmen (NOTAMs) as required accurately describing current airport conditions and contractor operations. This will be coordinated with tenants of the airport. Robb Etnyre, General Manager and Vince Wawrzynski, Director of Operations and Maintenance, will be responsible for issuing, maintaining, and canceling NOTAMs. The Airport Management has provided a list of airport employees who are authorized to issue NOTAMs to the FSS air traffic manager.

NOTAMs will be issued clearly identifying where the construction work is being performed and during which periods. A special NOTAM will be issued to identify that personnel and equipment are working on Apron A2 and that these areas are closed.

(c) Emergency Notifications:

In case of emergency during the construction of this project, Contractor will notify one or more of the following:

|  |                |
|--|----------------|
| Fire/Police/Ambulance .....                                | Call 911       |
| Airport Radio Communication (Article 5 of CSPP) .....      | 122.8 Mhz      |
| Aircraft Rescue and Fire Fighting (ARFF) - Emergency ..... | Call 911       |
| Nevada County Sheriff's Department.....                    | (530) 265-1291 |
| Local Hospital.....  | (530) 587-6011 |
| Poison Control .....                                       | (530) 587-6011 |

(d) Coordination with ARFF Personnel:

The Contractor will be required to notify the Truckee Tahoe Airport District and ARFF personnel if any water lines or fire hydrants are damaged or deactivated. The Contractor will also notify the District and/or ARFF personnel if there are any blocked or rerouted emergency access routes or if hazardous materials will be used on the airfield. The non-emergency telephone number for ARFF is (530) 582-7850 and the contact person is Dispatcher on Duty. Contractor will confirm in writing the date and time ARFF was notified and the contact person.

(e) Notification to the FAA:

*Part 77.* The Contractor will coordinate with the RPR who will file a 7460-1 form with the F.A.A. Airports District Office in Walnut Creek if any construction equipment (i.e. cranes, graders, other equipment) affects navigable airspace as defined in FAR Part 77.



*NAVAIDS*. For emergency notification about impacts to both airport owned and FAA owned NAVAIDS Airport Management will contact the Operations Control Center at (866) 432-2622.

If construction operations will cause impacts to FAA owned NAVAIDS, the Airport Management will contact FAA ATO Service Area Planning and Requirements Groups a minimum of 45 days prior to implementing these operations and coordinate the shutdown with the local FAA ATO/Technical Operations office, including necessary reimbursable agreements and flight checks. A 7-day notice will be given to FAA ATO to schedule the actual NAVAID shutdown.

## **10. INSPECTION REQUIREMENTS**

The Airport will provide an inspector to ensure that all Contractor operations comply with all requirements of the plans, specifications, and this Safety Plan. It will be his/her duty to inspect materials and workmanship of the work under instructions of the Airport or RPR and to report any and all deviations from the Drawings, Specifications, and other Contract provisions that may come to his/her notice. The inspector will have the right to order the work entrusted to his/her supervision immediately stopped, if in his/her opinion such action becomes necessary, until the Airport or RPR is notified and has determined and ordered that the work may proceed in due fulfillment of all Contract requirements.

- (a) Daily Inspections. Daily inspections will be conducted to ensure conformance with the CSPP. Exhibit 6 of this CSPP includes a Construction Project Daily Safety Inspection Checklist for this purpose.
- (b) Final Inspections. Whenever an area on the airport is reopened for aircraft operations, an inspection will be conducted to assure compliance with the plans, specifications, and CSPP. At the end of the project a final inspection will be held by the RPR, the Airport Management, and the Federal Aviation Administration to assure all components of the project comply with the plans, specifications, and CSPP.

## **11. UNDERGROUND UTILITIES**

Not less than two full working days prior to performing any excavation, the Contractor will be required to notify Underground Service Alert (USA) by calling 811. The location of the subsurface installations will be in accordance with Sections 4216 and 4217 of the Government Code, as latest amended. No excavation will be performed until the subsurface installations have been located, hand-excavated and identified. The Contractor will update the location of the subsurface installations in the proposed work area every 14 calendar days, as required.

In case of accidental utility disruption, utilities owners' contacts and telephone numbers are included below:

|  |                |
|--|----------------|
| Electrical & Water – Truckee Donner Public Utility District..... | (530) 587-3896 |
| Gas – Southwest Gas Corporation .....                            | (800) 772-4555 |
| Sewer – Truckee Sanitary District .....                          | (530) 587-3804 |
| Telephone.....   | (530) 550-3900 |
| Cable TV .....   | (530) 550-3900 |

Refer to Article 9 of this CSPP for procedures for contacting the Fire Department and FAA in case of interruption of water service and NAVAIDs, respectively.

## **12. PENALTIES**

If in the opinion of Airport Management or the RPR, the Contractor's employees or subcontractors are in violation of the airport's rules and regulations, including this CSPP, in sufficient magnitude as to cause danger to life and property, the RPR shall have the right to stop all work on this contract for a period of forty-eight (48) hours as a contractual penalty.

Any vehicle operator who willfully violates the CSPP will be requested, through the Contractor, to leave the job site.

## **13. SPECIAL CONDITIONS**

Some special conditions may trigger specific safety mitigation actions outlined in this CSPP. These may include low visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, Vehicle/Pedestrian Deviations (VPD), and other activities requiring construction suspension/resumption. In order to be advised of these special conditions and actions to be taken, the Contractor shall at all times maintain radio contact as specified in Article 5 of this CSPP.

Should an aircraft emergency occur anywhere on the airport, the Contractor will be required to move all personnel and equipment beyond the safety area of the runway and taxiways and to refrain from moving out of these areas to resume work until specifically authorized by Airport personnel. The area around the downed aircraft shall be evacuated and not reentered by the Contractor until given permission, except for lifesaving activities.

Contractor will be responsible for dust and erosion control during the construction of this project.

## **14. RUNWAY AND TAXIWAY VISUAL AIDS**

There exist on the airport runway and taxiway marking, runway and taxiway lights and signs, and visual NAVAIDs. These facilities are shown on the attached Construction Safety Plan Drawing, Exhibit 1. Areas where aircraft will be operating will be clearly and visibly separated from construction areas. Throughout the duration of the construction project, these areas will remain clearly marked and visible at all times and all marking, lighting, signs, and visual NAVAIDs will remain in place and operational.

It will not be necessary to install temporary marking, lights, signs, or visual NAVAIDS during the construction of this project except as shown for the guidance of pedestrians as identified on Exhibit 2.

During the construction hours the existing airfield guidance sign panels for areas affected by construction will be covered by the contractor in such a way that the panels are not visible. Covers will be secured to the sign to resist prop blast and weather conditions. Sign covers will be placed before beginning work and removed after work is complete. For the location of the guidance sign panels to be covered, see the Closed Facility Signage Tables on Exhibits 3 and 4, Barricade Plans.

Lights, markings, signs, and visual NAVAIDS adjacent to areas used by aircraft will comply with the frangibility requirements of Advisory Circular 150/5220-23, *Frangible Connections*.

## **15. MARKING AND SIGNS FOR ACCESS ROUTES**

The marking and signing for access routes to the construction site is shown on the Construction Safety and Phasing Plans. Signs will conform to Advisory Circular 150/5340-18F, Standards for Airport Sign Systems. To the extent possible, signs will be in conformance with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications and will not be hand lettered.

During the construction of Phase 1A, the Snow Melt Apron, the Contractor will furnish and install a Terminal Entrance Direction Sign as detailed on Exhibit 2, Barricade Plan – Phase 1A. Sign will have black lettering on a white background.

## **16. HAZARD MARKING AND LIGHTING**

The airport will be open during construction of the work on this project. The Airport will furnish barricades with lights for closures in all phases of the work. The Contractor will erect and maintain hazard marking and lighting at the boundary of the work areas to keep aircraft from entering the Contractor's work areas and to keep the Contractor's personnel and equipment from occupying any of the areas open for aircraft operations. The Contractor will be required to provide any batteries required to maintain the lights during the project. Hazard marking and lighting will also be placed to identify small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. The locations and details of barricades to be placed in this project are shown on the Construction Safety and Phasing Plan, Exhibit 1, and the Barricade Plans, Exhibits 2 through 4.

On all airfield pavement, except for flags, no part of the barricade or light will extend ten (10) inches above the paved surface. Maximum spacing between barricades will be four (4) feet. Spacing must be such that a breach is physically prevented barring a deliberate act. Lights will be flashing red and have at least five (5) candelas effective intensity for night marking. Barricades will be painted alternate orange and white diagonal striping. Supplement with signs such as "No Entry,"

“No Vehicles,” as necessary. All barricades will be placed 20 feet back from the edge of an active runway, taxiway or apron.

During the construction of Phase 1A, the Snow Melt Apron, Contractor will furnish and install Continuous 42” Jersey Barricades as detailed on Exhibit 2, Barricade Plan – Phase 1A. Barricades will be plastic, water-filled, Jersey-shaped barricades with red solar powered lights. The Contractor will place and maintain barricades and lights throughout the project duration. Barricades will be approved by the Airport prior to delivery and installation. Each barricade will have 2 solar-powered lights with red lenses, each controlled by photocells, set to continuous “On” at night and “Off” during the day. Barricades will be secured if necessary to resist movement from jet or prop blast. Location of Jersey barricades to be approved by Airport Operations Manager and RPR. At the completion of construction, all Jersey barricades will be drained of water and removed from the airport and all airport furnished barricades will be drained of water and returned to the airport.

Barricades are not permitted in any active safety area or on the runway side of a runway hold line.

The Contractor will supply the names and telephone numbers of persons responsible for the emergency maintenance of the hazard marking and lighting during construction of this project who will be available 24 hours a day.

## **17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS**

No construction may occur within a runway safety area (RSA), taxiway safety area (TSA), or taxiway object free area (TOFA) while the associated runway or taxiway is open for aircraft operations. These safety areas, along with the runway object free zone (OFZ) and object free area (OFA), taxiway OFA, and runway approach surfaces, are shown on the Construction Safety and Phasing Plan.

No blasting operations will be required or allowed during the construction of this project.

Open trenches or excavations will not be permitted within the RSA at night while the runway is open for aircraft operations. The Contractor will furnish, erect, and maintain red or orange flags, as approved by the airport operator, and red lights during hours of restricted visibility or darkness, around open trenches, excavations, temporary stockpiles, and his/her parked construction equipment that may be hazardous to the operation of aircraft, emergency fire-rescue, or maintenance vehicles on the airport. See Article 16 of this CSPP for details of Hazard Marking and Lighting.

No drop-off greater than 3 inches will be allowed to exist within the RSA or TSA at night, weekends, or during periods when the Contractor is not working in these areas. If excavation occurs within the RSA or TSA that leaves a depression greater than 3 inches, the Contractor will fill the excavated area such as to maintain a maximum 3 inch drop off at the edge of pavement and extend at a maximum slope of 5 percent from the edge of pavement. This embankment will be rolled a sufficient amount such that it will withstand truck traffic without

rutting. The backfill will be removed from this area or spread out and used as the specified segment of the pavement section when work resumes in the area.

The RSA and TSA will be:

- a. Cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations.
- b. Drained by grading or storm sewers to prevent water accumulation.
- c. Capable under dry conditions of supporting construction and maintenance equipment, aircraft rescue, fire-fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.
- d. Free of objects, except for objects that need to be located in the RSA because of their functions. These objects will be constructed on low impact resistant supports (frangible mounted structures) to the lowest practical height with the frangible point no higher than 3 inches above finished grade.

Construction, including excavations, may be permitted in the runway OFA. However, equipment must be removed from the runway OFA when not in use, and material will not be stockpiled in the runway OFA. Stockpiling material in the OFA requires submittal of a 7460-1 and justification provided to the FAA Airports District Office for approval.

No construction may occur within a taxiway OFA while the taxiway is open for aircraft operations except as provided in Advisory Circular 150/5370-2G, Article 222d.

No construction equipment or personnel may penetrate the OFZ while the runway is open for aircraft operations.

All personnel, materials, and/or equipment must remain clear of the applicable runway approach/departure areas and clearways as shown on the Construction Safety and Phasing Plan, Exhibit 1.

During construction an experienced flagger furnished by the contractor and trained by the Airport will have a two-way radio tuned to Tower Ground Control frequency 118.3 MHz. He/she will also by visual observation identify any aircraft operation at the airport as detailed in Article 5 of this CSPP. NOTAMs will be issued to alert pilots of this condition. During all times when Contractor's equipment and personnel are not working on the project, all Contractor's equipment shall be moved to the Contractor's Storage and Staging Area as shown on the Construction Safety and Phasing Plan.

If it is necessary to use construction equipment (cranes, concrete pumps, etc.) that is higher than 25 feet, a 7460-1 determination will be issued for such equipment as outlined in Article 18 of this CSPP.

## **18. OTHER LIMITATIONS ON CONSTRUCTION**

Additional limitations on construction including but are not limited to:

- a. No use of equipment taller than 25 feet (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for each piece of equipment. Contractor must allow for up to 50 working days after the request to use equipment taller than 25 feet to allow for FAA to make a determination on a 7460-1.
- b. No use of open flame welding or torches unless fire safety precautions are provided and the airport operator has approved their use.
- c. No use of electrical blasting caps on or within 1,000 feet of the airport property.
- d. No use of flare pots within the air operations area.



SAFETY PLAN NOTES:

- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SECURITY AND CLEANLINESS OF THE WORK SITE AND CONTRACTOR'S STORAGE AREA AT ALL TIMES
- WESTERN HAUL ROUTE SHALL BE UTILIZED TO ACCESS THE WEST PORTION OF APRON A2 (PHASES 1 AND 1A). SWING GATE SOUTH OF FUEL ISLAND SHALL BE USED BY CONTRACTOR FOR HAUL ROUTE . HAUL ROUTE WILL CONTINUE NORTH FROM THE SWING GATE ALONG A ROUTE, MARKED BY BARRICADES, WEST OF THE WASH RACK AND EAST OF THE FUEL ISLAND TO PHASE 1 WORK AREA.
- EASTERN HAUL ROUTE TO PROVIDE ACCESS TO THE EAST PORTION OF APRON A2 (PHASE 2). AUTOMATIC GATE #5 SOUTHEAST OF THE FIRE STATION WILL BE USED BY THE CONTRACTOR FOR ACCESS TO THE AIRPORT. CONTRACTOR SHALL DELINEATE, WITH BARRICADES OR CONES A 30' WIDE HAUL ROUTE ALONG THE WEST EDGE OF THE JET PARKING RAMP AS SHOWN ON THESE PLANS.
- DUST CONTROL SHALL BE MAINTAINED BY THE CONTRACTOR ON ALL HAUL ROADS. PAVED SURFACES SHALL BE MAINTAINED CLEAR OF DEBRIS AT ALL TIMES. APRON AND TAXIWAYS SHALL BE MAINTAINED BROOM CLEAN.
- CONTRACTOR SHALL LIMIT ALL CONSTRUCTION VEHICLE ACTIVITY TO THE LIMITS OF THE PROJECT AND THE HAUL ROAD SHOWN ON THE PLANS. NO CONSTRUCTION TRAFFIC WILL BE ALLOWED BEYOND THE LIMITS OF THE WORK AREA .
- THE OWNER WILL PROVIDE A QUALIFIED FLAGGER TO MONITOR THE AIRPORT GROUND FREQUENCY 118.3 MHZ AND ESCORT THE CONTRACTOR THROUGH ANY AREA OPEN TO AIRCRAFT. AIRCRAFT HAVE THE RIGHT OF WAY AT ALL TIMES.
- CONTRACTOR'S PERSONNEL & EQUIPMENT ARE NOT ALLOWED ON TAXIWAY A OR RUNWAY 11-29 AT ANY TIME.
- CONTRACTOR SHALL ERECT & MAINTAIN LIGHTED AIRPORT-FURNISHED BARRICADES AT THE BOUNDARY OF THE WORK AREA TO KEEP VEHICLES AND AIRCRAFT FROM ENTERING THE CONTRACTOR'S WORK AREAS AND THE CONTRACTOR'S PERSONNEL & EQUIPMENT FROM OCCUPYING ANY OF THE AREAS OPEN FOR AIRCRAFT OPERATIONS .
- CONTRACTOR SHALL VERIFY LOCATION AND PROTECT ALL EXISTING UTILITIES.
- SHOULD CONTRACTOR ENCOUNTER AND DAMAGE A WATERLINE ON THE AIRPORT HE SHALL IMMEDIATELY NOTIFY THE LOCAL FIRE DEPARTMENT AND THE AIRPORT.
- IN CASE OF AN AIRCRAFT EMERGENCY THE AREA AROUND THE AIRCRAFT SHALL BE EVACUATED AND NOT REENTERED BY THE CONTRACTOR WITHOUT GIVEN PERMISSION EXCEPT FOR LIFESAVING ACTIVITIES.
- ALL GATES USED BY THE CONTRACTOR SHALL REMAIN CLOSED AT ALL TIMES EXCEPT WHEN AUTHORIZED EQUIPMENT IS ACTUALLY ENTERING THE AIRPORT OR GATE IS CONTINUOUSLY GUARDED BY A FLAGGER, TRAINED BY THE AIRPORT, TO KEEP UNAUTHORIZED PERSONNEL AND WILDLIFE FROM ENTERING THE AIRPORT.

- CONTRACTOR'S STORAGE AND STAGING AREA LOCATION SHALL BE DESIGNATED BY THE AIRPORT MANAGER. CONTRACTOR SHALL BARRICADE DESIGNATED AREA AND INSTALL BMP'S AS REQUIRED BY SWPPP. SEE PLAN FOR DESIGNATED CONTRACTOR'S STAGING AND TEMPORARY STOCKPILE AREA. DESIGNATED STAGING AREAS ARE LOCATED NEAR AIRCRAFT TRAVEL ROUTE. CONTRACTOR SHALL MAINTAIN DUST CONTROL ON ALL STOCKPILES. STOCKPILES LOCATED NEAR AIRCRAFT TRAVEL ROUTE MUST BE PROTECTED FROM JET BLAST BY MAINTAINING A WET SURFACE. CONTRACTOR SHALL MAKE PROVISIONS TO KEEP SURFACE WET AND PROTECTED FROM JET BLAST 7 DAYS OF THE WEEK.
- ALL EQUIPMENT OPERATING DURING DAYLIGHT HOURS SHALL BE EQUIPPED WITH AN ORANGE AND WHITE CHECKERED FLAG OR FLASHING AMBER BEACON. EQUIPMENT OPERATING IN LOW VISIBILITY CONDITIONS, DAWN OR DUSK HOURS SHALL BE EQUIPPED AND USE AN AMBER FLASHING BEACON.
- ALL TRASH SHALL BE PLACED IN WASTE CONTAINERS TO PREVENT THE ATTRACTION OF WILDLIFE. WASTE CONTAINERS SHALL BE EQUIPPED WITH LIDS AND SECURED AT ALL TIMES. NO TRASH OR DEBRIS SHALL BE LEFT ON SITE BY THE CONTRACTOR.
- CONTRACTOR SHALL COVER/OBSCURE AIRFIELD GUIDANCE SIGNS AS SHOWN ON SHEET 4 & 5.
- PRIOR TO START OF WORK CONTRACTOR, RPR AND AIRPORT OPERATIONS WILL ESTABLISH EMERGENCY CONTACT INFORMATION FOR WORKING DAYS AND NON-WORKING DAYS.

| SEED                     | RATE OF APPLICATION (LBS/ACRE) |
|--------------------------|--------------------------------|
| WHEATGRASS STREAMBANK SO | 15.0                           |
| FESCUE SHEEP VNS         | 20.0                           |
| RYEGRASS ANNUAL VNS      | 8.0                            |
| TOTAL                    | 43.0                           |

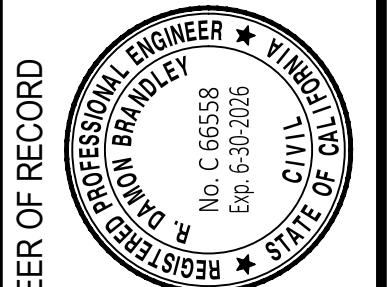
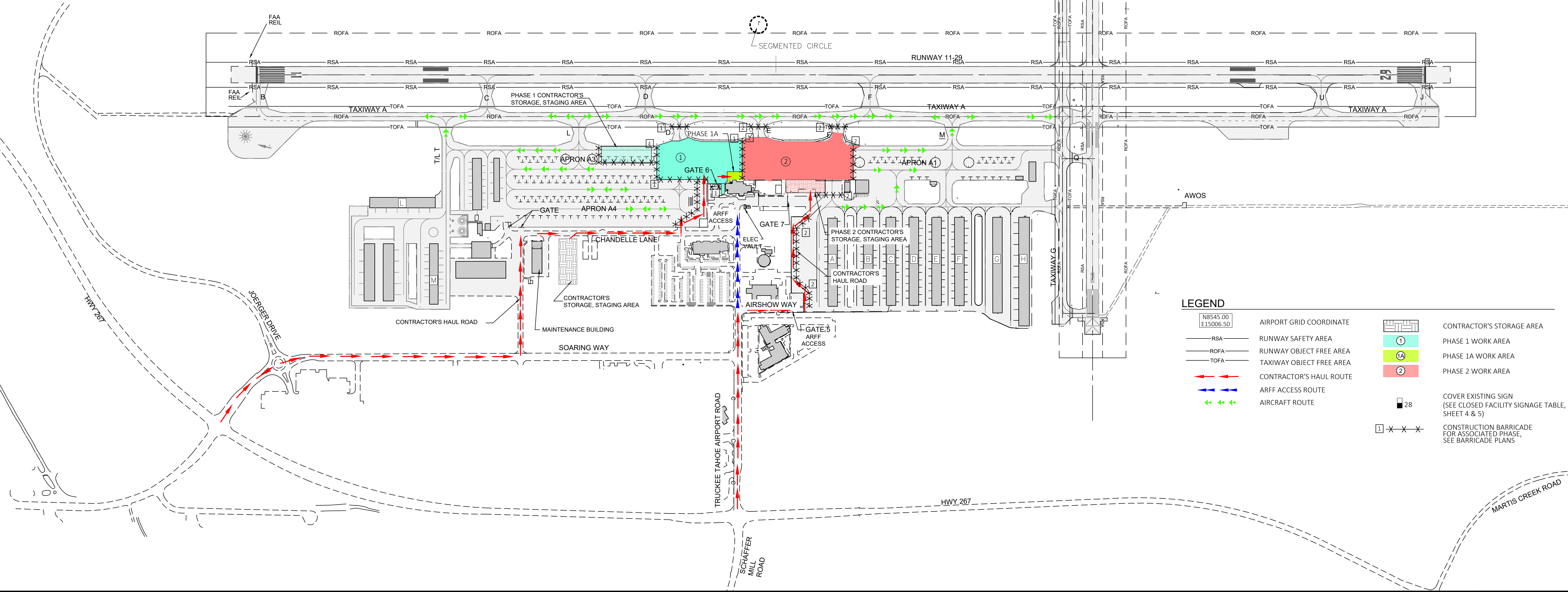
SEEDING NOTES:

- AT CONCLUSION OF ALL WORK, CONTRACTOR SHALL SEED CONTRACTOR'S STORAGE, STAGING AND TEMPORARY STOCKPILE AREAS AND ALL DISTURBED SHOULDER AREAS. LIMITS OF SEEDING SHALL BE VERIFIED BY RESIDENT PROJECT REPRESENTATIVE. HYDROSEEDING SHALL BE A REQUIRED BMP TO BE INCLUDED IN THE SWPPP. NO ADDITIONAL PAYMENT FOR SEEDING DISTURBED AREAS SHALL BE MADE, COST SHALL BE INCLUDED IN THE COST OF PREPARING AND IMPLEMENTING THE SWPPP.
- MULCH SHALL BE APPLIED AT A MINIMUM RATE OF 1,800 LB/ACRE.
- TACKIFIER SHALL BE APPLIED AT A MINIMUM RATE OF 150 LB/ACRE.
- FERTILIZER SHALL BE APPLIED AT A MINIMUM RATE OF 5 GALLONS/ACRE AS NECESSARY TO PRODUCE ADEQUATE GROWTH TO SATISFY THE STATE WATER BOARD SUCH THAT THE SWPPP CAN BE CLOSED OUT AFTER THE PROJECT IS COMPLETE.
- INOCULANT SHALL BE APPLIED AT A MINIMUM RATE OF 50 LB/ACRE.
- SEE TABLE THIS SHEET FOR SEED MIX.

| CONSTRUCTION STAGING PLAN |                                      |   |   |
|---------------------------|--------------------------------------|---|---|
| PHASE                     | CONTRACTOR'S WORK                    | CONTRACTOR'S WORK AREA                              | FACILITY CLOSURE  |
| 1                         | RECONSTRUCT WEST PORTION OF APRON A2 | WEST PORTION OF APRON A2, DRAINAGE WEST OF TERMINAL | WEST PARKING ON APRON A2, TAXIWAY D BETWEEN TAXIWAY A AND APRON, PORTION OF APRON TAXILANES (NO THRU TAXI), GATE 6 AND PARKING WEST OF TERMINAL |
| 1A                        | CONSTRUCT SNOW MELT APRON            | PORTION OF APRON A2                                 | PORTION OF APRON A2, LIMITED PEDESTRIAN ACCESS TO TERMINAL FROM THE WEST  |
| 2                         | RECONSTRUCT EAST PORTION OF APRON A2 | EAST PORTION OF APRON A2                            | EAST PARKING ON APRON A2, TAXIWAY E AND F, AND LIMITED PEDESTRIAN ACCESS TO TERMINAL FROM THE EAST.   |

STAGING NOTES:

- THE CONTRACTOR SHALL PERFORM ALL AIRFIELD WORK IN A SINGLE, COMBINED PHASE ONLY IF SCHEDULE B IS ACCEPTED. IF SCHEDULE B IS ACCEPTED, THE PHASE 1 CONTRACTOR STORAGE AND STAGING AREA WILL NOT BE AVAILABLE FOR USE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PERFORM ALL AIRFIELD WORK IN 2 DIFFERENT PHASES ON THE AIRPORT AS SHOWN IN CONSTRUCTION SCHEDULE, IF SCHEDULE A IS ACCEPTED. THE AREA INCLUDED IN EACH PHASE OF WORK IS INDICATED BY A CIRCLE WITH THE STAGE NUMBER INDICATED IN THE CIRCLE. THE BARRICADES REQUIRED FOR EACH PHASE OF WORK IS INDICATED BY A SQUARE WITH THE WORK PHASE NUMBER INDICATED. SEE BARRICADE PLAN FOR EACH PHASE, SHEET 3 THRU 5.
- THE PHASE 1 CONTRACTOR STORAGE AND STAGING AREA WILL ONLY BE AVAILABLE FOR USE PRIOR TO JUNE 30 FOR SCHEDULE A. THIS AREA MUST BE BROOM CLEAN AND CLEANED UP TO THE SATISFACTION OF THE AIRPORT AND RPR BY JUNE 30. REGULAR AIRPORT OPERATIONS WILL REQUIRE THE USE OF THIS AREA BY AIRCRAFT STARTING JULY 1. THIS AREA IS NOT AVAILABLE ANYTIME FOR SCHEDULE B.
- WORK IN PHASES 1 AND 1A MAY BE PERFORMED CONCURRENTLY. WORK IN PHASE 1 AND 1A SHALL BE COMPLETED BEFORE STARTING WORK IN PHASE 2. WORK IN PHASE 1A MAY BE STARTED PRIOR TO WORKING IN PHASE 1. SEE BARRICADE PLAN SHEET 3 FOR PHASE 1A.
- DRAINAGE IMPROVEMENTS TO BE CONSTRUCTED IN PHASE 1 WILL REQUIRE THE CLOSURE OF THE PARKING AREA, SIDEWALKS AND LANDSCAPE AREA JUST WEST OF THE TERMINAL BUILDING. THE WORK IN THIS AREA SHALL BE COMPLETED IN 5 WORKING DAYS. CLOSURE OF THIS AREA WILL BE DURING WORKING HOURS ONLY AND ALL TRENCHES SHALL BE COVERED WITH APPROVED TRENCH PLATES OR BACKFILL COMPLETED PRIOR TO OPENING AT THE END OF EACH DAYS WORKING HOURS.
- DRAINAGE IMPROVEMENTS TO BE CONSTRUCTED IN PHASE 2 WILL REQUIRE ISOLATED CLOSURE OF THE PLAYGROUND AND LAWN AREA EAST OF THE TERMINAL. BARRICADES WILL BE PLACED AROUND THE PERIMETER OF THE WORK AREA. CLOSURE OF THE PLAYGROUND AND LAWN AREA WILL ONLY BE DURING WORKING HOURS AND ALL TRENCHES SHALL BE COVERED WITH APPROVED TRENCH PLATES OR BACKFILL COMPLETED PRIOR TO OPENING AT THE END OF EACH DAYS WORKING HOURS
- PEDESTRIAN TRAFFIC FROM THE APRON WILL BE MAINTAINED BY PLACEMENT OF BARRICADES, AS SHOWN ON THE PLANS , BUT ACCESS PATH WILL BE LIMITED TO PORTION OF APRON A2 NOT UNDER RECONSTRUCTION.
- CONTRACTOR SHALL PROVIDE STAGING SCHEDULE AT TWO WEEKS PRIOR TO START OF CONSTRUCTION. DETAILED CONSTRUCTION SCHEDULES SHALL BE UPDATED AND COORDINATED WITH THE AIRPORT MANAGER AND RPR.
- THE AIRPORT MAY REQUIRE SOME TEMPORARY STRIPING ON THE WEST APRON DESIGNATED AS APRON A4. ALL TEMPORARY MARKINGS SHALL BE REMOVED AT THE END OF THE PROJECT. SEE NOTES ON MARKING PLAN SHEETS FOR REQUIREMENTS AND DETAILS.



ENGINEER OF RECORD

| No. | REVISIONS | BY | APR | DATE |
|-----|-----------|----|-----|------|
|     |           |    |     |      |
|     |           |    |     |      |
|     |           |    |     |      |
|     |           |    |     |      |
|     |           |    |     |      |
|     |           |    |     |      |
|     |           |    |     |      |
|     |           |    |     |      |
|     |           |    |     |      |

|                                      |            |
|--------------------------------------|------------|
| TRUCKEE                              | CALIFORNIA |
| RECONSTRUCT APRON A2                 |            |
| CONSTRUCTION SAFETY AND PHASING PLAN |            |

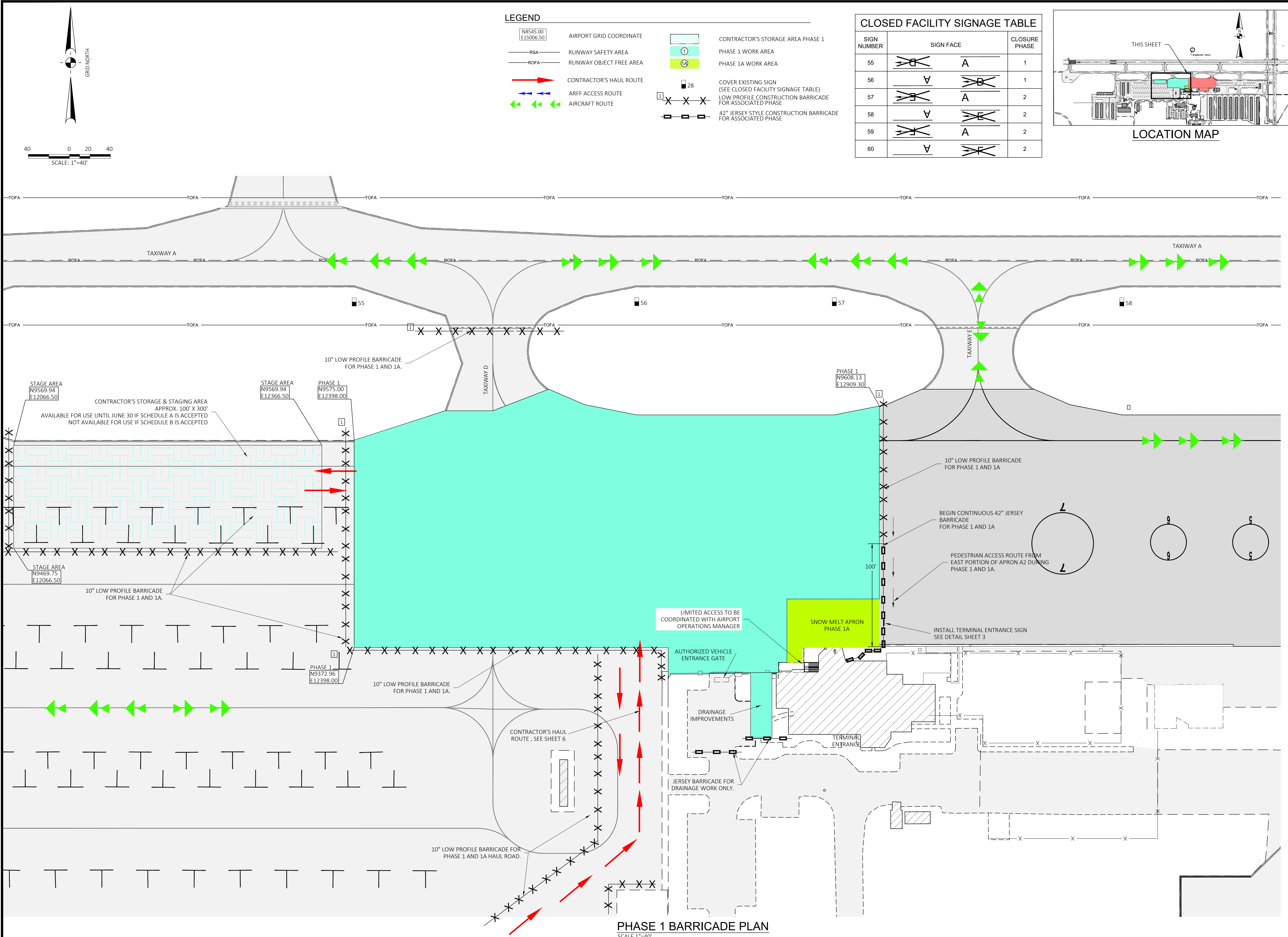
|             |                |
|-------------|----------------|
| DATE        | 3/7/2025       |
| DRAWN       | TS             |
| CHECKED     | DB             |
| PROJECT No. | 40.38          |
| FILE        | 4038.02.Safety |
| SCALE       | 1"=300'        |
| SHEET No.   | EXHIBIT 1      |







G:\40 Truckee\38 Apron A2\Bld Site\4038.02 Safety.dwg PLOTTED 03.12.2025 11:30 AM BY David Baltazar



TRUCKEE

TRUCKEE-TAHOE AIRPORT

CALIFORNIA

RECONSTRUCT APRON A2

BARRICADE PLAN - PHASE 1

DATE: 3/7/2025

DRAWN: TS

CHECKED: DB

PROJECT No.: 40.38

FILE: 4038.02 Safety

SCALE: 1"=40'

SHEET No.: EXHIBIT 2

ENGINEER OF RECORD

DAVID BRANDLEY

REGISTERED PROFESSIONAL ENGINEER

CIVIL

STATE OF CALIFORNIA

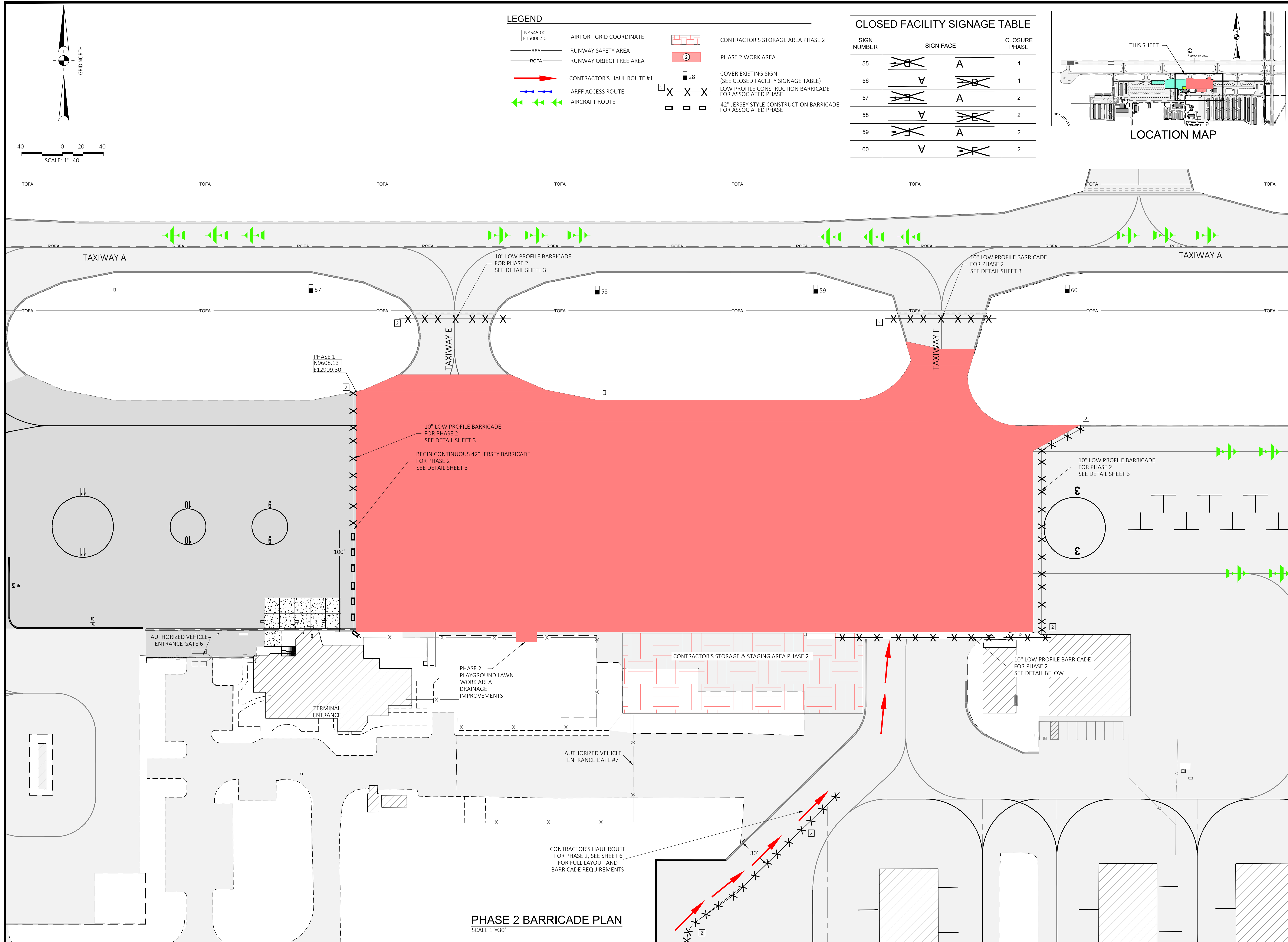
No. C 66553

Exp. 6-30-2026

BRANDLEY

ENGINEERING

6125 KING ROAD, SUITE 201 · LOOMIS, CALIFORNIA 95650 · (916) 652-4725





G:\40 Truckee\38 Apron A2\Bld Site\4038.02 Safety.dwg PLOTTED 03.12.2025 11:30 AM BY David Baltazar

- LEGEND**
- N8545.00  
E15006.50

— RSA —

— ROFA —

AIRPORT GRID COORDINATE

RUNWAY SAFETY AREA

RUNWAY OBJECT FREE AREA

1

1A

CONTRACTOR'S STORAGE AREA

PHASE 1 WORK AREA

PHASE 1A WORK AREA

28

COVER EXISTING SIGN  
(SEE CLOSED FACILITY SIGNAGE TABLE)

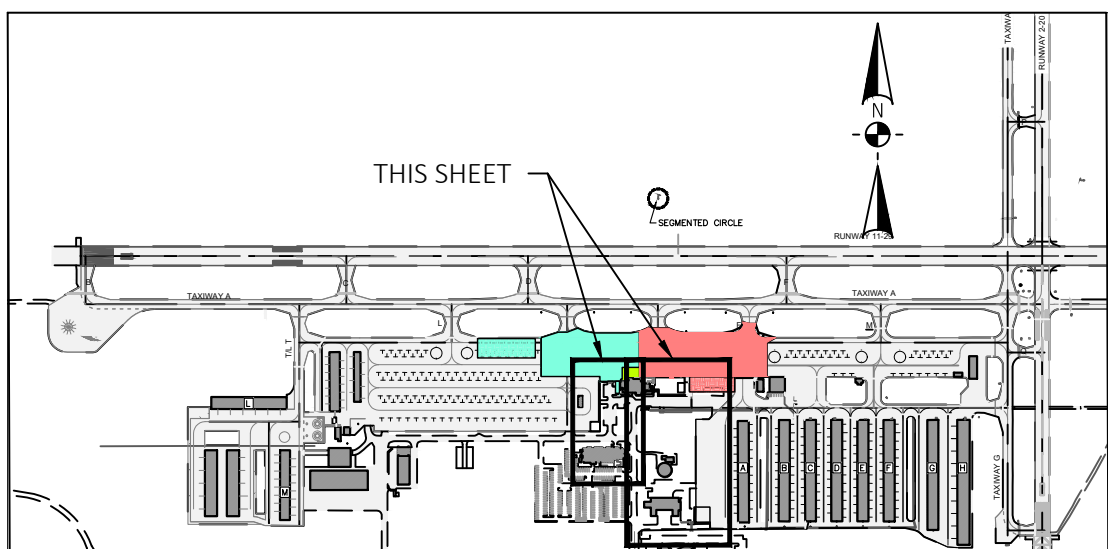
LOW PROFILE CONSTRUCTION  
BARRICADE  
FOR ASSOCIATED PHASE

42" JERSEY STYLE CONSTRUCTION  
BARRICADE  
FOR ASSOCIATED PHASE

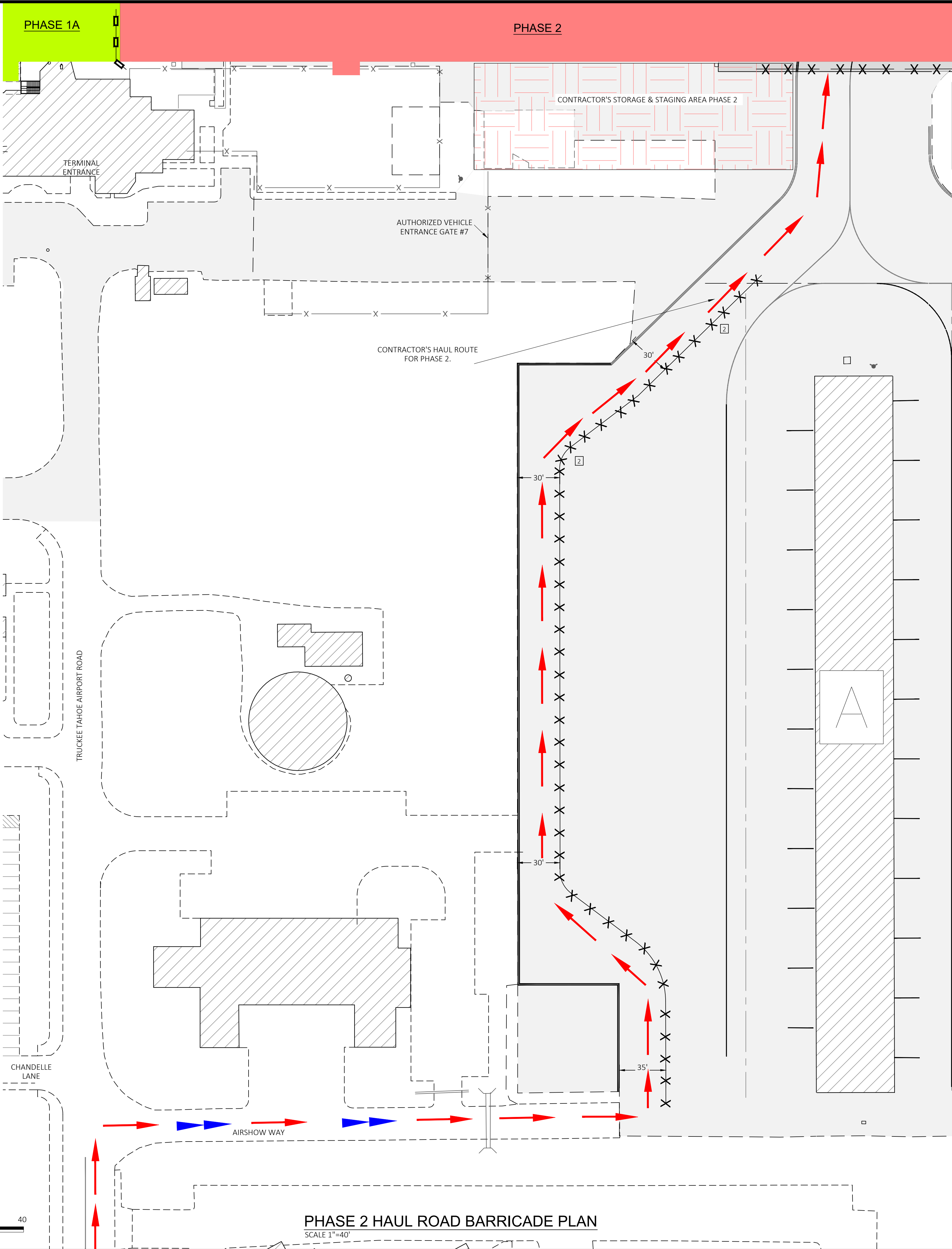
CONTRACTOR'S HAUL ROUTE

ARFF ACCESS ROUTE

AIRCRAFT ROUTE



LOCATION MAP



PHASE 1 HAUL ROAD BARRICADE PLAN  
SCALE 1"=40'

PHASE 2 HAUL ROAD BARRICADE PLAN  
SCALE 1"=40'

TRUCKEE

TRUCKEE-TAHOE AIRPORT

DATE

3/7/2025

DRAWN

TS

CHECKED

DB

PROJECT No.

40.38

FILE

4038.02 Safety

SCALE

1"=40'

SHEET No.

EXHIBIT 5

CALIFORNIA

RECONSTRUCT APRON A2

BARRICADE PLAN - HAUL ROADS

ENGINEER OF RECORD

DAVID BRANDLEY

REGISTERED PROFESSIONAL ENGINEER

CIVIL

No. C 66553

Exp. 6-30-2026

LIBERTY OF STATE

BRANDLEY

ENGINEERING

6125 KING ROAD, SUITE 201 · LOOMIS, CALIFORNIA 95650 · (916) 652-4725

**APPENDIX D. 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 uncovered 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 airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

**Table D-1. Potentially Hazardous Conditions**

| <b>Item</b>  | <b>Action Required (Describe)</b> | <b>No Action Required (Check)</b> |
|--|-----------------------------------|-----------------------------------|
| 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 inch (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   |                                   |                                   |

| <b>Item</b>   | <b>Action Required (Describe)</b> | <b>No Action Required (Check)</b> |
|---|-----------------------------------|-----------------------------------|
| approach zones.   |                                   |                                   |
| Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a 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.  |                                   |                                   |
| 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.   |                                   |                                   |

| Item  | Action Required (Describe) | No Action Required (Check) |
|---|----------------------------|----------------------------|
| 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 ARFF 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.   |                            |                            |
| 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).  |                            |                            |

| <b>Item</b>  | <b>Action Required (Describe)</b> | <b>No Action Required (Check)</b> |
|--|-----------------------------------|-----------------------------------|
| 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 B*  
*CONSTRUCTION MANAGEMENT PLAN*



**APPENDIX B**

**TRUCKEE TAHOE AIRPORT**  
**TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**CONSTRUCTION MANAGEMENT PLAN**

**Prepared by:**

**Brandley Engineering**  
**6125 King Road, Suite 201**  
**Loomis, CA 95650**  
**Telephone (916) 652-4725**  
**Fax (916) 652-9029**

**March 11, 2025**

**TRUCKEE TAHOE AIRPORT  
TRUCKEE, CALIFORNIA**

**RECONSTRUCT APRON A2**

**AIP NO. 3-06-0262-0\_\_-2025**

**CONSTRUCTION MANAGEMENT PLAN**

**TABLE OF CONTENTS**

|       |  |        |
|-------|--|--------|
| I.    | Introduction.....  | I-1    |
| II.   | Construction Management Personnel .....  | II-1   |
| III.  | Resumes of Brandley Engineering Personnel (Quality Assurance Consultant) ..... | III-1  |
| IV.   | Resumes of Contractor's Quality Control Personnel.....                         | IV-1   |
| V.    | Inspection Procedures and Frequencies .....                                    | V-1    |
| VI.   | Submittal Process .....  | VI-1   |
| VII.  | Quality Control Testing .....  | VII-1  |
| VIII. | Quality Assurance Testing.....   | VIII-1 |
| IX.   | Test Result Documentation.....   | IX-1   |
| X.    | Final Test and Quality Control Report.....                                     | X-1    |

## **I. INTRODUCTION**

## **I. INTRODUCTION**

The Truckee Tahoe Airport District proposes the construction of the following facilities at the Truckee Tahoe Airport, Truckee, California.

- Reconstruction of Apron A2 (26,500 sq. yd.), including grading, drainage, paving, and airfield marking.
- Construction of Snow Melt Apron (75' x 60')

The 2021 Pavement Maintenance Management Plan (PMMP) prepared for Truckee Tahoe Airport shows that the pavement on Apron A2 needs to be reconstructed by 2026. The subgrade is forecast to fail under deep seated distresses and requires reconstruction. The existing pavement section is only 3" of AC and 6" of AB, for a total of 9". The FAA minimum pavement section required with a subgrade CBR<20 (CBR=7) is 4" AC, 6" AB, 6" of ASB for a total minimum pavement section of 16" thick. Due to grade limitations of nearby buildings, it is not practical to raise the grade. Reconstruction will be necessary to install the required FAA pavement section for this project as the current pavement section is inadequate and is being overstressed with the current jet traffic. New airfield markings will be installed.

The Sponsor is committed to providing and maintaining competent technical supervision at the construction site throughout the project to assure conformance with the approved plans and specifications. A Construction Management Plan has been prepared to detail the measures and procedures that are required to assure compliance with the Quality Control (QC) provisions of the construction contract. The Contractor is responsible for all Quality Control (QC) testing and inspection. The Sponsor is responsible for Quality Assurance (QA) to confirm that all work has been performed in accordance with the plans and specifications. This report details the Construction Management Plan for this project.

## **II. CONSTRUCTION MANAGEMENT PERSONNEL**

## II. CONSTRUCTION MANAGEMENT PERSONNEL

### **Quality Assurance (QA) Program – Sponsor Responsible**

**Sponsor:** Truckee Tahoe Airport District, Truckee Tahoe Airport, 10356 Truckee Tahoe Airport Road, Truckee, CA 96161, Telephone (530) 587-4119, Extension 105, Fax (530) 587-2984

Sponsor Representative..... Robb Etnyre, General Manager  
Responsibility and authority for contract administration

**Consulting Engineer:** Brandley Engineering, Consulting Airport Engineers, 6125 King Road, Suite 201, Loomis, CA 95650, Telephone (916) 652-4725, Fax (916) 652-9029

***Project Manager, Principal Engineer..... R Damon Brandley, P.E.***

- Advise and consult with Sponsor.
- Resolve any 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.
- Make periodic visits to the job site to familiarize himself generally with the progress and quality of the work and to determine in general whether such work is proceeding in accordance with the contract documents.
- Review materials, equipment and performance tests for compliance with plans and specifications.

***Resident Project Representative (RPR)/QA Manager ..... David Baltazar, E.I.T.***

- Advise and consult with Sponsor. All Sponsor's instructions shall be issued through the Project Manager. The Project Manager shall interpret the requirements of the contract documents and judge the performance thereunder by both the Sponsor and the Contractor.
- Provide complete construction management services, including providing all resident engineering, testing, and inspection services and all required reports to the Sponsor and F.A.A.
- Notify the Contractor or his/her representative 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 Project Manager for his decision.
- Review asphalt mix design submitted by the contractor.
- Attend weekly construction meetings.
- Determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for under the contract.
- Approve applications for progress payments made by Contractor.
- Review and approve all Contractor submittals.
- Evaluate materials and methods of construction.
- Perform field and/or construction surveys if required.

- Prepare and assist in negotiating any required change orders.
- Perform and/or supervise all testing and inspection services required for Quality Assurance. Depending on circumstances in the field, tests and inspections will be performed by RPR, Brandley Engineering inspector, or qualified outside testing laboratory.
- Review all Contractor Quality Control testing and test results.
- Prepare or review weekly and final summary test reports.

***Inspector***.....

- Assist the RPR in all aspects of construction management including but not limited to testing and inspection services, evaluation of materials and methods of construction, and performing field and/or construction surveys if required.

**Quality Control (QC) Program – Contractor Responsible**

**Contractor:** ..... ***To Be Determined***

***Project Superintendent*** ..... ***To Be Determined***

- Monitor quality control plan.
- Prepare asphalt mix design based on test results from an ASTM-certified laboratory.
- Analyze test results.
- Prepare daily and weekly summary and final summary test reports.
- Transmit test results to home office with copies to RPR.
- Make and implement corrective decisions.
- Supervise all employees and subcontractors.
- Prepare and transmit to RPR all required submittals.

***Quality Control Manager***..... ***To Be Determined***

- Administer quality control plan.
- Prepare and submit Quality Control Program.
- Perform quality control tests on subbase course, aggregate base course, bituminous surface course, and Portland cement concrete.
- Assemble and review test data, make statistical and trend analysis, provide corrective recommendations to Project Superintendent.
- Provide daily inspection reports and daily testing reports to RPR.
- Provide weekly typewritten summaries of all test results for each material tested to RPR.
- Provide linear control charts on aggregate base course and asphalt gradations each week.

- At the end of the project provide final typewritten summary tables showing all test results in chronological order conducted for each product.

***Plant Foreman ..... To Be Determined***

- Control gradation, cement content, and temperature of the mix.
- Report all test data plus mix and cement quantities at least twice daily to Project Superintendent and/or Quality Control Manager.

***Paving Foreman..... To Be Determined***

- Control grade, thickness, joints, density, and surface tolerance.
- Monitor yield.

**Testing Laboratory: \_\_\_\_\_**

***Testing Technician..... To Be Determined***

- Perform quality control tests on all materials submitted by Contractor.
- Provide test results to Quality Control Manager.
- Analyze results and provide analysis and corrective recommendations to Quality Control Manager.

**Manufactured Materials** – Contractor shall obtain and submit to RPR vendors’ certificates of compliance with specification requirements. Vendors’ certificates will be required for the following items:

- Mineral Filler and Asphalt Cement Binder
- Emulsified Asphalt Prime Coat
- Emulsified Asphalt Tack Coat
- Portland Cement
- Structural Steel
- Concrete Admixtures
- Fly Ash
- Paint and Reflective Beads
- Drainage Features

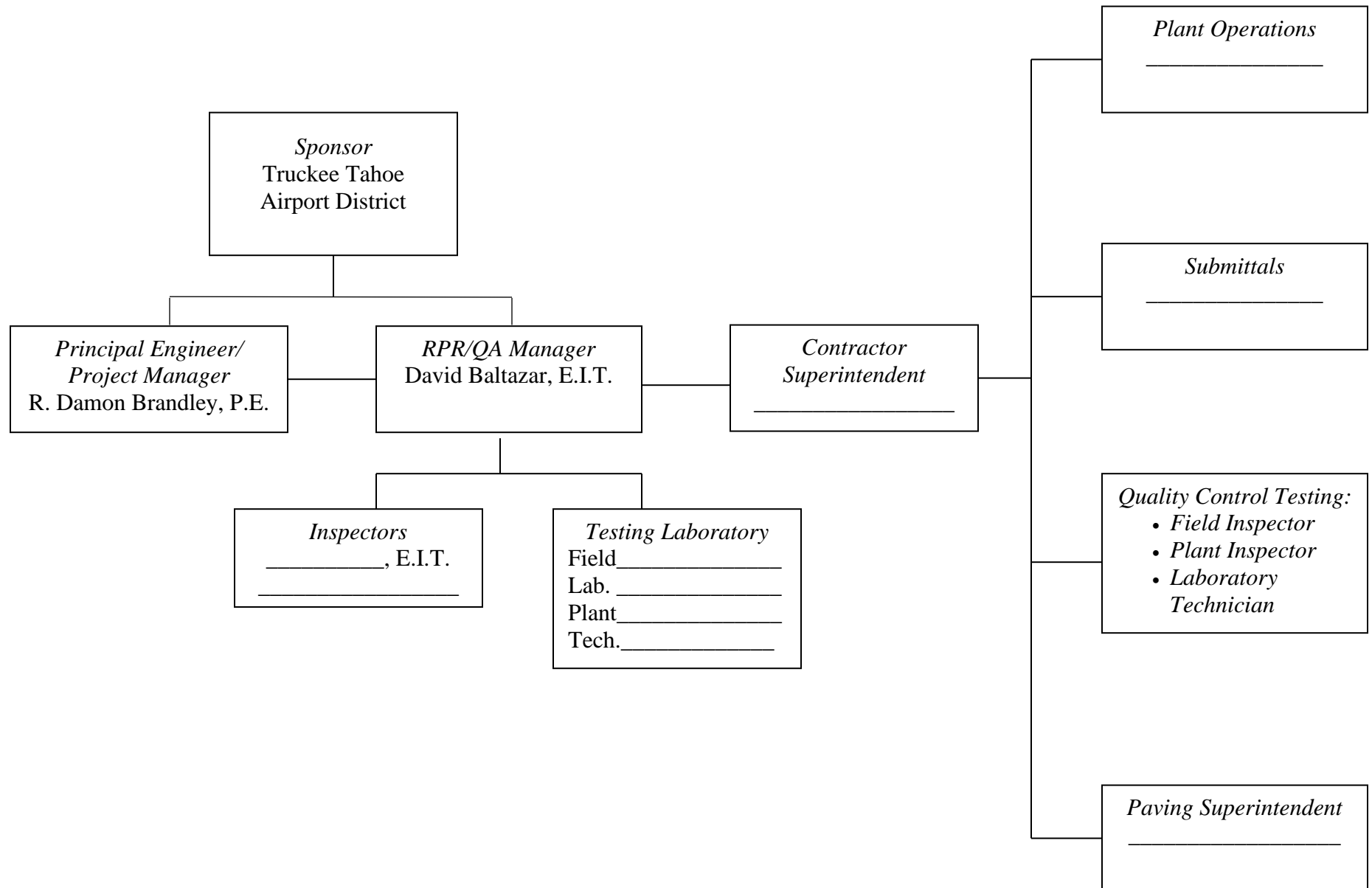
**RPR’s Field Office and Laboratory** – All inspection and Quality Assurance testing will be performed by the Sponsor’s Consulting Engineer’s staff (Brandley Engineering) with assistance from qualified testing laboratory for testing of hot mix asphalt and concrete. Testing Laboratory is to be determined.

An office and laboratory space will be furnished on site by the Sponsor for the use of the RPR. Required laboratory test equipment will be brought to the site to allow testing of most materials. Some specialized tests will be conducted in the home office laboratory of Brandley Engineering or in the testing laboratory.

Most tests will be performed in the field laboratory so that the Contractor can have immediate access to all Quality Assurance test results.



## CONSTRUCTION MANAGEMENT PLAN – ORGANIZATION CHART



**III. RESUMES OF BRANDLEY ENGINEERING PERSONNEL  
(QUALITY ASSURANCE CONSULTANT)**

**R. DAMON BRANDLEY, P.E.**  
**PROJECT MANAGER/PRINCIPAL ENGINEER**

---

***EDUCATION:***

Master of Science in Civil Engineering, Transportation Major, University of Illinois, Dec. 2001.  
B. Sc. in Civil Engineering, Texas A&M University, May 2000.

***PROFESSIONAL REGISTRATION***

State of California - Civil Engineer - No. 66558

***PROFESSIONAL EXPERIENCE:***

Mr. Brandley is an owner and principal engineer of Brandley Engineering. He has been actively involved in airport and airfield pavement design and construction control for nine summers while attending school and full time since 2002. He has completed a Research Assistantship at the University of Illinois in Champaign/Urbana. This research was conducted in conjunction with the FAA's Center of Excellence in Airport Pavement Research. His work as a Research Assistant included airfield pavement design and testing, Super Pave mix designs, and various other research projects. He is experienced in the planning and design of runways, taxiways, and roads, including paving, grading, drainage, lighting, utilities, etc. He operates the AutoCAD system and has conducted construction management, testing, and inspection on several airports since 2002.

***REPRESENTATIVE PROJECTS – RESIDENT PROJECT REPRESENTATIVE (RPR)***

Tulelake Municipal Airport - Rehabilitate Runway 11-29 – 2004

Georgetown Airport - Reconstruct and Light Runway 16-34 – 2005

Chico Municipal Airport - Rehabilitate Aircraft Parking Apron Phase 1 – 2005 and Phase 2 – 2008-2009

Lincoln Regional Airport - Reconstruct So. T/W, Replace VASI with PAPI – 2007

Stockton Metropolitan Airport - Rehabilitate Runway 11R-29L – 2007

Lake Tahoe Airport – Reconstruction of Runway 18-36 – 2008

Lake Tahoe Airport – Terminal Apron Rehabilitation – 2009

Chico Municipal Airport – Rehabilitate Aircraft Parking Apron Phase 2b – 2010

Lake Tahoe Airport – Terminal Apron Rehabilitation Phase 3 – 2011

Lake Tahoe Airport – Crack Seal and Airfield Marking, Update Airfield Signage – 2011

Truckee Tahoe Airport – Runway 10-28 Rehabilitation and 2012 Pavement Maintenance Project

Truckee Tahoe Airport – 2012 and 2013 Airfield Maintenance Programs

Truckee Tahoe Airport - Reconstruct Apron A4 - 2014

Chico Municipal Airport – Reconstruct Taxiway H and Aircraft Parking Apron – 2015

Truckee Tahoe Airport – Reconstruct Taxiways and Apron, Widen Apron – 2016

Lake Tahoe Airport – Reconstruct GA Apron Phase 4 – 2018

Truckee Tahoe Airport – Reconstruct Taxiway R – 2019

Lincoln Regional Airport – Airport Fuel Tanks Project – 2019-2020

## **DAVID BALTAZAR, E.I.T. - RESIDENT PROJECT REPRESENTATIVE**

---

**Education:** B. Sc. in Mechanical Engineering, California State University, Sacramento 2007

### ***PROFESSIONAL EXPERIENCE:***

Mr. Baltazar has been involved in airfield pavement testing and inspection on airports in the Western United States since 2005, during which time he has gained progressive experience in field and laboratory testing and inspection of airfield projects in our office. He is experienced in the inspection of runways, taxiways, aprons, and roads, including paving, grading, drainage, lighting, utilities, etc. Mr. Baltazar has been responsible for field and laboratory testing and inspection on several airports over the past few years.

### ***REPRESENTATIVE PROJECTS:***

#### ***Field Inspection and Testing/Resident Project Representative (RPR):***

Cedarville Municipal Airport – Construct Tee Hangar Taxiways – 2005  
Georgetown Airport - Reconstruct and Light Runway 16-34 – 2005  
Gansner Field – Reconstruct Aircraft Parking Apron Phase 2 – 2005  
Lincoln Regional Airport - Reconstruct S. T/W, Replace VASI with PAPI – 2007  
Placerville Airport - Remove Obstructions, Phase 1 Hangar Area – 2007  
Stockton Metropolitan Airport - Rehabilitate Runway 11R-29L – 2007  
Mammoth Yosemite Airport – Reconstruct Runway 9-27 & Taxiways – 2008  
Lake Tahoe Airport – Reconstruct Runway 18-36 – 2008  
Lake Tahoe Airport – Reconstruct Terminal Ramp Phases 1 and 2 – 2009  
Chico Municipal Airport – Rehabilitation of Aircraft Parking Aprons – 2008 through 2010  
Oroville Municipal Airport – Rehabilitate Airfield Pavements – Crack Seal, Remark Airfield Markings – 2011  
Tulelake Airport – Rehabilitation of Aircraft Parking Apron – 2012  
Truckee Tahoe Airport – Reconstruct Runway 10-28 – 2012  
Rogers Field – Joint Seal Airfield Pavements – 2013  
Rogers Field- Reconstruct Tie Down Apron - 2015  
Alturas Municipal Airport – Helicopter Parking Apron - November 2016  
Truckee Tahoe Airport – Reconstruct Hangar Taxilanes CD and DE (East) – August 2017  
Madera Municipal Airport – Crack Seal Airfield Pavements – 2018  
Chowchilla Municipal Airport – Crack Seal and Slurry Seal Taxiway A and Apron – 2018  
Truckee Tahoe Airport – Reconstruct Taxilane R – 2019  
Truckee Tahoe Airport - Reconstruct Med Services Apron and Runway Blast Pad, Construct Wash Rack – 2020  
Truckee Tahoe Airport – Reconstruct Taxiway A West & Cross Taxiways - 2021  
University Airport – Runway 17-35 Reconstruction & Widening, Exit Pavements, and Airfield Lighting - 2022

#### **IV. RESUMES OF CONTRACTOR'S QUALITY CONTROL PERSONNEL**

***Project Superintendent***  
***(To be added once Contractor has been selected)***

***Quality Control Manager***  
***(To be added once Contractor has been selected)***

***Quality Control Testing***  
***(To be added once Contractor has been selected)***



## **V. INSPECTION PROCEDURES AND FREQUENCIES**

## **V. INSPECTION PROCEDURES AND FREQUENCIES**

### **A. Surveying and Grade Control**

The surveying to be included in this program will be provided by the Contractor and will be limited to that required for construction of the project. All field notes and data collected during design shall be made available to the Contractor. The survey party shall consist of a qualified party chief and survey crew. All survey equipment shall be verified for proper working operation prior to use. All required horizontal and vertical control is in place and was established in design surveys.

For horizontal control, the referenced datum is NAD83. For vertical control, the referenced datum is NAVD88. The construction monuments shall be adequately protected throughout the duration of the project.

The Contractor shall accomplish construction layout and staking by using horizontal and vertical control monuments established by the Sponsor's surveyor. The responsibility and risk associated with the construction layout shall be borne by the Contractor. The RPR will review Contractor's layouts and final grades.

During the course of the project work, the RPR will make spot checks on alignment, verify proper cross sections of the completed pavement layers, and verify final cross sections for computing final pay quantities as required. Where applicable, RPR will observe and verify Contractor's final grade surveys and utilize these data for calculating pay quantities. A copy of all Contractor's survey notes shall be given to the RPR.

### **B. Quality Control By Contractor – Inspection and Testing Responsibility**

The Contractor is responsible for Quality Control on this project. All definable features of work will be inspected on a daily basis to ensure continuing compliance with contract requirements until completion of the particular item of work. The following inspections will be addressed:

1. The Contractor will prepare the hot mix asphalt (HMA) mix design for the HMA proposed for use on the project. The laboratory will be accredited in accordance with ASTM D3666. The laboratory accreditation must be current and listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Engineer prior to start of construction.
2. The Contractor will prepare the concrete mix design for the concrete proposed for use on the project. The laboratory will be accredited in accordance with ASTM D1077. The laboratory accreditation must be current and listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Engineer prior to start of construction.
3. During plant operation for material production, quality control test results and periodic inspections will be utilized to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other

requirements of the specifications. All equipment utilized in proportioning and mixing will be inspected to ensure its proper operating condition. All necessary inspections will be performed by certified technicians on a daily basis and documented.

4. During field operations, quality control test results and periodic inspections shall be utilized to ensure the quality of all materials and workmanship. All equipment utilized in placing, finishing and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance with the specifications and are within the plan dimensions, lines, grades, and tolerances specified. All necessary inspections will be performed by certified technicians on a daily basis and documented.
5. Any test results that do not meet specification requirements and any grade that is out of tolerance will be immediately reported to the Contractor's Superintendent and the RPR. Corrective measures will be implemented and new tests and inspections performed to demonstrate that corrections have been made.
6. Test reports will be prepared and transmitted to the RPR, as follows:
  - a. Daily
  - b. Weekly Summary in typewritten format - Electronic
  - c. Final Summary – Typewritten & Bound - Electronic

Failing test results will be highlighted and corrective action noted. If the weekly summary is not submitted to the RPR, the work will be shut down and the contractor will not be allowed to proceed with the work until the reports have been submitted.

7. Submittals – All required submittals will be prepared, reviewed and submitted to the RPR. Only Contractor reviewed submittals will be accepted.

C. Quality Assurance By RPR – Inspection and Testing Responsibility

The RPR is responsible for Quality Assurance on this project. All definable features of work will be inspected on a daily basis to ensure continuing compliance with contract requirements until completion of the particular item of work. The following inspections will be addressed:

- a. Compaction
- b. Grade and alignment
- c. Suitability test results
- d. Surface tolerance
- e. Rideability
- f. Finish grading and revegetation if necessary
- g. Pavement marking
- h. Drainage Features
- i. Electrical Features

A daily inspection report will be completed as shown in this section of the Construction Management Plan. Weekly reports (FAA Form 5370-1), along with a weekly statement of working days, will be submitted to the Sponsor, the Contractor, and the Federal Aviation Administration.

D. Quality Control Test Program

The Quality Control Test Program established for this project is shown on the Quality Control Testing Schedule included on Page VII-2.

Reports of all testing by the Contractor and RPR will be prepared daily and summarized weekly as required. Samples of the proposed daily and weekly report forms are included on the following pages.



Report No. \_\_\_\_\_

## INSPECTION REPORT

☒ Daily  
☐ Weekly  
☐ Monthly

**AIRPORT:** Truckee Tahoe Airport

**DATE:** \_\_\_\_\_

**PROJECT:** Reconstruct Apron A2

**WEATHER:** \_\_\_\_\_

**AIP NO.:** 3-06-0262-0 -2025

**TEMPERATURE:** min \_\_\_\_\_ max \_\_\_\_\_

**CONTRACTOR:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**WORKING DAY:** yes { } no { }

Contract Working Days Schedule A 60  
Contract Working Days Schedule B 45

### **A. EARTHWORK**

1. { } Excavation and Embankment (P-152) \_\_\_\_\_
2. { } Scarify and Recompact Subgrade (P-152) \_\_\_\_\_
3. { } Remove Existing Slot Drain (P-152) \_\_\_\_\_
4. { } Subbase Course (P-154) \_\_\_\_\_
5. { } Geogrid (P-154) \_\_\_\_\_
6. { } \_\_\_\_\_

### **B. FLEXIBLE BASE COURSE**

7. { } In-Place FDR Asphalt Aggregate Subbase (P-207) \_\_\_\_\_
8. { } Crushed Aggregate Base Course (P-209) \_\_\_\_\_
9. { } \_\_\_\_\_

### **C. RIGID BASE COURSE**

10. { } Asphalt Surface Coarse (P-401) \_\_\_\_\_
11. { } \_\_\_\_\_

### **D. MISCELLANEOUS**

12. { } Emulsified Asphalt Prime Coat (P-602) \_\_\_\_\_
13. { } Emulsified Asphalt Tack Coat (P-603) \_\_\_\_\_
14. { } Concrete – Concrete Cap Utilities (P-610) \_\_\_\_\_
15. { } Concrete – Concrete Curb (P-610) \_\_\_\_\_
16. { } Concrete – Snow Melt Apron (P-610) \_\_\_\_\_
17. { } \_\_\_\_\_

### **E. MARKING**

18. { } Temporary Marking (P-620) \_\_\_\_\_
19. { } Temporary Marking Removal (P-620) \_\_\_\_\_
20. { } Marking (P-620) \_\_\_\_\_
21. { } Reflective Media (P-620) \_\_\_\_\_
22. { } \_\_\_\_\_

### **F. DRAINAGE**

23. { } HDPE Pipe Stub with Cap (D-701) \_\_\_\_\_
24. { } C900 Pipe, Concrete Encased (D-701) \_\_\_\_\_
25. { } Trench Drain (D-701) \_\_\_\_\_
26. { } Inlets (D-751) \_\_\_\_\_
27. { } \_\_\_\_\_

TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
AIP 3-06-0262-0\_\_-2025

INSPECTION REPORT (Continued)

Page No. 2

Dated: \_\_\_\_\_

G. ELECTRICAL

28. { } Airport Underground Electrical Conduits (L-110) \_\_\_\_\_  
29. { } Electrical Junction Structure (L-115) \_\_\_\_\_  
30. { } Retroreflective Markers, L-853 (L-125) \_\_\_\_\_  
31. { } \_\_\_\_\_

H. MISCELLANEOUS

32. { } Mechanical Snow Melt System (M-100) \_\_\_\_\_  
33. { } Gate Loop (Sheet No. 19) \_\_\_\_\_  
34. { } \_\_\_\_\_

REMARKS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONTRACTOR’S PERSONNEL/EQUIPMENT ON SITE**


| <b><u>EQUIPMENT</u></b> | <b><u>PERSONNEL</u></b> |
|-------------------------|-------------------------|
|                         |                         |
|                         |                         |
|                         |                         |
|                         |                         |
|                         |                         |
|                         |                         |
|                         |                         |

Visitors: \_\_\_\_\_

Personnel: \_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_

|   |                                 |  |                   |                                    |
|---|---------------------------------|--|-------------------|------------------------------------|
|  <b>U.S. Department of Transportation<br/>Federal Aviation Administration</b>  |                                 | <b>Construction Progress and Inspection Report</b><br><br><b>Airport Grant Program</b> |                   | Period Ending                      |
|   |                                 |  |                   | Project Number<br>AIP 3-06-0262-__ |
| Airport Name<br>Truckee Tahoe Airport, Truckee, California  |                                 |  |                   |                                    |
| Project Description<br>Reconstruct Apron A2   |                                 |  | Contractor's Name |                                    |
| 1. Contract Time  | No. Days Charged to Date        | Last Working Day Charged (Date)  |                   |                                    |
| 2. Brief Weather Summary this Period, including Approximate Rainfall and Periods of Below Freezing Temperature<br>(On earthwork jobs, include soil conditions.) |                                 |  |                   |                                    |
| 3. Rough Estimate of Percent Completion to Date of Construction Phases (Include items such as clearing, grading, drainage, base, surface, lighting, etc.)       |                                 |  |                   |                                    |
| 4. Work Completed or In Progress this Period  |                                 |  |                   |                                    |
| 5a. Summary of Laboratory and Field Testing this Period (Note failing tests and any retests. Summarize out-of-tolerance.)                                       |                                 |  |                   |                                    |
| 5b. Material (Identify material subject to pay reduction.)  |                                 |  |                   |                                    |
| 6. Description of Anticipated Work by Contractor for Next Period  |                                 |  |                   |                                    |
| 7. Problem Areas/Other Comments (Include revisions to plans and specifications approved or denied, delays, difficulties, etc. and actions taken.)               |                                 |  |                   |                                    |
| <b>SPONSOR'S INSPECTOR OR REPRESENTATIVE</b>  |                                 |  |                   |                                    |
| Date  | Typed or Printed Name and Title |  | Signature         |                                    |



6125 KING ROAD, SUITE 201 · LOOMIS, CALIFORNIA 95650 · P. (916) 652.4725

## WEEKLY STATEMENT OF WORKING DAYS

AIRPORT: Truckee Tahoe Airport DATE: \_\_\_\_\_  
 PROJECT: Reconstruct Apron A2 AIP NO: 3-06-0262-0 -2025

TO: (Contractor) \_\_\_\_\_  
 \_\_\_\_\_

The following statement shows the number of working days charged to your contract for the week ending \_\_\_\_\_.

|   |       |
|---|-------|
| Date Contract Approved                      | _____ |
| Date of First Chargeable Working Day        | _____ |
| Date Contractor Began Work                  | _____ |
| Working Days Specified in Contract          | _____ |
| Time Extensions by Approved Change Order    | 0     |
| Total Authorized Working Days               | 0     |
| Total Authorized Calendar Days              | -     |
| Date Job Shutdown due to Weather Conditions | -     |
| Date Job Resumed                            | -     |

| DATE                     | DAY       | WEATHER OR CONDITIONS | WORKING DAY CHARGED | Nonworking Day Caused by Weather or *Other Conditions |
|--------------------------|-----------|-----------------------|---------------------|---|
|                          | Sunday    |                       |                     |   |
|                          | Monday    |                       |                     |   |
|                          | Tuesday   |                       |                     |   |
|                          | Wednesday |                       |                     |   |
|                          | Thursday  |                       |                     |   |
|                          | Friday    |                       |                     |   |
|                          | Saturday  |                       |                     |   |
| Days this Week           |           | 0                     |                     |   |
| Days Previously Reported |           | 0                     |                     |   |
| Total Days to Date       |           | 0                     |                     |   |

|   |         |
|---|---------|
| Working Days Remaining to Complete Contract | 0       |
| Project Completion this Week                | 0%      |
| Project Completion to Date                  | 0%      |
| Contract Time Elapsed                       | #DIV/0! |

Note: The Contractor will be allowed 15 days to protest in writing the correctness of this statement; otherwise, the statement shall be deemed to have been accepted by Contractor.

RESIDENT PROJECT REPRESENTATIVE

\* Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



## **VI. SUBMITTAL PROCESS**

## **VI. SUBMITTAL PROCESS**

At the Preconstruction Conference, the Contractor will provide a listing of all submittals required for the project for approval by the RPR. The listing can be developed in a spreadsheet format and shall include:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal
- e. Scheduled data of submittal

After approval of this list, individual submittals will be submitted to the RPR for approval a minimum of 10 calendar days before use, installation, or construction. Contractor shall review and approve all submittals prior to submittal to RPR. Any submittal that does not include Contractor's review and approval signature will not be accepted. The RPR will review submittals and return them to the Contractor either approved or rejected. No materials will be delivered to the project until submittals are approved.

Certificates of compliance for all manufactured or prefabricated materials shall be delivered to the RPR.

Upon delivery to the site, the RPR will inspect each item to assure that it is the same as the approved submittal.

The Submittal Schedule and review path are shown on the following pages.

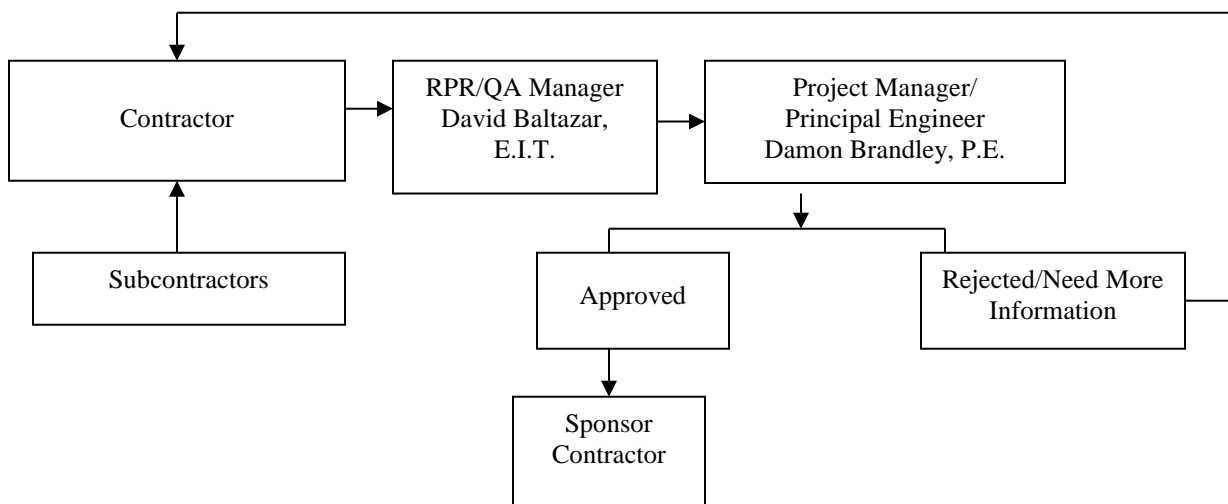
| TRUCKEE TAHOE AIRPORT - RECONSTRUCT APRON A2 - AIP 3-06-0262-0__-2025 |   |  |   |  |   |
|---|---|--|---|--|---|
| SUBMITTAL SCHEDULE  |   |  |   |  |   |
| Bid Item  | Item Description  | Type Submittal   | Project Spec.                                       | Material Specification   | Title   |
| --  | Construction Schedule                                     | CMP  | --  | N/A  | N/A   |
| --  | List of Materials/Schedule of Values                      | List   | SC (19)b  | N/A  | N/A   |
| --  | Safety Plan Compliance Document                           | Manual   | SC (18)a  | N/A  | N/A   |
| --  | Contractor Quality Control Program                        | Manual   | C-100   | N/A  | N/A   |
| 1   | Storm Water Pollution Prevention Plan                     | Plan/Permit  | C-103   | N/A  | N/A   |
| 8   | Subbase Course (P-154)                                    | Suitability Tests  | 154-2.1   | ASTM D1883   | California Bearing Ratio (CBR)  |
|   |   | Gradation  |   | C 136 & C 117  | Sieve Analysis  |
| 9   | Geogrid (P-154)   | Product Data   | 154-2.4   | N/A  | N/A   |
| 11  | Crushed Aggregate Base Course (P-209)                     | Suitability Tests  | 209-2.1   | ASTM C131<br>ASTM C88<br>ASTM D5821<br>ASTM D4791<br>ASTM C142<br>ASTM D4318<br>ASTM D1883 | LA Rattler<br>Sodium Sulfate Soundness<br>Fractured Particles<br>Flat or Elongated Particles<br>Clay Lumps and Friable Particles<br>Liquid Limit and Plasticity Index<br>California Bearing Ratio (CBR) |
|   |   | Gradation  | 209-2.2   | C 136 & C 117  | Sieve Analysis  |
| 12  | Asphalt Surface Course (P-401)                            | Aggregate Suitability Tests - Coarse Aggregate   | 401-2.1a  | ASTM C 88<br>ASTM D5821<br>ASTM C 131<br>ASTM C142<br>ASTM D4791                           | Sodium Sulfate Soundness<br>Fractured Particles<br>LA Rattler<br>Clay Lumps and Friable Particles<br>Flat or Elongated Particles  |
|   |   | Aggregate Suitability Tests - Fine Aggregate   | 401-2.1b  | ASTM D4318<br>ASTM C88<br>ASTM D2419<br>ASTM D1073   | Liquid Limit and Plasticity Index<br>Sodium Sulfate Soundness<br>Sand Equivalent<br>Natural Sand  |
|   |   | Mineral Filler   | 401-2.2   | ASTM D242<br>ASTM D4318  | Mineral Filler<br>Plasticity Index  |
|   |   | Asphalt Binder - Certificate   | 401-2.3   | ASTM D6373   | Asphalt Binder  |
|   |   | Anti-Strip Agent   | 401-2.4   | N/A  | N/A   |
|   |   | JMF Laboratory   | 401-3.2   | ASTM D3666   | Agencies Testing & Inspection Road & Paving Materials   |
|   |   | Air Voids<br>Percent VMA<br>Tensile Strength<br>Gradation<br>Job Mix Formula<br>Marshall Tests   | 401-3.3   | ASTM D3203<br>ASTM D6995<br>ASTM D4867<br>C 136 & C 117<br>N/A<br>Asphalt Institute MS-2   | Air Voids<br>Percent Voids in Mineral Aggregate (VMA)<br>Effect of Moisture on AC Mixtures<br>Sieve Analysis<br>N/A<br>Marshall Method of Mix Design  |
|   |   | Asphalt Pavement Analyzer or Hamburg Wheel Test  | 401-3.3   | AASHTO T340<br>AASHTO T324   | Rutting Susceptibility of HMA Using APA<br>Hamburg-Wheel-Track Testing of Compacted AC  |
| 13  | Emulsified Asphalt Prime Coat (P-602)                     | Certificate  | 602-2.1   | ASTM D977  | Emulsified Asphalts   |
| 14  | Emulsified Asphalt Tack Coat (P-603)                      | Certificate  | 603-2.1   | ASTM D977  | Emulsified Asphalts   |
| --  | Joint Sealant (P-605)                                     | Certificate<br>Certificate   | 605-2.1<br>605-2.1                                  | ASTM D5893<br>ASTM D6690   | Cold Applied, Chemically Curing Silicone Joint Sealant<br>Joint and Crack Sealants, Hot Applied   |
| 15-17   | Concrete (P-610)  | Alkali-Silica Reaction<br>Aggregate - Coarse<br>Gradation - Coarse<br>Aggregate - Fine<br>Cement - Certificate<br>Cementitious Materials | 610-2.1<br>610-2.2<br>610-2.3<br>610-2.4<br>610-2.5 | ASTM C 1260<br>ASTM C33<br>ASTM C 136<br>ASTM C33<br>ASTM C 150<br>ASTM C618<br>ASTM C989  | Alkali Reactivity<br>Concrete Aggregates<br>Sieve Analysis<br>Concrete Aggregates<br>Portland Cement<br>Fly Ash<br>Slag Cement  |
|   |   | Admixtures   | 610-2.7   | ASTM C260<br>ASTM C 494<br>ASTM C494   | Air-entraining Admixtures<br>Water-reducing Admixtures<br>Chemical Admixtures   |
|   |   | Premolded Joint Material   | 610-2.8   | ASTM D 1751<br>ASTM D 1752   | Preformed Expansion Joint Filler<br>Preformed Sponge Rubber & Cork Joint Filler   |
|   |   | Steel Reinforcement  | 610-2.10  | ASTM A615  | Deformed Bars   |
|   |   | Concrete Curing - Certificates   | 610-2.11  | ASTM C 309   | Liquid Membrane Forming Compounds   |
| 17  | Concrete - Dowel Bars (P-610)                             | Product Data   | 610-2.12  | N/A  | N/A   |
| 18 & 20   | Marking Materials (P-620)                                 | Certificate  | 620-2.2a  | Fed Spec TT-P-1952   | Paint, Traffic, and Airfield Marking  |
| 21  | Reflective Media (P-620)                                  | Certificate  | 620-2.2b  | Fed Spec TT-B-1325   | Beads (Glass Spheres) Retroreflective   |
| 22  | HDPE Pipe Stub with Cap (D-701)<br>Rubber Gaskets (D-701) | Certificate<br>Certificate   | 701-2.2<br>701-2.4                                  | AASHTO M294<br>ASTM F477   | Corrugated Polyethylene Pipe, 12- to 60-in. Diameter<br>Elastomeric Seals (Gaskets) for Joining Plastic Pipe  |
| 23  | C900 Pipe (D-701)   | Certificate  | 701-2.2   | ASTM D1784<br>AWWA C900  | Rigid PVC Compounds & Chlorinated PVC Compounds<br>PVC Pressure Pipe & Fabricated Fittings  |
| 24  | Trench Drain (D-701)                                      | Product Data   | 701-2.11  | N/A  | N/A   |

**TRUCKEE TAHOE AIRPORT - RECONSTRUCT APRON A2 - AIP 3-06-0262-0\_\_-2025**  
**SUBMITTAL SCHEDULE**

| Bid Item | Item Description                          | Type Submittal                | Project Spec. | Material Specification | Title  |
|----------|---|-------------------------------|---------------|------------------------|--|
| 25       | <i>Inlets</i>                             |                               |               |                        |  |
|          | Mortar (D-751)                            | Certificate                   | 751-2.2       | ASTM C150              | Portland Cement                                  |
|          | Manhole Rings (D-751)                     | Certificate                   | 751-2.4       | ASTM C478              | Precast Reinforced Concrete Manhole Sections     |
|          | Gaskets (D-751)                           | Certificate                   | 751-2.4       | ASTM C443              | Joints for Concrete Pipe and Manholes            |
|          | Corrugated Metal (D-751)                  | Certificate                   | 751-2.5       | AASHTO M36             | Corrugated Steel Pipe, Metallic-Coated           |
|          | Gray Iron Castings (D-751)                | Certificate                   | 751-2.6       | ASTM A48               | Gray Iron Castings                               |
|          | Malleable Iron Castings (D-751)           | Certificate                   | 751-2.6       | ASTM A47               | Ferritic Malleable Iron Castings                 |
|          | Steel Castings (D-751)                    | Certificate                   | 751-2.6       | ASTM A27               | Steel Castings, Carbon                           |
|          | Structural Steel (D-751)                  | Certificate                   | 751-2.6       | ASTM A283              | Tensile Strength Carbon Steel Plates             |
|          | Ductile Iron Castings (D-751)             | Certificate                   | 751-2.6       | ASTM A536              | Ductile Iron Castings                            |
|          | Austempered Ductile Iron Castings (D-751) | Certificate                   | 751-2.6       | ASTM A897              | Austempered Ductile Iron Castings                |
|          | Precast inlet Structures (D-751)          | Certificate                   | 751-2.8       | ASTM C913              | Precast Concrete Water and Wastewater Structures |
| 26-28    | Underground Electrical Duct (L-110)       | Product Data                  | 110-2.3       | N/A                    | N/A  |
|          | Conduit Spacers (L-110)                   | Product Data                  | 110-2.5       | N/A                    | N/A  |
|          | Detectable Warning Tape (L-110)           | Product Data                  | 110-2.7       | N/A                    | N/A  |
| 29       | Electrical Junction Structure (L-115)     | Product Data                  | 115-2.4       | N/A                    | N/A  |
|          | Frames and Covers                         | Product Data/Structural Calcs | 115-2.7       | N/A                    | N/A  |
| 30       | Retroreflective Marker (L-125)            | Product Data                  | 125-2.6       | N/A                    | N/A  |
| 31       | Mechanical Snow Melt System (M-100)       | Product Data                  | See Plans     | N/A                    | N/A  |
| 32       | Gate Loop (Sheet No. 19)                  | Product Data                  | See Plans     | N/A                    | N/A  |

**TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
AIP NO. 3-06-0262-0\_\_-2025**

**PATH FOR REVIEW AND APPROVAL OF SUBMITTALS**



## **VII. QUALITY CONTROL TESTING**

## **VII. QUALITY CONTROL TESTING**

Quality Control Testing will be performed under the direction of the Contractor and will be reviewed by the RPR.

The Quality Control Testing Schedule, flow path, and corrective action plan proposed for this project are shown on the following pages.

**TRUCKEE TAHOE AIRPORT**  
**RECONSTRUCT APRON A2 - AIP 3-06-0262-0 \_-2025**

**QUALITY CONTROL TESTING SCHEDULE**

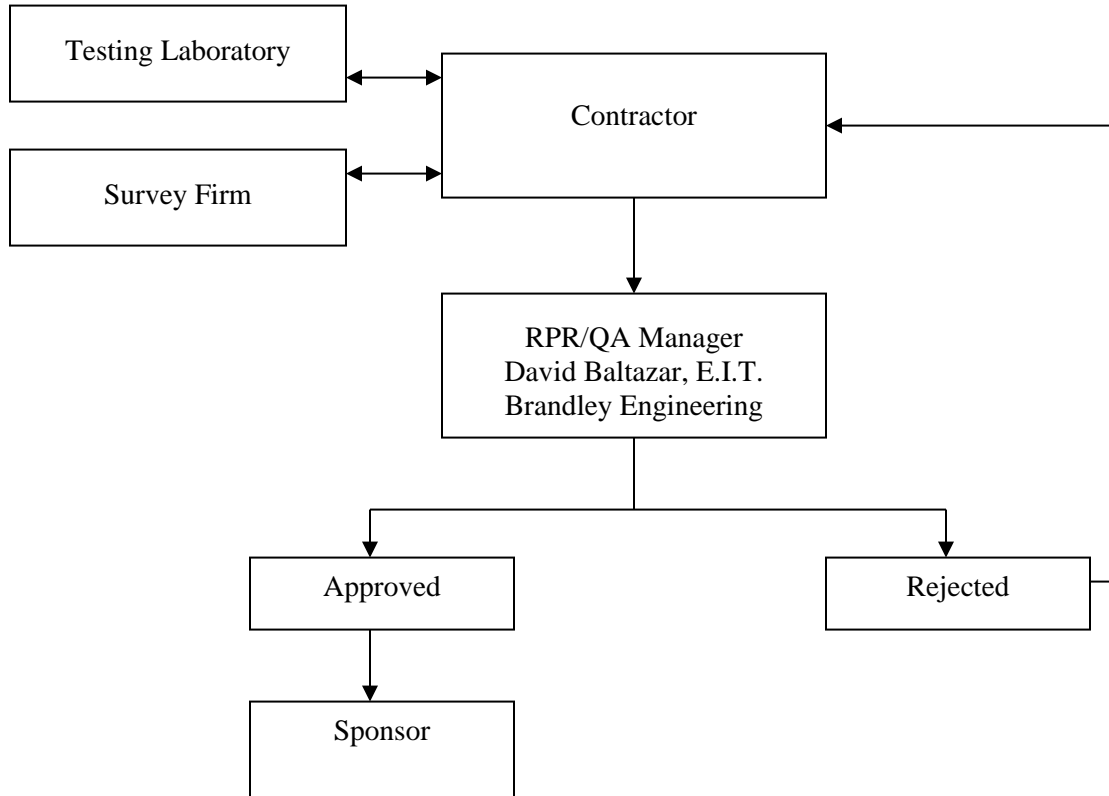
| Spec. No. | Material                              | Min Frequency | Testing   | ASTM            | Title   |
|-----------|---------------------------------------|---------------|---|-----------------|---|
| P-152     | Excavation                            | 1/1,000 SY    | Laboratory Compaction Test  | D1556           | In-Place Density - Sand Cone  |
|           |                                       |               | Field Density Test - Nuclear (Control)  | D 6938          | In-Place Density - Nuclear  |
| P-152     | Scarify and Recompact Subgrade        | 1/1,000 SY    | Field Density Test - Nuclear (Control)  | D1556<br>D6938  | In-Place Density - Sand Cone<br>In-Place Density - Nuclear                    |
|           |                                       | 50-foot grid  | Field Surface Tolerance   | N/A             | N/A   |
| P-154     | Subbase Course                        | 1/day         | Control Gradation (Production)  | C 117<br>C 136  | Materials Finer than 75-µm Sieve<br>Sieve Analysis - Fine & Coarse Aggregates |
|           |                                       | 2/1,200 SY    | Laboratory Compaction Test  | D 1557          | Laboratory Compaction   |
|           |                                       | 50-foot grid  | Surface Tolerances - Smoothness/Grade   | N/A             | N/A   |
|           |                                       | 2/1,200 SY    | Field Density Test - Nuclear (Control)  | D1556<br>D 6938 | In-Place Density - Sand Cone<br>In-Place Density - Nuclear                    |
|           |                                       | 2/1,200 SY    | Thickness   | N/A             | N/A   |
|           |                                       | 2/1,200 SY    | Laboratory Compaction Test  | D 1557          | Laboratory Compaction   |
| P-207     | FDR Recycled Asphalt - Subbase Course | 2/day         | Control Gradation (Production)  | C 117<br>C 136  | Materials Finer than 75-µm Sieve<br>Aggregates                                |
|           |                                       | As Needed     | Optimum Moisture Content  | D 2216          | Water (Moisture) Soil & Rock  |
|           |                                       | As Needed     | California Bearing Ratio  | D 1883          | California Bearing Ratio  |
|           |                                       | 50-foot grid  | Surface Tolerances - Smoothness/Grade   | N/A             | N/A   |
|           |                                       | 2/1,200 SY    | Field Density Test - Nuclear (Control)  | D1556<br>D 6938 | In-Place Density - Sand Cone<br>In-Place Density - Nuclear                    |
|           |                                       | 2/1,200 SY    | Thickness   | N/A             | N/A   |
| P-209     | Aggregate Base Course                 |               | Aggregate Suitability Tests*  |                 |   |
|           |                                       | 2/day         | Control Gradation (Production)  | C 117<br>C 136  | Materials Finer than 75-µm Sieve<br>Sieve Analysis - Fine & Coarse Aggregates |
|           |                                       | 25-foot grid  | Field Surface Tolerance   | N/A             | N/A   |
|           |                                       | 2/1,200 SY    | Laboratory Compaction Test  | D 1557          | Laboratory Compaction   |
|           |                                       | 2/1,200 SY    | Field Density Test - Nuclear (Control)  | D1556<br>D 6938 | In-Place Density - Sand Cone<br>In-Place Density - Nuclear                    |
|           |                                       | 2/1,200 SY    | Thickness   | N/A             | N/A   |
| P-401     | Asphalt Surface Course                |               | Job Mix Formula (Item 401-3.2)  | --              | --  |
|           |                                       | As Necessary  | Asphalt Pavement Analyzer or Hamburg Wheel Test   | T340 or T324    | --  |
|           |                                       | 2/Day         | Control Gradation (Production)  | D544            | Sieve Analysis  |
|           |                                       | 2/Day         | Asphalt Content   | D6307<br>D2172  | AC Content - Ignition Method<br>Extraction of Bitumen from Mixtures           |
|           |                                       | 1/Day         | Moisture Content of Aggregates  | C 566           | Moisture Content of Aggregate   |
|           |                                       | 1/Day         | Moisture Content of Asphalt   | D 1461          | Moisture Distillates in Mixture   |
|           |                                       | 4/Day         | Temperatures  | N/A             | N/A   |
|           |                                       | 1/Sublot      | Field Test Cores  | D 3665          | Random Sampling of Materials  |
|           |                                       | As Necessary  | Field Density Test - Nuclear (Control)  | D 2950          | Density of Bituminous Concrete  |
|           |                                       | Daily         | Smoothness  | N/A             | N/A   |
|           |                                       | Daily         | Grade   | N/A             | N/A   |
| P-610     | Structural PCC                        |               | Aggregate Suitability Tests*  | --              | --  |
| D-701     | Pipes                                 |               | Compaction of Backfill - Nuclear (Control) Compliance Certificate   | D 6938          | In-Place Density - Nuclear  |
| D-751     | Drop Inlets                           |               | Compaction of Backfill - Nuclear (Control) Compliance Certificate   | D 6939          | In-Place Density - Nuclear  |
| L-125     | Airfield Lighting & Signage           |               | Installed at proper elevation, alignment check, securing screws tightened as per manufacturer's recommendations | N/A             | N/A   |

\*See Submittal Schedule



**TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
AIP NO. 3-06-0262-0\_\_-2025**

**FLOW CHART – QUALITY CONTROL RESPONSIBILITIES**  
**(Between Testing Laboratory, Contractor, and Resident Project Representative)**



## **QUALITY CONTROL CORRECTIVE ACTION PLAN**

In the event that inspection or test results indicate unsatisfactory production or construction processes, immediate action will be taken. Corrective actions may range from a minor process adjustment to temporary termination of production. Correction action options are contained in this section of the Construction Management Plan.

Corrective actions will be taken each time that inspection or testing results show a material quality or process to be out of compliance. When any tests fall outside tolerance levels, an appropriate investigation will be set up to determine the cause and bring the material back into tolerance. Where two consecutive tests are outside tolerance levels, then Contractor will take immediate corrective action. This corrective action will occur regardless of its impact upon production. If three consecutive tests are out of specification, then production will immediately be halted and will not resume until it is demonstrated that all requirements can be met. Production will recommence upon approval of the RPR.

### **Item Description**

### **Corrective Action**

#### ***SUBGRADE – ITEM P-152:***

|                    |   |
|--------------------|---|
| Density            | If test results are outside the tolerances set forth in Item P-152 of the specifications, 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.   |
| Surface Tolerances | Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches, reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Subbase course will not be placed until the corrections have been made and the RPR has inspected and approved. |

#### ***SUBBASE COURSE – ITEM P-154/ ITEM P-207:***

|                    |   |
|--------------------|---|
| Density            | If the specified density is not attained, the area represented by the failed test shall be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached.   |
| Gradation          | If test results are outside the tolerances set forth in Item P-154 and P-207 of the specifications, an immediate investigation will be conducted to determine the cause. Corrections will be made and material will be tested immediately to assure that the correction has been effective. |
| Surface Tolerances | Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches, reshaped and re-compacted to grade until the   |

Item Description

Corrective Action

|           |   |
|-----------|---|
|           | required smoothness and accuracy are obtained and approved by the RPR   |
| Thickness | Where the thickness is deficient by more than 1/2-inch, the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches, adding new material of proper gradation, and the material shall be blended and recompacted to grade. |

***AGGREGATE BASE COURSE – ITEM P-209:***

|                        |   |
|------------------------|---|
| Gradation              | If test results are outside of the tolerances set forth in Item P-209 of the specifications, an immediate investigation will be conducted to determine the cause. Corrections will be made and material will be tested immediately to assure that the correction has been effective.  |
| Finished Grade         | If finished grade of aggregate base is outside limits, then the surface will be regraded before bituminous surface course is placed. asphalt surface course will not be placed until the corrections have been made and the QC Manager has inspected and approved.  |
| Percent Crushed        | If test results are outside the limits set forth in Item P-209 of the specifications, an immediate investigation will be conducted to determine the cause. Corrections will be made, and material will be tested immediately to assure that the correction has been effective.  |
| Density of AB in-Place | If the field density of aggregate base in-place determination indicates that the aggregate base is not being placed to a minimum of the required maximum density of the lab specimen, immediate action will be taken. Corrections will be made, and material will be tested immediately to assure that the correction has been effective. |

***ASPHALT SURFACE COURSE – P-401:***

|                   |  |
|-------------------|--|
| Surface Tolerance | If the finished surface varies more than 1/4” when tested with a 12-foot straightedge, immediate action will be taken to bring finish surface within the specified tolerance. If the completed thickness is deficient by more than 1/4” of the design thickness, corrective action will be taken by excavating to the required depth and replacing with new material. If the completed thickness is thicker and/or surface straightedge tolerances are exceeded, RPR will evaluate suitability of finished product and Contractor may be requested to grind the surface or remove and replace the AC pavement. |
|-------------------|--|

| <u>Item Description</u>                  | <u>Corrective Action</u>   |
|--|--|
| Asphalt Content                          | If one point falls outside the suspension limit of $\pm 0.70\%$ , or two consecutive points fall outside the action limit of $\pm 0.45\%$ , an immediate investigation will be conducted to determine the cause. Corrections will be made and material will be tested immediately to assure that the correction has been effective.  |
| Aggregate Gradation                      | If test results are outside of limits set forth in the control charts in paragraph 401-6.5 of the specifications, an immediate investigation will be conducted to determine the cause. Corrections will be made and material will be tested immediately to assure that the correction has been effective.  |
| Aggregate Moisture                       | When individual or composite aggregate moisture values differ from those of the plant computer, the plant computer will be adjusted to reflect the most recent aggregate moisture.   |
| Asphalt Temperature                      | If the asphalt temperature is not sufficient to provide adequate coating of aggregate particles or the asphalt temperature exceeds $325^{\circ}\text{F}$ ( $148^{\circ}\text{C}$ ) the plant operator will immediately take corrective action to raise or lower the temperature as needed. Temperature will be closely monitored to verify that the correction was adequate.     |
| Aggregate Temperature                    | If the aggregate and mineral filler temperature exceeds $347^{\circ}\text{F}$ ( $175^{\circ}\text{C}$ ) when asphalt is added, the plant operator will immediately take corrective action to lower the temperature as needed. Temperature will be closely monitored to verify that the correction was adequate.  |
| Mix Moisture Content                     | If the mix moisture exceeds $0.5\%$ , the plant operator will be notified and corrective action will be taken to reduce the moisture in the mix. Aggregate piles may be spread to dry, aggregate time in the heater may be increased, etc.   |
| Aggregate Base Preparation<br>(P-209)    | If the inspection indicates that the aggregate base is not compacted to $100\%$ maximum density under areas to be paved, immediate action will be taken. Aggregate base problems will be corrected – dried, cleaned, compacted, graded, etc. Asphalt concrete will not be placed until the corrections have been made and the QC and QA Managers have inspected and approved.    |
| Prime and Tack Coat<br>(P-602 and P-603) | If inspection indicates that the prime and/or tack coat material or application is not in accordance with the specifications, immediately action will be taken. Prime/Tack coat will be re-applied, changed, time for “break” will be lengthened, etc. Bituminous surface course will not be placed until the corrections have been made and the RPR has inspected and approved. |

| <u>Item Description</u> | <u>Corrective Action</u>   |
|-------------------------|--|
| Base Temperature        | If the surface temperature is less than specified in Table 4 of paragraph 401-4.1 of the specifications, bituminous mixture will not be placed unless approved by the RPR.   |
| Mix Temperature         | If physical measurements indicate that the mix temperature is below the specified temperature, corrective action will be taken immediately. Cool mix will be returned to the plant and the operation will be changed to correct the situation that is causing the problem. AC will be held in tarped trucks and not windrowed until necessary.   |
| In-Place Density        | If field density determination indicates that the bituminous surface course is not being placed to a minimum theoretical maximum density of the mat at 92.8% or joint of 90.5%, immediate action will be taken. Roller operations will be investigated and may be changed, plant will be notified and mix quality will be examined, temperature will be determined, etc. Density will be tested immediately following the corrective action to assure that the action has been effective. If a lot does not equal 90 percent within limits (PWL) of the compaction of both mat and joints, corrective action will be taken to increase the degree of compaction. |
| Air Voids               | If the lot does not have air voids within the limits (PWL) of Table 5 of paragraph 401-5.2 of the specifications, the reason shall be determined and corrective action will be taken.  |
| Surface Smoothness      | If the finished surface varies more than 3/8" for base course and 1/4" of surface course using a 12-foot straightedge, corrective action will be taken. If more than 15% of all measurements within a lot exceed these tolerances using methods set forth in the specifications, then corrective action will involve removing deficient material and replacing with new. High points will be ground off when required.   |
| Re-sampling Pavement    | Corrective action for pavement items may include re-sampling of pavement.  |

***STRUCTURAL PORTLAND CEMENT CONCRETE – (P-610):***

|                      |  |
|----------------------|--|
| Compressive Strength | If the test specimens fail to conform to the requirements for strength, changes shall be made to the concrete mixture to increase the strength to meet the requirements. When a given lot of concrete fails to meet the minimum requirements the entire lot shall be replaced at the Contractor's expense. |
|----------------------|--|

Item Description

Corrective Action

Defective Work

Any defective work discovered after the forms have been removed, which in the opinion of the Engineer cannot be repaired satisfactorily, shall be immediately removed and replaced at the expense of the Contractor. Defective work shall include deficient dimensions, or bulged, uneven, or honeycomb on the surface of the concrete.

## **VIII. QUALITY ASSURANCE TESTING**

## **VIII. QUALITY ASSURANCE TESTING**

Quality Assurance Testing and Inspection will be performed by or under the direction of the RPR. Quality Assurance Testing, as a minimum, will include all final acceptance testing to make sure the final product is within specification limits and to determine pay factors for each item.

The Quality Assurance Testing Schedule, flow path charts, and pay factors are included on the following pages.



**TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
AIP 3-06-0262-0 -2025**

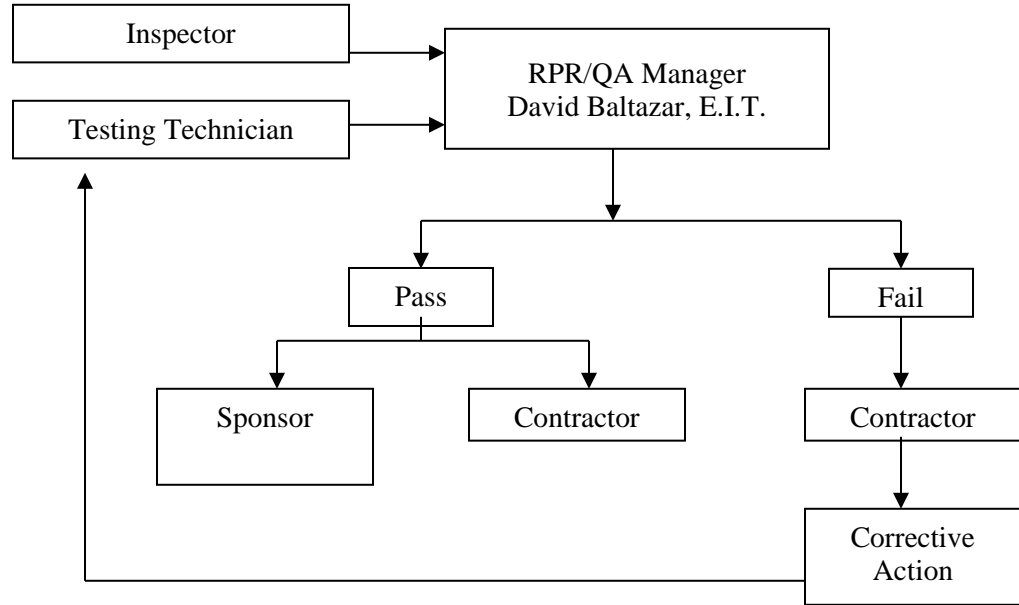
**QUALITY ASSURANCE TESTING SCHEDULE**

| Spec. No. | Material                              | Min Frequency        | Testing  | ASTM   | Title                              |
|-----------|---------------------------------------|----------------------|--|--------|------------------------------------|
| P-152     | Excavation                            | 1/1,000 SY           | Field Density Acceptance Test - Sand Cone                                      | D 1557 | Laboratory Compaction              |
| P-152     | Scarify & Recompact Subgrade          | 1/1,000 SY           | Field Density Acceptance Test - Sand Cone                                      | D 1557 | Laboratory Compaction              |
| P-154     | Subbase Course                        | 2/1,200 SY           | Field Density Acceptance Test - Sand Cone                                      | D 1557 | Laboratory Compaction              |
|           |                                       | 50-foot grid         | Field Surface Tolerance  | N/A    | N/A                                |
| P-207     | FDR Recycled Asphalt - Subbase Course | 2/day                | Field Gradation (Placement)  | C 136  | Sieve Analysis                     |
|           |                                       | 50-foot grid         | Field Surface Tolerance(1)   | N/A    | N/A                                |
|           |                                       | 2/1,200 SF           | Field Density Moisture Content   | D 1557 | Laboratory Compaction              |
|           |                                       | 2/1,200 SF           | Field Density Acceptance Test - Sand Cone                                      | D 1557 | Laboratory Compaction              |
| P-209     | Aggregate Base Course                 | 2/day                | Field Gradation (Delivery)   | C 136  | Sieve Analysis                     |
|           |                                       |                      | Field Percent Crushed  |        |                                    |
|           |                                       | 25-foot grid         | Field Surface Tolerance(1)   | N/A    | N/A                                |
|           |                                       | 2/1,200 SF           | Field Density Moisture Content   | D 1557 | Laboratory Compaction              |
|           |                                       | 2/1,200 SF           | Field Density Acceptance Test - Sand Cone                                      | D 1557 | Laboratory Compaction              |
| P-401     | Asphalt Surface Course                | 4/day                | Field Temperature  | N/A    | N/A                                |
|           |                                       | 1/sublot             | Field Density, Voids, From Cores - Mat & Joint                                 |        |                                    |
|           |                                       | 1/sublot             | Bulk Specific Gravity  | D2726  | Bluk Specific Gravity & Density    |
|           |                                       | 1/sublot             | Air Voids  | D3203  | Percent Air Voids                  |
|           |                                       | Daily                | Grade  | N/A    | N/A                                |
|           |                                       | Daily                | Thickness  | N/A    | N/A                                |
|           |                                       | Daily                | Smoothness   | N/A    | N/A                                |
| P-602     | Emulsified Asphalt Prime Coat         |                      | Spread   | N/A    | N/A                                |
| P-603     | Emulsified Asphalt Tack Coat          |                      | Spread   | N/A    | N/A                                |
| P-610     | Concrete                              | Each Day's Placement | Slump  | C143   | Slump - Hydraulic Cement           |
|           |                                       |                      | Air Content  | C231   | Air Content Freshly Mixed Concrete |
|           |                                       |                      | Compressive Strength   | C39    | Compressive Strength               |
| P-620     | Airfield Marking                      |                      | Check Layout and Coverage  | N/A    | N/A                                |
| D-701     | Pipes                                 |                      | Compaction of Backfill - Sandcone(Acceptance)<br>Check compliane Certification | D 1557 | Laboratory Compaction              |
| D-751     | Drop Inlets                           |                      | Compaction of Backfill - Sandcone(Acceptance)<br>Check compliane Certification | D-1557 | Laboratory Compaction              |
| L-115     | Junction Structure                    |                      | Check Installation   | N/A    | N/A                                |
| L-125     | Airfield Electrical                   |                      | Check Installation   | N/A    | N/A                                |

**TRUCKEE TAHOE AIRPORT  
RECONSTRUCT APRON A2  
AIP NO. 3-06-0262-0\_\_-2025**

**FLOW CHART – QUALITY ASSURANCE RESPONSIBILITIES**

**(Between Testing Laboratory, Resident Project Representative, and Contractor)**



## **PAY FACTORS**

**Subgrade, Subbase Course, Aggregate Base Course** - If grade is high, the Contractor shall remove this excess material at no cost to the Owner. If grade is more than 1/2-inch low, the existing section shall be scarified, additional material added, and the total section recompacted.

**Asphalt Surface Course – Basis of Adjusted Payment** - The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule shown below. A pay factor shall be calculated for both mat density and air voids. The lot pay factor shall be the higher of the two values when calculations for both mat density and air voids are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either mat density or air voids is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both mat density and air voids are less than 100%. If PWL for joint density is less than 71% then the lot pay factor shall be reduced by 5% but be no higher than 95%.

| <b>PRICE ADJUSTMENT SCHEDULE</b>  |  |
|---|--|
| Percentage of Material Within the Specification Limit (PWL)   | Lot Pay Factor (Percent of Contract Unit Price) <sup>1</sup> |
| 96-100  | 106  |
| 90-95   | PWL + 10   |
| 75-89   | 0.5 PWL + 55   |
| 55-74   | 1.4 PWL – 12   |
| Below 55  | Reject <sup>2</sup>  |
| <sup>1</sup> Although it is theoretically possible to achieve a pay factor of 106 percent for each lot, actual payment above 100 percent shall be subject to the total project payment limitation specified in paragraph 401-8.1.   |  |
| <sup>2</sup> The lot shall be removed and replaced. However, the RPR may decide to allow the rejected lot to remain. In that case, if the RPR and Contractor agree in writing that the lot shall not be removed, it shall be paid for at 50% of the contract unit price and the total project payment shall be reduced by the amount withheld for the rejected lot. |  |

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. The total project payment for plant mix asphalt pavement shall not exceed 106 percent of the product of the contract unit price and the total number of tons of asphalt used in the accepted work. Payment in excess of 100% for accepted lots of asphalt shall be used to offset payment for accepted lots of asphalt pavement that achieve a lot pay factor less than 100%.

Payment for sublots which do not meet grade in accordance with specification requirements after correction for over 25% of the sublot shall be reduced by 5%.

**Other Materials** – Payment for accepted other materials, such as prime coat, tack coat, paint, beads, drainage features, electrical features, and the snow melt apron will be measured in place and paid for at unit prices bid.

## **IX. TEST RESULT DOCUMENTATION**

## IX. TEST RESULT DOCUMENTATION

### A. Quality Control Tests and Inspections

The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the Contractor's Program Administrator.

The Contractor shall be responsible for establishing a system which will record all quality control test results. **Daily test reports** shall document the following information:

- (1) Technical specification item number and description
- (2) Test designation
- (3) Location
- (4) Date of test
- (5) Control requirements
- (6) Test results
- (7) Causes for rejection
- (8) Recommended remedial actions
- (9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. The Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible Quality Control Manager and the Contractor.

Each week the Contractor will provide Summary Reports to the RPR in electronic format for testing on each product – subbase, base, pavement, etc.

Each Contractor Quality Control Manager shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations on a form acceptable to the Project Engineer. These technician's **daily inspection reports** shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:

- (1) Technical specification item number and description;
- (2) Weather conditions;
- (3) Compliance with approved submittals;

- (4) Proper storage of materials and equipment;
- (5) Proper operation of all equipment;
- (6) Adherence to plans and technical specifications;
- (7) Summary of any necessary corrective actions;
- (8) Safety inspection; and
- (9) Photographs and/or video.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible Quality Control Manager and the Contractor. The RPR shall be provided at least one copy of each daily inspection report before the work starts on the following day of record. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been approved by the RPR.

B. Quality Assurance Tests and Inspections

The RPR shall maintain current quality assurance records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract.

Daily and weekly summary test reports will be prepared and furnished to Sponsor and Contractor.

The forms to be used for these records are included in this section of the Construction Management Plan.

C. Final Test Reports

After completion of the project and before final payment is made, all test data from the Contractor's Quality Control Testing for each material used on the project shall be summarized in typed tabular form and submitted to the RPR in electronic format. No final payment will be made to the Contractor until this report has been received by the RPR.

Copies of typical test reports for each item of work are attached.

Quality Assurance tests only shall be used in the determination of pay factors for any material or for acceptance or rejection of any portion of the work.

# FIELD DENSITY TESTS & COMPACTION CONTROL

JOB NAME: \_\_\_\_\_ DATE: \_\_\_\_\_ DAY: \_\_\_\_\_

JOB NUMBER: \_\_\_\_\_ SOIL CLASSIFICATION: \_\_\_\_\_

|   |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|
|   | Test No.                                     |  |  |  |  |  |  |  |  |
|   | Date of Test                                 |  |  |  |  |  |  |  |  |
|   | Location (use back if needed)                |  |  |  |  |  |  |  |  |
|   | Lift   |  |  |  |  |  |  |  |  |
|   | Elevation                                    |  |  |  |  |  |  |  |  |
| A | Wet Soil - gm                                |  |  |  |  |  |  |  |  |
| B | Sand, start - gm                             |  |  |  |  |  |  |  |  |
| C | Sand, end - gm                               |  |  |  |  |  |  |  |  |
| D | Vol. Ring - gm                               |  |  |  |  |  |  |  |  |
| E | Sand, end + ring - gm (C + D)                |  |  |  |  |  |  |  |  |
| F | Sand in Hole - gm (B - E)                    |  |  |  |  |  |  |  |  |
| G | Density Sand - lb/cu ft                      |  |  |  |  |  |  |  |  |
| H | Wet Density - lb/cu ft (A/F) * G             |  |  |  |  |  |  |  |  |
|   | Est. Moisture - %                            |  |  |  |  |  |  |  |  |
|   | Tare No.                                     |  |  |  |  |  |  |  |  |
| I | Wet Wt. + Tare                               |  |  |  |  |  |  |  |  |
| J | Dry Wt. + Tare                               |  |  |  |  |  |  |  |  |
| K | Wt. Water (I - J)                            |  |  |  |  |  |  |  |  |
| L | Wt. Tare                                     |  |  |  |  |  |  |  |  |
| M | Wt. Dry Soil (J - L)                         |  |  |  |  |  |  |  |  |
| N | Water - % (K/M)                              |  |  |  |  |  |  |  |  |
| O | Dry Density - lb/cu ft $[H/(1 + H)]$         |  |  |  |  |  |  |  |  |
| P | Max Dry Density - lb/cu ft                   |  |  |  |  |  |  |  |  |
|   | Optimum Moisture - %                         |  |  |  |  |  |  |  |  |
|   | Relative Compaction - % $[(O/P) \times 100]$ |  |  |  |  |  |  |  |  |

Depth of Fill Remaining \_\_\_\_\_

REMARKS \_\_\_\_\_

Job Progress - % Completed \_\_\_\_\_

\_\_\_\_\_

Inspector \_\_\_\_\_

Time \_\_\_\_\_ Mileage \_\_\_\_\_





|   |      |       |       |
|---|------|-------|-------|
| L | 2.0% | 92.8% | 90.5% |
| U | 5.0% |       |       |

|  |  |  |  |       |           |  |  |  |  |
|--|--|--|--|-------|-----------|--|--|--|--|
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       |           |  |  |  |  |
|  |  |  |  |       | Average   |  |  |  |  |
|  |  |  |  |       | Std. Dev. |  |  |  |  |
|  |  |  |  |       | QL        |  |  |  |  |
|  |  |  |  |       | QU        |  |  |  |  |
|  |  |  |  |       | PL        |  |  |  |  |
|  |  |  |  |       | PU        |  |  |  |  |
|  |  |  |  |       | PWL       |  |  |  |  |
|  |  |  |  |       | % Pay     |  |  |  |  |
|  |  |  |  | Total | % Pay     |  |  |  |  |



TRUCKEE TAHOE AIRPORT  
TRUCKEE, CALIFORNIA

RECONSTRUCT APRON A2

AIP NO. 3-06-0262-\_\_-2025

**SUMMARY OF COMPRESSIVE STRENGTH TEST RESULTS -**  
**STRUCTURAL PORTLAND CEMENT CONCRETE**

| Sample<br>ID | Location             | Date<br>Cast | Slump<br>(inch) | Air<br>Content     | Compressive Strength - psi |                   |
|--------------|----------------------|--------------|-----------------|--------------------|----------------------------|-------------------|
|              |                      |              |                 |                    | 7-day                      | 28-day            |
|              | <b>Specification</b> |              | <b>4 Max.</b>   | <b>5% +/- 1.2%</b> |                            | <b>4,000 Min.</b> |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |
|              |                      |              |                 |                    |                            |                   |

## **X. FINAL TEST AND QUALITY CONTROL REPORT**

## **X. FINAL TEST AND QUALITY CONTROL REPORT**

At the end of the project the RPR shall submit a final test and quality control report documenting the results of all tests performed both by the Contractor's Quality Control Program and the Sponsor's Quality Assurance Program. Those tests that failed or did not meet the applicable test standard shall be highlighted and corrective action/retesting noted. The report shall include the pay reductions applied or bonuses paid and justification for accepting any out-of-tolerance materials.

At the completion of the project the RPR will submit a Final Engineer's Report and Record Drawings. The summary test results of all Quality Control and Quality Assurance testing will be included in this report. Included in this final report will be the following:

- **Brief Narrative of Work Accomplished**
  - ✓ Include explanation for any deleted work items
  - ✓ Provide brief description of non-participating work items
- **Project Photographs**
  - ✓ Include a representative number of photographs that depict major elements of the project prior to the improvement and after completion of construction
- **Summary of Key Milestone Dates**
  - ✓ Receipt of Bids
  - ✓ Notice-To-Proceed
  - ✓ Substantial Completion
  - ✓ Contract
  - ✓ Final Inspection - Attach the final inspection record with any remaining punch list items as well
  - ✓ Final Acceptance
- **Contract Time**
  - ✓ Explanation of liquidated damages (if required)
  - ✓ Description of weather delays and winter shutdowns (Note: Calendar contracts require submittal of NWS data to support weather events exceeded the normal monthly events.)
- **Labor Provisions**
  - ✓ Statement of compliance with contract labor provisions (i.e. payroll reviews, etc.).
  - ✓ Summary of any complaints/findings and resolution.
- **Environmental Requirements**
  - ✓ Provide a statement if the environmental requirements were met and if not why.

- **Summary of DBE Utilization**
  - ✓ Prepare and submit a summary of the actual DBE participation compared to the contract goal.
- **Contract Change Orders and Quantity Adjustments**
  - ✓ Provide a change order summary with a delineation of eligible and ineligible costs
  - ✓ Detail and justify the changes required to engineering agreements, contract times, final construction quantities
  - ✓ Summarize FAA eligibility determinations from previously communicated change orders
- **Construction Material Testing and Acceptance**
  - ✓ Provide a summary of all required acceptance tests per the project specifications and the approved construction observation plan (Grant obligation).
  - ✓ Sponsor/consultant does not need to submit actual test reports with close out report but must make such information available upon request by the FAA.
  - ✓ The summary must provide clear explanation of any price adjustments due to the application of Percent Within Limit (PWL) rules.