

BUTTE REGIONAL TRANSIT OPERATIONS CENTER ON-SITE PACKAGE

BUTTE COUNTY ASSOCIATION OF GOVERNMENTS

ADDENDUM NO. 3

PROJECT ADDRESS
**326 Huss Lane
Chico, Ca. 95928**

OWNER
**Butte County Association of
Governments
2580 Sierra Sunrise Terrace,
Suite 100
Chico, Ca. 95928**

DATE
08/07/14

TLCD PROJECT NUMBER
11054.00

Note: The following changes, modifications and additions to the Project Manual and Drawings described within this Addendum are made a part thereof and are subject to all of the requirements thereof as if originally specified.

ADDENDUM NO. 3

**BUTTE REGIONAL TRANSIT OPERATIONS
CENTER
ON-SITE PACKAGE**

**Butte County Association of Governments
2850 Sierra Sunrise Terrace, Suite 100
Chico, Ca. 95928**

STAMPS, SIGNATURES AND APPROVALS

ADDENDUM NO. 3

To the Plans and Specifications for:

BUTTE REGIONAL TRANSIT OPERATIONS CENTER ON-SITE PACKAGE

Butte County Association of Governments
2850 Sierra Sunrise Terrace, Suite 100
Chico, Ca. 95928

Date: 8-7-14

GENERAL INFORMATION FOR BIDDERS

- Per previous communication, the Architect *will not* review or respond to any substitution requests during the bidding phase. All Contractors to notify sub-contractors about this matter, communicating to them (and subs, their vendors) not to contact the Architect on this matter, by any means of communication.

REVISIONS TO SPECIFICATIONS

1.1 REVISION TO 00 4530 BIDDER CERTIFICATIONS:

- A. Replace Section 00 4530 Bidder Certifications in its entirety.

1.2 REVISION TO 00 7300 SPECIAL CONDITIONS

- A. Revise Item 13 Appendices, item E1 add text to read:“(WDID number to be provided once obtained by Owner.)”
- B. Revise Item 13 Appendices, add Appendix item E2 to read:“Storm Water Pollution Prevention Plan.” (*Note: SWPPP documentation was provided in Addendum #2*)
- C. Replace Section 00 7300 Special Conditions in its entirety.

1.3 REVISION TO SECTION 11 8100 MATERIALS HANDLING:

- A. Replace Section 11 8100 Materials Handling in its entirety.

- 1.4 REVISION TO SECTION 21 0500 COMMON WORK RESULT FOR FIRE SUPPRESSION:
- A. Add to Part 1, paragraph 1.3 A text to read: "In addition to Section 01 3300 SUBMITTAL PROCEDURES provide shop drawings in a REVIT 2014 model."
- 1.5 REVISION TO SECTION 22 1000 PLUMBING PIPING AND PUMPS:
- A. Add to Part 1, paragraph 1 text to read: "Shop Drawings: Indicate layout of piping systems, including equipment, critical dimensions, and sizes. In addition to Section 01 3300 SUBMITTAL PROCEDURES provide shop drawings in a REVIT 2014 model."
- 1.6 REVISION TO SECTION 23 0900 INSTRUMENTATION AND CONTROLS:
- A. Replace Section 23 0900 Instrumentation and Controls in its entirety.
- 1.7 REVISION TO SECTION 23 2000 HVAC PIPING AND PUMPS:
- A. Add to Part 1, paragraph 1.2 A text to read: "In addition to Section 01 3300 SUBMITTAL PROCEDURES provide shop drawings in a REVIT 2014 model."
- 1.8 REVISION TO SECTION 23 1123 NATURAL GAS PIPING:
- A. Add to Part 1, paragraph 1.2 text to read: "E. Shop Drawings: Indicate layout of piping systems, including equipment, critical dimensions, and sizes. In addition to Section 01 3300 SUBMITTAL PROCEDURES provide shop drawings in a REVIT 2014 model."
- 1.9 REVISION TO SECTION 23 1000 FACILITY FUEL SYSTEMS:
- A. Add to Part 1, paragraph 1.4 C.6 revise text to read: "Shop Drawings: Complete dimensional layout with all piping and appurtenances. Indicate layout of piping systems, including equipment, critical dimensions, and sizes. In addition to Section 133300 SUBMITTAL PROCEDURES provide shop drawings in a REVIT 2014 model."
- 1.10 REVISION TO SECTION 23 3000 HVAC AIR DISTRIBUTION:
- A. Add to Part 1, paragraph 1.2 A text to read: "8. In addition to Section 01 3300 SUBMITTAL PROCEDURES provide shop drawings in a REVIT 2014 model."
- B. Add to Part 3.2 text to read: "Z. VAV box clearances; provide sufficient maintenance clearance for maintenance and control access according to manufacturer recommendations."

1.11 REVISION TO SECTION 23 7300 INDOOR CENTRAL STATION AIR HANDLING UNITS:

- A. Add to Part 2.1 F.1 text to read: "The base frame shall have factory pre-drilled holes, around the entire perimeter, at the proper height, size and spacing as recommended by the air handling unit manufacturer for attaching the base frame to the mounting curb. The Contractor shall attach the base frame to the mounting curb with screws of a size recommended by the air handling unit manufacturer."
- B. Add to Part 2.2 F.1 text to read: "The base frame shall have factory pre-drilled holes, around the entire perimeter, at the proper height, size and spacing as recommended by the air handling unit manufacturer for attaching the base frame to the mounting curb. The Contractor shall attach the base frame to the mounting curb with screws of a size recommended by the air handling unit manufacturer."

REVISIONS TO DRAWINGS

1.12 REVISION TO DRAWING C1.2 SITE GRADING PLAN:

- A. Revise Drawing, add Sheet CA 1.0_3

1.1 REVISION TO DRAWING C1.3 SITE LAYOUT PLAN:

- A. Revise Drawing, add Sheet CA 2.0_3

1.2 REVISION TO DRAWING C1.4 SITE UTILITY PLAN:

- A. Revise Drawing, add Sheet CA 3.0_3
- B. Revise Drawing, add Sheet CA 4.0_3

1.3 REVISION TO DRAWING C3.2 SANITARY SEWER PROFILES:

- A. Revise Drawing, add Sheet CA 5.0_3

1.4 REVISION TO DRAWING A9.3 ACCESSIBILITY DETAILS:

- A. Revise Detail 22/A9.3 (Water Closet Side and Front views), revise dimension text at grab bar, from "Centerline (CL)" to read: "TO T.O. GRIPPING SURFACE"

1.5 REVISION TO DRAWING L 1.01 LANDSCAPE CONSTRUCTION PLAN:

- A. Revise Drawing 1 and 2, add Sheet LA 1.0_3

- 1.6 REVISION TO DRAWING S2.1 ADMINISTRATION/ OPERATIONS FOUNDATION PLAN:
 - A. Revise Drawing, add Sheet SA 1.0_3

- 1.7 REVISION TO DRAWING S2.2 ADMINISTRATION / OPERATIONS ROOF PLAN:
 - A. Revise Drawing, add Sheet SA 1.1_3
 - B. Revise Drawing, add Sheet SA 2.0_3
 - C. Revise Drawing, add Sheet SA 3.0_3

- 1.8 REVISION TO DRAWING S2.4 MAINTENANCE BUILDING ROOF AND SERVICE EQUIPMENT PLANS:
 - A. Revise Drawing, add Sheet SA 1.2_3

- 1.9 REVISION TO DRAWING S6.0 STEEL DETAILS:
 - A. Revise Drawing, add Sheet SA 4.0_3

- 1.10 REVISION TO DRAWING S6.1 STEEL DETAILS:
 - A. Revise Drawing, add Sheet SA 1.3_3
 - B. Revise Drawing, add Sheet SA 2.1_3

- 1.11 REVISION TO DRAWING M2.5 BUS WASH AND FUELING HVAC PLANS:
 - A. Revise Drawing, add Sheet MA 2.0_3

- 1.12 REVISION TO DRAWING M5.2 MECHANICAL DETAILS:
 - A. Revise Drawing, add Sheet MA 1.0_3

- 1.13 REVISION TO DRAWING M6.3 HVAC SCHEDULES:
 - A. Revise Drawing, add Sheet MA 3.0_3
 - B. Revise Drawing, add Sheet MA 4.0_3

1.14 REVISION TO DRAWING P2.3 BUS WASH PLUMBING PLAN:

- A. Revise Drawing, add Sheet PA 1.0_3

1.15 REVISION TO DRAWING Q2.3 BUS WASH BUILDING – EQUIPMENT LAYOUT PLAN:

- A. Revise Drawing, add Sheet QA 1.0_3

ADDENDUM NO. 3

00 45 30 BIDDER CERTIFICATIONS

TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID

CERTIFICATE OF NON-DISCRIMINATION

On behalf of the bidder making this Bid, the undersigned certifies that there will be no discrimination in employment with regard to race, color, religion, sex, sexual orientation, disability or national origin; that all federal, state, and local directives and executive orders regarding non-discrimination in employment will be complied with; and that the principle of equal opportunity in employment will be demonstrated positively and aggressively.

BIDDER'S SIGNATURE

STATEMENT OF CONVICTIONS, Public Contract Code Section 10285.1

"I hereby swear, under penalty of perjury, that no more than one final, un-appealable finding of contempt of court by a Federal Court has been issued against me within the past two years because of failure to comply with an order of a Federal Court to comply with an order of the National Labor Relations Board."

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ____, has not ____ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The Bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

BIDDER'S SIGNATURE

PREVIOUS DISQUALIFICATIONS

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

If the answer is yes, explain the circumstances on the separate sheet attached hereto entitled "Previous Disqualifications." If such exceptions are attached, please explain the circumstances.

BIDDER'S SIGNATURE

CERTIFICATION OF WORKER'S COMPENSATION INSURANCE

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

BIDDER'S SIGNATURE

CERTIFICATION OF PUBLIC CONTRACT CODE SECTION 10232

In conformance with Public Contract Code Section 10232, the Contractor, by signing this bid hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.
Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution

BIDDER'S SIGNATURE

**CERTIFICATION OF DEBARMENT AND SUSPENSION, TITLE 49, CODE OF FEDERAL REGULATIONS,
PART 29**

The Bidder, under penalty of perjury, certifies that, except as noted, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, explain on the separate sheet attached hereto entitled "Certificate of Debarment & Suspension, Title 49 CFR, Part 29." If such exceptions are attached, please explain the circumstances. Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted, indicate to whom it applies, initiating agency, and dates of action.

Note: Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

BIDDER'S SIGNATURE

BUY AMERICA REQUIREMENTS

A bidder or offeror must submit the appropriate Buy America certification (sample below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.

Certification requirement for procurement of steel, iron, or manufactured products.

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 C.F.R. Part 661.5.

Date _____

Signature _____

Company Name _____

Title _____

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

NON-LOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective participant certifies, by signing and submitting this bid or bid, 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 undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal 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 Federal 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 of Lobbying Activities," in conformance with its instructions.
- 3) The prospective participant also agrees by submitting his or her bid or bid that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such 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.

Note: Pursuant to 31 U.S.C. Section 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.

The prospective participant certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the prospective participant understands and agrees that the provisions of 31 U.S.C A 3801 et seq., apply to this certification and disclosure, if any.

DISCLOSURE OF LOBBYING ACTIVITIES

COMPLETE THIS FORM TO DISCLOSE LOBBYING ACTIVITIES PURSUANT TO 31 U.S.C. 1352

<p>1. Type of Federal Action:</p> <p><input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance</p>	<p>2. Status of Federal Action:</p> <p><input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award</p>	<p>3. Report Type:</p> <p><input type="checkbox"/> a. initial <input type="checkbox"/> b. material change</p> <p>For Material Change Only: year _____ quarter _____ date of last report _____</p>
<p>4. Name and Address of Reporting Entity</p> <p><input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known</p> <p>Congressional District, if known _____</p>	<p>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</p> <p>_____</p> <p>_____</p> <p>Congressional District, if known _____</p>	
<p>6. Federal Department/Agency:</p> <p>_____</p> <p>_____</p>	<p>7. Federal Program Name/Description:</p> <p>_____</p> <p>_____</p> <p>CFDA Number, if applicable _____</p>	
<p>8. Federal Action Number, if known:</p> <p>_____</p>	<p>9. Award Amount, if known:</p> <p>_____</p>	
<p>10. a. Name and Address of Lobby Entity (If individual, last name, first name, MI)</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI)</p> <p>_____</p> <p>_____</p>	
(attach Continuation Sheet(s) if necessary)		
<p>11. Amount of Payment (check all that apply)</p> <p>\$ _____ <input type="checkbox"/> actual <input type="checkbox"/> planned</p>	<p>13. Type of Payment (check all that apply)</p> <p><input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input type="checkbox"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferred <input type="checkbox"/> f. other, specify _____</p>	
<p>12. Form of Payment (check all that apply):</p> <p><input type="checkbox"/> a. cash <input type="checkbox"/> b. in-kind; specify: nature _____ value _____</p>		
<p>14. Brief Description of Services Performed or to be performed and Date(s) of Service, including officer(s), employee(s), or member(s) contacted, for Payment Indicated in Item 11:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p style="text-align: center;">(attach Continuation Sheet(s) if necessary)</p>		
<p>15. Continuation Sheet(s) attached: Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>16. Information requested through this form is authorized by Title 31 U.S.C. Section 1352. This disclosure of lobbying reliance was placed by the tier above when his transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to Congress semiannually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>		
		<p>Signature: _____</p> <p>Print Name: _____</p> <p>Title: _____</p> <p>Telephone No.: _____ Date: _____</p>
<p>Federal Use Only:</p>		<p>Authorized for Local Reproduction Standard Form – LLL Rev. 09-12-97</p>

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of covered Federal action or a material change to previous filing pursuant to title 31 U.S.C. section 1352. The filing of a form is required for such payment or agreement to make payment to lobbying entity 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 a covered Federal action. Attach a continuation sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence, the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last, previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the first tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in Item 4 checks "Subawardee" then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organization level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identification in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract grant. or loan award number, the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitments for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influenced the covered Federal action.
(b) Enter the full names of the individual(s) performing services and include full address if different from 10 (a). Enter Last Name, First Name and Middle Initial (MI).
10. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
11. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

12. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
13. Provide a specific and detailed description of the services that the lobbyist has performed or will be expected to perform and the date(s) of any services rendered. Include all preparatory and related activity not just time spent in actual contact with Federal officials. Identify the Federal officer(s) or employee(s) contacted or the officer(s) employee(s) or Member(s) of Congress that were contacted.
14. Check whether or not a continuation sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name title and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

SF-LLL-

Instructions Rev. 06-04-90

SF-LLL-Instructions Rev. 06-04-90

CERTIFICATION OF PREVAILING WAGE RATES AND RECORDS

By my signature hereunder, as CONTRACTOR, I certify that I am aware of the provisions of Section 1773 of the Labor Code which requires the payment of prevailing wage on public projects. Also, that the CONTRACTOR and any subcontractors under the Contractor shall comply with Section 1776, regarding wage records, and with Section 1777.5, regarding the employment and training of apprentices, of the Labor Code. It is the CONTRACTOR'S responsibility to ensure compliance by any and all subcontractors performing work under this Contract. This project includes funding by the Federal Transit Administration (FTA) and is subject to federal prevailing wage requirements established by the Davis-Bacon Act (DBA) also. The Contractor is required to pay the higher of State or Federal prevailing wages as may apply.

Contractor agrees to provide certified payrolls for it's own forces and subcontractor forces every two (2) weeks throughout the duration of the project. Contractor will provide a Statement of Non-Performance Payroll Form for all periods when no labor is provided.

The information below applies to the above sections.

BIDDER'S SIGNATURE

Name of Bidder _____

Signed by (printed) _____

Title _____

Dated _____

INSTRUCTIONS – LOCAL AGENCY BIDDER – DBE INFORMATION

SUCCESSFUL BIDDER:

The form requires specific information regarding the construction contract: Agency, Location, Project Description, Federal Aid Project Number (assigned by Federal Transit Administration Caltrans-Local Assistance), Total Contract Amount, Bid Date, Bidder's Name, and Contract Goal.

The form has a column for the Contract Item Number (or Item No's) and Item of Work and Description or Services to be Subcontracted or Materials to be provided by DBEs. The DBE should provide a certification number to the Contractor and expiration date. The DBE contractors should notify the Contractor in writing with the date of the decertification if their status should change during the course of the contract. The form has a column for the Names of DBE certified contractors to perform the work (must be certified on the date bids are opened and include DBE address and phone number). Enter DBE prime and subcontractors certification number. Prime contractors shall indicate all work to be performed by DBEs including work performed by its own forces if a DBE.

IMPORTANT: Identify **all** DBE firms participating in the project- regardless of tier. Names of the First Tier DBE Subcontractors and their respective item(s) of work listed should be consistent, where applicable, with the names and items of work in the "List of Subcontractors" submitted with your bid.

There is a column for the total DBE dollar amount. Enter the Total Claimed DBE Participation dollars and percentage amount of items of work submitted with your bid pursuant to the Special Provisions. (If 100% of item is not to be performed or furnished by the DBE, describe exact portion of time to be performed or furnished by the DBE.) See Section "Disadvantaged Business Enterprise (DBE)," of the Special Provisions (construction contracts); to determine how to count the participation of DBE firms.

must be signed and dated by the successful bidder. Also list a phone number in the space provided and print the name of the person to contact.

Local agencies should complete the Contract Award Date, Federal Share, Contract and Project Number fields, and verify that all information is complete and accurate before signing and sending a copy of the form to the Federal or State Agency within 15 days of contract execution. Failure to submit a completed and accurate form within the 15-day time period may result in the de-obligation of funds on this project.

DBE INFORMATION—GOOD FAITH EFFORTS
(First, Second and Third Low Bidder)

Federal-aid Project No. CA-0040089

Bid Opening Date _____

The Butte County Association of Governments established an Disadvantaged Business Enterprise (DBE) goal of **7.0%** for this project. The information provided herein shows that a good faith effort was made.

Lowest, second lowest and third lowest bidders shall submit the following information to document adequate good faith efforts. Bidders should submit the following information even if the “Local Agency Bidder – DBE Commitment” form indicates that the bidder has met the DBE goal. This will protect the bidder’s eligibility for award of the contract if the administering agency determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following items are listed in the Section entitled “Submission of DBE Commitment” of the Special Provisions:

- A. The names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (please attach copies of advertisements or proofs of publication):

<u>Publications</u>	<u>Dates of Advertisement</u>

- B. The names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

<u>Names of UDBEs Solicited</u>	<u>Date of Initial Solicitation</u>	<u>Follow Up Methods and Dates</u>

- C. The items of work which the bidder made available to DBE firms, including, where appropriate, any breaking down of the contract work items (including those items normally performed by the bidder with its own forces) into economically feasible units to facilitate DBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation was made available to DBE firms.

Items of Work	Bidder Normally Performs Item (Y/N)	Breakdown of Items	Amount (\$)	Percentage Of Contract

- D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the bidder's rejection of the DBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each DBE if the selected firm is not a DBE:

Names, addresses and phone numbers of rejected DBEs and the reasons for the bidder's rejection of the DBEs:

Names, addresses and phone numbers of firms selected for the work above:

E. Efforts made to assist interested DBEs in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs:

F. Efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate:

G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.):

Name of Agency/Organization	Method/Date of Contact	Results
_____	_____	_____
_____	_____	_____

H. Any additional data to support a demonstration of good faith efforts (use additional sheets if necessary):

NOTE: USE ADDITIONAL SHEETS OF PAPER IF NECESSARY.

END OF SECTION

00 73 00 - SPECIAL CONDITIONS

1. Mitigation Measures and Environmental Stewardship

Contractor shall comply with all mitigation measures, adopted by the Butte County Association of Governments (BCAG) with respect to this Project pursuant to the California Environmental Quality Act, (Public Resources Code section 21000 et.seq.).The contractor is responsible for all requirements in the permitting documents and environmental impact report mitigation requirements, made a part of this agreement in attached **Appendix A**. Contractor is to extend extra efforts when working in areas of special concerns identified in these documents.

The summary below is intended to assist in bidding but may not be inclusive of all of the requirements of the contract documents.

Species Protection:

This Project is within or near habitat for regulated species shown below:

- BCAG Butte Regional Transit Operations Center project, Negative Declaration Mitigation, Monitoring Measures, and Reporting Program, included at **Appendix A**.

The contractor is responsible for all requirements in the Mitigation Measures requirements made a part of this agreement at **Appendix A**. Contractor is to extend extra efforts when working in areas of special concerns identified in this document.

Biological Resources of heightened concern;

- MM Biological 5 - Western Burrowing Owls (Transit Facility Site).
- MM Biological 6 - Swainson's hawks (Transit Facility Site).
- MM Biological 7 - Migratory birds and raptors (Transit Facility Site).

Cultural Resources of heightened concern;

- MM Cultural 1 – Contractor is hereby informed that if any cultural materials are encountered, all work within 100 feet of the discovered site shall cease....

Hydrology and Water Quality Resources of heightened concern;

- MM Water Quality 1 - To minimize erosion entering Comanche Creek during construction, the BMPs listed shall be required and are incorporated into the agreement for the project and will be implemented by the contractor to protect water quality.....

General Protection Measures:

1. Contractor will be familiar with and will comply with all environmental permits.
2. Contractor shall keep a binder with all permits onsite for reference at all times.
3. Contractor to notify BCAG 10 working days prior to the start of construction to schedule the BCAG provided biologist to conduct pre-construction migratory bird surveys and notify permitting agencies.
4. Contractor to maintain a clean work site with all trash (especially food wrappers) contained in trash receptacle to prevent attracting wildlife to the site.

Protection Measures for Nesting Migratory Birds, Red Bats, & Burrowing Owls:

1. BCAG provided biologist is required conduct a survey for all birds protected by the MBTA, red bats, & burrowing owls and map all nests located within 500 feet of construction areas.

2. BCAG provided biologist will develop buffer zones around active nests in coordination with CDFG. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails. Nests shall be monitored at least twice per week and a report submitted to CDFG monthly.

Protection Measures for Swainson's Hawk:

1. BCAG provided biologist is required conduct a survey for Swainson's Hawk nests located within ½ mile radius of construction areas.
2. If a nest is found and work must occur a BCAG provided biologist will monitor the nest site. If it is abandoned and if the nestlings are still alive, the BCAG shall fund the recovery and hacking (controlled release of captive reared young) of the nestling(s).

Protection Measures for Water Quality and Aquatic Life:

1. Contractor to maintain water quality BMP's as required in project permits. No siltation is allowed to pass the sediment barrier.
 - a. Minimize turbidity/siltation with appropriate sediment barriers.
 - b. No plastic monofilament or cross joint in netting that are bound/stitched (such as straw wattles/fiber rolls, and some erosion control blankets) are allowed.
 - c. Upon completion of work stabilize site with appropriate erosion control vegetation and then remove barriers.
 - d. Implement SWPPP BMP's.
2. Contractor is to conduct water sampling per the Central Valley Regional Water Quality Control Board 401 permit, "Additional Technically Conditioned Certification.
3. Restore site as required in Plans and Specifications.

Cultural Resource Protection:

1. If any cultural materials (e.g. bones, pottery fragments or other potential cultural resources) are encountered or unearthed during construction, all work within 100 feet of the discovered site shall cease. Further, the Contractor shall immediately notify BCAG and the Butte County Coroner pursuant to Section 7050.5 of California's Health and Safety Code, and contact the Planning Services Department at 879-6800 as soon as possible. BCAG shall then retain an archeologist from the City's list of qualified archeologists to evaluate the significance of the site. If the archeologist determines that the materials represent a potentially significant resource, the project proponent, archeologist, City Planning Director, and local tribal coordinator shall begin a consultation process to determine a plan of action either for 1) total data recovery, as a mitigation,
 - 2 tribal cultural resource monitoring, 3) displacement protocol, or 4) total avoidance of the resource.

Full compensation for furnishing all labor, tools, equipment, material and incidentals and for doing all the work involved with conforming to the requirements of this section shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

2. Water Pollution Control

The Contractor shall be required to submit an updated Storm Water Pollution Prevention Plan (SWPPP) which complies with the conditions of the Water Quality Order 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges Associated with Construction Activity (General Permit). The SWPPP shall be prepared with guidance from the City of Chico Best Practices Manual, the City of Chico Best Practices Technical Manual, and Caltrans Storm Water Quality Handbooks. This plan shall be approved by the QSD prior to beginning any work. The Contractor shall be responsible for implementing, maintaining, and monitoring such water pollution control measures as called for in the SWPPP, and as directed by the Owner.

Contractor to:

- a. Prepare updates to Storm Water Pollution Prevention Plan (SWPPP) already prepared by QSD and uploaded to SMARTS website. SWPPP preparation includes obtaining SWPPP acceptance and amending the SWPPP.
- b. Install BMP's per approved SWPPP as required throughout construction as detailed in the SWPPP. Maintain, repair, clean, or replace BMP's as needed throughout project to ensure no site discharges occur.
- c. Prepare and implement a SWPPP monitoring program in compliance with the latest California NDPEs Storm Water Pollution Prevention rules. All monitoring shall be documented and reported as required to State of California SMARTS website.
- d. Prepare Rain Event Action Plans (REAPs) if specified for the project risk level, REAP preparation includes preparing and submitting REAP forms and monitoring weather forecasts.
- e. Complete all required Storm Water Sampling and Analysis. Storm Water Sampling and Analysis may include reporting of storm water quality per qualifying rain event. If specified for the risk level, the work includes preparation, collection, analysis, and reporting of storm water samples for turbidity, pH, and other constituents.
- f. Prepare and submit all required Storm Water Annual Reports. Storm Water Annual Report preparation includes certifications, monitoring and inspection results, and obtaining Storm Water Annual Report acceptance.
- g. Contractor is to assume maintenance and cleaning of all BMP's placed adjacent to the site upon completion of all offsite work. Contractor is to assume responsibility of the SWPPP responsibilities from the Off-site Contractor.
- h. Contractor is to work with the Owner at the time they develop the Industrial SWPPP for the site, to ensure the two separate SWPPP's uploaded to the SMARTs website do not include overlapping areas of responsibility prior to the completion of the Phase 1 construction milestone.

Copies of the General Permit, the manuals, and the handbook referred to above are available on the Internet at

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

The Contractor shall be responsible for inspecting the work site a minimum of once at the beginning and once at the end of the work day to insure that pollution control measures as specified in the SWPPP are in place and functioning properly. Inspections will also be required on non-work days when rainfall is forecasted. Monitoring shall be required for all rainfall events whether on work or non-work days. Unless specified otherwise in the approved SWPPP, Contractor-performed monitoring duties shall end when the project Notice of Completion is filed with the County Recorder and the Notice of Termination acceptance by the RWQCB, which includes all annual reports and support documentation. All inspections and monitoring shall be documented in a log that will be maintained on site with the approved SWPPP.

Note special seed restriction for erosion control & hydro seeding regarding variety is required due to adjacent organic farming. Attention is directed to Section 3, Relations with Adjacent Property Owners.

Should the Contractor be found not to be in compliance with the approved SWPPP and the requirements in these Special Provisions, he shall be fined \$2,000 for the first occurrence and \$3,000 for each occurrence thereafter. The fine shall not relieve the Contractor's obligation to indemnify BCAG from third-party lawsuits as a result of the Contractor's actions.

If the Contractor has been found not to be in conformance with the approved SWPPP and fails to provide the required maintenance of the pollution control devices within the same day that he is notified of the deficiency, BCAG reserves the right to complete the work necessary to bring the devices into conformance with the SWPPP. In addition to the fine stated above, BCAG shall charge the Contractor for the actual cost of such maintenance, which shall be deducted from the Contractor's next progress payment.

MEASUREMENT AND PAYMENT

The contract lump sum price paid for water pollution control shall include full compensation for furnishing all labor, tools, materials, equipment, and incidentals for doing all the work involved in preparing any revisions or updates to the SWPPP and supplying, installing, monitoring, and maintaining the measures implemented as part of the SWPPP as required by the Standard Specifications and these Special Provisions, and as directed by the Engineer.

The Owner will recognize the following percentages in the Schedule of Values for preparing storm water pollution prevention plan and implementation as follows:

1. A total of 90 percent of the item total over the life of the contract.
2. A total of 100 percent of the item total upon accepted Notice of Termination from RWQCB SMARTs website.

Compensation for providing air pollution control and dust control and noise control shall be included in the prices paid for other items of work in the contract, and no additional payment shall be made.

3. **Tire Derived Aggregate (TDA) at Bioswales Grantee Requirements**

This project has received a Grant from CalRecycle to compensate for Tire Derived Aggregate (TDA) used at the bioswales throughout the project site, see Sheets C1.3 & C5.5. The Grant includes conditions that must be met by Grantee which are made a requirement of the Contractor also. These requirements are primarily cost reporting in nature involved to complete the TDA installation, see **Appendix B** for the requirements Contractor is obligated to meet and/or provide.

The Contractor certifies they have reviewed and agree to meet all their obligations to comply with the CalRecycle Grantee & Contractor obligations identified at the Grant documents included and made a part of this agreement;

- The complete work to install Tire Derived Aggregate/TDA derived from only California generated waste tires at bio-swales shall be completed no later than January 1, 2016, to comply with the Grant terms and allow for payment by CalRecycle on a reimbursement basis prior to grant deadlines. This must include As-built drawings for the TDA installation, which have been verified by a site survey and certified by a Registered Civil Engineer, and a laboratory analysis and gradation report of the TDA material delivered to the jobsite.
- Contractor certifies all contractors involved with the TDA scope of work are NOT on the CalRecycle Unreliable List by completing the State of California, Reliable Contractor Declaration, CalRecycle form 168, prior to the start of any TDA work. This form must be uploaded along with other reporting requirements to the CalRecycle's Grant Management System (GMS). If the Contractor/Subcontractor/Manufacturer involved with the TDA work is placed on the CalRecycle's Unreliable List at any time during this project, the Contractor is obligated to and agrees to replace that party immediately to ensure the Owner's Grant Funding is not lost, see Grant Exhibit A – Terms and Conditions. Should contractor's actions/inactions result in loss of Grant funding to the Owner, Contractor shall be liable for lost funding in an equal amount to be credited via the next change order processed on the project.
- Contractor and/or TDA supplier/manufacturer must complete the State of California, Tire Derived Aggregate (TDA) Certification, CalRecycle form 740-TDA, prior to providing any material to the site.
- The Contractor and/or TDA supplier/manufacturer shall comply with all audit and record keeping requirements of CalRecycle, Department of Finance, the Bureau of State Audits, to ensure the Grant requirements are complied with. Contractor shall provide separate Personnel Time Logs / timesheets to the Owner for audit purposes only, using the Personnel Expenditure Itemized summary, CalRecycle form 165, <http://www.calrecycle.ca.gov/grants/forms/General/CalRecycle165.pdf> .
- All correspondence, schedule of values, project documentation, etc. relative to the TDA work and CalRecycle Grant shall reference the Grant Number; TDA3-13-0009.
- Contractor to provide the executed Reliable Contractor Declaration, CalRecycle form 168, as a priority, and no later than 30 days after the NTP date for the project.

4. Relations with Adjacent Property Owners
Sierra Nevada Brewery

This project is located adjacent to lands owned by Sierra Nevada Brewery (SNB). A memorandum of understanding (MOU) has been entered into by BCAG and Sierra Nevada Brewery. The Contractor shall be fully informed of the requirements of this agreement as well as rules, regulations, and conditions that may govern the Contractor's operations in these areas and shall conduct the work accordingly. The contractor shall not impact the active operations of SNB. Sierra Nevada receives 8 to 10 train-cars per week at the adjacent property, and the contents are then trucked to the brewery through the intersection at the corner of Huss and Aztec Drives on public roadways.

Notify SNB at least 48 hours in advance of any work which may affect SNB property. Deliveries to the project site should be scheduled so the SNB operations are not negatively impacted. Contractor is obligated to cooperate and schedule work so SNB operations are not impacted to the extent required by the MOU. Owner’s obligations are made a part of this agreement and Contractor will cooperate in all respects BCAG is obligated.

Dust Control: Contractor shall take all measures deemed required to maintain a Zero Dust Policy for all equipment, operations and deliveries near the SNB property. This applies to scrapers, loaders, semi-truck and trailers, pick-ups, excavators, etc. The creation of dust on this property will have a negative effect on the success of the farming operations and ultimately the crop yields. Contractor shall maintain a water truck on-site during any period to ensure dust conditions can be dealt with immediately. Contractor shall tarp all truckloads of soil export while driving adjacent to the SNB Farm property, to ensure the dust contamination is minimized. Vehicle speeds shall be reduced to a maximum of 15 mph.

Contractor is required to provide SNB with weekly look ahead schedules when work may affect trucking operations on city streets adjacent to project site. The SNB point of contact is:

David Tamble, Transload Operations Manager, tamble@sierranevada.com or
 Lau Ackerman, Agricultural Supervisor, lau@sierranevada.com
 1075 East 20th Street
 Chico, CA 95928
 (530) 510-5085

Sierra Nevada Brewery (SNB) operates organic farming adjacent to this project. Special considerations shall be taken to avoid disturbing the farming operations:

1. Laydown, material, and equipment storage areas shall be kept off SNB lands.
2. SNB shall have continuous access to their property for trucking and agricultural uses. Contractor shall maintain a minimum of 12’ clear lane at all times, including in city streets and public right of way. Contractor is to provide flagmen as needed to ensure the continuous operation of the SNB deliveries thru the site, and ensure all contractor equipment and deliveries yield the right of way to the SNB grain transfer.

Contractor is responsible for the costs to repair or other property damage caused by the construction operations. Note special restrictions for erosion control hydroseed mix is required due to adjacent organic farming. Erosion control seed mix shall include only the following pre-approved varieties. Substitutions must be approved by SNB landscape supervisor.

<u>Botanical Name</u>	<u>Common Name</u>
Melica californica	California melicgrass
Leymus Triticoides	Creeping Wildrye

Hegan Lane Business Partners

This project is located adjacent to lands owned by Hegan Lane Business Partners (HLBP). A Permit to Enter and Construct (PTEC) has been entered into by BCAG and Hegan Lane Business Partners, see **Appendix C**. The Contractor shall be fully informed of the requirements of this agreement as well as rules, regulations, and conditions that may govern the Contractor’s operations in these areas and shall conduct the work accordingly. The contractor shall not impact the active operations of HLBP, and shall name HLBP as additional insureds in all policy’s required for the project. Any spoils stockpiles on HLBP adjacent property shall be placed per the requirements of the stockpile layout and sections given at this **Appendix C**.

5. Work by Other Contractors

The Butte Regional Transit Operations Center project will be advertised and divided into multiple discreet projects, each with its own contractor. The Contractor bidding on this project shall be aware of and work cooperatively with other contractor's working adjacent to or on the same site as this contractor. The Contractor agrees to communicate and coordinate their work and the work of other contractor's as though the work is its own. The multiple prime contracts are required due to funding and time constraints, and Contractor is made aware of this and agrees to work in this delivery method with no further claims for cost or time impacts to the Owner as a result of this delivery method. Owner reserves the right to procure other contractors or vendors as needed to complete the project within the time or fiscal constraints required, and contractor agrees to work with such furniture, data, and security or maintenance contractors in the same manner as called for here.

- BRTOC Off-site Plans for Aztec Drive Extension & Comanche Creek Storm Drainage Outfall
- BRTOC On-site plans
- BRTOC Remodel of Existing Building

6. Plans and Bid Documents

See Section 00 11 16 – Invitation to Bid for instruction on obtaining plans and specifications for bidding.

Plans bid documents may be examined at the Butte County Association of Governments Office, located at 2580 Sierra Sunrise Terrace Chico, California, or various Builders Exchanges in the area. Copies of all bid documents are to be requested and obtained through ARC Document Solutions. Technical Questions should be directed to the BCAG offices in Chico, CA, contact Andy Newsum PE, Deputy Director, email anewsum@bcag.org , Fax 530-879-2444.

Interested parties may download copies of bid documents related attachments and all future communication and correspondence regarding this bid process from the County's website at <http://www.bcag.org/RFPs/index.html> (follow the prompts for RFP's/Bid Notices). The Butte County Association of Governments will not be a distribution point for plans.

The Butte County Association of Governments affirms that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises (DBE) will be afforded full opportunity to submit bids in response to this invitation.

7. Water Main work Owned & Inspected by California Water Service

The work performed in connection with Domestic Water, Irrigation Water Services & Fire Water Systems shall conform to the plans and specifications of the local water service provider, California Water Service Company (Cal Water). Cal Water is preparing plans and specifications specifically for this project and will be providing inspection of the installation. **These plans will be issued via addendum or after bid day upon receipt when Cal Water completes their design.** The design is not expected to differ materially from that design by GHD included in the bid documents now. The contractor is to complete the installation following all Cal Water requirements and direction.

The Cal Water Service Company (Cal Water) Subdivider and Contractor Requirements for Subdivider Installation Agreement and Rule No. 15 – Main Extensions requirements are made a part of this agreement by inclusion here, see **Appendix D**. The Cal Water requirements for the installing contractor of all water services to be Owned and Maintained by Cal Water at completion of the project shall be complied with. See the sample agreement included as for a list of current

Approved Installing Contractors the contractor is obligated to use for the installations designed by and ultimately owned by Cal Water.

COST BREAK DOWN. The Contractor shall furnish the Owner a cost break down for the work of Domestic, Irrigation and Fire Water System including hydrants shown on the civil plans. A cost break down table shall be submitted to the Owner for approval within 15 working days after the contract has been approved or the Cal Water design, whichever comes later.

Cost break downs shall be completed and furnished in the format shown in the samples of the cost break downs included in this section. Line item descriptions of work shown in the samples are the minimum to be submitted. Additional line item descriptions of work may be designated by the Contractor. If the Contractor elects to designate additional line item descriptions of work, the quantity, value and amount for those line items shall be completed in the same manner as for the unit descriptions shown in the samples. The line items and quantities given in the samples are to show the manner of preparing the cost break downs to be furnished by the Contractor. The Contractor shall determine the quantities required to complete the work shown on the plans. The quantities and their values shall be included in the cost break downs submitted to the Owner for approval. The Contractor shall be responsible for the accuracy of the quantities and values used in the cost break downs submitted for approval. Overhead and profit shall be included in each individual line item of work listed in a cost break down table.

No adjustment in compensation will be made in the contract lump sum prices paid for water system due to differences between the quantities shown in the cost break downs furnished by the Contractor and the quantities required to complete the work as shown on the plans and as specified in these special provisions.

Individual line item values in the approved cost break down tables will be used to determine partial payments during the progress of the work. The Cost Break-down is also required to be provided to Cal Water Service prior to the start of Water Main Installation work.

Sample Cost Break-Down

<u>UNIT DESCRIPTION</u>	<u>UNIT</u>	<u>APPROXIMATE QUANTITY</u>	<u>VALUE</u>	<u>AMOUNT</u>
12" DUCTILE IRON WATER LINE				
8" C-900 WATER LINE				
6" C-900 WATER LINE				
FIRE HYDRANT ASSEMBLY				
12" VALVE				
8" VALVE				
6" VALVE				
BLOW OFF ASSEMBLY				

TOTAL; _____

8. Clean Water & Air Requirements

The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. The Contractor agrees to report each violation to the Owner and understands and agrees that the Owner will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office. The Contractor also agrees to include these requirements in each subcontract agreement.

This project lies within the boundaries of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB has issued a permit which governs storm water and non-storm water discharges resulting from construction activities in the project area. The RWQCB permit is entitled "National Pollutant Discharge Elimination System (NPDES) Construction General Permit 2009-0009-DWQ". Copies of the RWQCB permit may be obtained at the BCAG Offices, 2580 Sierra Sunrise Terrace, Suite 100, Chico, CA 95928.

The NPDES permits that regulate this project, as referenced above, are collectively referred to in the agreement as the "permits". This project shall conform to the permits and modifications thereto. The Contractor shall maintain copies of the permits at the project site and shall make them available during construction.

The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor agrees to report each violation to the Owner and understands and agrees that the Owner will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office. The Contractor also agrees to include these requirements in each subcontract.

Contract execution constitutes submittal of the following certification by the Contractor:

"I am aware of the emissions reduction regulations being mandated by the California Air Resources Board. I will comply with such regulations before commencing the performance of the work and maintain compliance throughout the duration of this contract."

The Contractor shall be familiar with and comply with all monitoring, reporting, notifications, and control requirements of agencies having jurisdiction over air quality.

The Contractor shall prevent the formation of an airborne dust nuisance by watering work areas as required until the project is completed and accepted. The amount of water used shall not be excessive to cause soil carry-over or wash-off outside the boundaries of the working area. If soil wash-off occurs, the Contractor shall immediately notify the Engineer and identify the area where wash-off occurred. The Contractor shall provide polyethylene sheeting to place underneath and over any stockpiled soil. The stockpile shall be covered daily after completion of work. The sheeting shall be adequately weighted or secured to keep the sheeting in place during non-work periods.

9. Indemnification

In addition to the requirements for Indemnification given at Section 00 72 13 - General Conditions, Section 14.2, the contractor shall include the following specifically by name as Additional Insureds on their insurance certification;

- Butte County Association of Governments
- Kitchell

- TLCD Architecture
- City of Chico
- Sierra Nevada Brewery (SNB)
- Hegan Lane Business Partners
- California Water Service Company

Including their officers, directors, employees, agents, and design professionals.

10. Encroachment Permit

Prior to start of work within the City of Chico's right-of-way, the contractor will be required to obtain an Encroachment Permit from the City of Chico. Contactor shall pay all associated encroachment fee costs. The City of Chico's procedures to obtain an encroachment permit included below.

PROCEDURE TO OBTAIN AN OFFSITE ENCROACHMENT PERMIT

Step 1: Contractors wishing to obtain an encroachment permit, must have the following:

- Pre-approved Excavation Bond form (provided by the City of Chico) in the amount of \$10,000 *OR* an Excavation Bond form provided by an insurance company which has been approved by the City Attorney.
- Certificate of GENERAL LIABILITY, in the amount of \$1,000,000, which has been approved by the City of Chico Risk Manager (530) 879-7900.
- State contractor's pocket license which shows the following information:
 - License number;
 - Classification(s); and
 - Expiration date
- Letter from corporation/company/sole proprietorship authorizing specific employees/agents to sign Encroachment Permits on behalf of said entity.
- City of Chico Business License - Contact the Finance Dept. @ (530) 879-7300.
- Correct and current name of owner/lessee/agent/business, with mailing address(es).

Step 2: Provide this sheet, which is part of the Application process, at the time the Encroachment Permit is requested.

Plan Approval Date:	6/9/14 <i>MJ</i>	Proj. Acct: 72173
Subdivision Name:	BCAG Transit Center	
Parcel Map No. (Name):		
APN(s):	Portions 039-060-125 and 126	
Address(es):	Huss Lane	

Step 3: Encroachment Permits are obtained at the Building Permit counter, on the 2nd floor of City Hall.

Step 4: Please allow 1 - 2 days for processing.

Step 5: The City will contact you when the encroachment permit is ready to be signed and picked up.

11. Weather Days

Delays due to Adverse Weather conditions will only be permitted in compliance with the provisions in the General Conditions and only if the number of days of Adverse Weather exceeds the following parameters:

January	6	July	0
February	6	August	0
March	4	September	0
April	4	October	2
May	1	November	4

June	0	December	6
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Total; ... 33 CD's/Year

The construction schedule shall include critical path activities as the last activities prior to the Final completion milestone that reflects anticipated rain delay for each month during the performance of the Contract. No other activity shall be concurrent with the weather allowance days. The duration shall reflect the average climatic range and usual industrial conditions prevailing in the locality of the Site. Weather data shall be based on information provided by the National Weather Service and as indicated in the table provided here. Comply with all other requirements for weather as provided at section 01 32 00 – Construction Progress Documentation. Contractor shall release the weather days each month as that's month's Schedule Update is stasured to provide a true and accurate representation of weather impact which is current thru the end of that month's data date.

12. Permits, Certificates, Licenses, Fees, Approval

- a. **Payment for Permits, Certificates, Licenses, and Fees.** As required in the General Conditions, the Contractor shall secure and pay for all permits, licenses and certificates necessary for the prosecution of the Work with the exception of the following:

(1) **City of Chico Building & Encroachment Permits**

With respect to the above listed items, Contractor shall be responsible for securing such items; however, Owner will be responsible for payment of these charges or fees without contractor any mark-ups. Contractor shall notify the Owner of the amount due with respect to such items and to whom the amount is payable. Contractor shall provide the Owner with an invoice and receipt with respect to such charges or fees.

b. **Storm Water Permits**

- (1) Contractor acknowledges Owner is now or will soon be obligated to develop and implement the following storm water requirements, without limitation:

(A) A Municipal Separate Storm Sewer System (MS4). An MS4 is a system of conveyances used to collect and/or convey storm water, including, without limitation, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

(B) A Storm Water Pollution Prevention Plan (SWPPP) at:

(i) Industrial sites where the Owner engages in maintenance (e.g., fueling, cleaning, repairing) of transportation activities.

(ii) Construction sites where:

(a) One (1) or more acres of soil will be disturbed, or

(b) The project is part of a larger common plan of development that disturbs more than one (1) or more acres of soil.

- (2) Contractor shall comply with Owner storm water requirements that are approved by the Water Resources Control Board and applicable to the Project, at no additional cost to the Owner, see **Appendix E** and SWPPP/BMP requirements in the bid documents.

13. APPENDICIES:

APPENDIX A

BCAG Negative Declaration Mitigation Monitoring Measures

APPENDIX B

Tire Derived Aggregate (TDA) grant requirements for contractor to comply with

- 1) Grant Agreement cover sheet.
- 2) Grant Terms and Conditions, Exhibit A 10 pages dated 9/12/13.
- 3) Grant Procedures and Requirements, Exhibit B 11 pages FY 2013 / 2014.
- 4) Forms Guide, 1 page.

- 5) Reliable Contractor Declaration, CalRecycle form 168, 2 pages Revised 7/2013.
- 6) Tire Derived Aggregate (TDA) Certification, CalRecycle form 740-TDA, 2 pages dated 8/13.

APPENDIX C

- 1) Hegan Lane Business Partners Permit to Enter and Construct (PTEC), June 3 2014.
- 2) Excess spoils stockpile requirements on adjacent HLBP property.

APPENDIX D

- 1) California Water Service , Subdivider and Contractor Requirements for subdivider installation agreements, Form 1518 dated 11/14/02.
- 2) California Water Service, Approved Installing Contractors as of 8/30/12.
- 3) Developers cost Estimate form
- 4) CWS Rule 15 – Main Extensions, Form 1283 Rev. 8/08.

APPENDIX E

- 1) **Central Valley Regional Water Quality Control Board 401 Permit (WDID# _____).**

APPENDIX F

- 1) Bidders Question Form.

APPENDIX G

APPENDIX H

- 1) Federal Davis-Bacon Act Wage determination, effective as of 7/4/14.

14. Buy America Act (23 CFR 635.410)

For a Federal-aid contract, furnish steel and iron materials to be incorporated into the work that are produced in the United States except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)]
2. If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or \$2,500, material produced outside the United States may be used.

Production includes:

1. Processing steel and iron materials, including smelting or other processes that alter the physical form or shape (such as rolling, extruding, machining, bending, grinding, and drilling) or chemical composition
2. Coating application, including epoxy coating, galvanizing, and painting, that protects or enhances the value of steel and iron materials

For steel and iron materials to be incorporated into the work, submit a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications that certifies all production processes occurred in the United States except for the above exceptions.

15. DBE Goal and Certification Status

Bidders are advised that, as required by federal law, the State has established a statewide overall **DBE goal of 7.0%**. This Agency federal-aid contract is considered to be part of the statewide overall DBE

goal. The Agency is required to report to Caltrans on DBE participation for all Federal-aid contracts each year so that attainment efforts may be evaluated. To provide assistance in meeting the statewide goal, the Agency may include a DBE Availability Advisory in this contract. Bidders need not achieve the percentage stated in any DBE Availability Advisory as a condition of award.

This Agreement is subject to Title 49, Part 26 of the Code of Federal Regulations (49 CFR 26) entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." In order to ensure the California Department of Transportation (Caltrans) achieves its federally mandated statewide overall Disadvantaged Business Enterprises (DBE) goal, the Agency encourages the participation of DBE's, as defined in 49 CFR 26, in the performance of Agreements financed in whole or in part with federal funds. The national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. The agency's overall goal for DBE participation is 7%. A separate contract goal has not been established for this procurement.

The contractor 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 this DOT-assisted 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 BCAG deems appropriate. Each subcontract the contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).

As required by federal law, Caltrans has established a statewide overall DBE goal. In order to ascertain whether that statewide overall DBE goal is being achieved, Caltrans is tracking DBE participation on all Federally assisted contracts.

To assist Contractors in ascertaining DBE availability for specific item of work, the Agency advises that it has determined that DBE's could reasonably be expected to compete for subcontracting opportunities on this project and the likely DBE Availability Advisory Percentage is 7.0 percent. The Agency also advises that participation of DBE's in the specified percentage is not a condition of award.

The Contract has agreed to carry out applicable requirements of Title 49 CFR 26, in the award and administration of federally assisted Agreements. The regulations in their entirety are incorporated herein and by reference.

The contractor must promptly notify BCAG, whenever a DBE subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of BCAG.

DBE as defined in Title 49 CFR 26 and other small businesses are encouraged to participate in the performance of Agreements financed in whole or in part with federal funds. The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out the applicable requirements of 49 CFR, Part 26 in the award and administration of U.S. Department of Transportation 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 recipient deems appropriate.

Any subcontract entered into as a result of the Agreement shall contain all the provisions of this section.

The Contractor shall maintain records showing the name and business address of each first tier subcontractor. The records shall also show the name and business address of every DBE subcontractor, DBE vendor of materials and DBE trucking company, regardless of tier. The records shall show the date

of payment and the total dollar figure paid to all of these firms. DBE prime contractors shall also show the date of work performed by their own forces along with the corresponding dollar value of the work.

Upon completion of the contract, a summary of these records shall be prepared on "Final Report-Utilization of Disadvantaged Business Enterprises (DBE), First Tier Subcontractors" Form CEM-2402(F) and certified correct by the Contractor or the Contractor's authorized representative, and shall be furnished to the Engineer. The form shall be furnished to the Engineer within 90 days from the date of contract acceptance. The amount of \$10,000 will be withheld from payment until a satisfactory form is submitted.

Prior to the fifteenth of each month, the Contractor shall submit documentation to the Engineer showing the amount paid to DBE trucking companies. The Contractor shall also obtain and submit documentation to the Engineer showing the amount paid by DBE trucking companies to all firms, including owner operators, for the leasing of trucks. If the DBE leases trucks from a non DBE, the Contractor may count only the fee or commission the DBE receives as a result of the lease arrangement.

The successful bidder/offeror will be required to report its DBE participation obtained through race-neutral means throughout the period of performance.

If a DBE subcontractor is decertified during the life of the project, the decertified subcontractor shall notify the Contractor in writing with the date of decertification. If a subcontractor becomes a certified DBE during the life of the project, the subcontractor shall notify the Contractor in writing with the date of certification. The Contractor shall furnish the written documentation to the Engineer.

Upon completion of the contract, "Disadvantaged Business Enterprises (DBE) Certification Status Change" Form CEM-2403(F) indicating the DBEs' existing certification status shall be signed and certified correct by the Contractor. The certified form shall be furnished to the Engineer within 90 days from the date of contract substantial completion.

16. Access to Records and Reports for FTA Reporting

The Contractor agrees to provide the Owner, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C.F.R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.

The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Owner, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).

Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between Owner and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

17. FEDERAL LAWS FOR FEDERAL-AID CONTRACTS

"Federal Laws for Federal-Aid Contracts," includes specifications required in a Federal-aid construction contract and applies to a Federal-aid contract. Form FHWA-1273 is included in the contract in Section 7-1.50B, "FHWA-1273." Some contract terms on the form are different than those used in other contract parts as shown in the following table:

FHWA-1273 Terms and Department Equivalencies

FHWA-1273 Term	Equivalent Term Used in Other Contract Parts
SHA	Department
SHA contracting officer	Engineer
SHA resident engineer	Engineer

FHWA-1273 Electronic version -- March 10, 1994
 with revised Section VI

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Payment of Predetermined Minimum Wage
- V. Statements and Payrolls
- VI. Record of Materials, Supplies, and Labor
- VII. Subletting or Assigning the Contract
- VIII. Safety: Accident Prevention
- IX. False Statements Concerning Highway Projects
- X. Implementation of Clean Air Act and Federal Water Pollution Control Act
- XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion
- XII. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

- A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.
3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
 Section IV, paragraphs 1, 2, 3, 4, and 7;
 Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 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 DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:
- a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
 - b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: 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, preapprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.
- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
- c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.
- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

- a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
- b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these specifications, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

- a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
- b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.
- c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

1. The number of minority and non-minority group members and women employed in each work classification on the project;
2. The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;
3. The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and
4. The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES
 (Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE
 (Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers 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 regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide

fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) 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 be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b) (2) of the Davis- Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, 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 paragraphs 4 and 5 of this Section IV.

b. 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.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

1. the work to be performed by the additional classification requested is not performed by a classification in the wage determination;
2. the additional classification is utilized in the area by the construction industry;
3. the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
4. with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification 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 DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour 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.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional 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 Wage and Hour Administrator for determination. Said 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.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. 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 or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a 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.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

1. 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 DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

2. The allowable ratio of apprentices to journeyman-level employees 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 employee 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 listed in 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 or subcontractor 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-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

3. 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 journeyman-level 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 for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

4. In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

1. 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 DOL, Employment and Training Administration.
2. The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who 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.
3. Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level 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-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.
4. In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor 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.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor 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, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the

contractor, 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.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her 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, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies 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 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV,

paragraph 3b, has found 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 and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/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 maintained under paragraph 2b of this Section V and that such information is correct and complete;
2. that such laborer or 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 the Regulations, 29 CFR 3;
3. that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. 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 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, 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 SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions 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.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR
(As of May 22, 2007, Form FHWA-47 is no longer required.)

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from

the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by Engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.
3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. 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 clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and
 Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement,

theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. 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 clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING
 (Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal 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.
 - b. 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 Federal 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.
2. 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 31 U.S.C. 1352. 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.
3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

7-1.50C Female and Minority Goals

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the Department is including in Section 7-1.50C, "Female and Minority Goals," female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed \$10,000. The nationwide goal for female utilization is 6.9 percent. The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

Minority Utilization Goals

Economic Area		Goal (Percent)
174	Redding CA: Non-SMSA Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehema	6.8
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA CA Monterey 7360 San Francisco-Oakland CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San Mateo 7400 San Jose, CA CA Santa Clara, CA 7485 Santa Cruz, CA CA Santa Cruz 7500 Santa Rosa CA Sonoma 8720 Vallejo-Fairfield-Napa, CA CA Napa; CA Solano	28.9 25.6 19.6 14.9 9.1 17.1

	Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	23.2
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA CA Placer; CA Sacramento; CA Yolo Non-SMSA Counties CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; CA Sutter; CA Yuba	16.1 14.3
178	Stockton-Modesto, CA: SMSA Counties: 5170 Modesto, CA CA Stanislaus 8120 Stockton, CA CA San Joaquin Non-SMSA Counties CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Toulumne	12.3 24.3 19.8
179	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA CA Kern 2840 Fresno, CA CA Fresno	19.1 26.1

	Non-SMSA Counties: CA Kings; CA Madera; CA Tulare	23.6
180	Los Angeles, CA: SMSA Counties: 0360 Anaheim-Santa Ana-Garden Grove, CA CA Orange 4480 Los Angeles-Long Beach, CA CA Los Angeles 6000 Oxnard-Simi Valley-Ventura, CA CA Ventura 6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino 7480 Santa Barbara-Santa Maria-Lompoc, CA CA Santa Barbara Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	11.9 28.3 21.5 19.0 19.7 24.6
181	San Diego, CA: SMSA Counties 7320 San Diego, CA CA San Diego Non-SMSA Counties CA Imperial	16.9 18.2

For each July during which work is performed under the contract, you and each non-material-supplier subcontractor with a subcontract of \$10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

7-1.50D Training

Section 7-1.50D, "Training," applies if a number of trainees or apprentices is specified in the special provisions.

As part of your equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

You have primary responsibility for meeting this training requirement.

If you subcontract a contract part, determine how many trainees or apprentices are to be trained by the subcontractor.

Include these training requirements in your subcontract.

Where feasible, 25 percent of apprentices or trainees in each occupation must be in their 1st year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of your needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, submit to the Department:

1. Number of apprentices or trainees to be trained for each classification
2. Training program to be used
3. Training starting date for each classification

Obtain the Department's approval for this submitted information before you start work. The Department credits you for each apprentice or trainee you employ on the work who is currently enrolled or becomes enrolled in an approved program.

The primary objective of Section 7-1.50D, "Training," is to train and upgrade minorities and women toward journeymen status. Make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area. Show that you have made the efforts. In making these efforts, do not discriminate against any applicant for training.

Do not employ as an apprentice or trainee an employee:

1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman
2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training

Ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. Your records must show the employee's answers to the questions.

In your training program, establish the minimum length and training type for each classification. The Department and FHWA approves a program if one of the following is met:

1. It is calculated to:
 - 1.1. Meet the your equal employment opportunity responsibilities
 - 1.2. Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period
2. It is registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training and it is administered in a way consistent with the equal employment responsibilities of federal-aid highway construction contracts

Obtain the State's approval for your training program before you start work involving the classification covered by the program.

Provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The Department reimburses you 80 cents per hour of training given an employee on this contract under an approved training program:

1. For on-site training
2. For off-site training if the apprentice or trainee is currently employed on a federal-aid project and you do at least one of the following:
 - 2.1. Contribute to the cost of the training
 - 2.2. Provide the instruction to the apprentice or trainee
 - 2.3. Pay the apprentice's or trainee's wages during the off-site training period
3. If you comply with Section 7-1.50D, "Training"

Each apprentice or trainee must:

1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill
2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program

Furnish the apprentice or trainee:

1. Copy of the program you will comply with in providing the training
2. Certification showing the type and length of training satisfactorily completed

Maintain records and submit reports documenting your performance under Section 7-1.50D, "Training."

END OF DOCUMENT

SECTION 11 81 00 - MATERIAL HANDLING EQUIPMENT

PART 1 - GENERAL

The General Provisions of the Contract, including General and Special Conditions and the requirements of Division 1, apply to the Work in this Section.

1.1 WORK INCLUDED

- A. Equipment items as listed below by Equipment Identifier:
 - 1. 5404 Forklift, electric, 4,000 pounds (Ref. Part 2.1)
- B. Roughing-in installation of equipment, and final connection of utilities, with labor, services, and incidentals necessary for complete and operational equipment installation.

1.2 QUALITY ASSURANCE

- A. Manufacturer's Representative:
 - 1. Installation: Provide a qualified manufacturer's representative at site to supervise work related to equipment installation, check out, and start up.
 - 2. Training: Provide a qualified manufacturer's representative to provide training to Owner's maintenance personnel in operation and maintenance of specified equipment.

1.3 SUBMITTALS

- A. Product Data:
 - 1. Submit Product Data in accordance with Division 1 - General Requirements of these specifications.
 - 2. Restrict submitted material to pertinent data. For instance, do not include manufacturer's complete catalog when pertinent information is contained on a single page.
 - 3. Additional costs resulting from substitution of products other than those specified, including drawing changes and construction, will be at the expense of the contractor.
- B. Operations and Maintenance Manual:
 - 1. Submit Operations and Maintenance Manuals in accordance with Division 1- General Requirements of these specifications.
 - 2. Provide complete parts, operating, and maintenance manual covering equipment at time of installation.
 - 3. Description of system and components.
 - 4. Schematic diagrams of electrical, plumbing, and compressed air system.
 - 5. Manufacturer's printed operating instructions.
 - 6. Printed listing of periodic preventive maintenance items and recommended frequency to validate warranties. Failure to provide maintenance information will indicate that preventive maintenance is not a condition for validation of warranties.
- C. Shop Drawings: Submit Shop Drawings in accordance with of Division 1 - General Requirements of these specifications.

1.4 PRODUCT SUBSTITUTIONS

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- A. Follow requirements specified in Division 1 - General Requirements.
 - B. Additional costs resulting from substitution of products other than those specified, by model number, including drawing changes and construction, will be at the expense of the Contractor.
 - C. Substitution Approval: Prior to delivery or installation, submittals for each equipment item by Equipment Identifier shall be provided in accordance with Division 1 - General Requirements. Acceptance will be based on the technical requirements herein as determined by Owner and Architect.
- 1.5 WARRANTY
- A. Warrant work specified herein for one year from substantial completion against defects in materials, functions, and workmanship.
 - B. Warranty shall include materials and labor necessary to correct defects.
 - C. Defects shall include, but not be limited to noisy, rough or substandard operation; loose, damaged, and missing parts; and abnormal deterioration of finish. Defects shall not include damage due to neglect, misuse, or situations resulting from non-performance of a manufacturer's recommended preventive maintenance schedule.
 - D. Submit warranties in accordance with Division 1 - General Requirements of these specifications.
 - E. All parts shall be readily available locally in the United States.
- 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING
- A. Deliver equipment in manufacturer's containers, appropriately packaged and/or crated for protection during domestic shipment and storage in humid and/or dusty conditions.
 - B. Indelibly label all containers, including those contained in others, on outside with item description(s) per title and Equipment Identifier of this specification.
 - C. Provide equipment and material specified complete in one shipment for each equipment item. Split or partial shipments are not permissible.
- 1.7 LABELING
- A. Manufacturer shall securely attach in a prominent location, on each major item of equipment, a non-corrosive nameplate showing manufacturer's name, address, model number, serial number, and pertinent utility or operating data.
 - B. All electrical equipment and materials shall be new and shall be listed by Underwriter's Laboratories, Inc. (UL) in categories for which standards have been set by that agency and labeled as such in the manufacturer's plant.

PART 2 - PRODUCTS

2.1 FORK LIFT, ELECTRIC, 4,000 POUNDS

Equipment Identifier: 5404

A. Manufacturer's Reference:

1. Prime manufacturer: Specifications are based on equipment identified herein by manufacturer's name and model to establish minimal acceptable standards of quality, features, performance, and construction.
 - a. Clark Material Handling Company, Lexington, KY (859) 422-6400
 - b. Model No.: NPR20 with accessories
2. Alternate manufacturers: *Contingent upon compliance with these specifications* and documentation requirements set forth in SUBMITTALS, equipment produced by other manufacturers, including the following, *may* be considered as equal.
 - a. Hyster Company, Danville, IL (253) 561-7113
 - b. Mitsubishi Forklifts, Houston, TX (713) 365-1000

B. Capacities/Dimensions:

1. Overall dimensions:
 - a. Length: 70-1/4 inches
 - b. Width: 40-1/4 inches
 - c. Height: 95 inches
2. Turning radius: 66-1/2 inches
3. Rated capacity: 4,000 pounds
4. Mast dimensions/capacities:
 - a. 24 inch load center
 - b. Fork length: 48.1 inches
 - c. Lift height: 210 inches
 - d. Height fully extended: 258 inches
5. Weight: 6,940 pounds
6. Power: 24/36 volt

C. Features/Performance/Construction:

1. Unit shall contain a battery with 6 hour rate maximum.
2. Unit shall have urethane tires.
3. Unit shall have automatic, spring applied parking brake
4. Unit shall have hydraulic assist, variable steering.
5. Unit shall have a service brake consisting of a drum and shoe.
6. Drive motor and steer/auxiliary motor shall be controlled by transistor, infinite.

D. Utilities Requirements:

1. Battery charger: 460 VAC, 3 phase, 30 A
2. Provide dedicated circuit

PART 3 - EXECUTION

3.1 INSPECTION

- A. Coordinate location of rough-in work and utility stub-outs to assure match with equipment to be installed.
- B. Inspect equipment for damage from shipping and exposure to weather. Compare delivered equipment with packing lists and specifications to assure receipt of all equipment items and specified accessories.

3.2 INSTALLATION

- A. Perform work under direct supervision of Foreman of Construction Superintendent with authority to coordinate installation of scheduled equipment with Architect.
- B. Install equipment in accordance with plans, shop drawings, and manufacturer's instructions:
 - 1. Positioning: Place equipment in accordance with any noted special positioning requirements generally level (or slight slope as required by instructions), plumb, and at right angles to adjacent work.
 - 2. Fitting: Where field cutting or trimming is necessary, perform in a neat, accurate, professional manner without damaging equipment or adjacent work.
 - 3. Anchorage: Attach equipment as detailed or directed by Architect or designated representative. Installation fasteners shall be installed to avoid scratching or damaging adjacent surfaces.
- C. Upon completion of work, finish surfaces shall be free of tool marks, scratches, blemishes, and stains.

3.3 TESTING

- A. After final connections are made and prior to authorizing payment, specified equipment shall be tested for compliance with specifications in the presence of the Architect or designated representative using acceptance procedures provided by the manufacturer. Testing report shall be submitted to the Architect or designated representative.

3.4 CLEANUP

- A. Touch-up damage to painted finishes.
- B. Wipe and clean equipment of any oil, grease, and solvents, and make ready for use.
- C. Clean area around equipment installation and remove packing and installation debris from job site.
- D. Notify Architect or designated representative for acceptance inspection.

3.5 TRAINING

- A. Direct the technical representative to provide specified hours of training to designated Owner's maintenance personnel in operation and maintenance of the following equipment. Coordinate, with Owner, training schedule and list of personnel to be trained.
 - 1. 5404 Forklift, electric, 4,000 pounds; 1 hour (minimum)

- B. Obtain, from technical representative, a list of Owner's personnel trained in equipment operations and maintenance.

END OF SECTION 11 81 00

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SECTION 23 09 00 - HVAC INSTRUMENTATION AND CONTROLS**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes:
1. Control units.
 2. Control panel enclosures.
 3. Alarm system.
 4. Control valves.
 5. Electric valve actuators.
 6. Thermostats.
 7. Time clocks.
 8. Duct-mounted smoke detector.
 9. Differential pressure monitor.
 10. Gas detection system.
 11. Sequences of operations.
- B. Provide conduit and electrical wiring for complete system.

1.2 SUBMITTALS

Shop Drawings: Indicate operating data, system drawings, piping and wiring diagrams, and written detailed operational description of sequences. Indicate layout of piping systems, including equipment, critical dimensions, and sizes. In addition to Section 01 3300 SUBMITTAL PROCEDURES provide shop drawings in a REVIT 2014 model

- A.
1. Include trunk cable schematic showing programmable control unit locations and trunk data conductors.
 2. List connected data points, including connected control unit, or output and input device.
 3. Show system configuration with peripheral devices, batteries, power supplies, diagrams, modems, and interconnections.
 4. Label with settings, adjustable range of control and limits. Include written description of final control sequence.
 5. Include flow diagrams for each control system, graphically depicting control logic.
 6. Include description and sequence of operation of operating, user, and application software.
 7. Submit schedule of valves indicating size, flow, and pressure drop for each valve.
 8. For automatic dampers indicate arrangement, velocities, and static pressure drops for each system.
 9. Gas detection system.
- B. Product Data: Submit description and engineering data for each control system component. Include sizing. Submit data for each system component and software module.

1.3 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of controls including thermostats remotely located from equipment in pipes ducts and walls.

- B. Operation and Maintenance Data: Submit:
 - 1. Systems descriptions, set points, and controls settings and adjustments.
 - 2. Inspection period, cleaning methods, recommended cleaning materials, and calibration tolerances.
 - 3. Interconnection wiring diagrams complete field installed systems with identified and numbered system components and devices.
 - 4. Keyboard illustrations and step-by-step procedures indexed for each operator function.

1.4 MAINTENANCE SERVICE

- A. Furnish manufacturer's maintenance services on control system for one year from Date of Substantial Completion.
- B. Furnish complete service of controls systems, including callbacks. Make minimum of 4 complete normal inspections of approximately 8 hours duration in addition to normal service calls to inspect, calibrate, and adjust controls. Submit written report after each inspection.

PART 2 - PRODUCTS

2.1 CONTROL UNITS

- A. Units: Modular in design and consisting of processor board with programmable RAM memory, local operator access and display panel, and integral interface equipment.
- B. Battery Backup: For minimum of 100 hours for complete system including RAM without interruption, with automatic battery charger.
- C. Control Units Functions:
 - 1. Monitor or control each input/output point.
 - 2. Independent with hardware clock/calendar and software to maintain control independently.
 - 3. Acquire, process, and transfer information to operator station or other control units on network.
 - 4. Accept, process, and execute commands from other control unit's or devices or operator stations.
 - 5. Access both database and control functions simultaneously.
 - 6. Record, evaluate, and report changes of state or value occurring among associated points. Unit continues to perform associated control functions regardless of status of network.
- D. Input/output Capability:
 - 1. Discrete/digital input (contact status).
 - 2. Discrete/digital output.
 - 3. Analog input.
 - 4. Analog output.
 - 5. Pulse input (5 pulses/second).
 - 6. Pulse output (0-655 seconds in duration with 0.01 second resolution).
- E. Furnish control units with minimum 30 percent spare capacity.

-
- F. Test Mode Operation: Place input/output points in test mode to allow testing and developing of control algorithms on line without disrupting field hardware and controlled environment.

2.2 LOAD CONTROL PROGRAMS

- A. General: Support inch-pounds and S.I. metric units of measurement.
- B. Duty Cycling: Periodically stops and starts loads, based on space temperature, and according to various On/Off patterns.
- C. Automatic Time Scheduling: Automatic start/stop/scheduling of building loads.
- D. Start/Stop Time Optimization: Perform optimized start/stop as function of outside conditions, inside conditions, or both.
- E. Night Setback/Setup Program: Reduce heating space temperature setpoint or raise cooling space temperature setpoint during unoccupied hours; in conjunction with scheduled start/stop and optimum start/stop programs.

2.3 HVAC CONTROL PROGRAMS

- A. General: Support inch-pounds and S.I. metric units of measurement.
- B. Optimal run time.
- C. Supply air reset.
- D. Enthalpy switchover.

2.4 CONTROL PANEL ENCLOSURES

- A. Furnish for each system under automatic control with relays and controls mounted in cabinet and temperature indicators, pressure gages, pilot lights, push buttons and switches flush on cabinet panel face.
- B. Construction: NEMA 250, Type 1 steel enclosure indoors; NEMA 250, Type 4 outdoors.
- C. Covers: Continuous hinge, held closed by flush latch operable by key.
- D. Enclosure Finish: Manufacturer's standard enamel.

2.5 ALARMS

- A. At alarm condition indication light flashes.
- B. Status lights shall serve the purpose of an alarm for central air handling units at control panel displays.

2.6 CONTROL VALVES AND ACTUATORS

- A. Air Handling Unit Control Valve
 - 1. Manufacturers:
 - a. Tekmar
 - b. Substitutions: Permitted.
 - 2. Brass body, self balancing control valve, 3-way, pressure independent, wafer style for flanged connections, with stainless steel regulator and brass stem, position display actuator, 3-point floating input, 24 VAC, 150 sec, IP 44 housing. Tekmar 714 valve with Tekmar 741 actuator, or equal.
 - a. ECU-1: 84 gpm maximum flow, 3-inch size, Cv=117.
 - b. ECU-2: 68 gpm maximum flow, 2-1/2-inch size, Cv=74.
- B. Radiant Zone Control Valve manifolds
 - 1. Manufacturers:
 - a. Watts Radiant
 - b. Substitutions: Permitted.
 - 2. Stainless Steel supply manifolds with components supplied by manufacturer including built-in balancing valves, brass return manifolds, support brackets, tube bend supports, temperature gauges, isolation ball valves, drain ports, and electric control heads as required.

2.7 THERMOSTATS

- A. Cooling Thermostat: Digital with LCD display, day-night override button, and set point slide adjustment override options. Set point slide adjustment capable of being software limited by automation system to limit amount of room adjustment.
- B. Heating Thermostats with In-Floor Sensors:
 - 1. Wall thermostat with remote thermistor bulb sensor. Tekmar Net 2 with Tekmar 079 floor sensor or equal.
 - 2. Averaging service remote bulb element: 20 feet.
 - 3. Furnish with with cast device junction box, malleable iron, deep, with (2) 3/4" hubs, with blank top, to serve as pull box for in-slab sensor. Appleton FDC-1-75 or equal.

2.8 TIME CLOCKS

- A. Solid state programmable time control with minimum separate programs for each zone, 24 hour battery carry over, 7 day programming with 20 programmable holidays, system fault alarm.

2.9 CONTROL SYSTEM COMPONENTS

- A. Temperature Sensors:
 - 1. Type: Resistance temperature detector (RTD) or thermistor.
 - 2. Accuracy:
 - a. Plus or minus 1 degree F for standard applications. Where high accuracy is required, furnish accuracy of plus or minus 0.2 degrees F.
 - b. Sensing Accuracy: Plus or minus 0.5 degree F.
 - c. Display Accuracy and Resolution: Minimum of plus or minus 1 degree F.
 - 3. Outside Air Sensors: Watertight inlet fitting, furnish with shield from direct sunlight.

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4. Duct Temperature Sensors:
 - a. Rigid or averaging type as indicated in sequence of operations. Averaging sensor minimum length: 5 feet in length.
 5. Piping Temperature Sensors: Furnish with separable brass well.
 6. Slab Temperature Sensors: Furnish remote thermistor bulb type with minimum of 20 feet of cable.
- B. Differential Pressure Switches:
1. Furnish as specified in sequences of operation for status purposes in water and air applications.
 2. Fully adjustable differential pressure settings.
 3. UL Listed, SPDT snap-acting, pilot duty rated (125 VA minimum).
 4. NEMA 250 Type 1 enclosure.
 5. Scale range and differential suitable for intended application.
- C. Water Flow Switches:
1. Paddle type with stainless steel or bronze paddle.
 2. UL Listed, SPDT snap-acting with pilot duty rating (125 VA minimum).
 3. Appropriate scale range and differential adjustment.
 4. Adjustable sensitivity.
 5. NEMA 250 Type 1 enclosure.
- D. Occupancy Sensor: Passive infrared, with time delay, daylight sensor lockout, sensitivity control, and 180 degree field of view with vertical sensing adjustment, for flush mounting.
- E. Pump Sequence Control Panel:
1. Designed to operate two pumps by providing standby or staging operation, providing lead/lag capability to duplex pumps.
 2. With outdoor sensor, warm weather shut down, equal run time rotation, exercising, alert per pump, adjustable flow proof delay, CSA C US certified, 3 year warranty.
 3. Tekmar Pump Sequencer 132 or equal.
- F. Zone microprocessor control:
1. Radiant heating zone microprocessor control, Tekmar 313 or equal.
- G. Temperature Difference Controller:
1. To provide a 0-10 vdc output for pump control. Sorel Temperature Difference Controller TDC4 or equal.
- H. Air Handling Unit Control System:
1. Pre-programmed control panel for central air-handling unit to be mounted to unit prior to shipment. Pre-installed control devices internal to central air-handling unit shall be pre-wired to central air-handling unit control panel prior to shipment. Wiring to central air-handling unit control panel for control devices shipped loose with central air-handling unit shall be provided by contractor including all solenoid valves, hot water coil valve, interlock relay for rooftop exhaust fan, duct mounted air temperature sensors, averaging thermostats, and remote LCD display control panel at lower level of building.

2.10 DUCT-MOUNTED SMOKE DETECTOR

- A. Provide a duct mounted smoke detector in each supply air system in excess of 2,000 cubic feet per minute, for automatic shut-off upon detection of smoke in the main supply duct.
- B. Product Description: Ionization type, approved and listed by the California State Fire Marshal, with the following features:
 - 1. Auxiliary SPDT relay contact.
 - 2. Key-operated normal-reset-test switch.
 - 3. Duct sampling tubes extending width of duct.
 - 4. Visual indication of detector actuation.
 - 5. Duct-mounted housing.
- C. Furnish four-wire detector with separate power supply and signal circuits.

2.11 ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Electrical characteristics.
 - 1. 120 volts, single phase, 60 Hz.
- B. Disconnect Switch: Factory mount in control panel.

2.12 GAS DETECTION SYSTEM

- A. Complete gas detection system in full compliance with 2013 California Fire Code, 2311.7.
- B. Gas detection system to provide:
 - 1. Audible and visual alarm in repair garage.
 - 2. Deactivation of all heating systems in repair garage.
 - 3. Activation of mechanical ventilation in repair garage.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify conditioned power supply is available to panels and to operator workstation.
- B. Verify field end devices, wiring, and pneumatic tubing is installed prior to installation proceeding.
- C. Coordinate installation of system components with installation of mechanical systems equipment including air handling units, boiler pumps and air terminal units.

3.2 INSTALLATION

- A. Install control units and other hardware in position on permanent walls where not subject to excessive vibration.
- B. Install software in control units and in operator workstation. Implement features of programs to specified requirements and appropriate to sequence of operation.

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- C. Install with 120 volts alternating current, 15 amp dedicated emergency power circuit to each programmable control unit.
 - D. Install thermostats, space temperature sensors, and other exposed control sensors after locations are coordinated with other Work.
 - E. Install thermostats 48 inches above floor, and space temperature sensors and other exposed control sensors 60 inches above floor. Align with light switches.
 - F. Install outdoor reset thermostats and outdoor sensors indoors, with sensing elements outdoors with sun shield as required.
 - G. Provide separable sockets for liquids and flanges for air bulb elements.
 - H. Install valves with position indicators and with pilot positioners where sequenced with other controls.
 - I. Individually calibrate outside air measuring and modulation device to proper airflow set points.
 - J. Install control panels adjacent to associated equipment on vibration free walls or freestanding supports. Install engraved plastic nameplates for instruments and control components inside cabinets and engraved plastic nameplates on each cabinet face. Label with appropriate equipment or system designation.
 - K. Install “hand/off/auto” selector switches to override automatic interlock controls when switch is in “hand” position.
 - L. Install duct smoke detectors in the main supply duct in accordance with NFPA 72, California Building Codes and California Fire Codes. Factory installed smoke detectors in listed air moving equipment may be used in lieu of field installed smoke detectors in the main supply duct. Power duct smoke detectors from the air moving equipment, provide auxiliary contacts to fire alarm, and demonstrate shut-down and signaling.
 - M. Install and test gas detection system to operate in full accordance with California Building Codes and California Fire Code section 2311.7.2.2. Signal alarms, deactivate heating systems and interlock system with ECU-2 in the Maintenance Building for non-continuous operation during unoccupied hours.

3.3 FIELD QUALITY CONTROL

- A. Start and commission systems. Allow adequate time for start-up and commissioning prior to placing control systems in permanent operation. Allow 1 day for start-up of radiant heating system.
- B. Furnish service technician employed by system installer on site to instruct Owner’s representative in operation of systems plant and equipment.
- C. After completion of installation, test and adjust control equipment. Submit data showing set points and final adjustments of controls.

- D. 7-day Trend Reports. Provide trend reports over one week period for each HVAC system controlled and for each sequence of operation, plotting functional status and value over time. Repeat reporting until all systems meet approved sequences of operation.

3.4 DEMONSTRATION AND TRAINING

- A. Furnish basic operator training for 4 persons designated by Owner. Provide video tape of all training sessions. Include a minimum of 2 days instructor time for the boilers and 1 day for the air handler. Furnish training on site.
- B. Demonstrate complete operation of systems, including sequence of operation prior to Date of Substantial Completion.
- C. Demonstrate complete and operating system to Owner.

3.5 SEQUENCE OF OPERATION

A. SEQUENCE OF OPERATION FOR ECU-1:

1. Indirect Direct Evaporative Cooling Unit with Hot Water Coil and DX Cooling, ECU-1, serves the Administration Building.
2. Unit Control Overview:
 - a) When the unit start sequence has been initiated, ECU-1 shall maintain an average occupied cooling supply air (SA) setpoint temperature of 62 degrees Fahrenheit (adjustable). Optimal start shall be initiated when the average zone temperature is below or above the low/high limit temperature setpoint or a start enable needs to be initiated before the scheduled output is on. The SA reset shall be reset from the average zone deviation. Both the low/high zone deviation and the low/high SA setpoint shall be adjustable from the EMCS graphical user interface (GUI).
3. Unit Start/Stop sequence:
 - a) The start sequence shall be initiated whenever the HAND-OFF-AUTO (HOA) switch is placed in the HAND position, or when the energy management control system, (EMCS), Remote Enable Contact is closed while the HOA switch is in the AUTO position. This shall be a remote enable sent from the EMCS to ECU-1 through the BACnet IP connection. The supply and exhaust fan control sequence shall then be executed. ECU shall be capable of occupied and unoccupied modes, with setback temperature of 55 degrees Fahrenheit (adjustable) in heating and setup temperature of 85 degrees Fahrenheit (adjustable) in cooling.
 - b) The stop sequence shall include an automatic media dry-out cycle after direct evaporative cooling mode allowing the supply fan to operate for 30 minutes (adjustable) in order to dry-out the evaporative media prior to unit shut down. A manual stop in the HAND position shall terminate the automatic dry-out cycle immediately as a service function.
4. Supply and Exhaust Fans:
 - a) The fan motors shall be started immediately, according to the programmed occupancy schedule, and go to the minimum frequency setting on the VFD when the start sequence is completed. Once fan operation has been proven by the respective airflow proving switches, the supply fan speed will modulate to maintain the SA static pressure setpoint (adjustable).

- The exhaust fan speeds shall modulate to maintain the space static pressure setpoint (adjustable).
- b) Airflow status shall be monitored by airflow switches. If the switches are not made within three minutes after initial start-up, or more than thirty seconds after the unit is running, a fan alarm will be generated and the unit will shut down. The HOA switch or the unit enable value shall be cycled off to reset the fan alarm.
 - c) After airflow has been proven and as long as a fan alarm does not exist, the following sequence of operation for component control shall be allowed to execute:
5. Indirect Evaporative Cooling Heat Exchanger Face and Bypass Dampers:
 - a) When indirect evaporative cooling (IEC) is enabled by ECU controls, the IEC face and bypass dampers shall modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the IEC face and bypass dampers cooling mode setpoint. As the SA temperature drops below this calculated setpoint, the face damper shall modulate closed and the bypass damper shall modulate open to mix warmer outside air bypass air with cooler air flowing through the IEC heat exchanger.
 - b) If IEC is not enabled, the face and bypass dampers shall modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the IEC face and bypass dampers heating mode setpoint. As the SA temperature rises above this calculated setpoint, the face damper shall modulate closed and the bypass damper shall modulate open to mix cooler outside air bypass air with warmer air flowing through the IEC heat exchanger.
 - c) In the warm-up mode, the IEC face and bypass dampers shall both be 100% open.
 6. Directive Evaporative Cooling Face and bypass Dampers:
 - a) When direct evaporative cooling (DEC) is enabled by ECU controls, the DEC face and bypass dampers shall modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the DEC face and bypass dampers cooling mode setpoint. As the SA temperature drops below this calculated setpoint, the face damper shall modulate closed and the bypass damper will modulate open to mix warmer bypass air with cooler air flowing through the DEC / DX cooling sections.
 - b) If DEC is not enabled, the face and bypass dampers shall modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the DEC face and bypass dampers heating mode setpoint. As the SA temperature rises above this calculated setpoint, the face damper shall modulate closed and the bypass damper shall modulate open to mix cooler outside air bypass air with warmer air flowing through the DEC / DX cooling sections.
 - c) If the direct expansion (DX) cooling coil or the hot water (HW) heating coil is enabled, the DEC face dampers shall fully open and bypass dampers shall fully close.
 - d) In the warm-up mode, the DEC face dampers shall fully open and bypass dampers shall fully close, outside air (OA) dampers shall fully close and recirculation dampers shall fully open.
 7. Hot Water Preheating:
 - a) Preheating shall be enabled when the OA temperature is less than the SA temperature setpoint plus the OA temperature differential to enable HW heating setpoint, or the warm-up mode is set to be ON. The HW valve shall modulate to maintain SA temperature at SA temperature setpoint plus the SA temperature differential for HW heating setpoint. The OA temperature differential to enable HW heating setpoint shall be 20 degrees Fahrenheit

(adjustable).

8. Indirect Evaporative Cooling:

- a) The IEC sump shall be enabled and filled when the OA temperature is greater than the SA temperature setpoint plus the OA temperature differential to enable IEC sump setpoint, and the unit is not currently in the scheduled dump mode. The IEC sump shall be disabled but remain filled when the OA temperature drops below the calculated IEC change over setpoint. The IEC sump shall be disabled and dumped immediately when the OA temperature drops below the minimum temperature for sump and DX coil operation setpoint.
- b) The IEC pump shall cycle on when the IEC sump is enabled and full. The pump shall continue to run according to the fan and damper control sequences above, but shall not run during dump and flush cycles.
- c) Whenever the sump is filled, it shall remain filled until the unit is manually shut down or the regularly scheduled dump occurs once a week on Saturday (adjustable). The Dump Schedule Time shall initiate a sump dump for fifty-five minutes followed by a sump flush for five minutes. The fans shall be forced to run for the IEC sump dry out time (adjustable) after the pump has been disabled.

9. Direct Evaporative Cooling:

- a) The DEC sump shall be enabled and filled when the OA temperature is greater than the SA temperature setpoint plus the OA temperature differential to enable DEC sump setpoint, the OA dewpoint maximum to allow DEC sump, and the unit is not currently in the scheduled dump mode. The DEC sump shall also be enabled and filled when the return air (RA) dewpoint is less than the RA dewpoint to enable DEC humidification. The DEC sump shall be disabled but remain filled when the OA temperature drops below the calculated DEC change over setpoint. The DEC sump shall be disabled and dumped immediately when the OA temperature drops below the minimum temperature for sump and DX cooling coil operation setpoint.
- b) The DEC pump shall cycle on when the DEC sump is enabled and full, the RA dewpoint is less than the RA dewpoint maximum to allow DEC pump setpoint, and the SA dewpoint is less than the SA dewpoint maximum to allow DEC Pump setpoint. The DEC pump shall also run when the DEC sump has been filled for humidification. The pump shall continue to run according to the fan and damper control sequences above, but shall not run during dump and flush cycles.
- c) Whenever the DEC sump is filled, it shall remain filled until the unit is manually shut down or the regularly scheduled dump occurs once a week on Saturday (adjustable). The Dump Schedule Time shall initiate a sump dump for fifty-five minutes followed by a sump flush for five minutes. The fans shall be forced to run for the IEC sump dry out time (adjustable) after the pump has been disabled.

10. DX Cooling:

- a) DX cooling shall be enabled when OA temperature is greater than the SA temperature setpoint plus the OA temperature differential to enable DX cooling setpoint. Compressors shall be staged in the DX cooling mode to control the SA temperature to the SA temperature setpoint plus the SA temperature differential to enable DX cooling. The EA fan VFD output shall be at or above the EA VFD minimum speed for DX cooling setpoint.

11. Alarms:

-
- a) The unit shall shut down, signal an alarm, and require manual reset, (by cycling the HOA off, or the unit enable value is cycled off), if:
 - 1) One of the fans fail.
 - 2) One of the VFDs fail.
 - 3) The freezestat has tripped more than three times in one hour.
 - 4) The supply air discharge static pressure exceeds its setpoint.
 - 5) The return air negative static pressure drops below its setpoint.
 - b) The unit shall shut down, signal an alarm and automatically restart if:
 - 1) The freezestat trips.
 - 2) The power monitor input opens.
 - 3) The smoke detector input opens.
 - c) The unit shall signal an alarm but continue to operate if:
 - 1) SA filter input status closes.
 - 2) RA filter input status closes.
 - 3) One of the compressors fail.
 - 4) The water hardness in the IEC sump or DEC sump exceeds 550 ppm.
- B. SEQUENCE OF OPERATION FOR ECU-2:
1. Indirect Direct Evaporative Cooling Unit with Hot Water Coil, ECU-2, serves the Maintenance Building.
 2. Unit Control Overview:
 - a) When the unit start sequence has been initiated, ECU-2 shall maintain an average occupied cooling supply air (SA) setpoint temperature of 62 degrees Fahrenheit (adjustable). Optimal start shall be initiated when the average zone temperature is below or above the low/high limit temperature setpoint or a start enable needs to be initiated before the scheduled output is on. The SA reset shall be reset from the average zone deviation. Both the low/high zone deviation and the low/high SA setpoint are adjustable from the EMCS graphical user interface (GUI).
 3. Unit Start/Stop Sequence:
 - a) The start sequence shall be initiated whenever the HAND-OFF-AUTO (HOA) switch is placed in the HAND position, whenever the gas detection system is activated, or when the energy management control system, (EMCS), Remote Enable Contact is closed while the HOA switch is in the AUTO position. This shall be a remote enable sent from the EMCS to ECU-2 through the BACnet IP connection. The supply and exhaust fan control sequence will then be executed. ECU shall be capable of occupied and unoccupied modes, with setback temperature of 55 degrees Fahrenheit (adjustable) in heating and setup temperature of 85 degrees Fahrenheit (adjustable) in cooling.
 - b) The stop sequence shall include an automatic media dry-out cycle after direct evaporative cooling mode allowing the supply fan to operate for 30 minutes (adjustable) in order to dry-out the evaporative media prior to unit shut down. A manual stop in the HAND position shall terminate the automatic dry-out cycle immediately as a service function.
 4. Supply and Exhaust Fans:
 - a) The fan motors shall be started immediately, according to the programmed occupancy schedule, and go to the minimum frequency setting on the VFD when the start sequence is completed. Once fan operation has been proven by the respective airflow proving switches, the supply fan speed will modulate to maintain the SA static pressure setpoint (adjustable). The exhaust fan speeds shall modulate to maintain the space static pressure setpoint

- (adjustable).
- b) Airflow status shall be monitored by airflow switches. If the switches are not made within three minutes after initial start-up, or more than thirty seconds after the unit is running, a fan alarm will be generated and the unit will shut down. The HOA switch or the unit enable value shall be cycled off to reset the fan alarm.
 - c) After airflow has been proven and as long as a fan alarm does not exist, the following sequence of operation for component control shall be allowed to execute:
5. Indirect Evaporative Cooling Heat Exchanger Face and Bypass Dampers:
- a) When indirect evaporative cooling (IEC) is enabled by ECU controls, the IEC face and bypass dampers shall modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the IEC face and bypass dampers cooling mode setpoint. As the SA temperature drops below this calculated setpoint, the face damper will modulate closed and the bypass damper will modulate open to mix warmer outside air bypass air with cooler air flowing through the IEC heat exchanger.
 - b) If IEC is not enabled, the face and bypass dampers will modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the IEC face and bypass dampers heating mode setpoint. As the SA temperature rises above this calculated setpoint, the face damper will modulate closed and the bypass damper shall modulate open to mix cooler outside air bypass air with warmer air flowing through the IEC heat exchanger.
 - c) In the warm-up mode, the IEC face and bypass dampers will both be 100% open.
6. Directive Evaporative Cooling Face and Bypass Dampers:
- a) When direct evaporative cooling (DEC) is enabled by ECU controls, the DEC face and bypass dampers shall modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the DEC face and bypass dampers cooling mode setpoint. As the SA temperature drops below this calculated setpoint, the face damper will modulate closed and the bypass damper will modulate open to mix warmer bypass air with cooler air flowing through the DEC section.
 - b) If DEC is not enabled, the face and bypass dampers will modulate to maintain the SA temperature at the SA temperature setpoint plus the SA temperature differential for the DEC face and bypass dampers heating mode setpoint. As the SA temperature rises above this calculated setpoint, the face damper will modulate closed and the bypass damper shall modulate open to mix cooler outside air bypass air with warmer air flowing through the DEC section.
 - c) If the hot water (HW) heating coil is enabled, the DEC face dampers shall fully open and bypass dampers shall fully close
 - d) In the warm-up mode, the DEC face dampers shall fully open and bypass dampers shall fully close, outside air (OA) dampers shall fully close and recirculation dampers shall fully open.
7. Hot Water Preheating:
- a) Preheating shall be enabled when the OA temperature is less than the SA temperature setpoint plus the OA temperature differential to enable HW heating setpoint, or the warm-up mode is set to be ON. The HW valve shall modulate to maintain SA temperature at SA temperature setpoint plus the SA temperature differential for HW heating setpoint.
8. Indirect Evaporative Cooling:
- a) The IEC sump shall be enabled and filled when the OA temperature is greater than the SA

- temperature setpoint plus the OA temperature differential to enable IEC sump setpoint, and the unit is not currently in the scheduled dump mode. The IEC sump shall be disabled but remain filled when the OA temperature drops below the calculated IEC change over setpoint. The IEC sump shall be disabled and dumped immediately when the OA temperature drops below the minimum temperature for sump operation setpoint.
- b) The IEC pump shall cycle on when the IEC sump is enabled and full. The pump shall continue to run according to the fan and damper control sequences above, but shall not run during dump and flush cycles.
 - c) Whenever the sump is filled, it shall remain filled until the unit is manually shut down or the regularly scheduled dump occurs once a week on Saturday (adjustable). The Dump Schedule Time shall initiate a sump dump for fifty-five minutes followed by a sump flush for five minutes. The fans shall be forced to run for the IEC sump dry out time (adjustable) after the pump has been disabled.
9. Direct Evaporative Cooling:
- a) The DEC sump shall be enabled and filled when the OA temperature is greater than the SA temperature setpoint plus the OA temperature differential to enable DEC sump setpoint, the OA dewpoint maximum to allow DEC sump, and the unit is not currently in the scheduled dump mode. The DEC sump shall also be enabled and filled when the return air (RA) dewpoint is less than the RA dewpoint to enable DEC humidification. The DEC sump shall be disabled but remain filled when the OA temperature drops below the calculated DEC change over setpoint. The DEC sump shall be disabled and dumped immediately when the OA temperature drops below the minimum temperature for sump operation setpoint.
 - b) The DEC pump shall cycle on when the DEC sump is enabled and full, the RA dewpoint is less than the RA dewpoint maximum to allow DEC pump setpoint, and the SA dewpoint is less than the SA dewpoint maximum to allow DEC Pump setpoint. The DEC pump shall also run when the DEC sump has been filled for humidification. The pump shall continue to run according to the fan and damper control sequences above, but shall not run during dump and flush cycles.
 - c) Whenever the DEC sump is filled, it shall remain filled until the unit is manually shut down or the regularly scheduled dump occurs once a week on Saturday (adjustable). The Dump Schedule Time shall initiate a sump dump for fifty-five minutes followed by a sump flush for five minutes. The fans shall be forced to run for the IEC sump dry out time (adjustable) after the pump has been disabled.
10. Alarms:
- a) The unit shall shut down, signal an alarm, and require manual reset, (by cycling the HOA off, or the unit enable value is cycled off), if:
 - 1) One of the fans fail.
 - 2) One of the VFDs fail.
 - 3) The freezestat has tripped more than three times in one hour.
 - 4) The supply air discharge static pressure exceeds its setpoint.
 - 5) The return air negative static pressure drops below its setpoint.
 - b) The unit shall shut down, signal an alarm and automatically restart if:
 - 1) The freezestat trips.
 - 2) The power monitor input opens.
 - 3) The smoke detector input opens.
 - c) The unit shall signal an alarm but continue to operate if:
 - 1) SA filter input status closes.

- 2) RA filter input status closes.
- 3) One of the compressors fail.
- 4) The water hardness in the IEC sump or DEC sump exceeds 550 ppm.
- d) The unit shall signal an alarm, and require manual reset, but continue to operate if:
 - 1) Gas detection system is activated.

C. SEQUENCE OF OPERATION FOR VAV BOX COOLING ONLY:

1. VAV air distribution serves VAV zones the Administration Building and the Maintenance Building.
 - a) Each VAV box will be controlled by its own temperature unit controller.
 - b) A wall mounted zone electronic temperature sensor shall have push buttons for override and warmer/cooler adjustment.
 - c) Multiple units will be controlled by common thermostat only where shown on the drawings.
 - d) Cooling operation: The temperature unit controller shall compare the cooling setpoint with the space temperature and signal the modulation box damper to vary the supply air quantity being delivered to the zone. Cooling setpoint temperature = 74 degrees Fahrenheit (adjustable).
 - e) The following items shall be monitored:
 - 1) Room temperature.
 - 2) SA temperature.

D. SEQUENCE OF OPERATION FOR EXHAUST FANS:

1. Control sequences for exhaust fans:
 - a) General rooftop exhaust fans: Interlock general rooftop exhaust operation to central air-handling unit operation.
 - b) Exhaust fan serving Maintenance Pit: Interlock fan to operate with programmed building occupancy schedule.
 - c) Rooftop exhaust fans serving office areas and toilets: Start and operate fan during normally scheduled occupied hours only. Fan shall stop and remain off during unoccupied periods.
 - d) Exhaust fans serving mechanical rooms and electrical rooms: Start and operate fan when room temperature rises to 85F or greater. Fan shall stop and remain off when room temperature drops to 75F or less.
 - e) Bus Wash Bay exhaust fan: Start fan when a bus enters the Bus Wash Bay and operate fan while bus is inside the Bus Wash Bay. Fan shall stop 5 minutes after last bus leaves the Bus Wash Bay and remain off.

E. SEQUENCE OF OPERATION FOR HHW-1 SYSTEM:

1. The heating hot water system HHW-1 is a primary only loop system, and serves the Administration Building.
2. System Control Overview:
 - a) Boilers B-1A and B-1B shall be controlled by the main boiler control panel and the sub boiler control panel. The boiler control panel shall be programmable at a panel located on or near the boiler and shall have commands to control the following:
 - 1) Boiler B-1A, boiler B-1B, and loop circulation pump P-1A and loop circulation pump P-1B.
 - 2) Lead/lag rotation of boilers on a daily basis.

- 3) Option of Lo/Hi/Lo/Hi or Lo/Lo/Hi/Hi sequencing of boilers. Lag boiler shall fire when lead boiler has reached full fire capacity, or fire both lead and lag boilers on lowest fire stage then stage both to higher firing rates.
- 4) Seasonal enable flag is based off of month of the year, October through May (adjustable). If the current month is between starting month and ending month, then enable flag is off. If the current month is between ending month and starting month, then enable flag is on.
- 5) The boilers are enabled only when:
 - i. The programmed schedule is on.
 - ii. The outside air (OA) temperature is less than the HW system outside air lockout temperature (adjustable).
 - iii. Any of the HW valves are calling for heat, in either occupied or unoccupied mode.
 - iv. Seasonal enable flag is on.
3. The main boiler control panel shall monitor the HW loop supply and return temperatures, stage boilers on, adjust the firing rate, and automate both boilers to function as a unit to maintain loop setpoint temperature. The lead boiler shall be enabled based upon outside air temperature, 68 degrees Fahrenheit (adjustable).
4. The loop pumps P-1A and P-1B shall rotate lead/lag on a daily basis, and the VFDs on the pumps shall modulate to maintain a constant differential pressure across the heating water supply (HWS) and heating water return (HWR) headers.
5. Reset heating hot water temperature based upon outside air temperature, with minimum and maximum ranges set at terminal. HWS = 180 degrees Fahrenheit when outside air temperature = 24 degrees Fahrenheit, and HWS = 120 degrees Fahrenheit when outside air temperature = 60 degrees Fahrenheit, with a straight line relationship between points.
6. The following displays and commands shall be available:
 - a) Current HWS and HWR temperatures.
 - b) Current status commanded for each boiler.
 - c) Current status of start/stop command at each pump.
 - d) Current switch status at each pump.
 - e) Runtime totalization (up to 64,000 hours).
 - f) Trend logs.
 - g) Alarm history.
 - h) Fail indication of pumps.
7. Setpoints shall be interlocked between heating and cooling to prevent simultaneous heating and cooling. Set deadband between heating and cooling at 2-3 degrees Fahrenheit (adjustable).

F. SEQUENCE OF OPERATION FOR RADIANT CEILING PANEL HEATING SYSTEM:

1. The radiant ceiling panel heating system serves the Administration Building.
2. System Control Overview:SYSTEM CONTROL OVERVIEW:
 - a) Each radiant ceiling panel heating zone shall be directly controlled by its own controller. The zone consists of ceiling mounted hydronic radiant panels with tubing circuit(s) and zone valve(s).
 - b) A wall mounted zone thermostat with room setpoint adjustment and room air temperature sensor shall be furnished for occupant control.
 - c) In heating mode the controller compares the heating setpoint temperature with the room air temperature and modulates the zone valve(s) to maintain heating setpoint

temperature.

- d) All temperature sensors shall be factory calibrated to +/- 1/2 degree Fahrenheit. All sensors shall be interchangeable with no calibration required.
- e) The following items shall be monitored:
 - 1) Room temperature.

G. SEQUENCE OF OPERATION FOR HHW-2 SYSTEM:

1. The heating hot water system HHW-2 is a primary only loop system, and serves the Maintenance Building.
2. System Control Overview:
 - a) Boilers B-2A and B-2B shall be controlled by the main boiler control panel and the sub boiler control panel. The boiler control panel shall be programmable at a panel located on or near the boiler and shall have commands to control the following:
 - 1) Boiler B-2A, boiler B-2B, and loop circulation pump P-2A and loop circulation pump P-2B.
 - 2) Lead/lag rotation of boilers on a daily basis.
 - 3) Option of Lo/Hi/Lo/Hi or Lo/Lo/Hi/Hi sequencing of boilers. Lag boiler shall fire when lead boiler has reached full fire capacity, or fire both lead and lag boilers on lowest fire stage then stage both to higher firing rates.
 - 4) Seasonal enable flag is based off of month of the year, October through May (adjustable). If the current month is between starting month and ending month, then enable flag is off. If the current month is between ending month and starting month, then enable flag is on.
 - b) The boilers are enabled only when:
 - a. The programmed schedule is on.
 - b. The outside air (OA) temperature is less than the HW system outside air lockout temperature (adjustable).
 - c. Any of the HW valves are calling for heat, in either occupied or unoccupied mode.
 - d. Seasonal enable flag is on.
 - e. The main boiler control panel shall monitor the HW loop supply and return temperatures, stage boilers on, adjust the firing rate, and automate both boilers to function as a unit to maintain loop setpoint temperature. The lead boiler shall be enabled based upon outside air temperature, 68 degrees Fahrenheit (adjustable).
 - f. Gas detection system is not activated.
3. The loop pumps P-2A and P-2B shall rotate lead/lag on a daily basis, and the VFDs on the pumps shall modulate to maintain a constant differential pressure across the heating water supply (HWS) and heating water return (HWR) headers.
4. Reset heating hot water temperature based upon outside air temperature, with minimum and maximum ranges set at terminal. HWS = 180 degrees Fahrenheit when outside air temperature = 24 degrees Fahrenheit, and HWS = 120 degrees Fahrenheit when outside air temperature = 60 degrees Fahrenheit, with a straight line relationship between points.
5. The following displays and commands shall be available:
 - a) Current HWS and HWR temperatures.
 - b) Current status commanded for each boiler.
 - c) Current status of start/stop command at each pump.
 - d) Current switch status at each pump.
 - e) Runtime totalization (up to 64,000 hours).
 - f) Trend logs.
 - g) Alarm history.
 - h) Fail indication of pumps.

6. Setpoints shall be interlocked between heating and cooling to prevent simultaneous heating and cooling. Set deadband between heating and cooling at 2-3 degrees Fahrenheit (adjustable).

H. SEQUENCE OF OPERATION FOR RADIANT SLAB HEATING SYSTEM:

1. The radiant slab heating system serves the Maintenance Building.
2. System control Overview:
 - a) Each slab heating zone shall be directly controlled by its own controller. The zone consists of in-slab hydronic tubing circuit(s) and zone valve(s).
 - b) A wall mounted zone thermostat with room setpoint adjustment and in-slab temperature sensor shall be furnished for occupant control.
 - c) In heating mode the controller compares the heating setpoint temperature with the slab temperature and modulates the zone valve(s) to maintain heating setpoint temperature.
 - d) Removable temperature sensors shall be placed in conduit permanently embedded in concrete slab. All temperature sensors shall be factory calibrated to +/- ½ degree Fahrenheit. All sensors shall be interchangeable with no calibration required.
 - e) The following items shall be monitored:
 - 1) Slab temperature.

I. SEQUENCE OF OPERATION FOR SELF-CONTAINED AIR CONDITIONER:

1. The Self-Contained Air Conditioning system serves the MDF Room 129 in the Administration Building.
2. System control Overview:
 - a. A wall-mounted thermostat with room setpoint adjustment, 75 degrees Fahrenheit, shall be furnished for occupant control.
 - b. Unit fan operates continuously.
 - c. Upon rise in space temperature above cooling setpoint, compressor/condensing equipment stages on to maintain setpoint.
 - d. When cooling setpoint temperature is met, compressor/condensing equipment stages off.
3. The following features shall be interfaced with HVAC controls:
 - a. Operating status.
 - b. System diagnostics and safety alarms.
 - c. Monitor constant and variable motor loads.
 - d. Signal an alarm to the HVAC control system when cooling setpoint cannot be maintained for 20 minutes.

J. SEQUENCE OF OPERATION FOR SPLIT-SYSTEM AIR CONDITIONER:

1. The Split-System Air Conditioner serves the Money Room 408 in the Fueling Building.
2. System control Overview:
 - a. A wall-mounted thermostat with room setpoint adjustment, 72/72 degrees Fahrenheit occupied cooling/heating, and 85/60 degrees Fahrenheit unoccupied cooling/heating, shall be furnished for occupant control.
 - b. Unit operation shall be programmable for occupied and unoccupied periods, seven days per week.
 - c. Unit evaporator fan operates continuously during occupied hours.
 - d. Unit evaporator fan operates intermittently during unoccupied hours.
 - e. Upon rise in space temperature above cooling setpoint, compressor/condensing equipment stages on to maintain setpoint.
 - f. When cooling setpoint temperature is met, compressor/condensing equipment stages off.

- g. Upon drop in space temperature below heating setpoint, compressor/condensing equipment stages on to maintain setpoint.
- h. When heating setpoint temperature is met, compressor/condensing equipment stages off.
- 3. The following features shall be interfaced with HVAC controls:
 - a. Signal an alarm to the HVAC control system when cooling or heating setpoint cannot be maintained for 20 minutes.

END OF SECTION 23 09 00



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**326 HUSS LANE
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TLCD PROJECT NO:

11054.03

DATE:

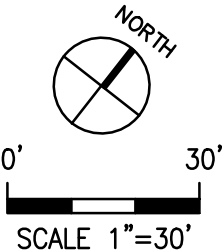
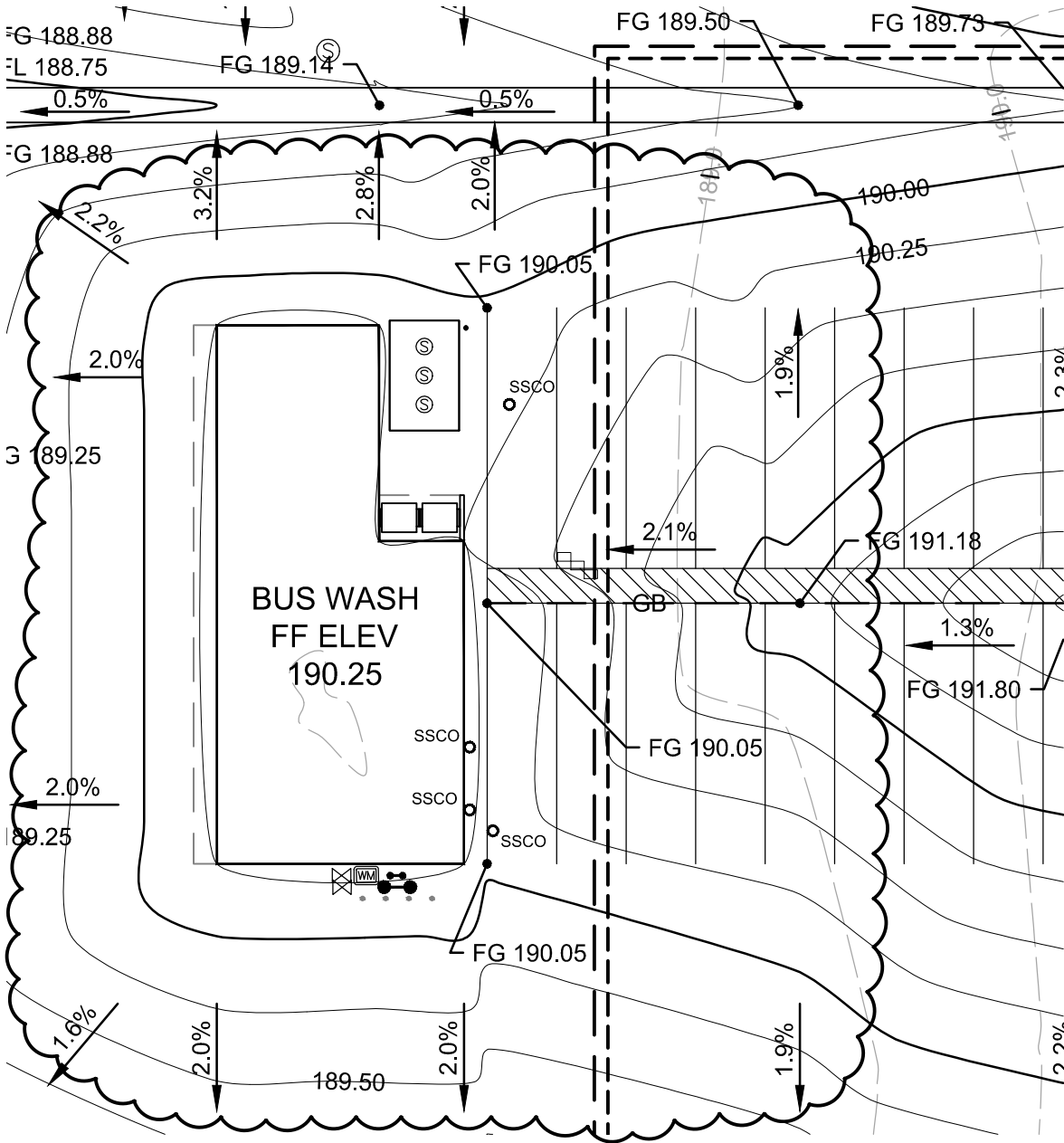
08/07/2014

BY:

MGK

DESCRIPTION:

**Grading Plan Contours
Drawing C1.2**



DRAWING NO:

CA 1.0_3



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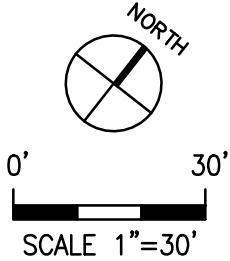
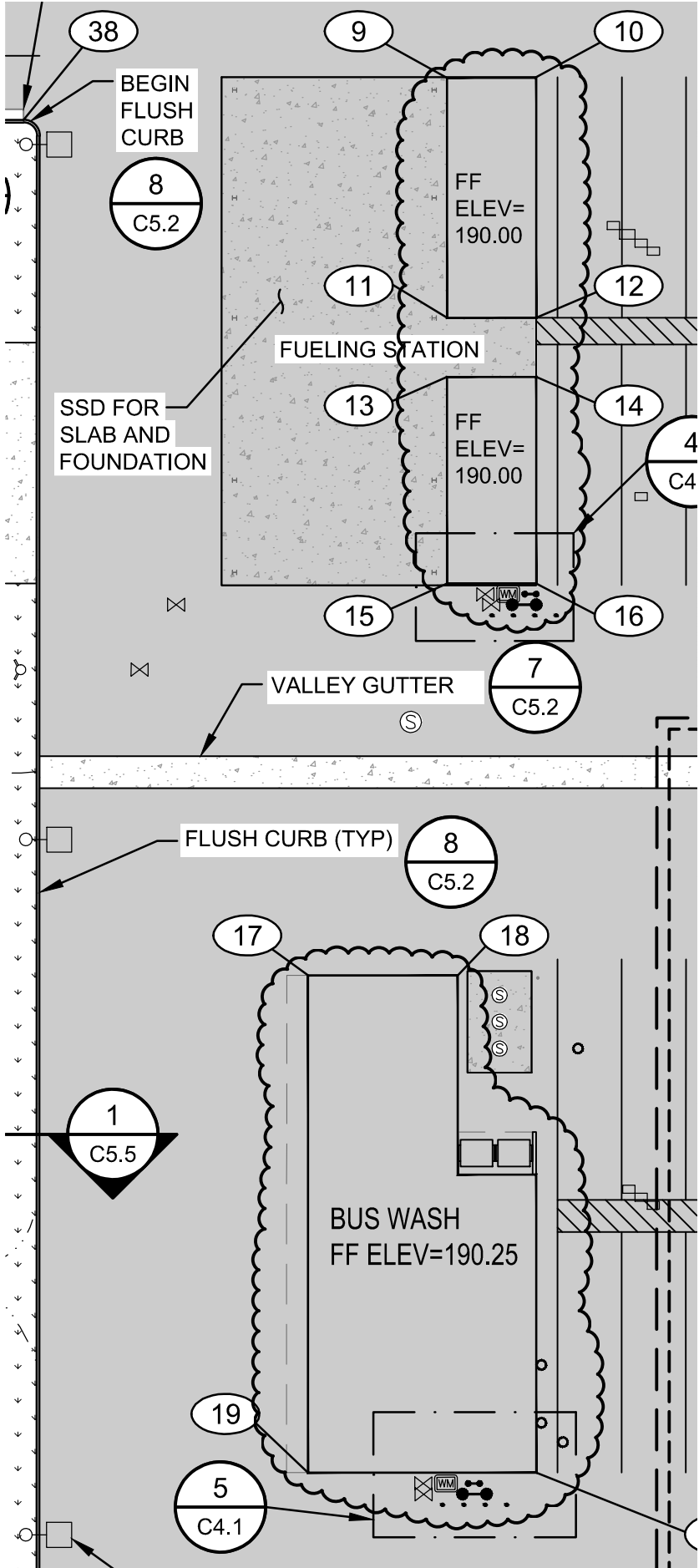
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TLCD PROJECT NO:

11054.03

DATE:

08/07/2014

BY:

MGK

DESCRIPTION:

**Fuel Facility and Bus Wash
Finish Floor Elevation - Drawing C1.3**



Matthew Glen Kennedy

DRAWING NO:

CA 2.0_3

PROJECT NAME

**Butte Regional Transit
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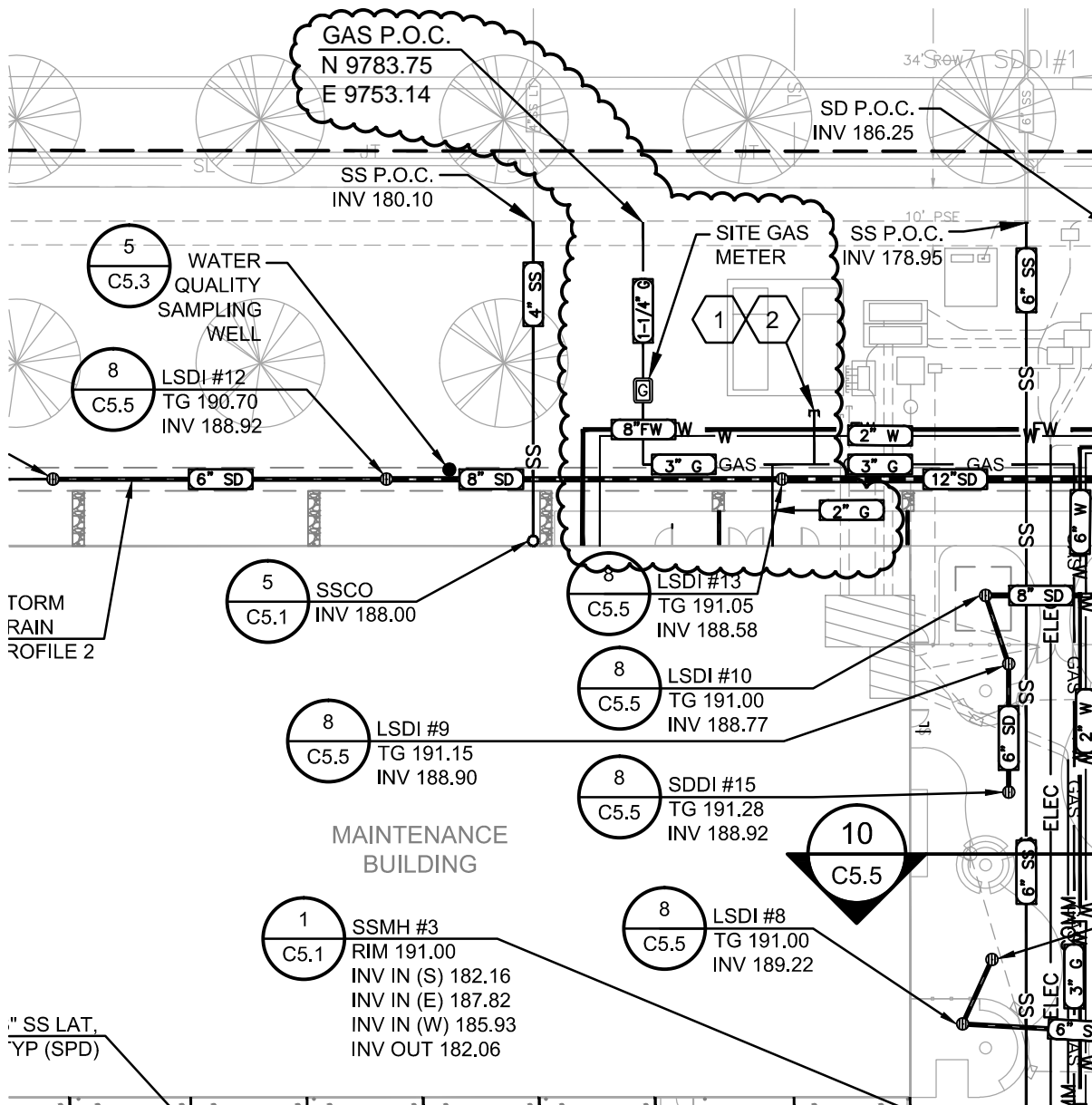
08/07/2014

BY:

MGK

DESCRIPTION:

Gas Line - Drawing C1.4



KEYNOTES

1. STUB OUT 2 INCH GAS WITH SHUT-OFF VALVE WITHIN 3 FEET OF BID ALTERNATE 1 GENERATOR PAD.
2. BID ALTERNATE 1 - PROVIDE 2" MPG TO ABOVE GRADE TO GAS SUB METER, REGULATOR COMPATIBLE WITH GENERATOR MANUFACTURER'S REQUIREMENTS. PROVIDE 2" GAS TO GENERATORS POINT OF CONNECTION.



Matthew Glen Kennedy

DRAWING NO:

CA 3.0_3

PROJECT NAME

**Butte Regional Transit
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TLCD PROJECT NO:

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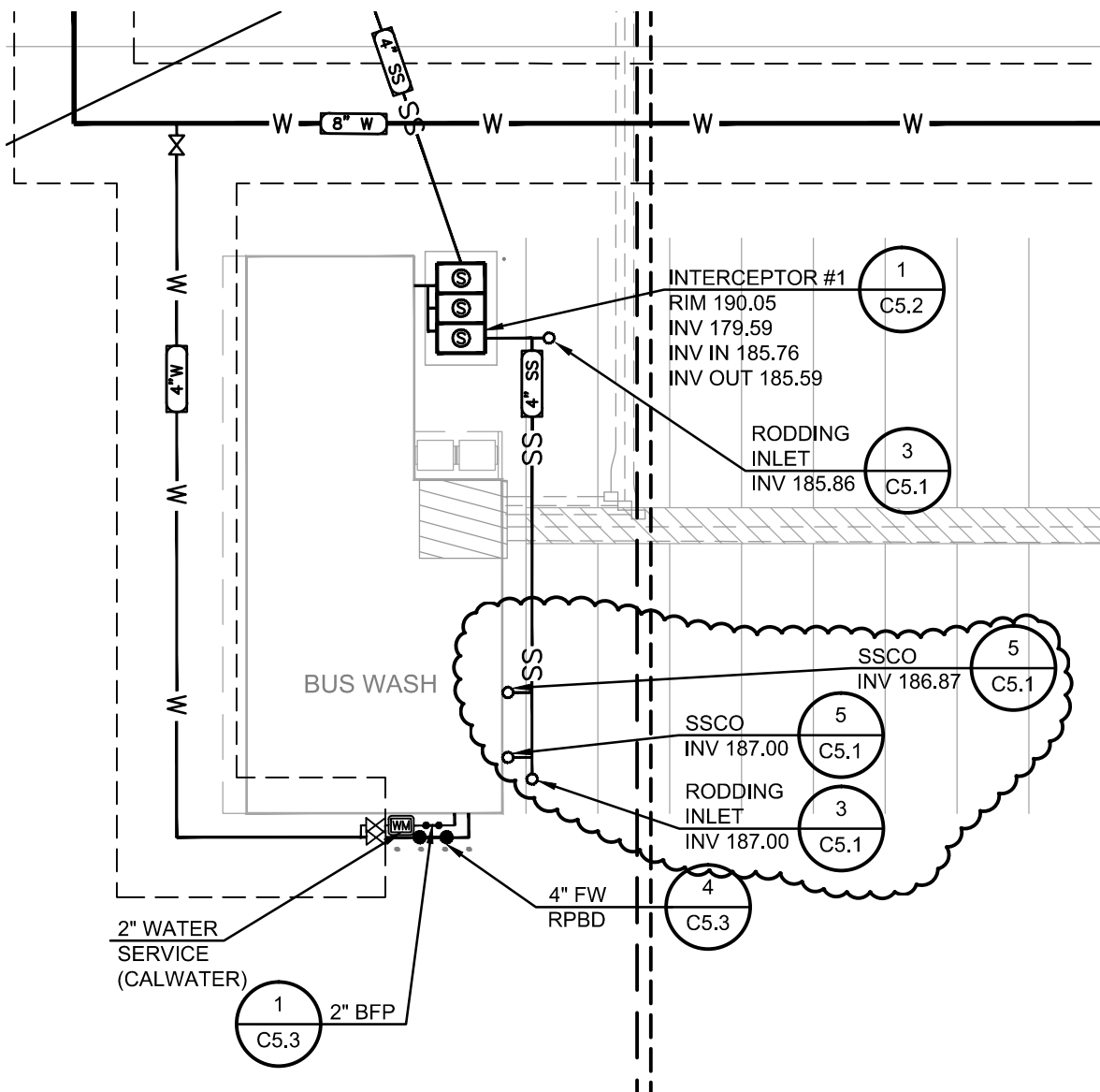
08/07/2014

BY:

MGK

DESCRIPTION:

Sanitary Sewer - Drawing C1.4



Matthew Glen Kennedy

DRAWING NO:

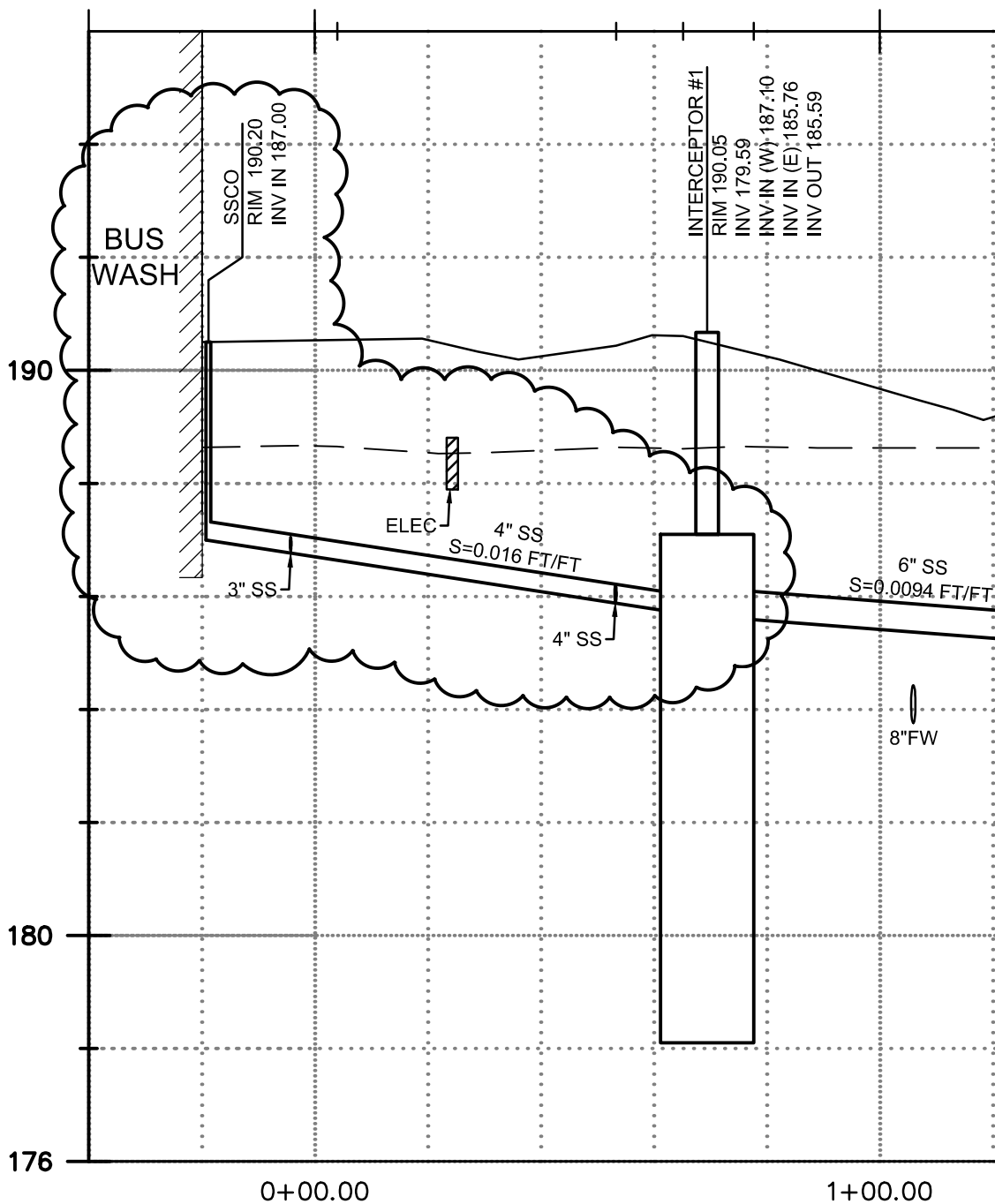
CA 4.0_3

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TLCD PROJECT NO:

11054.03

DATE:

08/07/2014

BY:

MGK

DESCRIPTION:

**Sanitary Sewer Profile
Drawing C3.2**



Matthew Glen Kennedy

DRAWING NO:

1 SANITARY SEWER PROFILE 1
C1.4 SCALE: 1" = 30' HZ
1" = 3' VT

PROJECT NAME
**Butte Regional Transit
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TLCD PROJECT NO:
11054.03

DATE:
08/05/14

BY:
MELTON DESIGN GROUP

DESCRIPTION:
ADDENDUM

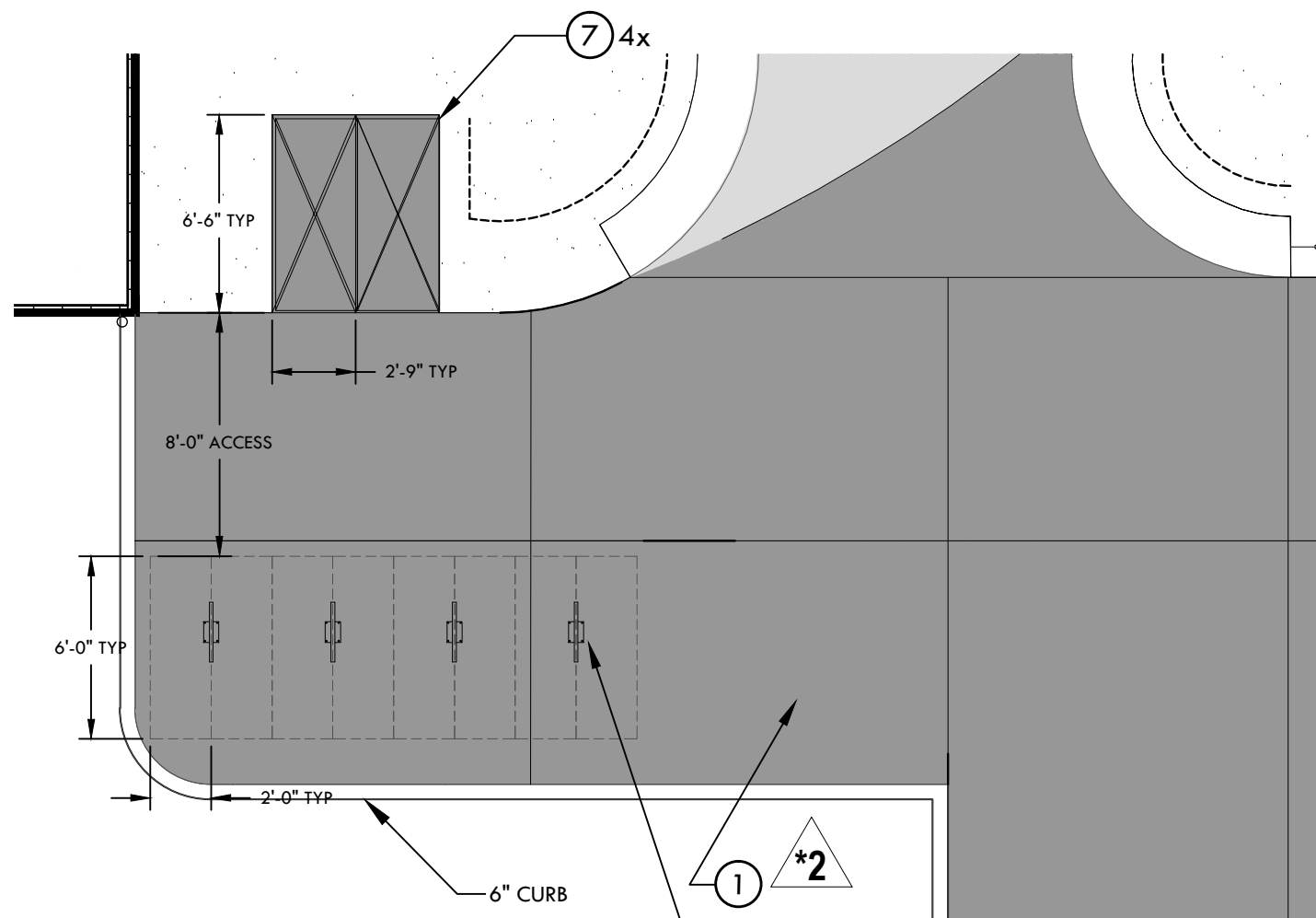
- *1 1. BIKE PARKING DETAIL
ADDED TO VERIFY CODE
COMPLIANCE (CMC 19.70.080.)
- *2 2. REMOVAL OF DG IN CORNER,
REPLACED WITH CONCRETE.

DRAWING NO:

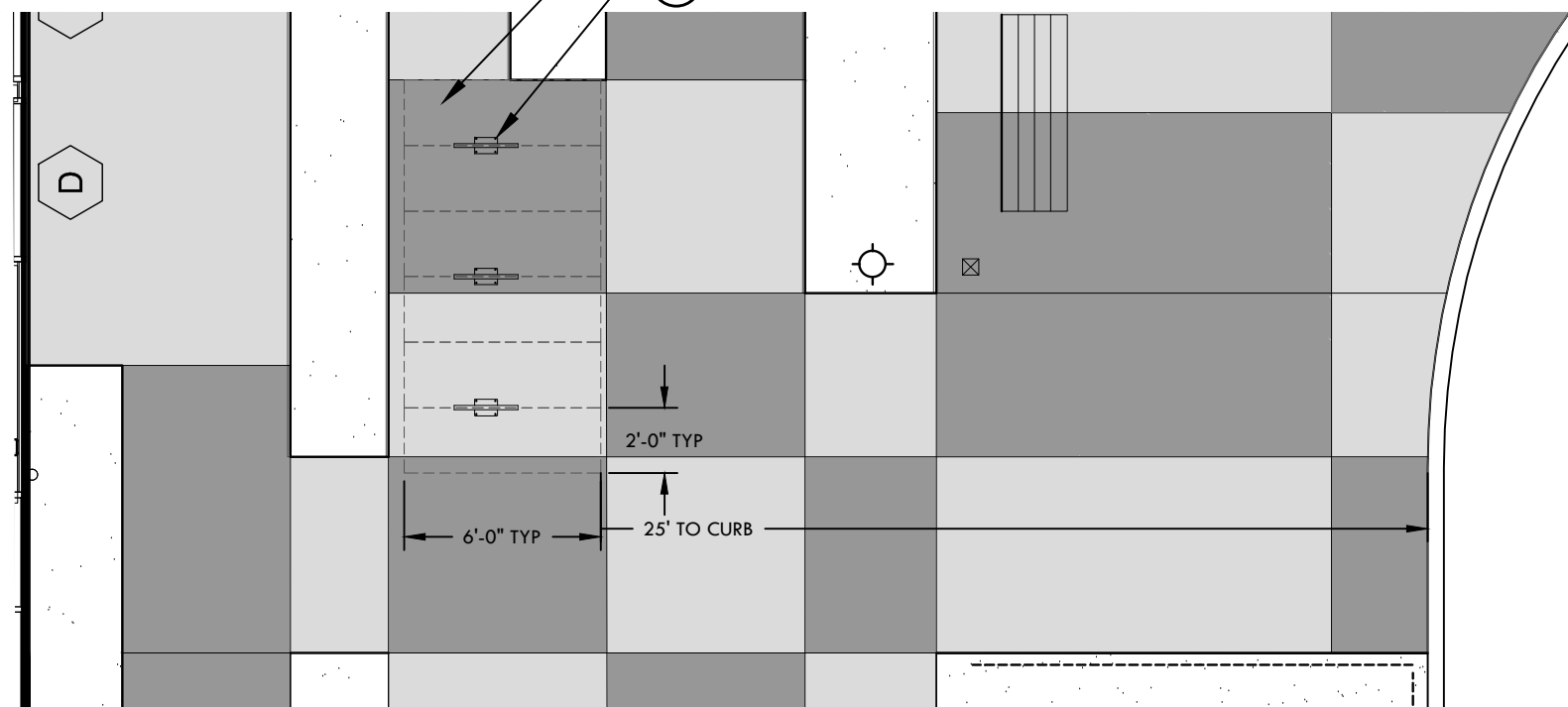
LA 1.0_3

HARDSCAPE LEGEND (SEE SHEET L-1.0)

SYMBOL	DESCRIPTION	REMARKS	DETAIL/ SHEET
①	COLORED CONCRETE SIDEWALK DAVIS COLOR: GRAPHITE 860 (IRON OXIDE)	ANTIQUÉ WASH OR ACID FINISH, EXPOSING SAND LIGHTLY (NON-SLIP). ADD SILICA TO MIX. SCORE PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION AND ENGINEER'S PLAN FOR STRUCTURAL SECTION.	--
⑥	BIKE PARKING	CAST ALUMINUM BIKE RACK. 2 BIKES PER RACK MODEL: EMMERSON MANUFACTURE: www.landscapeform.com	6/ L-2.10
⑦	LONG TERM BIKE PARKING	BIKE STORAGE BY: PARK-A-BIKE SEE DETAIL	2/ L-2.10



***1 BIKE PARKING AT PLAZA**
SCALE: 3/16" = 1'



***1 BIKE PARKING AT MAIN ENTRANCE**
SCALE: 3/16" = 1'



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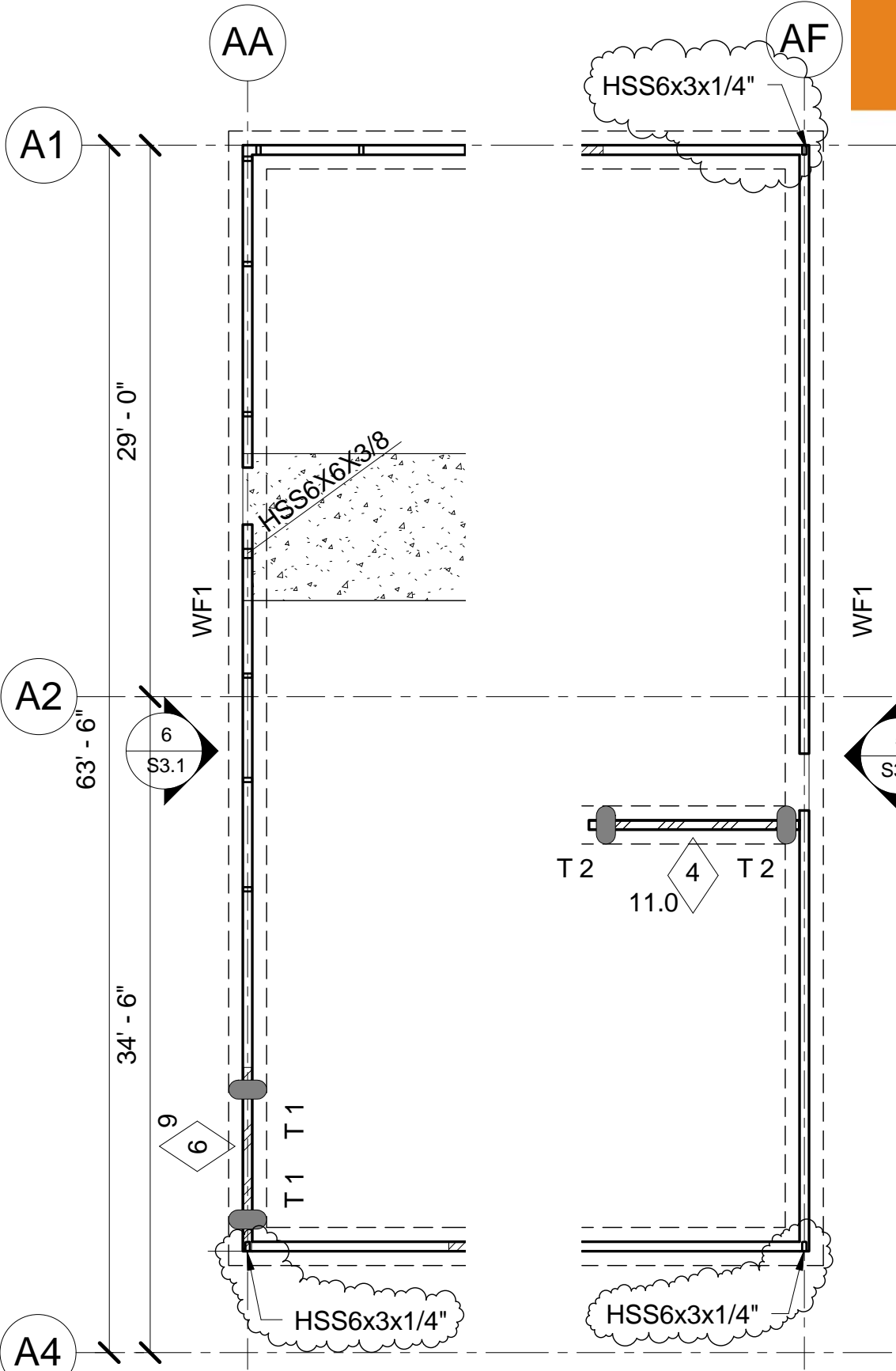
DATE:
08/07/14

BY:
KL

DESCRIPTION:
SUPPORTS ADDED
FOR OVERHANG-
SHEET S2.1



DRAWING NO:



1 PARTIAL PLAN - ADMINISTRATION
FOUNDATION-NORTH
1/8" = 1'-0"

2 PARTIAL PLAN - ADMINISTRATION
FOUNDATION - SOUTH
1/8"=1'-0"

SA 1.0_3

(2) L3X3 T TO
MATCH TRUSS, TYP.



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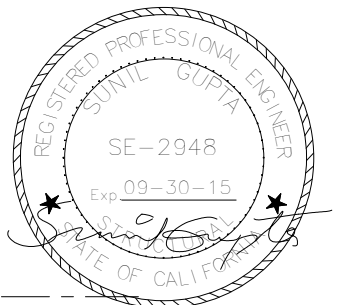
08/07/14

BY:

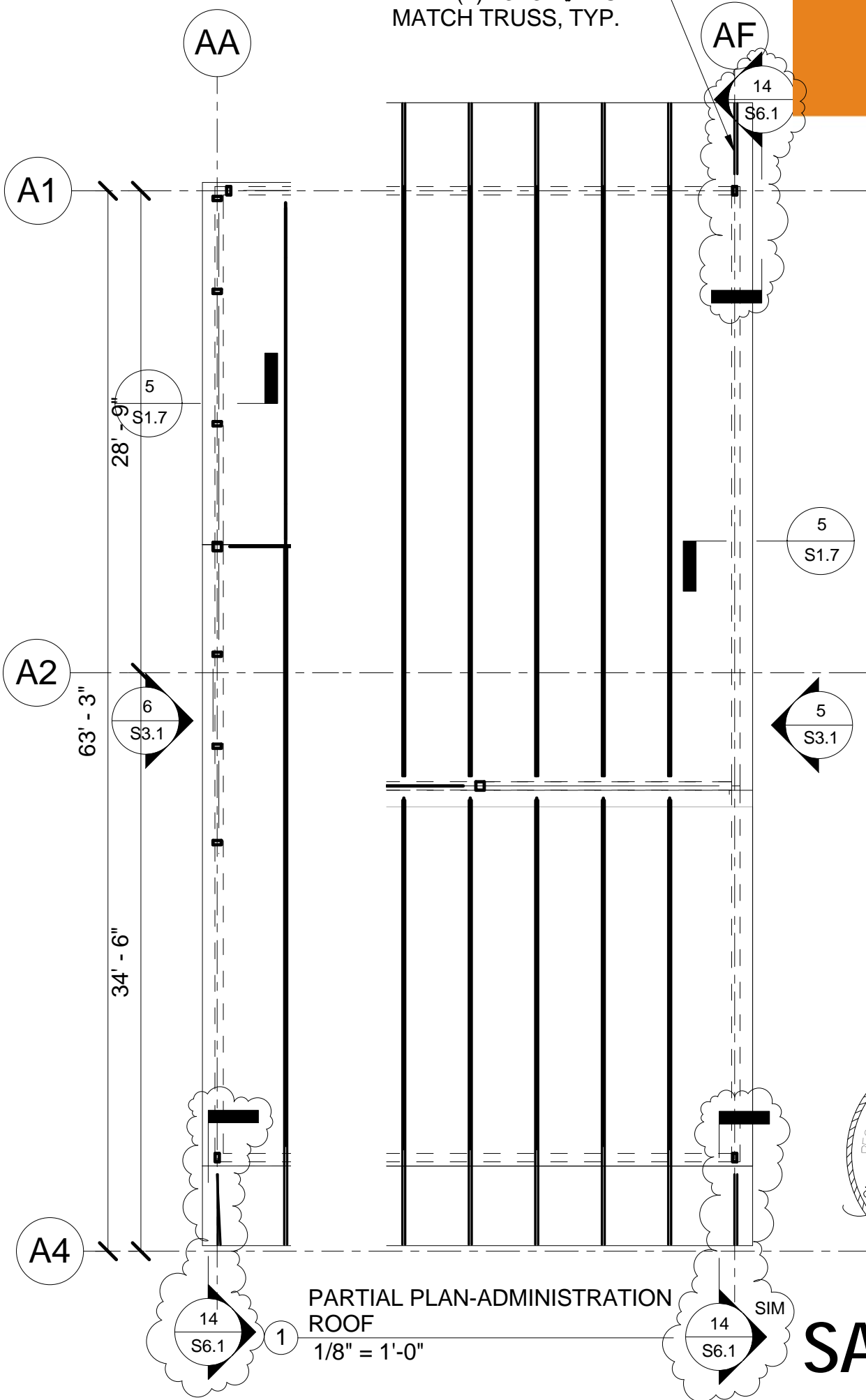
KL

DESCRIPTION:

**ADDED OVERHANG
SUPPORT DETAILS -
ADMIN BLDG
SHEET S2.2**



DRAWING NO:



**PARTIAL PLAN-ADMINISTRATION
ROOF**

1/8" = 1'-0"

SA 1.1_3



ARCHITECTURE

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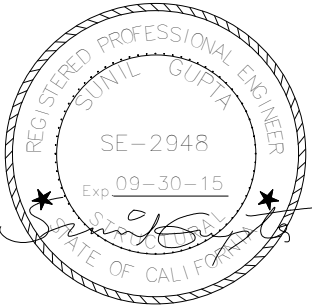
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TLCD PROJECT NO:
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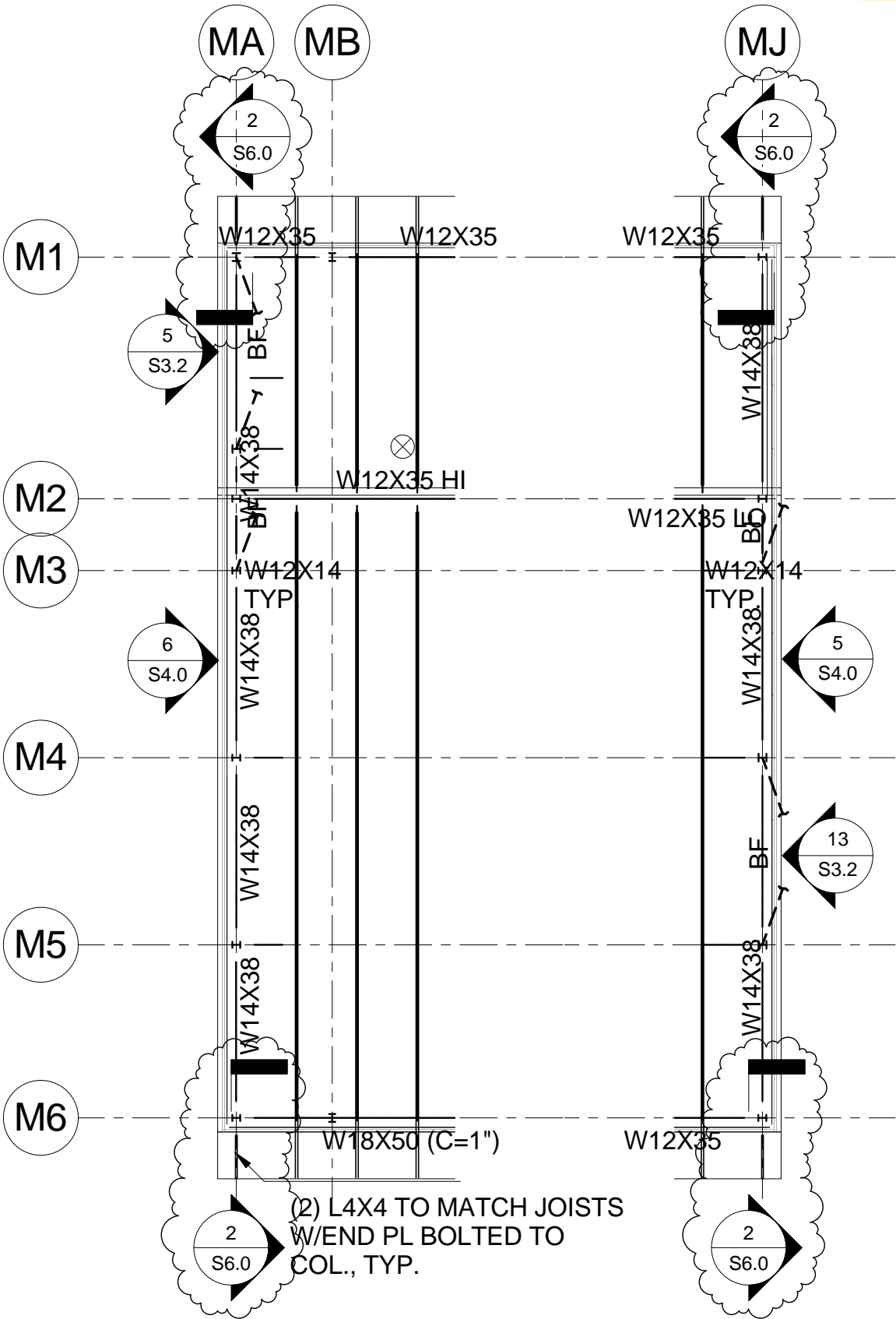
DATE:
08/07/14

BY:
KL

DESCRIPTION:
ADDED OVERHANG
SUPPORT DETAILS
- MAINT. BLDG.
SHEET S2.4



DRAWING NO:



1 PARTIAL PLAN - MAINTENANCE ROOF
1/16" = 1'-0"

SA 1.2_3

PROJECT NAME

**Butte Regional Transit
Operations Center**

PROJECT ADDRESS

**326 HUSS LANE
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STUD PER PLAN
W/ LVF @ 24" TO HSS

HSS
PER PLAN

(4) LVF TOP TRACK
TO CAP PL

CONT TOP TRACK

ADMINOPS T.O. PLATE LEVEL
11' - 0"

1/2" CAP PLATE

STUD
PER PLAN

2L-SIZE & GAP
TO MATCH JOISTS

(4) 3/4"Ø A325N
PL 1/2"X7"X0'-9"

**OUTRIGGER TO HSS CONNECTION
- DETAIL 14/S6.1**

1
1" = 1'-0"

M6

ROOF DECK
PER PLAN

0' - 1 1/2"

MAINTENANCE HOIST AND SERVICE
EQUIPMENT SUPPORT
24' - 0"

2L-SIZE & GAP TO
MATCH JOISTS

(4) 3/4"Ø A325N

PL 1/2"X7"X0'-10"

EA FLANGE

BM BEYOND

BM
PER PLAN

CONN. PER 11
S1.3 SIM

TLCD PROJECT NO:
11054

DATE:
08/07/14

BY:
KL

DESCRIPTION:
**NEW OVERHANG
DETAILS
SHEET S6.1**



DRAWING NO:

**OUTRIGGER TO COLUMN CONNECTION
- DETAIL 2/S6.0**

2
1" = 1'-0"

SA 1.3_3

AA

AB

2
S6.1
SUNSHADE
DETAIL

A1

PROJECT NAME
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PROJECT ADDRESS
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5
S1.7

SIM
13
S6.1

3:12
4:12

16K2 @ 4'-0" O.C.

11
S6.1

24K 100/80

0' - 8 3/8"

13
S6.1

TLCD PROJECT NO:
11054

DATE:
08/07/14

BY:
KL

DESCRIPTION:
**ADDED GIRDER TRUSS
DETAILS
SHEET S2.2**

A2

6
S3.1

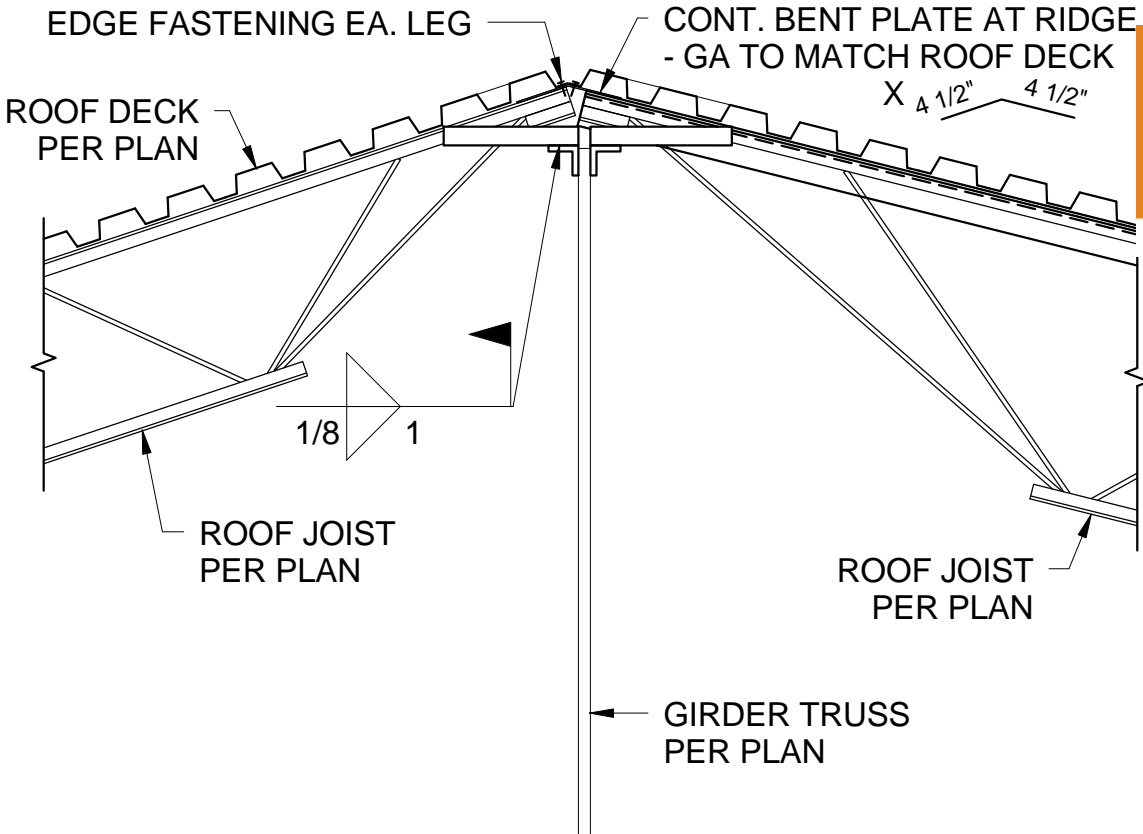


DRAWING NO:

SA 2.0_3

**PARTIAL PLAN - ADMINISTRATION .
OPERATIONS ROOF**

1
1/8" = 1'-0"



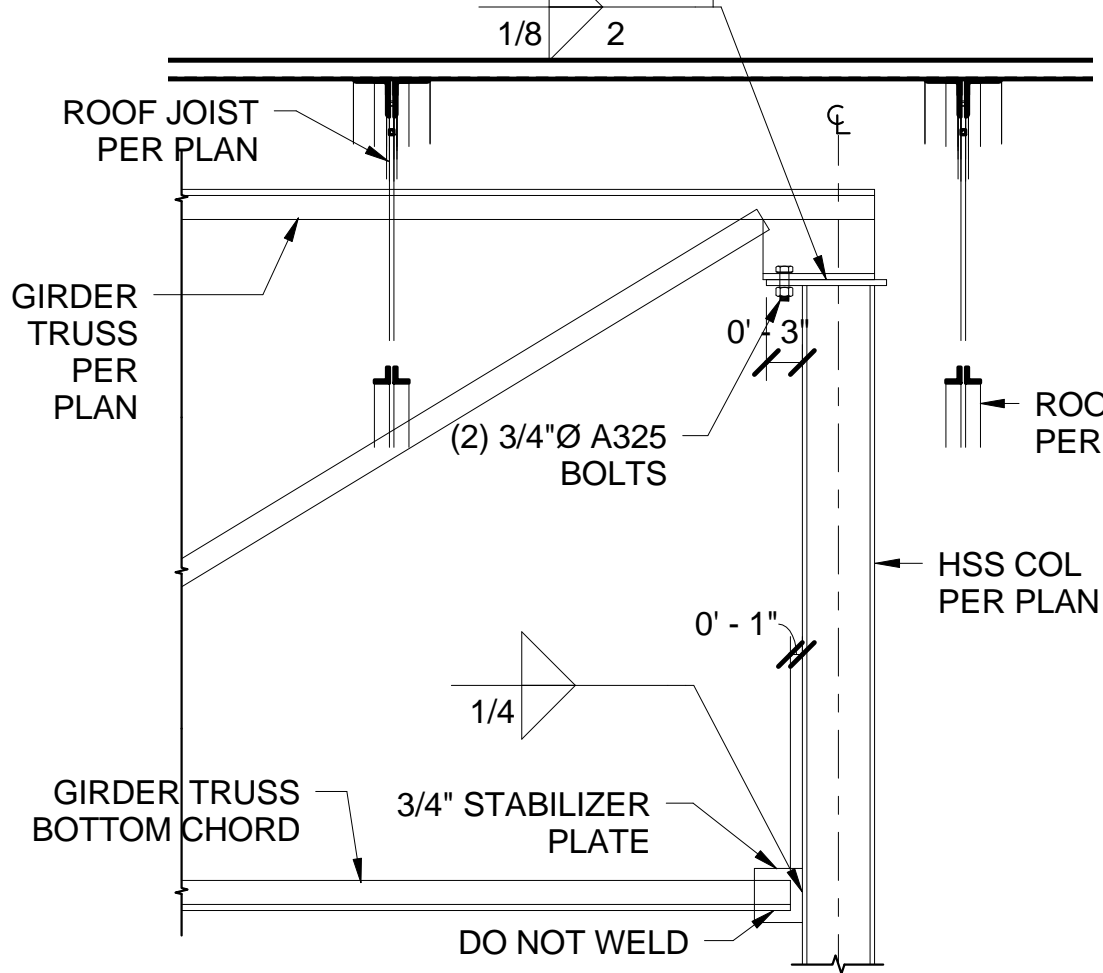
111 SANTA ROSA AVENUE, #300
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 TEL 707.525.5600
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PROJECT NAME
**Butte Regional Transit
 Operations Center**

PROJECT ADDRESS
**326 HUSS LANE
 CHICO, CA 95928**

① JOIST TO GIRDER CONNECTION
 NEW DETAIL 11/S6.1
 3/4" = 1'-0"



TLCD PROJECT NO:
11054

DATE:
08/07/14

BY:
KL

DESCRIPTION:
**NEW GIRDER TRUSS
 DETAILS
 SHEET S6.1**



DRAWING NO:

② GIRDER TRUSS TO COLUMN
 CONNECTION - NEW DETAIL 13/S6.1
 3/4" = 1'-0"

SA 2.1_3

AD



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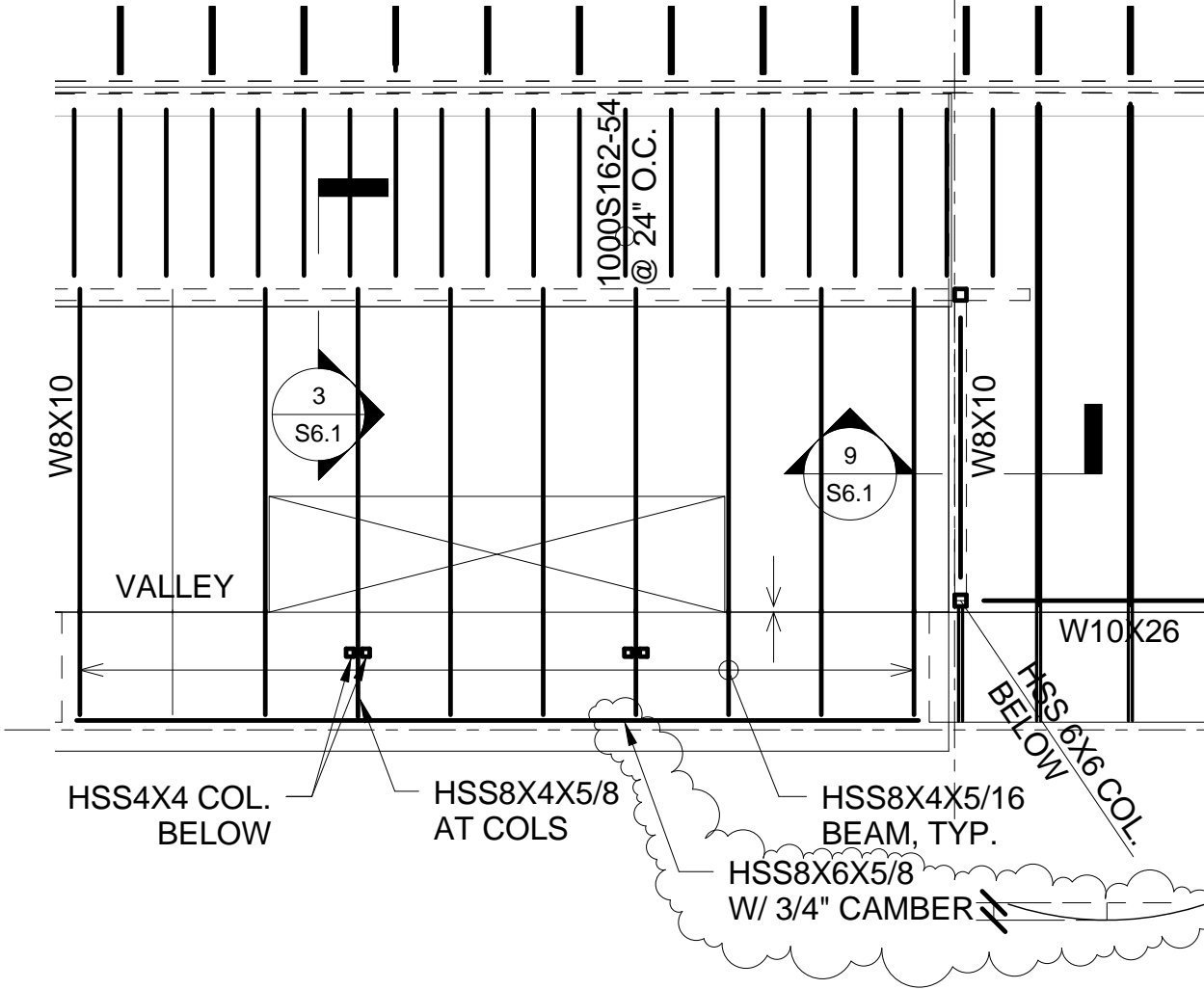
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PROJECT NAME

Butte Regional Transit
Operations Center

PROJECT ADDRESS

326 HUSS LANE
CHICO, CA 95928



A4

TLCD PROJECT NO:
11054

DATE:
08/07/14

BY:
KL

DESCRIPTION:
CAMBER SPECIFIED AT
ENTRY CANOPY BEAM
SHEET S2.2

1

PARTIAL PLAN - ADMINISTRATION /
OPERATIONS ROOF

1/8" = 1'-0"



DRAWING NO:

SA 3.0_3



TLCD
ARCHITECTURE

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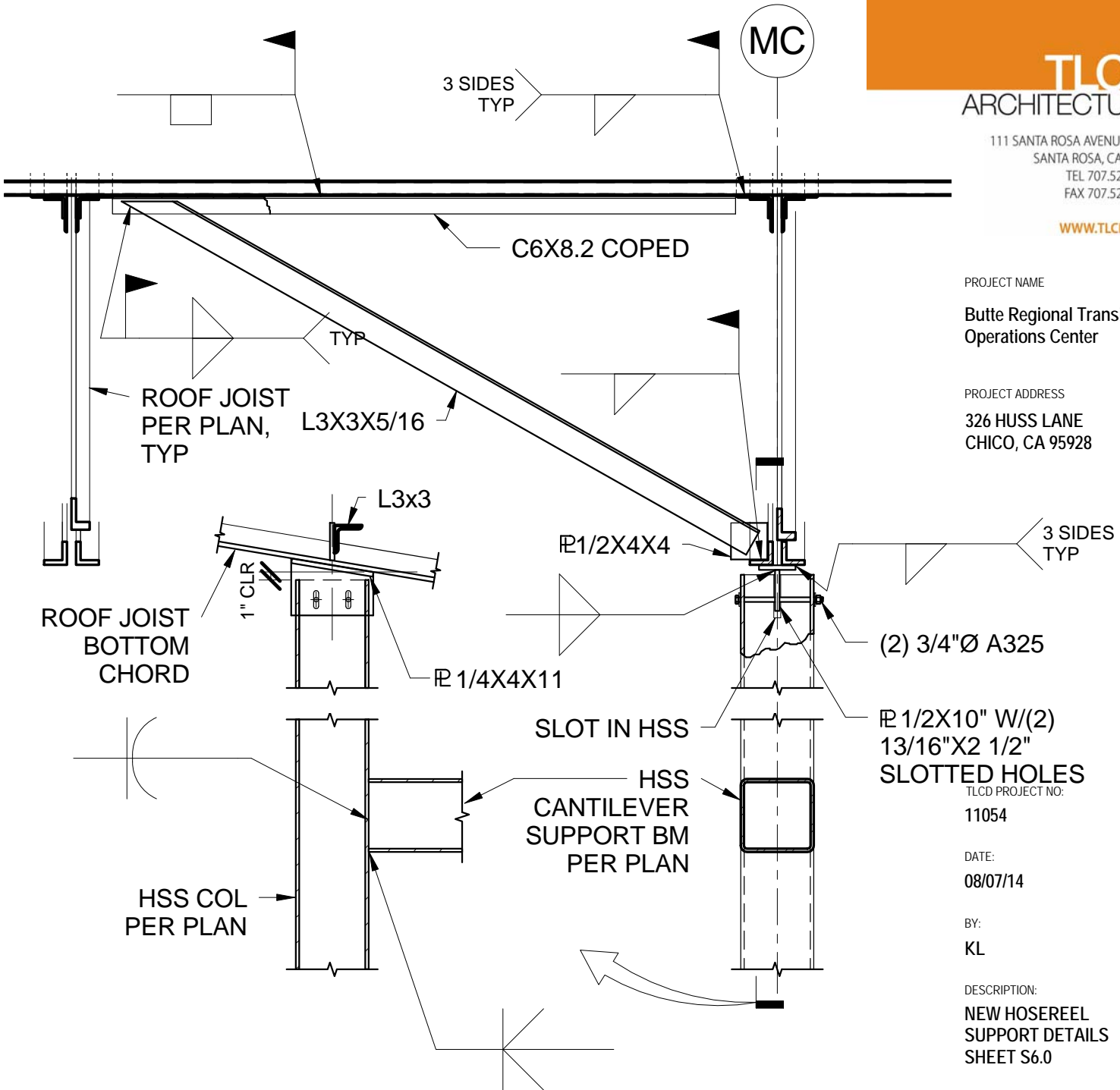
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Operations Center**

PROJECT ADDRESS

**326 HUSS LANE
CHICO, CA 95928**



HOSEREEL COLUMN CONNECTIONS

-NEW DETAIL 16/S6.0

①
3/4" = 1'-0"



DRAWING NO:

SA 4.0_3

PROJECT NAME

**Butte Regional Transit
Operations Center**

PROJECT ADDRESS

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TLCD PROJECT NO:

11054.03

DATE:

08/06/14

BY:

JPD

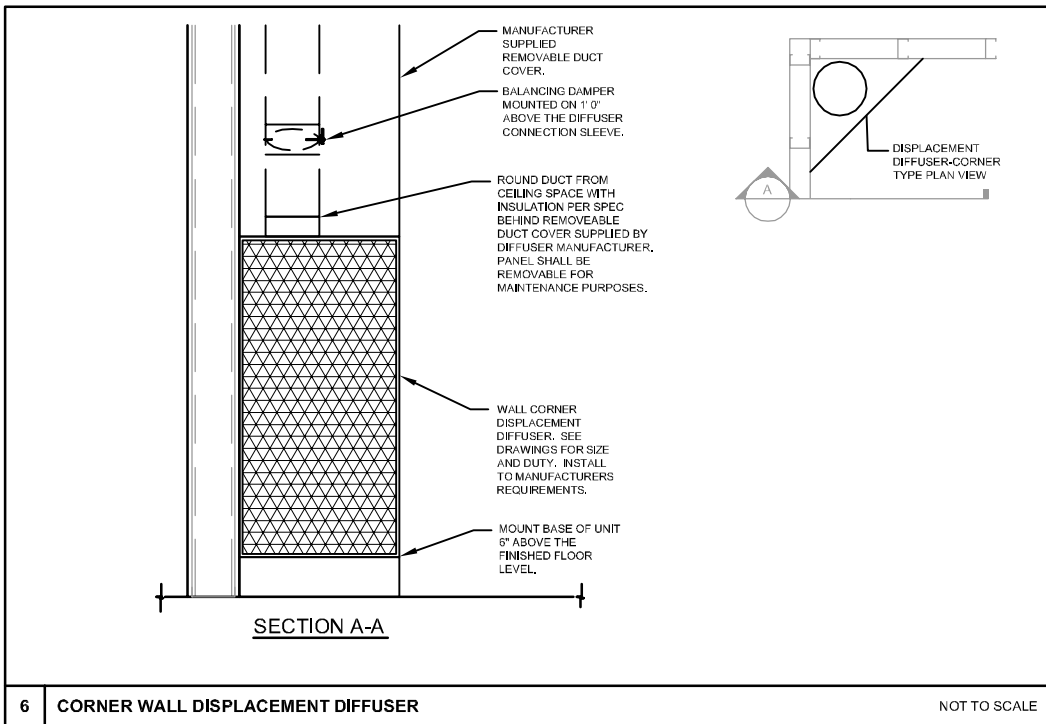
DESCRIPTION:

**DISPLACEMENT
DIFFUSER DETAILS 6&7
M5.2**

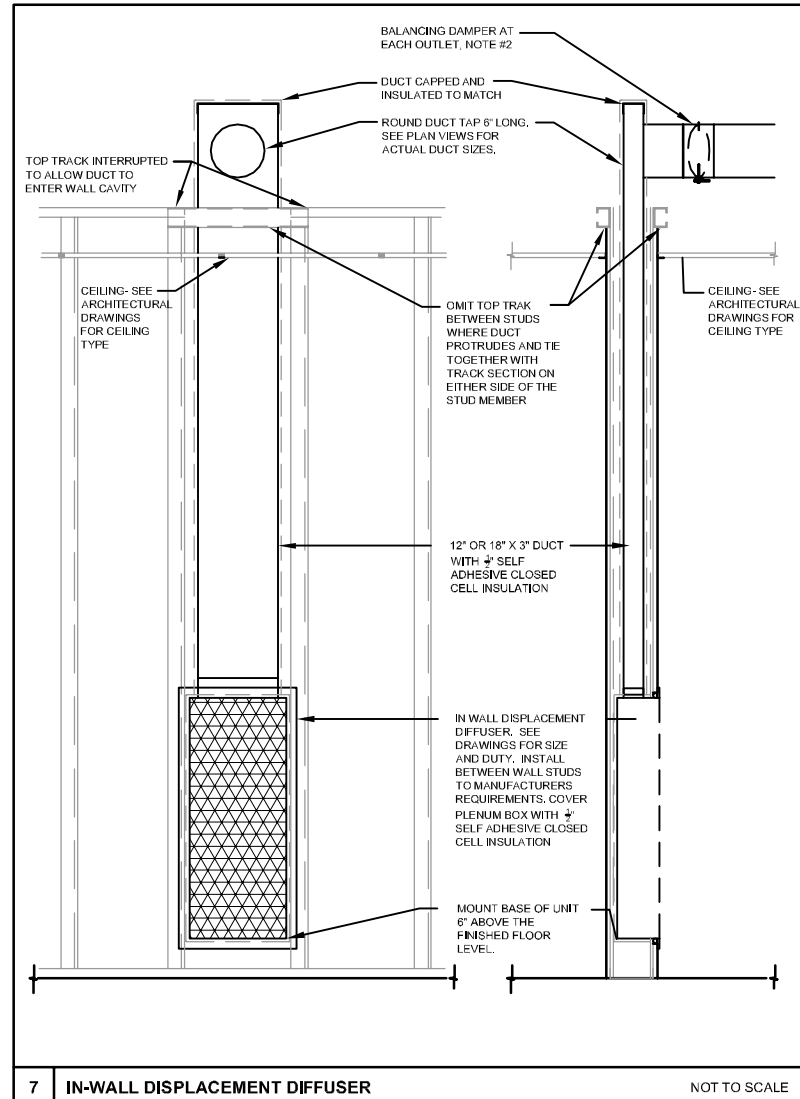


John Blat

MA 1.0_3



6 CORNER WALL DISPLACEMENT DIFFUSER NOT TO SCALE



7 IN-WALL DISPLACEMENT DIFFUSER NOT TO SCALE

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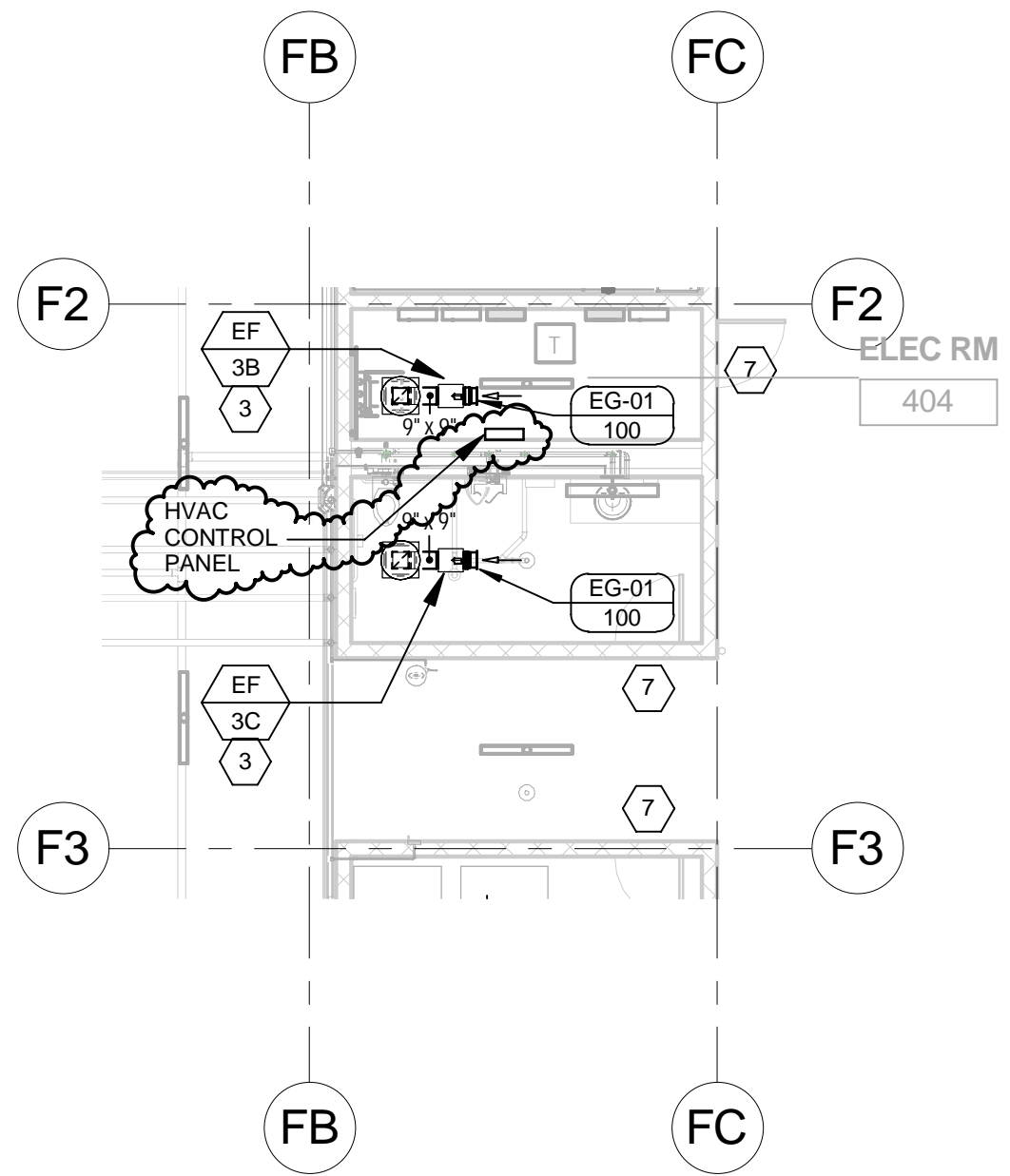
DATE:
08/06/14

BY:
JPD

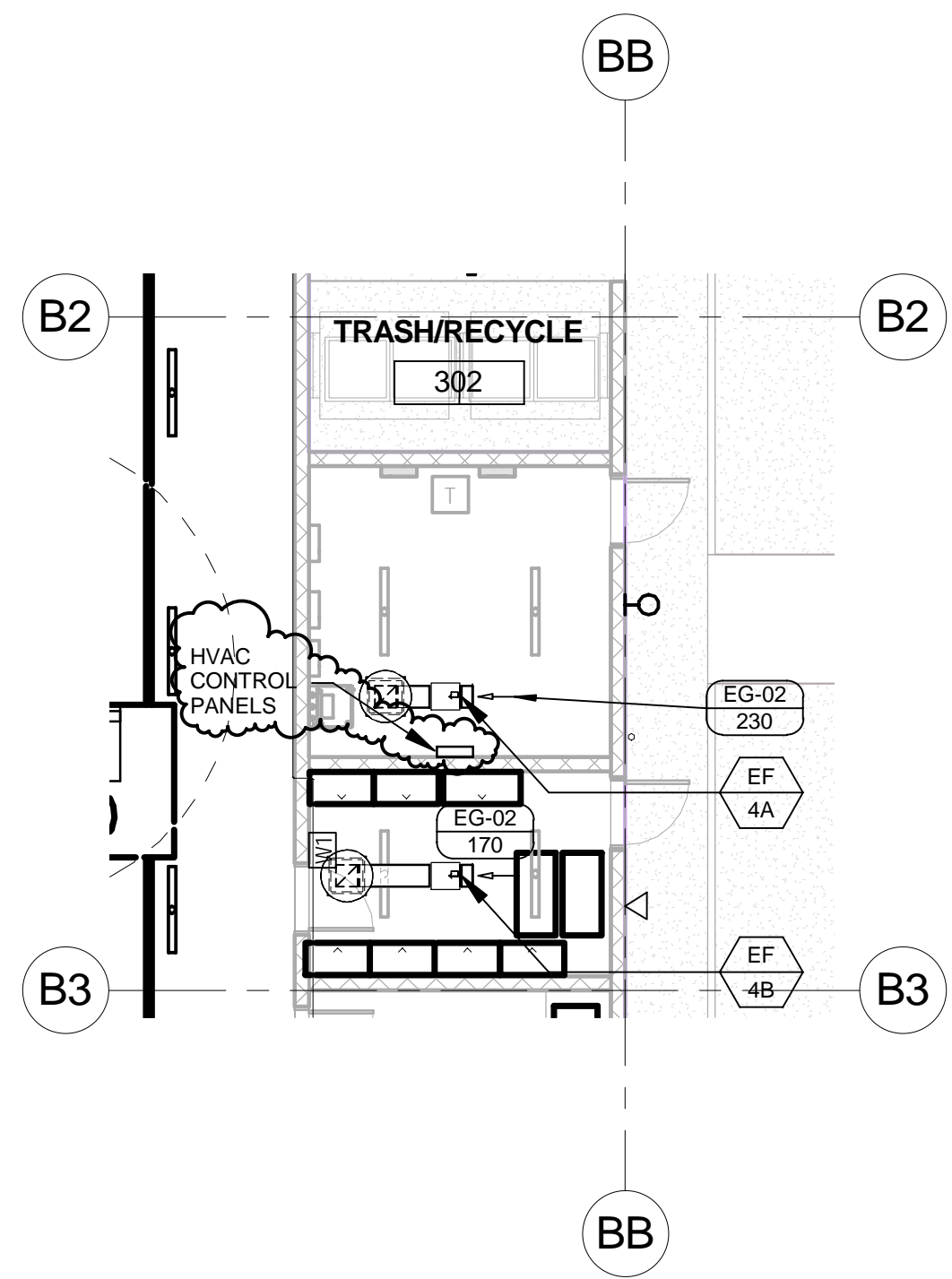
DESCRIPTION:
FUELING AND BUS
WASH HVAC CONTROL
PANEL NAME CHANGE



Daniel Boyd Reiter
MA2.0_3



1 FUELING STATION HVAC PLAN
1/8" = 1'-0"



2 BUS WASH HVAC PLAN
1/8" = 1'-0"

MA3.0_3 AIR TERMINAL SCHEDULE

SYSTEM TYPE	MARK	MANUFACTURER	MODEL	FACE SIZE	NECK SIZE	DESCRIPTION	MATERIAL	THROW	NOISE CRITERIA	PRESSURE DROP	COLOR	Accessories
Supply Air												
Supply Air	SD-01	Titus	300RL	6 x 4	6"x4"	Adjustable Supply Grille with Double Deflection	Steel - Coated	12'	15	0.10 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Supply Air	SD-02	Titus	300RL	18 x 12	18"x12"	Adjustable Supply Grille with Double Deflection	Steel - Coated	18'	20	0.10 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Supply Air	SD-03	Titus	300RL	20 x 20	20"x20"	Adjustable Supply Grille with Double Deflection	Steel - Coated	32'	26	0.10 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Supply Air	SDD-01	Price	DF1C	24 x 36	8"ø	Rectangular 1-Way Corner Displacement Diffusers	Steel - Coated	N/A	15	0.04 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	VCD FITTED BEHIND DUCT COVER 6FT AFFL
Supply Air	SDD-02	Price	DF1C	24 x 48	8"ø	Rectangular 1-Way Corner Displacement Diffusers	Steel - Coated	N/A	15	0.06 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	VCD FITTED BEHIND DUCT COVER 6FT AFFL
Supply Air	SDD-03	Price	DF1C	30 x 36	10"ø	Rectangular 1-Way Corner Displacement Diffusers	Steel - Coated	N/A	15	0.03 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	VCD FITTED BEHIND DUCT COVER 6FT AFFL
Supply Air	SDD-04	Price	DF1C	30 x 48	10"ø	Rectangular 1-Way Corner Displacement Diffusers	Steel - Coated	N/A	15	0.05 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	VCD FITTED BEHIND DUCT COVER 6FT AFFL
Supply Air	SDD-05	Price	DF1C	30 x 60	10"ø	Rectangular 1-Way Corner Displacement Diffusers	Steel - Coated	N/A	15	0.06 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	VCD FITTED BEHIND DUCT COVER 6FT AFFL
Supply Air	SDD-06	Price	DF1W	15 x 24	12"x3"	Rectangular 1-Way In - Wall Displacement Diffusers	Steel - Coated	N/A	15	0.01 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	FLUSH MOUNT WITH WALL 6" AFFL
Supply Air	SDD-07	Price	DF1W	15 x 30	12"x3"	Rectangular 1-Way In - Wall Displacement Diffusers	Steel - Coated	N/A	15	0.02 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	FLUSH MOUNT WITH WALL 6" AFFL
Supply Air	SDD-08	Price	DF1W	15 x 36	12"x3"	Rectangular 1-Way In - Wall Displacement Diffusers	Steel - Coated	N/A	15	0.02 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	FLUSH MOUNT WITH WALL 6" AFFL
Supply Air	SDD-09	Price	DF1W	15 x 48	12"x3"	Rectangular 1-Way In - Wall Displacement Diffusers	Steel - Coated	N/A	15	0.04 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	FLUSH MOUNT WITH WALL 6" AFFL
Supply Air	SDD-10	Price	DF1W	23 x 48	18"x3"	Rectangular 1-Way In - Wall Displacement Diffusers	Steel - Coated	N/A	22	0.07 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	FLUSH MOUNT WITH WALL 6" AFFL
Return Air												
Return Air	RD-01	Price	PDDR	12 x 12	6"ø	Perforated Diffusers Ducted Return	Steel - Coated	N/A	15	0.01 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	RD-02	Price	PDDR	16 x 16	8"ø	Perforated Diffusers Ducted Return	Steel - Coated	N/A	15	0.05 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	RD-03	Price	PDDR	24 x 24	8"ø	Perforated Diffusers Ducted Return	Steel - Coated	N/A	15	0.09 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	RD-04	Price	PDDR	24 x 24	10"ø	Perforated Diffusers Ducted Return	Steel - Coated	N/A	15	0.09 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	RD-05	Price	PDDR	24 x 24	12"ø	Perforated Diffusers Ducted Return	Steel - Coated	N/A	15	0.15 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	RG-01	Titus	350RL	44 x 6	44"x6"	Return Grille with 35 Degree Deflection	Steel - Coated	N/A	14	0.08 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	RG-02	Titus	350RL	30 x 24	30"x24"	Return Grille with 35 Degree Deflection	Steel - Coated	N/A	31	0.10 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	TG-01	Titus	350RL	44 x 6	44"x6"	Return Grille with 35 Degree Deflection	Steel - Coated	N/A	14	0.08 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Return Air	TG-02	Titus	300RL	18 x 6	18"x6"	Return Grille with 35 Degree Deflection	Steel - Coated	N/A	10	0.02 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	
Return Air	TG-03	Titus	350RL	24 x 18	24"x18"	Return Grille with 35 Degree Deflection	Steel - Coated	N/A	14	0.02 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE



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TLCD PROJECT NO:
11054.03

DATE:
08/06/14

BY:
JPD

DESCRIPTION:
**AIR TERMINAL COLOR
FIELD ADDED M6.3**



Daniel Boyd Reiter
MA3.0_3

MA4.0_3 AIR TERMINAL SCHEDULE

SYSTEM TYPE	MARK	MANUFACTURER	MODEL	FACE SIZE	NECK SIZE	DESCRIPTION	MATERIAL	THROW	NOISE CRITERIA	PRESSURE DROP	COLOR	Accessories
Exhaust Air												
Exhaust Air	EAL-2A	Ruskin		12 x 12	12"x12"	Weather Resistant Louver	Steel - Coated	N/A		0.18 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	
Exhaust Air	EAL-2B	Ruskin		8 x 8	8"x8"	Weather Resistant Louver	Steel - Coated	N/A		0.18 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	
Exhaust Air	EAL-2C	Ruskin		12 x 12	12"x12"	Weather Resistant Louver	Steel - Coated	N/A		0.18 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	
Exhaust Air	ED-01	Price	PDDR	12 x 12	6"ø	Perforated Diffusers Ducted Exhaust	Steel - Coated	N/A	15	0.01 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	ED-01A	Price	APDDR	12 x 12	6"ø	Perforated Diffusers Ducted Exhaust	Aluminum	N/A	15	0.01 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	ED-02	Price	PDDR	16 x 16	8"ø	Perforated Diffusers Ducted Exhaust	Steel - Coated	N/A	15	0.09 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	ED-02A	Price	APDDR	16 x 16	8"ø	Perforated Diffusers Ducted Exhaust	Aluminum	N/A	15	0.05 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	ED-03	Price	PDDR	24 x 24	6"ø	Perforated Diffusers Ducted Exhaust	Steel - Coated	N/A	15	0.09 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	ED-04	Price	PDDR	24 x 24	8"ø	Perforated Diffusers Ducted Exhaust	Steel - Coated	N/A	15	0.09 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	ED-05	Price	PDDR	24 x 24	12"ø	Perforated Diffusers Ducted Exhaust	Steel - Coated	N/A	15	0.15 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	EG-01	Titus	350RL	12 x 12	12"x12"	Exhaust Grille with 35 Degree Deflection	Steel - Coated	N/A	10	0.08 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	EG-02	Titus	350RL	12 x 12	12"x12"	Exhaust Grille with 35 Degree Deflection	Steel - Coated	N/A	10	0.08 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE
Exhaust Air	EG-03	Titus	350RL	18 x 12	18"x12"	Exhaust Grille with 35 Degree Deflection	Steel - Coated	N/A	27	0.10 in-wg	COLOR TO BE COORDINATED WITH ARCHITECT	w/VCD ADJUSTABLE THROUGH FACE



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GHD Inc.

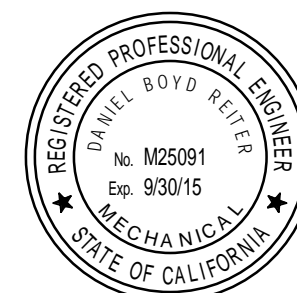
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TLCD PROJECT NO:
11054.03

DATE:
08/06/14

BY:
JPD

DESCRIPTION:
**AIR TERMINAL COLOR
FIELD ADDED M6.3**



Daniel Boyd Reiter
MA4.0_3

PROJECT NAME

**Butte Regional Transit
Operations Center**

PROJECT ADDRESS

**326 HUSS DRIVE
CHICO, CA 95928**

TLCD PROJECT NO:

11054.03

DATE:

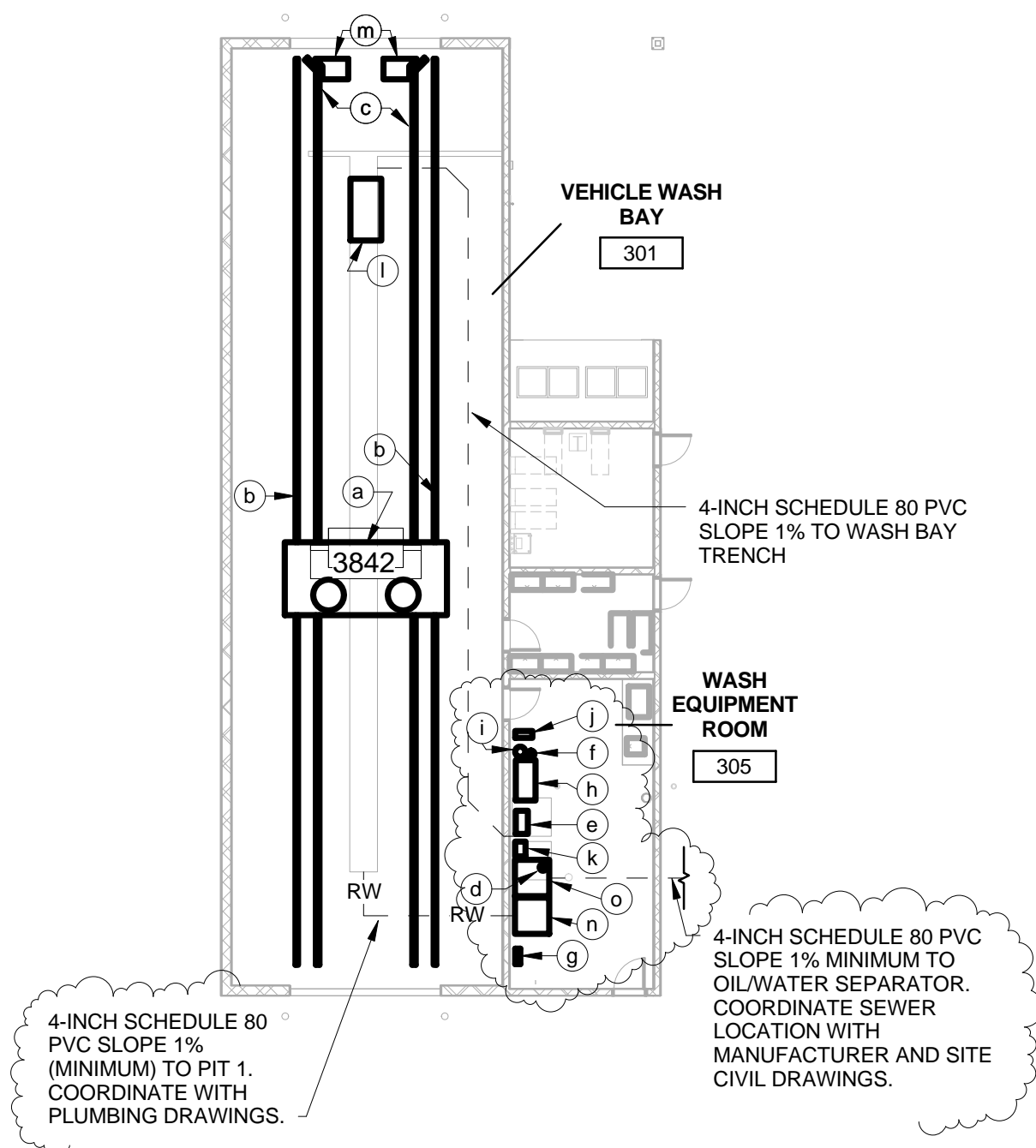
08/06/14

BY:

JW

DESCRIPTION:

**VEHICLE WASH
EQUIPMENT**



ADDENDUM #3 - WASH BUILDING - EQUIPMENT LAYOUT PLAN

1

1/16" = 1'-0"

DRAWING NO:

QA1.0_3