

Humboldt County Administrative Office/Purchasing Agent
825 Fifth Street Eureka CA 95501 (707) 445-7266

SPECIAL PROVISIONS

NOTICE TO CONTRACTORS,
PROPOSAL AND CONTRACT

FOR

COUNTY OF HUMBOLDT ADA MODIFICATIONS CLAM BEACH PARK

**1100 Clam Beach Road
McKinleyville, California 95519**

COUNTY NUMBER: 2017-204

Prepared by:

The KPA Group
On behalf of
The Humboldt County Administration Office/Purchasing Agent

Issued:

June 13, 2018

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SECTION 00 11 16 – INVITATION TO BIDDERS

NOTICE IS HEREBY GIVEN that informal sealed bids are invited by the County Administration Office/Purchasing Agent of Humboldt County, a public body, corporate and politic, for the performance of all the work and the furnishing of all the labor, materials, supplies, tools, and equipment for the following project:

CONSTRUCTION OF
ADA MODIFICATIONS
CLAM BEACH PARK
COUNTY OF HUMBOLDT
COUNTY NUMBER: 2017-204

Pursuant to the Contract Documents on file with the County Administration Office of Humboldt County.

A pre-bid meeting is scheduled for December 11, 2018 at 2:00 p.m. Pacific Time, at the Clam Beach Park, located at 1100 Clam Beach Road, McKinleyville, California 95519 Contract Documents, Plans and Specifications will be available.

Each Bid must be contained in a sealed envelope addressed as set forth in said Bid Documents, and filed at the office of the Clerk of the Board of Supervisors of Humboldt County, 825 5th Street, Room 111, Eureka, California at or before January 8, 2019 at 2:00 p.m. Pacific Daylight Time. All Bids will be publicly opened and summary amounts read aloud. The officer whose duty it is to open the Bids will decide when the specified time for the opening of Bids has arrived.

Plans and Specifications and other Contract Document forms will be available for examination at the Humboldt County Administration Office, 825 5th St, Eureka, CA 95501, Phone: (707) 445-7266. Plans will be available for viewing at area plan centers and on the County's website at: <http://humboldtgov.org/Bids.aspx>.

Each Bid shall be submitted on the forms furnished by the County within the Bid Documents. All forms must be completed.

Each Bid shall be accompanied by one of the following forms of Bidder's Security to with a certified check or a cashier's check payable to the County, U.S. Government Bonds, or a Bid Bond executed by an admitted insurer authorized to issue surety bonds in the State of California (in the form set forth in said Contract Documents). The Bidder's security shall be in the amount equal to at least ten percent (10%) of the Bid.

The County reserves the right to reject any or all Bids or to waive any informalities in any Bid. No Bid shall be withdrawn for a period of one hundred twenty days (120) calendar days subsequent to the opening of Bids without the consent of the County.

All Bidders will be required to certify that they are eligible to submit a Bid on this project and that they are not listed either (1) on the Controller General's List of Ineligible Bidders/Contractors, or (2) on the debarred list of the Labor Commissioner of the State of California.

The successful Bidder shall possess a valid Contractor's license in good standing, with a classification of "B" (General Building Contractor) at the time the contract is awarded.

The successful Bidder will be required to comply with all equal employment opportunity laws and regulations both at the time of award and throughout the duration of the Project.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of

the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

The Contractor, and each subcontractor participating in the Project, shall be required to pay the prevailing wages as established by the Department of Industrial Relations, Division of Labor Statistics and Research, P.O. Box 420603, San Francisco, CA, Phone: (415) 703-4780.

The attention of Bidders is directed to the fact that the work proposed herein to be done will be financed in whole or in part with State and County funds, and therefore all of the applicable State and County statutes, rulings and regulations will apply to such work.

In the performance of this contract, the Contractor will not discriminate against any employee or applicant for employment in accordance with the provisions of the California Fair Employment and Housing Act. (Government Code section 12900et seq)

In accordance with the provisions of Section 22300 of the Public contractors code, the Contractor may elect to receive 100% of payments due under the contract from time to time, without retention of any portion of the payment, by entering into an Escrow Agreement for Security Deposits In Lieu of Retention.

SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS

Informal sealed Bids will be received by the Clerk of the Board of Supervisors of the County of Humboldt, Humboldt County Courthouse, 825 5th Street, Room 111, Eureka, California 95501, until 2:00 p.m. Pacific Time on January 8, 2019 at which time they will be publicly opened by the Clerk of the Board of the County of Humboldt at a public meeting in the Office of the Clerk of the Board, for performance of the following work:

CONSTRUCTION OF
ADA MODIFICATIONS
CLAM BEACH PARK
COUNTY OF HUMBOLDT
COUNTY NUMBER: 2017-204

A. SECURING DOCUMENTS

Plans and Specifications and other Contract Document forms will be available for examination at the Humboldt County Administration Office, 825 5th St, Room 112 Eureka, CA 95501, Phone: (707) 445-7266. Plans will be available for viewing at area plan centers and on the County's website at: <http://humboldtgov.org/Bids.aspx>.

B. BASIC INFORMATION

These instructions pertain to the work (as hereinafter defined) to be performed under Agreement with the County of Humboldt (hereinafter sometimes called "Owner"):

<u>Owner</u>	<u>Humboldt County Board of Supervisors</u> 825 Fifth Street Eureka, CA 95501
Owner's Lead Agency:	County Administration Office County of Humboldt 825 5th St Eureka, California 95501 Phone: (707) 445-7266 Fax: 707-445-7299
Project Location:	1100 Clam Beach Road McKinleyville, California 95519
Architect:	The KPA Group, Inc. 6700 Koll Center Parkway, Suite 125 Pleasanton, CA 94566 Phone: (925).223-8217

C. RECEIPT OF BIDS

Each bidder should mark its bid as "Bid for the Construction of ADA Modification Clam Beach Park." Bids shall be deemed to include the written responses to the bidder to any questions or requests for information of County made as part of bid evaluation process after submission of bid. Telephone and telefax proposals will not be accepted. County will reject all bids received after the specified time and will return such bids to bidders unopened.

D. DETERMINATION OF APPARENT LOW BIDDER

Apparent low bid will be based on the amount of the bids listed of the Bid Form with the following criteria:
a. The apparent low bid will be based on the Base Bid.

E. REQUIRED BID FORM

All bidders must submit bids on the Section 00 41 00, the "Bid Form." County will reject as non-responsive any bid not submitted on the required form. Bids must be full and complete. Bidders must complete all bid items and supply all information required by the bidding documents and specifications. County reserves the right in its sole discretion to reject any bid as non-responsive as a result of any error or omission in the bid. Bidders may not modify the Bid Form or qualify their bids. Bidders must submit clearly and distinctly written bids. Bidders must clearly make any changes in their bids by crossing out original entries, entering new entries and initialing new entries. County reserves the right to reject any bid not clearly written. The Bid Form shall be signed by the bidder's legal representative as indicated on the Bid Form. If the bid is made by an individual, it shall be signed and his/her full name and his/her address shall be given; if it is made by a partnership, it shall be signed with the co-partnership name by a member of the firm, who shall sign his/her own name and provide the name and address of each member; and if it is by a corporation, the bid shall show the name of the corporation and the state under the laws of which the corporation was chartered. When the bid is signed by the duly authorized officer or officers of the corporation, it shall be attested by the corporate seal, and the names and titles of the principal officers of the corporation shall be given. When a bid is signed by an agent, other than the officer or officers of a corporation authorized to sign contracts on its behalf or a member of a partnership, a "Power of Attorney" must be filed with the County prior to opening bids or shall be submitted with the bid; otherwise, the bid may be rejected as irregular and unauthorized. Bids submitted as joint ventures must so state and be signed by each venturer.

F. CONTENTS OF BID ENVELOPE

The bid envelope shall contain all of the following:

- Section 00 41 00 - Bid Form
- Section 00 43 13 - Bid Security Form (Bid Bond)
- Section 00 43 36 - Subcontractor List
- Section 00 45 19 - Non-collusion Affidavit
- Section 00 45 26 - Workers' Compensation Certification
- Section 00 45 46 – Evidence of Responsibility/Non-responsibility
- Section 00 45 47 - Public Contract Code 10232 Statement
- Section 00 45 48 - Debarment and Suspension Certification

G. BID OPENING

The County will stamp bids with the date and time of receipt. Bids will be opened and read publicly at the time and place indicated in Section 1 above. Bidders or their authorized agents may be present. After opening of bids, the County will review all bids for accuracy and reserves the right to correct obvious errors. Upon completion of review, the bids will be ranked by the bid amount and the apparent low bidder will be determined and notified.

H. FAILURE TO EXECUTE AND DELIVER DOCUMENTS

IF the bidder to whom the Contract is awarded shall fail or neglect , with ten (10) calendar days from the date of the receipt of a notice of award, to execute and deliver all required Contract Documents and file all required bonds, insurance certificates and other documents, County may, in its sole discretion, deposit bidder's surety bond, cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for bidder's failure to enter into the Contract Documents. Bidder agrees that calculating the damages County may suffer as a result of bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of bidder's required bid security shall be the agreed and presumed amount of County's damages.

I. BIDDER'S BOND, PERFORMANCE BOND AND PAYMENT BOND

Bid security must be submitted with the bid. The successful bidder, prior to execution of the Contract, must submit a Performance Bond in the full amount of the Contract. The successful bidder, prior to execution of the Contract, must submit a Payment Bond in the full amount of the Contract.

J. INSURANCE

It is highly recommended that bidders confer with their respective insurance carriers or brokers to determine in advance of bid submission the availability of the insurance certificates and endorsements required. A bidder, who executes the Contract and thereafter fails to comply strictly with the insurance requirements, will be deemed to be in breach of Contract.

K. RESERVATION OF RIGHTS

County specifically reserves the right, in its sole discretion, to reject any or all bids, or re-bid, or to waive minor irregularities from bid requirements. If no bids are received, the County reserves the right to identify interested contractor(s) and negotiate directly without re-bidding.

L. SECURITIES IN LIEU OF RETENTION

Public Contract Code Section 22300 gives the Contractor for option to deposit securities with an escrow agent as a substitute for retention earnings to be withheld by the County.

M. PRE-BID MEETING

The Pre-Bid Meeting is scheduled for December 11, 2018 at 2:00 p.m. Pacific Time, at the Humboldt County Clam Beach Park located at 1100 Clam Beach Road, McKinleyville, California 95519. The Pre-Bid meeting is not mandatory. See Paragraph "R" below.

N. WITHDRAWAL OF BIDS

Any bidder may withdraw his/her bid, either personally or by written request, any time prior to the scheduled closing time for receipt of bids.

O. QUESTIONS AND CLARIFICATIONS

In order to avoid any misinterpretation or misrepresentation between the Bidder, the Architect and the County as regards the plans and specifications for the Project, neither the County nor Architect will respond to any verbal or telephone inquiries, however Bidders may submit written inquiries for clarifications or questions by email, mail or fax to the attention of County Administration Office, 825 5th Street, Eureka, CA, 95501, FAX 707-445-7299, email: CDillingham@co.humboldt.ca.us. Any responses to written Bidder inquiries will be at the full discretion of the County, and any responses will be in writing in the form of an Addendum to these Contract Documents, which will be sent to all Bidders.

P. ADDENDA OR BULLETINS

Any Addenda or Bulletins issued during the time of bidding or forming a part of the Documents loaned to the Bidder, for the preparation of his Bid, shall be covered in the Bid, and shall be made a part of the Contract.

Q. BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm, or corporation shall be allowed to make or file, or be interested in more than one bid for the same work, unless alternate bids are called for. A person, firm, or corporation, who has submitted a sub proposal to a bidder, is not thereby disqualified from submitting a sub proposal or quoting prices to the other bidders.

R. VISITING THE SITE & KNOWLEDGE OF PLANS & SPECIFICATIONS

Before submitting a bid for the work, it is recommended that the Bidder inspect the sites and inform himself as to the conditions under which he will be obligated to execute the work. A Pre-Bid meeting and walk-through are scheduled for this project. See Paragraph "M" above.

No allowance will be subsequently made for failure to inspect, and the Bidder will be solely responsible for the consequences of his negligence or lack of diligence. Before submitting any proposal, each Bidder shall examine the General Conditions, Plans, Specifications, as well as these Instructions to Bidders, and the forms appended hereto and made a part hereof.

END OF SECTION 00 21 13

SECTION 00 22 13 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. PROJECT DESCRIPTION

The ADA Modifications McKinleyville Clam Beach Park includes: replacing the existing toilet rooms at Camper Parking Lot and North Day Use Parking Lot with accessible toilet rooms; providing two (2) accessible parking stalls at Camper Parking Lot; providing one (1) accessible stall at North Day Use Parking Lot; providing accessible parking stall adjacent to Hammond trail and accessible path of travel to trail.

- A. Project Location:
Clam Beach Park
1100 Clam Beach Road
McKinleyville, California 95519

2. TIME FOR COMPLETION

The Contractor shall complete the entire project within 60 calendar days from the County's issuance of the "Notice to Proceed".

3. SUBSTITUTIONS

- A. All pre-bid substitution requests for "equal" products or systems shall be submitted to the Owners Representative 10 days prior to the contract bid opening date. All pre-bid substitution requests shall be submitted on the PRE-BID SUBSTITUTION REQUEST FORM - SECTION 00 43 25, see Section 00 72 00, GC 27, B.
- B. Product substitution requests for products that are "equal" to specified products but not produced by an "Acceptable Manufacturer", per each technical specification shall be submitted within 35 days after the contract is awarded. All product substitution requests shall be submitted on the PRODUCT SUBSTITUTION REQUEST FORM; see Section 01 60 00, "Product Requirements."

4. ADDENDA

No addenda shall be issued within 48 hours of the designated Bid opening time. Any addenda resulting in material changes, addition, or deletion shall be issued at least 72 hours before the designated Bid opening time; otherwise the Bid time shall be extended by not less than 72 hours.

5. COMMUNICATIONS

- A. All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.
- B. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Contract or at such other office as Contractor may from time to time designate in writing to the County of Humboldt or deposited in the United States mail in a sealed postage-prepaid envelope, or if delivered with charges prepaid to any delivery company for transmission, in each case addressed to such office.

- C. All papers required to be delivered to the County shall, unless otherwise specified in writing to the Contractor, be delivered to the County and any notice to or demand upon the County of Humboldt shall be mailed in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any delivery company for transmission to the County of Humboldt at such address, or to such other representatives of the County of Humboldt or to such other address as the County may subsequently specify in writing to the Contractor for such purpose.
- D. Any such notice shall be deemed to have been given as of the time of actual delivery; or, in the case of mailing, when the same should have been received in due course of post; or, in case of any delivery company, at the time of actual receipt.

6. MINIMUM RATES OF PAY

A schedule of the minimum rates of pay applicable to this Contract is on file at the principal office of Humboldt County Administration Office, 825 5th Street, Eureka, California, and shall be made available to any interested party on request.

7. JOB OFFICES

- A. The Contractor must designate an area to serve the posting requirements of this contract. A board (4' x 8') must be in plain view in a well-trafficked area on site. On this board will be posted EEO and wage information in compliance with the General Conditions of this contract.
- B. The Contractor and their subcontractors may maintain such office and storage facilities on the site as may be necessary for the proper conduct of the work. These shall be located so as to cause no interference with any work to be performed on the site. The Owner's Representative shall be consulted with regard to locations.
- C. Upon completion of the project, or as directed by the County of Humboldt, Owner's Representative, the Contractor shall remove all such temporary structures and facilities from the site, same to become their property, and leave the premises in the condition required by the County.

8. PERFORMANCE AND PAYMENT BONDS

The company providing the required performance and payment bonds must be listed in U.S. Treasury Circular No. 570 as a surety approved to issue bonds securing Government contracts in the State of California.

9. NOISE ABATEMENT PROVISIONS

- A. External Noise:
 - 1. Locate stationary noise sources away from noise sensitive land uses and buildings to the extent possible. Obtain approval from the Owner's Representative before locating stationary noise sources.
 - 2. Use truck haul routes through surrounding communities which minimize impacts on noise sensitive land uses. On the site, use routes as directed and approved by Owner's Representative.
- B. Vibration Control: Provide ten (10) working days notice before conducting construction activities that might cause vibration, such as, but not limited to, drilling, excavation, compaction, pile driving, etc.
- C. Noise Levels: Do not exceed an average continuous sound level of 72 dBA, measured at the perimeter of the work area, and do not exceed an impact noise level of 100 dBA measured at the

perimeter of the work area, and only two impact occurrences between 72 dBA and 100 dBA are permitted in a one-hour period.

END OF SECTION 00 22 13

SECTION 00 41 00 - BID FORM

TO
THE COUNTY OF HUMBOLDT

CONSTRUCTION OF ADA MODIFICATIONS CLAM BEACH PARK

COUNTY NUMBER: 2017-204

Name of Bidder:

(Note: Name must be exactly as it appears on Contractor's License.)

Business Address:

Telephone Number:

Residence Address:

The work to be done shall be constructed in accordance with the Contract Documents, prepared by the County of Humboldt, Dated <DATE>, 2018, the Agreement annexed hereto and the General Prevailing Wage provisions as specified in the "Invitation To Bidders".

Bids are submitted for the entire work. The amount of "The Bid" for comparison purposes will be the determination of the apparent low bid as specified in Section 00 21 13, "Instructions to Bidders".

The Bidder shall set forth for the Base Bid and each Alternate, if any, in clearly legible figures, a written lump sum price and a numeric lump sum price.

In case of a discrepancy between the two notated prices, the written price shall prevail, unless, however, if the amount set forth in writing is ambiguous, unintelligible or uncertain for any cause, or is omitted, then the amount set forth in the numeric column for the item shall prevail.

If this proposal shall be accepted and the undersigned shall fail to enter into the Contract and to give the two required bonds in the sums to be determined as aforesaid, with surety satisfactory to the County Administration Office, within seven (7) days, not including Sundays and legal Holidays, after the Bidder has received notice from the Department that the contract has been awarded, the County may, at its option, determine that the Bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the County of Humboldt.

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

Receipt and compliance with the following Addenda to the Contract Documents is acknowledged:

1. Addendum No. _____ Dated _____
2. Addendum No. _____ Dated _____
3. Addendum No. _____ Dated _____
4. Addendum No. _____ Dated _____

I, _____, as an agent for _____

_____, declare under penalty of perjury under the laws of the State of California, that the information contained in this Bid is true and correct.

Executed at _____, California, on _____, 2018

The project shall be complete within the time limits specified in Section 00 22 13, "Supplementary Instructions To Bidders." The undersigned is aware the Contract includes provisions for liquidated damages as specified in Section 00 22 13, "Supplementary Instructions To Bidders," if the Project is not completed within the agreed time of completion.

THE UNDERSIGNED, as Bidder, proposes the following:

BASE BID:

To furnish and complete the entire work as shown on the drawings and listed in the specifications, including required contract bonds and insurance, without additions or subtractions on account of specified alternates, for the sum of:

Base Bid (Lump Sum):	
	\$ _____
Total Amount in Words	Total

BID ALTERNATES

None

Proposal Signature Page

Accompanying this proposal is _____
(Insert the words "Cash (\$)", "Cashier's Check", "Certified Check", or "Bidder's Bond", as the case may be)
in the amount of at least ten percent (10%) of the total Bid Price submitted. The names of all persons interested in the foregoing proposal as Principals are as follows:

(NOTE: If a Bidder or other interested person is a Corporation, state the legal name of the corporation, also names of the president, secretary, treasurer, and manager thereof; if a Co-partnership, state the true name of the firm, also state the names of all individual co-partners composing the firm; if the Bidder or other interested person is an Individual, state the first and last names in full.)

Licensed in accordance with an Act providing for the registration of Contractors:

License No.: _____ Expiration Date: _____

By my signature on this proposal I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Section 10162, and 10232, are true and correct and that the bidder has complied with the requirements of Section 8102 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this proposal I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and the Title 49 Code of Federal Regulation, Part 29 Debarment and Suspension Certification are true and correct.

Signature of Bidder

Date

If a Bidder is a Corporation or a Co-partnership:

Name of Corporation or Firm Name of Co-partnership

Signatures of officer(s) or partners authorized to sign contracts on behalf of the Corporation or Co-partnership, Corporations require signature by 2 (two) corporate officers:

Name

Title

Name

Title

If Signature is by an agent, other than an officer of a corporation or a member of a partnership, a Power of Attorney must be on file with the Department prior to opening Bids or may be submitted with the Bid; otherwise the Bid will be disregarded as irregular and unauthorized.

Bidder's Business Address: _____

Place of Residence: _____

Date: _____

END OF SECTION 00 41 00

SECTION 00 43 13 - BID SECURITY FORM

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal, and _____, a corporation, organized and existing under and by virtue of the laws of the State of _____ and authorized to do surety business in the State of California, as Surety, are held and firmly bound unto the _____, State of California, as Obligee, in the sum of _____, Dollars (\$ _____), for the payment of which sum well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to the County of Humboldt, State of California, for all work specifically described in the accompanying bid;

NOW, THEREFORE, if the aforesaid Principal is awarded the contract, and within the time and manner required under the specifications, after the prescribed forms are presented to Principal for signature, enters into a written contract in the prescribed form, in accordance with the bid, and files the two bonds, one guaranteeing faithful performance and the other guaranteeing payment for labor and materials as required by law, or if the said Principal shall fully reimburse and save harmless the Obligee from any damage sustained by the Obligee through failure of the Principal to enter into the written contract and to file the required performance and labor and material bonds, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the Court.

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

By: _____

Principal (Seal)

By: _____

Surety (Seal)

NOTE: (1) Signature of those executing for the surety must be properly acknowledged.
(2) This bond must be in an amount equal to as least ten (10%) percent of the amount bid.
(3) Bidders must use this form unless the surety company form is substantially the same.

END OF SECTION 00 43 13

SECTION 00 43 25 - PRE-BID SUBSTITUTION REQUEST FORM

PROJECT: ADA Modifications Clam Beach Park
County Number: 2017-204

DATE: _____

Note to Contractor: All substitution requests for "equal" products or systems shall be submitted to the Owner's Representative, (10) ten days prior to the contract bid date. See specification section 00 22 13 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS, sub-section 4.

We hereby submit for your consideration the following product in lieu of the specified item for the above project.

SECTION: _____ Paragraph: _____

Specified Item: _____

Proposed Substitution: _____

1. Attach completed technical data, including laboratory tests, color and material samples, if applicable
2. Include complete information on changes to Drawings and/or Specifications which proposed substitution will require for its proper installation. (Plan layout changes, electrical hookup locations)
3. Does the substitution affect dimensions shown on Drawings? Yes No
4. Will the undersigned pay for changes to the building design, including detailing costs caused by the requested substitution? Yes No
5. What effect does substitution have on other trades?
6. Differences between proposed substitution and specified item?
7. Cost of proposed substitution in comparison with product, system, or method specified?
8. Availability of maintenance and repair services, and sources of repair or replacement items?
9. Manufacturer's guarantees of the proposed and specified items are:
 Same Different (Explain on attachment)

The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

Submitted By: _____

Signature: _____

Firm: _____

Address: _____

Telephone: _____

FOR USE BY ARCHITECT:

Accepted Accepted as Noted

Not Accepted Received Too Late

By: _____ Date: _____

END OF SECTION 00 43 25

**COUNTY OF HUMBOLDT
ADA MODIFICATIONS CLAM BEACH PARK
COUNTY No.: 2017-204**

SUBCONTRACTOR LIST
Section 00 43 36 - Page 1

SECTION 00 43 36 - SUBCONTRACTOR LIST

LIST OF SUBCONTRACTORS

PROJECT NAME: ADA MODIFICATIONS CLAM BEACH PARK
COUNTY NUMBER: 2017-204

The Bidder shall list all Subcontractors in accordance with Article 18 of the Supplementary General Conditions.

<u>Name of Subcontractor, CA Contractor License Number & DIR Registration Number</u>	<u>Address</u>	<u>Description of Work to be Performed</u>
--	----------------	--

**COUNTY OF HUMBOLDT
ADA MODIFICATIONS CLAM BEACH PARK
COUNTY No.: 2017-204**

SUBCONTRACTOR LIST

Name of Subcontractor,
CA Contractor License
Number & DIR
Registration Number

Address

Description of Work to be Performed

END OF SECTION 00 43 36

SECTION 00 43 93 - BID SUBMITTAL CHECKLIST

The following documents shall be submitted by each Bidder, as part of their complete Bid:

1. Section 00 41 00 - Bid Form
2. Section 00 43 13 - Bid Security Form (Bid Bond)
3. Section 00 43 36 - Subcontractor List
4. Section 00 45 19 - Non-collusion Affidavit
5. Section 00 45 26 - Workers' Compensation Certification
6. Section 00 45 46 – Evidence of Responsibility/Non-responsibility
7. Section 00 45 47 - Public Contract Code 10232 Statement
8. Section 00 45 48 - Debarment and Suspension Certification

END OF SECTION 00 43 93

SECTION 00 45 19 - NONCOLLUSION AFFIDAVIT

TO THE COUNTY OF HUMBOLDT, COUNTY ADMINISTRATIVE OFFICE

Non-Collusion Affidavit

(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the Bidder declares that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid, and they have not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the Bidder has not directly or indirectly, submitted their bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member of agent thereof to effectuate a collusive or sham bid.

Signature of Bidder

Date

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

END OF SECTION 00 45 19

SECTION 00 45 26 – WORKERS' COMPENSATION CERTIFICATE

Labor Code Section 3700.

"Every employer except the State shall secure the payment of compensation in one or more of the foregoing ways:

- (a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.
- (b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to their employees."

I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and that I will comply with such provisions before commencing the performance of the work of this contract.

Signature of Contractor

Date

In accordance with Article 5 [commencing at Section 1860], Chapter 1, Part 7, Division 2, of the Labor Code, the above certificate must be signed and filed with the awarding body prior to commencing any work under this contract.

END OF SECTION 00 45 26

SECTION 00 45 46 – RESPONSIBILITY / NONRESPONSIBILITY

1. DETERMINATION OF BIDDER RESPONSIBILITY

- A. A responsible bidder is a bidder who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity and experience to satisfactorily perform the contract. It is the County's policy to conduct business only with responsible contractors. (Ord. 2291, § 1, 01/07/2003)
- B. Bidders are hereby notified that the County may determine whether the bidder is responsible based on a review of the bidder's performance on any contracts, including but not limited to County contracts. Particular attention will be given to violations of labor laws related to employee compensation and benefits, and evidence of false claims made by the bidder against public entities. This will include subcontractors and their employees as well. (Ord. 2291, § 1, 01/07/2003)
- C. The County may declare a bidder to be non-responsible for the purpose of this contract, if the Board of Supervisors, in its discretion, finds that the bidder has done any of the following: (1) committed any act or omission which negatively reflects on the bidder's quality, fitness or capacity to perform this contract with the County or a contract with any other public entity, or engaged in a pattern or practice which negatively reflects on same; (2) committed an act or omission which indicates a lack of business integrity or business honesty; or (3) made or submitted a false claim against the County or any other public entity. (Ord. 2291, § 1, 01/07/2003)
- D. If there is evidence that the apparent low bidder may not be responsible, the department shall notify the bidder in writing of the evidence relating to the bidder's responsibility, and its intention to recommend to the Board of Supervisors that the bidder be found not responsible. The department shall provide the bidder and/or the bidder's representative with an opportunity to present evidence as to why the bidder should be found to be responsible and to rebut evidence which is the basis for the department's recommendation. If the bidder fails to avail itself of the opportunity to rebut the department's evidence, the bidder may be deemed to have waived all rights of appeal. (Ord. 2291, § 1, 01/07/2003)
- E. If the bidder presents evidence in rebuttal to the department, the department shall evaluate the merits of such evidence, and based on that evaluation, make a recommendation to the Board of Supervisors. The final decision concerning the responsibility of the bidder shall reside with the Board of Supervisors. (Ord. 2291, § 1, 01/07/2003)
- F. These terms shall also apply to proposed [subcontracts/ subconsultants] of bidders on County contracts. (Ord. 2291, § 1, 01/07/2003)

2. DETERMINATION OF BIDDER DEBARMENT

- A. The bidder is hereby notified that the County may debar the bidder from bidding on other County contracts for a specified period of time, not to exceed three (3) years, and the County may terminate any or all of the bidder's existing contracts with the County, if the Board of Supervisors finds, in its discretion, that the bidder has done any of the following: (1) violated any term of a contract with the County; (2) committed any act or omission which negatively reflects on the bidder's quality, fitness, or capacity to perform a contract with the County or any other public entity, or engaged in a pattern or practice which negatively reflects on same; (3) committed an act or offense which indicates a lack of business integrity or business honesty; or (4) made or submitted a false claim against the County or any other public entity. (Ord. 2291, § 1, 01/07/2003)
- B. If there is evidence that the apparent low bidder may be subject to debarment, the department shall notify the bidder in writing of the evidence which is the basis for the proposed debarment, and shall advise the bidder of the scheduled date for a debarment hearing before the Contractor Hearing Board (CHB). (Ord. 2291, § 1, 01/07/2003)
- C. The CHB shall conduct a hearing where evidence on the proposed debarment is presented. The bidder and/or the bidder's representative shall be given an opportunity to submit evidence at that hearing. After the hearing, the CHB shall prepare a proposed decision, which shall contain a recommendation regarding whether the bidder should be debarred, and, if so, the appropriate length of time of the debarment. If the bidder fails to avail itself of the opportunity to submit evidence to the CHB, the bidder may be deemed to have waived all rights of appeal. (Ord. 2291, § 1, 01/07/2003)

- D. A record of the hearing, the proposed decision and any other recommendation of the CHB shall be presented to the Board of Supervisors, by the department head. The Board of Supervisors shall have the right to modify, deny or adopt the proposed decision and recommendation of the hearing board.(Ord. 2291, § 1, 01/07/2003)
- E. These terms shall also apply to proposed [subcontractors/ subconsultants] of bidder's on County contracts.(Ord. 2291, § 1, 01/07/2003)

EVIDENCE OF RESPONSIBILITY / NONRESPONSIBILITY

(Humboldt County Code Sections 2141 et seq.)

The bidder shall, under penalty of perjury, answer each of the questions below and provide supporting documentation. The term "bidder" shall include any person associated with the bidder in the capacity of owner, partner, director, officer or manager.

1. Is the bidder under suspension, debarment, or determination of ineligibility by any federal, state or local agency? No Yes (explain)

2. Has the bidder been suspended, debarred, or determined ineligible by any federal, state or local agency within the preceding 5 years: No Yes (explain)

3. Is there pending against the bidder any proposed debarment or suspension proceeding?

No Yes (explain)

4. Has the bidder been indicted, charged with, or convicted, or assessed civil or administrative penalties, or had a civil judgment rendered against it, in any matter involving:

- (a) fraud, false claims, or dishonesty;
- (b) any serious or wilful violation of the California Occupational Safety and Health Act of 1973 (Labor Code Sections 6300 et seq) or the Federal Occupational Safety and Health Act of 1970;
- (c) violation of the state workers' compensation laws;
- (d) violation of the Contractor's State License Law (Bus & Prof Code Sections 7000 et seq.)
- (e) violation of prevailing wage laws;
- (f) violation of state or federal environmental laws;
- (g) violation of local laws related to permits, land use, or waste disposal?

No Yes (explain)

5. Has the bidder defaulted on a construction contract within the preceding 10 years?

No Yes (explain)

6. Provide information concerning any bankruptcy or receivership of bidder, and information regarding all legal claims, disputes, or lawsuits (including administrative matters) arising from any construction project performed within the preceding 5 years, including information regarding any work completed by a surety.

NOTE: This information will not necessarily result in denial of award, but will be considered in determining bidder responsibility. Bidders are cautioned that making a false certification may subject the bidder to criminal prosecution.

END OF SECTION 00 45 46

SECTION 00 45 47 - PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

In accordance with Public Contract Code Section 10232, the Contractor, 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.

Signature of Bidder

Date

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

END OF SECTION 00 45 47

SECTION 00 45 48 - DEBARMENT AND SUSPENSION CERTIFICATION

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

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

1. is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State or local agency;
2. has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State or local agency within the past 3 years;
3. does not have a proposed debarment pending; and
4. 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, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: 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.

Signature of Contractor

Date: _____

END OF SECTION 00 45 48

SECTION 00 52 00 - AGREEMENT

This is an AGREEMENT made and entered into this _____ day of _____, 2018 by and between the County of Humboldt, a political subdivision of the State of California (hereinafter referred to as COUNTY) and _____, a corporation organized and existing under the laws of the State of _____, a partnership consisting of _____; an individual doing business as _____ in the State of California, (hereinafter referred to as "CONTRACTOR").

County and Contractor for the consideration hereinafter named agree as follows:

SECTION 1 - SCOPE OF WORK

Contractor shall furnish all labor, tools and materials and perform all the work for the construction of:

HUMBOLDT COUNTY
ADA MODIFICATIONS
CLAM BEACH PARK
COUNTY NUMBER: 2017-204

in accordance with the Contract Documents referred to in Section 3 of this Agreement.

The scope of work includes the work included in the "Base Bid" for the project and the following bid alternatives: _____

SECTION 2 - CONTRACT PRICE

County shall pay, and Contractor shall accept Contractor's Price, as follows:

Dollars and _____ /100 (\$ _____)

as full compensation for furnishing all materials and for doing all the work contemplated and embraced in this Agreement; also for all loss or damage, arising out of the work aforesaid, or from the actions of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by County, and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of the work and for well and faithfully completing the work, and the whole thereof, in the manner and according to the Plans and Specifications, and the requirements of the Owner.

SECTION 3 - CONTRACT DOCUMENTS

The complete contract between the parties hereto shall consist of the following, hereinafter referred to as the CONTRACT DOCUMENTS:

- Invitation To Bidders
- Bid Form
- Bid Security Form
- Performance Bond
- Payment Bond
- This Agreement
- Insurance Certificates
- List of Subcontractors
- Special Conditions
- General Conditions
- Supplementary General Conditions
- General Requirements
- Plans and Drawings
- Technical Specifications
- Non collusion Affidavit
- Evidence of Responsibility /Nonresponsibility
- Debarment and Suspension Certification

And, as published by the Department of Transportation, State of California, except as modified by the
Special Provisions:

- Standard Specifications - dated 2015
- Equipment Rental Rates in effect at the time the work is performed

And, as published by the California Department of Industrial Relations, and U.S. Department of Labor

- General Prevailing Wage Rates
- Labor and Surcharge Rates

And any addenda to any of the above documents, all of which are on file in the office of the County Administrative Office of the County of Humboldt. Each of said CONTRACT DOCUMENTS is incorporated and made a part of this Agreement by the reference contained in this Section.

All rights and obligations of the County and the Contractor are fully set forth and described in the Contract Documents. All of the above named documents are intended to be complimentary, so that any work called for in one, and mentioned in the other is to be performed and executed the same as if mentioned in all said documents.

SECTION 4 - BEGINNING OF WORK

Following receipt and full execution and approval of the Contract Documents and posting of the requisite Bonds as called for therein, the COUNTY will issue a "Notice to Proceed". Under no circumstances shall the CONTRACTOR enter upon the site of work until receipt of the "Notice to Proceed", unless so authorized in writing by the COUNTY.

SECTION 5 - TIME OF COMPLETION

The work called for in this Agreement shall be commenced within ten (10) calendar days of the date of receipt by Contractor of the Notice to Proceed and shall be fully completed within <#> calendar days following receipt of the Notice to Proceed by the Contractor.

SECTION 6 - PREVAILING WAGE

Pursuant to Section 1770 of the Labor Code, the County has determined the Prevailing Wage Rate to be as listed by the Department of Industrial Relations, Division of Labor Statistics and Research, P.O. Box 420603, San Francisco, CA, 94101, Phone: (415) 703-4780. Complete Certified Payrolls must be submitted to the OWNER together with each application for progress payment. Electronic submittal directly to DIR shall be required.

SECTION 7 - WORKERS' COMPENSATION

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

SECTION 8 - NOTICES

All notices shall be in writing and delivered in person or transmitted by mail. Notices required to be given to the COUNTY shall be addressed as follows:

Humboldt County Administrative Office
825 Fifth Street, Eureka Room 112, California, 95501

Notices required to be given to CONTRACTOR shall be addressed as follows:

SECTION 9 - NUCLEAR FREE HUMBOLDT COUNTY ORDINANCE COMPLIANCE

Neither the Contractor, his Subcontractors or their suppliers are Nuclear Weapons Contractors, and are not knowingly or intentionally engaged in the research, development, production, or testing of nuclear warheads, nuclear weapons systems, or nuclear weapons components, as defined by the Nuclear Free Humboldt County Ordinance. Contractor, his Subcontractors and/or their suppliers agree to notify Owner immediately if they become a nuclear weapons contractor as defined above.

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IN WITNESS WHEREOF, The parties hereto have entered into this Agreement as of the date first above set forth.

COUNTY OF HUMBOLDT

(SEAL)

By: _____
Chairperson, Board of Supervisors of the County of Humboldt, State of California

ATTEST:

By: _____
Clerk of the Board of Supervisors of the County of Humboldt, State of California

CONTRACTOR: Corporations require signature by 2 (two) corporate officers

By: _____

Title: _____

By: _____

Title: _____

APPROVED AS TO FORM:

By: _____
Deputy County Counsel

INSURANCE CERTIFICATES REVIEWED AND APPROVED:

By: _____
Risk Manager

END OF SECTION

COUNTY OF HUMBOLDT
ADA MODIFICATIONS CLAM BEACH PARK
COUNTY No.: 2017-204

PERFORMANCE BOND
Section 00 61 13 - Page 1

SECTION 00 61 13 - PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____
(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and:
(Corporation, Partnership or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

HUMBOLDT COUNTY
825 5th Street
Eureka, California 95501

hereinafter called OWNER, in the penal sum of

Dollars (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bond ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of:

**COUNTY OF HUMBOLDT
ADA MODIFICATIONS CLAM BEACH PARK
COUNTY No.: 2017-204**

**PERFORMANCE BOND
Section 00 61 13 - Page 2**

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all of the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if Principal shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, 20____.

By: _____
Principal

By: _____
Surety

SURETY

(Power of Attorney for person signing for Surety Company, or a certified copy thereof, must be attached. Signatures of person or persons executing for the Surety must be acknowledged.)

END OF SECTION 00 61 13

SECTION 00 61 14 - PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WHEREAS, the County of Humboldt, by its order made _____, 20____, has awarded to _____, hereinafter designated as the "Principal," a contract for the work described as follows:

NOW, THEREFORE, we the Principal and _____, Surety, are held and firmly bound unto the County of Humboldt in the penal sum of _____ Dollars (\$_____), lawful money of the United States of America for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that is said Principal, his/her or its heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 9100 of the Civil Code, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant, or for any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the Contractor and their subcontractors pursuant to Section 18806 of the Revenue and Taxation Code with respect to such work and labor as required by Sections 9550 et seq. of the Civil Code of California, then said Surety will pay for the same, in or to an amount not exceeding the amount hereinafter set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney's fees, as shall be fixed by the court, awarded and taxed as in the above-mentioned statutes provided.

AND, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or to the work, or to the specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety above named, on the _____ day of _____, 20 ____.

PRINCIPAL

BY: _____

SURETY

BY _____
ATTORNEY-IN-FACT

END OF SECTION 00 61 14

SECTION 00 72 00 - GENERAL CONDITIONS

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GC 1. DEFINITIONS

- A. **COUNTY:** The term "County, or pronouns in place of same where used herein, shall mean Humboldt County acting through its Board of Supervisors.
- B. **BOARD:** The term "Board", or pronouns in place of same where used herein, shall mean the Humboldt County Board of Supervisors.
- C. **OWNER:** The "Owner" is the person or entity identified as such in the Owner-Contractor Agreement; the term Owner means the Owner or their authorized representative.
- D. **ARCHITECT:** The term "Architect" shall mean the licensed professional architect employed by the Humboldt County as the authorized representative of the Owner.
- E. **CONTRACTOR:** The term "Contractor", where used herein, shall mean the Contractor to whom the contract for the work described and specified herein has been awarded by the Board.
- F. **PLANS AND SPECIFICATIONS:** The term "Plans and Specifications", where used herein, shall mean and include all specifications and provisions of every kind, whether general, detailed or otherwise, relating to the equipment, material of work, and the installation thereof, and the plans and drawings accompanying same which are made a part thereof. Such Plans and Specifications are recognized as instruments of professional service.
- G. **OWNER'S REPRESENTATIVE:** The term "Owner's Representative" shall mean agent assigned to the Project by Humboldt County.
- H. **PROJECT INSPECTOR:** The term "Project Inspector" shall mean agent assigned to the Project by Humboldt County.

GC 2. CONTRACT

- A. The Contract Documents include all documents identified as such in the Agreement (Section 00 52 00), any amendments and Change Orders thereto
- B. In the execution of the work or any portion thereof, Contractor shall operate as an independent contractor and not as the agent of Owner or Architect.
- C. No verbal agreement or conversation with any officer, agent, or employee of Owner or Architect, either before or after execution of the Agreement, shall affect or modify any terms or obligations of the Contract unless duly incorporated into the Contract by written Change Order or amendment of the Contract.
- D. The Contract Documents shall not be construed to create any contractual relationship of any kind between the Architect and the Contractor, but the Architect shall be entitled to performance of obligations intended for their benefit, and to enforcement thereof. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner or the Architect and any subcontractor or sub-subcontractor.

GC 3. BONDS

- A. The successful bidder, simultaneously with the execution of the Agreement, will be required to furnish a Payment Bond in an amount equal to one hundred (100%) percent of the contract price, and a faithful Performance Bond in an amount equal to one hundred (100%) percent of the contract price. The Contractor must submit a certificate from the Humboldt County Clerk's Office with all payment bonds. The Clerk's certificate must indicate that the surety is admitted to transact business in the State of California, and certify that the surety's certificate of authority, issued by the Insurance Commissioner, has not been suspended, revoked, canceled, or annulled.
- B. The bonds shall comply with Section 9554 of the Civil Code of the State of California. The payment Bond and the faithful Performance Bond shall each be in a form that is satisfactory to the County Counsel, or Risk Management of the County of Humboldt. A copy of an acceptable format is attached to the Agreement forms of these specifications.

GC 4. INSURANCE REQUIREMENTS

- A. THIS CONTRACT/AGREEMENT SHALL NOT BE EXECUTED BY COUNTY and the CONTRACTOR is not entitled to any rights, unless certificates of insurance, or other sufficient proof that the following provisions have been complied with, and such certificate(s) are filed with the Clerk of the Humboldt County Board of Supervisors.
- B. Without limiting Contractor's indemnification provided herein, Contractor shall and shall require any of its subcontractors to take out and maintain, throughout the period of this Agreement, the following policies of insurance placed with insurers with a current A.M. Bests rating of no less than A:VII or its equivalent against injury/death to persons or damage to property which may arise from or in connection with the activities hereunder of Contractor, its agents, employees or subcontractors:
- C. Comprehensive or Commercial General Liability Insurance at least as broad as Insurance Services Office Commercial General Liability coverage (occurrence from CG 0001), in an amount of \$2,000,000 per occurrence. If work involves explosive, underground or collapse risks, XCU must be included. If a general aggregate limit is used, either the general aggregate limit shall apply separately to this project or the general aggregate shall be \$5,000,000. Said policy shall contain, or be endorsed with, the following provisions:
 1. The County, its officers, employees and agents, are covered as additional insured for liability arising out of the operations performed by or on behalf of Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the County, its officers, agents, and employees.
 2. The policy shall not be canceled or materially reduced in coverage without thirty (30) days prior written notice (10 days for non-payment of the premium) to County by certified mail.
 3. The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, and the coverage afforded shall apply as though separate policies had been issued to each insured, but the inclusion of more than one insured shall not operate to increase the limits of the insurer's liability.
 4. For claims related to this project, the Contractor's insurance is primary coverage to the County, and any insurance or self-insurance programs maintained by the County are excess to Contractor's insurance and will not be called upon to contribute with it.
 5. Any failure to comply with reporting or other provisions of the parties, including breach of warranties, shall not affect coverage provided to County, its officers, employees, and agents.
- D. Automobile liability insurance with coverage at least as broad as Insurance Services Office form CA 0001 06092, Code 1 (any auto), for vehicles used in the performance of this Agreement with minimum coverage of not less than \$1,000,000 per accident combined single limit (CSL). Such policy shall contain or be endorsed with the provision that coverage shall not be canceled or materially reduced in coverage without thirty (30) days prior written notice (10 days for non-payment of premium) to County by certified mail.

- E. Workers' Compensation insurance meeting statutory limits of the California Labor Code which policy shall contain or be endorsed to contain a waiver of subrogation against County, its officers, agents, and employees and provide for thirty (30) days prior written notice in the event of cancellation.
- F. If applicable, Builder's Risk or Course of Construction, written on an "All-Risk" form, for 100% of the completed value of the insurable part of the project. The Builder's Risk policy shall provide for losses to be payable to County and the Contractor as their interests may appear, and that in the event of payment for any loss under the coverage provided, the insurer shall have no rights of recovery against County and Contractor.
- G. Contractor shall furnish County with certificates and original endorsements effecting the required coverage prior to execution of this Agreement by County. The endorsements shall be on forms as approved by the County's Risk Manager or County Counsel. Any deductible or self-insured retention over \$100,000 shall be disclosed to and approved by County. If Contractor does not keep all required policies in full force and effect, County may, in addition to other remedies under this Agreement, take out the necessary insurance, and Contractor agrees to pay the cost of said insurance.
- H. **SUBCONTRACTORS:** Should contractor subcontract any portion of the work to be performed under this Agreement, said subcontractors shall be required by contractor to:
 - 1. Enter into a written contract with contractor acknowledging that no employee/employer relationship exists between contractor and subcontractor and that no Workers' Compensation, unemployment benefits, or other personnel benefits are required by or available to subcontractor through contractor or County.
 - 2. Hold harmless and to indemnify, defend and save harmless contractor and County, its Board of Supervisors, officers, agents, employees and volunteers, from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, material suppliers, laborers, and any other person, firm or corporation who may be injured or damaged by subcontractor in the performance of this Agreement.
- I. **HOLD HARMLESS/INDEMNIFICATION CLAUSE**

Pursuant to Government Code section 895.4, the parties to this Agreement shall indemnify, defend and hold harmless the other parties hereto and their officers, agents, and employees, from any and all claims, demands, losses, damages, and liabilities of any kind or nature, including attorney's fees, which arise by the virtue of its own acts or omissions (either directly or through or by its officers, agents or employees) in connection with its duties and obligations under this Agreement and any amendments hereto.

Acceptance of insurance, if required by this Agreement, does not relieve Contractor from liability under this indemnification clause. This indemnification clause shall apply to all damages or claims for damages suffered by Contractor's operations regardless if any insurance is applicable or not.

GC 5. TERMINATION OF CONTRACT

- A. Each of these general conditions, whether preceding or following this paragraph, is to be considered material and failure to comply with any of such conditions by the Contractor will be deemed a breach of contract.
- B. Should the Contractor fail to perform any of the provisions of the Contract, the Owner shall have the right, whether or not an alternative right is provided, to declare the Contract terminated. A written notice by the Owner to the Contractor that the Contract is terminated shall be deemed a complete termination of same.
- C. On the Contract being so terminated, the Contractor shall, provided Contractor is ordered to do so by the Owner, immediately remove from the premises all or any materials and personal property belonging to Contractor which have not been used in the construction of the Work or which is not in place in the Work; and both Contractor and their surety shall be liable upon their bond for all damages caused to the Owner by reason of failure to complete the Contract.

D. See GC Article 29, SUFFICIENT LABOR OR MATERIAL.

GC 6. NON-CONTINUANCE OF WORK

A. Should the Contractor at any time during the progress of the Work refuse, neglect or be unable for any reason, except the documented inability to supply a sufficiency of materials or workmen necessary, to complete the Work within the time specified in the Contract, the Owner shall have the power to terminate the Contract as prescribed.

GC 7. ASSIGNMENT OF CONTRACT

A. The Contractor shall not assign or sublet the Contract in whole or in part without the prior written consent of the Owner. The Contractor shall not assign any monies due or to become due to them under the Contract without the prior written consent of the Owner.

B. Any assignments permitted under these documents or approved by the Owner shall, in addition, have prior written approval of all sureties of the Contractor executing bonds or insurance in the interest of this Contract.

C. If the Contractor seeks to assign any portions or monies as permitted, Contractor shall pay to the Owner \$1,000 to cover Owner's costs each time an assignment occurs.

GC 8. SEPARATE CONTRACTS

A. The Owner reserves the right to let other contracts in connection with this Project. The Contractor shall afford all other such contractors reasonable opportunity for storage of their materials; shall provide that the execution of their work properly connects and coordinates with theirs; and shall cooperate with them to the end of facilitating the Work.

B. The work performed or executed under other contracts in advance of work under this Contract shall be inspected and determined to be in proper condition by the Contractor before permitting related or connecting work to proceed under this Contract.

C. Contractor shall immediately notify Architect of any discrepancies, defects or other conditions found unsuitable for proper execution of the work.

GC 9. CONFERENCES

A. At any time during the progress of the Work, the Owner, Owner's Representative, or Architect shall have authority to require the Contractor to attend a conference of any or all of the contractors engaged in the Work; and any notice of such conference shall be duly observed and complied with by the Contractor.

GC 10. TERMS OF PAYMENT

A. At the end of each calendar month, the Contractor shall submit to the Owner's Representative a statement of all materials actually placed in the building during the month, the labor expended thereon, and the cost thereof; whereupon after verification by the Owner's Representative it is found to be acceptable, a certificate for the amount less five percent (5%) thereof will be issued by the Owner's Representative except that no certificate will be issued for defective work and materials until they have been removed, replaced and made good. The Owner will also pay the costs of material on hand under the following conditions: Written approval is given by the Owner's Representative prior to requesting payment. Approved items have been inventoried by the Owner's Representative and they are stored in a safe and weather protected manner, and are major items that delay in receiving will adversely affect the construction time schedules. The Owner's Representative will issue a certificate for the certified invoice amount, less five percent (5%) thereof. The Contractor shall be paid monthly

as the work progresses, the amount of each such certificate. Final payment shall be made in accordance with E. below.

- B. As a basis for determining the amount of monthly payments, the Contractor shall, before commencing the work, submit to the Owner's Representative for approval a detailed statement of all materials and labor included in their original estimate. This statement shall be so arranged that the value of the work as it progresses may be readily determined. Payment for change order work will be made if the change order work is complete and is approved prior to the Owner's Representative issuing the monthly certification of payment. The regular initial schedule of values shall be prepared and submitted by Contractor twenty (20) calendar days in advance of the time the first request for payment is due, allowing sufficient time for review, approval and modifications as may be required prior to use for said first payment. The total sum of the schedule of values shall equal the Contract Price.
- C. Acceptance of any work and payments therefore shall be made upon written recommendation of the Owner's Representative and Architect.
- D. Payments to the Contractor will be made within 30 days of an approved pay estimate in accordance with Owner's regular approval and accounting procedures, based upon statements or certificates received as issued or approved by the Owner's Representative, including written certification that complete certified payroll records have been, or will be, submitted to the Labor Commissioner as required by the California Labor Code.
- E. Thirty-five (35) days after the acceptance of the work by the Owner's Representative and Architect (provided the project has been accepted by the Board of Supervisors), the Contractor shall be entitled to the balance due for the completion and acceptance of the work, provided that all claims for labor and materials have been paid, and that no claims shall have been filed with the County based upon acts or omissions of the Contractor and that no stop notices have been filed.

GC 11. CONFLICTS OR ERRORS

- A. During construction, if any conflicts are discovered in the plans or specifications, they shall be immediately submitted to the Owner's Representative who will render an interpretation on what was intended and the Contractor agrees to furnish all things necessary by such interpretation to the satisfaction of the Owner's Representative without additional expense to the Owner.
- B. The Contractor shall not contend that any error, delay or default in their work is due to omission or ambiguity in said plans or specifications.
- C. If errors are found in the Construction Documents that can not be termed conflicts (shown, sized or called out differently in different places) the Contractor shall immediately notify the Owner's Representative within 15 calendar days following the discovery of any error so that a change order can be prepared and the item corrected prior to construction.
- D. Refer to G.C. 24, Unity of Documents.

GC 12. CHANGES TO PLANS AND SPECIFICATIONS

- A. No modification or deviation from plans and specifications will be permitted by the Contractor without prior written consent of Owner. However, within the limits allowed by law, the Contractor agrees that Owner, without invalidating the Contract, may order extra work or make changes by altering, adding to, or deducting from the Work, the contract sum being adjusted accordingly, and that Contractor will enter into a modification of the original contract to make such changes by means of a written Change Order.
- B. Change Orders shall be signed by the Contractor, Architect and authorized representative of the Owner.

C. All such work shall be executed under the conditions of the original contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. Both parties agree that the credit to, or charge against the Owner shall be determined as follows:

1. In the event that a modification results in a reduction of the amount of labor and material to be supplied by the Contractor, the Owner shall be given a credit equal to the actual value of such labor and materials plus a reasonable amount for the use of tools, materials and overhead and profit; or, in the event that a modification results in an increase in the amount of labor and materials to be supplied by the Contractor, the Owner shall pay the Contractor the actual value of such labor materials and equipment plus not more than 15% which shall cover the use of Contractor's overhead and profit. In no case shall the total of any subcontractor(s) together with the Contractor's overhead, profit, bonds and insurance exceed 15%. All costs shall be included as a lump sum price on change orders.
2. Cost Estimates for all changes shall be submitted by the Contractor to the Owner's Representative for checking by the Owner's Representative and Architect. The Contractor shall submit all Cost Estimates within 15 calendar days following the discovery of any potential change. The Owner's Representative shall render a written decision as to reasonable costs within 15 calendar days of receiving cost estimate unless more time is agreed to by both Contractor and Owner's Representative.
3. Any increases in cost or extension of time shall be approved by the Owner's Representative, Architect and Owner, on a signed change order.
4. In the event that the Contractor, for whatever reason, does not accept the dollar amount of increase or decrease or extension of time to the contract amount in the decisions rendered by the Owner, Contractor shall, upon receiving written order from the Owner, proceed with the work called for in the Change Order on a force account basis. Any claim for dollar increases or extension of time shall be made in writing to the Owner's Representative in accordance with the provisions of GC 51, Claims Procedures.

D. In response to a request for a proposed modification, Contractor shall promptly furnish within 15 calendar days, relevant cost breakdowns, time estimates and other information as may be required to the Owner's Representative.

GC 13. GUARANTEE

A. The Contractor shall be held responsible to make-good any defects due to faulty, improper or inferior workmanship or materials arising or discovered in any part of the Work within one (1) year after the completion and final acceptance of the same by the Owner's Representative, Architect and Owner unless a longer period is called for in the Technical Specification Sections.

B. Acceptance of the Work by the Owner's Representative, Architect or Owner shall in no way absolve the Contractor from the responsibility of complying with the provisions of the plans and specifications and other contract documents, even though deviations may not be discovered within the aforementioned one year period.

C. The bond for faithful performance furnished by the Contractor shall cover such defects and protect the Owner against them and remain in force during the one year guarantee period.

GC 14. INTERPRETATIONS

A. The Contractor shall comply with the obvious intent and meaning of the plans and specifications which shall be construed to include all material, measures and modes or work necessary to complete the work required in a workmanlike manner, in strict accordance with these plans and specifications, and to the satisfaction of the Owner.

B. Should any question arise as to the intent and interpretation of the plans or specifications, the Contractor shall promptly, upon discovery thereof, refer the same in writing to the Owner's Representative, whose decision thereon shall be final.

GC 15. DECISIONS BY ARCHITECT AND/OR OWNER'S REPRESENTATIVE

- A. The Owner's Representative shall, in all cases, determine whether the amount and quality of the several kinds of work which are to be paid for under the Contract are in accordance with the plans and specifications.
- B. The Owner's Representative shall have power to cause all or any part of the work to be expedited with greater diligence when delayed or stopped.
- C. When requested by the Owner's Representative, the Architect's decisions in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents.
- D. Where not involving a change in the agreed Contract Price or Completion Time, and not inconsistent with the intent of the Contract Documents, the Owner's Representative shall have authority to:
 1. Correct any errors or inconsistencies in, and make any deletions from or additions to the drawings and specifications;
 2. Order minor changes or adjustments in the work, whether by field order, notations on Contractor's submittals, or other instructions;
 3. Order certain portions of the work delayed when particularly involved with or affected by any Change Order in process or being considered by Owner.
- E. The Owner's Representative will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both the Owner and Contractor.
- F. The Architect through the Owner's Representative will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and within fifteen (15) calendar days.
- G. Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be referred to the Owner's Representative for decision which the Owner's Representative will render in writing with a reasonable promptness and within fifteen (15) calendar days.

GC 16. ADMINISTRATION OF THE CONTRACT

- A. The Owner's Representative will provide administration of the Contract. Maintenance of the Project records for the contract shall be as prescribed by the Owner's Representative and as hereinafter described.
- B. The Owner's Representative will be the representative of the Owner during construction and until final payment is due. The Architect will advise and consult with the Owner's Representative and Owner. The Owner's instruction to the Contractor shall be forwarded through the Owner's Representative. The Owner's Representative will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument.
- C. The Owner's Representative or Architect will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Owner's Representative or Architect will not be responsible for or have control acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.
- D. The Owner's Representative and Architect shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Owner's Representative and Architect may perform their functions under the Contract Documents.

- E. Based on the Owner's Representative and Architect's observations and an evaluation of the Contractor's Applications for Payment, the Owner's Representative will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts as provided in GC Article 10.
- F. The Owner's Representative shall, upon receipt of a complete submittal from the Contractor, make the submission to the Architect. The Architect shall review and take appropriate action on shop drawings, product data, samples, and other submittals required by the Contract Documents. Such review shall be only for general conformance with the design concept and general compliance with the information given in the Contract Documents. It shall not include review of quantities, dimensions, weights or gauges, fabrication processes, construction methods, coordination with the work of other trades, or construction safety precautions, all of which are the sole responsibility of the Contractor. The Architect's review shall be conducted with reasonable promptness, and within 21 calendar days unless otherwise noted, consistent with sound professional practice. Review of a specific item shall not indicate acceptance of an assembly of which the item is a component. The Architect shall not be required to review and shall not be responsible for any deviations from the Contract Documents not clearly noted by the Contractor, nor shall the Architect be required to review partial submissions or those for which submissions for correlated items have not be received.
- G. The Owner's Representative will prepare Change Orders in accordance with GC Article 12.
- H. The Contractor shall provide sufficient, safe and proper facilities at all times for the full inspection of the Work by the Architect or other representatives of the Owner, at the project site and at the various other locations where project is being performed.
- I. The Owner's Representative and Architect will have authority to reject Work which does not conform to the Contract Documents. Whenever, in their opinion, the Owner's Representative and Architect considers it necessary or advisable for the implementation of the intent of the Contract Documents, the Owner's Representative or Architect will have authority to require special inspection or testing of the Work in accordance with GC Article 31, whether or not such Work be then fabricated, installed or completed. However, the Owner's Representative and Architect's authority to act under this Subparagraph and any decision made by them in good faith to exercise or not to exercise such authority, shall not give rise to any duty or responsibility of the Owner's Representative or Architect to the Contractor, and Subcontractor, any of their agents or employees, or any other person performing any the Work.
- J. The duties, responsibilities and limitations of authority of the Owner's Representative as the representative of the Owner during construction as set forth in the Contract Documents will not be modified or extended without written consent of the Owner.

GC 17. NON-CONFORMING WORK

- A. The fact that the work and materials have been inspected from time to time and payments on account have been made, shall not relieve the Contractor from the responsibility of replacing and making good any defective work or materials that may be discovered within one year from the date of completion of the Work by the Contractor and its approval by the Owner's Representative, Architect, and its acceptance by the Owner.
- B. Failure of Owner's Representative, Architect or Owner to object to any defects in work or material or variances from the plans and specifications during or after construction shall not be deemed a waiver by Owner, Owner's Representative or Architect of such defects or variances; nor by such failure shall Owner, Owner's Representative or Architect be deemed stopped from requiring Contractor to correct such defects or variances.
- C. At Owner's sole option, if Owner prefers to accept non-conforming work, Owner may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum, or if the amount is determined after final payment it shall be paid by the Contractor.

D. Uncovering of Work:

1. If any portion of the Work should be covered contrary to the request of the Owner's Representative, Architect or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Owner's Representative, be uncovered for their observation and shall be replaced at the Contractor's expense.
2. If any other portion of the Work has been covered which the Owner's Representative or Architect has not specifically requested to observe prior to being covered, the Owner's Representative or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this condition was caused by the Owner or a separate contractor as provided in GC 8 above, in which event the Owner shall be responsible for the payment of such costs.

GC 18. OWNERSHIP OF DOCUMENTS

- A. All plans and specifications shall remain the property of the Owner and shall be returned to the Owner's Representative or shall be accounted for by the Contractor before the final acceptance of building by the Owner.
- B. Documents for this project shall not be used on or for any other work or purposes without express written consent of Owner's Representative, Architect and Owner.

GC 19. DOCUMENTS FURNISHED

- A. The Contractor will be supplied one (1) set of Contract Documents for use in the Work.

GC 20. DRAWING DIMENSIONS

- A. The general dimensions are shown in figures on the drawings furnished to the Contractor. These figured dimensions shall invariably have preference to scaled measurements; but the Contractor shall exercise proper caution and care to verify the figures before laying out the Work, and shall be held responsible for any omissions or errors therein that might have been avoided.

GC 21. DETAILED DRAWINGS

- A. Drawings and details may be furnished to the Contractor as work progresses, showing in more elaboration the work intended to be done and the Contractor shall conform to them as being a part of the Contract.
- B. No work shall be performed in advance of the receipt by the Contractor of such detailed drawings, except such work as the Owner's Representative shall order in writing to be done without details. Any complaint as to the character and extent of the details shall be made to the Owner's Representative within ten days after the Contractor has received the same. The Contractor shall notify the Owner's Representative in ample time as to when the Contractor will require these drawings so they may be prepared without causing any delay to the Work.

GC 22. SUBMITTALS

- A. Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- B. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.

- C. Samples are physical examples which illustrate materials equipment or workmanship and establish standards by which the Work will be judged.
- D. The Contractor shall review, approve and submit, with such promptness as to cause no delay in their own work or in that of any other contractor, copies of all Shop Drawings or Setting Drawings, Schedules for the Work of the various trades and samples of materials and finishes required for the Work, together with information or supporting data as may be required or called for. The Owner's Representative will pass upon them with reasonable promptness in accordance with GC Article 16. The Contractor shall make any corrections required by the Owner's Representative or Architect and resubmit corrected copies.
- E. Samples required or called for shall be exactly as specified for and intended to be used in the work; and Shop Drawings shall accurately portray the Work required. Materials, finishes and workmanship shall be equal in every respect to that of the reviewed submittals.
- F. Submittals shall be delivered as directed by the Owner's Representative, postage or delivery charges prepaid by the Contractor in all cases. Samples returned upon request from the Contractor shall be returned by collect mail, parcel post or any carrier named by Contractor.
- G. The furnishing by the Contractor or the review by the Architect of drawings, samples, schedules or other data shall not relieve the Contractor from responsibility for deviations from drawings or specifications, nor shall it relieve them of responsibility for errors of any sort in shop drawings, schedules or other submittals.
- H. By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that they have determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that they have checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- I. Each Submittal shall be properly identified as required by the Owner's Representative.
- J. Deviations from requirements of Contract Documents, errors, inconsistencies with submittals previously made to or reviewed by Architect, and corrections to dimensions or supporting data shall be clearly identified by the Contractor by notations on the submittals or attached explanations.
- K. No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been reviewed by the Architect as provided in Subparagraph of GC Article 16. All such portions of the Work shall be in accordance with reviewed submittals.

GC 23. SURVEY AND LAYOUT

- A. All work pertaining to this Contract shall be laid out on the premises by the Contractor who shall be held responsible for its correctness.
- B. The Contractor shall retain and pay for the services of a registered Engineer or licensed surveyor, when applicable, who shall lay out the main lines of the building and other improvements at the site and provide other primary lines, pile locations and levels as may be required.
- C. All stakes, benchmarks, survey marks, monuments and other line or level points which have been or may be established in the building or on or about the premises shall be carefully preserved and respected by the Contractor.
- D. On-site work shall be laid out to properly meet existing off-site work not required to be removed or replaced, or to lines and levels established by civil authorities having jurisdiction, as applicable to conditions at the place of the Work.

GC 24. UNITY OF DOCUMENTS

- A. The Plans and Specifications are one document and any work shown, required or called for in the one and not in the other, or vice versa, shall be furnished or performed as though it were shown, required or called for in both.
- B. The Contractor admits and agrees that the Contract Documents exhibit the intent and purpose of the Owner in regard to the Work, and that they are not complete in every detail and are to be considered as showing the purpose and intent only; and Contractor further agrees to furnish all labor or material for any detail that is necessary to carry out said intent and purpose without extra charge to the Owner.
- C. The misplacement, addition or omission of any word, letter or punctuation mark shall in no way change the intent, purpose of meaning or the Plans and Specifications.
- D. Any part of the Work or any article or detail pertaining thereto which is not specifically set forth in the Specifications or shown on the Drawings, but which is necessary for the proper completion of the Work, shall be furnished and installed at the Contractor's expense the same as if it had been partly or fully shown or specified. The Contractor shall do and furnish all things necessary to make a complete and workmanlike job in accordance with the intent and purpose of the Contract Documents.

GC 25. INSPECTION BY CONTRACTOR

- A. The Contractor shall inspect, review, compare and familiarize himself with the Contract Documents and the premises of the Work, and shall at once report to the Architect, in writing if requested, any error, omission or inconsistency within the documents or between information given and conditions observed or found at the premises.
- B. The Contractor shall make a close inspection of all materials as delivered, and shall promptly return all damaged or defective materials without waiting for their rejection by the Owner's Representative, Project Inspector, or Architect.
- C. Before beginning any of the work, the Contractor shall examine all construction and work of other contractors or trades that may affect this work, and to satisfy that everything is in proper condition to receive this work; and shall at once notify the Owner's Representative, in writing if requested, of any exception taken to any construction or condition so affecting this work, whether placed under this Contract or other contracts.
- D. Failure to file with the Owner's Representative any notice to the contrary shall constitute acceptance by the Contractor of the construction of other contractors or trades as being suitable in all ways to receive their work, except as to defects which later develop in the work of other contractors after the execution of their own work.
- E. Contractor's inspection of documents and premises shall include making known to himself the general and particular location, nature and character of the project work, the physical and contractual conditions, provisions and requirements, the nature and extent of work and equipment to be furnished by Owner, and the limitations and various other aspects relative to this project, including all coordination necessary for proper and timely execution of the Work.
- F. Owner will not consider any claims whatsoever on account of Contractor's failure to fully investigate or determine their requirements in advance of commencing the work or the conditions of the work throughout its progress.

GC 26. DEVIATION FROM PLANS OR SPECIFICATIONS

- A. No deviations shall be made from the plans or the specifications. If the Contractor shall vary from the plans the amount or value of the materials herein provided for, the Owner shall have the right to order such improper work or materials removed or replaced; any other work disturbed or damaged by such alteration shall be made good at the Contractor's expense.

GC 27. STANDARDS OF MATERIALS

- A. Wherever the name or brand of a manufacturer's article is specified herein, it is used as a measure of quality and utility; a standard.
- B. If the Contractor desires to use any other brand or manufacturer of equal quality and utility to that specified, Contractor shall make application to the Owner's Representative in writing, and submit samples if requested. Refer to Section 00 22 13, "Supplementary Instructions To Bidders" for substitution request procedures.

GC 28. QUALITY OF MATERIALS AND LABOR

- A. All materials used on this Contract shall be new and the best market quality unless specified or shown otherwise. All labor used on this Contract shall be competent and skilled for the Work. All Work executed under this Contract shall be done in the best, most thorough, substantial and workmanlike manner. All material and labor shall be subject to the approval of the Architect as to its quality and fitness, and shall be immediately removed if it does not meet with approval. The Owner's Representative may refuse to issue a Certificate of Payment for unapproved work until all defective materials or work have been removed and other material of proper quality substituted therefore.

GC 29. SUFFICIENT LABOR OR MATERIALS

- A. Should the Contractor abandon the Work called for under these specifications, or seek to assign this Contract, or if at any time the Owner's Representative shall be of the opinion and so certify in writing to the Owner that the Contractor is unnecessarily and unreasonably delaying the work, or that the Contractor is willfully violating any of the conditions or provisions of the plans and specifications, or is performing their work in bad faith, the Owner shall, in addition to all other remedies provided by Contract or by law, after seven (7) days written notice to the Contractor, have the power to notify the Contractor to discontinue all work or any part thereof under this Contract; and thereupon, the Contractor shall cease to continue said Work or such part thereof as the Owner may designate, and the Owner shall thereupon have the power to obtain by contract, purchase or hire, such implements, tools, labor or materials by contract or otherwise, as Owner may deem advisable, to work at and be used to complete the Work herein described, or such part thereof as the Owner's Representative shall certify has not been completed, and to use such material as it may find at the building site. The expenses so incurred in the process shall be deducted by the Owner out of such monies as may either be due or may at any time thereafter become due to the Contractor under and by virtue of these plans and specifications, or any part thereof.
- B. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for the Owner's Representative or Architect's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor or their bondsmen shall pay the difference to the Owner on notice to either from Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be certified by the Owner's Representative, upon application, in the manner provided in GC Article 10, and this obligation for payment shall survive the termination of the Contract.

GC 30. OLD MATERIAL

- A. Old material shall not be used.
- B. Construction materials or other items used or placed in the work later shall be considered old materials and not reused.

GC 31. TESTS

- A. Contractor shall comply with the requirements set forth in Division 01, General Requirements Sections.

GC 32. PATENT RIGHTS, COPYRIGHTS, TRADE NAMES AND ROYALTIES

- A. The Contractor shall indemnify and save harmless the Owner and authorized persons acting for the Owner against all liability on account of any patent rights, copyrights or trade names which may affect the articles or materials or their application under the Contract.
- B. The Contractor shall pay all royalties or other charges that may arise due to methods, types of construction, processes, materials or use of equipment and shall hold the Owner harmless from any claims or charges whatsoever which may arise; and shall furnish written assurance satisfactory to the Owner that such charges have been paid.

GC 33. COMPLIANCE WITH BUILDING LAWS

- A. The Contractor shall conform to and abide by all applicable city, county, regional, state and federal building, labor, sanitary, health and safety laws, ordinances, rules and regulations as currently adopted or enforced, including Part 1 & 2 of Title 24, Calif. Code of Regulation and the International Building Code; a copy of Title 24, CCR and the current California Building Code shall be kept at the job site at all times by the Contractor. Such laws and regulations shall be considered a part of these specifications the same as if set forth herein full, and all work hereunder shall be executed in accordance therewith.
- B. All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshal, the Safety Orders of the Division of Industrial Safety, the National Electric Code, the Uniform Plumbing & Mechanical Codes published by the International Association of Plumbing and Mechanical Officials, and other applicable state laws or regulation including all of Title 24, Calif. Code of Regulation. Nothing in these plans or specifications is to be construed to permit work not conforming to these codes.

GC 34. PERMITS AND LICENSES

- A. Unless otherwise provided in the Contract Documents, the Owner shall give all notices and procure and pay for permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and not excluded in Paragraph D below.
- B. LICENSES: Professional, trade, business and other licenses required by state statute or local government are entirely the responsibility of the Contractor and Subcontractors, and shall be prerequisite to submitting a bid proposal or performing work on the Project.
- C. PERMITS:
 1. Permits shall also include any cash deposits, returnable or otherwise, required by authorities having legal jurisdiction to make such demands;
 2. Owner reserves the right to cancel and declare null and void the Contract should any legal permit be refused or not issued for any reason;
 3. Due to cancellation for said reasons, Owner will not consider any claims by Contractor for loss of anticipated profits; or for work performed or materials procured prior to obtaining all permits required herein.
 4. The Contractor shall obtain Encroachment Permits from the City of Eureka, County of Humboldt, and CalTrans as needed.
- D. Contractor shall procure and deliver to the Owner's Representative, in forms prescribed and complete with dates and authorized signatures, all certificates of inspection, testing or approvals required of or by State or Civil authorities having legal jurisdiction or any public authority bearing on the performance of the Work.
- E. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work.

GC 35. TEMPORARY FACILITIES

- A. The Contractor shall provide and maintain a temporary field base of operation on the sites. Said base of operation shall be for the exclusive use of the Contractor; and shall be wind and weatherproof, furnished with sufficient lighting to permit reading of blueprints. A complete set of plans and specifications shall be kept continuously at each site. When vacated, said structure shall be removed and the work in that area completed in accordance with the Contract requirements. Based on need, Contractor shall maintain and pay for all utilities and fuels; shall provide maintenance and other services necessary for proper use and operation; and comply with related provisions as specified.
- B. The Contractor and each subcontractor shall furnish, at their own expense, all tools, equipment, appliances, materials, scaffolding or other means necessary for the entire completion of the Work; and shall be responsible for the care and guarding of same.
- C. The Contractor and each subcontractor shall erect and maintain where necessary to the progress and completion of the Work, all exterior and interior scaffolding which shall be erected in accordance with the safety rules of the State of California; and use of which shall be unrestricted for all persons performing work on the Project.
- D. The Contractor shall pay the cost of all water, gas and electricity used by their employees or subcontractors during the process of the Work, or as required for temporary services or tests and inspections.
- E. Also refer to Division 01, General Requirements Sections.

GC 36. LIABILITY FOR ACCIDENTS

- A. The Contractor shall be liable for any and all loss, accident, neglect, injury, or damage to person, life or property which may be the result of or may be caused by their building operations or their execution of this Contract, and for which the Owner might be held liable; and shall protect and indemnify the Owner, the Owner's Representative, the Project Inspector, the Architect, and/or any officer, agent or employee of the Owner and hold them harmless in every way from all claims and from all suits or actions at law for damage or injury to persons, life or property that may arise or be occasioned in any way because of their building operations or their execution of this Contract.
- B. Safety Precautions and Programs:
 1. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.
- C. The Contractor shall assume the full responsibility for personnel safety on the project and the means and methods of construction that pertain to personnel safety. Contractor is responsible that such means and methods of construction are adequate to provide safety to all personnel while accomplishing all requirements and standards of the Contract Documents. The Owner, Architect, Inspector and/or their representatives have no obligation, responsibility, or jurisdiction over safety or means and methods of construction that pertain to personnel safety on the project.

GC 37. ACCIDENT PREVENTION

- A. The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, and any other necessary construction required to secure safety of life or property; and shall maintain during all night hours sufficient lights to prevent accidents or damage to life or property.
- B. No earth, building, temporary or other structure shall be loaded, used or stressed so as to endanger its safety.
- C. In the event of an emergency affecting the safety of persons or property, the Contractor shall act, at their discretion, to prevent threatened damage, injury or loss. Claims by Contractor on account of alleged emergency actions shall be filed in writing with the Owner's Representative.

GC 38. EXISTING PREMISES AND IMPROVEMENTS

- A. The Contractor shall care for, preserve and protect existing structures, utilities and other features, fixtures or improvements at the premises, including adjacent or co-terminus properties which are not required to be removed or altered by reason of work under this Contract; and shall, likewise, care for and protect work or improvements newly placed or recently installed at the premises. Any part or portion of said existing or newly placed improvements which are removed, damaged or disturbed because of this work, shall be replaced, cleaned or otherwise returned to the original condition entirely at the expense of the Contractor.
- B. The removal and/or replacing of any existing structure, pipe, conduit, pavement or other existing improvement necessary for the proper completion of any work under the Contract shall be performed by the Contractor, and no claim for extra work shall be made on account of such removal and replacement.
- C. In case it shall be necessary to remove any telephone, telegraph or electrical power transmission poles, water pipes, electrical conduits, or underground structures of any character, or any portion thereof, the Owner or their agents shall be notified by the Contractor and the Contractor shall make the necessary arrangements for such removal. The right is reserved to the Owner and to gas, water, telephone, telegraph and electrical power transmission companies to enter upon the Work for purpose of making repairs and changes that have become necessary by reason of work related to the Project.
- D. The Contractor shall thoroughly investigate all existing poles, wires, pipes and conduits above and below ground and shall provide for the maintenance or replacing of same, in good condition and at no expense to the Owner. Any necessary new or additional pipe or materials shall be furnished by the Contractor at their expense.
- E. At the completion of the Work, the Contractor shall furnish the Owner's Representative with a written certificate from the owner of each and all conduits, pipes or structures to the effect that such replacements and maintenance have been satisfactorily performed.
- F. The Contractor shall amply protect all work or improvements, set in the building or at the premises, against any possible damage; and shall furnish all necessary building paper, rough boarding or other means or materials necessary therefore.
- G. Also refer to Division 01, General Requirements Sections.

GC 39. USE OF PREMISES AND CLEAN-UP

- A. During the progress of the Work, materials shall be neatly stacked at such points so as not to interfere with site access and shall be properly cared for and protected against damage by weather or other causes. Project staging and parking area are defined in the plans.
- B. In the case where there are several contractors operating at one time, arrangements must be made to allow the joint use of storage space so as to prevent delays in the work and unnecessary inconveniences.
- C. At the end of each working day, or as directed by the Owner's Representative, Project Inspector or Architect, the Contractor shall clean the building, premises, streets and adjacent properties of accumulated rubbish, debris, unnecessary appliances or any unused material which may constitute an obstruction to the progress or completion of the Work, whether the same was caused by their work or by the work of other crafts. Failure by the Contractor to maintain the site and building premises in a safe and clean condition will be considered a breach of contract and Contractor agrees to pay Owner for costs to have site cleaned or deduct said costs from any money due the Contractor under the contract.

- D. At the completion of the Work, and as one of the requisites thereof, the Contractor shall remove any and all tools, construction equipment, machinery, surplus materials, appliances, rubbish, packing, debris or other extraneous matter of any kind from the building, premises, sidewalks, streets or adjacent premises; Contractor shall go over all of their work and put the same in perfect order and condition and in strict accordance with the terms of the Contract; and shall repair or replace all damaged, broken or stained parts of their work, whether so injured by their workmen or others.
- E. No advertising signs of any kind shall be displayed on the building, premises, fences, offices or elsewhere upon the job, except the Project sign as called for in the specifications.
- F. At the completion of each phase of work of each kind of work or activity, the areas so used or involved shall be left in a "broom clean" condition daily unless otherwise more particularly required.

GC 40. DIRECTION OF THE WORK

- A. The Contractor shall have control or charge over their Subcontractors; shall be responsible to the Owner for the acts and omissions of their employees, subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor, and for all orders or instructions from the Owner, Owner's Representative or the Architect.
- B. It shall be the Contractor's duty to see that all of the subcontractors commence their work properly at the proper time and carry it on with due diligence as not to cause delay or injury either to work or materials; and that all damage caused by them or their workmen be properly made good by them or by himself at no cost to the Owner.
- C. The Contractor shall keep on the Work Site at all times and until the acceptance certificate is issued, a competent Project Manager and Project Superintendent for the purpose of receiving and executing without delay any orders in keeping with the terms of the Contract issued by the Owner, Owner's Representative or Architect. This Superintendent shall have charge of Plans and Specifications kept on the job; shall be instructed to be familiarized closely with all the provisions of the plans and specifications and to follow them in a precise manner.
- D. If at any time the Superintendent or workman who shall be employed by the Contractor or any of their Subcontractors shall be declared by the Owner's Representative to be incompetent or unfaithful in executing the work, then the Contractor upon receiving written notice shall, forthwith, dismiss such person and shall not again employ him on any part of the Work.
- E. Contractor shall supervise and direct the Work using their best skill and attention, and shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract; except that said responsibilities shall not be construed to permit use of any material, process, method or means if they are deemed unsuitable by Owner's Representative.
- F. Processing of Change Orders, Cost Estimates and like administrative matters, shall follow the procedures established and approved by the Owner at commencement of Work under the Contract. Change orders and other forms shall be as approved by the Owner's Representative or otherwise required or directed by Owner. Refer to GC 12.
- G. Review of Contract Documents: The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect through the Owner's Representative any conflict, error, inconsistency or omission Contractor may discover. Refer to GC 11 A.
- H. The Contractor shall not be relieved from their obligations to perform the Work in accordance with the Contract Documents by the activities or duties of the Owner's Representative in their administration of the Contract, or by inspections, tests or approvals required or performed under GC 31, by person other than the Contractor.
- I. Progress Schedule:

1. The Contractor shall prepare and submit to the Owner's Representative with copy to the Architect and the Construction Inspector the Contractor's Initial Construction Schedule within ten (10) calendar days after date on the Notice to Proceed. The Contractor's Initial Construction Schedule shall be comprised of either a Detailed Bar Chart, if the contract value is less than one million dollars (\$1,000,000), or a Critical Path Method network, if the contract value is one million dollars (\$1,000,000) or more. The Contractor's Initial Construction Schedule shall show the dates on which each part or division of the work is expected to be started and completed, and shall show all submittals associated with each work activity, allowing a minimum of twenty one (21) calendar days (per GC 16 F) for the Architect's review of each submittal unless a longer period of time is specified elsewhere in these Contract Documents. The work activities making up the schedule shall be of sufficient detail to assure that adequate planning has been done for proper execution of the work and such that, in the sole judgment of the Owner, it provides an appropriate basis for monitoring and evaluating the progress of the work. The schedule shall show the interdependence of each activity and a single critical path. The Contractor shall also submit a separate progress schedule listing all submittals required under the contract and when it is anticipated that each submittal will be submitted.
2. The Contractor's Initial Construction Schedule shall show the sequence, duration in calendar days, and interdependence of activities required for the complete performance of all work. The Contractor's Initial Construction Schedule shall begin with the date of issuance of the Notice to Proceed and conclude with the date of final completion.
3. Float, slack time, or contingency within the schedule (i.e., the difference in time between the project's early completion date and the required contract completion date), and total float within the overall schedule, is not for the exclusive use of either the Owner or the Contractor, but is jointly owned by both and is a resource available to and shared by both parties as needed to meet contract milestones and the contract completion date.
4. The Contractor shall not sequester shared float through such strategies as extending activity duration estimates to consume available float, using preferential logic, or using extensive crew/resource sequencing, etc. Since float time within the schedule is jointly owned, no time extensions will be granted nor delay damages paid until a delay occurs which extends the work beyond the Contract completion date. Since float time within the construction schedule is jointly owned, it is acknowledged that Owner caused delays on the project may be offset by Owner caused time savings (i.e., critical path submittals returned in less time than allowed by the contract, approval of substitution requests which result in a savings of time to the Contractor, etc.) In such an event, the Contractor shall not be entitled to receive a time extension or delay damages until all Owner caused time savings are exceeded and the contract completion date is also exceeded.
5. Comments made by the Owner on the Contractor's Initial Construction Schedule during review will not relieve the Contractor from compliance with the requirements of the contract documents. The review is only for general conformance with the scheduling requirements of the contract documents. Upon the Owner's request, the Contractor shall participate in the review of the Contractor's Initial Construction Schedule submissions (including the original submittal, all update submittals, and any re-submittals). The Owner may request the participation of subcontractor in these reviews, as determined necessary by the Owner. All revisions shall be resubmitted within fifteen (15) calendar days after the Owner's review.
6. The submittal of a fully revised and acceptable Contractor's Initial Construction Schedule shall be a condition precedent to the processing of the first monthly payment application.
7. On any project with a construction value equal to or greater than one million dollars (\$1,000,000), the Contractor must submit a Critical Path Method (CPM) network. The network shall provide a workable plan for monitoring the progress of all the elements of the work, establish and clearly display the critical elements of the work, forecast completion of the construction, and match the contract duration in time. Exclusive of those activities for submittal review and material fabrication and delivery, activity duration shall not be less than one (1) nor more than thirty (30) calendar days, unless otherwise approved by the Owner. In addition to the detailed network diagram, the Contractor shall submit the following reports with the original submittal and all updates and revisions:

- a. Predecessor/Successor Report or a list showing the predecessor activities and successor activities for each activity in the schedule.
- b. Activity Report sorted by early start or a list showing each activity in the schedule, arranged by early start dates.
- 8. Regardless of which schedule method the Contractor elects to use in formulating the Contractor's construction schedule, and unless the Owner's Representative in writing each month, specifically waives this requirement, an updated construction schedule shall be submitted to the Owner's Representative five (5) days prior to the submittal of the Contractor's monthly payment request. The submittal of the updated construction schedule which satisfies the requirements of the Contract Documents accurately reflects the status of the work, and incorporates all changes into the schedule, shall be a condition precedent to the processing of the monthly payment application. Updated schedules shall also be submitted at such other times as the Owner may direct. Upon approval of a change order or issuance of a direction to proceed with a change, the approved change shall be reflected in the next schedule update submittal by the Contractor, or other update submittal approved by the Owner.
- 9. If completion of any part of the work, the delivery of equipment or materials, or submittal of the Contractor submittals is behind the updated construction schedule and will impact the end date of the work past the contract completion date, the Contractor shall submit in writing, a plan acceptable to the Owner for completing the work on or before the current contract completion date.
- 10. No time extensions shall be granted nor delay damages paid unless the delay can be clearly demonstrated by the Contractor on the basis of the updated construction schedule current as of the month the change is issued or the delay occurred and which delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of work or other means. Contractor shall submit all disputes or claims under the provisions of GC 51, Claims Procedure, otherwise it shall be waived.
- 11. As a condition precedent to the release of retained funds, the Contractor shall, after completion of the work has been achieved, submit a final Contractor's construction schedule which accurately reflects the manner in which the project was constructed and includes actual start and completion dates for all work activities on the construction schedule.

J. The Contractor shall forward all communications to the Owner and Architect through the Owner's Representative.

GC 41. CUTTING, FITTING AND PATCHING

- A. The Contractor shall do all cutting, fitting and patching of Work that may be required to make its several parts come together properly, and prepare it to join or be joined by the work of other contractors; and Contractor shall make good after them.
- B. The Contractor shall not endanger any work by cutting, digging or otherwise; and shall not cut or alter the work of any other contractor without the written consent of the Architect; and shall not cut a beam, timber or support of any kind without the consent of the Architect. Under no circumstances shall any principal brace, timber, truss, support or other structural member be cut or structurally weakened in any way.
- C. Where the construction is required to join with or match existing work, it shall be finished exactly similar to that work so as to form complete, unified and finished work.
- D. Contractor shall be responsible for and particularly supervise each and every operation and all work which in any way may affect the structural integrity of the various works, including below, or, or above grade structures, and whether for temporary or permanent work.
- E. Any cost for repairs or restoration caused by cutting, digging or otherwise due to ill-timed or defective work shall be borne by the Contractor.
- F. Also refer to Division 01, General Requirements Sections.

GC 42. RIGHT TO OCCUPY OR USE

- A. The Owner reserves the right to occupy or use any part or parts, or the entirety of the building and/or grounds when the Owner deems the same may be safe for use or occupancy.
- B. The exercising of this right shall in no way constitute an acceptance of such parts, or any part of the work, nor shall it in any way affect the dates and times when payments shall become due from the Owner to the Contractor, nor shall it in any way prejudice the Owner's right under the Contract or any bonds guaranteeing the same. The Contract shall be deemed completed only when all the Work contracted for shall be duly and properly performed and accepted by the Board of Supervisors.
- C. When any part or portion of the Project is to be used or occupied by Owner in advance of final completion and acceptance, and when duly notified by Owner's Representative, the Contractor shall arrange for completion of said portions of the Work the same as required under the Documents for the whole Work, including cleaning and other readying by the date stipulated with such notice.
- D. Contractor shall not be held responsible for any damage to the occupied part of the Project resulting from Owner's occupancy.
- E. Occupancy by Owner shall not be deemed to constitute a waiver of existing claims on behalf of Owner or Contractor against each other.
- F. Use and occupancy by Owner prior to project acceptance shall not relieve Contractor's responsibility to maintain all insurance and bonds required of Contractor under the Contract until the entire Project is completed and accepted by Owner.
- G. If after written notification by the Owner of the intent to occupy, the Contractor feels that such occupancy will delay progress of the work or will cause additional expense to the Contractor, Contractor may file a request for an equitable adjustment in Contract Price or Time of Completion, or both, with the Owner's Representative. If the Owner's Representative agrees he will either prepare a written change order for the Owner to sign or advise the Owner to delay occupancy.

GC 43. CHANGE OF CONTRACT TIME & LIQUIDATED DAMAGES

- A. Change by Change Order. The contract time may only be changed by change order. A request for an extension or shortening of the contract time shall be based on written notice delivered by the party making the request to County promptly after the occurrence of the event giving rise to the request and stating the general nature of the request. Notice of the extent of the request with supporting data shall be delivered to County and shall be accompanied by the written statement that the adjustment requested is the entire adjustment to which the requesting party has reason to believe it is entitled as a result of the occurrence of said event. No request for an adjustment in the contract time will be valid if not submitted in accordance with the requirements of this paragraph.
- B. Contract time may be extended. The contract time will be extended in an amount equal to time lost due to delays beyond the control of Contractor if the request is made therefor as provided in this article. Such delays shall include, but not be limited to, acts of neglect by County or others performing additional work, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.
- C. Delay and price change. All time limits stated in the contract documents are of the essence. There shall be no adjustment of contract price due to delays for fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God. The provisions of this Provision shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

D. Delays in completion of work :

1. Notice of delays. Whenever the Contractor foresees any delay in the prosecution of the work, and in any event immediately upon the occurrence of any delay which the Contractor regards as unavoidable, Contractor shall notify County in writing of the probability of the occurrence of such delay and its cause in order that County may take immediate steps to prevent, if possible, the occurrence or continuance of the delay or, if this cannot be done, may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the work are to be delayed thereby. It will be assumed that any and all delays which have occurred in the prosecution and completion of the work have been avoidable delays, except such delays as shall have been called to the attention of County at the time of their occurrence and found by County to have been unavoidable. The Contractor shall make no requests for extensions of time as to delay not called to the attention of County at the time of its occurrence.
2. Avoidable delays. Avoidable delays in the prosecution or completion of the work shall include all delays which in the opinion of County would have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or Contractor's subcontractors.
3. Unavoidable delays. Unavoidable delays in the prosecution or completion of the work shall include all delays which, in the opinion of County, result from causes beyond the control of the Contractor and which could not have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or the subcontractors and/or any suppliers. Delay in completion due to contract modifications ordered by County and unforeseeable delays in the completion of work or interference by other contractors employed by County will be considered unavoidable delays insofar as they interfere with the Contractor's completion of the work.

E. Extension of time:

1. Avoidable delays. In case the work is not completed in the time specified, including such extensions of time as may have been granted for unavoidable delays, the Contractor will be assessed damages for delay in accordance with liquidated damages provision. The County, however, shall have the right to grant an extension of time for avoidable delay if it is deemed in County's best interest to do so. During such extension of time, the Contractor will be charged for engineering and inspection services and other costs but will not be assessed damages for the delay.
2. Unavoidable delays. For delays which County considers to be unavoidable, the Contractor shall, pursuant to Contractor's application, be allowed an extension of time beyond the time herein set forth, proportional to such delay or delays, in which to complete the contract. During such extension of time, neither extra compensation for engineering and inspection provided nor damages for delay will be charged to the Contractor.
3. Liquidated damages. County and Contractor recognize that time is of the essence and that County will suffer financial loss if the work is not completed within the time specified above, plus any extensions thereof allowed in accordance with this contract. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by County if the work is not completed on time. Accordingly, instead of requiring any such proof, and due to impracticality and difficulty of ascertaining exact damages caused by delay, County and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay County that amount set forth in the Contract, or if no such amount is specified, then one-half of one percent of the total contract price for each day that expires after the time specified above for completion. In case of joint responsibility for delay in the final completion of the work, where two or more separate contracts are in force at the same time and cover work at the same site, liquidated damages assessed against any one Contractor will be based upon the individual responsibility of that Contractor for the delay as determined by, and in the judgment of, County. County shall have the right to deduct the liquidated damages from any money in its hands, otherwise due, or to become due, to Contractor, or to sue for and recover compensation for damages for nonperformance of this contract within the time stipulated. County has determined and the Contractor acknowledges that the liquidated damages as established herein are governed by the provisions of Government Code §

53069.85 and are predicated upon the reasonable damages accruing to County stemming from any delay in the completion of this project.

GC 44. HOURS OF WORK

- A. The time of service of any labor, workman or mechanic employed upon any of the Work herein specified, shall be limited and restricted to that allowed by law, and no laborer, workman or mechanic employed upon said Work herein specified shall be required or permitted to labor more than that allowed by law, except in cases of extraordinary emergency caused by fire, military or naval defenses or works in time of war.
- B. Within thirty (30) calendar days after any workman is permitted to work over that allowed by law in any one calendar day due to such an extraordinary emergency, the Contractor shall file with the Owner a verified report setting forth the nature of the said emergency, which shall contain the name of said workman and the hours worked by them on said particular day; and failure to file said report within the said thirty day period shall be *prima facie* evidence that no extraordinary emergency existed.
- C. The Contractor and each subcontractor shall keep an accurate record showing the name of and actual hours worked by each worker employed by said Contractor and subcontractor in connection with the work contemplated by this agreement. The record shall be kept open at all reasonable hours to inspection by the Owner or its officers or agents and by the Division of Labor Law Enforcement of the Department of Industrial Relations.
- D. The Contractor shall forfeit as a penalty to the Owner twenty-five dollars (\$25) for each laborer, workman or mechanic employed in the execution of this Contract by them or by any subcontractor under him, upon any public work herein specified for (a.) each calendar day during which any laborer, workman or mechanic is required or permitted to labor more than that allowed by law; or (b.) each calendar week during which any laborer, workman or mechanic is required or permitted to labor more than that allowed by law of the Labor Code of the State of California. Said sums and amounts which shall have been so forfeited pursuant to the herein paragraph and said provisions of said Labor Code shall be withheld and retained from payments due to the Contractor under this Contract, pursuant to this Contract, and the terms of said Code; but no sum shall be so withheld, retained or forfeited except from the final payment without a full investigation by either the Division of Labor Law Enforcement of the State Department of Industrial Relations or by the Owner.

GC 45. PREVAILING WAGE RATES & PAYROLL RECORDS

- A. Prevailing Wage Rates
 - 1. Pursuant to section 1770 and following of the Labor Code of the State of California, the Director of Industrial Relations has ascertained the general prevailing rate of per diem wages and the rates for overtime and holiday work in the locality in which the work is to be performed for each craft, classification or type of worker needed to execute the Contract which will be awarded to the successful bidder, copies of which are on file at Humboldt County Public Works, 1106 Second Street, Eureka, CA 95501, Phone (707) 445-7493 and are available to interested parties on request and by reference are incorporated herein and made a part hereof. Contractor will maintain a copy of prevailing rates and wages on the job site during the contract period.
 - 2. It shall be mandatory upon the Contractor and upon any subcontractor under it, to pay not less than the specified rates to all laborers, workers, and mechanics employed in the execution of the Contract. It is further expressly stipulated that the Contractor shall, as a penalty to the Owner, forfeit not more than \$200 for each calendar day, or portion thereof, for paying less than the stipulated prevailing rates for any work done under this contract by Contractor or by any subcontractor under it; and Contractor agrees to comply with all provisions of Section 1775 of the Labor Code.

3. In case it becomes necessary for the Contractor or any subcontractor to employ on the project under this Contract any person in a trade or occupation (except executives, supervisory, administrative, clerical, or other non-manual workers as such) for which no minimum wage rate is herein specified, the Contractor shall immediately notify the Owner, who will promptly thereafter determine the prevailing rate for such additional trade or occupation and shall furnish the Contractor with the minimum rate based thereon. The minimum rate thus furnished shall be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment. Each contractor shall file a certified copy of the payroll records with the entity that requested the records within ten (10) days after receipt of a written request.
4. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the Owner, shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the contractor awarded the contract for performing the contract shall not be marked or obliterated.
5. The Contractor shall inform the Owner of the location of the payroll records, including the street address, city and county, and shall, within five working days, provide a notice of any change of location and address.
6. The Prime Contractor shall be responsible for compliance with this section.

B. Payroll Records. The Contractor agrees to comply with all requirements of Section 1776 of the Labor Code, including, without limitation, the following:

1. The Contractor and each subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by it in connection with the public work. Each payroll record shall be verified by written declaration, under penalty of perjury, stating both the following:
 - a. The information contained in the payroll record is true and correct.
 - b. The employer has complied with the requirements of sections 1771, 1811 and 1815 of Labor Code for any work performed by his employees on the project.
2. The above-referenced payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:
 - a. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or their authorized representative on request;
 - b. A certified copy of all payroll records shall be made available for inspection or furnished upon request to the Owner, the Division of Labor Standards Enforcement, or the Division of Apprenticeship Standards of the Department of Industrial Relations.
 - c. A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the Owner, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided, pursuant to paragraph b. above, the requesting party shall, prior to being provided the records, reimburse the cost of the Contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the Contractor.

C. Pursuant to Section 1771.1(a) of the California Labor Code, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in Sections 1770 et seq. of the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. It is not a violation of Section 1771.1(a) for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the

contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

GC 46. TAXES

A. Any federal, state or city tax, including sales, excise, use and other taxes payable on articles furnished by the Contractor under the Contract shall be included in the Contract Price and paid for by the Contractor.

GC 47. SUBCONTRACTORS

A. In accordance with the provisions of Section 4100 et seq, of the Public Contract Code of the State of California, each bidder for the work herein specified shall set forth in their Bid Proposal the name and location of the place of business of each subcontractor who will perform work or labor or render service to the General Contractor in or about the construction of the Work or improvements an the amount in excess of one-half (1/2) of one percent (1%) of the General Contractor's total Base Bid; and the portion of the Work which will be done by each subcontractor if the Contract or said Work is awarded to said Bidder.

B. If any General Contractor fails to specify a subcontractor or specifies more than one subcontractor for the same portion of the Work to be performed on the Contract in excess of one-half of one percent of the General Contractor's total Bid, Contractor agrees to perform such portion himself and, if Contractor's Bid is accepted, Contractor shall not be permitted to subcontract that portion of the Work.

C. Should the General Contractor violate any provision of the subletting and subcontracting Fair Practices Act, the Contractor will be deemed in violation of the contract and the Owner may at it's option, (1) cancel the Contract. (2) assess upon the Contractor a penalty in an amount of not more than ten percent (10%) of the amount of the subcontract involved.

D. Prior to the award of the Contract, the Owner's Representative shall notify the successful bidder in writing if the Owner, after due investigation, has reasonable objection to any person or organization on the required list of subcontractors. Failure of the Owner to make an objection to any person or organization on the list prior to the award shall constitute acceptance of such person or organization.

E. The Contractor shall not contract with any subcontractor or any person or organization for any portion of the work who has not been accepted by the Owner. The Contractor will not be required to contract with any subcontractor or person or organization against whom Contractor has a reasonable objection.

F. If after the award of the contract, the Owner refuses to accept any person or organization on the required list of subcontractors, the Contractor shall submit an acceptable substitute and the Contract Sum shall be increased or decreased by the difference in cost occasioned by such substitution, and an appropriate Change Order shall be issued; however, no increase in the Contract Sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.

G. After the award, the Contractor shall resubmit the list of subcontractors, corrected or modified as may be necessary as directed by the Owner.

H. Subcontracting

1. Nothing contained in the Contract Documents shall be construed as creating any contractual relationship between Owner and any subcontractor. The Divisions or Sections of the Specifications, and the divisioning of the Drawings are not intended to control the Contractor in dividing the Work among subcontractors or to limit the Work performed by any trade.

2. The Owner, Owner's Representative or Architect will not undertake to settle any differences between the Contractor and their subcontractors or between subcontractors.

3. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions, and

other Contract Documents insofar as applicable to the work of subcontractors; and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents. The Contractor shall make available to each proposed subcontractor prior to the execution of the Subcontract, copies of the Contract Documents to which the subcontractor will be bound by this Paragraph and identify to the subcontractor any terms and conditions of the proposed Subcontract which may be at variance with the Contract Documents. Each subcontractor shall similarly make copies of such Documents available to their sub-subcontractors.

I. Payments to Subcontractors:

1. Contractor shall pay each subcontractor or supplier upon receipt of payment from Owner, an amount equal to the percentage of completion allowed to Contractor on account of such work performed or material supplied. Contractor shall also require each subcontractor to make similar payments to their subcontractors or suppliers.
2. Contractor shall pay each subcontractor a just share of any insurance monies received by Contractor when and as applicable, and Contractor shall require each subcontractor to make similar payments to their subcontractors or suppliers.
3. The Owner's Representative may, on request and at their discretion, furnish to any subcontractor, if practicable, information regarding percentages of completion certified to the Owner on account of Work done under the Contract.
4. Neither Owner, Owner's Representative or Architect shall have any obligation to see to the payment of any monies to any subcontractor except as may otherwise be required by law.

GC 48. RECORDS, ACCOUNTS AND SEGREGATED PRICES

- A. Contractor agrees to keep one complete set of records and books of accounts, on a recognized cost accounting basis, satisfactory to Owner and Owner's Representative showing all expenditures, of whatever nature, made pursuant to this Contract.
- B. Contractor shall furnish such records, information and data as may be reasonably required and shall cooperate with Owner or Owner's Representative in establishing total costs for various major portions of the Work as will be designated by the Owner's Representative.
- C. If required for convenience of Owner's accounting, Contractor shall furnish segregated prices for various other portions of the Work. These segregated prices shall be in addition to or separate from the required Schedule of Values.

GC 49. LIABILITY FOR TREES

- A. In case of damage to or loss of trees due to carelessness or lack of sufficient protective measures specified, Contractor shall forfeit an amount in proportion to the extent of damage or loss, which shall not be less than Two hundred (\$200) dollars nor exceed One Thousand (\$1,000) dollars per tree for total loss.

GC 50. LIABILITY FOR SURVEY MARKS

- A. In case of damage to, disturbance or removal of survey marks, field markers, monuments, or other survey or layout devices due to carelessness or lack of sufficient protective means, the party responsible for such damage, disturbance or removal shall be liable for the expense to have them replaced and reset in compliance with specified requirements.

GC 51. CLAIMS PROCEDURES

- A. For purposes of this section:
 1. "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
 - a. A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the County under the contract for the project.

- b. Payment by the County of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for the project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
- c. Payment of an amount that is disputed by the County.
- 2. "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the California Business and Professions Code who has entered into a direct contract with the County for a project.
- 3. "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the California Business and Professions Code who either is in direct contract with a Contractor or is a lower tier subcontractor.

B. Upon receipt of a Contractor's claim, the County shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, the County and a contractor may, by mutual agreement, extend the time period provided in this section.

C. The claimant shall furnish reasonable documentation to support the claim.

D. If the County needs approval from its Board of Supervisors to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the County shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

E. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the County issues its written statement. If the County fails to issue a written statement, paragraph (K) shall apply.

F. If the Contractor disputes the County's written response, or if the County fails to respond to a claim issued pursuant to this section within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the County shall schedule a meet and confer conference within 30 days for settlement of the dispute.

G. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the County shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the County issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the County and the claimant sharing the associated costs equally. The County and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

H. For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

- I. Unless otherwise agreed to by the County and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
- J. This section does not preclude the County from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.
- K. Failure by the County to respond to a claim from the Contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the County's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
- L. Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.
- M. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against the County because privity of contract does not exist, the Contractor may present to the County a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the County shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the County and, if the original Contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.
- N. A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable, and (2) the County may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the time frames and procedures set forth in this section.

GC 52. ATTORNEY'S FEES

- A. Contractor hereby agrees to pay Owner, Owner's Representative and/or Architect a reasonable sum as attorney's fees in all court actions including arbitration brought by either of them against the other or in which they are both plaintiffs or defendants, and also in court actions involving claims of subcontractors or material suppliers and in actions involving offsetting claims between Contractor and Owner, Owner's Representative or Architect because of any doubts, disputes or actions arising out of this Contract, except in the following cases:
 - 1. When Contractor obtains a favorable net judgment against the Owner, Owner's Representative and/or Architect after consideration of claims and offsets of Owner which are allowed by the court against Contractor for breach of this Contract;
 - 2. When Owner, Owner's Representative and/or Architect is denied a favorable judgment by a court in a suit against Contractor which may be brought by Owner, Owner's Representative or Architect.

END OF SECTION 00 72 00

SECTION 00 73 00 - SUPPLEMENTARY GENERAL CONDITIONS

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SGC 1. GUARANTEE WORK

A. In the event of failure of Contractor to comply with the requirements of any guarantee by this Contract within seven (7) days after being notified in writing, Owner is authorized to proceed to have the defects repaired and made good at the expense of Contractor, who shall pay the costs and charges therefore immediately on demand.

SGC 2. LAWS AFFECTING PUBLIC WORKS

A. Attention to bidders is called to necessity of being familiar with the various Federal, State and Local laws affecting public work, especially, but not limited to, those laws relating to hours of employment, minimum wage rates, payment of wages, sanitary and safety conditions for workmen, workmen's compensation insurance, type and kind of materials that can be used, non-discrimination in employment and affirmative-action programs. Contractor is advised that this project is being paid for by State and local funds. Contractor shall comply with applicable regulations and hold harmless the Owner for their failure to comply. Certain of those provisions may be set forth herein or in the General Construction Contract. The existence of these provisions does not excuse the Contractor from complying with other statutory requirements or provisions which are not set forth in these Contract Documents.

SGC 3. OWNER'S REPRESENTATIVE, INSPECTOR

A. The Owner will employ an "Owner's Representative" and "Inspector". The Inspector will observe the installation of all materials and equipment to be incorporated into the Work and the placing of such materials and equipment to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of their observations, the Inspector will keep the Owner's Representative informed as to the progress of the Work and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor and subcontractors employed by the Contractor in the prosecution of the Work. The Owner's Representative and Inspector shall not be responsible for means, methods, techniques, sequences or procedures of construction, nor be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

SGC 4. RESPONSIBILITY FOR COMPLIANCE WITH OSHA

A. All work, materials, work safety procedures and equipment shall be in full accordance with the latest OSHA rules and regulations.

B. Contractor warrants that Contractor and each of their subcontractors shall, in performance of this Contract, comply with each and every compliance order issued pursuant to OSHA and CAL-OSHA. The Contractor assumes full and total responsibility for compliance with OSHA and CAL-OSHA Standards by their subcontractors as well as himself. The cost of complying with any compliance order and/or payment of any penalty assessed pursuant to OSHA and CAL-OSHA shall be borne by the Contractor. Contractor shall save, keep and hold harmless the Owner and all officers, employees and agents thereof from all liabilities, costs or expenses in law or in equity, that may at any time arise or be set up because of Contractor's or subcontractor's non-compliance or alleged non-compliance with OSHA and CAL-OSHA requirements.

C. Nothing contained herein shall be deemed to prevent the Contractor and their subcontractors from otherwise allocating between themselves responsibility for compliance with OSHA and CAL-OSHA requirements; provided, however, that the Contractor shall not thereby be, in any manner whatsoever, relieved of their responsibility to the Owner as herein above set forth.

SGC 5. AS BUILT DRAWINGS

A. The Contractor shall maintain a set of drawings and specifications which shall be kept at the site of the Work at all times. Exact locations of all pipes and conduits, and all changes in construction and details shall be indicated and dimensioned upon these drawings, and all changes in materials and

equipment installed shall be indicated in these specifications. The as-built drawings shall be current (up-to-date) to qualify for payment; the job Inspector will verify. Upon completion of the Work, the As-Built Drawings shall be prepared by the Contractor and Specifications shall be reviewed by the Owner's Representative and Consultants and returned to the Owner prior to the final payment. The As-Built Drawings shall be neatly drafted on erasable mylar reproducible transparencies, or printed on vellum and submitted as a .dwg file if prepared electronically.

SGC 6. FINAL CERTIFICATES

- A. When the Work is ready for acceptance, by the Owner, the Owner's Representative shall so certify in writing to the Owner, indicating substantial completion and that the building can be occupied and used and a Certificate of Acceptance will be issued to the Contractor which will bring their Progress Payment up to ninety-five (95%) percent of the Contract Price, with five (5%) percent to remain in retention until after Notice of Completion, less sums withheld regarding liquidated damages, if any, or any other damages incurred by owner, or other sums withheld pursuant to the terms of this agreement or by law.
- B. Notice of Completion will be filed by the Owner after substantial completion and acceptance of the Work by the Board of Supervisors. Providing no stop notices have been filed, thirty-five days after filing of such notice of completion, payment due under the Contract will become due to the Contractor and the Owner's Representative shall so certify to the Owner authorizing the final payment. Such payment may withhold any reasonable sums payable to Contractor for any Work which has not been completed on said date, or that the Owner may have found defective and ordered to be replaced; final payment for withholding to be made when certified by Owner's Representative in writing to Owner.

SGC 7. LIENS AND STOP NOTICES

- A. Should Stop Notices be filed with the Owner, Owner shall in accordance with California Civil Code Section 9358, withhold the amount claimed, plus an allowance of 25% to cover its litigation costs plus interest at the rate of 10%, from certificates until such claims have been resolved pursuant to law.

SGC 8. GUARANTEES AND MAINTENANCE MANUALS

- A. The Contractor and each subcontractor and each supplier shall provide to the Owner, copies of all maintenance guarantees, maintenance manuals and technical specifications relating to their portion of the Project prior to completion of the Project, and in accordance with the GENERAL REQUIREMENTS, PROJECT CLOSE-OUT.

SGC 9. THE WORK

- A. The Work comprises the completed construction required by the Contract Documents and approved change orders and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

SGC 10. THE PROJECT

- A. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.
- B. By executing the Contract, the Contractor represents that Contractor has visited the sites, familiarized themselves with the local conditions under which the Work is to be performed, and correlated their observations with the requirements of the Contract Documents.
- C. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to

produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

D. The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.

SGC 11. OWNER

A. The Owner shall forward all instruction to the Contractor through the Owner's Representative.

B. Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

SGC 12. OWNER'S RIGHT TO STOP THE WORK

A. If the Contractor fails to correct defective Work as required by GC 17, or persistently fails to carry out the Work in accordance with the contract Documents, the Owner, by a written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

SGC 13. OWNER'S RIGHT TO CARRY OUT THE WORK

A. If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven (7) calendar days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, after seven (7) calendar days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the Owner may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Owner's Representative or Architect's additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner immediately upon demand.

SGC 14. INDEMNIFICATION

A. To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the Owner, Owner's Representative, Inspector and the Architect and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense is (1) attributable to bodily injury, sickness, disease or death, or the injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder; excepting only such claims as are caused by the sole negligence or willful misconduct of the Owner, Owner's Representative, Inspector or Architect. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

B. In any and all claims against the Owner, Owner's Representative, Inspector or the Architect or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any

subcontractor under Workers' or Workmen's Compensation Acts, disability benefit acts or other employee benefit acts.

C. The obligations of the Contractor under this paragraph shall not extend to the liability of Owner's Representative or the Architect, their agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, design or specification, or (2) the giving of or the failure to give directions or instruction by the Owner's Representative or the Architect, their agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

SGC 15. COMPLIANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, 2010 ADA STANDARDS AND THE INTERNATIONAL BUILDING CODE

A. Governing Codes: Title 24, California Code of Regulations (C.C.R.), latest edition which adopts and amends the International Building Code, latest edition; International Fire Code, latest edition; Uniform Mechanical Code, latest edition; National Electrical Code, latest edition; Uniform Mechanical Code, latest edition; and the Uniform Plumbing Code, latest edition. The project shall also comply with the Americans with Disabilities Act, and the latest editions of associated regulations.

SGC 16. LIABILITY OF CONTRACTOR

A. The Contractor shall do all of the Work and furnish all labor, materials, tools, and appliances, except as otherwise herein expressly stipulated, necessary or proper for performing the Work herein required in the manner and within the time herein specified. The mention of any specific duty or liability imposed upon the Contractor shall not be construed as a limitation or restriction of any general liability or duty imposed upon the Contractor by this contract, said reference to any specific duty or liability being made herein merely for the purpose of explanation.

B. The right of general supervision by the Owner shall not make the Contractor an agent or employee of the Owner, and the liability of the Contractor for all damages to persons or to public or private property arising from the Contractor's execution of the Work shall not be lessened because of such general supervision.

B. Until the completion and final acceptance by the Owner of all of the Work under and implied by this contract, the Work shall be under the responsible care and charge of the Contractor. The Contractor shall rebuild, repair, restore and make good all injuries, damages, re-erects and repairs occasioned or rendered necessary or caused of any nature whatsoever, excepting only acts of God not covered by the all-risk insurance policy called for in Article GC 4 and not other, to all or any portions of the Work except as otherwise expressly stipulated.

SGC 17. NUCLEAR FREE HUMBOLDT COUNTY ORDINANCE COMPLIANCE

A. Neither the Contractor, their Subcontractors or their suppliers are Nuclear Weapons Contractors, and are not knowingly or intentionally engaged in the research, development, production, or testing of nuclear warheads, nuclear weapons systems, or nuclear weapons components, as defined by the Nuclear Free Humboldt County Ordinance. Contractor, their Subcontractors and/or their suppliers agree to notify Owner immediately if they become a nuclear weapons contractor as defined above.

SGC 18. REQUIRED LISTING OF PROPOSED SUBCONTRACTORS

A. Each proposal shall have listed therein the name, address, description of work and contractor's license number of each subcontractor to whom the bidder proposes to subcontract portions of the work in the amount of 1/2 of one percent of their total bid, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code and for verification of conformance with Labor Code Sections 1771 and 1725.5. The bidder's attention is invited to other provisions of said Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.

- B. Pursuant to Section 1771.1(a) of the California Labor Code, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in Sections 1770 et seq. of the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. It is not a violation of Section 1771.1(a) for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.
- C. A sheet for listing the subcontractors, as required herein, is included in the proposal- Please reference Section 00 43 36 "Subcontractor List."

SGC 19. NONDISCRIMINATION

- A. During the performance of this contract, the Contractor and its subcontractors shall not deny the contract's benefits to any person on the basis of religion, color, ethnic group identification, sex, age, physical or mental disability, nor shall they unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age (over 40), marital status, denial of family care leave and denial of pregnancy disability leave in connection with any program or activity funded in whole or in part by Federal and/or State funds provided through this grant contract.
- B. Contractor and all subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Contractor and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12990 [a-f] et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.).
- C. The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a part hereof as set forth in full. Contractor and subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
- D. Contractor shall comply with all applicable nondiscrimination laws and regulations.
- E. The Contractor and all subcontractors shall include the nondiscrimination and compliance provisions of this clause in all contracts and subcontracts to perform work under the contract.

SGC 20. HAZARDOUS WASTE IN EXCAVATION

- A. If the Contractor encounters material in excavation which Contractor has reason to believe may be hazardous waste, as defined by Section 25117 of the Health and Safety Code, Contractor shall immediately so notify the Owner's Representative in writing. Excavation in the immediate area of the suspected hazardous material shall be suspended until the OWNER authorizes it to be resumed. If such suspension delays the current controlling operation, the Contractor will be granted an extension of time by means of a change order.
- B. The Owner reserves the right to use other forces for exploratory work to identify and determine the extent of such material and for removing hazardous material from such area.

SGC 21. CONSTRUCTION ACTIVITIES

- A. Construction activities at the site shall be as required by the Contractor to complete the project by the prescribed completion date. Contractor must comply with Noise Abatement Provisions.

SGC 22. DISCOVERY OF HUMAN REMAINS OR AN ARCHAEOLOGICAL SITE

- A. If during construction activities, human remains or evidence of an archaeological site, including outhouse pits, construction shall be immediately halted and the Owner's Representative notified who will request an evaluation by a qualified archaeologist, approved by the Owner as to whether the discovery constitutes an "important archaeological resource" as defined in Section III, Appendix K of the CEQA Guidelines.
- B. If the resource is determined to be important, mitigation shall proceed as outlined by Appendix K of the Guidelines and as recommended by the archaeologist.

SGC 23. CONTRACTOR RESPONSIBILITY AND DEBARMENT

- A. A responsible contractor is a contractor who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity and experience to satisfactorily perform the contract. It is the County's policy to conduct business only with responsible contractors. (Ord. 2291, § 1, 01/07/2003)
- B. The contractor is hereby notified that, in accordance with Title II, Division 14 of the County Code, if the County acquires information concerning the performance of the contractor on this or other contract which indicates that the contractor is not responsible, the County may, in addition to other remedies provided in the contract, debar the contractor from bidding on County contracts for a specified period of time, not to exceed three (3) years, and terminate any or all existing contracts the contractor may have with the County. (Ord. 2291, § 1, 01/07/2003)
- C. The County may debar a contractor if the Board of Supervisors finds, in its discretion, that the contractor has done any of the following: (1) violated any term of a contract with the County; (2) committed any act or omission which negatively reflects on the contractor's quality, fitness, or capacity to perform a contract with the County or any other public entity, or engaged in a pattern or practice which negatively reflects on same; (3) committed an act or offense which indicates a lack of business integrity or business honesty; or (4) made or submitted a false claim against the County or any other public entity. (Ord. 2291, § 1, 01/07/2003)
- D. If there is evidence that the contractor may be subject to debarment, the department will notify the contractor in writing of the evidence which is the basis for the proposed debarment and will advise the contractor of the scheduled date for a debarment hearing before the CHB (Contractor's Hearing Board). (Ord. 2291, § 1, 01/07/2003)
- E. The CHB will conduct a hearing where evidence on the proposed debarment is presented. The contractor and/or the contractor's representative shall be given an opportunity to submit evidence at that hearing. After the hearing, the CHB shall prepare a proposed decision, which shall contain a recommendation regarding whether the contractor should be debarred, and, if so, the appropriate length of time of the debarment. If the contractor fails to avail itself of the opportunity to submit evidence to the CHB, the contractor may be deemed to have waived all rights of appeal. (Ord. 2291, § 1, 01/07/2003)
- F. A record of the hearing, the proposed decision and any other recommendation of the CHB shall be presented to the Board of Supervisors. The Board of Supervisors shall have the right to modify, deny or adopt the proposed decision and recommendation of the hearing board. (Ord. 2291, § 1, 01/07/2003)
- G. These terms shall also apply to subcontractors and subconsultants of County contractors. (Ord. 2291, § 1, 01/07/2003)

SGC 24. BID PROTEST

Any bid protest must be in writing and must be received by the Director of County Administrative Office, Humboldt County Administrative Office, 825 Fifth Street, Eureka, CA, 95501, Fax: (707) 445-7299 or by email before 5:00 p.m. no later than three (3) working days following bid opening (the "Bid Protest Deadline") and must comply with the following requirements:

- A. Only a bidder who has actually submitted a Bid Proposal is eligible to submit a bid protest against another bidder. Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest.
- B. The bid protest must contain a complete statement of the basis for the protest and all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the specific portion or portions of the Contract Documents upon which the protest is based. The protest must include the name, address and telephone number of the person representing the protesting bidder if different from the protesting bidder.
- C. A copy of the protest and all supporting documents must also be transmitted by fax or by e-mail, by or before the Bid Protest Deadline, to the protested bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.
- D. The protested bidder may submit a written response to the protest, provided the response is received by the Department Director before 5:00 p.m., within two (2) working days after the Bid Protest Deadline or after receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must include all supporting documentation. Material submitted after the Response Deadline will not be considered. The response must include the name, address and telephone number of the person representing the protested bidder if different from the protested bidder.
- E. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of bid protest. The bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue a bid protest, including filing a Government Code Claim or initiation of legal proceedings.

SGC 25. STORM WATER POLLUTION PREVENTION PLAN

- A. The Contractor shall develop a Storm Water Pollution Prevention Plan that addresses all of the required elements outlined in this specification.
- B. The Contractor shall comply with the following prohibitions, limitations and general requirements:
 1. Prohibitions:
Discharge of materials other than storm water and authorized non-storm water discharges and all discharges which contain a hazardous substance to surface waters are prohibited.
 2. Storm Water Pollution Prevention Plan (SWPPP) Requirements:
The development and implementation of a Storm Water Pollution Prevention Plan is herein required. The SWPPP shall contain site map(s) which shows the construction site perimeter, existing and proposed buildings, roadways, storm water collection and discharge points, general topography both before and after construction and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect storm water runoff and placement of BMPs. Additionally, the SWPPP must contain a visual monitoring program: a chemical monitoring program for non-visible pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body.
- C. Submittals:
The Contractor is required to submit to the County for approval a SWPPP detailing the placement of BMPs and the methods used to comply with those BMPs. The SWPPP shall be in place before any construction activity may start.
- D. References:
The Contractor is strongly urged to consult the following resources:

1. The State Water Resources Control Board General Construction Storm Water Permit at <http://www.swrcb.ca.gov/stormwtr/construction.html>
2. The California Storm Water Association web site at: <http://www.cabmphandbooks.com>
3. California Department of Transportation (CalTrans) at: <http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm>
4. National Storm Water Best Management Practices (BMP) Database at: <http://www.bmpdatabase.org>

END OF SECTION 00 73 00

SECTION 01 11 00 - SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contractor's use of site and premises.
- B. County's occupancy requirements.
- C. Specification formats and conventions.

1.2 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Vehicle access to Project site shall be held to a minimum. Vehicle access will be on one specific route approved by County; no exceptions will be allowed.
- B. Coordinate use of the premises under the direction of the County.
- C. Assume full responsibility for the protection and safekeeping of materials, products, and equipment under this Contract, stored on the site.
- D. Move any stored materials, products, and equipment under Contractor's control which interfere with the operations of County or a separate contractor.
- E. Obtain and pay for the use of additional storage or work areas needed for Contractor's operations.
- F. Contractor shall be aware of and abide by the Humboldt County and local Noise Ordinance and County's noise prevention requirements. Contractor to verify County's requirements.

1.3 COUNTY'S OCCUPANCY REQUIREMENTS

- A. Tenant Occupancy: the Public will continue to occupy and use the site and building during construction, with the exception of areas under construction, during the entire construction period.
- B. Contractor shall cooperate with County and their tenants to minimize conflicts, and to facilitate County's ongoing operations and use of the building.
- C. Contractor shall verify occupancy requirements with County, and schedule the Work to accommodate County's tenant's requirements.
- D. Contractor shall maintain access to existing alternate walkways, entrances to the building and other adjacent occupied or used facilities. Contractor shall not close or obstruct walkways or other occupied or used facilities without written permission from County and authorities having jurisdiction.
- E. Contractor shall provide not less than 72 hours of notice to County of activities that will affect tenant operations.

1.4 ENVIRONMENTAL MANAGEMENT

- A. Spills: Contractor shall clean up all fluid spills caused by leaks in the equipment or generated while Contractor is performing the work under this Contract. Contractor shall provide drip catch pans for all equipment that drips or leaks oils or other fluids. Spills generated by Contractor's operation shall be cleaned up by Contractor at no cost to County.
- B. Dust and Noise Control:

1. Precaution shall be exercised at all times to control dust and excessive noise created as a result of any operations during the construction period.
2. If serious problems and/or complaints arise due to airborne dust and excessive noise, and when directed by the County, operations causing such problems shall be temporarily discontinued until a suitable remedy is established. The remedy shall be approved by the County before implementation, and shall be considered part of Contractor's normal effort to maintain safety and cleanliness without cause for further payment.

1.5 MATERIALS AND WORKMANSHIP

- A. Except as otherwise specified all materials and equipment incorporated in the Work under the Contract shall be new. All workmanship shall be first-class and by persons qualified in the respective trades.

1.6 ACCIDENT PREVENTION AND PROTECTION OF LIVES AND HEALTH

- A. Precaution shall be exercised at all times for protection of all personnel and occupants, including employees of Contractor, County, and property.
- B. The California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH, also known as Cal/OSHA) requirements for safety and health protection of workers and public apply. Other requirements not covered by Cal/OSHA, shall be in accordance with U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) requirements.
- C. Comply with safety requirements of CCR, Title 8, Division 1, Chapter 4, "Division of Industrial Safety," and Title 8, Division 1, Chapter 3.2, "Cal/OSHA Regulations"; CCR, Title 24, CBC; and other applicable building and construction codes. Machinery, equipment, openings, power lines, and all other safety hazards shall be guarded or eliminated in accordance with safety requirements of Title 8, and Manual of Accident Prevention in Construction published by the Associated General Contractors of America.

1.7 UTILITIES

- A. Excavation at the Project site requires a call to Underground Service Alert North (USA North), 811 or by internet at <http://usanorth811.org>.
 1. Contractor shall call USA North at least 7 days prior to commencing excavation work. Obtain a ticket number and confirm service date for marking underground facilities (utilities).
 2. Prior to placing the call, Contractor shall mark the outline of excavation with chalk, paint, or stakes, to enable representatives (locators) of USA North members to map the area for existing underground facilities (utilities).
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by County or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify the County not less than three days in advance of proposed utility interruptions.
 2. Obtain County's written permission before proceeding with utility interruptions.
- C. Provide necessary protection to existing utility services and repair work damaged as a result of operations under this Contract.

1.8 PROTECTION OF EXISTING FACILITIES

- A. Contractor shall take appropriate measures to prevent damage to existing facilities, site work, landscaping, and adjoining property. Should damage occur, such facilities, site work, landscaping, and property shall be restored to original condition, at no cost to County.

1. Contractor shall arrange for protection of existing buildings at all times. Contractor shall furnish, install, and maintain, necessary barricades, temporary coverings, etc., as required for protection, and remove them at completion of the Work. When all Work is complete, damaged areas of the premises shall be restored to original undamaged condition that existed prior to installation of temporary protection.
- B. Housekeeping: The premises shall be kept in a clean, safe condition at all times. Rubbish shall be removed as fast as it accumulates.
- C. Burning: Burning of refuse, debris, and construction waste at Project site will not be permitted.

1.9 OVERLOADING

- A. Contractor shall not overload any part or parts of structures beyond their safe calculated carrying capacities by placing materials, equipment, tools, machinery or any other item thereon. No loads shall be placed on floors or roofs before they have attained their permanent and safe strength.

1.10 MANUFACTURER'S INSTRUCTIONS

- A. Where required in the Specifications that materials, products, equipment, and processes be installed or applied in accordance with manufacturer's instructions, directions, or specifications, or stated in words to that effect, it shall be construed to mean that said installation or application shall be in strict accordance with printed instructions furnished by manufacturer of the specified item and is suitable for use under conditions similar to those at the jobsite. Three copies of such instructions shall be included in the applicable submittal and furnished to the County for review. Obtain County's acceptance prior to commencement of the Work.

1.11 RESPONSIBILITY FOR THEFT AND DAMAGE

- A. County will not be responsible for the loss or theft of Contractor's tools, equipment and materials.

1.12 FIRE PROTECTION

- A. Contractor shall at all times maintain good housekeeping practices to reduce the risk of fire and water damage. All scrap materials, rubbish and trash shall be removed daily from jobsite, inside and around the buildings or structures, as applicable, and shall not be scattered on adjacent property.
- B. Suitable storage space shall be provided outside immediate building areas during construction for temporary storage of flammable materials and paints, as required by CFC Chapter 14 and NFPA 241. Excess flammable liquids being used inside the building shall be kept in closed metal containers and be removed from the building during unused periods.
- C. Contractor shall provide temporary fire extinguishers during construction in accordance with the recommendations of CBC Chapter 33, CFC Chapter 14, and NFPA Bulletins Nos. 10 and 241. However, in all cases a minimum of one fire extinguisher shall be available for use.
- D. Under provisions of CFC Chapters 14 and 26, provide a fire extinguisher at each location where cutting, soldering, or welding is being performed. Where electric or gas welding or cutting work is done, interposed shields of noncombustible material shall be used to protect against fire damage due to sparks and hot metal. When temporary heating devices are used, a watchman shall be present to cover periods when other workmen are not on the premises.

1.13 EMERGENCY CONDITIONS

- A. Emergency condition shall be any condition at the Project site which has the actual or potential for significant adverse effects to persons or property, whether or not resulting from Contractor's operations.

- B. Immediate action shall be taken by Contractor by whatever means necessary to alleviate the condition and to prevent damage or injury to persons or property. County shall be notified of the existence of such a condition, but shall not be called upon to perform emergency service.
- C. County may not respond to the emergency condition, which shall not be used as an excuse by Contractor to neglect immediate action; County will not be responsible or liable for any resulting conditions. Absence of Contractor's Representative during emergency conditions at jobsite shall not relieve Contractor from contractual responsibility of providing an immediate response to the situation, for restoration of conditions to normalcy.
- D. If the emergency conditions are not caused by Contractor's fault or neglect, the Contract Sum shall be adjusted to reflect the actual direct field costs of labor and materials to perform and complete emergency measures.
- E. The Contract Time shall also be adjusted to reflect the actual direct effect of such actions to the then critical path of the Construction Progress Schedule. The foregoing notwithstanding, adjustments of the Contract Sum or the Contract Time for actions taken by Contractor in response to emergency circumstances shall be subject to Contractor's strict compliance with all other applicable provisions of the Contract Documents relating to notices and time for delivery of notices.

1.14 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and numbering system of CSI "MasterFormat, 2004 Edition.
- B. Division 01 Sections govern the execution of the Work of all Sections in the Specifications.
- C. Specifications Conventions: Singular words shall be interpreted as plural and plural words shall be interpreted as singular, where applicable, as the context of the Contract Documents indicates.
- D. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

PART 1 GENERAL**1.01 RELATED DOCUMENTS**

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing the following contract modifications:

1. Request for Information.
2. Field Order.
3. Request for Cost Proposal.
4. Cost Proposal.
5. Change Orders.

1.03 DEFINITIONS**A. Request for Information (RFI)**

1. Written request submitted by Contractor to County's Representative via the County's online project management system on a form supplied by County's Representative requesting clarification, interpretation, or additional information pertaining to Contract Documents.
2. An RFI shall not be used as a vehicle for only confirming or verifying issues.

B. Field Order (FO)

1. County's Representative written directives to the Contractor covering a specific aspect of work, signed by the County or County's lead agency that authorizes changes in the Work to expedite the change order process.

C. Request for Cost Proposal (RFCP)

1. Written request by the County's Representative to the Contractor to quote change to Contract Sum and/or Contract Time for proposed change to Contract Document.

D. Cost Proposal (CP)

1. Written request by the Contractor to the County's Representative to change Contract Sum and/or Contract Time for proposed change to Contract Document.

E. Change Order (CO)

1. Initiated by the County, Contractor, Consultant, County's lead agency, or the County's Representative and signed by the County and Contractor stating their agreement to a change to Contract Documents and adjustment to Sum and/or Contract Time.

1.04 REQUEST FOR INFORMATION (RFI)

- A. Submit RFIs numbered in sequential order, reviewed by the Contractor with respect to Contract Documents.
 1. Submit RFIs on forms designated by the County's Representative.
- B. County's Representative will monitor the RFI process and responses from the Consultant. The Consultant will receive RFIs only from the County's Representative; Consultant will not accept RFIs directly from any other entity.
- C. County's Representative will receive only legible, properly prepared RFI:
 1. Unreadable facsimile machine RFIs, illegibly written RFIs, or RFIs with incomplete information, will be returned promptly without action.
 2. RFIs may be transmitted to County's Representative by online project management system.
 - a. County's Representative will forward to Consultant for review, and return response by same method received from Contractor.
 3. Consultant will review RFIs with respect to Contract Documents and return response in a timely manner, generally within 7 calendar days, or commensurate with RFI subject.
 - a. RFIs marked "URGENT" will take precedence over outstanding RFIs and be answered by Consultant as soon as possible.

- D. Contractor being fully familiar with Contract Documents, shall not be relieved of responsibility to coordinate the Work to prevent adverse impact to Project schedule when submitting RFIs to Owner's Representative for clarification or interpretation of Contract Documents, or additional information.
- E. If the Contractor believes the scope of work referenced in the RFI has a cost and /or time impact, he will not proceed with the work until either a Field Order or a Change Order has been issued.

1.05 FIELD ORDER (FO)

- A. Field Orders may include supplementary or revised Drawings and/or Specification to describe changes to Contract Documents.
- B. Field Orders will be executed on forms designated by the County's Representative.
- C. Field Orders may be generated by the Contractor's written notice submitted on a Cost Proposal form, that an RFI response or other unforeseen condition has changed the Contract cost and /or time, and that schedule impact will result if written directive is not provided in a timely manner.

- D. Contractor shall provide an estimate of cost and/or time impact at the time of the request for a Field Order.
- E. County's Representative will review the request for a Field Order and initiate a written Field Order for authorization by the County or County's lead agency.
- F. If the Field Order is approved by the County or County's lead agency, County's Representative will release the signed Field Order to the Contractor. If rejected, the Contractor is so notified by the County's Representative.

1.06 REQUEST FOR COST PROPOSAL (RFCP)

- A. Request for Cost Proposal is an informational request only, and is not an instruction or authorization to execute a change, or an order to stop Work in progress.
- B. Request for Cost Proposal may include supplementary or revised Drawings and/or Specification to describe proposed changes to Contract Documents.
- C. Contractor shall submit cost and/or time quotation to County's Representative within 15 calendar days following receipt of Request for Cost Proposal.

1.07 COST PROPOSAL (CP)

- A. Contractor shall submit to the County's Representative a Cost Proposal for all occurrences the Contractor believes impacts Scope of Work cost and/or time.
 - 1. A Cost Proposal shall be submitted within 15 calendar days of the occurrences.
- B. Submit Cost Proposal numbered in sequential order, reviewed by the Contractor with respect to Contract Documents.
 - 1. Submit Cost Proposals on forms designated by the County's Representative.
- C. All Cost Proposals submitted shall have detailed breakdown for all associated work, cost and/or time.
- D. County's Representative will solicit and monitor independent cost estimates responses from the Consultant.
- E. County's Representative shall return Cost Proposal responses and reviews to the Contractor within 15 calendar days following receipt of Cost Proposal.
- F. A processed Cost Proposals is informational back-up for a potential Change Order, and not an instruction or authorization to execute a change, or an order to stop Work in progress.

1.08 CHANGE ORDER (CO)

- A. Change Orders may be initiated by the County, Contractor, Consultant, Owner's lead agency, or the Owner's Representative.
- B. Changes to the Project Contract Sum and/or Contract Time listed or indicated in Change Orders shall include or be determined by methods described in the General Conditions.

- C. County's Representative has responsibility for processing and administering Change Orders for the Project, and will prepare each Change Order using form designated by the County's Representative.
- D. Contractor shall provide all pricing proposals Cost Proposals for a Change Order. The Consultant shall provide independent cost estimates to Cost Proposals.
 - 1. Cost differentials between the Contractor's Cost Proposal and the Owner's Representative may negotiate the Consultants cost estimates.
 - 2. If no agreement is reached, the County's Representative may issue a time and material change Order.
 - a. Use Daily Force Account Report designated by County's Representative.
- E. The Contractor, Consultant, County's Representative, County's lead agency and County will sign a fully documented Change Order.

1.09 CORRELATING CHANGE ORDERS WITH OTHER CONTRACT REQUIREMENTS

- A. Revise Schedule of Values and Applications for Payment to record each Change Order as a separate item of work with adjustment to Contract Sum and Contract Time.
- B. Revise Construction Schedule to reflect each change in Contract Time.
- C. Record modifications in Record Documents.

END OF SECTION 01 26 00

PART 1 GENERAL**1.01 DESCRIPTION**

- A. This specification defines the general requirements and procedures for submittals. A submittal is information submitted for Humboldt County review to establish compliance with the contract documents.
- B. Detailed submittal requirements are found in the technical sections of the contract specifications. The County may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective technical specifications at no additional cost to the government.
- C. County approval of a submittal does not relieve the Contractor of the responsibility for any error which may exist. The Contractor is responsible for fully complying with all contract requirements and the satisfactory construction of all work, including the need to check, confirm, and coordinate the work of all subcontractors for the project. Non-compliant material incorporated in the work will be removed and replaced at the Contractor's expense.

1.02 DEFINITIONS

- A. Preconstruction Submittals: Submittals which are required prior to issuing contract notice to proceed or starting construction. For example, Certificates of insurance; Surety bonds; Site-specific safety plan; Construction progress schedule; Schedule of values; Submittal register; List of proposed subcontractors.
- B. Shop Drawings: Drawings, diagrams, and schedules specifically prepared to illustrate some portion of the work. Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be integrated and coordinated.
- C. Product Data: Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions, and brochures, which describe and illustrate size, physical appearance, and other characteristics of materials, systems, or equipment for some portion of the work. Samples of warranty language when the contract requires extended product warranties.
- D. Samples: Physical examples of materials, equipment, or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged. Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project. Field samples and mock-ups constructed to establish standards by which the ensuing work can be judged.
- E. Design Data: Calculations, mix designs, analyses, or other data pertaining to a part of work.
- F. Test Reports: Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work. Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

- G. Certificates: Document required of Contractor, or of a manufacturer, supplier, installer, or subcontractor through Contractor. The purpose is to document procedures, acceptability of methods, or personnel qualifications for a portion of the work.
- H. Manufacturer's Instructions: Pre-printed material describing installation of a product, system, or material, including special notices and MSDS concerning impedances, hazards, and safety precautions.
- I. Manufacturer's Field Reports: Documentation of the testing and verification actions taken by manufacturer's representative at the job site on a portion of the work, during or after installation, to confirm compliance with manufacturer's standards or instructions. The documentation must indicate whether the material, product, or system has passed or failed the test.
- J. Operation and Maintenance Data: Manufacturer data that is required to operate, maintain, troubleshoot, and repair equipment, including manufacturer's help, parts list, and product line documentation. This data shall be incorporated in an operations and maintenance manual.
- K. Closeout Submittals: Documentation necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a phase of construction on a multi-phase contract.

1.03 SUBMITTAL REGISTER

- A. The submittal register will list items of equipment and materials for which submittals are required by the specifications. This list may not be all inclusive and additional submittals may be required by the specifications. The Contractor is not relieved from supplying submittals required by the Contract Documents but which have been omitted from the submittal register.
- B. The submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period.
- C. The Contractor shall track all submittals by maintaining a complete list, including completion of all data columns, including dates on which submittals are received and returned by the County.
- D. The Contractor shall update the submittal register as submittal actions occur and maintain the submittal register at the project site until final acceptance of all work by County.
- E. The Contractor shall submit formal monthly updates to the submittal register in electronic format. Each monthly update shall document actual submission and approval dates for each submittal.

1.04 SUBMITTAL SCHEDULING

- A. Submittals are to be scheduled, submitted, reviewed, and approved prior to the acquisition of the material or equipment.

- B. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow time for potential resubmittal.
- C. No delay costs or time extensions will be allowed for time lost in late submittals or resubmittals.
- D. All submittals are required to be approved prior to the start of the specified work activity.

1.05 SUBMITTAL PREPARATION

- A. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.
- B. Collect required data for each specific material, product, unit of work, or system into a single submittal. Prominently mark choices, options, and portions applicable to the submittal. Partial submittals will not be accepted for expedition of construction effort. Submittal will be returned without review if incomplete.
- C. If available product data is incomplete, provide Contractor prepared documentation to supplement product data and satisfy submittal requirements.
- D. All irrelevant or unnecessary data shall be removed from the submittal to facilitate accuracy and timely processing. Submittals that contain the excessive amount of irrelevant or unnecessary data will be returned with review.
- E. Provide a transmittal form for each submittal with the following information:
 1. Project title, location and number.
 2. Construction contract number.
 3. Date of the drawings and revisions.
 4. Name, address, and telephone number of subcontractor, supplier, manufacturer, and any other subcontractor associated with the submittal.
 5. List paragraph number of the specification section and sheet number of the contract drawings by which the submittal is required.
 6. When a resubmission, add alphabetic suffix on submittal description. For example, submittal 18 would become 18A, to indicate resubmission.
 7. Product identification and location in project.
- F. The Contractor is responsible for reviewing and certifying that all submittals are in compliance with contract requirements before submitting for County review. Proposed deviations from the contract requirements are to be clearly identified. All deviations submitted must include a side by side comparison of item being proposed against item specified. Failure to point out deviations will result in the County requiring removal and replacement of such work at the Contractor's expense.
- G. Stamp, sign, and date each submittal transmittal form indicating action taken.

H. Stamp used by the Contractor on the submittal transmittal form to certify that the submittal meets contract requirements is to be similar to the following:

CONTRACTOR

(Firm Name)

Approved

Approved with corrections as noted on submittal data and/or
attached sheets(s)

SIGNATURE: _____

TITLE: _____

DATE: _____

1.06 SUBMITTAL FORMAT AND TRANSMISSION

- A. Provide submittals in electronic format, with the exception of material samples. Use PDF as the electronic format, unless otherwise specified or directed by the County.
- B. Compile the electronic submittal file as a single, complete document. Name the electronic submittal file specifically according to its contents.
- C. Electronic files must be of sufficient quality that all information is legible. Generate PDF files from original documents so that the text included in the PDF file is both searchable and can be copied. If documents are scanned, Optical Character Resolution (OCR) routines are required.
- D. E-mail electronic submittal documents smaller than 5MB in size to e-mail addresses as directed by the County.
- E. Provide electronic documents over 5MB through an electronic FTP file sharing system. Confirm that the electronic FTP file sharing system can be accessed from the County computer network. The Contractor is responsible for setting up, providing, and maintaining the electronic FTP file sharing system for the construction contract period of performance.
- F. Provide hard copies of submittals when requested by the County. Up to 3 additional hard copies of any submittal may be requested at the discretion of the County, at no additional cost to the County.

1.07 SAMPLES

- A. Submit two sets of physical samples showing range of variation, for each required item.
- B. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified.
- C. When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.
- D. Before submitting samples, the Contractor is to ensure that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.
- E. The County reserves the right to disapprove any material or equipment which previously has proven unsatisfactory in service.
- F. Physical samples supplied maybe requested back for use in the project after reviewed and approved.

1.08 OPERATION AND MAINTENANCE DATA

- A. Submit data specified for a given item within 30 calendar days after the item is delivered to the contract site.

B. In the event the Contractor fails to deliver O&M Data within the time limits specified, the County may withhold from progress payments 50 percent of the price of the item with which such O&M Data are applicable.

1.09 TEST REPORTS

The County may require specific test after work has been installed or completed which could require contractor to repair test area at no additional cost to contract.

1.10 REVIEW OF SUBMITTALS AND RFIS

A. The County will review all submittals for compliance with the technical requirements of the contract documents. The Architect-Engineer for this project will assist the County in reviewing all submittals and determining contractual compliance. Review will be only for conformance with the applicable codes, standards and contract requirements.

B. Period of review for submittals begins when the County receives submittal from the Contractor.

C. Period of review for each resubmittal is the same as for initial submittal.

D. County review period is 15 working days for submittals.

E. County review period is 10 working days for RFIs.

F. The County will return submittals to the Contractor with the following notations:

1. "No Exception Taken": authorizes the Contractor to proceed with the work covered.
2. "Make Corrections Noted": authorizes the Contractor to proceed with the work covered provided the Contractor incorporates the noted comments and makes the noted corrections.
3. "Amend and Resubmit": indicates noncompliance with the contract requirements or that submittal is incomplete. Resubmit with appropriate changes and corrections. No work shall proceed for this item until resubmittal is approved.
4. "Rejected": indicates submittal does not comply with the Contract Documents. The Contractor is to submit product or item as shown or specified.
5. "Not reviewed": indicates submittal does not have evidence of being reviewed and approved by Contractor or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals after taking appropriate action.

1.11 APPROVED SUBMITTALS

A. The County approval of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory.

B. The County approval of a submittal does not relieve the Contractor of the responsibility for any error which may exist. The Contractor is responsible for fully complying with all contract

requirements and the satisfactory construction of all work, including the need to check, confirm, and coordinate the work of all subcontractors for the project. Non-compliant material incorporated in the work will be removed and replaced at the Contractor's expense.

- C. After submittals have been approved, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.
- D. Retain a copy of all approved submittals at project site, including approved samples.

1.12 WITHHOLDING OF PAYMENT

- A. Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

E N D OF SECTION 01 33 00

PART 1 GENERAL**1.1 SUMMARY**

- A. Administrative and procedural requirements for quality control services.

1.2 RELATED SECTIONS

- A. All Sections listed in the Table of Contents are a Condition of this Section.

1.3 SUMMARY

- A. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, and governing authorities.
- B. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

1.4 SUBMITTALS

- A. Reports: The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Architect (two copies), Humboldt County, the Contractor (two copies), and the Project Manager/ Inspector.
- B. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:
 1. Date of issue
 2. Project title and number
 3. Name, address and telephone number of testing agency
 4. Dates and locations of samples and tests or inspections
 5. Names of individuals making the inspection or test
 6. Designation of the Work and test method
 7. Identification of product and Specification Section
 8. Complete inspection or test data
 9. Test results and an interpretation of test results
 10. Ambient conditions at the time of sample-taking and testing
 11. Comments or professional opinion as to whether inspected or tested

12. Work complies with Contract Document requirements
13. Name and signature of laboratory inspector
14. Recommendations on retesting.

1.5 QUALITY ASSURANCE

- A. Referenced Standards
 1. California Building Code (CBC), 2010 for administrative code application regarding testing and CBC 2016 for all other testing requirements.

1.6 RESPONSIBILITIES

- A. Testing Laboratory: Contractor will engage and pay for the services of an independent agency to perform inspections and tests specified.
- B. Retesting: The Contractor is responsible for the cost of retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.
 1. Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.
- C. The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested.
- D. Coordination: The Contractor, Project Manager/Inspector, and each agency engaged to perform inspections, testing and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
 1. The Contractor is responsible for communicating to the Project Manager/Inspector the scheduling times for inspections, tests, taking samples and similar activities.
- E. Payment for Testing Laboratory Services:
 1. Contractor will pay for tests and inspections performed by Testing Laboratory, as specified in individual product Sections of the Specifications.
 2. Contractor shall pay all costs for repeated observations, reinspection or retesting by Testing Laboratory due to non-conforming Work.
- F. Obligation to Perform Work According to Contract Documents: Employment of Testing Laboratory shall in no way relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents and applicable Codes.
- G. Limits on Testing Laboratory's Authority:

1. Testing Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Testing Laboratory may not approve or accept any portion of the Work.
3. Testing Laboratory may not assume any duties of Contractor.
4. Testing Laboratory shall have no authority to stop Work.

H. Contractor's Responsibilities to Testing Laboratory: Contractor shall make the Work in all stages of progress available for personal and continuous observation by the Testing Laboratory.

1. Testing Laboratory shall have free access to any and all parts of the Work at all times.
2. Contractor shall provide the Testing Laboratory with reasonable facilities for Testing Laboratory to obtain such information as Testing Laboratory determines is necessary for Testing Laboratory to be kept fully informed of the progress and manner of performance of the Work and character of products, according to Testing Laboratory's duties and responsibilities.
3. Observation and inspection of the Work by Testing Laboratory shall not relieve Contractor from any obligation to fulfill the requirements of the Contract.

I. Retesting: When materials tested fail to meet requirements herein specified, they shall be promptly corrected or removed and replaced and retested in a manner required by Humboldt County's Representative.

1.7 TESTS AND INSPECTIONS

A. Tests and Inspections, General: All construction work shall be subject to inspection by Humboldt County and all such construction or work shall remain accessible and exposed for inspection purposes until approved by Humboldt County.

1. Humboldt County will provide project personnel, including inspectors, to be available at the project site.
2. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of the building code or of other ordinances of the jurisdiction, including plans and specifications. Inspections presuming to give authority to violate or cancel the provisions of code, or of plans and specifications shall not be valid.
3. It shall be the duty of the contractor to cause the work to remain accessible and exposed for inspection purposes. Neither the Inspector nor Humboldt County shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

B. Approval Required: Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the Inspector. The Inspector, upon notification, shall make the requested inspections and shall either indicate in writing that portion of the construction is satisfactory as completed, or shall notify the Contractor

that same fails to comply with plans and specifications. Any portions of Work that do not comply shall be corrected by the Contractor, and such portion shall not be covered or concealed until authorized by the Inspector.

1. There shall be a final inspection and approval of all buildings and structures when completed and ready for occupancy and use.
- C. Inspection Coordination: Contractor shall provide, on a weekly basis, an anticipated Inspection Requirements Schedule, coordinated with the three-week look ahead schedule, showing the anticipated inspection needs for the following three weeks to facilitate appropriate campus coordination and interface as well as mobilization of required inspection staffing.
- D. Required Inspections: Reinforcing steel, structural framework, or interior wall and/or ceiling support framing of any part of any building or structure shall not be covered or concealed without first obtaining the approval of the Inspector.

PART 2 PRODUCTS**PART 3 EXECUTION****3.1 REPAIR AND PROTECTION**

- A. Repair and Protection: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."
 1. Protect construction exposed by or for quality control service activities, and protect repaired construction.
 2. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01 45 29

PART 1 GENERAL**1.01 DESCRIPTION**

- A. This section specifies the requirements for the management of non-hazardous building construction and demolition waste.
- B. Waste disposal in landfills shall be minimized to the greatest extent possible. Of the inevitable waste that is generated, as much of the waste material as economically feasible shall be salvaged, recycled or reused.
- C. Contractor shall use all reasonable means to divert construction and demolition waste from landfills and incinerators, and facilitate their salvage and recycle not limited to the following:
 - 1. Waste Management Plan development and implementation.
 - 2. Techniques to minimize waste generation.
 - 3. Sorting and separating of waste materials.
 - 4. Salvage of existing materials and items for reuse or resale.
 - 5. Recycling of materials that cannot be reused or sold.
- D. At a minimum the following waste categories shall be diverted from landfills:
 - 1. Soil.
 - 2. Inerts (eg, concrete, masonry and asphalt).
 - 3. Clean dimensional wood and palette wood.
 - 4. Green waste (biodegradable landscaping materials).
 - 5. Engineered wood products (plywood, particle board and I-joists, etc).
 - 6. Metal products (eg, steel, wire, beverage containers, copper, etc).
 - 7. Cardboard, paper and packaging.
 - 8. Bitumen roofing materials.
 - 9. Plastics (eg, ABS, PVC).
 - 10. Carpet and/or pad.
 - 11. Gypsum board.
 - 12. Insulation.
 - 13. Paint.
 - 14. Fluorescent lamps.

1.02 RELATED WORK

A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 QUALITY ASSURANCE

A. Contractor shall practice efficient waste management when sizing, cutting and installing building products. Processes shall be employed to ensure the generation of as little waste as possible. Construction Demolition waste includes products of the following:

1. Excess or unusable construction materials.
2. Packaging used for construction products.
3. Poor planning and/or layout.
4. Construction error.
5. Over ordering.
6. Weather damage.
7. Contamination.
8. Mishandling.
9. Breakage.

B. Establish and maintain the management of non-hazardous building construction and demolition waste set forth herein. Conduct a site assessment to estimate the types of materials that will be generated by demolition and construction.

C. Contractor shall develop and implement procedures to recycle construction and demolition waste to a minimum of 65 percent.

D. Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling. Any revenues or savings obtained from salvage or recycling shall accrue to the contractor.

E. Contractor shall provide all demolition, removal and legal disposal of materials. Contractor shall ensure that facilities used for recycling, reuse and disposal shall be permitted for the intended use to the extent required by local, state, federal regulations.

F. Contractor shall assign a specific area to facilitate separation of materials for reuse, salvage, recycling, and return. Such areas are to be kept neat and clean and clearly marked in order to avoid contamination or mixing of materials.

G. Contractor shall provide on-site instructions and supervision of separation, handling, salvaging, recycling, reuse and return methods to be used by all parties during waste generating stages.

H. Record on daily reports any problems in complying with laws, regulations and ordinances with corrective action taken.

1.04 TERMINOLOGY

- A. Class III Landfill: A landfill that accepts non-hazardous resources such as household, commercial and industrial waste resulting from construction, remodeling, repair and demolition operations.
- B. Clean: Untreated and unpainted; uncontaminated with adhesives, oils, solvents, mastics and like products.
- C. Construction and Demolition Waste: Includes all non-hazardous resources resulting from construction, remodeling, alterations, repair and demolition operations.
- D. Dismantle: The process of parting out a building in such a way as to preserve the usefulness of its materials and components.
- E. Disposal: Acceptance of solid wastes at a legally operating facility for the purpose of land filling (includes Class III landfills and inert fills).
- F. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert materials are taken for the purpose of filling an excavation, shoring or other soil engineering operation.
- G. Inert Fill: A facility that can legally accept inert waste, such as asphalt and concrete exclusively for the purpose of disposal.
- H. Inert Solids/Inert Waste: Non-liquid solid resources including, but not limited to, soil and concrete that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional water board, and does not contain significant quantities of decomposable solid resources.
- I. Mixed Debris: Loads that include commingled recyclable and non-recyclable materials generated at the construction site.
- J. Mixed Debris Recycling Facility: A solid resource processing facility that accepts loads of mixed construction and demolition debris for the purpose of recovering re-usable and recyclable materials and disposing non-recyclable materials.
- K. Permitted Waste Hauler: A company that holds a valid permit to collect and transport solid wastes from individuals or businesses for the purpose of recycling or disposal.
- L. Recycling: The process of sorting, cleansing, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating or thermally destroying solid waste.
 - 1. On-site Recycling – Materials that are sorted and processed on site for use in an altered state in the work, i.e. concrete crushed for use as a sub-base in paving.
 - 2. Off-site Recycling – Materials hauled to a location and used in an altered form in the manufacture of new products.
- M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of new products. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a solid waste facilities permit or be regulated by the local enforcement agency.

- N. Reuse: Materials that are recovered for use in the same form, on-site or off-site.
- O. Return: To give back reusable items or unused products to vendors for credit.
- P. Salvage: To remove waste materials from the site for resale or re-use by a third party.
- Q. Source-Separated Materials: Materials that are sorted by type at the site for the purpose of reuse and recycling.
- R. Solid Waste: Materials that have been designated as non-recyclable and are discarded for the purposes of disposal.
- S. Transfer Station: A facility that can legally accept solid waste for the purpose of temporarily storing the materials for re-loading onto other trucks and transporting them to a landfill for disposal, or recovering some materials for re-use or recycling.

1.05 SUBMITTALS

- A. In accordance with Section 01 33 00, SUBMITTALS, furnish the following:
- B. Prepare and submit to the County a written demolition debris management plan. The plan shall include, but not be limited to, the following information:
 - 1. Procedures to be used for debris management.
 - 2. Techniques to be used to minimize waste generation.
 - 3. Analysis of the estimated job site waste to be generated:
 - a. List of each material and quantity to be salvaged, reused, recycled.
 - b. List of each material and quantity proposed to be taken to a landfill.
 - 4. Detailed description of the Means/Methods to be used for material handling.
 - a. On site: Material separation, storage, protection where applicable.
 - b. Off site: Transportation means and destination. Include list of materials.
 - 1) Description of materials to be site-separated and self-hauled to designated facilities.
 - 2) Description of mixed materials to be collected by designated waste haulers and removed from the site.
 - c. The names and locations of mixed debris reuse and recycling facilities or sites.
 - d. The names and locations of trash disposal landfill facilities or sites.
 - e. Documentation that the facilities or sites are approved to receive the materials.
- C. Designated Manager responsible for instructing personnel, supervising, documenting and administer over meetings relevant to the Waste Management Plan.

- D. Monthly summary of construction and demolition debris diversion and disposal, quantifying all materials generated at the work site and disposed of or diverted from disposal through recycling.

1.06 RECORDS

- A. Maintain records to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration.

PART 2 PRODUCTS

2.01 MATERIALS

- A. List of each material and quantity to be salvaged, recycled, reused.
- B. List of each material and quantity proposed to be taken to a landfill.
- C. Material tracking data: Receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices, net total costs or savings.

PART 3 EXECUTION

3.01 COLLECTION

- A. Provide all necessary containers, bins and storage areas to facilitate effective waste management.
- B. Clearly identify containers, bins and storage areas so that recyclable materials are separated from trash and can be transported to respective recycling facility for processing.
- C. Hazardous wastes shall be separated, stored, disposed of according to local, state, federal regulations.

3.02 DISPOSAL

- A. Contractor shall be responsible for transporting and disposing of materials that cannot be delivered to a source-separated or mixed materials recycling facility to a transfer station or disposal facility that can accept the materials in accordance with state and federal regulations.
- B. Construction or demolition materials with no practical reuse or that cannot be salvaged or recycled shall be disposed of at a landfill or incinerator.

3.03 REPORT

- A. With each application for progress payment, submit a summary of construction and demolition debris diversion and disposal including beginning and ending dates of period covered.
- B. Quantify all materials diverted from landfill disposal through salvage or recycling during the period with the receiving parties, dates removed, transportation costs, weight tickets,

manifests, invoices. Include the net total costs or savings for each salvaged or recycled material.

- C. Quantify all materials disposed of during the period with the receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices. Include the net total costs for each disposal.

END OF SECTION 01 79 19

PART 1 GENERAL**1.01 RELATED DOCUMENTS**

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:

1. Inspection procedures.
2. Project record document submittal.
3. Operation and maintenance manual submittal.
4. Submittal of warranties.
5. Final cleaning.

B. Closeout requirements for specific construction activities are included in the appropriate Sections.

1.03 SUBSTANTIAL COMPLETION

A. Prior to requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. 100 percent completion will bring the Contractor's progress Payment up to (95%) ninety percent of the Contract Price with (5%) percent to remain in retention until after Notice of Completion.
 - b. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - c. If 100 percent completion cannot be shown, include a list ("punchlist") of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
2. Advise the County of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.

4. Obtain and submit releases enabling the County unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra stock, and similar items.
7. Make final changeover of permanent locks and transmit keys to the County. Advise the County's personnel of changeover in security provisions.
8. Complete startup testing of systems and instruction of the County's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
9. Complete final cleanup requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred, exposed finishes.

B. Substantial Completion will not be issued without the following:

1. Issuance of a Certificate of Occupancy.
2. The electrical system, fire alarm, and sprinkler system 100% complete.
3. Operation manuals, maintenance manuals and warranties submitted and approved.
4. Instruction of staff in the operation and maintenance of equipment and systems.
5. Record drawings submitted and approved.
6. Any extra material required by contract delivered.

C. Inspection Procedures:

1. On receipt of a request for inspection, the County's Representative and the Architect will either proceed with inspection or advise the Contractor of unfilled requirements.
2. The County's Representative will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - a. The County's Representative and the Architect will repeat inspection when requested and assured that the Work is substantially complete.
 - b. Results of the completed inspection will form the basis of requirements for final acceptance.
3. County will allow the Contractor no longer than 30 calendar days from the Date of Substantial Completion to remedy deficiencies.

1.04 FINAL ACCEPTANCE

A. Prior to requesting final inspection for certification of final acceptance and final payment, complete and submit the following:

1. Final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
3. Certified copy of the County's Representative and Architect's final inspection list of items to be completed or corrected endorsed and dated by the County's Representative and Architect.
 - a. Certification shall state that each item has been completed or otherwise resolved for acceptance.
4. Submit consent of surety to final payment.
5. Submit all subcontractor final unconditional lien releases.
6. Submit a final liquidated damages settlement statement.
7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Re-inspection Procedure:

1. County's Representative and/or Architect will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed.
 - a. Indicate items whose completion is delayed under circumstances acceptable to the County's Representative.
2. Should the County's Representative determine that Work is incomplete or defective:
 - a. County's Representative will notify the Contractor, in writing, listing incomplete or defective Work.
 - b. Contractor shall remedy deficiencies promptly and notify County's Representative when ready for re-inspection.

C. Final Acceptance Certificate

1. Upon completion of inspection or any re-inspections, the County's Representative will prepare a certificate of final acceptance in accordance.
2. Final Acceptance will be presented to the County Board of Supervisors.
 - a. Only the County Board of Supervisors has final authority over Acceptance of Project.

D. Notice of Completion

1. Upon final acceptance by the County Board of Supervisors, the County's Lead Agency will prepare and file a Notice of Completion in accordance with the Project Specification Section 00800, Supplemental General Conditions.
 - a. Start of mandatory 35-day lien period.

1.05 RECORD DOCUMENT SUBMITTALS

A. Project Record Drawings:

1. Maintain a clean, undamaged set of Contract Drawings and Shop Drawings and identify as "RECORD DRAWINGS".
2. Mark the Drawings to show the actual installation where the installation varies substantially from the Work as originally shown.
 - a. Using an erasable colored pencil (not ink or indelible pencil) clearly describes change by graphic line or note.
 - b. Date all entries, and note related Change Order number where applicable.
 - c. Call attention to all entries by a "cloud" drawn around area affected.
 - d. Where overlapping changes occur, mark with different colors.
3. Conversion of schematic layouts:
 - a. Design of future modifications of facility may require accurate information as to final physical layout of items that are shown schematically on Drawings.
 - b. Show on Project set of Record Drawings, by dimension accurate to within one inch, centerline of each run of items shown schematically on Drawings. Clearly identify item by accurate note such as "cast iron drain", "galv. water", and the like. Show, by symbol or note, vertical location of item ("under slab", "in ceiling plenum", "exposed" and the like).
4. Prior to request for Substantial Completion, secure from the County's Representative at no charge to the Contractor, a complete set, full sized drawings and (.DWG) files of all Contract Documents.
 - a. Clearly transfer change data shown on Project set of Record Drawings to corresponding transparencies, coordinating changes as required.
 - b. Clearly indicate at each affected detail and other drawings a full description of changes made during construction, and actual location of items.
 - c. Show final location of electrical junction boxes and outlets, telephone and data outlets, supply and return registers, and like items.
 - d. Call attention to all entries by a "cloud" drawn around area affected.

- e. Make changes neatly, consistently, and with proper media to assure longevity and clear reproduction.

B. Record Specifications:

1. Maintain one complete copy of the Project Manual, including addenda and other written construction documents, such as Change Orders and modifications issued during construction.
2. Mark Specifications to show substantial variations in actual Work performed in comparison with the text of the Specifications.
3. Note substitutions in reference to items specified.

C. Maintenance Manuals:

1. Contractor to submit a written summary of all maintenance manuals to be transmitted to County's Representative.
2. Submit 3 complete copies of all maintenance manuals prior to start-ups and instruction of operation to maintenance personnel.
3. Provide manuals in 8-1/2 x 11 inch format with plastic/fiberboard covers and colored fly-sheets separating sections, to include the following:
 - a. Covered labeled as "Operating and Maintenance Instructions" with name and address of Project, and names of Contractor and Subcontractor.
 - b. Typewritten index near front of manual, providing immediate information as to location within manual of emergency information regarding installation.
 - c. Complete instructions regarding operation and maintenance of all equipment, including lubrication, disassembly, and re-assembly.
 - d. Complete nomenclature of all parts of all equipment.
 - e. Complete nomenclature and part number of all replacement parts, name and address of nearest vendor, and all other data pertinent to procurement and procedures.
 - f. Copy of garnets and warranties issued.
 - g. Manufacturers' bulletins, cuts, and descriptive data, where applicable, clearly indicating precise items included in this installation and deleting, or otherwise clearly indicating, all manufacturers' data which this installation is not concerned.
 - h. Such other data as required in applicable Specification Sections.

D. Guarantees/warranties and Bonds:

1. General:
 - a. Manufacturers' warranties notwithstanding, warrant the entire Work against defects in materials and workmanship for twelve (12) months from the date of

Substantial Completion in accordance with the GENERAL CONDITIONS & SUPPLEMENTARY GENERAL CONDITIONS.

- b. Guarantee/warrant or bond Work as required in the Specifications.
- c. Warranties between the Contractor and manufacturers, and the Contractor and suppliers, shall not affect guarantees/ warranties between the Contractor and the County.
- d. The Contractor will not be held responsible for defects due to misuse, negligence, willful damage, improper maintenance, or accident caused by Others, nor shall he be responsible for defective parts whose replacement is necessitated by failure of the Owner's maintenance forces to properly clean and service them, provided the Contractor has furnished complete maintenance instructions to the County.
- e. Compile specified guarantees/warranties and bonds.
- f. Time of Submittal:
 - i. For equipment or component parts of accepted equipment put into service for the County's benefit during the progress of the Work, submit guarantees/warranties within ten (10) calendar days after acceptance of the Work.
 - ii. Otherwise, submit guarantees/warranties within ten (10) calendar days after date of Substantial Completion and prior to the Final Application for Payment.
 - iii. For items of Work where acceptance is delayed materially beyond the date of Substantial Completion, furnish updated submittal within ten (10) calendar days after such delayed acceptance, listing the date of delayed acceptance as the start of the guarantee/warranty period.

E. Other Documents:

- 1. Three sets of warranties, guarantees and bonds.
- 2. Spare parts and materials extra stock list.
- 3. One set of evidence of compliance with requirements of governmental agencies having jurisdiction including, but not limited to:
 - a. Certificates of Inspection.
 - b. Certificates of Occupancy.
- 4. One set of certificates of insurance for products and completed operations.
- 5. One set of evidence of payment and release of liens.
- 6. One copy of list of Subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

1.06 INSTRUCTION

- A. Arrange for each Installer of equipment and systems that requires regular maintenance to meet with the County's personnel for instruction in proper operation and maintenance of systems, equipment and similar items, which were provided as part of the Work.
 - 1. Submit to County's Representative an instruction schedule listing instruction subjects and proposed dates at least 15 calendar days prior to the first proposed date.

1.07 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - 1. Remove labels that are not permanent labels.
 - 2. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - 3. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - 4. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - 5. Clean the site, sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
- B. Remove temporary protection and facilities installed for protection of the Work during construction.
- C. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
 - 1. Where extra materials of value remain after completion of associated Work, they become the County's property. Dispose of these materials as directed by the County.

END OF SECTION 01 77 00

PART 1 GENERAL**1.01 SUMMARY**

- A. This section specifies demolition and removal of buildings, portions of buildings, utilities, portion of utility access structures, pavements, curbs and gutters, landscaping, signage, light and light poles, other structures and debris from trash dumps shown.

1.02 RELATED SECTIONS

- A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 PROTECTION

- A. Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures.
- B. Provide safeguards, including warning signs, barricades, temporary fences, warning lights, and other similar items that are required for protection of all personnel during demolition and removal operations.
- C. Maintain fences, barricades, lights, and other similar items around exposed excavations until such excavations have been completely filled.
- D. Prevent spread of flying particles and dust. Sprinkle rubbish and debris with water to keep dust to a minimum. Do not use water if it results in hazardous or objectionable condition such as, but not limited to; ice, flooding, or pollution. Vacuum and dust the work area daily.
- E. In addition to previously listed fire and safety rules to be observed in performance of work, include following:
 1. No wall or part of wall shall be permitted to fall outwardly from structures.
 2. Wherever a cutting torch or other equipment that might cause a fire is used, provide and maintain fire extinguishers nearby ready for immediate use. Instruct all possible users in use of fire extinguishers.
 3. Keep hydrants clear and accessible at all times. Prohibit debris from accumulating within a radius of 4500 mm (15 feet) of fire hydrants.
- F. Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The contractor shall take necessary precautions to avoid damages to existing items to remain in place, to be reused, or to remain the property of the County any damaged items shall be repaired or replaced as approved. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing

construction weakened by demolition or removal works. Repairs, reinforcement, or structural replacement must have approval.

PART 2 PRODUCTS (NOT USED)**PART 3 EXECUTION****3.01 DEMOLITION**

- A. Completely demolish and remove portions of buildings and structures, including all appurtenances related or connected thereto, as shown.
- B. Debris, including brick, concrete, stone, metals and similar materials shall become property of Contractor and shall be disposed of by him daily, off the site to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the County Representative. Break up concrete slabs below grade that do not require removal from present location into pieces not exceeding 600 mm (24 inches) square to permit drainage. Contractor shall dispose debris in compliance with applicable federal, state or local permits, rules and/or regulations.
- C. Remove existing utilities as indicated or uncovered by work and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the County Representative. When Utility lines are encountered that are not indicated on the drawings, the County Representative shall be notified prior to further work in that area.

3.02 CLEAN-UP

- A. On completion of work of this section and after removal of all debris, leave site in clean condition satisfactory to County. Clean-up shall include off-site disposal of all items and materials not required to remain property of the County as well as all debris and rubbish resulting from demolition operations.

E N D OF SECTION 02 41 19

PART 1 GENERAL**1.01 SUMMARY**

A. This Section includes the requirements for tests and inspections for concrete work specified in Sections 03 20 00 Concrete Reinforcement and 03 30 00 Cast in Place Concrete.

1.02 RELATED SECTIONS

A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 SUBMITTALS

A. Submit for review and approval.

1. Design Data: Certified copies of mix designers for each concrete class specified
2. Certifications that materials comply with requirements specified.
3. Samples: As requested by the Testing Laboratory and accompanied by certification from vendor that samples originate from and are representative of each lot proposed for use.
4. Test Reports
 - a. Mill test reports for reinforcement.
 - b. Reports from testing organization.

1.04 QUALITY ASSURANCE

A. Referenced Standards

1. California Building Code (CBC), 2016.
2. ACI 301 0 Specifications for Structural Concrete for Buildings.
3. ACI 318 – Building Code Requirements for Structural Concrete.

1.05 DELIVERY, STORAGE AND HANDLING

A. Pursuant to Section 01 45 29 Contractor is responsible for all testing and inspection of concrete work. Humboldt County shall retain the services of a certified testing laboratory to perform concrete testing.

PART 2 PRODUCTS**2.01 REINFORCEMENT**

A. The Testing Laboratory

1. Take samples from bundles delivered to job site from the mill, unless bundles are identified by heat number and accompanied by mill certificates. When reinforced is not positively identified by heat numbers or when random sampling is intended two specimens will be taken from each 2 ½ tons or fraction thereof of each size and grade.

2. Test for tensile and bending strength in accordance with CBC Chapters 17 and 19.

2.02 CAST IN PLACE CONCRETE

- A. The Testing Laboratory will:

1. Review mix designs, compliance certificates and samples of materials proposed for use.
2. Test and inspect materials according to CBC 1903 from compliance with requirements specified in Section 03 30 00 Cast-in-Place Concrete.
3. Inspect batch plant prior to concrete being furnished to verify that:
 - a. Plant is equipped with approved metering devices for determining moisture content of fine aggregate.
 - b. Other plant quality controls are satisfactory.

PART 3 EXECUTION

3.01 CAST IN PLACE CONCRETE

- A. The Testing Laboratory will:

1. Perform testing in accordance with ACI 318
2. Test concrete slump in accordance with ASTM C143
3. Test concrete for required compressive strength in conformance with CBC Section 1905, as follows.
 - a. Make and cure a minimum of five specimen cylinders according to ASTM C31 for each 150 cubic yards, or fraction thereof, of each class of concrete placed each day.
 - b. As a minimum, one set of five specimen cylinders shall be made for each 5,000 square feet of slab or wall surface area or fraction thereof placed each day
 - c. Retain one cylinder for 7 day test, one for 14-day test, and two for 28 day test. Hold one or more cylinders for subsequent testing, in necessary.
 - d. Number each cylinder, date each set of cylinders and record placement represented by each set of cylinders.
 - e. Transport specimen cylinders from jobsite to laboratory.
 - f. Test specimen cylinders according to ASTM C30 from specified strength after cylinders have aged for 7 days, 14 days, and 28 days.

- B. Furnish to the Testing Laboratory the ready mix delivery tickets for each batch of concrete delivered to the jobsite, each ticket bearing the following:

1. Design mix number
2. Time of batching

3. Weight of cement, type and maximum size of aggregates, water, and admixtures in each batch.
4. Total volume of concrete in each batch.

C. When laboratory tests of specimen cylinders show compressive strengths below the minimum specified, the Contractor will be back charged for costs of the taking and testing core specimens of hardened concrete according to ASTM C42.

END OF SECTION 03 05 00

PART 1 GENERAL**1.01 SUMMARY**

A. This section includes the requirements for furnishing and installing concrete reinforcement.

1.02 RELATED SECTIONS

A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 SUBMITTALS

A. Shop Drawings: Complete bending and placing details of reinforcement.

1. Details of reinforcement not shown on Drawings shall be in conformance with ACI 315 and ACI 318.
2. Detailing, fabricating, and spacing of reinforcement shall be in conformance with ACI 315 unless otherwise shown or noted.

B. Test Reports: Certified copies of mill tests showing chemical and physical analyses of each heat or melt from which reinforcement was made.

1.04 QUALITY ASSURANCE

A. Referenced Standards

1. California Building Code (CBC), 2016
2. ACI 301 – Specifications for Structural Concrete for Buildings.
3. ACI 318 – Building Code Requirements for Reinforced Concrete
4. ACI 347R – Guide to Formwork for Concrete.
5. CRSI Manual of Standard Practice

B. Allowable Tolerances Fabricating/placing tolerances shall be in conformance with ACI 301.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver reinforcement from the mill in securely tied bundles, each bundle limited to one size and grade of reinforcement. Identify each bundle with readily visible metal or plastic tags identifying the reinforcement by the same item marking as on the approved shop drawings; tags shall also identify the mill, heat or melt number, and the grade and size of reinforcement.

B. After bundles are broken, identify by segregating reinforcement by sizes and grades.

C. Store reinforcement off the ground, protected from the elements and foreign material which could adversely affect its bond with concrete.

PART 2 PRODUCTS**2.01 MATERIALS**

A. Reinforcing Bars: ASTM A625, Grade 60 for all bars except where noted otherwise on plans.

- B. Wire for Ties, Stirrups, and Spiral Reinforcement: ASTM A82.
- C. Spacers, Bar Supports, and Other Accessories: In conformance with ACI 315. Where portions of accessories will be within 1/2 inch of concrete surfaces which will be exposed to the elements in the finished work, such accessories shall be of non-corrosive material or shall be corrosion-resistant treated; aluminum products will not be acceptable.

2.02 FABRICATION

- A. Fabricate reinforcement in accordance with the requirements of ACI 315, where specific details are not shown or where Contract Documents are not more restrictive.
- B. Fabrication of reinforcement shall begin only after approval of bar lists and shop drawings, with each item of reinforcement fabricated in conformance with such approved documents.
- C. Bend reinforcing steel cold; do not straighten or rebend, doing damage to the material.

PART 3 EXECUTION

3.01 INSTALLATION

- A. At time of concrete placement, reinforcement shall be free of dirt, oil, scale, loose rust, and other foreign material that could adversely affect the bond with concrete.
- B. Fasten reinforcement/support to prevent displacement beyond the tolerances specified in ACI 301, by construction loads and concrete placement. Sizes and dimensions of supports shall be as required to position the reinforcement as shown on the approved shop drawings and in conformance with the minimum concrete protective covering requirements of ACI 301.
- C. Furnish reinforcing bars full length whenever possible; splices will be permitted only where shown or noted on the approved shop drawings, or as otherwise permitted by Humboldt County.
- D. Splices may be made in horizontal reinforcement by lapping and placing ends of bars in contact and securely wiring; or bars may be separated sufficiently to permit the embedment of the entire surface of each bar in concrete.
 - 1. Locate all splices as per drawings. Lap bars 48 diameters minimum.
 - 2. Stagger splices in adjacent bars.
 - 3. Where threaded couplers are noted on Drawings, locate couplers in accordance with Drawings. Stagger coupler locations unless noted otherwise.
- E. Obstructions: Should items to be embedded in concrete interfere with placement of reinforcements, notify Humboldt County to obtain written approval of procedure before starting.
- F. Concrete Cover: Install reinforcement to achieve the minimum concrete coverage shown or noted on the Drawings, unless otherwise specified.
- G. Welding: Reinforcing bars shall not have welded joints.

H. Misplaced Reinforcing Bars:

1. If reinforcing bars are found to be misplaced after concrete placement, immediately notify Humboldt County for recommendations for correcting the misplacement; perform no corrective measures without such prior recommendations.
2. Redesign, alterations, corrections, and replacement of concrete or reinforcing bars due to misplaced bars shall be performed at no additional expense to Humboldt County.

3.02 MAINTENANCE OF REINFORCEMENT

- A. Continuously inspect/maintain reinforcement in proper position during concreting operations.
- B. Where reinforcement cannot otherwise be kept properly aligned, provide additional bracing ties, stirrups, and other items as necessary.

END OF SECTION 03 20 00

PART 1 GENERAL**1.01 SUMMARY**

- A. This Section includes the requirements for furnishing and placing cast-in-place concrete, including cast-in-place architectural finish concrete, curing and finishing.
- B. All Sections listed in the Table of Contents are a Condition of this Section.

1.02 SUBMITTALS

- A. Mix design for each class of concrete proposed for use. If concrete will be pneumatically placed, mixes shall be specifically so designed and designated.
- B. Laboratory test reports for concrete mixes. Compression test data (field experience method) or results of testing (trial batch method) used to establish mix proportions.
- C. Product Data: Manufacturers' and suppliers' proprietary information on materials.
- D. Layout Drawings: Submit layout drawings showing proposed locations of construction joints, control joints, details of construction, and connections for approval prior to concrete placement.
- E. Submit delivery ticket to Humboldt County for each batch of concrete delivered.

1.03 QUALITY ASSURANCE

- A. Reference Standards
 1. California Building Code (CBC), 2016.
 2. ACI 301 – Specifications for structural Concrete for Buildings.
 3. ACI 318 – Building Code Requirements for Reinforced Concrete.
- B. Quality Control: Contractor to retain the services of a qualified testing organization as specified in Testing Laboratory Services Section 01 45 29.
- C. Allowable Tolerances: Deviation from plumb and level shall not exceed 1/8 inch within ten feet in any direction, as determined with a ten-foot straightedge. Cumulative deviation over the length or height of the building shall not exceed 3/8 inch in any direction.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, and handle packaged materials in the manufacturers' original, sealed packages, each clearly identified with the manufacturer's name, and name and type of material.
- B. Deliver, store, and handle materials subject to damage from dirt and moisture maintaining them clean and dry, off the ground, and suitably protected.
- C. Store coarse and fine aggregates in separate, covered bins to prevent them from mixing, and to preserve moisture content of aggregate at batch plant.
- D. Store bulk cement in covered bins.

1.05 PROJECT CONDITIONS

- A. Environmental Requirements for Concrete Placement:
 - 1. Hot Weather: In conformance with ACI 305.
 - 2. Cold Weather: In conformance with ACI 306.
 - 3. During Precipitation: Do not place unless adequate protection is provided.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete, ready-mixed, ASTM C94.
 - 1. Cement: ASTM C150, Type II, Portland Cement.
 - 2. Aggregate:
 - a. Fine Aggregate: ASTM C33
 - b. Coarse Aggregate: ASTM C33
 - c. Source of aggregate shall remain constant for the duration of the work.
 - 3. Water: Clean, clear, and potable.
- B. Curing materials:
 - 1. Liquid Membrane: ASTM C308, Type I.
 - 2. Sheet material: ASTM C171.
- C. Admixtures
 - 1. Water reducing Admixture: ASTM C494, only with prior review of mix design.
 - 2. Air-Entraining Admixture: ASTM C260, for lightweight concrete only with prior review of mix design.
 - 3. Unspecified Admixtures: Not Permitted.
 - 4. Calcium Chloride: not Permitted.
 - 5. Hydrogen Chloride: Not Permitted
- D. Epoxy Grout for Reinforcement and Bolt Installation: Hilti "HIT-RE 500-SD" Adhesive Anchor System", Simpson Strong-Tie "SET XP", or equal.
- E. Detectable Warning – Truncated Domes: Vanguard ADA Systems. www.VanguardOnline.com or equal, apply to wet concrete. Meet 36 CFR 1191, 49 CFR 27, 37 and 38 and ADAGG, Title 49, Part 37.9, Appendix A, Section 4.29.2 – Detectable warnings on walking surfaces. Homogeneous glass and carbon reinforced or an epoxy

polymer compositions which is color and UV stable. Color shall be federal yellow and homogeneous throughout the minimum 3/8" panel thickness.

1. Spacing, height and configuration of truncated domes shall meet CBC 11B-705. Base diameter of 0.9 inch min. and 0.92 inch max, a top diameter of 0.45 inch and minimum of 0.47 inch and a height of 0.2 inch. Dome spacing shall have center to center 2.3 inch min. and 2.4 inch max., and a base to base spacing of 0.65 inch.

2.02 MIXES

A. Design Criteria

1. Concrete shall develop the minimum compressive strength 3,000 psi at 28 days on cylinders made and tested in accordance with referenced ASTM standards.
2. The average of the sets of three consecutive strength tests shall be equal to or greater than the specified strength, and no individual strength test results shall fall below the specified strength by more than 500 psi.

B. General

1. Mix designs shall be in conformance with CBC Section 1905, based on materials tested and approved by the Testing Laboratory.
2. If concrete will be pneumatically placed, mixes shall be specifically so designed and designated.
3. If concrete is to be pumped, mixes shall be specifically so designed and designated.

2.03 MIXING

A. Batch Plant:

1. Equipment and plant shall be capable of weighing, segregating, and efficiently handling materials. Automatic metering capable of determining moisture content of sand shall be utilized.
2. Equipment and plant shall be subject to the approval of the Testing Laboratory; equipment and processes not so approved shall not be used for the work.

B. General:

1. Mixing shall be in conformance with ASTM C94 and CBC.
2. Mix cement, fine and coarse aggregate, admixtures, and water to exact proportions of approved mix designs.
3. Measure fine and coarse aggregates separately according to approved method which affords accurate control and checking.
4. Adjust grading to improve workability; do not add water unless otherwise recommended by Humboldt County.

C. Admixtures: use automatic metering dispenser to incorporate admixtures into mix

2.04 CONCRETE CLASSES

A. Definitions:

1. Strength: Minimum compressive strength after 28 days, when tested in accordance with ASTM C39.
2. Aggregate: Maximum size.
3. Weight: Pounds per cubic foot, air dry.
4. Slump: When tested in accordance with ASTM C143.
5. Maximum water/ cement ratio of 0.45

B. Concrete Classes and Uses:

Class	Weight (psf)	Strength (psi)	Aggregate	Slump	Use
A	145	3000	$\frac{3}{4}$ "	4"	Cast-In-Place Concrete

PART 3 EXECUTION

3.01 PREPARATION

- A. Prior to concrete placement, determine finishes required to accommodate the work of other sections, and make preparations for such finishes. Where determination for such finishes may be in question, refer to Humboldt County for resolution.
- B. Remove loose dirt/foreign material from excavations and forms and standing and saturated soil from excavations and cavities. Placing concrete in standing water is not permitted.
- C. Thoroughly clean reinforcement and other items to be embedded in concrete of loose rust and other foreign matter which could inhibit bond with concrete.
- D. Thoroughly wet wood forms, except coated plywood, and adjacent concrete a minimum of one hour prior to placing concrete; securely close cleanout and inspection ports; repeat wetting as required to keep forms damp.
- E. Work form release agent into all areas of form liner as recommended by form manufacturer.
- F. Apply form release agent to form liners before each use and within the same day that concrete is placed.
- G. Subgrade and forms shall have been checked for line and grade, and work areas shall have been inspected and observed by Humboldt County prior to starting concrete placement.
- H. Roughen surfaces $\pm \frac{1}{4}$ " amplitude at all joints and at all contact surfaces between new and existing concrete. Provide shear keys and prepare joints as per Drawings and Specifications. Apply bonding agent between existing and new concrete pours.

3.02 TRANSPORTING

- A. Transport concrete from the mixer to the place of final deposit as quickly as possible, and by methods which prevent the separation and loss of ingredients. Concrete shall be of uniform density when placed.
- B. Concrete shall not be freely dropped where reinforcement will cause segregation. Spouts, elephant trunks, or other approved means shall be utilized to prevent segregation.
- C. In no case shall concrete be freely dropped more than six (6) feet. Provide formwork with pour ports at four (4) feet or closer horizontally so that concrete will be deposited freely such that no more than six (6) feet is dropped at any location.
- D. Concrete may be pumped from the mixer to the place of deposit, provided that information on mix design adjustments, equipment, and procedures have received Humboldt County's written approval.

3.03 PLACING

- A. General:
 - 1. Notify Humboldt County a minimum of 72 hours prior to each major concrete placement.
 - 2. Place concrete in a continuous operation until a section of approved size and shape has been completed.
 - 3. For horizontal surfaces, maintain a plastic surface essentially horizontal until completion of placement of the section.
 - 4. Prevent displacement of reinforcement and other items to be embedded.
 - 5. Before concrete sets, completely remove concrete spilled on forms and reinforcement in sections where concrete is not to be immediately installed.
 - 6. An interruption of more than 60 minutes in concrete placement will be cause for shutting down the work and disposing of remaining mixed concrete. If such interruption occurs, provide construction joints where and as instructed, and cut concrete back to such line, cleaning forms and reinforcement as specified.
 - 7. Record the date and time of concrete placement in each section. Retain records until completion of the work, and make available at all times to the review of Humboldt County.
- B. Consolidation:
 - 1. Thoroughly consolidate concrete by puddling with suitable tools during placement, and by thoroughly working around reinforcement and other embedded items, and into corners of forms.
 - 2. In addition to manual spading and tamping, internally vibrate concrete with high-speed mechanical vibrators of sufficient amplitude for thorough consolidation.
 - 3. Vertically insert and remove hand-held vibrators at points 18 to 30 inches apart, vibrating concrete the minimum amount required for consolidation. Do not use vibrators to transport concrete in forms.

- a. Thoroughly clean contact surfaces by sandblasting or chipping the entire surface a minimum of five days after the initial placement, or by an approved method that will ensure equal bond, such as a thorough hose washing of surfaces not less than two or more than four hours after concrete placement.
- b. Thoroughly clean wash water and chalky material from surfaces.
- c. Sandblast vertical construction joints in suspended slabs.
- d. Prior to continuing concrete placement, deposit on horizontal construction joints slurry mix containing the same proportion of cement and fine aggregate used in concrete mix plus a maximum of 50 percent of the coarse aggregate

4. Prevent formation of shoulders and ledges.
5. Provide keys across vertical joints as shown on drawings. Place dowels across joints.
6. Joints for Slabs on Grade: Locate construction joints where approved and under partitions, whenever possible.

3.04 PROTECTION AND CURING

- A. Protection:
 1. Maintain concrete temperature above 50 degrees F during curing.
 2. Protect concrete from sun and rain.
 3. Do not subject concrete to loads until it has completely cured and attained minimum 28 day strength.
 4. Water cure concrete continuously for minimum duration specified, including Saturdays, Sundays, and holidays; do not permit it to dry out until it has cured for the specified time.
 5. Protect concrete during/after curing from damage from construction operations.
 6. Cover traffic areas with kraft paper and plywood sheets; maintain protective covering in place and in good repair as long as necessary to protect concrete from damage.
 7. Keep finished areas free from traffic for a minimum of four days, or as long as necessary for concrete to have set sufficiently to prevent its being damaged.
- B. Curing: Curing shall immediately follow finishing and shall be performed as follows.
 1. Flatwork Surfaces: Membrane cure for a minimum of seven days.

3.05 DEFECTIVE CONCRETE

- A. Repair or replace defective concrete as instructed by Humboldt County, and at no additional expense to Humboldt County. Repair materials shall include, as necessary, cements, aggregates, admixtures, and epoxy.
- B. With written approval of Humboldt County, some minor defective work may be repaired by use of cement mortar; however, if the defects affect the strength of the structure, its appearance, or are otherwise detrimental, Humboldt County may require the removal and replacement of that portion of the structure.
- C. Immediately after form removal, inspect concrete surfaces for poor joints, voids, rock pockets, tie holes, and other defects. Prior to starting patching, Humboldt County will examine the defects, following which such defects shall be immediately patched upon Humboldt County's written approval of patching mixture and method proposed for use.
- D. Finish: Finish to match adjacent surfaces with no discernable or visible difference in appearance.

END OF SECTION 03 30 00

PART 1 GENERAL**1.01 SUMMARY**

- A. This Section includes the materials, design and installation of precast concrete vaults with factory installed waterproofing.
- B. All Sections listed in the Table of Contents are a Condition of this Section.

1.02 SUBMITTALS

- A. Submit submittal packages in accordance with SECTION 01 33 00 – SUBMITTALS.
- B. Submit manufacturer's catalog data on precast items. Show dimensions of vault and location of openings including thicknesses of walls, floor and top slab. Show reinforcing wire and steel. Show materials of construction by ASTM reference and grade.
- C. Submit manufacturer's design calculations and certification signed and sealed by a structural engineer, registered in the State of California, that vault design and construction comply with the specified design load conditions and the referenced ASTM specification.
- D. Submit manufacturer's catalogue data, descriptive literature and installation instructions for waterproofing material.

1.03 QUALITY ASSURANCE

- A. Reference Standards
 - 1. California Building Code (CBC), 2016.
 - 2. American Concrete Institute (ACI)
 - ACI 304 – Guide for Measuring, Mixing, Transporting and Placing Concrete.
 - ACI 318 – Building Code Requirements for Reinforced Concrete.
 - 3. American Society of Testing Materials (ASTM)
 - ASTM C857 – Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures.
 - ASTM C858 – Standard Specification for Underground Precast Concrete Utility Structures.
 - ASTM C1227 – Standard Specification for Precast Concrete Septic Tanks
 - 4. American Welding Society (AWS)
 - AWS D1.1 - Structural Welding Code – Structural Steel
 - AWS D1.4 - Structural Welding Code – Reinforcing Steel
 - 5. Concrete Reinforcing Steel Institute (CRSI)
 - CRSI Manual of Standard Practice

B. Quality Control: Contractor shall demonstrate adherence to the standards set forth in the National Precast Concrete Association (NPCA) Quality Control Manual.

1. The precast contractor shall have been in the business of producing precast concrete products similar to those specified for a minimum of 5 years.
2. The precast producer shall maintain a permanent quality control department or retain an independent testing agency on a continuing basis.
3. The precast producer shall show that the following tests are performed in accordance with ASTM standards. Tests shall be performed for each 150 cu. Yd. of concrete placed, but not less frequently than once per week.
 - a. Slump: ASTM C143
 - b. Compressive Strength: ASTM C31, C192 & C39
 - c. Air Content (When air-entrained concrete is being used): ASTM C231 or C173
 - d. Unit Weight: ASTM C138
4. The precast concrete producer shall provide documentation demonstrating compliance with this paragraph.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Products shall be stored, handled, shipped and unloaded in a manner to minimize damage. Lifting holes or inserts shall be consistent with industry standards. Lifting shall be accomplished with methods or devices intended for this purpose.
- B. The County's representative shall make final inspection and acceptance of the precast concrete products upon arrival at the site.

PART 2 PRODUCTS

2.01 PRECAST CONCRETE VAULTS

- A. Precast concrete vaults shall comply with ASTM C858 except as modified herein.
- B. Design Criteria:
 1. Design live and dead loads shall be in accordance with ASTM C857.
 2. Superimposed loads shall accommodate 2 feet of soil and H20 vehicle loading.
 3. Earth pressure shall be converted to a horizontal pressure using a coefficient of earth pressure at rest of 0.5 and not a coefficient of active pressure.
 4. Design shall evaluate earthquake forces.
- C. Construction:
 1. Size: 5,000 gallon capacity.

2. Precast vault construction shall be in the form of monolithic walls and slabs. Do not use panelized units.
3. Minimum wall thickness shall be 6 inches.
4. Design and construct vaults to be watertight when subjected to ground water over the entire height of wall.
5. Provide openings in precast vaults for piping and access. Provide cast-in-place inserts in roof slab and end walls at the locations shown on the drawings. No field coring of openings is allowed.
6. Provide ladders, covers and frames, vents, supports, inserts, eyebolts and other miscellaneous metalwork for proper functioning of the concrete vault.
7. Finishes:
 - a. Formed non-architectural surfaces: Surfaces cast against approved forms using industry practice in cleaning forms, designing concrete mixes, placing and curing concrete. Normal color variations, form joint small surface holes caused by air bubbles and minor chips and spalls will be tolerated but no major imperfections, honeycombs or other defects shall be permitted.
 - b. Patching and repairs:
 - i. Defects that will not impair the functional use or expected life of a manufactured precast concrete product may be repaired by any method that does not impair the product.
 - ii. When honeycombed areas are to be repaired, all loose material shall be removed and the areas cut back into essentially horizontal and vertical planes to a depth at which coarse aggregate particles break under chipping rather than being dislodged.
 - iii. Proprietary repair materials shall be used in accordance with the manufacturer's instructions. If a proprietary repair material is not used, the area shall be saturated with water and immediately prior to repair the area should be damp but free of excess water. A cement-sand grout or an approved bonding agent shall be applied to the chipped surfaces, followed immediately by consolidating an appropriate repair material into the cavity.

2.02 MATERIALS

A. Concrete:

1. Concrete shall be a uniform mix of quality materials. Mix proportions shall be determined by following the standards in ACI 318 Chapter 5. Recommendations for selecting proportions for concrete are given in ACI 211.1, Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.
2. Compressive Strength: All concrete shall develop a minimum compressive strength of 4,000 psi in 28 days.

- a. Portland Cement: ASTM C150, Type II.
- b. Aggregates: ASTM C33.
- c. Water: Potable.
- d. Admixtures:
 - i. Water reducing, retarding or accelerating: ASTM C494.
 - ii. Pozzolans, fly ash and other mineral mixtures: ASTM C989.
- 3. Water Cement Ratio: concrete shall have a water cement ratio of 0.40 or less.

B. Reinforcement and Connection Materials:

- 1. Reinforcing Bars: ASTM A615.
- 2. Reinforcing Wire: ASTM A82.
- 3. Inserts and Embedded Metal: ASTM A36.
 - a. Hot-Dipped Galvanized: ASTM A152.

C. Joints:

- 1. Rubber Gaskets: ASTM C443.
- 2. Preformed Flexible Sealants: ASTM C990.

D. Grout:

- 1. Non-Shrink Grout: Premixed, packaged shrink resistant grout.

2.03 FABRICATION

A. Forms: forms for manufacturing precast concrete products shall be of the type and design consistent with industry standards. They shall be capable of consistently providing uniform products and dimensions. Forms shall be constructed so that the forces and vibrations to which the forms will be subjected can cause no product damage and maintain tolerances.

- 1. Forms shall be cleaned of concrete build-up after each use.
- 2. Form release agents shall not be allowed to build up on form casting surfaces.
- 3. Products shall not be removed from the forms until the concrete reaches the compressive strength required by the design for stripping.

B. Reinforcement:

- 1. Cages of reinforcement shall be fabricated either by tying the bars, wire or welded wire mesh into rigid assemblies in accordance with AWS D1.4.

2. Reinforcing shall be positioned as specified by the design and so that the concrete cover conforms to requirements. The tolerance on concrete cover shall be 1/3 of that specified, but not more than 1/2 inch. Positive means shall be taken to assure that the reinforcement does not move significantly during casting operations.

C. Embedded Items:

1. Embedded items shall be positioned at locations specified in the design documents. Inserts, plates, weldments, lifting devices and other items to be embedded in precast products shall be held rigidly in place so that they do not move significantly during casting operations.

D. Placing Concrete:

1. Concrete shall be deposited in forms as near to its final location as practical. The free fall of concrete shall be kept to a minimum.
2. Concrete shall be consolidated in such a manner that segregation of the concrete is minimized and honeycombed areas are kept to a minimum. Vibrators used to consolidate concrete shall have frequencies and amplitudes sufficient to produce well consolidated concrete.

E. Curing:

1. Curing by Moisture Retention: Moisture shall be prevented from evaporating from exposed surfaces until adequate strength for stripping is reached by one of the following methods:
 - a. Cover with polyethylene sheets a minimum of 6 mils thick.
 - b. Cover with burlap or other absorptive material and keep continually moist.
 - c. Use a membrane curing compound applied at a rate not to exceed 200 sq. ft. per gallon.
2. Curing with Heat and Moisture:
 - a. Concrete shall not be subjected to steam or hot air until after the concrete has attained its initial set.
 - b. Steam, if used, shall be applied within a suitable enclosure which permits free circulation of the steam.
 - c. If hot air is used for curing, precautions shall be taken to prevent moisture loss from the concrete.
 - d. The temperature of the concrete shall not be permitted to exceed 160 degrees F.

F. Shipping Products:

1. Products shall not be shipped until they are at least 5 days old, unless it can be shown that the concrete has reached at least 75% of the specified 28 day

strength or that damage will not be caused which will impair the performance of the product.

2.04 WATERPROOFING

- A. Waterproofing material shall be a factory applied, black bituminous compound of brush or spray consistency for application on below grade concrete surfaces including bottom.
 1. GCP Applied Technologies Bituthene 3000 or approved equal.
 2. Prime concrete surfaces, apply and protect product according to manufacturer's instructions.
 3. Touch-up waterproofing in field prior to backfilling.

PART 3 EXECUTION**3.01 EXCAVATION AND BACKFILLING FOR VAULTS**

- A. Perform earthwork as specified in SECTION 31 23 00 – EXCAVATING, BACKFILLING AND COMPACTION.
- B. Provide 6 inch minimum thickness of 3/4 inch crushed rock over the full width of the vault base and extend 12 inches beyond the edges of the vault.
- C. Backfill and compact around the vault with 3/4 inch crushed rock, 12 inch minimum in width. Clean, free from organics and boulders, excavated material may constitute the remainder of the compacted backfill.

3.02 INSTALLATION

- A. Site Access: Arrange adequate access to the site to facilitate hauling, storage and proper handling of the precast concrete products.
- B. Precast concrete products shall be installed to the lines and grades shown in the Contract Documents or otherwise specified.
- C. Products shall be lifted by suitable lifting devices at points provided by the precast concrete producer.
- D. Products shall be installed per the precast concrete producer's recommendations.
- E. Complete all required utility hook-ups.

3.03 FIELD QUALITY CONTROL

- A. Tests: Prior to backfilling, hydrostatically test per ASTM C1227 all utility connections including joints, pipe entry connectors and inserts for water tightness and to ensure the integrity of the entire system.

3.04 CLEAN-UP

- A. At completion of the installation, clean vault and adjust appurtenances as required to produce ready-for-use condition.

END OF SECTION 03 46 20

PART 1 GENERAL**1.01 DESCRIPTION**

- A. Painting and finishing of interior surfaces as required to complete finishing of the Work as indicated on the Drawings including the following items:
 - 1. Mechanical diffusers.
 - 2. Visible interior of ductwork.
 - 3. Electrical Sub-panels painted to match adjacent wall surface.
- B. The Work includes painting and finishing of new and existing interior exposed items and surfaces throughout project, except as otherwise indicated.
 - 1. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.
- C. Surfaces Not to be Painted:
 - 1. Factory pre-finished items as specified in various Sections.
 - 2. Pre-finished wall, ceiling, and floor coverings.
 - 3. Painting specified elsewhere and included in respective Sections, including but not necessarily limited to, shop priming.
 - 4. Code-Required Labels: Keep equipment identification and fire rating labels free of paint.
 - 5. Surfaces concealed in walls and above ceilings except as specifically indicated otherwise.
 - 6. Ducts, piping, conduit, and equipment concealed in walls and ceilings, unless specifically indicated otherwise.
- D. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.
- E. Paint exposed surfaces whether or not colors are designated in "schedules", except where natural finish of material is specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint same as adjacent similar materials or areas. If color of finish is not designated, Architect will select these from standard colors available for materials systems specified.

1.02 RELATED SECTIONS

A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 SUBMITTALS

A. Product Data:

1. Not less than 30 days before beginning work, submit a complete list of materials proposed for use, together with manufacturer's specifications.
2. Paint materials and products shall be subject to the Architect's acceptance.

B. Samples:

1. Custom and Stock Colors: Submit 8x8 inch brush-out samples for Architect's review of each color and texture. Provide a listing of material and application for each coat of each finish sample.
2. Samples shall be resubmitted as requested until required sheen, color, and texture is achieved.
3. Label and identify each sample as to location and application.

C. Field Samples: On actual wall surfaces and other exterior and interior building components in areas designated by Architect, duplicate painted finishes of prepared samples in 4 ft. sq. areas. Simulate finished lighting conditions for Architect's and State's review of in-place Work. Colors may require adjustment at no additional cost to State.

1.04 QUALITY ASSURANCE

A. Include on label of containers:

1. Manufacturer's name.
2. Type of paint.
3. Manufacturer's stock number.
4. Color.
5. Instructions for reducing, where applicable.

B. Field Quality Control:

1. Request review by the Architect of first finished room, space, or item of each color scheme required for color, texture, and workmanship.
2. Use first acceptable room, space, or item as the Project standard for each color scheme.

C. Regulatory Requirements:

1. Comply with the regulations of the Bay Area Air Quality Management District (BAAQMD) for Volatile Organic Contents (VOC's).
2. Paint shall be certified by the manufacturer as "non-lead" (less than 0.06 percent lead by weight in the dried film) as defined in Part 1303 of the Consumer Product Safety Act.
3. Work to be painted may contain excessive levels of lead-based paint. Contractor shall retain and pay for the services of a Testing Agency to perform and report on tests for such suspected material

1.05 DELIVERY AND STORAGE**A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, and following information:**

1. Name or title of material.
2. Manufacturer's stock number and date of manufacturer.
3. Manufacturer's name.
4. Contents by volume, for major pigment and vehicle constituents
5. Thinning instructions.
6. Application instructions.
7. Color name and number.

B. Storage of Materials:

1. Store only acceptable Project materials on Project site.

2. Store in a suitable location.
3. Restrict storage to paint materials and related equipment.
4. Comply with health and fire regulations.

1.06 PROJECT CONDITIONS**A. Environmental Requirements:**

1. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating systems can be stored and applied.
2. Do not apply paint in rain, fog or mist; or when relative humidity exceeds 85%; or to damp or wet surfaces; unless otherwise permitted by paint manufacturer's printed instructions.
3. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature limits specified by paint manufacturer during application and drying periods.

1.07 WARRANTY**A. Color and Life of Film:**

1. At the end of 1 year, colors of surfaces shall have remained free from serious fading, and variations (if any) shall be uniform.
2. Materials shall have their original adherence at end of 1 year and there shall be no evidence of blistering, running, peeling, scaling, chalking, streaking, or stains at end of this period.

1.08 MAINTENANCE**A. Extra Materials:**

1. At completion of the Work, deliver to the State extra stock of paint equaling approximately 5 percent of each color used in each coating material used.
2. Stock shall be in tightly sealed and clearly labeled containers.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Product numbers specified in Article 3.6, "Paint Systems", are as manufactured by Sherwin Williams, unless otherwise indicated. Equivalent products manufactured by Sinclair Paint Co., Benjamin Moore, Dunn-Edwards, ICI Paints, Fuller O'Brien or Glidden are acceptable.
- B. Materials selected for coating system of each type of surface shall be the product of a single manufacturer.
- C. Thinner: As recommended by each manufacturer for his respective product for use only within recommended limits.
- D. Colors used shall be selected for their permanence and non-fading qualities. In addition, colors that are used over concrete and plaster surfaces shall be limeproof.
- E. Unsuitability of Specified Products: Claims concerning unsuitability of any materials specified will not be entertained, unless such claim is made in writing to the Architect before the Work is started.

2.02 MATERIAL QUALITY

- A. Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
- B. Proprietary names used to designate colors or materials are not intended to imply that products of named manufacturers are required to exclusion of equivalent products of other manufacturers.

2.03 COLORS

- A. Colors: Colors to be selected by Architect from manufacturer's color chart. Exterior color scheme is to mimic existing, interior to be generally light colors.
- B. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated.
- C. Paint Coordination: Provide finish coats which are compatible with prime paints used. Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information on characteristics of finish material proposed for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify Architect in writing of any anticipated problems using specified coating systems with substrates primed by others.

2.04 MIXING AND TINTING

- A. Deliver paints ready mixed to jobsite.
- B. Accomplish job mixing and job tinting only when acceptable to the Architect.
- C. Mix only in mixing pails placed in suitable sized nonferrous or oxide-resistant metal pans.
- D. Use tinting colors recommended by manufacturer for specific type of finish.

PART 3 EXECUTION**3.01 EXAMINATION**

- A. Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Applicator.

- B. Starting of painting work will be construed as Applicator's acceptance of surfaces and conditions within any particular area.
- C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable paint film.

3.02 SURFACE PREPARATION

- A. General: Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.
- B. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface applied protection prior to surface preparation and painting operations. Remove, if necessary, for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, reinstall removed items.
- C. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program cleaning and painting so that contaminants from cleaning process will not fall onto wet, newly-painted surfaces.
- D. Gypsum Board:
 1. Fill narrow, shallow cracks and small holes with spackling compound.
 2. Rake deep, wide cracks and deep holes.
 - a. Dampen with clear water.
 - b. Fill with thin layers of drywall joint cement.
 3. Allow to dry.
 4. Sand Smooth after drying; do not raise nap of paper on gypsum board.
 5. See Section 09 21 00 for requirements for gypsum board finishing.

E. Ferrous Metals: Clean ferrous surfaces, which are not galvanized or shop-coated, of oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.

1. Touch-up shop-applied prime coats wherever damaged or bare, where required by other sections of these specifications. Clean and touch-up with same type shop primer.

F. Galvanized Surfaces: Clean free of oil and surface contaminants with non-petroleum based solvent.

G. Concrete:

1. Cure: Concrete must be cured prior to coating application. Cured is defined as concrete poured and aged at a material temperature of 75 degree F for at least 30 days. The pH of the surface should be between 6 and 9.
2. Moisture: Material must be free of moisture as much as possible. Test per ASTM D4263.
3. Temperature: Air, surface and material temperature must be at least 50 degrees F (10 deg C) during the application and until the coating is cured.
4. Surface cleaning: Remove all contaminants, grease, dirt, loose paint, oil, tar, glaze, laitance, efflorescence, loose mortar, and cement. Broom cleaning, vacuum cleaning, air blast cleaning, water cleaning, and steam cleaning are considered suitable as outlined in ASTM D4258. Concrete curing compounds, form release agents, and concrete hardeners may not be compatible with recommended coatings. Check for compatibility by applying a test patch of the recommended coating system, covering at least 2 to 3 square feet. Allow to dry one week before testing adhesion per ASTM D3359. If the coating system is incompatible, surface preparation per methods outlined in ASTM D4259 are required.
5. Surface imperfections may require filling with a material compatible with the coating product.

H. Surfaces which cannot be prepared or painted as specified shall be immediately brought to the attention of the Architect in writing.

1. Starting of work without such notification will be considered acceptance by the Contractor of surface involved.
2. Contractor shall replace unsatisfactory work caused by improper or defective surfaces, as directed by the Architect, at no additional cost to the State.

3.03 MATERIALS PREPARATION

- A. Mix and prepare painting materials in accordance with manufacturer's directions.
- B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.
- C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.

3.04 APPLICATION

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
 1. Apply additional coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently-fixed equipment or furniture with prime coat only before final installation of equipment.
 3. Paint back sides of access panels, and removable or hinged covers to match exposed surfaces.
 4. Omit first coat (primer) on metal surfaces which have been shop-primed and touch-up painted, unless otherwise indicated.
- B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pre-treated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 1. Allow sufficient time between successive coatings to permit proper drying. Do not re-coat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

- C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness as indicated or, if not indicated, as recommended by coating manufacturer.
- C. Prime Coats: Apply prime coat of material which is required to be painted or finished, and which has not been prime coated by others.
 - 1. Re-coat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn through or other defects due to insufficient sealing.
- E. Stipple Eggshell Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling such as laps, irregularity in texture, skid marks, or other surface imperfections.
- F. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.

3.05 CLEAN-UP AND PROTECTION

- A. Clean-up: During progress of work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day.
 - 1. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- B. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
 - 1. Provide "Wet Paint" signs as required to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
 - 2. At the completion of work of other trades, touchup and restore all damaged or defaced painted surfaces.

3.06 PAINT SYSTEMS

A. General:

1. Exterior paint systems are specified and identified by number and interior paint systems by letter.
2. Only major areas are scheduled, but miscellaneous and similar items and areas within room or space shall be treated with suitable system.
3. Number of coats scheduled is minimum.
 - a. Additional coats shall be applied at no additional cost if necessary to completely hide base material, produce uniform color, and provide satisfactory finish result.
4. This specification shall serve as a guide and is meant to establish procedure and quality.

B. Acceptance of Final Colors: Final coat of paint for both exterior and interior shall not be applied until colors have been accepted by the Architect based on field samples noted in 1.3.D above.

C. Interior Coating Systems: Provide the following finish coating systems for the various substrates, as shown on the Finish Plan. Provide coats as indicated and sufficient to cover.

1. Gypsum Wallboard:

- a. Flat: (ceilings, except as noted)
 - 1) Prime Coat: 220-22 PVA Sealer.
 - 2) Second Coat: One coat 209-00 Alkyd Wall Primer Sealer.
 - 3) Finish Coat: One coat 202-XX Flat Latex Wall Finish.
- b. Stipple Eggshell: (walls, except as noted)
 - 1) Prime Coat: One coat 220-22 PVA Sealer.
 - 2) Second Coat: 209-05 Satin Latex Stipple.
 - 3) Finish Coat: One coat 212-XX Eggshell Latex Enamel.

2. Galvanized Metal (trim and access doors, except structural steel, etc.):

- a. Semi-gloss:

- 1) Prime Coat (delete if shop primed): One coat 621-04 BLOX-RUST Alkyd Metal Primer.
- 2) Two coats 619-6X Ultra-Color Alkyd Semi-Gloss Enamel.

3. Ferrous Metal or Aluminum (miscellaneous)

- a. Semi-gloss:
 - 1) Prime Coat (delete if shop primed): 15 Red Oxide Primer
 - 2) Second Coat: 1790 Latex Enamel Undercoater
 - 3) Finish Coat: 4000 Acrylic Latex Enamel

END OF SECTION 09 90 00

PART 1 GENERAL**1.01 DESCRIPTION**

- A. This section specifies exterior parking and traffic regulatory signs.

1.02 RELATED WORK

- A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 MANUFACTURER'S QUALIFICATIONS

- A. Sign manufacturer shall provide evidence that they regularly and presently manufactures signs similar to those specified in this section as one of their principal products.

1.04 SUBMITTALS

- A. Submit in accordance with Section 01 33 00, SUBMITTALS.
- B. Manufacturer's Literature:
 - 1. Manufacturer's printed specifications, anchorage details, installation and maintenance instructions.

1.05 DELIVERY AND STORAGE

- A. Deliver materials to job in manufacturer's original sealed containers with brand name marked thereon. Protect materials from damage.
- B. Package to prevent damage or deterioration during shipment, handling, storage and installation. Maintain protective covering in place and in good repair until removal is necessary.
- C. Deliver signs only when the site and mounting services are ready for installation work to proceed.
- D. Store products in dry condition inside enclosed facilities.

1.06 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

- B. American Society for Testing and Materials (ASTM):

B209-07.....Aluminum and Aluminum-Alloy Sheet and Plate

B221-08.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and tubes.

PART 2 PRODUCTS**2.01 GENERAL**

- A. Signs of type, size and design shown on the drawings and as specified.
- B. Signs complete with lettering, framing and related components for a complete installation.
- C. Do not scale drawings for dimensions. Contractor to verify and be responsible for all dimensions and conditions shown by these drawings. County's Representative to be notified of any discrepancy in drawing, in field directions or conditions, and/or of any changes required for all such construction details.
- D. The Sign Contractor, by commencing work of this section, assumes overall responsibility, as part of his warranty of work, to assure that assemblies, components and parts shown or required within the work of the section, comply with the Contract Documents. The Contractor shall further warrant: That all components, specified or required to satisfactorily complete the installation are compatible with each other and with conditions of installations.

2.02 PRODUCTS

- A. General: For items exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names or roughness.
- B. Aluminum:
 - 1. Sheet and Plate: ASTM B209.
 - 2. Extrusions and Tubing: ASTM B221.
 - 3. Castings: ASTM B26.
- C. Concrete Post Footings: See Section 03 30 00, CAST-IN-PLACE CONCRETE.
- D. Steel:
 - 1. Posts: ASTM A53 Grade B, Schedule 40 pipe, Galvanized G90.
 - 2. Sheet: ASTM A1008, ASTM A591 electrolytic zinc coated.

2.03 SIGN STANDARDS

- A. Typography:
 - 1. Type Style: Helvetica Regular and Helvetica Bold. Initial caps or all caps as indicated in Sign Message Schedule.
 - 2. Arrow: See graphic standards in drawings.
 - 3. Letter spacing: See graphic standards on drawings.

4. Letter spacing: See graphic standards on drawings.
5. All text, arrows, and symbols to be provided in size, colors, typefaces and letter spacing shown. Text shall be a true, clean, accurate reproduction of typeface(s) shown. Text shown in drawings are for layout purposes only; final text for signs is listed in Sign Message Schedule.

2.04 SIGN TYPES

- A. General:
 1. Provide signage as shown
 2. Meet ADA Standards and California Building Code – 11B.
- B. Traffic Regulatory or Parking Restriction Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following minimum requirements:
 1. Steel Sheet: 0.0625 inch thick, painted.
 2. Aluminum Sheet: 0.1250 inch thick, painted.
- C. Posts: As shown on the drawings.
 1. 2 inch round standard pipe, galvanized.
- D. Accessories:
 1. Anchors and inserts: Provide hot-dipped galvanized anchors and inserts for exterior installations. Use toothed steel devices for drilled in anchors. Furnish inserts to be set into concrete or masonry work. Furnish galvanized through bolts for attachment to posts.

2.05 FABRICATION

- A. Drill holes for bolts and screws. Conceal fastenings where possible. Exposed ends and edges mill smooth, with corners slightly rounded. Form joints exposed to weather to exclude water.
- B. Coat aluminum exterior signs with low VOC acrylic polyurethane. Paint coatings are to be UV and graffiti resistant and able to maintain a consistent color and durability.
- C. All painted surfaces properly primed. Finish coating of paint to have complete coverage with no light or thin applications allowing substrate or primer to show. Finished surface smooth, free of scratches, gouges, drips, bubbles, thickness variations, foreign matter and other imperfections.
- D. Pre-assemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for re-assembly and coordinated installation.

E. No signs are to be manufactured until final sign message schedule and location review has been completed by the County's Representative & forwarded to Contractor.

2.06 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Baked Enamel: Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating and painting.

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Protect products against damage during field handling and installation. Protect adjacent existing and newly placed construction, landscaping and finishes as necessary to prevent damage during installation. Paint and touch up any exposed fasteners and connecting hardware to match color and finish of surrounding surface.
- B. Mount signs in proper alignment, level and plumb according to the sign location plan and the dimensions given on elevation and sign location drawings. Where otherwise not dimensioned, signs shall be installed where best suited to provide a consistent appearance throughout the project. When exact position, angle, height or location is in doubt, contact County's Representative for clarification.
- C. Contractor shall be responsible for all signs that are damaged, lost or stolen while materials are on the job site and up until the completion and final acceptance of the job.
- D. Remove or correct signs or installation work County's Representative determines as unsafe or as an unsafe condition.
- E. At completion of sign installation, clean exposed sign surfaces. Clean and repair any adjoining surfaces and landscaping that became soiled or damaged as a result of installation of signs.

3.02 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by the County.

END OF SECTION 10 14 00

PART 1 GENERAL**1.01 SUMMARY**

- A. Furnish labor, materials, equipment and services to install toilet and related accessories and components as shown on the Drawings, as specified herein and as required for a complete and proper installation, including, but not limited to the following:
 - 1. Toilet Room accessories.

1.02 RELATED SECTIONS

- A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies: Accessories and their installation shall conform to applicable requirements for the disabled.
- B. Design Criteria: Grab bars shall be capable of withstanding a force of 900 pounds, minimum, when installed in accordance with the manufacturer's instructions.
- C. Accessories shall be the product of a single manufacturer unless otherwise specified.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's descriptive and technical data and illustrations, marked to indicate specific product types, variations, and materials.
- B. Shop Drawings: Indicate layouts and installation details necessary for proper preparation of toilet partitions and other construction supporting grab bars or other accessory items.
- C. Test data or certification that grab bars meet the specified design criteria.
- D. Maintenance data, operating instructions, and keys required for each type of accessory and lock.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Quality designation and guarantee label shall be attached to each mirror, or manufacturer's certification that mirrors meet specified requirements shall be submitted.
- B. Protection:
 - 1. Maintain protective coatings or coverings on units until installation is complete.
 - 2. Remove protective coverings at final cleanup of installation.
- C. Handle so as to prevent damage to finished surfaces.
- D. Store materials in original protective packaging to prevent soiling, physical damage, or wetting.

1.06 PROJECT CONDITIONS

- A. Coordinate submission of installation instructions so that backing, blocking, framing and formwork can be properly installed and work of other trades will not be delayed.

1.07 WARRANTY

- A. Warrant mirrors for 5 years against silver spoilage.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Stainless Steel Sheet: ASTM A167, commercial grade, Type 304, standard gage.
- B. Stainless Steel Tubing: ASTM A269, commercial grade, seamless welded.
- C. Sheet Steel: ASTM A366, cold rolled stretcher leveled; with G90 galvanized coating.
- D. Adhesive: Epoxy type contact cement.
- E. Attachment Devices: Hot dip galvanized; furnish backing plates, brackets, and hardware required for a complete installation as recommended by accessory manufacturer for component and substrate.
 - 1. Fastening shall be concealed and theft-proof when available.
- F. Locks: Provide locks and furnish keys for standard lockable items.
- G. Grab Bars: 1-1/4 to 1-1/2 inches O.D., mandrel bent, with welded end flanges, exposed mounting, and peened or other approved safety-grip finish; anchor plates for each bar.

2.02 FINISHES

- A. Provide manufacturer's finish for each item indicated in accessory schedule, stainless steel where available.
 - 1. Where there are choices of available finishes, not including satin stainless steel, provide chart for Architect's selection.
- B. Exposed Finishes: Stainless steel No. 4, satin finish; satin chrome finish acceptable where stainless steel not available for accessory item scheduled.

2.03 ACCESSORY SCHEDULE

- A. Model numbers indicated in the Schedule below are those of Bobrick Washroom Equipment, Inc. (unless noted otherwise) and are used to establish a standard of quality, utility. Equivalent products of other manufacturers may also be acceptable, subject to conformance with the requirements specified herein and indicated. All accessories brushed stainless steel, unless otherwise noted.
 - 1. Provide one item for each location indicated on Drawings.
 - 2. All items shall be satin finish, unless otherwise specified or indicated.
- B. Schedule (itemized below as referenced on Drawings):

1. Bobrick B-5806 – 1-1/4 inch (32mm) Diameter Stainless Steel Grab Bars with Snap-Flange Cover

2.04 FABRICATION

- A. Corners: Weld and grind smooth; leave no open miters.
- B. Form exposed surfaces from one sheet of stock, free of joints.
- C. Provide steel anchor plates and anchor components for installation on building finish.
- D. Form surfaces flat without distortion; maintain flat surfaces without scratches or dents.
- E. Back paint components where contact is made with building finishes, to prevent electrolysis
- F. Hot dip galvanize components; package complete with anchors and fittings.
- G. Locked Dispensing Units: Key alike for all accessories.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Check openings scheduled to receive recessed units for correct dimensions, plumbness of blocking or frames, and preparation that would affect installation of accessories.
- B. Check areas to receive surface mounted units for conditions that would affect quality and execution of Work.
- C. If unsatisfactory conditions exist, do not commence the installation until such conditions have been corrected.

3.02 INSTALLATION

- A. Install accessories in locations and at heights indicated.
- B. Install true, plumb and level, securely and rigidly anchor accessories to substrate in accordance with manufacturer's instructions.
- C. Use tamper-proof, security type fasteners.
- D. Attach grab bars to backing installed in wall to withstand loads prescribed by IBC.
- E. Install accessories in strict dimensional tolerance to CBC codes, diagrams and standards.

3.03 ADJUSTMENT AND CLEANING

- A. Remove protective coatings in accordance with the manufacturer's instructions.
- B. Adjust accessories for proper operation.
- C. After completion of installation, clean and polish all exposed surfaces.
- D. Deliver keys and instruction sheets to the County.

3.04 COMPLETION

- A. When complete, accessories shall be set plumb and level, accurately aligned, and securely attached.
- B. Exposed surfaces shall be clean and free from scratches, dents, tool marks, stains, discoloration, and other defects and damage.

END OF SECTION 10 28 00

PART 1 GENERAL**1.01 SUMMARY**

- A. This Section includes the materials, design and installation of pre-assembled, turnkey, precast concrete restrooms complete with lighting, plumbing, accessories, etc. as shown on the Contract Documents.
- B. Except as modified herein, construction shall also be as specified in SECTION 03 46 20 – PRECAST CONCRETE VAULTS.
- C. Refer to SECTION 22 00 00 - PLUMBING
- D. Refer to SECTION 10 28 00 – TOILET ACCESSORIES.
- E. All Sections listed in the Table of Contents are a Condition of this Section.

1.02 SUBMITTALS

- A. Submit submittal packages in accordance with SECTION 01 33 00 – SUBMITTALS.
- B. Submit manufacturer's design documents. Show dimensions of building and location of openings including thicknesses of walls, floor and roof. Show and dimension all items necessary for a complete installation including doors, windows, lighting, plumbing, accessories, etc. Prepare architectural plans, elevations, sections and details.
- C. Submit structural requirements. Show reinforcing wire and steel. Show materials of construction by ASTM reference and grade.
- D. Submit manufacturer's design calculations and certification signed and sealed by a structural engineer, registered in the State of California, that vault design and construction comply with the specified design load conditions and the referenced ASTM specification.
- E. Submit manufacturer's catalogue data, descriptive literature and installation instructions for waterproofing material.

1.03 QUALITY ASSURANCE

- A. Reference Standards
 - 1. California Building Code (CBC), 2016.
 - 2. American Concrete Institute (ACI)
 - ACI 304 – Guide for Measuring, Mixing, Transporting and Placing Concrete.
 - ACI 318 – Building Code Requirements for Reinforced Concrete.
 - 3. American Society of Testing Materials (ASTM)
 - ASTM C857 – Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures.
 - ASTM C858 – Standard Specification for Underground Precast Concrete Utility Structures.

ASTM C1227 – Standard Specification for Precast Concrete Septic Tanks

4. American Welding Society (AWS)

AWS D1.1 - Structural Welding Code – Structural Steel

AWS D1.4 - Structural Welding Code – Reinforcing Steel

5. Concrete Reinforcing Steel Institute (CRSI)

CRSI Manual of Standard Practice

B. Design Criteria:

1. The design criteria are to ensure that the restrooms will not only withstand the minimum forces of nature listed below but to provide protection from vandalism and other unforeseen hazards.

a. Roof Load: 20 psf

b. Floor Load: 50 psf

c. Wind Load: 110 mph

d. Seismic Load: $S_{DS} = 1.737 \text{ g}$

2. Restroom shall be designed to meet the requirements of the Americans with Disabilities Act, the Uniform Federal Accessibility Standard and CBC.

C. Quality Control: Contractor shall demonstrate adherence to the standards set forth in the National Precast Concrete Association (NPCA) Quality Control Manual.

1. The precast contractor shall have been in the business of producing precast concrete products similar to those specified for a minimum of 5 years.

2. The precast producer shall maintain a permanent quality control department or retain an independent testing agency on a continuing basis.

3. The precast producer shall show that the following tests are performed in accordance with ASTM standards. Tests shall be performed for each 150 cu. Yd. of concrete placed, but not less frequently than once per week.

a. Slump: ASTM C143

b. Compressive Strength: ASTM C31, C192 & C39

c. Air Content (When air-entrained concrete is being used): ASTM C231 or C173

d. Unit Weight: ASTM C138

4. The precast concrete producer shall provide documentation demonstrating compliance with this paragraph.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Products shall be stored, handled, shipped and unloaded in a manner to minimize damage. Lifting holes or inserts shall be consistent with industry standards. Lifting shall be accomplished with methods or devices intended for this purpose.
- B. The County's representative shall make final inspection and acceptance of the precast concrete products upon arrival at the site.

PART 2 PRODUCTS**2.01 PRECAST CONCRETE VAULT RESTROOMS**

- A. Precast concrete vaults shall comply with ASTM C858 except as modified herein.
- B. Concrete Construction:
 - 1. Dimensions: As shown on the Contract Documents.
 - 2. Precast vault construction shall be in the form of monolithic walls and slabs. Do not use panelized units.
 - 3. Minimum wall, floor and roof thickness shall be 6 inches.
 - 4. Finishes:
 - a. Formed architectural and non-architectural surfaces: Surfaces cast against approved forms using industry practice in cleaning forms, designing concrete mixes, placing and curing concrete. Normal color variations, form joint small surface holes caused by air bubbles and minor chips and spalls will be tolerated but no major imperfections, honeycombs or other defects shall be permitted.
 - b. Patching and repairs:
 - i. Defects that will not impair the functional use or expected life of a manufactured precast concrete product may be repaired by any method that does not impair the product.
 - ii. When honeycombed areas are to be repaired, all loose material shall be removed and the areas cut back into essentially horizontal and vertical planes to a depth at which coarse aggregate particles break under chipping rather than being dislodged.
 - iii. Proprietary repair materials shall be used in accordance with the manufacturer's instructions. If a proprietary repair material is not used, the area shall be saturated with water and immediately prior to repair the area should be damp but free of excess water. A cement-sand grout or an approved bonding agent shall be applied to the chipped surfaces, followed immediately by consolidating an appropriate repair material into the cavity.

2.02 MATERIALS

- A. Concrete:

1. Concrete shall be a uniform mix of quality materials. Mix proportions shall be determined by following the standards in ACI 318 Chapter 5. Recommendations for selecting proportions for concrete are given in ACI 211.1, Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.
2. Compressive Strength: All concrete shall develop a minimum compressive strength of 4,000 psi in 28 days.
 - a. Portland Cement: ASTM C150, Type II.
 - b. Aggregates: ASTM C33.
 - c. Water: Potable.
 - d. Admixtures:
 - i. Water reducing, retarding or accelerating: ASTM C494.
 - ii. Pozzolans, fly ash and other mineral mixtures: ASTM C989.
3. Water Cement Ratio: concrete shall have a water cement ratio of 0.40 or less.

B. Reinforcement and Connection Materials:

1. Reinforcing Bars: ASTM A615.
2. Reinforcing Wire: ASTM A82.
3. Inserts and Embedded Metal: ASTM A36.
 - a. Hot-Dipped Galvanized: ASTM A152.

C. Color:

1. Interior: Provide smooth finish on all interior surfaces with epoxy coating or equal. Color to be chosen by County.
2. Exterior: Provide fine textured finish with high-build, water based, acrylic coating.

D. Joints:

1. Rubber Gaskets: ASTM C443.
2. Preformed Flexible Sealants: ASTM C990.

E. Grout:

1. Non-Shrink Grout: Premixed, packaged shrink resistant grout.

2.03 FABRICATION

A. Forms: forms for manufacturing precast concrete products shall be of the type and design consistent with industry standards. They shall be capable of consistently providing uniform products and dimensions. Forms shall be constructed so that the forces and

vibrations to which the forms will be subjected can cause no product damage and maintain tolerances.

1. Forms shall be cleaned of concrete build-up after each use.
2. Form release agents shall not be allowed to build up on form casting surfaces.
3. Products shall not be removed from the forms until the concrete reaches the compressive strength required by the design for stripping.

B. Reinforcement:

1. Cages of reinforcement shall be fabricated either by tying the bars, wire or welded wire mesh into rigid assemblies in accordance with AWS D1.4.
2. Reinforcing shall be positioned as specified by the design and so that the concrete cover conforms to requirements. The tolerance on concrete cover shall be 1/3 of that specified, but not more than 1/2 inch. Positive means shall be taken to assure that the reinforcement does not move significantly during casting operations.

C. Embedded Items:

1. Embedded items shall be positioned at locations specified in the design documents. Inserts, plates, weldments, lifting devices and other items to be embedded in precast products shall be held rigidly in place so that they do not move significantly during casting operations.

D. Placing Concrete:

1. Concrete shall be deposited in forms as near to its final location as practical. The free fall of concrete shall be kept to a minimum.
2. Concrete shall be consolidated in such a manner that segregation of the concrete is minimized and honeycombed areas are kept to a minimum. Vibrators used to consolidate concrete shall have frequencies and amplitudes sufficient to produce well consolidated concrete.

E. Curing:

1. Curing by Moisture Retention: Moisture shall be prevented from evaporating from exposed surfaces until adequate strength for stripping is reached by one of the following methods:
 - a. Cover with polyethylene sheets a minimum of 6 mils thick.
 - b. Cover with burlap or other absorptive material and keep continually moist.
 - c. Use a membrane curing compound applied at a rate not to exceed 200 sq. ft. per gallon.
2. Curing with Heat and Moisture:
 - a. Concrete shall not be subjected to steam or hot air until after the concrete has attained its initial set.

- b. Steam, if used, shall be applied within a suitable enclosure which permits free circulation of the steam.
- c. If hot air is used for curing, precautions shall be taken to prevent moisture loss from the concrete.
- d. The temperature of the concrete shall not be permitted to exceed 160 degrees F.

F. Shipping Products:

1. Products shall not be shipped until they are at least 5 days old, unless it can be shown that the concrete has reached at least 75% of the specified 28 day strength or that damage will not be caused which will impair the performance of the product.

2.04 FIXTURES

- A. Lighting: Wall Mount, Cooper Industries BCLED Series, 4 foot, Powder Coated with Snap-in Lens.
- B. Plumbing:
 1. Manufacturer: Acorn Engineering Company or approved equal.
 - a. Location: 15125 Procter Avenue, City of Industry, California 91744
 - b. Telephone: 800-488-8999
 2. Toilet:
 - a. Waterless Toilet: Dura-Ware 2131 Series or equal.
 - b. Mounted over vented pit.
 - c. 18 gauge Stainless Steel (type 304), Seamless Welded, Satin Finish.
 - d. Plastic seat.
 3. All fixtures shall be ADA compliant.
 4. Plastic seat when open shall clear grab bars by 1 1/2 inches.

2.05 DOORS

- A. Doors and frames:
 1. Doors and frames shall comply with Steel Door Institute (SDI) Recommended Specifications for Standard Steel Doors and Frames.
 2. Provide 3'-0" x 7'-0" x 1 3/4", 18 gauge galvanized and insulated door construction
 3. Provide 16 gauge welded frames.

4. Louvers: Sight-proof, 24" x 24" with insect screen, galvanized steel louver mounted in lower half of door.
5. Doors and frames shall be painted with one coat of rust inhibitive primer and one finish coat of enamel. Color to be selected from manufacturer's standard.

B. Door Hardware:

1. Hinges: 1 1/2 pair Stanley FBB191, 32D (ANSI A5112), 4 1/2" x 4 1/2", Satin Stainless Steel finish or equal.
2. Lock set: Corbin Russwin CL3957 (BHMA 630), Satin Stainless Steel with lever handles or equal. Meet ADA installation height.
3. Provide weatherstriping and door bottom.
4. Threshold: Pemko 171A, mill finish aluminum or equal.
5. Closer: Norton Series 8501 or equal. Adjust closer to meet ADA door opening force.

2.06 WINDOWS & SKYLIGHTS

A. Windows and Frames:

1. Windows and frames shall comply with Steel Door Institute (SDI) Recommended Specifications for Standard Steel Doors and Frames.
2. Provide 16 gauge welded frames.
3. Windows and frames shall be painted with one coat of rust inhibitive primer and one finish coat of enamel. Color to be selected from manufacturer's standard.
4. Fixed glaze with Transparent Polycarbonate (Lexan 9600).

2.07 ROOFING AND WATERPROOFING

A. Roofing and Flashing: Prefabricated, Prefinished, Standing Seam Roof System.

1. AEP Span Span-Lok HP (SLHP-216) or approved equal.
2. 22 gauge, 16" wide, Galvalume with 2" high seams.
3. Provide color coordinated hip, gable and valley flashings, ridge and peak caps, eave drips and counterflashings.

B. Waterproofing:

1. GCP Applied Technologies Ice and Water or approved equal at roof.
2. Prime concrete surfaces, apply and protect product according to manufacturer's instructions.
3. Factory applied, black bituminous compound of brush or spray consistency for application on below grade concrete surfaces including bottom.

- C. Sealant: SIKA FLEX 1A elastic sealant or equal.

2.08 ACCESSORIES

- A. Grab Bars: 1 1/4 " diameter satin stainless steel.
- B. Toilet Tissue Dispensers: Surface mounted, double roll dispenser, satin finish.

PART 3 EXECUTION

3.01 EXCAVATION AND BACKFILLING FOR VAULTS

- A. Perform earthwork as specified in SECTION 31 23 00 – EXCAVATING, BACKFILLING AND COMPACTION.
- B. Provide 6 inch minimum thickness of 3/4 inch crushed rock over the full width of the vault base and extend 12 inches beyond the edges of the vault.
- C. Backfill and compact around the vault with 3/4 inch crushed rock, 12 inch minimum in width. Clean, free from organics and boulders, excavated material may constitute the remainder of the compacted backfill.

3.02 INSTALLATION

- A. Site Access: Arrange adequate access to the site to facilitate hauling, storage and proper handling of the precast concrete products.
- B. Precast concrete products shall be installed to the lines and grades shown in the Contract Documents or otherwise specified.
- C. Products shall be lifted by suitable lifting devices at points provided by the precast concrete producer.
- D. Products shall be installed per the precast concrete producer's recommendations.
- E. Complete all required utility hook-ups.
- F. Install accessories and signage per CBC accessibility requirements, dimension and clearances.

3.03 FIELD QUALITY CONTROL

- A. Tests: Prior to backfilling, hydrostatically test per ASTM C1227 all utility connections including joints, pipe entry connectors and inserts for water tightness and to ensure the integrity of the entire system.

3.04 CLEAN-UP

- A. At completion of the installation, clean vault and adjust appurtenances as required to produce ready-for-use condition.

END OF SECTION 13 12 00

PART 1 GENERAL**1.01 GENERAL REQUIREMENTS**

- A. The plumbing work as on the drawings and described in these Specifications shall be subject to all provisions of the General and Special conditions of the contract documents.
- B. The work described on the plans and in these specifications includes all labor, materials, equipment, transportation, testing and startup of the plumbing devices and systems, as outlined in the Summary of Work.
- C. The plumbing contractor shall submit the initial bid price to include all costs with overhead and profit to complete the construction described in the plans and specifications through start up and acceptance by the County.
- D. The requirements outlined in the specifications shall be in addition to the plans.

1.02 RESPONSIBILITY

- A. The contractor shall be responsible for staffing this division of work with qualified persons experienced in the particular work described herein. All material shall be new and of the best quality. All work shall be installed in a manner so as to result in a completed section of work with a neat orderly appearance. The contractor shall coordinate this work with other portions of the project to result in completely operable systems.
- B. The intent of the plans and specifications is to describe the general scope of the plumbing work and plumbing systems. It is not the intent of these plans and specifications to preclude the submittal of alternative methods or materials. Manufacturer's names and catalog numbers are stated to identify the type and quality of the equipment or materials required for the project. The contractor may submit shop drawings and/or technical information on alternative equipment, materials or installation details to accomplish the intent of the plans and specifications. Approval of the alternative equipment, materials or installation details shall not relieve the contractor of any responsibility for complying with the intent of the plans and specifications.
- C. The contractor shall construct the project in conformance with the plans, specifications, and related codes and installation standards. Deviations from the plans and specifications shall be requested through a "Request for Information (RFI), Authorization to deviate from the plans and specifications shall be by a written response to the RFI. Verbal understandings do not exist.

1.03 SUMMARY OF WORK

Provide and install the following plumbing fixtures, equipment and systems and/or modifications thereto:

- A. All plumbing fixtures shown in the architectural and plumbing plans. Reference the architectural plans for fixture locations and dimensions.
- B. All cold water piping, valves, fittings, supports and controls from the point of connection to the yard piping or existing building systems, to each point of use, including service and connection to all water heaters. Reference the site utility plan or site plumbing plan for connection from the yard piping to the building system piping. Provide and install access panels

for each concealed valve.

- C. All hot water piping, valves, fittings, insulation, supports and controls from the water heaters to the points of use. Provide circulation pumps with related valves and piping in the case of re-circulated systems. Provide and install access panels for each concealed valve.
- D. All waste piping, fittings and supports from the point of connection at each fixture to the connection with the onsite waste collection system including indirect waste fittings and clean outs.
- E. All vent piping, fittings and supports from the points of connection with the waste piping through the vent terminations above the roof. Vent piping is required to penetrate through the exterior wall then up 6" above the roof. Roof penetrations are not permitted.
- F. All site piping, trenching, backfill, fittings, back flow prevention valves, isolation valves and boxes with covers. Provide H-20 composite material or concrete boxes with covers for in ground installations.
- G. All valves, including pressure reducing, ball, check, gate and globe.

1.04 DIVISION 220000 RESPONSIBILITIES

- A. Assume responsibility for the installation and proper functioning of the plumbing systems in the entirety. Furnish and install all low voltage (24 volts or less) systems. Providing disconnects, contactors, stop/start and protective devices, for switching power circuits is the responsibility of the electrical contractor.
- B. Coordinate all electric power and control requirements with the electrical contractor to assure complete, operable systems.

1.05 DIVISION 260000 ELECTRICAL RESPONSIBILITIES

- A. Furnish and install all raceways, conductors, disconnects, contactors, start/stop and protective devices necessary for electrical power supply and switching, all control wiring conduit, and line voltage control wiring to all motors and equipment.

1.06 WORK NOT DESCRIBED

- A. Include all minor work not typically shown or specified, as required to produce complete, operational, plumbing systems.

1.07 RULES AND REGULATIONS

All work and materials shall comply with the latest rules and regulations of:

- A. The California Building Code, California Code of Regulations (CCR), Title 24, Part 2
- B. The California Plumbing Code, CCR Title 24, Part 5, including all related International Association of Plumbing and Mechanical Officials (IAPMO), installation standards.
- C. The California Energy Code, CCR, Title 24, Part 6
- D. The California Green Code, CCR, Title 24, Part 11

Strict compliance with the latest adopted codes and regulations is mandatory.

1.08 SITE EXAMINATION

Thoroughly examine the site and verify the actual work conditions. No extra compensation will be allowed for expenses due to failure to discover site conditions which affect the work.

1.09 PLAN AND SPECIFICATIONS ACCURACY

- A. The plans and specifications are diagrammatic in nature and do not represent exact locations or distances except where specifically noted. Include all required offsets, bends, and other special fittings. Coordinate with the other building trades and make all modifications required at no extra costs.
- B. The plans showing existing plumbing systems in areas to be remodeled show the systems as illustrated in the best available as-built documents and on limited field inspection of the site by the Engineer. Inspect and field-verify actual existing conditions. The plans reflect the desired new configurations. Include all required modifications to implement the new configuration at no extra cost.

1.10 SUBSTITUTIONS AND SUBMITTALS

- A. Provide six (6) submittals of all equipment and materials described in the equipment schedules as shown on the plans and exposed plumbing materials. Provide wiring and/or piping diagrams for all control systems. Submittal data shall be sufficient to verify complete compliance with the plans and specifications. Provide complete data even if using materials specified. Submittals shall conform to the requirements of the General Conditions and be submitted in one package to expedite the review process.
- B. Provide shop drawings for all fabricated equipment.
- C. Submit all proposed deviations from the plans or specifications in material type, size, configuration, quantity, or routing, through a Request for Information (RFI) for Engineer's review. Requested deviations shall be accepted, modified or denied by a written response to the RFI. Verbal understandings do not exist.
- D. Submittal review is for the purpose of determining general conformance with the intent of the plans and specifications, the favorable review of part of all or the submittal does not relieve the contractor of any responsibility for compliance with the contract documents.
- E. The contractor is responsible for reviewing plumbing equipment and fixture sizes, at the time of submittal, coordinating sizes with all other construction crafts on the project and for submitting a (RFI) through the general contractor to resolve any interferences.

1.11 AS BUILT DRAWINGS

- A. Provide and keep up-to-date, a complete set of prints, which shall be regularly corrected, and shall show every change from the original contract drawings, include change orders. Deliver as-built set to the Engineer upon project completion and acceptance. Include dimensions, exact locations, and invert elevations of all exterior and interior underground piping.

1.12 DEMOLITION AND REMOVAL

- A. Demolish and remove from the site all portions of the plumbing systems not specifically required for the intended operation of the systems and equipment described herein.
- B. Remove all equipment and materials not required for continuing operation and dispose of it in an environmentally accepted manner. The County shall have the right to take possession of any materials and equipment they deem suitable for other use.

1.13 QUALITY

- A. Install only new materials. No used materials, other than equipment shown as "Existing Relocate" (ER), may be installed.
- B. Do not install materials received in a damaged in a damaged condition or damaged at job-site. Return all damaged components. Repair of minor and incidental damage, if first approved by Engineer and manufacturer, is acceptable.

1.14 EQUIPMENT SLEEVES, INSERTS AND ANCHORS

- A. Install all sleeves, inserts, anchorages, etc. required for this Division and which are embedded in work of other trades.

1.15 FOUNDATIONS AND SUPPORTS

- A. Install equipment on concrete foundation pads anchored to the slab floor, if shown on the Plans, listed in the Specifications, or recommended by the manufacturer. Anchor equipment to the pad to meet normal load and seismic requirements.
- B. Securely attach all equipment, piping, etc. to the building as detailed in the related construction code, or as described in these plans and specifications. Allow for expansion and contractions.

1.16 CUTTING AND PATCHING

- A. Make all cuts and patches required to install the work according to good construction practice. Modification of structural building components shall be made only with the Engineer's specific written approval.
- B. Do not cover concealed piping or other systems installed under this Division until inspected and approved by Engineer and all other required construction inspectors. If systems are covered before inspection and approval, Contractor will remove covering and replace after inspection at no extra cost.

1.17 TRAINING FOR OPERATION AND MAINTENANCE

- A. After all plumbing systems have been tested and accepted, provide at least 4 hours training to the Owners maintenance crew. Cover operating and maintenance procedures for all plumbing systems and components installed.
- B. Submit four (4) bound sets of Operations and Maintenance (O&M) Manuals to the Owner. Submit a draft copy to the Engineer for approval prior to issuing the final copies. The

O&M Manuals shall include, at a minimum:

All available manufacturer's O&M literature, parts lists, etc. Wiring diagrams

Controls diagrams of all pneumatic, electrical, and electronic control systems. Written sequence of operations of all controls.

Any unusual or unique system O&M procedures not covered by manufacturer's literature.

Summary maintenance schedule showing maintenance intervals as recommended by the manufacturers,

A copy of the manufacturers warranties.

The Contractor is required to meet the guarantee requirements of the General Conditions

1.18 SEISMIC CONSTRUCTION

A. Provide seismic and sway bracing for plumbing components and piping as shown on the plans.

1.19 TESTING

A. Perform pressure tests on all plumbing systems in conformance with the UPC. Failure of any pressure test requires repair of the nonconforming section and retesting until the test criteria is satisfied. Failure of a pressure test in gas piping requires the replacement of the nonconforming section of pipe. Re-test the repaired/replaced section of piping to acceptance. Service test all systems to assure the function and equipment. Provide an operational test on each system.

B. Pressure test requirements:

1. Domestic water piping - Hydrostatic or air test to 50 psi or line pressure, which ever is greater for a period of not less than 15 minutes with no drop in pressure.

2. Waste and Vent piping - Hydrostatic test waste piping to 10 feet of head above the highest fixture connection, for a period of not less than 15 minutes with no drop in liquid level, and no apparent leaks at any joints or connections. Hydrostatic test vent piping to the top of the lowest connected vent through roof, for a period of not less than 15 minutes, with not drop in liquid level, and no apparent leaks at any joints or connections.

1.20 WARRANTY

A. Provide one year unconditional warranty on all plumbing equipment and systems.

PART 2 PRODUCTS

2.01 DOMESTIC WATER PIPING

- A. Inside building, above floor - Type "L" hard copper tubing, conforming to ASTM B-88, with wrought copper fittings and 95/5 solder or pressed fitting joints. Type "M" hard copper may be used for un-pressurized drain piping. P.E. PEX piping may be used for branch piping with brass connectors, in concealed locations.
- B. Beneath floor slab, below grade - Type K, copper tubing conforming to ATM B-88, with wrought copper fittings and 95/5 solder or pressed fitting joints, double wrapped with 20 mil P.E. pipe wrap. P.E. PEX listed piping is accepted for below slab on grade, with brass connectors. All brass connectors to be double wrapped with 20 mil P.E. pipe wrap. PEX piping intended for human consumption, located below grade is required to be sleeved in ductile iron or polypropylene pipe.
- C. Outside building - Schedule 40 PVC pipe conforming to ASTM D1785, PVC socket fittings and solvent cemented joints.

2.02 SANITARY SOIL, WASTE AND VENT AND RAINWATER PIPING

- A. Soil and waste piping, vent and rainwater piping above and below grade - Acrylonitrile-Buladiene-Styrene (ABS), conforming to ASTM D2661-85a, with solvent cemented fittings, or Poly Vinyl Chloride (PVC), conforming to ASTM D2665-85a, with solvent cemented fittings. Use only listed adapters for connection to non-plastic pipe. Provide standard weight cast iron piping with no hub connectors for all vertical waste and rainwater piping within walls, above grade. Type DWV CU with solder fittings to be used for above grade vent piping in exposed locations, installed in the south end of the apparatus bays.
- B. Sanitary sewer and drain piping, outside of building perimeter, below grade, Poly Vinyl Chloride (PVC) SDR 35, conforming to ASTM D3034 with gasket joints. Sand bedded and backfill with # 2 base, compacted to 95% of native soil compaction. Minimum cover 2 feet.

2.03 INSULATION

- A. All concealed tempered water (120 F.) and hot water (140 F.) piping shall be insulated with; a minimum 1" thick P.E. insulation for 1/2" and 3/4" pipe size, 1 1/2" thick P.E. insulation for 1" and larger pipe.
- B. All exposed tempered water (120 F) and hot water (140 F) piping shall be Insulated with; a minimum 1" thick sectional molded fiberglass insulation with kraft jacket, 1 1/2" thick sectional molded fiberglass insulation with kraft jacket.
- C. All cold water piping, above kitchens, and within the building insulation envelope, minimum 3/4" thick P.E. insulation.
- D. All cold water piping, above grade and outside the building insulation envelope shall be insulated with a minimum 3/4" thick P.E. insulation.
- E. All piping located outside of the building and above grade shall be covered with a minimum 24 ga aluminum jacket.

2.04 PIPE HANGERS AND SUPPORTS

- A. Hangers for 1/2" and 3/4" piping with wood construction may be preformed wire type. Hangers for 1" to 4" and cold pipe size 6" and over shall be adjustable wrought steel

clevis or trapeze hangers. Provide copper plated hangers for copper piping.

- B. Provide steel hanger rods, threaded at both ends, threaded one end or continuous threaded.

2.05 FLASHING

- A. Steel flashing: 26 gauge galvanized steel.
- B. Caps: Steel 22 gauge minimum.

2.06 SLEEVES

- A. Pipe through floors - Form with 18 gauge galvanized steel.
- B. Pipes through walls, fire proofing, footings, and potentially wet floors - Form with 18 gauge galvanized steel.

2.07 VALVE CONNECTIONS

- A. Provide valves suitable to connect to adjoining as specified for pipe joints. Use pipe size valves.
- B. Thread pipe sizes 2 inches smaller. Flange or mechanical joints for 2 1/2" and larger.
- C. Solder or thread to solder adapters for copper tubing.

2.08 CHECK VALVES

- A. Bronze, swing disc, solder or screwed ends.
- B. Swing check for horizontal installation only. Provide valve listed for vertical installations, for vertical positions.
- C. Iron body, bronze trim, swing disc, renewable disc and seat, flanged ends.

2.09 HOSE BIBBS

- A. Bronze or red brass, replaceable hexagonal disc, hose thread spout, chrome plated where exposed.
- B. Chrome plated, polished bronze, wall plate, recessed box, hose thread spout, and removable key.
- C. Provide non-removable vacuum breaker on each hose babb.

2.10 BALL VALVES

- A. Bronze body, bronze trim, solder or screwed ends. Provide ball valves for all isolation service.

2.11 GAS COCKS

- A. Bronze body, bronze tapered plug. Non-lubricated, teflon packing, screwed ends.

2.12 BACK FLOW PREVENTERS

- A. Bronze body construction, modular design with replaceable seats, ball type test cocks, and quarter turn, full port ball shutoff valves.

2.13 PRESSURE RATINGS

- A. Unless otherwise indicated, use valves suitable for 125 minimum psig, WSP, and 4500 F. and 200 psig, and 2500 F.

2.14 VALVE OPERATORS

- A. Provide suitable handwheels for gate, globe or angle valves.
- B. Provide loose key operator for all hose bibs.

2.15 CLEANOUTS AND CLEANOUT ACCESS COVERS

- A. Provide caulked or threaded type extended to finished floor or wall surfaces. Ensure ample clearance at cleanout for routing of drainage system.
- B. Floor cleanout access covers in unfinished areas shall be round with nickel bronze scored frames and plates. Provide round access covers in finished areas with depressed center section to accommodate floor finish. Wall cleanouts to have plated caps.
- C. Grade cleanout, provide with cleanout plug and 16" x 16" x 5" deep concrete pond, flush with grade.

2.16 WATER HAMMER ARRESTORS

- A. Fit water supply to each fixture or group of fixtures with air chamber. Provide air chambers same size as supply line of 3/4" minimum, and minimum 18" long.

PART 3 EXECUTION**3.01 PIPING CONNECTIONS**

- A. Threaded joint steel piping up to and including 2". Flange or mechanical joint for 2 1/2" diameter and larger.
- B. Make threaded joint with full cut standard taper pipe threads with teflon tape or teflon-based pipe dope applied to threads only.
- C. Steel to ABS or PVC connections shall be made with listed adapters.
- D. Make connections to equipment with unions or flanges.

E. Provide non-conductive di-electric union type connections wherever joining dissimilar metals in open systems, such as copper to steel. Brass fittings and valves are acceptable with either copper or steel systems. Provide di-electric union 6" above grade on all metal piping which extends down below grade.

3.02 PIPING ROUTE AND GRADES

- A. Route piping in orderly manner and maintain proper grades. Install all cold and hot water piping concealed in the attic or ceiling space, except as noted in the plans. Run exposed piping parallel to walls.
- B. On closed systems, equip low points with 3/4" drain valves and hose nipples. Provide collecting chambers and high capacity float operated automatic air vents, at high points within the system.
- C. Make horizontal reductions in water pipes with eccentric reducing fittings installed to provide drainage and venting.
- D. Make horizontal sanitary sewer drainage piping 1/4" per foot minimum, within the building perimeter, except as noted on plans.
- E. Grade horizontal rain water drainage piping 1/4" per foot minimum, within the building perimeter, except as noted on plans.
- F. Install piping to allow for expansion and contraction without stressing pipe or equipment connected.
- G. Provide clearance for installation of insulation and for access to valves, air vents, drains and unions.
- H. Install same type piping material specified for inside building to 8' outside building.

3.03 PIPE HANGERS AND SUPPORTS

A. Support horizontal copper piping as follows:

Nominal Pipe Size(in.)	Distance Between Supports (ft.)	Hanger Rod Diameter(in.)
1/2 to 1 1/2"	6	3/8
2" to 4"	10	3/8

B. Support horizontal steel piping as follows:

Nominal Pipe Size(in.)	Distance Between Supports (ft.)	Hanger Rod Diameter(in.)
3/4" and smaller	10	3/8

1" to 4"

12

3/8

Support all horizontal ABS and PVC piping on cable trays.

- C. Install hangers to provide minimum 1/2" clear space between finished covering and adjacent work.
- D. Place a hanger within one foot of each horizontal elbow.
- E. Use hangers which are vertically adjustable 1-1/2" minimum after piping is erected.
- F. Support horizontal soil pipe near each hub, with 5' maximum spacing between hangers.
- G. Support vertical piping at every other floor. Support vertical soil pipe at each floor at hub.
- H. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
- I. Where practical support riser piping independently of connected horizontal piping.

3.04 PAINTING

- A. Prime coat and finish paint to match building, all exposed pipe, steel hangers and supports. Hangers and supports, located in crawl spaces, pipes, shafts and suspended ceiling are not considered exposed. Label all gas pipes with yellow "GAS" labels every 25 feet.

3.05 SLEEVES

- A. Set sleeves in position in advance of concrete work. Provide suitable reinforcing around sleeves.
- B. Extend sleeves through potentially wet floors, one (1) inch above finished floor level. Caulk sleeves full depth and provide floor plate.
- C. Where piping passes through floor, ceiling or wall, close off space between pipe or duct and construction with 2-hour non-combustible insulation. Provide tight fitting metal caps on both sides and caulk.
- D. Install chrome plate escutcheons where piping passes through finished surfaces.

3.06 VALVES

- A. Install valves with stems upright or horizontal, not inverted.
- B. Ball valves for shut-off and isolating service, to isolate equipment, part of systems or vertical risers.
- C. Install back flow prevention valves at the service fill connection of each piping system or component requiring a water service protection.
- D. Provide and install access covers for all concealed valves. Provide fire rated access covers for rated walls, floors and ceilings.

3.07 PLUMBING SYSTEMS

- A. Bury outside water and drainage pipe minimum 2'. Provide one foot minimum vertical and horizontal offset of water and sewer piping, installed in a joint trench.
- B. Lubricate cleanout plugs with mixture of graphite and linseed oil. Prior to building turnover, remove cleanout plugs, re-lubricate and re-install using only enough force to ensure permanent leakproof joint.
- C. Install vacuum breakers on plumbing lines where contamination of domestic water may occur and all hose bibbs and flush valves.
- D. Install gas piping in open or ventilated spaces. Pitch lines and provide drip legs for condensation collection points.

3.08 PLUMBING FIXTURES AND TRIM

- A. Install each fixture with trap easily removable for servicing and cleaning. At completion, thoroughly clean plumbing fixtures and equipment.
- B. Provide chrome plated rigid or flexible supplies to fixtures with screw driver stops, reducers and escutcheons.
- C. Install wall mounted lavatories and water closets, with approved wall carriers, model to suit installation. Reference architectural plans for mounting locations and heights.
- D. Install hose and faucet connections with vacuum breakers.
- E. Install water heaters with T&P safety valve, pipe drain from T&P valve through outside wall. Provide and install two seismic safety straps on all tank type water heaters, one at one third height and one at two thirds height.
- F. Provide lever handles on each manually operated lavatory and sink with a maximum 5 lb. Operating force.

3.09 PIPING INSULATION

- A. Install piping insulation in conformance with the manufacturer's instructions. Do not insulate valve bodies. Install insulation in a manner which will prevent crushing or collapsing the insulation.

END OF SECTION 22 00 00

PART 1 GENERAL**1.01 SUMMARY**

- A. Excavating for footings, slabs-on-grade, trenches, curbs, and paving; backfill and compaction of sub-grade, base and trenches.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions, and Division 1 Specification Sections, apply to this Section.

1.02 RELATED SECTIONS

- A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 SUBMITTALS

- A. Submit list and source of materials to be used in the Work.

1.04 QUALITY ASSURANCE

- A. Verify that survey benchmark and intended elevations for the Work are as indicated.
- B. Comply with State of California Construction Safety Orders (CAL/OSHA)

1.05 UTILITY DISCONNECTS

- A. Coordinate directly with Humboldt County for any utility disconnects.
- B. Notify Humboldt County 72 hours prior to any excavation.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. General: Fill material will be subject to approval of the Geotechnical Engineer.
- B. Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than 2 inches in any dimension, debris, waste, vegetation, and other unsuitable materials. Local and import fill should have less than 15% fines and a plasticity index (PI) of less than 20.
- C. Aggregate Base: Class 2 conforming to Caltrans Specification Section 26, maximum size 3/4 inches; compact to minimum of 95 percent.

PART 3 EXECUTION**3.01 EXAMINATION**

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities that remain from damage.
- C. Notify utility company to remove and relocate utilities if required.
- D. Protect plant life, lawns, and other features remaining as a portion of final landscaping.

- E. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.02 EXCAVATION AND COMPACTING

- A. Saw cut all cuts into asphalt and/or concrete surfaces.
- B. Excavate subsoil to accommodate building foundations, paving and site structures, construction operations, and as indicated on Drawings.
- C. Compact disturbed load-bearing soil in direct contact with foundations to original bearing capacity; perform compaction as directed by Geotechnical Engineer.
- D. Support trench excavations in compliance with local codes and safety regulations.
- E. Sheet Pile or shore all excavations as required.
- F. Do not interfere with 45 degree bearing splay under foundations except at pile foundations or where shoring is designed to resist earth and foundation pressures without permitting any settlements of foundations, slabs, or similar structures.
- G. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- H. Hand trim excavation. Remove loose matter.
- I. Remove lumped subsoil, boulders, and rock larger than 2 inches in diameter.
- J. Correct areas over-excavated as directed by Geotechnical Engineer.
- K. Do not backfill trenches until tests and inspections have been made.
- L. Compact to minimum of 95 percent dry density (ASTM 1557) in planted areas and a minimum of 95 percent dry density (ASTM 1557) in paved areas.
- M. Footing bottoms should be free of loose debris and should be firm and unyielding as approved by the project Geotechnical Engineer prior to placement of steel and concrete.

END OF SECTION 31 23 00

PART 1 GENERAL**1.01 SUMMARY**

- A. This Section describes the requirements for providing and installing temporary erosion control structures as specified.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions, and Division 1 Specification Sections, apply to this Section.

1.02 RELATED SECTIONS

- A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 QUALITY ASSURANCE

- A. Reference Standards
 - 1. California Stormwater Quality Association (CASQA) "Stormwater Best Management Practice Handbook for Construction".
 - 2. State Water Resources Control Board (SWRCB) standards
 - 3. California Stormwater Quality Association "Stormwater Best Management Practice Handbook" for Construction and Industrial and Commercial Development, latest edition.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Furnish and install the following as specified herein and required to eliminate potential erosion and sedimentation during construction works.
 - 1. Siltation fences
 - 2. Outlet structure, basins, ditches
 - 3. Filter fabric, and/or mesh

PART 3 EXECUTION**3.01 PROCEDURES**

- A. Contractor shall prepare and submit for approval a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the SWRCB application and requirements for Humboldt County review and approval prior to submitting to the SWRCB.
- B. Erosion and sedimentation control measures are to be installed in areas as indicated or as directed by governing regulations.
- C. Contractor shall provide inspection and repair of established SWPPP applications and prepare maintenance reports of erosion control measures in accordance with approved SWPPP.

END OF SECTION 31 25 00

PART 1 GENERAL**1.01 DESCRIPTION**

A. This section shall cover site work concrete constructed upon the prepared subgrade and in conformance with the lines, grades, thickness, and cross sections shown. Construction shall include the following:

1. Pedestrian Pavement: Walks, & wheelchair curb ramps.

1.02 RELATED WORK

A. Laboratory and Field Testing Requirements: Section 01 45 29, TESTING LABORATORY SERVICES.

B. Concrete Materials, Quality, Mixing, Design and Other Requirements: Section 03 30 00, CAST-IN-PLACE-CONCRETE.

1.03 WEATHER LIMITATIONS

A. Placement of concrete shall be as specified under Article 3.8, COLD WEATHER and Article 3.7, HOT WEATHER of Section 03 30 00, CAST-IN-PLACE CONCRETE.

1.04 SUBMITTALS

A. In accordance with Section 01 33 00, SUBMITTALS, furnish the following:

B. Manufacturers' Certificates and Data certifying that the following materials conform to the requirements specified.

1. Expansion joint filler
2. Reinforcement
3. Curing materials

C. Data and Test Reports: Select subbase material.

1. Job-mix formula.

2. Source, gradation, liquid limit, plasticity index, percentage of wear, and other tests as specified and in referenced publications.

1.05 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. Refer to the latest edition of all referenced Standards and codes.

- B. American Association of State Highway and Transportation Officials (AASHTO):

M031MM031-07-ULDeformed and Plain Carbon-Steel Bars for Concrete Reinforcement (ASTM A615/A615M-09)

M055MM055-09-ULSteel Welded Wire Reinforcement, Plain, for Concrete (ASTM A185)

M147-65-ULMaterials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses (R 2004)

M148-05-ULLiquid Membrane-Forming Compounds for Curing Concrete (ASTM C309)

M171-05-ULSheet Materials for Curing Concrete (ASTM C171)

M182-05-ULBurlap Cloth Made from Jute or Kenaf and Cotton Mats

M213-01-ULPreformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Type) (ASTM D1751)

T099-09-ULMoisture-Density Relations of Soils Using a 2.5 kg. (5.5 lb) Rammer and a 305 mm (12 in.) Drop

T180-09-ULMoisture-Density Relations of Soils Using a 4.54 kg (10 lb.) Rammer and a 457 mm (18 in.) Drop

- C. American Society for Testing and Materials (ASTM):

C94/C94M-09Ready-Mixed Concrete

C143/C143M-09Slump of Hydraulic Cement Concrete

PART 2 PRODUCTS**2.01 GENERAL**

A. Concrete shall be Type C, air-entrained as specified in Section 03 30 00, CAST-IN-PLACE CONCRETE, with the following exceptions:

<u>TYPE</u>	<u>MAXIMUM SLUMP*</u>
Curb & Gutter	75 mm (3")
Pedestrian Pavement	75 mm (3")

* For concrete to be vibrated: Slump as determined by ASTM C143. Tolerances as established by ASTM C94.

2.02 REINFORCEMENT

A. The type, amount, and locations of steel reinforcement shall be as shown on the drawings and in the specifications.

B. Welded wire-fabric shall conform to AASHTO M55.

C. Dowels shall be plain steel bars conforming to AASHTO M31. Tie bars shall be deformed steel bars conforming to AASHTO M31.

2.03 SELECT SUBBASE

A. Subbase material shall produce a compacted, dense-graded course, meeting the density requirement specified in these specifications and drawings.

2.04 FORMS

- A. Use metal or wood forms that are straight and suitable in cross-section, depth, and strength to resist springing during depositing and consolidating the concrete, for the work involved.
- B. Do not use forms if they vary from a straight line more than 3 mm (1/8 inch) in any 3000 mm (ten foot) long section, in either a horizontal or vertical direction.
- C. Wood forms should be at least 50 mm (2 inches) thick (nominal). Wood forms shall also be free from warp, twist, loose knots, splits, or other defects. Use approved flexible or curved forms for forming radii.

2.05 CONCRETE CURING MATERIALS

- A. Concrete curing materials shall conform to one of the following:
 1. Burlap conforming to AASHTO M182 having a weight of 233 grams (seven ounces) or more per square meter (yard) when dry.
 2. Impervious Sheeting conforming to AASHTO M171.
 3. Liquid Membrane Curing Compound conforming to AASHTO M148 (ASTM C309), and shall be free of paraffin or petroleum.

2.06 EXPANSION JOINT FILLERS

- A. Material shall conform to AASHTO M213.

PART 3 EXECUTION**3.01 SUBGRADE PENETRATION**

- A. Maintain the subgrade in a smooth, compacted condition, in conformance with the required section and established grade until the succeeding operation has been accomplished.

3.02 SETTING FORMS

- A. Base Support:

1. Compact the base material under the forms true to grade so that, when set, they will be uniformly supported for their entire length at the grade as shown.
2. Correct imperfections or variations in the base material grade by cutting or filling and compacting.

B. Form Setting:

1. Set forms sufficiently in advance of the placing of the concrete to permit the performance and approval of all operations required with and adjacent to the form lines.
2. Set forms to true line and grade and use stakes, clamps, spreaders, and braces to hold them rigidly in place so that the forms and joints are free from play or movement in any direction.
3. Forms shall conform to line and grade with an allowable tolerance of 3 mm (1/8 inch) when checked with a straightedge and shall not deviate from true line by more than 6 mm (1/4 inch) at any point.
4. Do not remove forms until removal will not result in damaged concrete or at such time to facilitate finishing.
5. Clean and oil forms each time they are used.

C. The Contractor's Registered Professional Land Surveyor, shall establish and control the alignment and the grade elevations of the forms.

1. Make necessary corrections to forms immediately before placing concrete.
2. When any form has been disturbed or any subgrade or subbase has become unstable, reset and recheck the form before placing concrete.

3.03 PLACING REINFORCEMENT

- A. Reinforcement shall be free from dirt, oil, rust, scale or other substances that prevent the bonding of the concrete to the reinforcement.
- B. Before the concrete is placed, the County's Representative shall approve the reinforcement, which shall be accurately and securely fastened in place with suitable supports and ties. The type, amount, and position of the reinforcement shall be as shown.

3.04 PLACING CONCRETE - GENERAL

- A. Obtain approval of the County's Representative before placing concrete.
- B. Remove debris and other foreign material from between the forms before placing concrete. Obtain approval of the County's Representative before placing concrete.
- C. Before the concrete is placed, uniformly moisten the subgrade, base, or subbase appropriately, avoiding puddles of water.
- D. Convey concrete from mixer to final place of deposit by a method which will prevent segregation or loss of ingredients. Deposit concrete so that it requires as little handling as possible.
- E. While being placed, spade or vibrate and compact the concrete with suitable tools to prevent the formation of voids or honeycomb pockets. Vibrate concrete well against forms and along joints. Over-vibration or manipulation causing segregation will not be permitted. Place concrete continuously between joints without bulkheads.
- F. Install a construction joint whenever the placing of concrete is suspended for more than 30 minutes and at the end of each day's work.
- G. Workmen or construction equipment coated with foreign material shall not be permitted to walk or operate in the concrete during placement and finishing operations.

3.05 PLACING CONCRETE FOR CURB AND GUTTER AND PEDESTRIAN PAVEMENT

- A. Place concrete in the forms in one layer of such thickness that, when compacted and finished, it will conform to the cross section as shown.
- B. Deposit concrete as near to joints as possible without disturbing them but do not dump onto a joint assembly.
- C. After the concrete has been placed in the forms, use a strike-off guided by the side forms to bring the surface to the proper section to be compacted.
- D. Consolidate the concrete thoroughly by tamping and spading, or with approved mechanical finishing equipment.
- E. Finish the surface to grade with a wood or metal float.
- F. All Concrete pads and pavements shall be constructed with sufficient slope to drain properly.

3.06 CONCRETE FINISHING - GENERAL

- A. The sequence of operations, unless otherwise indicated, shall be as follows:
 1. Consolidating, floating, straight-edging, troweling, texturing, and edging of joints.
 2. Maintain finishing equipment and tools in a clean and approved condition.

3.07 CONCRETE FINISHING CURB AND GUTTER

- A. Round the edges of the gutter and top of the curb with an edging tool to a radius of 1/4 inch or as otherwise detailed.
- B. Float the surfaces and finish with a smooth wood or metal float until true to grade and section and uniform in textures.
- C. Finish the surfaces, while still wet, with a bristle type brush with longitudinal strokes.
- D. Immediately after removing the front curb form, rub the face of the curb with a wood or concrete rubbing block and water until blemishes, form marks, and tool marks have been removed. Brush the surface, while still wet, in the same manner as the gutter and curb top.
- E. Except at grade changes or curves, finished surfaces shall not vary more than 1/8 inch for gutter and 1/4 inch for top and face of curb, when tested with a 10 foot straightedge.
- F. Remove and reconstruct irregularities exceeding the above for the full length between regularly scheduled joints.
- G. Correct any depressions which will not drain.
- H. Visible surfaces and edges of finished curb, gutter, and combination curb and gutter shall be free of blemishes, form marks, and tool marks, and shall be uniform in color, shape, and appearance.

3.08 CONCRETE FINISHING PEDESTRIAN PAVEMENT

- A. Walks, Wheelchair Curb Ramps:
 1. Finish the surfaces to grade and cross section with a metal float, trowled smooth and finished with a broom moistened with clear water.

2. Brooming shall be transverse to the line of traffic.
3. Finish all slab edges, including those at formed joints, carefully with an edger having a radius as shown on the Drawings.
4. Unless otherwise indicated, edge the transverse joints before brooming. The brooming shall eliminate the flat surface left by the surface face of the edger. Execute the brooming so that the corrugation, thus produced, will be uniform in appearance and not more than 1/16 inch in depth.
5. The completed surface shall be uniform in color and free of surface blemishes, form marks, and tool marks. The finished surface of the pavement shall not vary more than 3/16 inch when tested with a 10 foot straightedge.
6. The thickness of the pavement shall not vary more than 1/4 inch.
7. Remove and reconstruct irregularities exceeding the above for the full length between regularly scheduled joints.

3.09 JOINTS - GENERAL

- A. Place joints, where shown, conforming to the details as shown, and perpendicular to the finished grade of the concrete surface.
- B. Joints shall be straight and continuous from edge to edge of the pavement.

3.10 CONSTRUCTION JOINTS

- A. Locate longitudinal and transverse construction joints between slabs as shown.
- B. Place transverse construction joints of the type shown, where indicated and whenever the placing of concrete is suspended for more than 30 minutes.
- C. Use a butt-type joint with dowels in curb and gutter if the joint occurs at the location of a planned joint.
- D. Use keyed joints with tiebars if the joint occurs in the middle third of the normal curb and gutter joint interval.

3.11 FORM REMOVAL

- A. Forms shall remain in place at least 12 hours after the concrete has been placed. Remove forms without injuring the concrete.
- B. Do not use bars or heavy tools against the concrete in removing the forms. Promptly repair any concrete found defective after form removal.

3.12 CURING OF CONCRETE

- A. Cure concrete by one of the following methods appropriate to the weather conditions and local construction practices, against loss of moisture, and rapid temperature changes for at least seven days from the beginning of the curing operation. Protect unhardened concrete from rain and flowing water. All equipment needed for adequate curing and protection of the concrete shall be on hand and ready to install before actual concrete placement begins. Provide protection as necessary to prevent cracking of the pavement due to temperature changes during the curing period. If any selected method of curing does not afford the proper curing and protection against concrete cracking, remove and replace the damaged pavement and employ another method of curing as directed by the Contracting Officer's Representative.
- B. Burlap Mat: Provide a minimum of two layers kept saturated with water for the curing period. Mats shall overlap each other at least 150 mm (6 inches).
- C. Impervious Sheeting: Use waterproof paper, polyethylene-coated burlap, or polyethylene sheeting. Polyethylene shall be at least 0.1 mm (4 mils) in thickness. Wet the entire exposed concrete surface with a fine spray of water and then cover with the sheeting material. Sheets shall overlap each other at least 300 mm (12 inches). Securely anchor sheeting.
- D. Liquid Membrane Curing:
 1. Apply pigmented membrane-forming curing compound in two coats at right angles to each other at a rate of 5 m²/L (200 square feet per gallon) for both coats.
 2. Do not allow the concrete to dry before the application of the membrane.
 3. Cure joints designated to be sealed by inserting moistened paper or fiber rope or covering with waterproof paper prior to application of the curing compound, in a manner to prevent the curing compound entering the joint.
 4. Immediately re-spray any area covered with curing compound and damaged during the curing period.

3.13 CLEANING

- A. After completion of the curing period:
 1. Remove the curing material (other than liquid membrane).
 2. Sweep the concrete clean.
 3. After removal of all foreign matter from the joints, seal joints as herein specified.
 4. Clean the entire concrete of all debris and construction equipment as soon as curing and sealing of joints has been completed.

3.14 PROTECTION

- A. The Contractor shall protect the concrete against all damage prior to final acceptance by the County. Remove concrete containing excessive cracking, fractures, spalling, or other defects and reconstruct the entire section between regularly scheduled joints, when directed by the County's Representative, and at no additional cost to the County. Exclude traffic from vehicular pavement until the concrete is at least seven days old, or for a longer period of time if so directed by the County's Representative.

3.15 FINAL CLEAN-UP

- A. Remove all debris, rubbish and excess material from the site.

E N D OF SECTION 32 05 23

PART 1 GENERAL**1.01 DESCRIPTION**

A. This work shall cover the composition, mixing, construction upon the prepared subgrade, and the protection of hot asphalt concrete pavement. The hot asphalt concrete pavement shall consist of an aggregate or asphalt base course and asphalt surface course constructed in conformity with the lines, grades, thickness, and cross sections as shown. Each course shall be constructed to the depth, section, or elevation required by the drawings and shall be rolled, finished, and approved before the placement of the next course. A. This Section includes specifications for constructing new asphalt concrete wearing surface Type A, 1/2-inch maximum with medium grading, at the locations and to the dimensions shown on plans as directed by the County's Representative.

1.02 RELATED WORK

A. All Sections listed in the Table of Contents are a Condition of this Section.

1.03 ALIGNMENT AND GRADE CONTROL

A. The Contractor's Registered Professional Land Surveyor shall establish and control the pavement (aggregate or asphalt base course and asphalt surface course) alignments, grades, elevations, and cross sections as shown on the Drawings.

1.04 SUBMITTALS

A. In accordance with Section 01 33 00, SUBMITTALS, furnish the following:

B. Data and Test Reports:

1. Aggregate Base Course: Sources, gradation, liquid limit, plasticity index, percentage of wear, and other tests required by Section 39 of CTSS.
2. Asphalt Base/Surface Course: Aggregate source, gradation, soundness loss, percentage of wear, and other tests required by Section 39 of CTSS.
3. Job-mix formula.

C. Certifications:

1. Asphalt prime and tack coat material certificate of conformance to Section 39 of CTSS requirements.
2. Asphalt cement certificate of conformance to CTSS requirements.
3. Job-mix certification - Submit plant mix certification that mix equals or exceeds Section 39 of CTSS.
4. Prior to starting construction, the Contractor shall submit the asphalt concrete mix design including the amount of asphalt binder to be mixed with the dry aggregate to the Engineer for approval. No resurfacing work will be allowed prior to the

approval of the mix design. Asphalt concrete mix design shall conform to Section 39 of CTSS.

5. The Contractor shall submit electronic copies of manufacturer's literature, specifications, applications and installations for filler and/or sealer material to the County's Representative for approval at least five (5) calendar days in advance of performing the filling and/or sealing work.

1.05 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. Refer to the latest edition of all referenced Standards and codes.
- B. State of California Department of Transportation (CalTrans):
 1. Standard Specifications (CTSS)

PART 2 PRODUCTS

2.01 GENERAL

- A. Aggregate base, Asphaltic base and asphalt concrete materials shall conform to the requirements of the following and other appropriate sections of the latest version of Section 39 of CTSS, including amendments, addenda and errata. Where the term "Engineer" is referenced in Section 39 of CTSS, it shall mean the County's Representative.

2.02 MATERIALS

- A. Asphalt: In accordance with the requirements of Section 39-2.01 of CTSS, except that asphalt shall be either PG 64-10 or AR-4000.
- B. Aggregate: In accordance with the requirements of Section 39-2.02 of CTSS, except that aggregate grading shall be as follows:

Sieve Sizes	Limits of		
	Proposed	Operating	Contract
	Gradation	Range	Compliance
3/4"	-----	100	100
1/2"	-----	95-100	89-100
3/8"	-----	80-95	75-100
No. 4	59-66	X [±] 5	X [±] 8

No. 8	43-49	X [±] 5	X [±] 8
No. 30	22-27	X [±] 5	X [±] 8
No. 200	-----	3-8	0-11

Minimum Durability Index: When tested in accordance with Caltrans Test Method 229, shall be 50.

c. Tack coat in accordance with Section 39 of CTSS.

2.03 EQUIPMENT

A. Spreading Equipment: In accordance with the requirements of Section 39 of CTSS.

B. Compacting Equipment: In accordance with the requirements of Section 9 of CTSS.

PART 3 EXECUTION

3.01 GENERAL

A. The Asphalt Concrete Paving equipment, weather limitations, job-mix formula, mixing, construction methods, compaction, finishing, tolerance, and protection shall conform to the requirements of the appropriate sections of Section 39 of CTSS for the type of material specified.

3.02 MIXING ASPHALTIC CONCRETE MATERIALS

A. Provide hot plant-mixed asphaltic concrete paving materials.

1. Temperature leaving the plant: 143 degrees C (290 degrees F) minimum, 160 degrees C(320 degrees F) maximum.
2. Temperature at time of placing: 138 degrees C (280 degrees F) minimum.

3.03 SUBGRADE

- Shape to line and grade and compact with self-propelled rollers.
- All depressions that develop under rolling shall be filled with acceptable material and the area re-rolled.
- Soft areas shall be removed and filled with acceptable materials and the area re-rolled.
- Should the subgrade become rutted or displaced prior to the placing of the subbase, it shall be reworked to bring to line and grade.

E. Proof-roll the subgrade with maximum 50 ton gross weight dump truck as directed by County's Representative. If pumping, pushing, or other movement is observed, rework the area to provide a stable and compacted subgrade.

3.04 BASE COURSES

A. Base:

1. Spread and compact to the thickness shown on the drawings.
2. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement ahead of the roller.
3. After completion of the base rolling there shall be no hauling over the base other than the delivery of material for the top course.

C. Thickness tolerance: Provide the compacted thicknesses shown on the Drawings within a tolerance of minus 0.0mm (0.0") to plus 12.7mm (0.5").

D. Smoothness tolerance: Provide the lines and grades shown on the Drawings within a tolerance of 5mm in 3m (3/16 inch in ten feet).

E. Moisture content: Use only the amount of moisture needed to achieve the specified compaction.

3.05 PLACEMENT OF ASPHALTIC CONCRETE PAVING

A. Remove all loose materials from the compacted base.

B. Apply the specified prime coat, and tack coat where required, and allow to dry in accordance with the manufacturer's recommendations as approved by the Contracting Officers Representative.

C. Receipt of asphaltic concrete materials:

1. Do not accept material unless it is covered with a tarpaulin until unloaded, and unless the material has a temperature of not less than 130 degrees C(280 degrees F).
2. Do not commence placement of asphaltic concrete materials when the atmospheric temperature is below 10 degrees C (50 degrees F), not during fog, rain, or other unsuitable conditions.

D. Spreading:

1. Spread material in a manner that requires the least handling.
2. Where thickness of finished paving will be 76mm (3") or less, spread in one layer.

E. Rolling:

1. After the material has been spread to the proper depth, roll until the surface is hard, smooth, unyielding, and true to the thickness and elevations shown on the drawings.

2. Roll in at least two directions until no roller marks are visible.
3. Finished paving smoothness tolerance:
 - a. No depressions which will retain standing water.
 - b. No deviation greater than 3mm in 1.8m (1/8" in six feet).

3.06 APPLICATION OF SEAL COAT

- A. Prepare the surfaces, mix the seal coat material, and apply in accordance with the manufacturer's recommendations as approved by the Contracting Officer's Representative.
- B. Apply one coat of the specified sealer.
- C. Achieve a finished surface seal which, when dry and thoroughly set, is smooth, tough, resilient, of uniform black color, and free from coarse textured areas, lap marks, ridges, and other surface irregularities.

3.07 PROTECTION

- A. Protect the asphaltic concrete paved areas from traffic until the sealer is set and cured and does not pick up under foot or wheeled traffic.

3.08 FINAL CLEAN-UP

- A. Remove all debris, rubbish, and excess material from the work area.

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PART 1 GENERAL**1.01 DESCRIPTION**

A. This work shall consist of furnishing and applying paint to parking bays, areas restricted to handicapped persons, crosswalks, and other detail pavement markings, in accordance with the details as shown or as prescribed by the County's Representative. Conform to the Manual on Uniform Traffic Control Devices for Streets and Highways, published by the U.S. Department of Transportation, Federal Highway Administration, CBC 11B and ADA 2010 for details not shown.

1.02 SUBMITTALS

A. In accordance with Section 01 33 00, SUBMITTALS, furnish Manufacturer's Certificates and Data certifying that the following materials conform to the requirements specified:

1. Paint.

1.03 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. Federal Specifications (Fed. Spec.):

TT-B-1325C Beads (Glass Spheres); Retro-Reflective

TT-P-1952D Paint, Traffic Black, and Airfield Marking, Waterborne

C. Master Painters Institute (MPI):

Approved Product List – 2010

PART 2 PRODUCTS**2.01 PAINT**

A. Paint for marking pavement (parking lot and zone marking) shall conform to MPI No. 97, color as shown. Paint for obliterating existing markings shall conform to Fed. Spec. TT-P-1952D. Paint shall be in containers of at least 18 L (5 gallons). A certificate shall accompany each batch of paint stating compliance with the applicable publication.

2.02 PAINT APPLICATOR

A. Apply all marking by approved mechanical equipment. The equipment shall provide constant agitation of paint and travel at controlled speeds. Synchronize one or more paint "guns" to automatically begin and cut off paint flow in the case of skip lines. The equipment shall have manual control to apply continuous lines of varying length and marking widths as shown. Provide pneumatic spray guns for hand application of paint in areas where a mobile paint applicator cannot be used. If the equipment does not have a glass bead dispenser, use a separate piece of equipment. An experienced technician

that is thoroughly familiar with equipment, materials, and marking layouts shall control all painting equipment and operations.

PART 3 EXECUTION**3.01 SURFACE PREPARATION**

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.
- B. Thoroughly clean all surfaces to be marked before application of paint. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods. Completely remove rubber deposits, existing paint markings, and other coatings adhering to the pavement with scrapers, wire brushings, sandblasting, mechanical abrasion, or approved chemicals as directed by the County's Representative. The application of paint conforming to Fed. Spec. TT-P-1952D is an option to removal of existing paint markings on asphalt pavement. Apply the black paint in as many coats as necessary to completely obliterate the existing markings. Where oil or grease are present on old pavements to be marked, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application. After cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint. Pavement marking shall follow as closely as practicable after the surface has been cleaned and dried, but do not begin any marking until the County's Representative has inspected the surface and gives permission to proceed. The Contractor shall establish control points for marking and provide templates to control paint application by type and color at necessary intervals. The Contractor is responsible to preserve and apply marking in conformance with the established control points.

3.02 APPLICATION

- A. Apply uniformly painted and reflective pavement marking of required color(s), length, and width with true, sharp edges and ends on properly cured, prepared, and dried surfaces in conformance with the details as shown and established control points. The length and width of lines shall conform within a tolerance of plus or minus 75 mm (3 inches) and plus or minus 3 mm (1/8 inch), respectively, in the case of skip markings. The length of intervals shall not exceed the line length tolerance. Temperature of the surface to be painted and the atmosphere shall be above 10°C (50°F) and less than 35°C (95°F). Apply the paint at a wet film thickness of 0.4 mm (0.015 inch). Disperse reflective glass beads evenly on the wet paint at a rate of 720 g/L (6 pounds per gallon) of paint. Apply paint in one coat. At the direction of the County's Representative, markings showing light spots may receive additional coats. The maximum drying time requirements of the paint specifications will be strictly enforced, to prevent undue softening of asphalt, and pick-up, displacement, or discoloration by tires of traffic. If there is a deficiency in drying of the marking, discontinue paint operations until cause of the slow drying is determined and corrected. Remove and replace marking that is applied at less than minimum material rates; deviates from true alignment; exceeds stipulated length and width tolerances; or shows light spots, faulty distribution of beads, smears, or other deficiencies or irregularities. Use carefully controlled sand blasting, approved grinding equipment, or other approved method to remove marking so that the surface to which the marking was applied will not be damaged.

3.03 PROTECTION

- A. Conduct operations in such a manner that necessary traffic can move without hindrance. Protect the newly painted markings so that, insofar as possible, the tires of passing vehicles will not pick up paint. Place warning signs at the beginning of the wet line, and at points well in advance of the marking equipment for alerting approaching traffic from both directions. Place small flags or other similarly effective small objects near freshly applied markings at frequent intervals to reduce crossing by traffic. Efface and replace damaged portions of markings at no additional cost to the Government.

3.04 DETAIL PAVEMENT MARKING

- A. Use Detail Pavement Markings, exclusive of actual traffic lane marking, at exit and entrance islands and turnouts, on curbs, at crosswalks, at parking bays, and at such other locations as shown. Show the International Handicapped Symbol at indicated parking spaces. Color shall be as shown. Apply paint for the symbol using a suitable template that will provide a pavement marking with true, sharp edges and ends. Place detail pavement markings of the color(s), width(s) and length(s), and design pattern at the locations shown.

3.05 FINAL CLEAN-UP

- A. Remove all debris, rubbish and excess material from the Station.

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PART 1 GENERAL**1.01 SUMMARY**

A. This section specifies site furnishings.

1. Picnic Table

2. Fire Ring

B. All site furnishings shall be ADA compliant.

1.02 QUALITY ASSURANCE

A. Installer Qualification: An experienced installer who has completed installation of site furnishings and whose work has resulted in construction with a record of successful in-service performance.

B. Manufacturer Qualifications: Experienced site furniture manufacturer for ten (10) years.

1.02 SUBMITTALS

A. Submit in accordance with Section 01 33 00, SUBMITTALS.

B. Manufacturer's Literature and Data:

1. Include manufacturer's address and telephone number.

2. Include catalog or model numbers and illustrations and descriptions of equipment and accessories.

C. Shop Drawings: Provide installation details for each product.

D. Maintenance Data: For each product

1. Provide recommended methods for repairing damage and abrasions to powder coated finish.

1.03 DELIVERY, STORAGE AND HANDLING

- A. Store products in original undamaged packaging in a dry location until ready for installation.
- B. Handle powder coated products carefully to prevent any damage to the finish.

1.04 WARRANTY

- A. Warrant products to be free from defects in materials and workmanship. Further warrant products as follows:
 - 1. Limited twenty (20) year warranty against structural failure of steel bench frames, table frames, litter receptacle frames and grille frames.
 - 2. Limited five (5) year warranty against structural failure of wood slats.

PART 2 PRODUCTS**2.01 GENERAL**

- A. Manufacturer:
 - 1. Furniture Leisure Inc. or approved equal.
 - a. Location: 2729 East Moody Boulevard, Bunnell, Florida 32110
 - b. Telephone: 386-437-6061
- B. All site furnishings shall be ADA compliant.

2.02 TABLE

- A. Portable Model WCT8ULPERFHDCP
- B. Materials:
 - 1. Polyethylene coated perforated metal surfaces.
 - 2. 2" x 2" angle frame.
 - 3. Moveable 2" diameter tubular steel supports.

C. Dimensions:

1. 8' long x 59.5" wide x 31" high.

2.03 FIRE RING

A. Model KPFR1830WCSAS

B. Materials:

1. 3/16" Black enamel coated steel ring.
2. Flip-up grate with cool spring handles.
3. Tilt back anchors.

C. Dimensions:

1. 18" high x see plan diameter

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Handle and install products according to manufacturer's recommendations and written instructions.

3.02 CLEAN-UP

- A. At completion of the installation, clean and adjust furniture as required to produce ready-for-use condition.
- B. Where surfaces are damaged during installation procedures, repair finishes to match adjoining undamaged surfaces.

END OF SECTION 32 33 00

