

PROJECT MANUAL

including Specifications
for construction of:

The COUNTY OF MENDOCINO

VETERANS SERVICES ADA

IMPROVEMENT PROJECT

405 Observatory Ave. Ukiah, Ca. 95449



BID 009-21

FACILITIES & FLEET DIVISION

841 LOW GAP ROAD
UKIAH, CA 95482
Tel: (707) 234-6073

Date of Issue:
November 19, 2021

00002 - PROJECT DIRECTORY

OWNER: County of Mendocino
501 Low Gap Road
Ukiah, CA 95482

AGENT: Mendocino County General Services
Facilities and Fleet
841 Low Gap Road
Ukiah, CA 95482
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335 S. Main St. Willits, CA. 95490M
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SECTION 00020

NOTICE INVITING BIDS

Notice is hereby given that sealed bids will be received at the General Services, Facilities and Fleet Division, County of Mendocino, 841 Low Gap Road, Ukiah, California 95482 until 2:00 pm., as determined by the clock on the wall of the General Services Office, County of Mendocino on Thursday December 16, 2021 and then publicly opened and read aloud in the General Services Office Conference Room, County of Mendocino, 841 Low Gap Road, Ukiah, California for the following project:

Mendocino County BID 009-21 Veterans Services ADA Improvement Project

License Required for this Project is: "A" or "B"

Electronic Plans and Documents may be seen or downloaded from the Mendocino County Web Page for Open RFP, Quotes & Bids:
<https://www.mendocinocounty.org/government/executive-office/open-rfp-quotes-bids>.
Additionally plans and documents have been distributed to builder's exchange plan rooms throughout Northern California. For printed plans in Mendocino County, electronic copies of the plans and documents have been supplied to:

Creative Workshop
759 S. State St.
Ukiah, CA 95482
707-468-0251

Bids shall be made on a form provided by the County and accompanied by a Certified Check, Cashier's Check, or Bidder's Bond for ten percent (10%) of the amount bid, made payable to the County of Mendocino. The above-mentioned check or Bid Bond shall be given as a guarantee that the Bidder shall execute the contract if it be awarded to it in conformity with the contract documents and shall provide the surety bond or bonds required, sign the contract and commence work as set forth in the Instructions to Bidders of the contract documents.

The successful Bidder will be required to furnish a Labor and Material Bond and a Faithful Performance Bond in an amount equal to one hundred percent (100%) of the contract price. Bonds shall each be obtained from a surety company satisfactory to the County of Mendocino.

Federal Laws, including The Davis-Bacon Act and The Americans with Disabilities Act of 1990, are applicable to the project.

Bidders' attention is called to Instruction to Bidders and other related documents for full directions and information as to bidding and other requirements.

Pursuant to California Public Contract Code Section 22300, the Contractor may substitute securities for any money withheld by the County to insure performance under the Contract. Said securities shall be in a form and of a type acceptable to the County.

A **NON MANDATORY** pre-bid conference and site inspection will be held on THURSDAY DECEMBER 2ND, 2021 @ 9:00 AM at the Project site, Veterans Services Office, 405 Observatory Ave. Ukiah, California.

PAYMENT OF PREVAILING WAGES

Pursuant to the provisions of the Labor Code of the State of California, the Department of Industrial Relations has made a determination of the rate of per diem wages to be paid on the prevailing rate of pay for regular, holiday and overtime work in the locality in which the public work is to be performed, for each craft, classification, or type of workman needed to execute the contract. All County of Mendocino projects greater than \$1,000 require that contractors adhere to Prevailing Wage requirements (California Labor Code, Sections 1770 through 1775). The rates can be found online here:

<https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>.

CONTRACTOR REGISTRATION

Per Labor Code Section 1771.1(a) 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.

CERTIFIED PAYROLL RECORDS

Per Labor Code Section 1776 each contractor and subcontractor shall keep accurate payroll records. A certified copy of all payroll records for work performed under this contract shall be furnished upon request to a representative of the awarding body. Per SB 854 contractors and subcontractors are required to furnish certified payroll reports directly to the Department of Industrial Relations.

EMPLOYMENT OF APPRENTICES

Each contractor and subcontractor performing work in an apprenticeable craft or trade shall comply with Section 1777.5 relating to Apprentices on public works projects.

MENDOCINO COUNTY BUSINESS LICENSE

Pursuant to Mendocino County Code Section 6.0 – Business Licenses and Regulations, at the time of contract award, the contractor shall supply a copy of their current County of Mendocino business license.

LAWS AND GOVERNANCES

In the performance of the work contemplated by this contract, the contractor shall conform to and abide by all labor requirements and provisions of State and Federal Laws and City and County Ordinances and Regulations which may in any manner affect those engaged or employed on the work project, including but not limited to the overtime provisions of the Labor Code section 1813 and 1815 of the State of California.

END OF SECTION

SECTION 00100

INSTRUCTIONS TO BIDDERS

PART 1 – GENERAL

1.1 BIDS RECEIVED

- A. Sealed bids for the **Mendocino County Veterans Services ADA Improvement Project** will be received at General Services Office, County of Mendocino, 841 Low Gap Road, Ukiah, California, until 2:00 p.m. as determined by the clock on the wall of the General Services Office, on THURSDAY DECEMBER 16, 2021 at 2:00PM, and then publicly opened and read aloud in the General Services Conference Room, County of Mendocino.
- B. Late bids will not be accepted. It is Bidder's responsibility to assure that its bid is delivered and received at the location noted above on or before the date and hour set for the bid opening.

1.2 LICENSE REQUIREMENT

- A. The license required for this Project is an "A" or "B" License
- B. Pursuant to Mendocino County Code Section 6.0 – Business Licenses and Regulations, at time of contract award, the contractor shall supply a copy of their current County of Mendocino business license.

1.3 SECURING OF PLANS AND DOCUMENTS

Electronic Plans and Documents may be seen at, or downloaded from the Mendocino County Web Page for Bidding Opportunities – Construction: <https://www.mendocinocounty.org/government/executive-office/open-rfp-quotes-bids>

Additionally plans and documents have been distributed to builder's exchange plan rooms throughout Northern California. In Mendocino County, printed plans may be obtained from:

Blueprints and Copies
759 S. State St.
Ukiah, CA 95482
707-468-0251

1.4 BIDS

Bids, to be considered, must be in accordance with the following instructions:

- A. Bids must be submitted on the bid form provided by County, properly and completely filled out with numbers stated both in writing and in figures and with signatures of all persons signing in longhand/cursive.
- B. The completed form shall be without erasures or interlineation and shall not contain recapitulations of the work to be done. Only written proposals will be permitted.
- C. A Bid Bond or Certified Cashier's Check made payable to the County of Mendocino for an amount equal to at least ten percent (10%) of the bid amount shall accompany each bid. Such guaranty to be forfeited should the Bidder to whom the contract is awarded fail to enter into the contract.

INSTRUCTIONS TO BIDDERS

1.5 PRE-BID CONFERENCE AND SITE ACCESS

- A. A non-mandatory pre-bid conference will be held, THURSDAY DECEMBER 2, 2021 @ 9:00 AM at the site, Veterans Services Office, 405 Observatory Ave. Ukiah, California. Following the meeting, a site review will be conducted to acquaint Bidders with the Project.
- B. The County reserves the right to schedule an additional mandatory pre-bid conference to ensure adequate bid representation.
- C. Failure to attend at least one of the pre-bid conferences will disqualify a non-attending bidder from the bid.

1.6 SUBCONTRACTORS LISTED

- A. In accordance with California Public Contract Code Sections 4100 et seq., inclusive, each bidder shall provide a list of subcontractors (Section 00430), giving the name and location of place of business and contractor's license number of each subcontractor who will perform a portion of the contract work in an amount in excess of one-half of one percent (0.5%) of the total contract price. In each instance, the nature and portion of the work to be subcontracted shall be described.
- B. Failure of Bidder to specify a subcontractor for any portion of the work in an amount in excess of one-half of one percent (0.5%) of the total contract price constitutes an agreement for Bidder to perform that portion of the work itself. After bids are opened, no subcontractor may be designated or substituted except as provided for in Sections 4107 et seq. of the Public Contract Code.
- C. All Bidders must supply with their Bids the required information on all subcontractors who will perform any portion of the work including labor, rendering of service or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one-half of one percent (0.5%) of total bid. Violation of this requirement may result in Bid being deemed non-responsive and not being considered.

1.7 AWARD OR REJECTION OF BIDS

The contract shall be awarded to the lowest responsible bidder complying with these instructions, provided the bid is deemed reasonable and in the best interest of the County of Mendocino. County reserves the right to reject any and all bids, and to waive any informality on bids received whenever the rejection or waiver is in the best interest of County. The competency and dependability of the bidders will be considered when making the award.

Additive and Deductive Items: Method of Determining Lowest Bid. Pursuant to Public Contract Code section 20103.8, if this bid solicitation includes additive and/or deductive items, the checked [X] method shall be used to determine the lowest bid: [check one]

X (a) The lowest bid shall be the lowest bid price on the base contract without consideration of the prices on the additive or deductive items.

(b) The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items that were specifically identified in the bid solicitation or Bid Form as being used for the purpose of determining the lowest bid price.

(c) The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items taken in order from a specifically identified list of those items that, when in the solicitation, and added to, or subtracted from, the base contract, are less than, or equal to, a funding amount publicly disclosed by the County before the first bid is opened.

(d) The lowest bid shall be determined in a manner that prevents any information that would identify any of the bidders or the proposed Subcontractors or suppliers from being revealed to the public entity before the ranking of all bidders from lowest to highest has been determined.

If no method is checked, sub-paragraph (a) shall be used to determine the lowest bid.

Notwithstanding the method used by the County to determine the lowest responsible bidder, the County retains the right to add to or deduct from the contract any of the additive or deductive items included in the bid solicitation.

The award of the contract, if awarded, is expected to be made within thirty (30) days and in no event later than eighty (80) days after the bid opening. After award, County shall notify the successful Bidder in writing, and forward with the notification original contracts for Bidder's execution. Within eight (8) working days after such notification, the successful Bidder shall return the signed contracts to County, accompanied by all required Surety Bonds, insurance policies and endorsements.

1.8 TIME OF COMPLETION

Bidder agrees to commence work on or before a date to be specified in the written "Notice to Proceed" from County and to fully complete the project within Sixty (60) calendar days from date of the written "Notice to Proceed".

1.9 ADDENDUM

Any addendum issued during the time of bidding and before bid opening shall be included in the bid. The addendum issued by County shall become part of the agreement. Questions to be considered for inclusion in an addendum must be in writing and in the hands of County not less than seven (7) days prior to bid opening date.

1.10 INTERPRETATION OF DRAWINGS AND DOCUMENTS

Should a Bidder find discrepancies in, or omissions from, the drawings or documents, or should it be in doubt as to their intent, it should at once notify County, which will then send responsive written instructions in the form of addenda to all Bidders. County will not be responsible for any oral instructions. Any verbal conversations with County during the bidding period are not to be construed as instructions. Any changes in the Contract documents will be issued by written addendum only.

1.11 WITHDRAWAL OF BID

Bids may be withdrawn prior to, but not later than, the time of bid opening.

1.12 BONDS

The successful Bidder is required to furnish a Labor and Material Payment Bond and a Performance Bond each in the amount equal to one hundred percent (100%) of the contract price. In addition, the successful Bidder is required to furnish a Bid Bond or Certified Cashier's Check made payable to the County of Mendocino for

an amount equal to at least ten percent (10%) of the bid amount. Said Bonds shall be obtained from a surety company satisfactory to County.

1.13 SUBSTITUTIONS

Any substitution shall be made in accordance with instructions contained in Section 01340 – Submittals and Substitutions included herein. Questions concerning substitutions will not be entertained during the bidding period.

1.14 LIQUIDATED DAMAGES

In case of failure on the part of Contractor to complete the work within the time stipulated plus any duly authorized extension of time granted in writing by County, Contractor shall pay to County the sum of \$250.00 per calendar day for each day's delay beyond the time prescribed as liquidated damages, but not as a penalty. The language in the paragraph of the General Conditions entitled "Time of Completion and Liquidated Damages" is incorporated herein.

1.15 BIDDER'S QUALIFICATIONS

- A. All Bidders, Contractors and Subcontractors bidding under joint venture agreements shall be duly licensed as provided for under Sections 7000 et seq. of the Business and Professions Code.
- B. A corporation which is awarded the Contract will be required to furnish certification attesting to its corporate existence, as well as evidence that the Officer signing the contract is duly authorized to do so.
- C. Bidders and their subcontractors may be required to furnish evidence satisfactory to County that they have sufficient means and have had experience in the class of work called for to enable them to complete the contract in a satisfactory manner.
- D. No person, firm or corporation shall make or file or be interested in more than one bid for the same work, except insofar as alternate bids may be called for. No person, firm or corporation shall submit a collusive or sham bid or seek directly or indirectly to induce any other bidder to submit a collusive or sham bid or to refrain from submitting a bid or to seek in any way to control or fix the price of the bid or any portion of the bid price in order to secure an advantage against County or any other person interested in the proposed contract. However, a person, firm or corporation submitting a sub-proposal to a bidder or quoting prices on materials to a bidder is not hereby disqualified from submitting sub-proposals or quoting prices to other bidders.
- E. A licensed contractor shall not submit a bid to a public agency unless (1) its contractor's license number appears clearly on the bid, (2) the license expiration date is stated, and (3) the bid contains a statement that the representations made therein are made under penalty of perjury. Any bid not containing this information, or a bid containing information which is subsequently proven false, shall be considered non-responsive and shall be rejected by County.

1.16 EXAMINATION OF SITE AND DOCUMENTS

By submitting a bid, Bidder agrees and warrants that (1) it has examined the site and all documents, drawings and specifications; (2) it is satisfied that the same are adequate to produce the required results; and (3) its bid covers the cost of all items required in the agreement. The work to be performed includes all of the

items mentioned in these specifications and/or as shown on the plans and other documents included as a part of the project.

1.17 ENVIRONMENTAL AND PLANNING CONDITIONS OF APPROVAL

Bidder agrees to perform its work in conformance with all environmental and planning conditions of approval applicable to the project. Bidders' attention is directed to specification section 00801 Supplementary General Conditions and the source documents for specific conditions of approval

1.18 AGREEMENT

Contract documents include the Agreement which the successful Bidder, as Contractor, will be required to execute.

1.19 PRE-CONSTRUCTION CONFERENCE

The successful bidder shall be available for a pre-construction conference with County at a mutually convenient time.

1.20 COVID REQUIREMENTS

Contractor, staff, and subcontractors to follow all current Covid 19 protocols pursuant to the California Department of Public Health.

1.21 QUALIFICATIONS OF BIDDERS

A. The work to be performed under this contract is of a very specialized

nature. It is the desire of County to secure the best work attainable and to maintain a very critical and condensed schedule. Bidders considered for award will be limited to those firms who can show to the satisfaction of County that they have the facilities and experience necessary to perform the required construction in accordance with specifications proposed for this project. The terms under which bidders will be evaluated and the rules that will be applied are attached to the bid documents herein as Section 00120, "Qualification Application".

END OF SECTION

SECTION 00120- QUALIFICATION APPLICATION

The information contained in this Application is confidential, and is for the sole use of County in evaluating the qualifications of Bidder. Only the information below ("Contact Information") is considered public information.

Firm Name (as it appears on license): _____

Check one: ☐ Corporation ☐ Partnership ☐ Sole Proprietor

Contact Person: _____

Address: _____

Phone: _____ Fax: _____

If the firm is a sole proprietor or partnership:

Owner(s) of Company: _____

Date of commencement of business: _____

If the firm is a corporation, provide the names of all officers plus other shareholders constituting at least 51% of outstanding shares.

Corporate Officers and Owners	Title	Percent Ownership
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Date incorporated: _____ Under the laws of the State of: _____

Contractor's License Number(s):

<u>License No.</u>	<u>Classifications</u>	<u>Expiration</u>	<u>Qualifying Individual</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

DIR Registration Number: _____

PART I. ESSENTIAL REQUIREMENTS FOR QUALIFICATION

The Contractor will be immediately disqualified if the answer to any of questions 1 through 4 is “no”.

The Contractor will be immediately disqualified if the answer to any of questions 5 through 8 is “yes”.

1. Contractor possesses a valid and current California Contractor’s license for the project for which it intends to submit a bid.
☐ Yes ☐ No
2. Contractor has a liability insurance policy with a policy limit of at least one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) aggregate.
☐ Yes ☐ No
3. Contractor has a current workers’ compensation insurance policy as required by the Labor Code or is legally self-insured pursuant to Labor Code Section 3700 *et seq.*
☐ Yes ☐ No ☐ Contractor is exempt from this requirement because it has no employees
4. Has Contractor’s license been revoked at any time in the last five (5) years?
☐ Yes ☐ No
5. Contractor is registered with the Department of Industrial Relations as required by Labor Code Section 1771.1.
☐ Yes ☐ No
6. Has a surety firm completed a contract on Contractor’s behalf, or paid for completion because Contractor’s firm was default terminated by the project owner within the last five (5) years?
☐ Yes ☐ No
7. At the time of submitting this qualification form, is Contractor’s firm ineligible to bid on or be awarded a public works contract, or perform as a subcontractor on a public works contract, pursuant to either Labor Code Section 1777.1 or Labor Code Section 1777.7?
☐ Yes ☐ No

If the answer is “yes”, state the beginning and ending dates of the period of debarment:

8. At any time during the last five (5) years, has Contractor’s firm, or any of its owners or officers, been convicted of a crime involving the awarding of a contract of a government construction project, or the bidding or performance of a government contract?
☐ Yes ☐ No

PART II. ORGANIZATION, HISTORY, ORGANIZATIONAL PERFORMANCE,
COMPLIANCE WITH CIVIL AND CRIMINAL LAWS

A. History of the Business and Organizational Performance

1. Has there been any change in ownership of the firm at any time during the last three (3) years?

NOTE: A corporation whose shares are publicly traded is not required to answer this question.

☐ Yes ☐ No

If "yes", explain on a separate signed page.

2. Is the firm a subsidiary, parent, holding company, or affiliate of another construction firm?

NOTE: Include information about other firms if one firm owns fifty percent (50%) or more of another, or if an owner, partner, or officer of Contractor's firm holds a similar position in another firm.

☐ Yes ☐ No

If "yes", explain on a separate signed page.

3. Are any corporate officers, partners, or owners connected to any other construction firms?

NOTE: Include information about other firms if an owner, partner, or officer of Contractor's firm holds a similar position in another firm.

☐ Yes ☐ No

If "yes", explain on a separate signed page.

4. Financial Statements: Does the Contractor have reviewed or audited financial statements for each of the last three years?

☐ Yes ☐ No

5. State Contractor's firm's gross revenues for each of the last three (3) years:

Year	Gross Revenue

6. How many years has Contractor's organization been in business in California as a contractor under its present business name and license number? _____ years.

7. Is Contractor's firm currently the debtor in a bankruptcy case?

☐ Yes ☐ No

If "yes", please attach a copy of the bankruptcy petition, showing the case number, and the date on which the petition was filed.

Disputes

8. At any time in the last five (5) years, has Contractor's firm been assessed and paid liquidated damages after completion of a project under a construction contract with either a public or private owner?

☐ Yes ☐ No

If “yes”, explain on a separate signed page, identifying all such projects by owner, owner’s address, the date of completion of the project, amount of liquidated damages assessed, and all other information necessary to fully explain the assessment of liquidated damages.

9. In the last five (5) years, has Contractor’s firm, or any firm with which any of Contractor’s company’s owners, officers or partners was associated, been debarred, disqualified, removed or otherwise prevented from bidding on, or completing, any government agency or public works project for any reason?

NOTE: “Associated with” refers to another construction firm in which an owner, partner or officer of Contractor’s firm held a similar position.

☐ Yes ☐ No

If “yes”, explain on a separate signed page. State whether the firm involved was the firm applying for qualification here or another firm. Identify by name of the company, the name of the person within Contractor’s firm who was associated with that company, the year of the event, the owner of the project, the project, and the basis for the action.

10. In the last five (5) years, has Contractor’s firm been denied an award of a public works contract based on a finding by a public agency that Contractor’s company was not a responsible bidder?

☐ Yes ☐ No

If “yes”, explain on a separate signed page. Identify the year of the event, the owner, the project, and the basis for the finding by the public agency.

NOTE: The following two questions refer only to disputes between Contractor’s firm and the owner of a project. Contractor need not include information about disputes between its firm and a supplier, another contractor, or subcontractor. Contractor need not include information about “pass-through” disputes in which the actual dispute is between a subcontractor and a project owner. Also, Contractor may omit reference to all disputes about amounts less than \$50,000.

11. In the last five (5) years, has any claim *against* Contractor’s firm concerning the firm’s work on a construction project been *filed in court or arbitration*?

☐ Yes ☐ No

If “yes”, on separate signed sheets of paper identify the claim(s) by providing the project name, date of the claim, name of the claimant, a brief description of the nature of the claim, the court in which the case was filed, and a brief description of the status of the claim (pending or, if resolved, a brief description of the resolution).

12. In the last five (5) years, has Contractor’s firm made any claim against a project owner concerning work on a project or payment for a contract and *filed that claim in court or arbitration*?

☐ Yes ☐ No

If “yes”, on separate signed sheets of paper identify the claim by providing the project name, date of the claim, name of the entity (or entities) against whom the claim was filed, a brief description of the nature of the claim, the court in which the case was filed, and a brief description of the status of the claim (pending or, if resolved, a brief description of the resolution).

Criminal Matters and Related Civil Suits

13. Has Contractor's firm or any of its owners, officers or partners ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or material misrepresentation to any public agency or entity?
☐ Yes ☐ No

If "yes", explain on a separate signed page, including who was involved, the name of the public agency, the date of the investigation and the grounds for the finding.

14. Has Contractor's firm or any of its owners, officers or partners ever been convicted of a crime involving federal, state, or local law related to construction?
☐ Yes ☐ No

If "yes", explain on a separate signed page, including who was involved, the name of the public agency, the date of the conviction and the grounds for the conviction.

15. Has Contractor's firm or any of its owners, officers or partners ever been convicted of a federal or state crime of fraud, theft, or any other act of dishonesty?
☐ Yes ☐ No

If "yes", identify on a separate signed page the person(s) convicted, the court (the county if a state court, the district or location if a federal court), the year, and the criminal conduct.

Bonding

16. If Issued a Notice to Proceed, can the contractor secure payment and performance bonds within ten (10) calendar days?
☐ Yes ☐ No

Name of Bonding Company: _____

Name, Address, Telephone# for Surety Agent: _____

C. Compliance with Occupational Safety and Health Laws and with Other Labor Legislation Safety

19. Has Cal-OSHA cited and assessed penalties against Contractor's firm for any "serious", "willful", or "repeat" violations of its safety or health regulations in the last five (5) years?

NOTE: If Contractor has filed an appeal of a citation, and the Occupational Safety and Health Appeals Board has not yet ruled on your appeal, Contractor need not include information about it.

☐ Yes ☐ No

If "yes", attach a separate signed page describing the citations, including information about the dates of the citations, the nature of the violation, the project on which the citation(s) was/were issued, and the amount of the penalty paid (if any). If the citation was appealed to the Occupational Safety and Health Appeals Board and a decision has been issued, state the case number and the date of the decision.

20. Has the Federal Occupational Safety and Health Administration cited and assessed penalties against Contractor's firm in the last five (5) years?

NOTE: If Contractor has filed an appeal of a citation and the Appeals Board has not yet ruled on the appeal, or if there is a court appeal pending, Contractor need not include information about the citation.

☐ Yes ☐ No

If "yes", attach a separate signed page describing each citation.

21. Has the EPA or any Air Quality Management District or any Regional Water Quality Control Board cited and assessed penalties against either Contractor's firm or the owner of a project contracted to Contractor in the last five (5) years?

NOTE: If Contractor has filed an appeal of a citation and the Appeals Board has not yet ruled on the appeal, or if there is a court appeal pending, Contractor need not include information about the citation.

☐ Yes ☐ No

If "yes", attach a separate signed page describing each citation.

22. How often does Contractor require documented safety meetings to be held for construction employees and field supervisors during the course of a project?

23. List Contractor's Experience Modification Rate (EMR) (California's Workers' Compensation insurance) for each of the past three (3) premium years:

NOTE: An Experience Modification Rate is issued to Contractor annually by its workers' compensation insurance carrier.

Current year: _____

Previous year: _____

Year previous to previous year: _____

If Contractor's EMR for any of these three (3) years is or was 1.20 or higher, Contractor may, at its discretion, attach a letter of explanation.

Prevailing Wage and Apprenticeship Compliance Record

24. Provide the name, address and telephone number of the apprenticeship program (approved by the California Apprenticeship Council) from whom Contractor intends to request the dispatch of apprentices to Contractor for use on any public work project for which it is awarded a contract by the County of Mendocino:

SECTION 00306 - ANTITRUST CLAIM ASSIGNMENT

Pursuant to California Labor Code Section 7103.5, the following certification is hereby set forth and made a part of these specifications:

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.

SECTION 00307 - NON-COLLUSION AFFIDAVIT

In accordance with California Public Contract Code Section 7106, the following affidavit must be completed by the Bidder:

Non-Collusion Affidavit to be executed by Bidder
and submitted with bid

State of California)
) ss.
County of Mendocino)

_____, being first duly sworn, deposes and says that he or she is _____ of _____ the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Signature

SECTION 00308- PUBLIC CONTRACT CODE
QUESTIONNAIRE

In accordance with California Public Contract Code Section 7106, the following questionnaire must be completed by the Bidder:

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

☐ Yes ☐ No

If 'yes', explain the circumstances in the space below.

SECTION 00310 - BID FORM FOR MENDOCINO COUNTY

VETERANS SERVICES ADA IMPROVEMENT PROJECT

TO: Honorable Board of Supervisors

It is understood that this bid is based upon completion of the work within the time of completion requirements contained in the Instructions to Bidders.

If awarded the Contract, the undersigned agrees to complete the Work sixty days (60) calendar days from the date of Notice to Proceed.

It is agreed that this bid may not be withdrawn for a period of eighty (80) days from the opening hereof.

The undersigned has carefully checked all its figures and understands that the County will not be responsible for any error or omissions on the part of the undersigned in making up this bid.

The undersigned, having become completely familiar with all conditions affecting the cost of the work at the place where the work is to be done, and with the drawings, specifications and other contract documents prepared and issued thereof and now on file at the General Services Agency Office, hereby proposes and agrees to perform everything required to be performed, and to provide and furnish any and all required labor, materials, equipment, transportation and services necessary to erect and complete in the best workmanlike manner, all as shown and specified.

The following bid amounts are as defined and clarified in the Bids Required portion of these specifications:

BASE BID:

_____ Dollars (\$_____)

ADDITIVE ALTERNATE BID FOR INTRUSION ALARM SYSTEM:

_____ Dollars (\$_____)

SALES TAX

All bids shall include required California State Sales Tax, cost of all bonds and insurance as required and all other items of expense incidental to the contract. The County of Mendocino is exempt from Federal Excise Tax.

A licensed Contractor shall not submit a bid to a public agency unless its Contractor's License number appears clearly on the bid, the license expiration date is stated, and the bid contains a statement that the representations made therein are made under penalty of perjury. Any bid not containing this information, or a bid containing information which is subsequently proven false, shall be considered nonresponsive and shall be rejected by the public agency.

Name of Organization _____

Type of Organization _____
(Corporation, Partnership, etc.)

Address _____

Name of State where incorporated _____

CONTRACTORS LICENSE NO. _____ EXPIRATION DATE _____

☐ Contractor has registered with the State of California's DIR (Department of Industrial Relations) website.

DIR Registration #: _____

☐ Contractor is currently licensed to do business in the County of Mendocino.

Mendocino County Business License #: _____

ADDENDA: CONTRACTOR TO ACKNOWLEDGE RECEIPT

I have received the following Addenda pertaining to this project and they have been included as part of my bid.

Numbers: _____

The undersigned hereby certifies under penalty of perjury that this bid is genuine and not collusive, that all the information is correct and that he/she has carefully checked all of the above figures and understands that the County will not be responsible for any errors or omissions on the part of the undersigned on making up this bid.

Signature _____

Corporate Seal

SECTION 00430 - SUBCONTRACTORS LISTING FORM

VETERANS SERVICES ADA IMPROVEMENT PROJECT

In accordance with the provisions of Section 4100 *et seq.* of the Public Contract Code of the State of California, each bidder shall list below the name, license number, Department of Industrial Relations (DIR) Registration Number, and location of place of business of each subcontractor who will perform a portion of the contract work in an amount in excess of one-half of one percent (0.5%) of the total contract price. In each such instance, the nature and portion of the work to be subcontracted shall be described.

[illegible]

SECTION 00500 - AGREEMENT FOR LUMP SUM BID

THIS AGREEMENT, made on the _____ day of _____ in the year 2021, between the County of Mendocino, hereinafter called COUNTY, and _____, hereinafter called CONTRACTOR.

COUNTY and CONTRACTOR, for the consideration described below named, agree as follows:

FIRST: CONTRACTOR shall furnish all labor, materials, equipment, mechanical workmanship, transportation, and services for the installation and completion of the **Veterans Services ADA Improvements Project**, in accordance with the contract documents, including the Addenda thereto, all as adopted by COUNTY.

SECOND: The work under this contract described below shall be completed within sixty (60) days from the date of the "Notice to Proceed".

THIRD: The Contract consists of the following documents, all of which are fully a part hereof as if herein set out in full, whether or not hereto attached:

1. Invitation to Bid
2. Instructions to Bidders
3. Agreement
4. Contractor's Guarantee
5. Close-Out Items including all Warranties
6. Coordination
7. Construction Temporary Facilities
8. Drawings & Specifications
9. General and Technical Conditions of the Specifications
10. All modifications thereof incorporated before execution of the Contract

FOURTH: COUNTY shall pay to CONTRACTOR, if CONTRACTOR is successful bidder, as full consideration for the faithful performance of the Contract the sum of:

This sum constitutes the bid for the following project components (referenced hereunder to specifications section). This sum includes the following alternate bids:

Payment shall be made each month to CONTRACTOR in accordance with and subject to the provisions embodied in the Documents made a part of this Contract.

**COUNTY OF MENDOCINO
STANDARD SERVICES AGREEMENT**

This Agreement is by and between the COUNTY OF MENDOCINO, hereinafter referred to as the "COUNTY", and _____, hereinafter referred to as the "CONTRACTOR".

WITNESSETH

WHEREAS, pursuant to Government Code Section 31000, COUNTY may retain independent contractors to perform special services to or for COUNTY or any department thereof; and,

WHEREAS, COUNTY desires to obtain CONTRACTOR for its [Services]: and,

WHEREAS, CONTRACTOR is willing to provide such services on the terms and conditions set forth in this AGREEMENT and is willing to provide same to COUNTY.

NOW, THEREFORE it is agreed that COUNTY does hereby retain CONTRACTOR to provide the services described in Exhibit "A", and CONTRACTOR accepts such engagement, on the General Terms and Conditions hereinafter specified in this Agreement, the Additional Provisions attached hereto, and the following described exhibits, all of which are incorporated into this Agreement by this reference:

Exhibit A	Definition of Services
Exhibit B	Payment Terms
Exhibit C	Insurance Requirements
Exhibit D	Mendocino County ePayables Information
Exhibit E	Public Project Provisions

The term of this Agreement shall be from the date this Agreement becomes fully executed by all parties (the "Effective Date"), and shall continue through _____, 20_____.

The compensation payable to CONTRACTOR hereunder shall not exceed [Spelled out Contract Amount] (\$[Numerical Amount]) for the term of this Agreement.

IN WITNESS WHEREOF

DEPARTMENT FISCAL REVIEW:

DEPARTMENT HEAD _____ DATE _____

Budgeted: ☐ Yes ☐ No

Budget Unit: _____

Line Item: _____

Grant: ☐ Yes ☐ No

Grant No.: _____

CARMEL J. ANGELO, Chief Executive Officer

By: _____
PURCHASING AGENT

Date: _____

INSURANCE REVIEW:

By: _____
Risk Management

Date: _____

EXECUTIVE OFFICE/FISCAL REVIEW:

By: _____
Deputy CEO

Date: _____

CONTRACTOR/COMPANY NAME

By: _____

Date: _____

NAME AND ADDRESS OF CONTRACTOR:

By signing above, signatory warrants and represents that he/she executed this Agreement in his/her authorized capacity and that by his/her signature on this Agreement, he/she or the entity upon behalf of which he/she acted, executed this Agreement

COUNTY COUNSEL REVIEW:

APPROVED AS TO FORM:

CHRISTIAN M. CURTIS,
County Counsel

By: _____
Deputy

Date: _____

Signatory Authority: \$0-25,000 Department; **\$25,001- 50,000 Purchasing Agent;** \$50,001+ Board of Supervisors

Exception to Bid Process Required/Completed ☐ _____

Mendocino County Business License: Valid ☐

Exempt Pursuant to MCC Section: _____

SIGNATURE APPROVAL

SECTION 00501 - WORKERS' COMPENSATION
CERTIFICATION

Pursuant to California Labor Code Section 1861, the Contractor hereby certifies the following:

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

Dated _____

Contractor Signature _____

SECTION 00510 - CONTRACTOR GUARANTEE

VETERANS SERVICES ADA IMPROVEMENT PROJECT

Contractor hereby guarantees that the labor and material furnished for this project is in accordance with the drawings and specifications. Contractor agrees to repair or replace any or all of the work, together with any other adjacent work which may be displaced in so doing, that may prove to be defective in its workmanship or material within a period of ONE (1) YEAR from date of acceptance of the above named project by County without any expense whatsoever to County, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of Contractor's failure to comply with the above-mentioned conditions within fifteen (15) calendar days after being notified in writing by County, Contractor authorizes County to proceed to have said defects repaired and made good at Contractor's expense. Contractor shall honor and pay the costs and charges therefore upon demand.

SIGNED _____

COUNTERSIGNED _____

CONTRACTOR _____

DATED _____

DATE OF BUILDING ACCEPTANCE _____

SECTION 00650 - CONSTRUCTION SITE STORM WATER POLICY

PART I – GENERAL

1.1 SUMMARY

- A. Mendocino County Ordinance No. 4313 STORM WATER RUNOFF POLLUTION PREVENTION PROCEDURE (Mendocino County Code Chapter 16.30 et.seq.) requires any person performing construction and grading work anywhere in the county shall implement appropriate Best Management Practices (BMP) to prevent the discharge of construction waste, debris, sediment or contaminants from construction materials, tools and equipment from entering the storm drainage system or natural waterways (off-site).
- B. By commencing work in this contract, the contractor agrees to comply with Mendocino County Code Section 16.30.140 Inspection and monitoring. The County may enter the worksite whenever necessary to perform inspections related to the Storm Water Runoff Pollution Prevention Procedures for the project including inspection of BMP's and records relating to storm water plan compliance.

1.2 SUBMITTALS

- A. Prior to beginning construction activities, submit construction site Best Management Practice (BMP) Plans and Specifications prepared by a Qualified Storm Water Developer (QSD) or the Contractor referencing Mendocino County Building and Planning Services Documents noted below:
 - 1. Construction Best Management Practices for over-the-counter building permits for projects that do not disturb any soil.
 - 2. Small Construction Site Storm Water Erosion and Sediment Control Plan Template for projects that will disturb any soil.
- B. Submittal shall include a project specific BMP plan for all areas of soil disturbance and possible contamination source generated by the project. Attach copies of the relevant current BMP fact sheets from the California Storm Water BMP Handbook Portal planned to address each potential source of contamination generated by the project.
- C. A County approved BMP plan is required prior to beginning work on the project.

Part 2 – PRODUCTS

2.1 MATERIALS

- A. Provide Materials in Compliance with Approve BMP fact sheets in appropriate quantities to mitigate possible runoff, sedimentation and/or contamination in accordance with the approved BMP plan.

Part 3 – EXECUTION

3.1 PREPARATION

- A. Prepare BMP schedule to identify dates when BMP's will be installed.
- B. Ensure that BMP Materials are on site in the event of an untimely rain event and prior to October 15th.
- C. Identify and mark Storm Drain Inlets and drainage features leading to storm drains or natural waterways.
- D. Identify and provide instruction and training to on site personnel responsible for installation and management of BMP's.

3.2 INSTALLATION

- A. Complete BMP installation Prior to October 1st or prior to ground disturbance activities between October 1st and April 15th, and call the project manager for an inspection of the installed BMP plan. Do not start grading activities without BMP's in place.
- B. Comply with installation guidelines included with BMP fact sheets and suitable to site conditions.
- C. Remove Contamination and Sediment BMP's after sources of sedimentation, or contamination have been removed from the site or final soil stabilization is complete. Do not remove Erosion Control BMP's until permanent Erosion Control features are established unless directed by the County.

3.3 INSPECTION

- A. It is the responsibility of the Contractor to provide regular inspection of BMP's throughout the rainy season. Maintain and replace all BMP's in accordance with the approve BMP plan.
- B. Prior to significant rain events, inspect installed BMP's to ensure all potential sources of contamination, sedimentation or erosion are protected by approved BMP's.
- C. During significant rain events verify that installed BMP's are adequate to the flows on the project site.
- D. Record inspection findings as required by approved BMP plan.
- E. Maintain Inspection records and a copy of the approved BMP plan on the project

site for inspection by County and NCWRCB.

- F. Failure of the Contractor to comply with the requirements of these specifications and the provisions of the approved Storm Water pollution Prevention Plan or BMP plan may result in work stoppage, a written citation, monetary fine or any combination thereof.

END OF SECTION

SECTION 007000 - GENERAL CONDITIONS

1. DEFINITIONS

Whenever in the Specifications and other Contract Documents the following abbreviations and terms are used, the intent and meaning shall be interpreted as follows:

- A. "Owner" - Board of Supervisors, County of Mendocino, or its authorized agents or assignees.
- B. "Agent" - The Agent acting for the County, which shall be either the County General Services Agency Director or his/her designee, or the County Executive Officer or his/her designee.
- C. "Contractor" - The person or persons, partnership, corporation, or combination thereof, private or municipal, who have entered into a contract with the County, as party or parties of the second part or his/her or their legal representatives.
- D. "Specifications" - The directions, provisions and requirements contained in these Specifications as supplemented by the Supplementary Conditions. Whenever the term "These Specifications" is used in this book, it means the provisions as set forth in this book.
- E. "Paragraph" - The particular section of subdivision herein designated by a number.
- F. "Laboratory" - The designated laboratory authorized by the County to test materials and work involved in the Contract.
- G. In the case of conflict between the Standard Specification and these Specifications, these Specifications shall take precedence over and be used in lieu of such conflicting portions:
 - A.W.S. American Welding Society
 - A.S.T.M. American Society for Testing Materials
 - A.S.A. American Standard Association
 - N.B.F.U. National Board of Fire Underwriters
 - N.B.S. National Bureau of Standards
 - A.S.M.E. American Society of Mechanical Engineers
 - A.R.I. American Refrigeration Institute
 - N.E.M.A. National Electrical Manufacturers Association
 - U.L. Underwriter's Laboratories
 - E.T.L. Electrical Testing Laboratories
 - A.C.I. American Concrete Institute
 - F.A. Federal Specifications
 - A.I.S.C. American Institute of Steel Construction
- H. The County and the Contractor are those named as such in the Agreement. They are treated throughout the Contract Documents as if each were of the singular number and the masculine gender.
- I. When the words "Approved", "Satisfactory", or "Equal", "As Directed", etc. are used, approval by the County is understood.

- J. All Federal, State laws and local laws shall govern the construction of the Contract and all rules, ordinances and requirements of authorized officials shall be complied with.
- K. It is understood that any reference to the Specifications or designation of the American Society for Testing Materials, Federal Specifications or other standard, code, or order, refers to the most recent or latest amended specification or designation.

2. EXAMINATION OF PLANS AND SPECIFICATIONS

The Bidder shall examine carefully the site of the work contemplated and the proposal, plans, specifications, and Contract forms thereof. It will be assumed that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and material to be furnished, and as to the requirements of these Specifications.

3. DRAWINGS AND SPECIFICATIONS

- A. Figured dimensions on the drawings shall govern, but work not dimensioned shall be as directed. Work indicated but not particularly detailed or specified shall be equal to similar parts that are detailed or specified, or as directed. Full-size detailed shall take precedence over scale drawings as to shape and details of construction. It is intended that scale drawings, full-size details and specifications should agree, but should any discrepancy or apparent error occur in plans and specifications or should any work of others affect this work, the Contractor shall notify the County at once; if the Contractor proceeds with the work affected without instruction from the County he shall make good any resultant damage or defect.
- B. All misunderstandings of drawings or specifications shall be clarified by the County, whose decision shall be final.
- C. Any work called for by the drawings and not mentioned in the Specifications, or vice versa, is to be furnished as though fully set forth by both. Where not specifically stated otherwise, all work and materials necessary for each unit of construction, including special construction for any specific brand or shape of material called for even though only briefly mentioned or indicated, shall be furnished and installed fully and completely as a part of the Contract.
- D. Lists, rules and regulations referred to are recognized printed standard and shall be considered as one and a part of these Specifications within the limits specified.
- E. "General Conditions" apply with equal force to all of the work, including extra work authorized.
- F. For convenience, the Technical Specifications are arranged in Divisions and further divided into various sections. It is to be understood, this separation is for convenience of all parties involved and is not to be considered as the limits of the work required of any separate trade. The terms and conditions of such limitations are wholly between the County and the Contractors during bidding and construction phases; i.e., all work shown, as well as for the proper completion of the project as a

whole, shall be coordinated by the Contractor and his Subcontractors during bidding and construction and shall be provided in this Contract.

4. CONDUCT OF WORK

- A. The County reserves the right to do other work in connection with the project by contract or otherwise. Contractor shall at all times conduct his work so as to impose no hardship on the County or others engaged in the work. Contractor shall adjust, correct, and coordinate his work with the work of others so that no discrepancies shall result in the whole work.
- B. The Contractor shall provide at his own cost and risk all labor, material, water, power tools, machinery, scaffolding, and framework for the execution of the work. Equipment shall be adequate and as approved.

The Contractor shall obtain all necessary measurements from the work and shall check dimensions, levels, and construction and layout and supervise the construction, for correctness of all of which he shall be responsible.

- C. Where work of one trade joins or is on other work, there shall be no discrepancy when same is completed. In engaging work with other materials, marring or damaging same shall not be permitted. Should improper work of any trade be covered by another which results in damage or defects, the whole work affected shall be made good without expense to the County.
- D. The Contractor must anticipate relation of all parts of the work and at the proper time furnish and set anchorage, blocking or bonding as required. Anchorage and blocking necessary for each trade shall be a part of same, except where stated otherwise.
- E. Assistance required by the County in obtaining measurements or information on the work shall be furnished accurately and fully without cost to the County.

5. OWNERSHIP OF DRAWINGS

All plans and specifications shall remain the property of the County and shall be returned to the office of the County Facilities and Fleet Division Manager or shall be accounted for by the Contractor before the final certificate will be issued.

6. PUBLIC AND COUNTY CONVENIENCE AND SAFETY

The Contractor shall furnish, erect, and maintain such fences, barriers, lights and signs as are necessary to give adequate warning to the public at all times and of any dangerous conditions until final acceptance of the work by the County.

7. ACCIDENT PREVENTION

- A. It shall be the Contractor's responsibility to keep himself fully informed of all existing and future safety regulations, Codes, OSHA requirements, and other laws and regulations governing the work which may in any manner affect anyone in and around the project or engaged or employed in the work, or materials, equipment, etc. used in the work or which in any way affect the conduct of the work.

- B. The Contractor shall appoint a Safety Officer for the project and submit his name to the County.
- C. The Contractor shall supply the County with a Material Safety Data Sheet (MSDS) on each hazardous substance to be used by the Contractor on the project.
- D. The Contractor and his Safety Officer shall be solely responsible for insuring compliance with those Codes, regulations, OSHA requirements, and for discovering and correcting any code violations or unsafe conditions.
- E. Reports of all lost-time accidents shall be promptly submitted to the Owner, giving all pertinent information.

8. RESPONSIBILITY FOR DAMAGE

The County shall not be answerable or accountable in any manner for: (1) any loss or damage that may happen to the work or any part thereof, for any loss or damage to any of the materials or other things used or employed in performing the work; (2) injury to or death of any person or persons, either workers or the public; (3) damage to property from any cause which might have been prevented by the Contractor or his workers or anyone employed by him. The Contractor shall be responsible for any liability imposed by law for injuries to or death of any person including, but not limited to, workers and the public or damage to property resulting from defects or obstructions or from any cause whatsoever during the progress of the work or at any time before its completion and final acceptance. The Contractor shall indemnify, save harmless and defend the County of Mendocino, its elected or appointed officers, agents, employees or volunteers connected with the work, from all claims or actions for injuries or death of any person, or damage to property, resulting from the Contractor's performance of the Contract. With respect to third party claims against the Contractor, the Contractor waives any and all rights to any type of express or implied indemnity against the County of Mendocino, its elected or appointed officers, agents, employees or volunteers.

In addition to any remedy authorized by law, so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the County may be retained by the County until disposition has been made of such suits or claims for damages as aforesaid.

9. LAWS TO BE OBSERVED

The Contractor shall keep himself fully informed of all existing and future State, Federal and local laws, codes and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies and tribunals having any jurisdiction or authority over the same and shall be solely responsible for insuring compliance with those laws, codes and regulations.

A partial, though not necessarily complete listing of laws to be observed by the Contractor is as follows:

- A. Federal Americans with Disabilities Act of 1990.
- B. Federal Labor Standards Act.

- C. The Anti Kick-Back regulations found in 29 CFR Part 3.
- D. All contract clauses required by 29 CFR 5.5 (a) and (c), 20 U.S.C. 1232b ; 40 U.S. C. 276a, 276c, 327-332; 29 CFR Parts, (926).
- E. Nondiscrimination clause and Certification of Non-Segregated Facilities prescribed by Executive Order No. 11246, September 24, 1965 as amended by Executive Order 11375.
- F. Executive Order No. 11288 of July 7, 1966 (31 FR 9261) "Prevention, Control and Abatement of Water Pollution".
- G. Executive Order 11988, relating to evaluation of flood hazards.
- H. Compliance with all Federal, State and local requirements for handicapped access, fire safety and seismic resistance.

10. BONDS REQUIRED

The successful bidder shall furnish bonds as required in the document entitled "Instructions to Bidders" which is part of these Contract documents.

11. INSURANCE

The Contractor, at his expense, shall secure and maintain at all times during the entire period of performance under this Contract, insurance as set forth below with insurance companies acceptable to the County of Mendocino.

The Contractor shall provide to the County of Mendocino certificates of insurance with endorsements properly executed by an officer or authorized agent of the issuing insurance company evidencing coverage and provisions as stated below:

A. INSURED

Name the County of Mendocino, its elected or appointed officials, employees, agents and volunteers as additional insured with regard to damages and defense of claims arising from: (a) activities performed by or on behalf of the Named Insured, (b) products and completed operations of the Named Insured, (c) Premises owned, leased or used by the Named Insured, or (d) Ownership, operation, maintenance, use, loading or unloading of any vehicle owned, leased, hired or borrowed by the Named Insured, regardless of whether liability is attributable to the Named Insured or a combination of the Named Insured and the County of Mendocino, its elected or appointed officials, employees, agents and volunteers.

B. SEVERABILITY OF INTEREST

Provide that the inclusion of more than one named insured shall not operate to impair the rights of one insured against another insured, and the coverages afforded shall apply as though separate policies had been issued to each insured.

C. CONTRIBUTION NOT REQUIRED

Provide that as respects: (a) work performed by the Named Insured on behalf of the County of Mendocino; or (b) products sold by the Named Insured to the County of Mendocino; or (c) premises leased by the Named Insured from the County of Mendocino; or (d) ownership, operation, maintenance, use, loading or unloading of any vehicle owned, leased, hired or borrowed by the Named Insured, the insurance afforded by this policy shall be primary insurance as respects the County of Mendocino, its elected or appointed officials, employees, agents and volunteers; or stand in an unbroken chain of coverage excess of the Named Insured's scheduled underlying primary coverage. In either event, any other insurance maintained by the County of Mendocino, its elected or appointed officials, employees, agents and volunteers shall be excess of this insurance and shall not contribute with it.

D. COVERAGE BELOW MINIMUM REQUIRED NOTICE

Provide that the limits of insurance afforded by this policy shall not fall below the minimum requirements of the County of Mendocino without notice to the County of Mendocino by certified mail return receipt requested. Such notice shall be addressed to: County of Mendocino, 501 Low Gap Road, Ukiah, Calif. 95482, Attn: Risk Management.

E. CANCELLATION NOTICE

Provide that the insurance afforded by this policy shall not be suspended, voided, canceled, non-renewed or reduced in coverage or in limits except after thirty (30) day's prior written notice, delivered in person or by First Class U.S. Mail, has been given to the County of Mendocino. Such notice shall be addressed to: County of Mendocino, 841 Low Gap Road, Ukiah, Calif. 95482, Attn: Risk Management.

Contractor shall furnish to the County of Mendocino certificate(s) of insurance evidencing Workers Compensation Insurance coverage to cover its employees. The Contractor shall require all subcontractors similarly to provide Workers Compensation Insurance as required by the Labor Code of the State of California for all of the Contractor's and subcontractors' employees.

The Contractor shall not commence work, nor shall he allow his employees or subcontractors or anyone to commence work until all insurance required and provisions contained herein have been submitted to and accepted by the County of Mendocino. Failure to submit proof of insurance as required herein may result in awarding said Contract to another bidder. Failure to comply with the insurance requirements set forth herein shall constitute a material breach of contract and, at County of Mendocino's option, shall subject this Contract to termination.

Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor for liability in excess of such coverage, nor shall it preclude the County of Mendocino from taking such other action as is available to it under any other provisions of this Contract or otherwise in law.

SCOPE OF LIABILITY COVERAGES

Contractor shall furnish to the County of Mendocino certificates of insurance evidencing at the minimum the following:

1. Public Liability-Bodily Injury (not auto) \$500,000 each person; \$1,000,000 each accident,
and
Public Liability-Property Damage (not auto) \$500,000 each occurrence;
\$1,000,000 aggregate.

---or---

Combined Single Limit Bodily Injury Liability and Property Damage Liability (not auto) \$1,000,000 each occurrence.

2. Vehicle-Bodily Injury \$500,000 each person, \$1,000,000 each occurrence,
and
Vehicle-Property Damage \$1,000,000 each occurrence.

---or---

Combined Single Limit Vehicle Bodily Injury and Property Damage Liability \$1,000,000 each occurrence.

12. WORKERS COMPENSATION CERTIFICATION

Contractor certifies as follows:

"I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Workers Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract". (Labor Code Section 1861)

13. CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the formal acceptance of the work by the County, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof or to materials or thing employed in doing the work or stored on the site by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, replace, and make good all injuries or damages to any portion of the work occasioned by any of the above caused before final acceptance and shall bear the expense thereof, except such injuries or damages occasioned by acts of the Federal Government or the public enemy. The Contractor's responsibility also extends to adjoining property as related to the construction operation.

14. RESPONSIBILITY OF COUNTY

The County shall not be held responsible for the care or protection of any material or parts of the work prior to final acceptance, except as expressly provided in these Specifications.

15. COOPERATION BETWEEN CONTRACTORS

Where two or more contractors are employed on related or adjacent work, each shall conduct his operations in such a manner as not to cause any unnecessary delay or hindrance to the other. Each contractor shall be responsible to the other for all damage to work, to person or property, or for loss caused by failure to furnish the work within the time specified for completion.

Should the Contractor, through acts of neglect on the part of any Contractor, suffer loss or damage to the Work, the Contractor agrees to settle with such other Contractor by agreement. If such other Contractor should file claim against the County on account of alleged damages to be sustained, the County shall notify the Contractor who shall, at his expense, indemnify and save harmless the County against any such claim.

16. SUBCONTRACTING AND ASSIGNMENT

The Contractor shall give his personal attention to the fulfillment of the Contract and shall keep the work under his control. Should the Contractor subcontract any part of his Contract, the Contractor shall be fully responsible to the County for the acts and omissions of his subcontractor and of the persons either directly or indirectly employed by the subcontractor as he is for the acts and omissions of persons directly employed by himself.

No subcontractor will be recognized as such, and all persons engaged in the work on construction shall be considered as employees of the Contractor.

17. PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges and fees, and file all notices necessary and incidental to the due and lawful prosecution of the work.

18. PATENTS

The Contractor shall assume all responsibilities arising from the use of patented materials, equipment, devices or processes used on or incorporated in the work.

19. LIENS

Liens shall be enforced as provided by California State Law pertaining to Public Works.

20. CHANGES IN THE WORK

A. The County may order changes in the work, in which event the Contract sum shall be adjusted by one or more, or a combination of, the following methods:

1. Unit bid prices previously approved or as may be agreed upon.
2. An agreed lump sum substantiated by Contractor, itemizing labor, material, equipment, overhead, profit, bond, etc.
3. By ordering Contractor to proceed with work and keep correct account with vouchers the actual cost of:
 - a. Labor, including foreman;
 - b. Materials entering permanently into the work;
 - c. The ownership or rental cost of construction plant and equipment during the time of use on the extra work;
 - d. Power and consumable supplies for the operation of power equipment;
 - e. Insurance;
 - f. Social Security and old age and employment contribution.

- B. To the cost under (2) and (3), there may be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) for the estimated cost of the work. The fee shall be compensation to cover the cost of administrative overhead, and profit.
- C. On changes which involve a credit to the County, no allowances for overhead need be figured.
- D. All such change orders and adjustments shall be in writing. Claims by Contractor for extra cost shall be made in writing before executing the work involved.
- E. All change orders shall be reviewed and approved by the County.

21. COUNTY'S RIGHT TO TERMINATE CONTRACT

If the Contractor should refuse or neglect to properly perform or prosecute the work or if he should substantially violate any provision of the Contract, then the County may, without prejudice to any other right or remedy upon seven (7) days written notice to the Contractor, terminate the services of the Contractor and take possession of the premises, and all materials, tools, and equipment thereon and complete the work. The expense thereof shall be deducted from the balance otherwise due the Contractor. If such expense should exceed such unpaid balance, then the Contractor shall pay the difference to the County.

22. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the work is stopped for a period of thirty (30) days under an order of any court or other public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the work under a contract with the Contractor, or if the work should be stopped for a period of thirty (30) days by the Contractor because no certificate for payment has issued as provided in Paragraph 25 or because the County has not made payment thereon as provided in Paragraph 25, then the Contractor may, upon seven (7) additional days' written notice to the County, terminate the Contract and recover from the County payment for all work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and damages.

23. TIME OF COMPLETION AND LIQUIDATED DAMAGES

- A. In case all the work called for under the Contract is not completed before or upon the expiration of the time limit as set forth in these specifications, damage will be sustained by the County, and it is impracticable to determine the actual damage which the County will sustain in the event of and by reason of such delay. It is therefore agreed that the Contractor will pay to the County the sum of money per calendar day for each day's delay beyond the time prescribed as required in the document entitled "Instructions to Bidders", which is a part of these Contract Documents. The Contractor agrees to pay such liquidated damages as herein provided, and in case the same are not paid, agrees that the County may deduct the amount thereof from any money due or that may become due the Contractor under the Contract.
- B. In case the work called for under the Contract is not finished and completed in all parts and requirements within the time specified, the County shall have the right to

extend the time for completion or not, as may best serve the interest of the County. If the County decides to extend the time limit for the completion of the Contract, the County shall further have the right to charge the Contractor, his heirs, assigns or sureties, and to deduct from the final payment for the work, all or any part, as it may deem proper, of the actual cost of County, including inspections, superintendence, and other overhead expenses directly chargeable to the Contract, and which accrue during the period of such extension. The cost of final inspections shall not be included in such charges.

- C. The Contractor shall not be assessed with liquidated damages nor the cost of County's services and inspection during any delay in the completion of the work caused by acts of God or the public enemy, acts of the County, fire, flood, earthquake, epidemics, quarantine restrictions, strikes, freight embargoes, shortages of materials, labor, fixtures or equipment (provided the Contractor furnishes satisfactory and acceptable proof that he has made diligent attempts to obtain same) and unusually severe weather or delays of subcontractors due to such causes, provided the Contractor shall within ten (10) days from the beginning of such delay notify the County in writing of the delay. County's findings of fact thereon shall be final and conclusive.
- D. The County agrees that changes in work ordered pursuant to Paragraph 20 and extensions of completion time made necessary by reasons thereof, shall in no way release any guarantee given by the Contractor or the Contract let hereunder, nor shall such changes in the work relieve or release the sureties on bonds executed pursuant to these specifications. Sureties shall be deemed to have expressly agreed to any change in the work and to any extension of time made by reason thereof.

24. ACCEPTANCE

- A. The Contract will be accepted as completed only when the whole and entire Contract shall have been completed satisfactorily to the County. In judging the work, no allowance for deviations from the original plans and specifications will be made unless already approved in writing at proper times and in a manner as called for herein.
- B. Should it become necessary to occupy a portion of the work before the Contract is fully completed, such occupancy shall not constitute acceptance.

25. PARTIAL PAYMENTS

Prior to submitting and as a condition of approval of the first progress payment application, the Contractor shall submit a schedule of values acceptable to the County providing a breakdown of the contract value by trade division such that the County can accurately assess the percentage completion of the project.

On the twenty-fifth (25th) day of each month, the Contractor shall submit to the County an application for payment, on a form acceptable to the County, showing an itemized statement for work that has been performed on a percent complete basis based on the previously approved schedule of values. The County within thirty (30) days of receipt of application that meets the County's approval shall issue to the Contractor a certificate for ninety percent (95%) of the amount the County finds due for work that has been performed.

Contractor shall submit certified copy of payroll showing payment of Davis-Bacon Act wages with each request for payment submitted.

26. FINAL PAYMENT

Upon completion of the Contract, the County will cause to be made a final estimate of the amount of work done, and the value of such work. After approval by the County representative, the County shall pay the remainder due on the contract (with the exception of retainage) after deducting there from, all previous payments. All amounts retained (retainage) under the provisions of the Contract shall be due and payable 30 days from the date of acceptance in writing of the completion of Contract and / or Notice of Completion issued by the County representative. All prior partial estimates and payments shall be subject to correction in the final estimate and payments. Payment and the final estimate is due within thirty-five (35) days from the recorded date of the Notice of Completion, provided all as-built drawings, equipment manuals, instructions to the owner and guarantees have been received and accepted by the County.

27. PAYMENT WITHHELD

The County may withhold or, on account of subsequently discovered evidence, may nullify the whole or part of any certificates to such extent as may be necessary to protect the County from (1) defective work not remedied, (2) asserted claims against Contractor, (3) failure of the Contractor to make payments properly to employees or for material or labor, (4) any reasonable doubt that the Contract work can be completed for the balance then unpaid, or (5) damage to another contractor.

28. FAULTY WORK AND MATERIALS

The Contractor shall promptly remove from the premises all materials condemned by the County as failing to conform to the Contract, whether incorporated in the work or not. The Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the County. The Contractor shall bear the expense of making good all work of other contractors destroyed or damaged by such removal.

If the Contractor does not remove such condemned work and materials within reasonable time, fixed by written notice, the County may remove them and may store the materials at the expense of the Contractor. If the Contractor does not pay the expenses of such removal within ten (10) days thereafter, the County may upon ten (10) days written notice, sell such materials at auction or at private sales and shall account for the net proceeds thereof after deducting all costs and expenses that should have been borne by the Contractor.

29. TEMPORARY SUSPENSION OF WORK

The County shall have the authority to suspend the work wholly or in part, for such period as it may deem necessary, due to unsuitable weather or to such other conditions as are considered unfavorable for the suitable progression of the work, or for such time as it may deem necessary due to the failure of the Contractor to carry out orders given by County, or to perform any provision of the Contract. The Contractor shall immediately obey such order of the County and shall not resume work until ordered in writing by the County.

30. SAMPLES

When requested, the Contractor shall submit for the County's review samples of the various materials, together with the finish thereof, as specified for and intended for use in the work. Samples of bulk materials shall be selected by the lab. All materials and

workmanship shall in all respects be equal to the samples so submitted and reviewed. Samples shall be sent or delivered to the County, samples and delivery charges paid by Contractor. Samples will be returned to the Contractor if requested, shipping or delivery charges collect.

31. CLEANING AND REMOVAL OF DEBRIS

The Contractor shall, as directed by the County during the progress of the work or as indicated elsewhere in these documents, remove and properly dispose of dirt and debris and shall keep the premises reasonably clean. Upon completion of the work, the Contractor shall remove all of his equipment and unused materials provided for the work, and shall put the building and appurtenances in a neat and clean condition and shall do all cleaning and washing required by the specifications.

32. OBSTRUCTIONS

The Contractor may be required to work around public utility facilities and other improvements which are to remain in place within the construction area. The Contractor shall be held liable to the owners of such facilities and improvements for any damage or interference with service resulting from the Contractor's operation.

The exact location of underground facilities and improvements within the construction area, whether shown on the drawings or not, shall be ascertained by the Contractor before using equipment that may damage such facilities or interfere with their service.

33. SUPERINTENDENT IN CHARGE

The Contractor shall keep on the work at all times and until the acceptance certificate is issued a competent superintendent or foreman for the purpose of receiving and executing without delay any orders from County in keeping with the terms of the Contract. This foreman shall have charge of the plans and specifications kept on the job. He shall be instructed to familiarize himself closely with all provisions of the plans and specifications and to follow the same accurately.

34. STORAGE OF MATERIALS AND EQUIPMENT

Materials and equipment shall not be stockpiled or placed outside of the site property lines unless written permission is obtained by the appropriate owner or political subdivision having jurisdiction over the adjacent property, roads, streets, etc.

35. GENERAL GUARANTY

Neither the final payment nor any partial payment, nor partial or entire use of the premises by occupancy by the County shall constitute an acceptance of the work not completed in accordance with the Contract. Final Payment or partial payment or partial or entire use of the premises by occupancy shall not relieve the Contractor of liability with respect to any warranties or responsibilities for faulty materials or workmanship. The Contractor shall remedy any defect in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of final acceptance of the

work, unless a longer period is specified elsewhere in these specifications. The County shall notify the Contractor of observed defects with reasonable promptness.

36. MATERIALS SUBMITTALS AND SUBSTITUTIONS

Materials and substitutions shall be governed by the relevant sections elsewhere in these documents. If not specified, the following shall govern.

- A. Specific reference to materials, appliances, fixtures and equipment by trade name is intended to be used as standard, but this implies no right on the part of the Contractor to use other materials, fixtures, appliances, equipment, until review by the County.
- B. The County alone shall determine what will be considered as equal, but the burden of proof as to quality, utility and function, etc. shall be upon the Contractor.

If the Contractor desires to substitute any item, he shall in writing state the cost of such item and the original item named in the specifications if requested and shall submit a substitution warranty in the format shown in the specifications.

- C. As soon as practicable and within twenty (20) days after official award of Contract and before any fixtures, materials or equipment are purchased, the Contractor shall submit to the County a complete list of materials, fixtures and equipment giving the manufacturers' names, catalog numbers, etc., and, when requested, the original and substitute item of each article which he proposes to install as a substitution.
- D. Requests for substitution will not be considered after the above period of time unless the item specified is not obtainable or, in the opinion of the County, such substitution would serve the County's interest.

37. CONSTRUCTION, MATERIAL AND LABOR COST SCHEDULES

- A. The successful Contractor shall submit the following schedules to the County within ten (10) days after commencing the work:
 - 1. A construction schedule indicating the start and finish of each phase of the work.
 - 2. A detailed statement of the cost of material and labor included in the original estimate for each phase of the work so arranged that the value of the work as it progresses may be readily determined.

38. CONFERENCES

At any time during the progress of the work, the County may request the Contractor to attend a conference of any or all of the Contractors engaged on the work, and any notice of such conference shall be duly observed and complied with by the Contractor.

39. INSPECTION AND PAYMENTS - NOT ACCEPTABLE

The fact that the work and materials have been inspected by the County of Mendocino and payments on account have been made does not relieve the Contractor from the

responsibility of replacing and making good any defective work or materials that may be discovered within one (1) year from the date of the completion of the work by the Contractor and its acceptance by the County. [Five (5) years for roof.]

40. RETURN OF DRAWINGS AND SPECIFICATIONS

All plans and specifications shall be returned to the Office of the County Director of General Services or shall be accounted for by the Contractor before the final certificate will be issued.

41. ARRANGEMENT OF SPECIFICATION SECTION

- A. For convenience, these specifications are arranged in several sections, but such separation shall not be considered as limiting any work required to a particular trade. The Contractor shall in cooperation with other contractors establish responsibility for any work required by the plans and specifications which may be improperly arranged or not included in the appropriate section.
- B. In areas where one trade meets another for joining, the Contractor is responsible to be certain that all work shown is included in his bid.

42. QUALITY OF MATERIALS AND LABOR

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 not meeting these standards shall be removed. The County may refuse to issue any certificate of payment until all defective materials or work have been removed, and other material of proper quality substituted therefor.

43. INCOMPETENT WORKERS

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

44. COUNTY TO DECIDE

All matters of color, texture, design, interpretation of plans and specifications shall be referred by the Contractor to County, whose decision thereon shall be final.

45. CODES

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 California Electric Code; the California Building Code; California Mechanical Code; the California Fire and Plumbing Codes; OSHA and other applicable State and local codes and laws.

Nothing in these plans or specifications is to be construed to permit work not conforming to these Codes.

46. PAYMENT OF FEDERAL, STATE OR LOCAL TAXES

Any Federal, State or Local tax payable on articles furnished by the Contractor under the Contract shall be included in the Contract price and paid by the Contractor.

47. LIMITATIONS OF HOURS OF WORK

Eight (8) hours labor constitutes a legal day's work. The Contractor shall forfeit as a penalty \$25.00 for each worker employed in the execution of the Contract by the Contractor for each calendar day which such worker is required or permitted to work more than eight (8) hours in one (1) calendar day and forty (40) hours in any one (1) calendar week in violation of the provisions of the California Labor Code, and in particular Sections 1810 and 1816. Work performed by employees of Contractors in excess of eight (8) hours per day and forty (40) hours during any one (1) week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1 & 1/2) times the basic rate of pay, as provided in Section 1815.]

48. PAYMENT OF NOT LESS THAN THE GENERAL PREVAILING RATE OF PER DIEM WAGES

- A. The Contractor shall pay his workers on all work included in this Contract not less than the general prevailing rate of per diem wages for legal holiday and overtime work in said locality. Such per diem wages shall not be less than the stipulated rates contained in a schedule thereof which has been ascertained and determined by the State Director of Industrial Relations to be the general prevailing rate of per diem wages for each craft or type of worker needed to execute this Contract.
- B. The Contractor shall comply with Labor Code Section 1775. In accordance with Section 1775, the Contractor shall forfeit as a penalty twenty-five dollars (\$25.00) for each calendar day or portion thereof, for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed for any work done under the Contract in violation of the provisions of the Labor Code in particular Labor Code Sections 1770 and 1780. In addition to said penalty, and pursuant to Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor.

49. LABOR CODE CLARIFICATION

It is to be understood that references to the California Labor Code shall mean the current Code or as may be amended during the period of the Contract.

50. NOTIFICATION OF READINESS FOR REQUIRED TESTS AND INSPECTIONS

The Contractor shall be responsible to notify all inspectors, testing agencies, and County representatives a minimum of seventy-two (72) hours before required tests and/or inspections.

51. RESPONSIBILITY FOR PROJECT SAFETY AND CONSTRUCTION TECHNIQUES

Specifically omitted from the services of the County are all design and construction review services relating to the Contractor's safety precautions or to means, methods, techniques, sequences, or procedures required for the Contractor to perform his work.

Omitted services include, but are not limited to, shoring, scaffolding, underpinning, temporary retainment of excavations and any erection methods and bracing.

52. RECORD DRAWINGS

- A. The Contractor shall furnish one complete set of clean "Record" drawings to the County prior to project acceptance, showing clearly any changes made during construction. Record drawings shall be in accordance with Section 017839 Project Record Documents..
- B. In addition to any changes, all mechanical, electrical and plumbing items concealed in the building and underground, actually installed and routed. Depth below surface to top of underground item shall be indicated.
- C. All underground items shall be dimensioned from permanent reference points in a manner that they can be easily found in the field at a later time.
- D. Each sheet of the "Record" drawings shall be identified with the following label to be signed by the Contractor:

These are record drawings which have been
prepared or supervised by the undersigned.

Contractor

Date

- E. The Contractor is solely responsible for the preparation, completeness, and accuracy of the "Record" drawings. The County and its representatives are not responsible to review the "Record" drawings.

53. OCCUPANCY OR USE BEFORE ACCEPTANCE OF COMPLETION

The County may occupy any building or portion thereof or use any improvement contemplated by the Contract prior to the completion of the entire work. A list of work to be completed and corrected by the Contractor, if any, shall be prepared and agreed to between the County and the Contractor before occupancy or use. Such occupancy or use shall not operate as an acceptance of any part of the work but shall start the guaranty-warranty period on the structure or portion thereof so occupied or improvement of equipment so used, provided, however, that such occupancy shall not start the guaranty-warranty period as to items appearing on the list of work to be completed and corrected. No such occupancy or use shall be deemed to have occurred unless and until the County has given the Contractor formal written notice of intention to so occupy or use, specifying the portion or portions of the structure, improvement or equipment which will be deemed so occupied or used.

54. COMPLIANCE WITH HANDICAPPED ACCESS LAWS

- A. It is the County's intent for all features on these plans and specifications to conform to applicable regulations for the accommodations of physically handicapped persons in buildings and facilities used by the public, whether or not said plans and specifications so conform.
- B. It shall be the responsibility of the manufacturers, suppliers and distributors to insure that all manufactured and fabricated products, devices and items they supply for this project conform to applicable regulations of Title 24 of the California Code of Regulations.
- C. When shop drawings and/or manufacturers product literature, and other matters subject to handicapped regulations are submitted to County, the following shall be provided:
 - 1. Statement that the item shown complies with the handicapped regulations of Title 24 of the California Code of Regulations.
 - 2. Show all required dimensions, heights, clearances, and locations that must be followed when items are installed on project.

55. CONTRACT AMBIGUITY

This Contract shall be deemed to have been prepared jointly by the parties signing the Contract and if any inconsistencies or ambiguities exist, they shall not be interpreted or construed against any of the parties as the drafter.

56. FAIR EMPLOYMENT PRACTICES/NONDISCRIMINATION

The Contractor shall comply with Federal and State Fair Employment Practices provisions.

The Contractor, in connection with performance of work under this agreement, agrees to comply with the rules and regulations which deal with or relate to nondiscrimination set forth as follows:

- 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 race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex or age, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, age, or sex. Contractor shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.
- B. The Contractor shall comply with the provisions of the California Fair Employment and Housing Act (Gov. Code, sections 12900 *et seq.*), the regulations promulgated thereunder (2 Cal. Code of Regulations sections 7285.0 *et seq.*), and Government Code Sections 11135 - 11139.5).
- C. The Contractor shall permit access by representatives of the Department of Fair Employment and Housing and the County upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours notice, to view such of

its books, records, accounts, other sources of information and its facilities as said Department or County shall require to ascertain compliance with this clause.

- D. The Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
- E. The Contractor shall include the above nondiscrimination and compliance provisions in above subparagraphs A and B in all subcontracts to perform work under the Contract.

END OF SECTION

SECTION 008110 - UNFORESEEN PHYSICAL CONDITIONS

PART I – GENERAL

1.1 SUMMARY

This Section includes special requirements for unforeseen hidden conditions, differing site conditions and underground facilities as required for California Public Works Contracts.

1.2 UNFORESEEN SITE CONDITIONS

A. Pursuant to Section 7104 of the California Public Contract Code, if any of the following conditions, hereinafter called hidden conditions, are encountered at the site, then Contractor shall promptly, before such conditions are disturbed and in no event later than three (3) days after discovery, notify County in writing using the "Hidden Conditions Report" attached to this Document:

1. Material that Contractor believes may be hazardous waste material, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or a Class III disposal site in accordance with provisions of existing law.
2. Subsurface or latent physical conditions at the site or in the building differing materially from those represented in the Contract Documents.
3. Archaeological or historical artifacts or soils conditions identified with such artifacts as noted in the conditions of approval from the California Department of Parks and Recreation CEQA Document No. 11293 – Archaeological Review.
4. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents or conditions that could be observed by examination of the site and the Reference Documents.

B. Conditions that are not unforeseen, hidden, unknown or differing site and building conditions include but are not limited to, the following.

1. All that is indicated in or reasonably interpreted from the Contract Documents.
2. All that is indicated in or reasonably interpreted from the Reference Documents specified in Section 01010, "Summary of Work".
3. All that could be seen on site and that could be observed.
4. Conditions that are materially similar or characteristically the same.
5. Conditions where the location of the building component is in the proximity where indicated in or reasonably interpreted from the Contract Documents or Reference Documents.

- C. County will promptly investigate the conditions reported which appear to be unforeseen conditions.
 - 1. If County determines that the reported conditions are inherent in work of the character provided for in the Contract Documents or observed by examination of the site and Reference Documents, or that the condition is not hidden, unforeseen or materially different, Contractor shall execute the Work at no additional cost to County.
 - 2. If County determines that the conditions are hidden or differing conditions and that they will materially cause a decrease or increase in Contractor's cost of any portion of the work, a Contract Modification will be issued for compensation of such portion of the work as provided in the General Conditions.
 - 3. If County determines that the conditions are hidden or differing conditions and that they will materially affect the performance time, Contractor, upon submitting a written request, will be granted an extension of time subject to the provisions of the General Conditions.
 - a. Time extensions or contract costs will not be granted for delays that could be or could have been avoided by Contractor redirecting his forces and equipment to perform other work on the Contract.
- D. Should Contractor disagree with County's determination, Contractor shall submit a Request for Change (RFC) to County that the condition is not indicated in or reasonably interpreted from the Contract Documents, and that the condition is not similar in character to the material that could have been observed by examination of the site and Reference Drawings, but that the condition is materially different and the condition is unforeseen and unknown.
 - 1. Contractor shall submit proof with written explanation, drawings, photographs, material and labor cost breakdowns, and other relevant data to show the condition.
 - 2. County will review Contractor's submission and make a determination. Contractor shall not file for claim or RFC before County makes the determination.
 - 3. In the event of continued disagreement, Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract.
 - 4. Contractor shall retain any and all rights provided either by the Contract or by law which pertain to the resolution of RFC and protests between the contracting parties.

1.3 REMOVAL, RELOCATION, OR PROTECTION OF EXISTING UTILITIES

- A. In accordance with the provisions of Section 4215 of the California Government Code, County will assume the responsibility for the removal,

UNFORESEEN PHYSICAL CONDITIONS

relocation, or protection of existing main or trunk-line utilities located on the site of the Contract work, if such utilities are not identified in the Contract Documents.

- B. Contractor shall immediately notify County and the public utility in writing of such utility facilities it discovers while performing the work which are not identified in the Contract Documents.
 - 1. Contractor shall negotiate with the owner of the utility, who shall have the sole discretion to perform repairs or relocation work or permit Contractor to do such repairs or relocation work at a reasonable price.
- C. Contractor shall not be assessed liquidated damages for delay in Substantial Completion if the delay was caused by such existing utilities in direct conflict with the work and not shown on the Drawings.
- D. Contractor will be compensated under the provisions of General Conditions Section 00700, Article 20 for extra work involving existing utilities not shown on the Drawings or included in the Specifications but in direct physical conflict with Contractor's operations.
 - 1. This extra work shall include the following costs:
 - a. Locating, supporting, working around, and protecting or repairing damage not due to the failure of Contractor to exercise reasonable care.
 - b. Removing and relocating, as directed by County, existing main or trunk line utility facilities located on site but not indicated on the Drawings and Specifications with reasonable accuracy.
 - c. Equipment on the project necessarily idled during such work.
- E. Contractor shall not be entitled to any adjustment in the Contract Sum or Time if the existence of such condition:
 - 1. Could have been reasonably discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the Contract Documents to be conducted by or for Contractor prior to commencing such work, or
 - 2. Could have been inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the work site.

1.4 WORK STOPPAGES FOR HISTORICAL OR ARCHAEOLOGICAL FINDS

- A. CONTRACTOR shall not be entitled to any adjustment in the Contract Sum for reasonable accommodations required to comply with the conditions of approval.

- B. Work stoppages required and any special excavation requested by the Archaeological monitor will be compensated under the provisions of article 7 of the General Conditions.

PART 2 - PRODUCTS
NOT USED

PART 3 - EXECUTION
NOT USED

END OF SECTION

HIDDEN CONDITIONS REPORT (HCR)

Regional Behavioral Health Training Center - Flooring Project

HCR No. _____

Submitted By: _____ Date: _____

Ctr to PM

PM to Arch

Arch to PM

PM to

Ctr

Date Sent: _____

Date Received: _____

Type of Conditions Reported:

☐ Site Work

☐ Structural

☐ Architectural

☐ HVAC

☐ Plumbing

☐ Fire Protection

☐ Electrical

☐ Other

Location and Reference to Drawing: _____

Conditions Reported: _____

Investigated By: _____ Firm: _____ Date: _____

☐ Check this box if the hidden condition reported is not hidden. Reply with location(s) where the information can be obtained.

Reply of Findings: _____

By: _____ Firm: _____ Date: _____

The reply is a finding from the investigation. No change in the Contract Sum or Time is authorized. See Specifications Document 00811 for the timeliness of investigation.

UNFORESEEN PHYSICAL CONDITIONS

00811-5

00851 - DRAWINGS INDEX

ARCHITECTURAL

A001	COVER
A101	PLAN VIEWS & DETAILS
G-1	STANDARD ABBREVIATIONS AND LEGANDS
C-1	DEMOLITION PLAN
C-2	SITE PLAN
C-3	GRADING PLAN
C-4	ADA DETAILS
E-101	SHEET SPECIFICATION
E-102	INTRUSION DIAGRAM & PHOTOS

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

- 1.1 REQUIREMENTS of the drawings and general provisions of the Prime Construction Agreement and other sections of Division 1 apply to this section.
- 1.2 THIS SECTION sets forth general project scope, and general provisions regarding work to be performed by the Contractor.
- 1.3 THE WORK OF THIS CONTRACT Shall include but not limited to new site ADA accessible parking, improve accessible path of travel to and from ADA accessible entry and public sidewalk, new intrusion detection system (Alternate), relocate rear entry door and add automatic entry device and related improvements for the County of Mendocino Veterans Services Building– Building 57. Project is located at 405 Observatory Ave., Ukiah, CA 95482.

WORK INCLUDED: Provide all documentation, labor, material, superintendence and administration as depicted in the drawings, as described in the project manual or as necessary for a complete and proper installation. Present to the Owner, at the close of construction, signed copies of all required permits indicating successful completion of all permit requirements.

- 1.4 APPLICABLE CODES AND REGULATIONS:
 - A. General Requirements: All materials and workmanship shall comply with the most recent edition of the California Code of Regulations (CCR), Title 24 (California Building Standards Code) with current State and local amendments. CCR, Title 24 consists of the following twelve parts:
 - Part 1 - California Building Standards Administrative Code
 - Part 2 - California Building Code
 - Part 3 - California Electrical Code
 - Part 4 - California Mechanical Code
 - Part 5 - California Plumbing Code
 - Part 6 - California Energy Code
 - Part 7 - (No longer published in Title 24. See Title 8, CCR)
 - Part 8 - California Historical Building Code
 - Part 9 - California Fire Code
 - Part 10 - California Existing Building Code
 - Part 11 - California Green Building Standards Code (CALGreen)
 - Part 12 - California Reference Standards Code
 - B. Energy Requirements: All materials and workmanship shall comply with the most recent editions of the California Code of Regulations, Title 24 (California Building Standards Code) with current State and local amendments and the most recent edition of the Building Energy Efficiency Standards published by the California Energy Commission.
 - C. Air Quality Requirements: All materials and workmanship shall comply with all current requirements of the Mendocino County Air Quality Management District. Provide all application materials, fees and documentation necessary to provide required notification and obtain all permits required by the Mendocino County Air Quality Management District. Obtain approval for all operations and present to the Owner, at the close of construction, signed copies of all required permits indicating successful completion of all permit requirements.

- D. Recycling Requirements: This project is subject to the Mendocino County "Construction and Demolition Recycling and Reuse" Ordinance and the Department of Toxic Substances Control "Requirements for Generators of Treated Wood Waste," and the requirements of California Green Building Standards Code (CALGreen).
- E. Other Requirements: All materials and workmanship shall comply with the most recent edition of any other codes or regulations adopted by governmental agencies having jurisdiction over any portion of the work.

1.5 PROJECT DATA:

- A. Construction Type: The proposed facility shall conform to all requirements for Type V-B construction as set forth in the most current edition of the California Building Code in effect at the time of construction with current State and local amendments.
- B. Occupancy Classification: The proposed facility shall conform to all requirements for Group A Occupancy as set forth in the most current edition of the California Building Code in effect at the time of construction with current State and local amendments.

1.6 WORK AREA AND USE OF PREMISES

- A. The contractor shall have controlled access to the site. Contractor shall perform work such that access to the building is not restricted except by prior arrangement with the County. Pedestrian access to the building entrances and adjacent businesses shall be maintained during business hours. Work shall be adequately cordoned off to direct public from the street or parking lot, and direction shall be provided around the work area, to the building entrances.
- B. The Contractor shall use every precaution to insure the protection of and prevent damage to existing facilities on or adjacent to the construction area. Damage to existing facilities due to construction activities shall be repaired by the Contractor at no additional cost to the Owner.
- D. Bidders shall assume that they can use only the area inside of the fenced area for staging, as shown on Sheet E1.1 of the drawings. Maintain the area clean and without damage to the surfaces or adjacent curbs and structures.

1.5 EXAMINATION

- A. General: As stipulated in Document 001000 Instructions to Bidders, Contractor is responsible for inspection of the existing site conditions prior to bidding and shall include in the Contract any modifications of the Contract Documents proposed as a result of Contractor's inspection. Such modifications shall be included in the bid.
- B. Persons performing work shall examine conditions that affect their work and shall report in writing to Contractor, with a copy to County, conditions detrimental to work.
 - 1. Failure to examine and report makes the person responsible, at no increase in the Contract Sum, for corrections necessary for the proper installation of their work.

SUMMARY OF WORK

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2. Commencement of Work constitutes acceptance of existing condition.

C. Field Verification: Contractor shall verify all existing conditions in the field prior to commencing the Work.

1.6 PERMITS FOR WORK

Contractor shall obtain and meet any building permit requirements from the County of Mendocino Building Department. Contractor is responsible for scheduling and passing all required building inspections and securing final acceptance. Building permit fees are waived by the County.

1.7 LISTING OF RELATED WORK

Listings of related work or sections in the various Sections are not necessarily complete listings. They are provided for information and convenience only and are intended to highlight related or similar work which is specified in other Sections. Related work listings and omissions from such listings are not intended to control Contractor in dividing the work among subcontractors or in establishing the extent of the work to be performed by any trade.

1.8 REQUEST FOR INFORMATION (RFI)

- A. Requirement: It is Contractor's responsibility to review Contract Documents in advance of the work to be executed, and to request information so that County will have sufficient time to respond to Requests for Information prior to the start of actual construction of that part of the Work to which the RFI relates. Contractor shall be responsible for all delays, disruptions and other related impacts as a result of untimely RFI's submitted to County.
- B. Contractor shall coordinate all requests for information to prevent duplication. Requests for information that are duplicative, uncoordinated with each other, or do not allow for a reasonable time for response will be returned to Contractor.
 1. Contractor shall promptly notify County in writing of any discrepancies, and shall not proceed with the Work until such discrepancies have been resolved.
 2. Failure to notify County shall not relieve Contractor of its responsibility for resulting damage and/or defect, and for the cost of any corrective work that may be required due to Contractor's failure to notify.
- C. Contractor shall prioritize RFI's and request a response based on its most current and accepted CPM schedule.
- D. Form:
 1. When an interpretation or clarification of the Contract Documents is required from County, Contractor shall make the request on a form acceptable to the County.
 2. Contractor shall limit the subject to one design discipline to expedite reply and attach supplementary information where necessary.

3. County will reply or give summary of reply on the same form and include supplementary information where necessary.
4. The completed form shall be the written record of each RFI.

F. Reply:

1. County will endeavor to reply to all RFI's promptly as work schedule of the consultants allows; generally no later than fifteen (15) days from the day received.
2. When an RFI involves a complex subject, extensive research or development, or substantial input from other governmental agency, County will inform Contractor and request additional time to prepare the reply. Contractor shall cooperate and agree to a reasonable time extension.
3. The reply shall be a clarification or an interpretation of the Contract Documents; the reply is not an authorization of change in the Contract Sum or Time.
4. Such written interpretation or clarification will be binding on Contractor and County. If County or Contractor believes that a written interpretation or clarification justifies an adjustment in the Contract Sum or Time, then County or Contractor may make a written request for change therefor as provided in the General Conditions, Article 20.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

SECTION 01500 - TEMPORARY FACILITIES & CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work included: Provide temporary facilities and controls needed for the Work including, but not necessarily limited to:

1. Sanitary Facilities
3. 2. Storm water protections

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary conditions, and Sections in Division 1 of these Specifications.
2. Except that equipment furnished by subcontractors shall comply with requirements of pertinent safe regulations, such equipment normally furnished by the individual trades in execution of their own portions of the Work are not part of this Section.
3. Permanent installation and hookup of the various utility lines are described in other Sections.

1.2 JOB SAFETY

- A. Comply with all applicable laws and regulations pertaining to job safety, and be solely responsible for construction means, methods, techniques, sequences procedures and safety precautions and programs in connection with the Work. Owner or Architect will not be responsible for Contractor's failure to employ proper safety procedures.
- B. All work, including the temporary construction, shall be in full accord with the latest orders, rules and regulations of the State of California Division of Industrial Safety and the California Occupational Safety and Health Act (CAL-OSHA).
- C. The Contractor shall at all times so conduct his work as to cause the least possible obstruction and inconvenience and insure the protection of persons and property in the vicinity of the Work.

PART 2 - PRODUCTS

TEMPORARY FACILITIES & CONTROLS

SECTION-01100 ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. The Alternate proposals as described herein shall state the net sum to be added to the lump sum in the event that the Alternate proposal is accepted. Dollar amounts for Alternate proposals shall be inserted in the "Form of Proposal."
- B. The Board reserves the right to accept or reject any or all Alternate proposals.
- C. Include in each Alternate proposal all changes in cost resulting in the work of all trades affected thereby. Work shall be performed in accordance with drawings and specifications affected unless otherwise specified.
- D. Each bidder shall determine to its own satisfaction the full extent to which the Work is affected by each Alternate proposal and shall make full and proper allowance therefore in preparation of its proposal.

1.2 ALTERNATE

Alternate No. 1: Burglar Alarm and Security System as specified on pages E101 and E102 of the attached plans..

ALTERNATES

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END OF SECTION

ALTERNATES

01100

2.1 MISCELLANEOUS FACILITIES

- A. Construction Aids: Hoists, ramps and ladders, enclosures, pumps, barriers, fences, barricades necessary to adequately move materials and equipment and to protect workmen and public.
- B. All temporary construction to comply with requirements of state and local authorities.

2.2 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work areas to minimize damage.
- C. Provide protective coverings at walls, projections, jambs, sills and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

PART 3 - EXECUTION

3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.
- B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit or as directed by the Architect.
- C. Remove temporary above grade or buried utilities, equipment, facilities, materials prior to Substantial Completion inspection.
- E. Clean and repair damage caused by installation or use of temporary work.

- F. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

END OF SECTION

SECTION 01640 - PRODUCT HANDLING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Products scheduled for use in the Work by means including, but not necessarily limited to those described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Additional procedures also may be prescribed in other Sections of these Specifications.

1.2 QUALITY ASSURANCE

Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

1.3 MANUFACTURERS' RECOMMENDATIONS

Except as otherwise approved by the County, determine and comply with manufacturers' recommendations on product handling, storage, and protection.

1.4 PACKING

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.
- B. The County may reject as non-complying such material and products that do not bear identification satisfactory to the County as to manufacturer, grade, quality, and other pertinent information.

1.5 PROTECTION

- A. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by Owner.

1.6 REPAIRS AND REPLACEMENTS

- A. In event of damage, promptly make replacements and repair to the approval of the County and at no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the County to justify an extension of the Contract Time of Completion.

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Closeout procedures, Final cleaning, Adjusting, Project record documents, Operation and maintenance data, Warranties, Spare parts and maintenance materials, Summary of closeout submittals to County.

1.2 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for County's inspection.
- B. Provide submittals to County that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Comply with procedures stated in the Conditions of the Contract Agreement and General Conditions for issuance of Certificate of Substantial Completion.
- E. Should County consider that the Work' is incomplete or defective, he will promptly notify the Contract in writing, listing the incomplete or defective items. The Contractor shall then take immediate steps to remedy the stated deficiencies, and send a second written certification to County that the Work is complete.
- F. Should County perform reinspections due to failure of the Work to comply with the claims of status of completion made by the Contractor:
 - 1. Owner will compensate County for such additional services.
 - 2. Owner will deduct the amount of such compensation from the final payment to the Contractor.
- G. When the County finds that the Work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.
- H. County will issue a final change order reflecting approved adjustments to Contract Sum not previously made by Change Order.

1.3 FINAL CLEANING

- A. Remove waste and surplus materials, rubbish, and construction facilities from the site.
- B. Execute final cleaning prior to final inspection.
- C. Clean interior carpeted finished floors of stains and foreign substances, vacuum carpeted and soft surfaces.
- D. Clean walls, windows, and sills affected by the work of the contract to a dust free condition.

1.4 OPERATION AND MAINTENANCE DATA

- A. Compile data and related information appropriate for Owner's maintenance and operation of products furnished under the Contract.
- B. Submit one copy of completed product data electronically.
- C. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned after final inspection, with County comments. Revise content of documents as required prior to final submittal.

1.5 WARRANTIES

- A. Provide two copies.
- B. Submit prior to final Application for Payment.

1.6 FINAL PAYMENT

- A. The retention shall be held by the Owner until Forty (40) days after Final Acceptance. If no liens or encumbrances are filed and if all work is complete, the retention shall be paid the Contractor. Assessed liquidated damages shall be deducted from the retention.
- B. Final payment to the Contractor will not be made until the Owner and County receive a signed-off final copy of the Building Permit, as applicable.

PART 2 PRODUCTS

(Not used)

PART 3 EXECUTION

(Not used)

SECTION 01710 - CLEANING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. In addition to standards described in this Section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.

1.2 QUALITY ASSURANCE

- A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
- B. In addition to the standards described in this Section, conduct cleaning and disposal operations to comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

- A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.
- B. Provide covered containers for deposit of waste materials, debris and rubbish.
- C. Locate containers for deposit of waste materials, debris and rubbish within the fenced site or as directed by owner.

2.2 COMPATIBILITY

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

- B. Use only the cleaning materials, methods and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.1 PROGRESS CLEANING

- A. General:
 - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
 - 2. Do not allow accumulation of scraps, debris, waste material, and other items not required for construction of this Work.
 - 3. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
- C. Building:
 - 1. As required preparatory to installation of flooring, clean the building floor to the degree of cleanliness recommended by the flooring manufacturer, using equipment and materials required to achieve the necessary cleanliness.
 - 2. Following the installation of finished floor materials, clean the finish floor.
 - a. "Clean," for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the Construction Manager, may be injurious to the finish floor material.

3.2 DUST CONTROL

- A. Establish and enforce strict cleaning and dust control procedures before, during and after installation of health care equipment, as approved by Owner and Construction Manager. This requirement is critical to successful completion of the Work.

3.3 FINAL CLEANING

- A. "Clean," for the purpose of this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- B. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.1 above.
- D. Schedule final cleaning as approved by the Construction Manager to enable the Owner to accept a completely clean finished installation.
- E. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight exposed surfaces in all construction areas, to verify that the entire Work is clean.

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- A. By careful study of the Contract Documents, determine the location and extent of construction waste management to be performed.
- B. In company with the Architect, visit the site and verify the extent and location of construction waste management required.
 - 1. Carefully identify limits of selective demolition.
 - 2. Mark interface surfaces as required to enable workmen to identify items to be managed according to the requirements of this section.
- C. Prepare and follow an organized plan for construction waste management.
 - 1. Establish a location on site for construction waste management tasks. Sort waste into required categories and stockpile materials until ready for disposal.
 - 2. Develop an organized plan for construction waste management and fully inform all employees of the requirements and conditions.
 - 3. Use means necessary to prevent dust, airborne debris and waterborne debris from becoming a nuisance to the public, to neighbors, workers and to other work being performed on or near the site.
- D. Disposal of Materials
 - 1. Completely remove items scheduled to be removed from site, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
 - 2. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.

3.3 SUBMITTALS:

- A. Submit construction waste management plan, disposal confirmation and any other required documentation to governmental agencies having jurisdiction and County.

SECTION 08100-METAL DOORS AND FRAMES

PART 1 – GENERAL

1.1 DOCUMENTS

The General Conditions, Supplementary Conditions and applicable portions of Division 1 of the Specifications are part of this Section.

1.2 SCOPE

A. Work Included: Metal doors and pressed metal frames, pressed metal frames for wood doors, and pressed metal frames at glazed partitions.

B. Related Work in Other Sections:

1. Door Hardware: Section 08700.

1.3 SUBMITTALS

Submit shop drawings in accordance with Supplementary Conditions.

1.4 AIR LEAKAGE

Doors at exterior shall comply with air leakage requirements of CBC 5324.

1.5 PROTECTION

Carefully handle and protect doors and frames during shipment. Store in upright position at building site, and protect from damage.

PART 2 – PRODUCTS

2.1 MATERIALS

A. General: Doors and frames shall be manufactured by Forderer Hollow Metal Products, or equal in appearance and utility.

B. Hollow Metal Doors: The two face sheets shall be formed from stretcher-leveled cold rolled steel not less than 18 U.S. gauge and shall be rigidly connected and reinforced inside by 18 gauge steel continuous interlocking stiffeners spaced a maximum of seven inches on centers. Sound-deadening material, moisture resistant and chemically inert, shall fill voids between stiffeners and face sheets. Door edges shall be welded and free of seams or cracks. Bevel lock edges 1/8-inch in two inches. Face of door to be flat with no joints, bumps or weld marks.

Door shall be neatly mortised and reinforced for all mortise type hardware and shall be drilled and tapped at the factory. Reinforce for surface applied hardware.

Exterior doors shall have automatic drop bottom No. 426 with closed cell neoprene, 1-inch maximum drop.

Glazed doors shall be as shown on the Drawings with provisions for glazing as indicated. Glass moldings shall be welded units and shall be watertight at exterior locations.

- C. Pressed metal frames shall be No. 16 U.S. gauge steel with corners mitered, fitted continuously, welded full width of frame and ground smooth. Widths of frames shall vary to match wall thickness.

Provide anchors to suit wall conditions and/or clips welded to frame, not less than three anchors per side.

Frames shall be neatly mortised and reinforced for all mortise type hardware and shall be drilled and tapped at the factory.

Provide holes for rubber silencers, three per jamb strike.

- D. Frame for fire door shall be as specified above, except that it shall comply with requirements of and be labeled by UL for class indicated on the door schedule.
- E. Finish: All surfaces are to be thoroughly cleaned of all oil, grease and other impurities and then chemically etched. All irregularities shall be filled and sanded to give a completely smooth surface. Apply one coat of rust inhibitive primer, baked on 300° for 30 minutes.

PART 3 – EXECUTION

3.1 INSTALLATION

Install frames and doors in strict accordance with manufacturer's shop drawings. Secure metal clips on door frames to studs with screw as detailed. Hang metal doors, fit and adjust door hardware. Upon completion of installation properly clean all work, adjust for freedom from binding and assure proper installation.

3.2 CLEAN UP

Remove all debris resulting from the work of this Section.

END OF SECTION

SECTION 09900-PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on interior and exterior substrates.
 - 1. Steel.
 - 2. Shop primed steel.
 - 3. Galvanized metal.
 - 4. Wood.
 - 5. Gypsum board.

1.3 DEFINITIONS

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- D. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- E. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- F. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches square.
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.

- C. Product List: **All interior paint products must meet approval of County Risk Management for odor and VOC content.** For each product indicated, include the following:
1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
 3. VOC content.
 4. MSDS.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 degrees F.
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. Low-Emitting Materials: Interior paints and coatings shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- D. Colors: As selected by Architect from manufacturer's full range.

2.2 METAL PRIMERS

- A. Exterior Primer, Alkyd, Anti-Corrosive for Metal: MPI #79.
- B. Interior Primer, Alkyd, Quick Dry, for Metal: MPI #76.

2.3 WOOD PRIMERS

- A. Exterior Primer, Alkyd for Exterior Wood: MPI #5.

2.4 SOLVENT-BASED PAINTS

- A. Alkyd, Quick Dry, Metal, Semi-Gloss (Gloss Level 5): MPI #81.
- B. Alkyd, Exterior, Wood or Metal, Semi-gloss, (Gloss Level 5): MPI #94.
- C. Alkyd, Exterior Flat (Gloss Level 1): MPI #8.

2.5 EXTERIOR LATEX PAINTS

- A. Latex, Exterior, Flat (Gloss Level 1): MPI #10.
- B. Latex, Exterior, Low Sheen (Gloss Level 3-4): MPI #15.
- C. Latex, Exterior, Semi-gloss (Gloss Level 5): MPI #11

2.6 INTERIOR PRIMERS/SEALERS

- A. Primer Sealer, Interior, Institutional Low Odor/VOC: MPI #149.
- B. Primer, Latex, for Interior Wood: MPI #39.

2.7 INTERIOR LATEX PAINTS

- A. Latex, Interior, Institutional Low Odor/VOC, Flat (Gloss Level 1): MPI #143
- B. Latex, Interior, Institutional Low Odor/VOC Egg-shell (Gloss Level 3): MPI #145
- C. Latex Interior, Institutional Low Odor/VOC, Semi-gloss (Gloss Level 5): MPI #147

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- B. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.
- E. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- G. Wood Substrates:
 - 1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
 - 2. Sand surfaces that will be exposed to view, and dust off.
 - 3. Prime edges, ends, faces, undersides, and backsides of wood.
 - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.

3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
 - C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
 - D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
 - E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
 1. Paint the following work where exposed to view:
 - a. Equipment, including panelboards and switch gear.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Tanks that do not have factory-applied final finishes.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

- A. Steel Substrates:
 - a. Prime Coat: Primer, alkyd, anticorrosive for metal, MPI #79.
 - b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
 - c. Topcoat: Alkyd, Quick Dry, Semi-gloss, MPI #81.

- B. Galvanized-Metal Substrates:
 - a. Prime Coat: Primer, galvanized metal, as recommended in writing by topcoat manufacturer for exterior use on galvanized-metal substrates with topcoat indicated.
 - b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
 - c. Topcoat: Alkyd, exterior, flat (Gloss Level 5), MPI #8.
- C. Wood Substrates: Including wood trim, doors, and wood siding.
 - a. Prime Coat: Primer, alkyd for exterior wood, MPI #5.
 - b. Intermediate Coat: Latex, Exterior Matching Topcoat.
 - c. Topcoat: Latex, Exterior, Low Sheen, MPI #15.

3.6 INTERIOR PAINTING SCHEDULE, WATER BASED COMPOUND PAINT

- A. Steel Substrates:
 - a. Prime Coat: Primer, quick dry, for metal, MPI #76.
 - b. Intermediate Coat: interior, matching topcoat.
 - c. Topcoat: Alkyd, Quick Dry, Semi-gloss, MPI #81
 - d. Low VOC Topcoat: Latex, Interior, Institutional Low Odor/VOC Semi-gloss, MPI #147.
- B. Gypsum Board Substrates:
 - a. Prime Coat: Primer/Sealer Low Odor/VOC: MPI #149.
 - b. Intermediate Coat: Latex, Interior, Low Odor/VOC matching Topcoat.
 - c. Topcoat: Latex, Interior, Low Odor/VOC, Egg-shell, MPI #145 (unless otherwise noted)
- C. Interior Wood Substrates:
 - a. Prime Coat: Wood Primer, MPI # 39
 - b. Intermediate Coat: Latex, Interior, Low Odor/VOC matching Topcoat.
 - c. Topcoat: Latex, Interior, Low Odor/VOC, Semi-gloss, MPI #147.

END OF SECTION

SECTION 10400- IDENTIFYING DEVICES

PART 1 – GENERAL

1.1 DOCUMENTS

The General Conditions, Supplementary Conditions and applicable portions of Division 1 of the Specifications are part of this Section.

1.2 SCOPE

A. Work Included

1. Handicap Parking Sign at Exterior: Furnish and install 10" x 16" Handicapped Logo sign, complete with mounting hardware, and post in accordance with Handicapped Parking staff requirements. Install where shown on Drawings.
2. Handicap Sign at Toilets: Furnish and install acrylic signs on the toilet doors as indicated on the Drawings. All toilet room doors shall also have Braille signs.
3. Room Numbers and Signs: At classrooms, furnish and install four-inch high acrylic signs. Provide Braille signs at each entry door to classrooms.

1.3 SUBMITTALS

Furnish shop drawings showing layouts, designs, dimension, construction and mounting details in compliance with Supplementary Conditions. Furnish color samples.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Handicapped logo parking stall signs, posts and mounting hardware shall be as manufactured by Hawkins-Hawkins Co., Inc., 1255 Eastshore Freeway, Berkeley, California.

Sign: HG-348-1 non-reflective.
Channel Post: Channel U-post MI-10SP.
Mounting hardware: MQ6 - Q14-UP.

- B. Acrylic signs shall be as manufactured by Matthews or equal, and distributed by R. Williams Englund, Walnut Creek, CA, phone (415) 932-8646. Signs shall be unframed Series 100, subsurface printed on 0.100-inch, matte finish, transparent acrylic plastic, Matthews G-3. Letters to be Microgramma, all caps, normal spacing. Transparent panel shall be back painted for color. Letter and background shall be of colors as selected from manufacturer's full range of colors. Signs at doors or panels above doors shall have square corners, other signs to have 3/8-inch radius corners. Letters to be 1-1/2 inches high.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Sign posts to be set in concrete footings as detailed on Drawings.

- B. Acrylic signs shall be attached to the building where indicated with Silastic adhesive and double face foam tape (Method SA with double face foam tape).

3.2 CLEAN UP

Remove all debris resulting from the work of this Section.

END OF SECTION

SECTION 10430-EXTERIOR SIGNS

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section describes the requirements for furnishing and installing exterior signs.
- B. Related Sections: The completion of the work described in this Section may require work in or coordination with other Sections of these Specifications. Contractor and Subcontractor shall be responsible for identifying and including all related work in other Sections of these Specifications and/or drawings necessary for a complete installation of the work described in this Section. These related Sections include but are not limited to the following:
 - 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's construction details relative to materials, dimensions of individual components, profiles, and finishes for each type of sign required.

PART 2 – PRODUCTS

2.1 SIGN SUMMARY

- A. Accessibility Entrance Signs: As shown on Drawings.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Locate where indicated on Drawings and as required by applicable codes and secure with specified fasteners.
- B. Install level, plumb and at height indicated or required, with surfaces free from distortion or other appearance defects.
- C. Where signs are adhesively applied, adhesive shall be spread over full contact area.

3.2 CLEANING AND PROTECTION

- A. At completion of installation, clean soiled surfaces in accordance with manufacturer's instructions. Protect units from damage until final acceptance.

END OF SECTION

SECTION 16010-GENERAL ELECTRICAL REQUIREMENTS

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. Provide labor, materials, equipment, and transportation to perform operations necessary or incidental to the proper execution and completion of the electrical work, whether specifically mentioned or not, and as directly indicated or reasonably implied by the Drawings and Specifications.
- B. Work specified in Division 16:
 - 1. Section 16050, “Basic Electrical Materials and Methods”.
 - 2. Section 16400, “Service and Distribution”.

1.2 RELATED WORK

- A. The completion of the Work described in this Section may require work in or coordination with other Sections of these Specifications. Contractor and Subcontractor shall be responsible for identifying and including all related work in other Sections of these Specifications and/or Drawings necessary for a complete installation of the Work described in this Section. These related Sections include, but are not limited to, the following:
 - 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.3 WORK NOT INCLUDED

- A. Refer to the specific Division 16 Sections for a detailed listing of work that is not included in this Contract.
- B. In any case, cooperate with the other trades who may or may not be party to this Contract for the purpose of coordinating the electrical requirements and installation of equipment, materials, and furnishings provided by those other trades, including County.

1.4 CODES AND STANDARDS

- A. Provide equipment and materials which conform to, and perform the installation thereof in accordance with the following codes and industry standards. The applicable version of each shall be that in effect as of the date of the Contract:
 - 1. California Electrical Code (CEC).
 - 2. Titles 8, 19 and 24 of the California Code of Regulations (CCR).
 - 3. American National Standards Institute (ANSI).
 - 4. California State Fire Marshal (CSFM).

5. Underwriters' Laboratories (UL).
 6. National Electrical Manufacturers' Association (NEMA).
 7. Institute of Electrical and Electronics Engineers (IEEE).
 8. National Electrical Safety Code (NESC).
 9. Electrical Safety Orders.
 10. Other applicable local codes and ordinances.
- B. Where the Authority Having Jurisdiction makes an interpretation or decision, as is their prerogative in accordance with the Code, such direction shall be considered a part of these Contract Documents as if contained herein. With respect to completing the intent of the Contract Documents, comply with any and all requirements of the Authority Having Jurisdiction and utility company field inspectors, at no additional cost.
- C. The above-referenced codes and standards are considered to be absolute minimum requirements. The Drawings and Specifications shall take precedence over the above- referenced codes and standards where materials or workmanship of higher quality or larger size is indicated. Nothing in these Drawings or Specifications shall be construed to allow Work not conforming to the applicable codes and standards.

1.5 REVIEW OF CONTRACT DOCUMENTS

Examine all relevant Contract Documents including Drawings, Specifications, and Shop Drawings in order to become acquainted with the Work of other installers whose activities will adjoin or be affected by the Electrical Work.

1.6 PERMITS, LICENSES, AND FEES

None Required

1.7 UTILITY COMPANY CHARGES

Do not include in the Contract Sum development or capital equipment charges imposed by the power, telephone, or CATV utility companies. Such charges include excess conductor charges, up-and-down charges, developer fees, Secondary MPOE charges, and service activation fees.

1.8 SITE VERIFICATION OF INFORMATION

- A. Visit the project site prior to submitting a bid and verify the condition, location and dimensions of buildings, equipment, and facilities. Become acquainted with conditions under which the Work is to be performed and which may affect the cost thereof.
- B. Verify at the project site the accuracy of information shown on the Drawings regarding existing equipment, materials, and facilities. This includes but is not limited to: size, type, rating, quality, age, and serviceability. No allowance will be made on behalf of Contractor for extra expenses resulting from the failure to discover conditions affecting the Work.

1.9 WORKING SPACE

Maintain adequate work space around, and access to, electrical and mechanical equipment in strict accordance with the applicable Codes. Verify during the course of construction that sufficient space will be available for the installation equipment, fixtures, etc.

1.10 MATERIALS AND SUBSTITUTIONS

- A. Materials shall be new, high quality, free from defects, of standard make, and of the brand or grade as shown on the Drawings or specified herein. Specific trade names are used in the Drawings and Specifications in order to establish the standard grade and characteristics of said items. This does not imply the right upon the part of Contractor to use other materials or methods without the approval of Architect.
- B. Electrical materials and equipment shall bear the label of, or be listed by, the Underwriters' Laboratories (UL) wherever standards have been established and label service is regularly furnished by that agency. Comply with the installation and application requirements of UL as documented in their published directories.
- C. Unless specifically noted, equipment and systems shall be the product of a manufacturer who has been in the manufacture of, and has nationally distributed catalogs covering the ratings and specifications of, said equipment or systems, for a period of not less than five (5) years.
- D. Maintain uniformity throughout the Project by making use of only one make or brand of material for each material used.
- E. Substitutions of materials or methods will only be allowed if such items are approved in writing by Architect as equal in quality and utility to the specified items. Submit a list of proposed substitutions within thirty (30) days of the award of the Contract. Include on the list the original manufacturer's name and model number, the proposed manufacturer's name and model number, catalog cut sheets, ratings, sizes, performance curves, shop drawings, and other data as may be required to demonstrate equality to the specified item.
- F. The approval of a substitution does not authorize any deviation from the utility, size, function, or durability of the specified item unless specifically pointed out and requested in the proposed substitution list, and said deviation is approved in writing by Architect. Responsibility of Contractor for dimensional considerations or space conflicts are not relieved by the approval of a substitution.
- G. If requested by Architect, submit samples of materials and equipment for approval prior to installation.

1.11 ELECTRICAL SUBMITTALS

- A. See the General Conditions for conditions of submittal approval and general requirements for submission of shop drawings.
- B. Submit a minimum of five (5) copies (or more as required by the General Conditions) of electrical shop drawings and manufacturer's cut sheets for equipment and materials as noted in each Division 16 Specification Section. Bind the submittals as complete volumes according to classification of equipment such as power, lighting, fire alarm, etc. When possible, make all electrical submittals at the same time.
- C. Submit shop drawings and supporting data as instruments of Contractor. Stamp each item in the submittal documents with Contractor's stamp, thereby stating that the equipment meets all requirements and conditions of the Drawings and Specifications. In particular, certify that the items shown on the shop drawings conform to the dimensional, environmental, and space restrictions as pertains to all work under this Contract and the work of other parties in conjunction

with this Project.

- D. Provide a blank space on the title page of each submittal classification for Architect's or Engineer's approval stamp and comment field. The minimum size of such space shall be 8" wide by 5" high.
- E. Arrange panelboard submittals to show bussing, circuit numbering, and branch circuit protective devices similar the schedules on the Drawings. Show elevations of switchboards, motor control centers, and distribution centers indicating the layout of devices, meters, handles, etc. Provide device ratings, circuit numbers, and nameplate descriptions in table form. Include terminal strip mounting arrangements on elevations for terminal cabinets.

1.12 DRAWINGS AND SPECIFICATIONS

- A. The data and information contained on the Drawings is as accurate as was reasonably possible at the time they were produced, but absolute accuracy is not guaranteed. Exact locations, distances, elevations, etc., will be dictated by the actual building and the conditions at the site.
- B. The layout of electrical equipment, wiring, and accessories is shown in a diagrammatic fashion (not pictorially) in order to achieve clarity and legibility. Although the size and location of electrical equipment is drawn to scale wherever possible, refer to all data in the Contract Documents and field verify this information as the project progresses. Examine architectural, structural, mechanical, and other drawings to determine the exact location of conduits, outlets, fixtures, and equipment and to note any conditions which may affect the electrical work.
- C. The Drawings and Specifications may be superseded by later detail drawings and specifications prepared by Architect. Conform to such detail drawings, specifications, addenda, change orders, other reasonable changes as if they are contained herein. See the General Conditions for change order cost considerations.
- D. Because the Electrical Drawings may be distorted for clarity of representation, it may be necessary to field verify the exact location of electrical outlets, lights, switches, etc. in order to conform to the architectural elements. Architect reserves the right to make minor changes to the locations of equipment, devices, and wiring shown on the Drawings, at no additional cost, providing the changes are ordered before the rough-in of conduit, boxes, or related items is completed, and no extra material are required.
- E. For dimensional and locational purposes, the Architectural Drawings take precedence over the Electrical Drawings. Determine the appropriate location of lighting fixtures, outlets, wall-mounted devices, etc. by studying the reflected ceiling plans, building sections, and interior elevations. Report conflicting conditions to Architect before rough-in for adjustments to the locations.
- F. Route conduit so as to conform to the structural conditions, avoid obstructing other trades, maintain space restrictions and keep circulation areas and access openings clear.
- G. Thoroughly examine the Contract Documents prior to submitting a bid in order to determine electrical requirements which are not necessarily indicated on the Electrical Drawings. Include sufficient allowance in the bid sum to cover the costs of these other requirements.
- H. Should Contractor perceive that the Drawings and Specifications do not sufficiently define the intent of electrical work, contact Architect for clarification or additional information. The absence of such contact will be considered as evidence of understanding, on the part of Contractor, of the intended Electrical Work and the required installation thereof.

1.13 WORKMANSHIP

- A. Constantly supervise the work personally or through an authorized and competent representative. Keep the same foreman or supervisor on the project from commencement through completion.
- B. Perform the Electrical work using the highest caliber craftsman available. Workmanship shall be first class and of the best quality available to insure a long and trouble free service life. Allow only experienced and competent workmen on the job.

1.14 COOPERATION AND COORDINATION

- A. Consult with the other installers and trades in coordinating the Work so as to avoid conflicts, omissions and delays. Cooperate with other contractors, third parties, and County in order to expedite the project and provide for the proper execution of the building as a whole. Work performed without regard to other trades or the overall project scheme, may necessarily be required to be moved at Contractor's expense.

1.15 MANUFACTURER'S DIRECTIONS

- A. Adhere to the manufacturer's directions regarding the proper installation and configuration of electrical equipment where those directions cover points not included in these Drawings and Specifications.

1.16 PROTECTION AND STORAGE

- A. Deliver electrical materials to the site new, and in unbroken packages. Provide for the temporary storage of such materials, equipment, and construction tools in accordance with the General Conditions. Protect electrical equipment and materials during transit, storage and handling to prevent damage, soiling and deterioration.
- B. During shipping storage and handling protect electrical materials from damage of any type including dust, water, over-spray, and temperature. Avoid damage during construction to the work and materials of other trades as well as the electrical work and material. Repair or replace, at Contractor's expense, defective or damaged items such that the entire Work is completed in a condition satisfactory to Architect.

1.17 EXCAVATION, CUTTING, PATCHING, AND REPAIR

- A. Perform excavation and backfill required for the installation of electrical sub-structures. Restore grounds, walkways, roadways, curbs, walls, and other existing underground facilities to their original condition.
- B. Conform to the applicable requirements of the Division 2 specification Sections on Site Work, in the selection, placement, and compaction of backfill material and finished surfaces.
- C. Cut, core-drill, and demolish existing walls, floors, ceilings and other building surfaces as required for the installation of Electrical Work. Obtain the approval of Architect prior to performing any operation which may affect any structural elements of the building.
- D. Patch and repair wood, plaster, tile, or concrete surfaces which have been damaged by the installation of the Electrical Work so that the finished surface matches the surrounding conditions.

1.18 FLASHING, WATERPROOFING AND SEALING

- A. In general, install in an approved watertight manner, Electrical Work which pierces exterior walls or waterproofing membranes. Flash and counter-flash roof and wall penetrations in a manner described in other applicable sections of this Specification and as approved by Architect.

- B. Fit conduits passing through finished walls with steel escutcheon plates of brass, chrome, or painted finish as directed by Architect. Grout penetrations of floor slabs, concrete or masonry walls with an approved grout or silicone elastomeric caulk.

1.19 IDENTIFICATION OF EQUIPMENT

- A. Label the following electrical equipment with nameplates which clearly identify each item, the function or use of the item, and the circuit identification of the feed to the item:
 - 1. Switchboards.
 - 2. Individual Circuit Breakers in Switchboards.
 - 3. Panelboards.
 - 4. Control Panels.
 - 5. Terminal Cabinets.
 - 6. Disconnect Switches and Enclosed Circuit Breakers.
 - 7. Individual Motor Starters.
 - 8. Time Switches.
 - 9. Contactors and Relays.
 - 10. Special Function Pushbuttons and Switches.
- B. Attach a nameplate to the main service switchboard stating the name of the building, year completed, name of the Electrical Engineer, name of the Electrical Contractor, name of the Manufacturer with their Identification number, and nothing else.
- C. Nameplate material shall be laminated phenolic plastic, white front and back with black core. Engrave the inscription through to the black layer. Embossed plastic pressure sensitive labels are not acceptable.
- D. As an alternative to separate nameplates, device plates may be engraved directly with lettering filled with black enamel.
- E. Fasten nameplates to the equipment with #4 Phillips round head cadmium plated steel self-tapping screws, brass bolts, or with a plastic resin adhesive glue, Goodyear "Pliebond" or equal.

1.20 CLEANING, ADJUSTING, AND TOUCH-UP

- A. Remove on a daily basis electrical debris, scraps, packaging material and other rubbish. Dispose of such items off-site in an approved manner and debris. Maintain the site free from physical hazards at all times in accordance with OSHA regulations. See the General Conditions for additional requirements.
- B. After installation, completely clean electrical equipment, fixtures, and materials of excess paint, over-spray, plaster, cement, insulating products, and other foreign matter. Leave the Electrical Work in a clean, finished, dry, level, like new condition.
- C. Touch-up paint scratches and scuffs on electrical equipment and lighting fixtures with paint recommended by the manufacturer and matching the original item finish.

- D. Make setting, adjustments, and programming in accordance with the manufacturers' operating and installation instructions. Settings and program variables will be issued by Architect prior to commissioning of the electrical system.

1.21 AS-BUILT DRAWINGS

- A. Throughout the Project, maintain accurate and current record documents. Show on the record drawings deviations from the Electrical Drawings, locations of underground conduits and pull-boxes, and concealed equipment which is not readily apparent. Dimension the record drawings using permanent, readily identified benchmarks such as column or wall lines.
- B. At the completion of the project, present one clearly legible set of the record drawings to Architect.

1.22 INSPECTIONS AND TESTING

- A. Arrange for the inspection of the Work at various stages of completion by the Authority Having Jurisdiction, utility company representatives, and Architect. Comply with all directions and remedial measures issued thereby. Any objections to these orders on the part of Contractor must be presented to Architect in writing within forty-eight (48) hours of the inspection report.
- B. Coordinate the installation of the Work so that observation of all rough-in, concealed, or underground Work can take place by Architect. Provide a minimum of seventy-two (72) hours notice to Architect prior to covering up the work. Uncover Work that has not been properly observed and make repairs to restore the Work and adjoining surfaces to their proper condition at no additional cost.
- C. Perform tests of the electrical system during the course of the project and at project completion to ensure safe and proper function in accordance with the Contract Documents, manufacturers' recommendations, and applicable codes. Provide complete documentation of all test results to the Architect prior to project completion. Testing shall include, but not necessarily be limited to, the following:
 - 1. Test for short circuits, open circuits, neutral leakage, and improper grounds on feeders and branch circuits. Perform this test with mains in disconnect from feeders, branch circuits closed, fixtures and devices permanently connected, lamps removed from sockets and wall switches closed.
 - 2. Provide insulation resistance tests of all phase and neutral circuit conductors using a 500 Volt Megger for circuits of 240 Volt rating and below, and a 1,000 Volt Megger for circuits of 277 volts and above. Minimum acceptable insulation resistance is one (1) megohm.
 - 3. Perform a ground resistance test of each main grounding electrode system, ground rod, and supplemental grounding electrode. Utilize a calibrated, direct reading, earth ground test set and make the tests using the "Three-terminal, Fall-of-Potential" method. The maximum allowable earth ground resistance is 25 ohms.
 - 4. Test for proper phase-to-phase and phase-to-neutral operating voltage on the main service and on each separately derived system. Perform this test at full load and at no load. With all circuits at full operating conditions, test the phase and neutral load currents using a clamp-on ammeter.
 - 5. Tests as required by other sections of these Specifications.

- 6. Tests as prescribed by individual equipment manufacturers whether or not described in these Specifications.
 - D. At Project completion, demonstrate to Architect that the entire installation is complete, in proper operation condition and that the Contract has been properly and fully executed. Activate all circuits, lights, devices, and controls under full load and normal operating conditions. Identify faulty items and immediately replace or repair defective equipment, workmanship, and materials to like new condition and retest in the presence of Architect.
 - E. At the completion of the Project, demonstrate to Architect that the entire electrical system is free from short circuits and improper grounds; or upon request of Architect any time, make necessary tests under the observation of Architect which will ensure that electrical equipment, materials and installation methods are as specified.
- 1.23 GUARANTEE
- A. Acceptance of the Contract for this work includes, at a minimum, the following guarantee:
 - 1. Contractor guarantees that it has performed the work in accordance with the Contract Documents. Contractor agrees to replace or repair, as new, any defective work, materials, or part which may appear within one (1) year of final acceptance if in the opinion of Architect or County the defect is due to workmanship or material.
- 1.24 WARRANTIES, CERTIFICATES, AND OPERATING MANUALS
- A. Properly fill out and deliver to Architect, all warranties, guarantees, certificates, etc. for equipment and materials that are furnished and installed under this Section of the Work. The effective date on each item shall be the date of acceptance of the work by County.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION

SECTION 16050- BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Work included in this Section: All materials, labor, equipment, services, and incidentals necessary to install the electrical work as shown on the Drawings and as specified hereinafter.
- B. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the Drawings.
- C. All work shall comply with Section 16010.
- D. Related Sections: The completion of the work described in this Section may require work in or coordination with other Sections of these Specifications. Contractor and Subcontractor shall be responsible for identifying and including all related work in other Sections of these Specifications and/or Drawings necessary for a complete installation of the work described in this Section. These related Sections include but are not limited to the following:
 - 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
 - 2. Division 9 - Finishes.
 - 3. Division 15 - Motors and Mechanical Equipment Installation.
 - 4. "As Built" drawings of the existing lighting system have been included in the Contract Documents.

1.2 SUBMITTALS

- A. Comply with the provisions of Division 1 Sections and Section 16010.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- B. Refer to Section 16010, "Basic Electrical Requirements", Part 2 - Products.
- C. List of Equipment Manufacturers:

Conduit and Conduit Fittings

Allied Tube and Conduit
Western Tube and Conduit
LTV Steel Tubular
National Electric Products
AFC
Republic Steel Corporation
Rome Cable Corporation
United States Steel Corporation
Killark Electric Manufacturing Company

Raco
VAW Aluminum Company
Bridgeport
Steel City
Thomas & Betts
Carlton
O.Z. Gedney
Appleton
Regal

Wire and Cable (600V)

American Wire Company
General Wire and Cable Corporation
Okonite Company
Rome Cable Corporation
Cerrowire
American Insulated Wire
AFC Cable Systems
Essex
Simplex Wire and Cable Company

Solderless Lugs and Grounding Connections

Burndy Engineering Company, Inc.
O.Z. Gedney Company, Inc.
Penn Union Electric Corporation
Thomas and Betts Company, Inc.

Pull Boxes, Gutters, Special Cabinets

Square D Company
Columbia Electric Manufacturing Company
General Electric Company
Westinghouse Electric Corporation
Circle Awalt

Outlet Boxes

Appleton Electric Company
Killark Electric Manufacturing Company
Lew Electric Fittings Company
National Electric Products Corporation
Raco
Steel City Electric Company
Carlton
Bowers

Floor Boxes

Steel City Electric Company
Harvey Hubbell, Inc.
RCI
Walker

Wiring Devices

Leviton
Arrow-Hart
Harvey Hubbell, Inc.
Lutron
Bryant

Conduit Racks, Hangers

General Electric Company
Killark Electric Manufacturing Company

Caddy
National Electric Products Corporation
Republic Steel Corporation
Rome Cable Corporation
United States Steel Corporation
VAW Aluminum Company
Superstrut
B-Line

Safety Switches (Disconnect and Fusible)

Square D Company
Cutler Hammer, Inc.
General Electric Company
Westinghouse Electric Corporation

Fuses

Bussman Manufacturing Company
Chase-Shawmut Company

Firestopping

3M
Nelson

2.2 MATERIALS

- A. Raceways: Only the raceways specified below shall be utilized on this Project. Substitutions shall be pre-approved in writing. All bare conduit ends (stub-ups or stub-outs) shall be provided with bushed ends or manufactured insulated throat connectors.
1. Rigid Type: Hot dip galvanized or sherardized steel, use on all exterior locations, below grade or in concrete slab, and to 18" on either side of structural expansion joints in floor slabs (see item 15 below), with completely watertight, threaded fittings throughout.
 - a. All rigid steel conduit couplings and elbows in soil or concrete or under membrane to be 1/2 lap wrapped with Scotch #50 tape and threaded ends coated with T&B #S.C.40 rust inhibitor prior to installation of couplings.
 - b. 1/2 lap wrap all rigid steel conduit stub-ups from slab or grade to 6" above finished grade level with Scotch #50 tape.
 2. In lieu of rigid steel conduit for power and control raceways and branch circuit conduits in soil or concrete slabs, "Schedule 40" PVC with Schedule 80 PVC conduit elbows and stub-ups may be used with code size (minimum No. 12) ground wire. A "stub-up" is considered to terminate 6" above the finished surface.
 - a. Schedule 80 PVC conduit shall be used in all concrete footings or foundations and to 18" of either side of footings or foundation walls.
 - b. Schedule 80 PVC conduit shall be used in all concrete masonry unit (CMU) walls or columns.
 - c. All conduit runs in concrete floor slabs (where allowed) shall be installed to comply with all applicable UBC and structural codes to maintain the structural integrity of the floor slab. Where conflicts occur, alternate routing shall be provided at no additional cost to County.
 3. Intermediate metal conduit shall be used in all exposed interior locations, except that electrical metallic tubing may be used in some locations as noted below. Utilize steel compression type fittings for all exposed conduit runs, unless otherwise noted. Cast fittings are unacceptable.

- B. Electrical metallic tubing may be used exposed in electrical and mechanical rooms and in unfinished spaces and in concealed and furred spaces, made up with steel watertight or steel set screw type fittings and couplings. Setscrews shall have hardened points. Cast fittings are unacceptable.
- C. Use flexible conduit for all motor, and recessed fixture connections (minimum 1/2"); "Seal-tite" type used outdoors, and in all wet locations, provide with code size (minimum No. 12) bare ground wire in all flexible conduit.
- D. Conceal conduit in ceiling, or walls of all areas where possible, all exposed conduits installed parallel to building members.
- E. Fasten conduits securely to boxes with locknuts and bushings to provide good electrical continuity.
- F. Provide chrome escutcheon plates at all exposed wall, ceiling and floor conduit penetrations.
- G. Support individual suspended conduits with heavy malleable strap or rod hangers; supports for 1/2" or 3/4" conduit placed on maximum 7' centers; maximum 10' centers on conduits 1" or larger.
- H. Support multiple conduit runs from Kindorf B907 channels with C-105 and C-106 straps.
- I. Conduit Bends: Long radius.
- J. Flash conduits through roof, using approved roof jack; coordinate with General Contractor.
- K. To facilitate pulling of feeder conductors, install junction boxes as shown or required.
- L. All empty conduits on the project shall be provided with a nylon pull rope to allow pulling of future conductors intended for the specific raceway. Provide plastic wire-tie style nameplate tags on each end of pull rope with printed identification of conduit use and the location of the opposite end of the rope.
- M. Where conduits pass through structural expansion joints in floor slab, rigid galvanized conduit shall be used 18" on either side of joint, complete with Appleton expansion couplings and bonding jumpers, or equal. All above grade expansion joint crossings shall also utilize expansion joint couplings or flex conduit transitions as required for each particular installation. No solid conduits shall be allowed to cross expansion joints without proper provisions for building and seismic movement.
- N. Minimum Cover of Conduits in Ground Outside of Building: 36", unless otherwise noted.
- O. Provide and install exterior wall conduit seals and cable seals in the locations listed below. Coordinate installation and scheduling with other trades.
 - 1. Conduit seals through exterior wall or slab (below grade): O.Z. Gedney series "FSK" in new cast in concrete locations, series "CSM" in cored locations.
 - 2. Conduit seals through exterior wall or slab (above grade): O.Z. Gedney series "CSMI."
 - 3. Cable seals at first interior conduit termination after entry through exterior wall or slab: O.Z. Gedney series "CSBI." Coordinate quantity of conductors at each location.
- P. Outlet Boxes and Junction Boxes:
 - 1. One-piece steel knockout type drawn boxes, unless otherwise noted, sized as required for conditions at each outlet or as noted.

2. Flush-mounted boxes equipped with galvanized steel raised covers for device mounting flush with finished surface. Provide extension rings as required on all acoustical or additional wall treatment areas to bring top of cover flush with finished surface (coordinate with architectural drawings). Devices shall be capable of being tightly mounted to boxes without distorting or bending device or mounting hardware.
3. Boxes for fixture outlets: 4" octagon or larger as required, or as noted.
4. Switch and Receptacle Outlets: Not smaller than 4" square in furred walls, with raised cover for single device; ganged where required.
5. Outlet and Switch Boxes for Wet Locations: Cast aluminum FS or FD type with cast aluminum gasket spring lid cover. Weatherproof "Bell" type boxes are not acceptable.
6. All connectors from conduit to junction or outlet boxes shall have insulated throats. Connectors shall be manufactured with insulated throats as integral part. Insertable insulated throats are unacceptable.
7. Outlet boxes for cable TV, telephone, 4" square or larger as required or noted, multi-ganged for telephone, data, and other services where indicated on the drawings.
8. Conduit Bodies: Malleable iron type, with lubricated spring steel clips over edge of conduit body, O.Z. Gedney type EW, or equal.
9. Concealed Service Floor Boxes: Electrogalvanized sheet steel, 14-gauge, complying with U.L 514A, fully adjustable before and after concrete pour, separate boxes for power and data/telephone services where noted on Drawings. Mount side by side.
 - a. Combination Power and Telephone/Data: Steel City #664-S, or equal, with 1-664-S-BP blank plate, and 664-CST-GRY cover. Verify color selection with Architect prior to submittal. Provide plate at signal outlet to match duplex power outlet for signal jacks by others - typical all signal outlets in all concealed service floor boxes. Provide and install carpet square in cover - typical all concealed service floor box locations.
 - b. Power only: Steel City #664-S, or equal, with #664-RP second receptacle faceplate, with 2-20A 125V 3PG duplex receptacles, 664-S-WT wire tunnel, and 664-CST-GRY cover. Verify color selection with Architect prior to submittal.
 - c. Data/Telephone only: Steel City #664-S, or equal, without power fitting, with 1-664-S-BP blank plate, and one plate to match duplex power outlet plates for signal jack installation by others, and 664-CST-GRY cover. Verify color selection with Architect prior to submittal.
 - d. Alternate: Combination power and tele/data concealed service Floor Boxes: Multi-service shallow steel, recessed floor box "Walker Resource RFB4-SS," complete with 4 wiring compartments, fully adjustable, with type "Walker Source III" activation covers, "RAKMII." Refer to the details on the Drawings for power and tele/data configurations.
10. Flush Service Floor Boxes: Multi-gang, cast iron, watertight, with corrosion resistant finish, exterior leveling screws, removable partitions, gasket cover, meeting U.L. 514.
 - a. For power and signal connection to furniture panels (slab-on-grade only): Steel City #642, or equal, with partition to separate power and signal. Provide brass plates with plugs, P-64-3/4 on one power side, and P-64-3/4-2 on signal side, with P-64-2G-CP carpet plate. Provide and install flexible conduit and conductors and connect furniture partitions complete. Provide rubber grommet for each signal opening to cable installer for installation with cables under separate contract.

Q. Wire and Cable:

1. 600-volt class, insulation color-coded, minimum No. 12 awg for branch circuits, No. 14 for control circuits.
2. All conductors shall be copper.
3. Insulation type:
 - a. Standard locations: #12 to #1 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils). All wire sizes used shall be based on a 75-degree insulation rating, unless specifically used with 90-degree rated breakers and devices.
 - b. High temperature and non-standard locations: Provide wire type and insulation category suitable for area of use as defined in NEC table 310-13.
4. Conductors No. 8 and larger and as otherwise noted on the Drawings shall be stranded. Conductors No. 10 and smaller shall be solid.
5. Install all wiring (low voltage and line voltage) in conduit unless noted otherwise in the Drawings, but do not pull into conduit until plastering and taping have been completed and conduits and outlets have been thoroughly cleaned and swabbed as necessary to remove water and debris.
6. Approximately balance branch circuits about the neutral conductors in panels.
7. Connections to devices from "thru-feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
8. Neutral conductor identified by white outer braid, with different tracers of "EZ" numbering tags used where more than one neutral conductor is contained in a single raceway.
9. Neatly arrange and "marlin" wires in panels and distribution panelboards with "T and B Ty-rap" or approved equal plastic type strapping.
10. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color-coded as follows:

Voltage	Phasing	A	B	C	N
120/208 3PH4W		Black	Red	Blue	White
208	3PH3W		Black	Red	Blue --

The equipment-grounding conductor shall be insulated copper; where it is insulated, the insulation shall be colored green.

11. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags indicating the connected circuit numbers.
12. Install feeder cables in one continuous section unless Architect approves splices. Exercise care in pulling to avoid damage or disarrangement of conductors, using approved grips. No cable shall be bent to smaller radius than the spool on which it was delivered from the manufacturer. Color code feeder cables at terminals. Provide identifying linen tags in each pullbox.

R. Switches: Model numbers are Leviton, color to be selected by Architect, unless otherwise noted:

1. Single Pole: No. 1221-2.
 2. Three Way: No. 1223-2.
 3. Momentary contact: No. 1257-I.
 4. Momentary contact, keyed,: No. 1257-LI.
- S. Receptacles: Mounting straps and contacts shall be one-piece design, (no rivets), constructed of minimum 0.050" solid brass. Base shall be high strength, glass reinforced nylon. Device shall accept up to #10 wire. Model numbers are Leviton, color to be selected by Architect, unless otherwise noted:
1. 15A 3PG 125 volt duplex: No. 5262A.
 2. 20A 3PG 125 volt duplex: No. 5362A-W.
 3. 1 3PG 125 volt ground fault interrupter receptacle, no indicator light, with safety lock-out action - No. 8599-W. Through wiring to downstream GFI designated receptacles is not acceptable.
 4. GFI Module (blank face), no indicator light, 1.5 hp rating @ 120VAC: No. 8490-W.
 5. 20A 3PG 125-volt duplex - No 5362 tamper-resistant in Jail areas and holding areas.
- T. Plates: All plates to have tamper-proof screws in Jail areas, and all holding areas and shall be Kenal type WSP/WPP series for security detention applications stainless steel 14 gauge. Leviton, or equal, except as noted:
1. For flush outlet boxes, for switches, and receptacles: Nylon, color to be per color coding as indicated on the Drawings.
 2. Plates for surface-mounted outlets: Galvanized steel unless otherwise noted. Emergency outlet plates shall be engraved "EMERGENCY."
 3. Weatherproof duplex receptacle plates for exterior location with ground fault interrupter receptacles in type FS or FD boxes: Leviton @6196-V or Hubbell #PFS26.
 4. Locking plates for weatherproof duplex receptacles for exterior locations with ground fault interrupter receptacles in type FS or FD boxes: Pass & Seymour #WPF26-L.
 5. Plates for flush telephone/data boxes: White nylon or as otherwise directed.
- U. Equipment Disconnects: All disconnects shall be located to allow proper code required clearance in each area. Locations shown on Drawings are diagrammatic only. The contractor shall coordinate exact locations in the field (with other trades) prior to rough-in to insure proper clearances.
1. Motor Disconnect Switches and Safety Switches: General Electric Company Heavy Duty Type "THD," cover interlocked with operating handle so that cover cannot be opened with switch in closed position and switch cannot be closed with cover in open position. 240V rating, single or multi-pole as required or as noted on Drawings, in NEMA 1 enclosure indoors or NEMA 3R enclosure outdoors unless otherwise noted. Provide dual element motor circuit fuses sized as recommended by equipment manufacturer (for final equipment actually installed).
 2. Code required disconnects: Provide a local disconnect in addition to the branch circuit protection device for all equipment as required by code (whether shown or not). Disconnects shall consist of a motor rated switch (or disconnect) for all motor loads less

than 3/4HP or other suitable disconnect sized to match branch circuit conductors and load current of equipment, with number of poles as required.

- V. Lugs and Connectors: Thomas and Betts “lock-tite,” for No. 4 and larger wire; “Scotchlock” fixed spring type with insulator for No. 6 and smaller wire.
 - 1. All splices made up with wire nut connectors shall be solidly twisted together with electricians pliers before connector is installed to ensure a proper connection in the event of wire nut failure. No exceptions.
 - 2. Connectors listed or labeled for “no wire twisting required” are not an acceptable substitute for actual wire twisting.
 - 3. Utilize porcelain type connectors in all high temperature environments (above 105°C).
- W. Splice Insulation: “Scotch” electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.
 - 1. Provide watertight cast splices for all conductors in site pullboxes or wet locations.
- X. Identification: Refer to Section 16010.
- Y. Firestopping: as manufactured by 3M Fire Protection Products or equal.
 - 1. Fire-rated and smoke barrier construction: Maintain barrier and structural floor fire and smoke resistance ratings including resistance to cold smoke at all penetrations, connections with other surfaces or types of construction, at separations required to permit building movement and sound vibration absorption, and at other construction gaps.

PART 3 - EXECUTION

3.1 GENERAL

- A. Refer to Basic Electrical Requirements - Section 16010 for work under this Section.

3.2 TESTS

- A. Testing and Inspection: See Section 16950 - Testing.

END OF SECTION

SECTION 16123- BUILDING WIRE AND CABLE

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Building wire and cable.

1.2 RELATED SECTIONS

- A. Section 16111 - Conduit.
- B. Section 16130 - Boxes.
- C. Section 16195 - Identification.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide for each cable assembly type.
- C. Test Reports: Indicate procedures and values obtained.
- D. Design Data: Indicate voltage drop and ampacity calculations for aluminum conductors substituted for copper conductors.
- E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years experience.

1.6 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.7 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. Conductor sizes are based on copper .

- C. If aluminum conductor is substituted for copper conductor, size to match circuit requirements for conductor ampacity and voltage drop.
- D. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet Project Conditions.
- E. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

1.8 COORDINATION

- A. Coordinate Work under provisions of Section 01045.
- B. Determine required separation between cable and other work.
- C. Determine cable routing to avoid interference with other work.

PART 2 – PRODUCTS

2.1 BUILDING WIRE AND CABLE

- A. Description: Single conductor insulated wire.
- B. Conductor: All conductor shall be copper.
- C. Insulation Voltage Rating: 600 volts.
- D. Insulation: ANSI/NFPA 70, Type THHN/THWN.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that mechanical work likely to damage wire and cable has been completed.

3.2 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

3.3 WIRING METHODS

- A. Use only building wire, Type THHN/THWN insulation in raceway.

3.4 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Use solid conductor for feeders and branch circuits 10 AWG and smaller.
- C. Use stranded conductors for control circuits.
- D. Use conductor not smaller than 12 AWG for power and lighting circuits.

- E. Use conductor not smaller than 18 AWG for fire alarm circuits. Use conductor not smaller than 22 AWG for security system circuits.

- F. Use 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet (23 m).
- G. Pull all conductors into raceway at same time.
- H. Use suitable wire pulling lubricant for building wire 4 AWG and larger.
- I. Protect exposed cable from damage.
- J. Support cables above accessible ceiling, using spring metal clips or plastic cable ties to support cables from structure or ceiling suspension system. Do not rest cable on ceiling panels.
- K. Use suitable cable fittings and connectors.
- L. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- M. Clean conductor surfaces before installing lugs and connectors.
- N. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
- O. Use suitable reducing connectors or mechanical connector adaptors for connecting aluminum conductors to copper conductors.
- P. Use split bolt connectors for copper conductor splices and taps, 6 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- Q. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
- R. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.

3.5 INTERFACE WITH OTHER PRODUCTS

- A. Identify wire and cable under provisions of Section 16195.
- B. Identify each conductor with its circuit number or other designation indicated on Drawings.

3.6 FIELD QUALITY CONTROL

- A. Perform field inspection and testing under provisions of Section 01400.
- B. Inspect wire and cable for physical damage and proper connection.
- C. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- D. Verify continuity of each branch circuit conductor.

END OF SECTION

SECTION 16700- TELEPHONE, DATA AND SIGNAL SYSTEMS

PART 1 – GENERAL

1.1 WORK INCLUDED

- A. Design, materials, labor, equipment, testing, and documentation for a complete local area network (LAN) structured cabling system in accordance with the following published standards, hereinafter referred to as the “Standards”:
 - 1. ANSI/TIA/EIA 568B, “Commercial Building Telecommunications Cabling Standard”.
 - 2. ANSI/TIA/EIA 569, “Commercial Building Standard for Telecommunications Pathways and Spaces”.
 - 3. EIA/TIA TSB-67, “Transmission Performance Specifications for Field Testing of UTP Cabling Systems”.
 - 4. ANSI/TIA/EIA 606, “Administration Standard For The Telecommunications Infrastructure of Commercial Buildings”.
 - 5. TIA/EIA 607, “Commercial Building Grounding and Bonding Requirements for Telecommunications”.
 - 6. ANSI/TIA/EIA-A-5.
 - 7. EIA/TIA TSB-95.
- B. The scope of the LAN infrastructure includes the following:
 - 1. Provisioning of telecommunications equipment rooms and closets including:
 - a. Service entrance minimum point of entry (MPOE).
 - b. Main distribution facility (MDF).
 - c. Intermediate distribution facilities (IDF).
 - 2. Pathways including conduits, junction boxes, cable trays, ducts, wireways, cable supports, and cabling management systems.
 - 3. Freestanding (floor) and wall-mounted equipment racks.
 - 4. Backbone cabling.
 - 5. Horizontal cabling.
 - 6. Telecommunication outlets and data jacks.
 - 7. Cross-connect fields, patch-panels, and cable terminations at the MDF and IDFs in telecommunications rooms and closets.

8. Documentation and labeling.
9. Cable testing and reports.

1.2 RELATED WORK

- A. Related Sections: The completion of the Work described in this Section may require work in or coordination with other Sections of these Specifications. Contractor and Subcontractor shall be responsible for identifying and including all related work in other Sections of these Specifications and/or Drawings necessary for a complete installation of the Work described in this Section. These related Sections include but are not limited to the following:
 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
 2. Section 16010 - Electrical.

1.3 WORK NOT INCLUDED

- A. Hubs, switches, routers, transceivers, and other active network equipment.
- B. Servers and workstation equipment.
- C. Patch cables, baluns, and adapters.

1.4 SUBMITTALS

- A. Cable Diagram: Indicating location of telecommunication outlets, routing of cable, location of MDF and IDFs, patch panel schematic, typical face plate pin out detail, and identification/labeling standard.
- B. Backbone and horizontal cabling including but not limited to the following:
 1. Unshielded twisted pair (UTP) cables.
- C. Connectors and terminations used for UTP cabling.
- D. Wall mount and floor mounted distribution equipment racks, frames, bracing, and anchors.
- E. Surface raceway, cable tray, and cable management systems.
- F. Cross-connect punch-down blocks, UTP modular patch-panels, and components.
- G. Telecommunication outlet jacks, boxes, bezels, modules, and cover-plates.

PART 2 – PRODUCTS

2.1 RACEWAYS, PATHWAYS, AND BOXES

- A. Provide conduit, wireway, cable-trays, junction boxes, and outlet boxes as indicated on the Drawings. Materials shall be in accordance with Specification Section 16010 in addition to specific requirements of the Standards.

- B. Provide pull-lines in both empty and partially occupied data and telecomm raceways. Partially occupied raceways are considered to be those that are filled to less than 40% of the cross sectional area of the raceway. Pull-line sizes and types are as follows:
 - 1. Conduits 1-1/4" and smaller: 3/16" polyester pre-measured printed tape, Greenlee Textron #434.
 - 2. Conduits 1-1/2" and larger: 1/4" Kevlar pre-measured printed tape, Greenlee Textron #39243.
 - 3. Cable trays longer than 10' in length: Rig continuous traveling pull-lines of 1/4" polypropylene between access points so as to allow multiple sequential cable installations over the life of the Project.
- C. Provide rough-in outlet boxes for data and telecomm outlets in size 4-11/16" square by 2-1/8" deep with single gang plaster rings. Select special knockout provisions to match the conduit entries indicated on the Drawings.

2.2 TERMINAL BACKBOARDS

- A. 3/4" exterior grade plywood, finished on one side. Furnish in 4' x 8' sheets and cut to fit the available space. Finish with two coats of white fire retardant paint.

2.3 EQUIPMENT RACKS

- A. Freestanding (floor) mounted: Standard EIA 19" aluminum rack with vertical cable management between sections. Chatsworth, ADC, or Panduit. For each two sections of rack, provide an adjustable steel channel mounting brace or lateral ladder rack section for anchorage to the wall or ceiling.

2.4 PATCH PANELS AND CROSS-CONNECTS

- A. All UTP components shall be rated to CAT-5e including cable, outlets, terminations, and patch panels.
- B. Unshielded twisted pair (UTP) components:
 - 1. Cat 5e UTP termination panels, 48 port, rack-mounted: Panduit #CP48BL.
 - 2. Cat 5e UTP termination modules, T568B (RJ45 type): Panduit #CJ588-X (color per scheme).
- C. Cable management components:
 - 1. Vertical cable management, 4" x 5" plastic wiring duct, front and rear: Panduit #WMPVS20 (on sides of racks) and #WMPVC20 (between adjacent racks).
 - 2. Horizontal cable management, 3" x 3" plastic wiring duct on front, 2" x 4" plastic wiring duct on rear, 2 rack space unit: Panduit #WMP1 (required between patch panels and at top and bottom).
 - 3. Cable ties: Velcro type, Panduit HLT or HLS series (color at Contractor's discretion).

2.5 UNSHIELDED TWISTED PAIR (UTP) CABLE

- A. Category 5e UTP cable: Unshielded, 4 twisted-pair, 24 AWG copper, Enhanced Category 5e, NEC Article 800 type CM rated, non-plenum type, extended performance, tested to 400MHz, Mohawk MegaLAN 400 #M55989.

- B. Belden or Bertek solid core Category 5e, non-bonded.
- C. Color for cable shall be red for A and blue for B.

2.6 TELECOMMUNICATIONS OUTLETS AND DATA JACKS

- A. Where individual wall data outlets are indicated, provide 2-port, single-gang outlets with bezels, adapters, faceplates, and Category 5e, RJ45 modules. The actual quantity and configuration of activations shall be as scheduled on the Drawings.
 - 1. Faceplate bezel: Panduit #CBEIW.
 - 2. Flat inserts: Panduit #CHF2IW.
 - 3. Sloped inserts: Panduit #CHS2IW.
 - 4. Blank inserts: Panduit #CH2IW.
 - 5. Modular jacks, T568B (RJ45 type): Panduit #CJ588-X (color per scheme).
- B. Where data outlets in surface wireway or modular furniture are indicated, provide 4-port, single-gang outlets with bezels, adapters, faceplates, and Category 5e, RJ45 modules. The actual quantity and configuration of activations shall be as scheduled on the Drawings.
 - 1. Duplex style frame for duplex receptacle style wireway covers: Panduit #CFPP4IW.
 - 2. Snap-in faceplates for "Industry Standard" furniture and wireway openings: Panduit #CHF2IW.
 - 3. Modular jacks, T568B (RJ45 type): Panduit #CJ588-X (color per scheme).
- C. Provide surface mounted boxes for outlets installed using surface mounted conduit or wireway. Size the box for the largest required conduit or wireway entry. Single gang outlets with accessories and faceplates with a similar appearance to flush-mounted telecommunications outlets. Boxes shall be Panduit PJBX36IW.
- D. Single data outlets that must be concealed in under-floor duct or attached inconspicuously to furniture or casework shall be fastened with low profile, two module, surface mount boxes. In no case shall cable data or telecom cabling be directly terminated without physical protection and support.
 - 1. Outlets box: Panduit #CBXJ2IW-A.
 - 2. Modular jacks, T568B (RJ45 type): Panduit #CJ588-X (color per scheme).
- E. Water Resistant Faceplates:
 - 1. 4-port Panduit Mini-Com # CFPWR4.
- F. Verify the color selection of data and telecommunications devices in the finished environment with Architect prior to installation.

PART 3 – EXECUTION

3.1 RACEWAYS, PATHWAYS, AND BOXES

- A. Install conduit, wireway, cable-trays, junction boxes, and outlet boxes as indicated on the Drawings. Installation methods shall be in accordance with Section 16010 in addition to the specific requirements of the Standards.

3.2 TERMINATIONS AND SPLICES

- A. Perform terminations and splices of backbone and horizontal cabling at each MDF, IDF, and station outlet. Splices and terminations shall be performed only by competent technicians proficient in latest standardized procedures.
- B. Category 5e UTP cabling terminations shall be performed using the insulation displacement contact (IDC) method. Take special care to observe jacket cut-back and pair twist requirements to preserve the performance of data cabling.
- C. Route, lace, and support both UTP cabling in accordance with the Standards. Observe published bending radius and pulling tension limitations during installation.
- D. The entire UTP channel shall be installed, terminated, and tested to meet or exceed CAT-5e standards.
- E. Provide a minimum of 3' slack for UTP cable at each MDF/IDF and 1' slack at data outlets to allow for adds/moves/changes. Slack shall be coiled in a service loop above the ceiling.

3.3 TERMINAL BACKBOARDS AND EQUIPMENT RACKS

- A. Fasten backboards securely to the structural wall framing. Provide blocking between wall studs or metal framing prior to application of wall finishes where substantial support cannot be obtained for the wall framing alone. Install the board with the finished side out and secure with #12 x 3" all-purpose screws spaced at not more than 2' apart.
- B. Anchor freestanding equipment racks to the building floor with 3/8" x 3" concrete expansion wedge anchors fastened through the base plate. Provide a minimum of four (4) anchors per rack. In addition racks over 47" high shall be tied back to the building structure at the top for additional seismic support.

3.4 TELECOMMUNICATIONS OUTLETS AND DATA JACKS

- A. Provide flush, large, double gang, back-boxes with single gang plaster rings for mounting of telecommunications outlets in finished walls.
- B. Unless otherwise indicated, wire Category 5e, UTP data jacks to the TIA 568B wiring configuration.

3.5 TESTING AND DOCUMENTATION

- A. Testing for UTP cable shall follow TSB-95 and shall include the following: Return Loss, ELFEXT, Far-end crosstalk, Power sum far-end crosstalk, Power sum near-end crosstalk, Delay, and Delay Skew. Testing shall include both Basic Link and Level II tests. Horizontal UTP cable shall meet the performance criteria as stipulated in the table below and as amended by the latest applicable Standards. Replace, re-splice, or re-terminate cables that do not meet the specified performance criteria. Retest and document the replacement cables.
 - 1. Characteristic impedance: 100 ohms "15% from 1 MHz to 100 MHz.
 - 2. Mutual capacitance: 17 pF maximum per 100 meters.

3. Attenuation is given as the maximum allowable attenuation in dB per 100m for the worst pair in the cable.
4. NEXT (near end cross talk) is given as the minimum allowable NEXT loss in dB for the worst pair in the cable.

Category 5e Horizontal Cable Performance Table

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	ACR (dB/100m)	PS-NEXT (dB/100m)	PS-ACR (dB/100m)	SRL (dB)
0.772	1.8	76	74.2	74.0	72.2	-
1.0	2.0	74.3	72.3	72.3	70.3	25.0
4.0	3.8	65.3	61.5	63.3	59.5	25.0
8.0	5.3	60.8	55.5	58.8	53.5	25.0
10.0	6.0	59.3	53.3	57.3	51.3	25.0
16.0	7.6	56.2	48.6	54.2	46.6	25.0
20.0	8.5	54.8	46.3	52.8	44.3	25.0
25.0	9.5	53.3	43.8	51.3	41.8	24.5
31.25	10.7	51.9	41.2	49.9	39.2	24.0
62.5	15.4	47.4	32.0	45.4	30.0	22.5
100.0	19.8	44.3	24.5	42.3	22.5	21.5
155	25.2	41.4	16.2	39.4	14.2	20.6
200	29.0	39.8	10.8	37.8	8.8	20.0
250	32.8	38.3	5.5	36.3	3.5	19.5
300	36.4	37.1	0.7	35.1	-	19.1
350	39.8	36.1	-	34.1	-	18.8
400	43.0	35.3	-	33.3	-	18.5
500	48.9	33.8	-	31.8	-	18.0
550	51.8	33.2	-	31.2	-	17.8

Testing parameters: Temperature of cable shall be between 20° - 30° Celsius at the time of testing.

- B. Horizontal UTP cable connections shall meet the performance criteria as stipulated in the latest applicable Standards. Replace, re-splice, or re-terminate cables that do not meet the specified performance criteria. Retest and document the replacement connectors.

3.6 IDENTIFICATION AND CABLING MANAGEMENT

- A. Permanently and clearly identify individual cables, fibers, and grounding conductors at outlets, terminations, and cross connects in accordance with TIA/EIA 606 standards.
- B. Develop a record keeping system for the Project that tracks the location, use, and status of telecommunications and LAN infrastructure components and equipment.
- C. Prepare a report that cross references the linkages between the various components and equipment.
- D. Prepare a computer- and paper-based administration system that documents the above elements A, B, and C. Provide three (3) copies of the system to Architect.

END OF SECTION

SECTION 16726- INTRUSION DETECTION SYSTEM

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Intrusion detection devices.
- B. Alarm control panel.
- C. Signaling devices.

1.2 RELATED SECTIONS

- A. Section 08700 - Door Hardware.
- B. Section 16123 - Building Wire and Cable.

1.3 REFERENCES

- A. NFPA 70 - National Electrical Code.
- B. NFPA 72G - Notification Appliances for Protective Signaling Systems.
- C. NFPA 72H - Guide for Test Procedures for Protective Signaling Systems.

1.4 SYSTEM DESCRIPTION

- A. Intrusion Detection System: Protect building and selected areas from as follows: System will include motion detectors throughout the building to cover all areas of possible entry.
- B. System to have 2 keypads as per attached drawing.
- C. Up to 18 inputs including door and window sensors, motion sensors and panic buttons.
- D. System will have 4 panic buttons located at 3 Veterans Services Officer's desks and one at the front lobby reception desk for a total of 4 panic buttons.
- E. System to have window and door sensors.
- F. System to be monitored by alarm company 24/7.
- G. System to disarm 0600 Hours, Mon.-Thurs., auto arm 2000 hrs, M- Thurs. Remain armed Friday, Saturday and Sunday.

1. Provide Security System Main Control Panel.
2. Provide Security System Kepad.
3. Provide Window Break Glass Sensor Protection.
4. Provide Door Contact Sensor Protection.
5. Provide Motion Sensor Protection.
6. Provide Panic Buttons. Coordinate Concealed Locations With County Staff.
7. Provide Audible Alarm Device (Horn)

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Shop Drawings: Indicate system wiring diagram showing each device and wiring connection required.
- C. Product Data: Provide electrical characteristics and connection requirements.
- D. Test Reports: Indicate satisfactory completion of required tests and inspections.
- E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of Product.

1.6 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01700.
- B. Record actual locations of initiating devices, signaling appliances, and end-of-line devices.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of Section 00700.
- B. Operation Data: Operating instructions.
- C. Maintenance Data: Maintenance and repair procedures.

1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this Section with minimum three years experience and with service facilities within 100 miles of Project.

1.9 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.

- B. Furnish Products listed and classified by UL as suitable for purpose specified and indicated.

1.10 MAINTENANCE SERVICE

- A. Furnish service and maintenance of intrusion detection system for one year from Date of Substantial Completion.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Fire Burglary Instruments, Model XL-4C.
- B. Substitutions: Under provisions of Section 01600.

2.2 ALARM CONTROL PANEL

- A. Control Panel: Modular construction with surface wall-mounted enclosure.
- B. Power supply: Adequate to serve control panel modules, remote detectors, and alarm signaling devices. Include battery-operated emergency power supply with capacity for operating system in standby mode for 24 hours.
- C. System Supervision: Provide electrically-supervised system, with supervised alarm initiating and alarm signaling circuits. Component or power supply failure places system in alarm mode.
- D. Initiating Circuits: Supervised zone module with alarm and trouble indication.
- E. Signal Circuits: Supervised zone coded signal module, sufficient for signal devices connected to system; occurrence of single ground or open condition places circuit in trouble mode and does not disable that circuit from transmitting alarm.
- F. Remote Station Signal Transmitter: Electrically supervised, capable of transmitting alarm and trouble signals over telephone lines to central station receiver.
- G. Alarm Sequence of Operation: Actuation of intrusion detecting device places system in alarm mode, which causes the following operations:
 - 1. Sound and display local alarm signaling devices with non-coded signal.
 - 2. Transmit non-coded signal to remote station equipment.
 - 3. Indicate location of actuated device on control panel.
 - 4. Alarm Reset: Key-accessible reset function resets alarm system out of alarm if alarm initiating circuits have cleared.
 - 5. Lamp Test: Manual lamp test function causes alarm indication at each zone at control panel.

2.3 INITIATING DEVICES

- A. Magnetic Switch: Surface Mount Reed Switch. Manufacturer and model: ZR-745-MSL.

- B. Motion Detector: Passive Infrared Detector. Manufacturer and model: XL-4722.

2.4 SIGNAL DEVICES

- A. Alarm Bells: NFPA 72G, electric vibrating, eight-inch (200 mm) bell with operating mechanism behind dome. Sound Rating: 81 dB at ten feet (3 m).

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use 22 AWG minimum size conductors for detection and signal circuit conductors. Install wiring in conduit.
- C. Make conduit and wiring connections to door hardware devices furnished and installed under Section 08700.

3.2 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01400.
- B. Test in accordance with NFPA 72H.

3.3 MANUFACTURER'S FIELD SERVICES

- A. Prepare and start systems under provisions of Section 01400.
- B. Include services of technician to supervise installation, adjustments, final connections, system testing, and Owner training.

3.4 DEMONSTRATION

- A. Provide systems demonstration under provisions of Section 00700.
- B. Demonstrate normal and abnormal modes of operation, and required responses to each.

END OF SECTION