

**COUNTY OF EL DORADO, CALIFORNIA
CHIEF ADMINISTRATIVE OFFICE
FACILITIES DIVISION**

CONTRACT DOCUMENTS

**INCLUDING
NOTICE TO BIDDERS,
PROPOSAL, CONTRACT, AND CONDITIONS of the CONTRACT
FOR**

**EL DORADO COUNTY PLACERVILLE JAIL
SEWER IN-LINE SHREDDER PROJECT
PLACERVILLE, CALIFORNIA**

BID #13-968-042

Bid Opening Date: To be Determined

**COUNTY OF EL DORADO, CALIFORNIA
CHIEF ADMINISTRATIVE OFFICE
FACILITIES DIVISION**

EL DORADO COUNTY JAIL SEWER IN-LINE SHREDDER PROJECT

BID #13-968-042

The Architectural Improvement Plans and Technical Specifications of these Contract Documents have been prepared under the direction of the following licensed Architect.



**COUNTY OF EL DORADO, STATE OF CALIFORNIA
CHIEF ADMINISTRATIVE OFFICE
FACILITIES DIVISION**

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

BID #13-968-042

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**COUNTY OF EL DORADO, CALIFORNIA
CHIEF ADMINISTRATIVE OFFICE
FACILITIES DIVISION**

NOTICE TO BIDDERS

NOTICE IS HEREBY GIVEN by the County of El Dorado, State of California, that sealed bids for work in accordance with the Project Plans (Plans) and Contract Documents designated:

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

BID #13-968-042

will be received by the Chief Administrative Office, Procurement & Contracts Division, California, until **TBD**, at which time bids will be publicly opened and read by the Chief Administrative Office, Procurement & Contracts Division.

No Bid may be withdrawn after the time established for receiving bids or before the award and execution of the Contract, unless the award is delayed for a period exceeding sixty (60) calendar days. Bids shall be executed in accordance with the instructions given and on the forms provided in the bound Contract Documents furnished by the County of El Dorado, Chief Administrative Office, Procurement & Contracts Division. The proposal shall **NOT** be detached from the Contract Documents. All bids must be clearly marked on the envelope:

"BID FOR PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT "

BID #13-968-042

TO BE OPENED AT 3:00 P.M. TBD

LOCATION/DESCRIPTION OF THE WORK: The project is located at 300 Forni Road, Placerville, California in El Dorado County. The Work to be done as shown on the Plans, generally consists of, but is not limited to:

- A. Bids are required for the entire work described herein. The work to be performed under this contract includes the furnishing of all labor, materials and equipment for construction of improvements to the on-site sanitary sewer system at the El Dorado County Jail Facility in Placerville. Improvements include but are not limited to installation of two prefabricated sewer manholes and sewer in-line shredders, sewer piping and cleanouts, 8' high chain link fence enclosure, and electrical conduits (above- and below ground), wiring and sewer in-line shredder control.
- B. The contract time shall be ELEVEN (11) CALENDAR DAYS.
- C. For bonding purposes the estimated project cost is between \$180,000 and \$220,000
- D. A Pre-Bid / Site Visit Meeting is scheduled for this project at **TBD** in front of the Placerville Jail, at 300 Forni Road, Placerville, California. **ATTENDANCE AT THE PRE-BID MEETING IS MANDATORY AND ONLY THE BIDS OF FIRMS WITH REPRESENTATIVES IN ATTENDANCE WILL BE CONSIDERED FOR EVALUATION AND AWARD.** In order to limit the disruption to the conduct of business, the meeting date listed will be the only opportunity for bidders to visit the site. The Bidder's representative will be required to sign an attendance sheet and provide the name of the firm being represented. The County will post on the Procurement & Contract's website such Addenda as the County in its discretion considers necessary in response to questions arising and information presented at the Pre-Bid / Site Visit Meeting. Oral statements shall not be relied upon and will not be binding or legally effective. Addenda issued as a result of the Pre-Bid / Site Visit Meeting shall constitute the sole and exclusive record and statement of the results of the Pre-Bid / Site Visit Meeting.

OBTAINING OR INSPECTING CONTRACT DOCUMENTS: The Contract Documents including Plans may be examined:

- Online at <http://edcapps.edcgov.us/contracts/invite.asp>
- At the County of El Dorado, Chief Administrative Office, Procurement & Contract Division located at 360 Fair Lane, Placerville, California, 95667
- Distributed at Mandatory Pre-Bid Meeting on TBD.

ONLY CONTRACT DOCUMENTS DISTRIBUTED AT THE MANDATORY PRE-BID MEETING ON TBD WILL BE ACCEPTABLE FOR BID SUBMITTAL.

CONTRACTORS LICENSE CLASSIFICATION: Bidders shall be properly licensed to perform the Work pursuant to the Contractors' State License Law (Business and Professions Code Section 7000 et seq.) and shall possess a **Class A General Engineering Contractor's** license or equivalent combination of Classes required by the categories and type of Work included in the Contract Plans at the time bids are submitted, and shall maintain a valid license through completion and acceptance of the Work, including the guarantee and acceptance period. Failure of the successful Bidder to obtain proper adequate licensing shall constitute a failure to execute the Contract and shall result in the forfeiture of the Bidder's security.

BUSINESS LICENSE: The County Business License Ordinance provides that it is unlawful for any person to furnish supplies or services, or transact any kind of business in the unincorporated territory of El Dorado County without possessing a County business license unless exempt under County Ordinance Code Section 5.08.070. The Bidder to whom an award is made shall comply with all of the requirements of the County Business License Ordinance, where applicable, prior to beginning work under this Contract and at all times during the term of this Contract.

REQUIRED LISTING OF PROPOSED SUBCONTRACTORS: Each Proposal shall have listed therein the name and address of each subcontractor, to whom the Bidder proposes to subcontract portions of the work in an amount in excess of 1/2 of one percent of its total bid in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The Bidder shall also describe in the Subcontractor Listing the work to be performed by each subcontractor listed. The work to be performed by the subcontractor shall be shown by listing the description of the work, and portion of the work to be performed by the subcontractor in the form of a percentage calculated by dividing the work to be performed by the subcontractor by the lump sum bid price. At the time the bids are submitted all listed subcontractors shall be properly licensed to perform their designated portion of the work. The Bidder's attention is invited to other provisions of the Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.

NONDISCRIMINATION: Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

**NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM
(GOVERNMENT CODE SECTION 12990)**

PREVAILING WAGE REQUIREMENTS: In accordance with the provisions of California Labor Code Sections 1770 et seq., the general prevailing rate of wages in the county in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations. These wage rates appear in the California Department of Transportation publication entitled General Prevailing Wage Rates. Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, P.O. Box 420603, San Francisco CA 94142-0603, Telephone (415) 703-4708 or by referring to the website at <http://www.dir.ca.gov/dlsr/PWD>. The rates at the time of the bid advertisement date of a project will remain in effect for the life of the project in accordance with the California Code of Regulations, as modified and effective January 27, 1997.

Copies of the general prevailing rate of wages in the county in which the Work is to be done are also on file at the Chief Administrative Office, Facilities Division, and are available upon request.

In accordance with the provisions of Labor Code 1810, eight (8) hours of labor shall constitute a legal day's work upon all work done hereunder, and Contractor and any subcontractor employed under this Contract shall conform to and be bound by the provisions of Labor Code Sections 1810 through 1815.

BID SECURITY: A bid security shall be provided with each bid. Bid security shall be in an amount of not less than ten percent (10%) of the total amount bid for the Work and shall be cash, a certified check or cashier's check drawn to the order of the County of El Dorado or a Bidder's Bond executed by a surety satisfactory to the County of El Dorado on the **form provided in the Proposal section of these Contract Documents (do not detach the form)**.

AWARD OF CONTRACT: Bids will be considered for award by the Purchasing Agent. The County of El Dorado reserves the right after opening bids to reject any or all bids, to waive any irregularity in a bid, or to make award to the lowest responsive, responsible Bidder and reject all other bids, as it may best serve the interests of the County.

As a condition of award, the successful Bidder will be required to submit bonds and evidence of insurance prior to execution of the Agreement by the County. Failure to meet this requirement shall constitute abandonment of the Bid by the Bidder and forfeiture of the Bidder's security. Award will then be made to the next lowest responsible Bidder.

PAYMENTS: Attention is directed to section 6.2 APPLICATIONS FOR PAYMENT of the Conditions of the Contract.

RETAINAGE FROM PAYMENTS: The Contractor may elect to receive one hundred percent (100%) of payments due under the Contract from time to time, without retention of any portion of the payment by the County, by depositing securities of equivalent value with the County in accordance with the provisions of Section 22300 of the Public Contract Code. Securities eligible for deposit hereunder shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

PROJECT ADMINISTRATION: All communications relative to the Contract Documents and Plans shall be directed to Sue Hennike in the County of El Dorado Chief Administrative Office, Procurement & Contracts Division, 360 Fair Lane, Placerville, CA 95667, telephone: (530) 621-5577. No oral responses to any questions concerning the content of the Plans and Contract Documents will be given. All responses will be in the form of written addenda to the Plans and/or Contract Documents.

BY ORDER OF the Purchasing Agent, County of El Dorado, State of California.

Authorized by the Chief Administrative Office, Procurement & Contracts Division on TBD at Placerville, California.

By _____
Terri Daly
Purchasing Agent

THESE INSTRUCTIONS SUPPLEMENT THE NOTICE TO BIDDERS, PROPOSAL, DRAFT AGREEMENT, AND CONDITIONS OF THE CONTRACT

**PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT
BID #13-968-042**

INSTRUCTIONS TO BIDDERS

1. The County of El Dorado will receive sealed bids from Bidders as stipulated in the Notice to Bidders.
2. The County of El Dorado reserves the right after opening bids to reject any or all bids, to waive any irregularity in a bid, or to make award to the lowest responsive, responsible Bidder and reject all other bids, as it may best serve the interests of the County.
3. Bidders must submit bids only on forms provided in the Contract Documents, and shall be accompanied by all documents and information required to be submitted by these Instructions to Bidders, the Notice to Bidders, and by law. Bids not submitted on the required forms shall be deemed nonresponsive and shall not be considered. The Proposal form is bound together with the Notice to Bidders, Instructions to Bidders, Agreement, and attendant documents. A Proposal shall be deemed "Non-Responsive" if the proposal is submitted without the entire Contract Document package attached.
4. Bidders must submit Non-Collusion Affidavit form with their bids. Bids submitted without the affidavit will be deemed nonresponsive and will not be considered.
5. Bidders must supply all information required by Contract Documents and specifications. Bids must be full and complete. The County reserves the right at its sole discretion to reject any bid as nonresponsive as a result of any error or omission in the bid.
6. Bidders may not modify Proposal or qualify their bids.
7. Submission of a bid signifies that the Bidder has done a careful examination of the Contract Documents and has a complete understanding of the nature, extent and location of Work to be performed. Bidder must complete the tasks listed below in subsections "a" and "b" as a condition to bidding ,and submission of bid shall constitute the Bidder's express representation to the County that Bidder has fully completed the following:
 - a. Bidder has attended the mandatory pre-bid meeting and has examined thoroughly and understands the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions and federal, state and local laws and regulations that in any manner may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto;
 - b. Bidder has given the County representative during the bid period prompt written notice of all conflicts, errors, ambiguities or discrepancies that it has discovered in or among the Contract Documents and as built and actual conditions and the written resolution thereof by County is acceptable to Bidder.
8. Substitutions: If the Bidder lists a manufacturer in its Proposal that is a substitute (i.e. "or equal"), such listing shall be considered a substitution request by the Bidder. If the Bidder is the apparent low Bidder, the Bidder shall, within two (2) business days following the bid opening, submit data substantiating the request for the substitution with the "or equal" item. Failure to submit such substantiating data within two (2) business days following the bid opening may result in the County deeming the apparent low Bidder non-responsive.

9. The following documents are to be executed and submitted by the apparent low Bidder after bids have been opened and duly inspected, the Contract has been awarded by the Chief Administrative Office Facilities Manager, and the County transmits the Notice of Award package to the successful Bidder. Failure to properly and timely submit these documents entitles the County to determine that the Bidder has abandoned the contract.

Submit the following documents to Sue Hennike, 360 Fair Lane, Placerville, CA 95667 by 5:00 p.m. of the TENTH calendar day, not including Saturdays, Sundays, and legal holidays following the date of the NOTICE OF AWARD OF CONTRACT letter. Execution of Contracts by the County depends upon approval of Insurance Certificates and Bonds, and associated contract documents.

- i. Contracts: The successful Bidder shall execute and submit the Agreements for the work associated with the Proposal Lump Sum Bid Price Schedule (See Draft Agreement). Submit two (2) originals of Agreement, each bearing an original signature.
- ii. County of El Dorado Performance Bond: To be executed by successful Bidder and surety each with notary acknowledgement.
- iii. County of El Dorado Payment Bond: To be executed by successful Bidder and surety each with notary acknowledgement.
- iv. Insurance certificates required by Contract Conditions and Article 8.
- v. California Form 590 – Withholding Exemption and County Payee Data Record Form

END OF DOCUMENT

COMPLETING BID IN PENCIL, ERASURES, OVERWRITES, AND USE OF CORRECTION FLUID OR TAPE ARE NOT ACCEPTABLE. BID PROPOSALS WITH PENCIL, ERASURES, OVERWRITES, OR USE OF CORRECTION FLUID OR TAPE WILL BE REJECTED. ALL CHANGES MUST BE LINED OUT AND CORRECTIONS INSERTED ADJACENT TO THE CHANGE AND INITIALED BY THE BIDDER'S AUTHORIZED REPRESENTATIVE

PROPOSAL

(to be attached to and submitted with this bound Contract Document bid package)

**TO: CHIEF ADMINISTRATIVE OFFICE, FACILITIES DIVISION
COUNTY OF EL DORADO,
STATE OF CALIFORNIA**

for the construction of

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

BID #13-968-042

NAME OF BIDDER _____

BUSINESS MAILING ADDRESS _____

CITY, STATE, ZIP _____

BUSINESS STREET ADDRESS _____

(Please include even if P.O. Box used)

CITY, STATE, ZIP _____

TELEPHONE NO: AREA CODE () _____

FAX NO: AREA CODE () _____

The work for which this Proposal is submitted is for the construction in accordance with these Contract Documents (including the payment of not less than the State general prevailing wage rates set forth herein), the Project Plans described below, including any addenda thereto, the Contract annexed hereto, and also in accordance with the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished, and in accordance with the General Prevailing Wage rates. The Project Plans and other Contract Documents for the work to be done are entitled:

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

BID #13-968-042

Bids are to be submitted for the entire work. The work includes LUMP SUM BID. Failure to submit a bid for the entire work will result in the bid being deemed non-responsive.

The Bidder shall set forth a lump sum total for the BID, in clearly legible figures in the respective space provided for this purpose.

If the item total for the lump sum is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing lump sums. The written lump sum in numbers will be interpreted according to the number of digits and, if applicable, decimal placement. In the event of a discrepancy, the written lump sum in words will govern over the written lump sum in numbers.

The foregoing provisions for the resolution of specific irregularities cannot be so comprehensive as to cover every omission, inconsistency, error or other irregularity which may occur in a bid. Any situation not specifically provided for will be determined in the discretion of the County of El Dorado, and that discretion will be exercised in the manner deemed by the County of El Dorado to best protect the public interest in the prompt and economical completion of the work. The decision of the County of El Dorado respecting the amount of a bid, or the existence or treatment of any irregularity in a bid, shall be final.

If this Proposal is accepted and the undersigned Bidder shall fail to enter into the Contract and furnish the two bonds in the sums required by the State Contract Act, with surety satisfaction to the County of El Dorado in accordance with the Special Provisions within ten (10) days, not including Saturdays, Sundays, and legal holidays, of the date of the letter notice from the County of El Dorado that the Contract has been awarded, the County of El Dorado may, at its option, determine that the Bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the County of El Dorado.

Attention! The undersigned Bidder acknowledges that a bid security must be submitted in amount of not less than ten (10) percent of the Lump Sum Bid.

The undersigned, as Bidder, declares under penalty of perjury under the laws of the State of California that the only persons or parties interested in this Proposal, as principals, are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that it has carefully examined the location of the proposed work, the annexed proposed form of Contract, and the Plans therein referred to; and that it proposes, and agrees if this Proposal is accepted, that it will contract with the County of El Dorado, in the form of the copy of the Draft Agreement annexed hereto, to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that it will take in full payment therefore the following item prices, to wit:

**PROPOSAL BID PRICE SCHEDULE
 PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT
 BID #13-968-042**

Note: Bid will be awarded on the basis of the lowest responsive, responsible bidder based upon the total of the LUMP SUM bid and meeting all other requirements.

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	APPROXIMATE QUANTITY	UNIT PRICE (IN FIGURES)	AMOUNT (IN FIGURES)
1	Mobilization / Demobilization	LS	1		
2	Clearing, Grubbing and Environmental Protection	LS	1		
3	Utility Location and Potholing	LS	1		
4	6" PVC ASTM D3034 SDR-35 Sanitary Sewer Pipe	LF	50		
5	Grinder (Muffin Monster) with Manhole & Installation	EA	2		
6	Sanitary Sewer Cleanout	EA	1		
7	Chain Link Fence	LF	20		
8	Electrical	LS	1		

LUMP SUM BID: (Figure) \$ _____

LUMP SUM BID (Words): _____

NOTICE: Bidder's failure to execute the questionnaire and statements contained in this Bid as required by applicable laws and regulations, or the determinations by El Dorado County based upon those questionnaires and statements, may prohibit award of the subject Contract to the Bidder.

SUBCONTRACTORS LISTING

The Bidder shall list the name and address and license number of each subcontractor to whom the Bidder proposes to subcontract portions of the work, as required by the provisions in "Required Listing of Proposed Subcontractors" in the Notice to Bidders. The Bidder shall also list the description of work and express the percentage of work to be performed by each subcontractor as subcontracted amount divided by LUMP SUM BID amount.

Name	Location of Business	License No.	Description of Work and Percentage of Work Subcontracted

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In accordance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the Bidder hereby declares under penalty of perjury under the laws of the State of California that the Bidder has_____, has not_____been convicted within the preceding three years of any offenses referred to in that Section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "Bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

NOTE: The Bidder must place a check mark after "has" or "has not" in one of the blank spaces provided.

The above Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement.

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

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In accordance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury under the laws of the State of California, the following questionnaire:

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

Yes: _____

No: _____

If the answer is yes, explain the circumstances in the following space:

PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

In accordance with Public Contract Code Section 10232, the Bidder hereby states under penalty of perjury under the laws of the State of California, that no more than one final unappealable finding of contempt of court by a Federal Court has been issued against the Bidder within the immediate preceding two year period because of the Bidder's failure to comply with an order of a Federal Court which orders the Bidder to comply with an order of the National Labor Relations Board.

NOTE:

The above Questionnaire and Statement are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Questionnaire and Statement.

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

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

In accordance with Title 23 United States Code, Section 112 and Public Contract Code Section 7106, the Bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in 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.

NOTE:

The above Noncollusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit.

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

Accompanying this proposal is _____

(NOTICE: INSERT THE WORDS "CASH (\$___)," "CASHIER'S CHECKS," "CERTIFIED CHECKS," OR "BIDDERS BONDS," AS THE CASE MAY BE)

in amount equal to at least ten percent of the total **amount of the Lump Sum Bid.**

The names of all persons interested in the forgoing Proposal as principals are as follows:

IMPORTANT NOTICE: If the Bidder or other interested person is a corporation, state legal name of corporation and place of incorporation, also names of the president, secretary, treasurer, and executive officer thereof; if a partnership, state name of partnership, also names of all individual partners; if Bidder or other interested person is an individual, state first and last names in full.

Licensed in accordance with an act providing for the registration of Contractors,

License No. _____ Classification(s) _____

A copy of the afore-referenced license must be attached hereto.

ADDENDA: This Proposal is submitted with respect to the changes to the Contract included in addenda number(s)

(Fill in addenda numbers if addenda have been received and insert, in this Proposal, any Proposal Pay Items and Bid Price Schedules that were received as part of the addenda)

By my signature on this Proposal I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232, and 10285.1 are true and correct and that I have complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5 of Division 4 of Title 2 of the California Code of Regulations). By my signature on this Proposal I further certify, under penalty of perjury under the laws of the State of California and the United States of America that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106 is true and correct.

The person or persons executing this Proposal on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise, that such person is or that such persons are appropriately authorized to act in these regards for such corporation or partnership. Such authority shall be demonstrated to the satisfaction of the County of El Dorado.

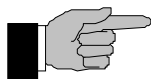
If the signature is by an agent other than an officer of a corporation or a member of a partnership, a power of attorney authorizing said act by the agent on behalf of his principal shall be submitted with the bid forms; otherwise, the bid may be disregarded as irregular and unauthorized.

The Bidder's execution on the signature portion of this Proposal shall constitute an endorsement and execution of those affidavits, declarations and certifications which are part of this Proposal.

Executed this _____ day of _____, 20__

at _____ County, State of _____

Date: _____



SIGN HERE _____

Name and Title of Bidder _____

Name of Firm _____

END OF PROPOSAL

COUNTY OF EL DORADO

BIDDER'S BOND

this form MUST be used

KNOW ALL PEOPLE BY THESE PRESENTS, THAT WE _____
_____, as **PRINCIPAL**, and

as Surety are held and firmly bound unto the County of El Dorado (Obligee), in the penal sum of **TEN (10) PERCENT OF THE AMOUNT OF THE TOTAL LUMP SUM BID PRICE** of the Principal above named, submitted by said Principal to the Obligee for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made to the Obligee, we the Principal and Surety bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the Surety hereunder exceed the sum of

TEN PERCENT (10%) OF THE AMOUNT OF THE TOTAL LUMP SUM BID PRICE

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:

WHEREAS, the Principal has submitted the above-mentioned Bid to the Obligee, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at Placerville, El Dorado County, California, for the construction of the

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT
BID #13-968-042

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

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

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

(seal) _____
Principal

(seal) _____
Surety

Address: _____

(NOTE: Signature of those executing for the Surety shall be properly acknowledged, and accompanied by a Certificate of Acknowledgment.)

SURETY

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,
(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

County of El Dorado, State of California

BID #13-968-042

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

THIS AGREEMENT ("Agreement") approved by the County of El Dorado Purchasing Agent, this _____ day of _____, in the year of _____, made and concluded, in duplicate, between the COUNTY OF EL DORADO, a political subdivision of the State of California, by the Chief Administrative Office, Facilities Division thereof, the party of the first part hereinafter called "County," and _____ (Contractor) party of the second part hereinafter called "Contractor."

RECITALS:

WHEREAS, County has caused the above-captioned project to be let to formal bidding process; and

WHEREAS, Contractor has duly submitted a bid response for the captioned project upon which County has awarded this Contract;

NOW, THEREFORE, the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree, each with the other, as follows:

Article 1. THE WORK

The improvement contemplated in the performance of this Contract is an improvement over which the County of El Dorado shall exercise general supervision. The County therefore, shall have the right, but not the duty to assume full and direct control over this Contract whenever the County at its sole discretion, shall determine that its responsibility is so required.

The Contractor shall complete the Work as specified or indicated under the County's Contract Documents entitled:

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

The project is located at 300 Forni Road, Placerville, 95667 in El Dorado County. The Work to be done is shown on the Plans, and generally consists of, but is not limited to installation of two prefabricated sewer manholes and sewer in-line shredders, sewer piping and cleanouts, 8' high chain link fence enclosure, and electrical conduits (above- and below ground), wiring and sewer in-line shredder control.

Article 2. CONTRACT DOCUMENTS

The Contract Documents consist of: the Notice to Bidders; the bid forms which include the accepted Proposal, Proposal Bid Price Schedule, Subcontractors Listing, Section 10285.1 Statement, Section 10162 Questionnaire, Section 10232 Statement, and the Noncollusion Affidavit; the Contract which includes this Agreement with all Exhibits thereto, the Performance Bond and Payment Bond; Conditions of the Contract; the drawings listed and identified as the Project Plans; the Technical Specifications; all Addenda incorporated in those documents before their execution, all Contract Change Orders, Architect's Supplemental Instructions, and Construction Change Directives issued in accordance with the Contract Documents which may be delivered or issued after the Effective Date of this Agreement and are not attached hereto; the prevailing Labor Surcharge And Equipment Rental Rates (when required) as determined by the Department of Industrial Relations to be in effect on the date the Work is accomplished; all the obligations of County and of Contractor which are fully set forth and described therein; and all Contract Documents which are hereby specifically referred to and by such reference made a part hereof. All Contract Documents are intended to cooperate so that any work called for in one and not mentioned in the other is to be executed the same as if mentioned in all Contract Documents. Contractor agrees to perform all of its promises, covenants, and conditions set forth in the Contract Documents, and to abide by and perform all terms and conditions set forth therein. In case of conflict between this Agreement and any other contract document, this Agreement shall take precedence.

Article 3. CONTRACT PRICE

As compensation agreed upon for said Work, County shall pay or cause to be paid to Contractor, in full, and for the full contract price and compensation for said completion of the Work, including without limitation, all bonds and insurance, THE NOT TO EXCEED SUM OF (insert dollar amount in words) DOLLARS (\$(insert dollar amount in numbers)) which sum constitutes the Contract Price for the complete Project (the “Contract Price”).

Article 4. COMMENCEMENT AND COMPLETION

The Work to be performed under this Contract shall commence on the date specified in the Notice to Proceed issued by County. The work shall be diligently prosecuted to completion within **110 working days** commencing from the date shown on the Contractor Notice To Proceed. The time of completion includes the lead time of approximately 60 working days to fabricate the in-line shredder manholes.

County and Contractor recognize that time is of the essence of the Agreement and that County will suffer financial loss if the Work is not completed within the time specified in the above paragraph, plus any extensions thereof allowed in accordance with Article 4.3.5 of the Conditions of the Contract. They also recognize the delays, expense, and difficulties involved with proving in a legal proceeding the actual loss suffered by County if the Work is not completed on time. Accordingly, instead of requiring any such proof, County and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay County the sum of One Thousand dollars (\$1,000.00) per day, as liquidated damages and not as a penalty, for each and every calendar day's delay in finishing the Work in excess of the contract time prescribed herein.

Article 5. PAYMENT

Payment shall be made to Contractor as follows:

Progress Payments are to be made semi-monthly based on the percentage of completion method reached by the Contractor and invoiced using Exhibit “A”, marked “Application and Certificate for Payment” incorporated herein and made by reference a part hereof.

Retention of 5% of the total Contract Price will be held at the option of County. Payment by County as herein provided shall not be construed as an absolute acceptance of defects in the Work or improper materials.

Article 6. INDEMNITY

To the fullest extent allowed by law, Contractor shall defend, indemnify, and hold the County and its officers, directors, and employees harmless against and from any and all claims, suits, losses, damages, and liability for damages, including attorney's fees and other costs of defense brought for or on account of injuries to or death of any person, including but not limited to, workers and the public, or on account of injuries to or death of County employees, or damage to property, or any economic, consequential or special damages which are claimed or which shall in any way arise out of or be connected with Contractor's services, operations or performance hereunder, regardless of the existence or degree of fault or negligence on the part of the County, the Contractor, subcontractors or employees of any of these, except for the active, or sole negligence of the County, its officers and employees, or where expressly prescribed by statute.

The duty to indemnify and hold harmless the County specifically includes the duties to defend set forth in Section 2778 of the Civil Code. The insurance obligations of the Contractor are separate, independent obligations under the Contract Documents, and the provisions of this defense and indemnity are not intended to modify nor should they be construed as modifying or in any way limiting the insurance obligations set forth in the Contract Documents.

Article 7. GUARANTEES

Contractor shall repair or replace any or all work provided hereunder which is defective due to faulty materials, poor workmanship, or defective equipment at no expense to County, ordinary wear or tear and unusual abuse or neglect excepted, during the term of the Contract and for a period of one (1) year after contract Acceptance. Contractor shall be

required to repair or replace any and all adjacent facilities or areas which have been damaged or displaced due to Contractor work performed under this Agreement at no expense to County during the term of this Contract and for a period of one (1) year after Contract Acceptance.

If a warranty or guarantee exceeding one (1) year is provided by the supplier or manufacturer of any equipment or materials used in this Project, or if a warranty or guarantee exceeding one (1) year is required elsewhere in these Contract Documents, then the guarantee for such equipment or materials shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials, and Contractor shall supply County with all warranty and guaranty documents relative to equipment and materials incorporated in the job and guaranteed by its suppliers or manufacturers.

The parties agree that this guarantee and the rights and obligations accruing therefrom shall be in addition to, and not by way of limitation in any manner whatsoever to, the rights, obligations, warranties or remedies otherwise provided for by law.

In the event of Contractor's failure to comply with the above mentioned conditions within ten (10) calendar days after being notified in writing by County, Contractor hereby authorizes County to proceed to have said defects repaired and made good at Contractor's expense, and Contractor will honor and pay all costs and charges therefore upon written demand.

Article 8. NOTICE

Any notice or other correspondence required to be given under this Agreement by either party to the other may be affected by personal delivery in writing or by mail, postage prepaid. Notices personally delivered during normal business hours shall be deemed received on the actual date of delivery; mailed notices shall be deemed received one (1) day after affixed postmark. Notices and correspondence to County shall be in duplicate and shall be delivered to it as follows:

To County:

County of El Dorado
Chief Administrative Office
3000 Fairlane Court, Suite One

Attn.: Russ Fackrell
Facilities Manager

Notices and correspondence to Contractor shall be delivered when personally delivered to, or if mailed, addressed to Contractor at:

Contractor's Business Name

Street Address
City, State Zip

Attn.: Name of Notices Recipient
Title of Notices Recipient

Either party may change its address for notices by giving written notice pursuant to this Article.

Article 9. VENUE

Any litigation arising out of this Contract shall be brought in El Dorado County.

Article 10. NOTIFICATION OF SURETY COMPANY

The surety company shall familiarize itself with all of the conditions and provisions of this Contract, and shall waive the right of special notification of any change or modifications of this Contract or extension of time, or of decreased or

increased work, or of the cancellation of the Contract, or of any other act or acts by County or its authorized agents, under the terms of this Contract; and failure to so notify the aforesaid surety company of changes shall in no way relieve the surety company of its obligation under this Contract.

Article 11. ASSIGNMENT OF ANTITRUST ACTIONS

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor offers and agrees and will require all of its subcontractors and suppliers to agree 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 Contractor, without further acknowledgment by the parties.

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Government Code Sections 4550-4554, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery. Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under Government Code Sections 4550-4554 if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

Article 12. TERMINATION BY COUNTY FOR CONVENIENCE

County reserves the right to terminate the Contract at any time upon determination by County's representative that termination of the Contract is in the best interest of County. County shall issue Contractor a written notice specifying that the Contract is to be terminated.

Upon receipt of said written notice, Contractor shall stop all work under the Contract except: (1) work specifically directed to be completed prior to termination, (2) work the Inspector deems necessary to secure the project for termination, (3) removal of equipment and plant from the site of the Work, (4) action that is necessary to protect materials from damage, (5) disposal of materials not yet used in the Work as directed by County, and (6) clean up of the site.

If the Contract is terminated for County's convenience as provided herein, all finished or unfinished work and materials previously paid for shall, at the option of County, become its property. Contractor shall be paid an amount which reflects costs incurred for work provided to the date of notification of termination. In addition, Contractor shall be paid the reasonable cost, as solely judged by County, and without profit, for all work performed to secure the project for termination.

Article 13. TERMINATION BY COUNTY FOR CAUSE

If Contractor is adjudged as bankrupt or insolvent, or makes a general assignment for the benefit of its creditors or if a trustee or receiver is appointed for Contractor or for any of its property, or if Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or on more than one occasion fails to supply sufficient skilled workmen or suitable material or equipment, or on more than one occasion fails to make prompt payments to subcontractors for labor, materials, or equipment, or disregards the authority of the County's representative, or the Engineer, if one is appointed, or otherwise violates any provision of the Contract Documents, then County may, without prejudice to any other right or remedy and after giving Contractor and its Surety a minimum of ten (10) days from delivery of a written termination notice, terminate the services of Contractor and take equipment and machinery thereon owned by Contractor and finish the Work by whatever method County may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished.

Without prejudice to other rights or remedies County may have, if Contractor fails to begin delivery of materials and equipment, to commence Work within the time specified, to maintain the rate of delivery of material, to execute the Work in the manner and at such locations as specified, or fails to maintain a work program which will ensure County's interest, or, if Contractor is not carrying out the intent of the Contract, an Inspector's written notice may be served upon Contractor and the Surety on its faithful performance bond demanding satisfactory compliance with the Contract. If Contractor or its Surety does not comply with such notice within five (5) days after receiving it, or after starting to comply, fails to continue, County may exclude it from the premises and take possession of all material and equipment, and complete the Work by County's own forces, by letting the unfinished Work to another Contractor, or by a combination of such methods.

Where Contractor's services have been so terminated by County, said termination shall not affect any right of County against Contractor then existing or which may thereafter accrue. Any retention or payment of monies by County due Contractor will not release Contractor from compliance with the Contract Documents.

If the unpaid balance of the Contract price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to Contractor. If the sums under the Contract are insufficient for completion, Contractor or Surety shall pay to County within five (5) days after the completion, all costs in excess of the Contract price. In any event, the cost of completing the Work shall be charged against Contractor and its Surety and may be deducted from any money due or becoming due from County.

The provisions of this Article shall be in addition to all other rights and remedies available to County under law.

If after notice of termination, it is determined for any reason that Contractor was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had not been issued. The Contract shall be equitably adjusted to compensate for such termination.

Article 14. SUCCESSORS AND ASSIGNS

This Agreement shall bind and inure to the heirs, devisees, assignees, and successors in interest of Contractor and to the successors in interest of County in the same manner as if such parties had been expressly named herein.

Article 15. REPORTING ACCIDENTS

Contractor shall prepare and submit (within 24 hours of such incidents) reports of accidents at the site and anywhere else the work is in progress in which bodily injury is sustained or property loss in excess of Five Hundred Dollars (\$500.00) occurs.

Article 16. WORKERS' COMPENSATION CERTIFICATION

Contractor shall comply with Labor Code Sections 3700 et seq., requiring it to obtain Workers' Compensation Insurance, and sign a certificate of knowledge thereof.

CERTIFICATE OF KNOWLEDGE - LABOR CODE SECTION 3700

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 work of this Contract.

Signed: _____ Date _____

Article 17. WARRANTY

Contractor warrants to County that materials and equipment furnished for the Work will be of good quality and new, unless otherwise required or permitted under the Contract Documents, that the Work will be free from defects or flaws

and is of the highest quality of workmanship and that the Work will conform with the requirements herein. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

Article 18. RETAINAGE

The retainage from payments is set forth in Section 6.4 "WITHHOLDINGS FROM PAYMENTS" of the Conditions of the Contract. Contractor may elect to receive one hundred percent (100%) of payments due as set forth in the Contract Documents, without retention, by depositing securities of equivalent value with County, in accordance with, and as set forth in Section 22300 of the Public Contract Code. Securities eligible for deposit hereunder shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

Article 19. PREVAILING WAGE REQUIREMENTS

In accordance with the provisions of California Labor Code Sections 1770 et seq., the general prevailing rate of wages in the county in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations. These wage rates appear in the California Department of Transportation publication entitled General Prevailing Wage Rates. Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco CA 94142-0603, Telephone (415) 703-4708 or by referring to the website at <http://www.dir.ca.gov/dlsr/PWD>. The rates at the time of the bid advertisement date of a project will remain in effect for the life of the project in accordance with the California Code of Regulations, as modified and effective January 27, 1997.

Copies of the general prevailing rate of wages in the county in which the Work is to be done are also on file at the Chief Administrative Office, Facilities Division, and are available upon request.

In accordance with the provisions of Labor Code 1810, eight (8) hours of labor shall constitute a legal day's work upon all work done hereunder, and Contractor and any subcontractor employed under this Contract shall conform to and be bound by the provisions of Labor Code Sections 1810 through 1815.

Article 20. BUSINESS LICENSE

The County Business License Ordinance provides that it is unlawful for any person to furnish supplies or services, or transact any kind of business in the unincorporated territory of El Dorado County without possessing a County business license unless exempt under County Ordinance Code Section 5.08.070. Contractor warrants and represents that it shall comply with all of the requirements of the County Business License Ordinance, where applicable, prior to beginning work under this Contract and at all times during the term of this Contract.

Article 21. CONTRACT ADMINISTRATOR

The County Officer or employee with responsibility for administering this Agreement is Russ Fackrell, Facilities Manager, 3000 Fairlane Court, Suite 1, Placerville, CA, Chief Administrative Office, or successor.

Article 22. AUTHORIZED SIGNATURES

The parties hereto represent that the undersigned individuals executing this Agreement on their behalf are fully authorized to do so by law or other appropriate instrument and to bind upon said parties the obligations set forth herein.

Article 23. PARTIAL INVALIDITY

If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will continue in full force and effect without being impaired or invalidated in any way.

Article 24. ENTIRE AGREEMENT

This document and the documents referred to herein or exhibits hereto are the entire Agreement between the parties and they incorporate or supersede all prior written or oral agreements or understandings.

IN WITNESS WHEREOF, the said Chief Administration Office, Facilities Division of the County of El Dorado, State of California, has caused this Agreement to be executed by County's Purchasing Agent, on its behalf, and the said Contractor has signed this Agreement the day and year written below.

COUNTY OF EL DORADO

Dated _____

Terri Daly
Purchasing Agent
County of El Dorado

CONTRACTOR

Dated _____

Name of Company

By _____

Authorized Representative

License No.

Federal Employer Identification No.

NOTE: If Contractor is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if Contractor is a partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts on behalf of the co-partnership; and if Contractor is an individual, his/her signature shall be placed above. Contractor executing this document on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise that it is appropriately authorized to act in these regards. For such corporation or partnership, such authority shall be demonstrated to the satisfaction of County. If signature is by an agent, other than officer of a corporation or a member of a partnership, an appropriate Power of Attorney shall be on file with the Department prior to signing this document.

Mailing Address: _____

Business Address: _____

City, Zip: _____

Phone: _____

Fax: _____

END OF CONTRACT

DRAFT

APPLICATION AND CERTIFICATE FOR PAYMENT - EXHIBIT A

TO OWNER:
 El Dorado County
 360 Fair Lane
 Placerville, CA 95667
 FROM CONTRACTOR:

PROJECT:

APPLICATION #: 1
 PERIOD TO:
 PROJECT NOS:
 CONTRACT DATE:

Distribution to:

<input type="checkbox"/>	County
<input type="checkbox"/>	Cont Adm
<input type="checkbox"/>	Contractor
<input type="checkbox"/>	
<input type="checkbox"/>	

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
 Continuation Sheet is attached.

1. ORIGINAL CONTRACT SUM -----	\$	<input type="text"/>
2. Net change by Change Orders -----	\$	<input type="text"/>
3. CONTRACT SUM TO DATE (Line 1 +/- 2)	\$	<input type="text"/>
4. TOTAL COMPLETED & STORED TO DATE -\$		<input type="text"/>
(Column G on Continuation Sheet)		
5. RETAINAGE:		
a. _____ of Completed Work	\$	<input type="text"/>
(Column D+E on Continuation Sheet)		
b. _____ of Stored Material	\$	<input type="text"/>
(Column F on Continuation Sheet)		
Total Retainage (Line 5a + 5b or		
Total in Column 1 of Continuation Sheet-----	\$	<input type="text"/>
6. TOTAL EARNED LESS RETAINAGE -----	\$	<input type="text"/>
(Line 4 less Line 5 Total)		
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT		
(Line 6 from prior Certificate)-----	\$	<input type="text"/>
8. CURRENT PAYMENT DUE -----	\$	<input type="text"/>
9. BALANCE TO FINISH, INCLUDING RETAINAGE		
(Line 3 less Line 6)	\$	<input type="text"/>

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown therein is now due.

CONTRACTOR:

By: _____ Date: _____

State of: California
 County of: El Dorado

CERTIFICATE FOR PAYMENT

In accordance with Contract Documents, based on on-site observations and the data comprising application, the Contract Administrator certifies to El Dorado County that to the best of the Contract Administrator's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED ----- \$ _____
 (Attach explanation if amount certified differs from the amount applied for. Initial all figures on this application and on the Continuation Sheet that are changed to conform to the amount certified.)

CONTRACT ADMINISTRATOR

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner of Contractor under this Contract.

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Contract Administrator		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

CONTINUATION SHEET

ATTACHMENT TO PAY APPLICATION
PROJECT:

APPLICATION NUMBER: 1
APPLICATION DATE:
PERIOD TO:
CONTRACTOR'S PROJECT NO:

A Item No.	B Description of Work	C Scheduled Value	D		E This Period	F Materials Presently Stored (Not In D or E)	G		H Balance To Finish (C - G)	I Retainage
			Work Completed				Total Completed And Stored To Date (D + E + F)	% (G/C)		
			From Previous Application (D + E)							
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SUBTOTALS PAGE 2										

COUNTY OF EL DORADO

PAYMENT BOND

(Section 3247, Civil Code)

Bond No. _____

WHEREAS, the County of El Dorado, a political subdivision of the State of California, hereafter referred to as "Obligee", has awarded to Contractor

_____ hereafter referred to as "Principal", a contract for the work described as follows:

**PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT
 BID #13-968-042**

AND, WHEREAS, said Principal is required to furnish a bond in connection with said contract, guaranteeing the faithful performance thereof:

NOW, THEREFORE, we the undersigned Principal and Surety are held and firmly bound unto the Obligee, in the sum of _____ Dollars, (\$ _____) to be paid to the Obligee, for which payment we bind ourselves, jointly and severally.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if said Principal or its subcontractors shall fail to pay any of the persons named in Civil Code Section 3181, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by such claimant, or any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the Principal and his subcontractors pursuant to Section 18806 of the Revenue and Taxation Code, with respect to such work and labor, that the Surety herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, the Surety will pay a reasonable attorney's fee to be fixed by the court.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 3181 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

Dated: _____

Correspondence or Claims relating to this bond should be sent to the Surety at the following address:

 PRINCIPAL

 SURETY

 ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the Principal and for the Surety must be properly acknowledged, and a Power of Attorney attached for the Surety.

NOTARY ACKNOWLEDGMENTS ATTACHED

PRINCIPAL

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,
(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

SURETY

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,
(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

COUNTY OF EL DORADO

PERFORMANCE BOND

Bond No. _____

KNOW ALL MEN BY THESE PRESENTS, that we _____
the Contractor in the Contract hereto annexed, as Principal, and _____
as Surety, are held firmly bound unto the County of El Dorado, a political subdivision of the State of California, hereinafter called the "Obligee" in the
sum of _____ DOLLARS,
(\$ _____) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, jointly and
severally, firmly by these presents.

Signed, sealed and dated: _____

The condition of the above obligation is such that if said Principal as Contractor in the Contract hereto annexed shall faithfully perform each and all of the conditions of said Contract to be performed by him, and shall furnish all tools, equipment, apparatus, facilities, transportation, labor and material, other than material, if any, agreed to be furnished by the Obligee, necessary to perform and complete, and to perform and complete in a good and workmanlike manner, the work of **BID #13-068-042 for the PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT** in strict conformity with the terms and conditions set forth in the Contract hereto annexed, then this obligation shall be null and void; otherwise this bond shall remain in full force and effect and the said Surety will complete the Contract work under its own supervision, by Contract or otherwise, and pay all costs thereof for the balance due under terms of the Contract, and the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work.

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

This guarantee shall insure the Obligee during the work required by any Contract and for a period of one (1) year from the date of acceptance of the work against faulty or improper materials or workmanship that may be discovered during that time.

No right of action shall accrue under this bond to or for the use of any person other than the Obligee named herein.

Dated: _____, 20_____.

Correspondence or Claims relating to this bond should be sent to the Surety at the following address:

PRINCIPAL

SURETY

ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the Principal and the Surety must be properly acknowledged, and a Power of Attorney attached for the Surety.

NOTARY ACKNOWLEDGMENTS ATTACHED

PRINCIPAL

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,
(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

SURETY

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,
(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

Withholding Exemption Certificate

2012

(This form can only be used to certify exemption from nonresident withholding under California Revenue and Taxation Code (R&TC) Section 18662. Do not use this form for exemption from wage withholding.)

590

File this form with your withholding agent. (Please type or print)

Withholding agent's name _____

Payee's name _____

Payee's SOS file no. SSN or ITIN CA corp. no. FEIN

Address (number and street, PO Box, or PMB no.) _____

Apt. no./ Ste. no. _____

City _____

State _____ ZIP Code _____

Read the following carefully and check the box that applies to the payee.

I certify that for the reasons checked below, the payee named on this form is exempt from the California income tax withholding requirement on payment(s) made to the entity or individual.

Individuals — Certification of Residency:

I am a resident of California and I reside at the address shown above. If I become a nonresident at any time, I will promptly notify the withholding agent. See instructions for General Information D, Who is a Resident, for the definition of a resident.

Corporations:

The above-named corporation has a permanent place of business in California at the address shown above or is qualified through the California Secretary of State (SOS) to do business in California. The corporation will file a California tax return and withhold on payments of California source income to nonresidents when required. If this corporation ceases to have a permanent place of business in California or ceases to do any of the above, I will promptly notify the withholding agent. See instructions for General Information F, What is a Permanent Place of Business, for the definition of permanent place of business.

Partnerships or limited liability companies (LLC):

The above-named partnership or LLC has a permanent place of business in California at the address shown above or is registered with the California SOS, and is subject to the laws of California. The partnership or LLC will file a California tax return and will withhold on foreign and domestic nonresident partners or members when required. If the partnership or LLC ceases to do any of the above, I will promptly inform the withholding agent. For withholding purposes, a limited liability partnership (LLP) is treated like any other partnership.

Tax-Exempt Entities:

The above-named entity is exempt from tax under California Revenue and Taxation Code (R&TC) Section 23701 _____ (insert letter) or Internal Revenue Code Section 501(c) _____ (insert number). The tax-exempt entity will withhold on payments of California source income to nonresidents when required. If this entity ceases to be exempt from tax, I will promptly notify the withholding agent. Individuals cannot be tax-exempt entities.

Insurance Companies, Individual Retirement Arrangements (IRAs), or Qualified Pension/Profit Sharing Plans:

The above-named entity is an insurance company, IRA, or a federally qualified pension or profit-sharing plan.

California Trusts:

At least one trustee and one noncontingent beneficiary of the above-named trust is a California resident. The trust will file a California fiduciary tax return and will withhold on foreign and domestic nonresident beneficiaries when required. If the trustee becomes a nonresident at any time, I will promptly notify the withholding agent.

Estates — Certification of Residency of Deceased Person:

I am the executor of the above-named person's estate. The decedent was a California resident at the time of death. The estate will file a California fiduciary tax return and will withhold on foreign and domestic nonresident beneficiaries when required.

Nonmilitary Spouse of a Military Servicemember:

I am a nonmilitary spouse of a military servicemember and I meet the Military Spouse Residency Relief Act (MSRRA) requirements. See instructions for General Information E, MSRRA.

CERTIFICATE: Please complete and sign below.

Under penalties of perjury, I hereby certify that the information provided in this document is, to the best of my knowledge, true and correct. If conditions change, I will promptly notify the withholding agent.

Payee's name and title (type or print) _____ Daytime telephone no. _____

Payee's signature ► _____ Date _____

Instructions for Form 590

Withholding Exemption Certificate

References in these instructions are to the California Revenue and Taxation Code (R&TC).

General Information

For purposes of California income tax, references to a spouse, husband, or wife also refer to a Registered Domestic Partner (RDP) unless otherwise specified. For more information on RDPs, get FTB Pub. 737, Tax Information for Registered Domestic Partners.

Private Mail Box (PMB) – Include the PMB in the address field. Write “PMB” first, then the box number. Example: 111 Main Street PMB 123.

Foreign Address – Enter the information in the following order: City, Country, Province/Region, and Postal Code. Follow the country's practice for entering the postal code. **Do not** abbreviate the country's name.

A Purpose

Use Form 590, Withholding Exemption Certificate, to certify an exemption from nonresident withholding. California residents or entities should complete and present Form 590 to the withholding agent. The withholding agent is then relieved of the withholding requirements if the agent relies in good faith on a completed and signed Form 590 unless told by the FTB that the form should not be relied upon.

The following are excluded from withholding and completing this form:

- The United States and any of its agencies or instrumentalities
- A state, a possession of the United States, the District of Columbia, or any of its political subdivisions or instrumentalities
- A foreign government or any of its political subdivisions, agencies, or instrumentalities

Important – This form cannot be used for exemption from wage and real estate withholding.

- If you are an employee, any wage withholding questions should be directed to the FTB General Information number, 800.852.5711. Employers should call **888.745.3886** or go to **edd.ca.gov**.
- Sellers of California real estate use Form 593-C, Real Estate Withholding Certificate, to claim an exemption from real estate withholding.

B Requirement

R&TC Section 18662 requires withholding of income or franchise tax on payments of California source income made to nonresidents of California.

Withholding is required on the following, but is not limited to:

- Payments to nonresidents for services rendered in California.
- Distributions of California source income made to domestic nonresident S corporation

shareholders, partners and members and allocations of California source income made to foreign partners and members.

- Payments to nonresidents for rents if the payments are made in the course of the withholding agent's business.
- Payments to nonresidents for royalties with activities in California.
- Distributions of California source income to nonresident beneficiaries from an estate or trust.
- Prizes and winnings received by nonresidents for contests in California.

However, withholding is optional if the total payments of California source income are \$1,500 or less during the calendar year.

For more information on withholding get FTB Pub. 1017, Resident and Nonresident Withholding Guidelines. To get a withholding publication see General Information H, Publications, Forms, and Additional Information.

Backup Withholding – Beginning on or after January 1, 2010, with certain limited exceptions, payers that are required to withhold and remit backup withholding to the Internal Revenue Service (IRS) are also required to withhold and remit to the Franchise Tax Board (FTB). The California backup withholding rate is 7% of the payment. For California purposes, dividends, interests, and any financial institutions release of loan funds made in the normal course of business are exempt from backup withholding. For additional information on California backup withholding, go to **ftb.ca.gov** and search for **backup withholding**.

If a payee has backup withholding, the payee must contact the FTB to provide a valid Taxpayer Identification Number (TIN) before filing a tax return. The following are acceptable TINs: social security number (SSN); individual taxpayer identification number (ITIN); federal employer identification number (FEIN); California corporation number (CA Corp No.); or Secretary of State (SOS) file number. Failure to provide a valid TIN will result in the denial of the backup withholding credit. For more information go to **ftb.ca.gov** and search for **backup withholding**.

C Who Certifies this Form

Form 590 is certified by the payee. An incomplete certificate is invalid and the withholding agent should not accept it. If the withholding agent receives an incomplete certificate, the withholding agent is required to withhold tax on payments made to the payee until a valid certificate is received. In lieu of a completed certificate on the preprinted form, the withholding agent may accept as a substitute certificate a letter from the payee explaining

why the payee is not subject to withholding. The letter must contain all the information required on the certificate in similar language, including the under penalty of perjury statement and the payee's taxpayer identification number. The withholding agent must retain a copy of the certificate or substitute for at least four years after the last payment to which the certificate applies, and provide it upon request to the Franchise Tax Board.

For example, if an entertainer (or the entertainer's business entity) is paid for a performance, the entertainer's information must be provided. **Do not** submit the entertainer's agent or promoter information.

The grantor of a grantor trust shall be treated as the payee for withholding purposes. Therefore, if the payee is a grantor trust and one or more of the grantors is a nonresident, withholding is required. If all of the grantors on the trust are residents, no withholding is required. Resident grantors can check the box on Form 590 labeled “Individuals — Certification of Residency.”

D Who is a Resident

A California resident is any individual who is in California for other than a temporary or transitory purpose or any individual domiciled in California who is absent for a temporary or transitory purpose.

An individual domiciled in California who is absent from California for an uninterrupted period of at least 546 consecutive days under an employment-related contract is considered outside California for other than a temporary or transitory purpose.

An individual is still considered outside California for other than a temporary or transitory purpose if return visits to California do not total more than 45 days during any taxable year covered by an employment contract.

This provision does not apply if an individual has income from stocks, bonds, notes, or other intangible personal property in excess of \$200,000 in any taxable year in which the employment-related contract is in effect.

A spouse/RDP absent from California for an uninterrupted period of at least 546 days to accompany a spouse/RDP under an employment-related contract is considered outside of California for other than a temporary or transitory purpose.

Generally, an individual who comes to California for a purpose which will extend over a long or indefinite period will be considered a resident. However, an individual who comes to perform a particular contract of short duration will be considered a nonresident.

For assistance in determining resident status,

get FTB Pub. 1031, Guidelines for Determining Resident Status, and FTB Pub. 1032, Tax Information for Military Personnel, or call the FTB at 800.852.5711 or 916.845.6500.

E Military Spouse Residency Relief Act (MSRRA)

Generally, for tax purposes you are considered to maintain your existing residence or domicile. If a military servicemember and nonmilitary spouse have the same state of domicile, the MSRRA provides:

- A spouse shall not be deemed to have lost a residence or domicile in any state solely by reason of being absent to be with the servicemember serving in compliance with military orders.
- A spouse shall not be deemed to have acquired a residence or domicile in any other state solely by reason of being there to be with the servicemember serving in compliance with military orders.

Domicile is defined as the one place:

- Where you maintain a true, fixed, and permanent home
- To which you intend to return whenever you are absent

A military servicemember's nonmilitary spouse is considered a nonresident for tax purposes if the servicemember and spouse have the same domicile outside of California and the spouse is in California solely to be with the servicemember who is serving in compliance with Permanent Change of Station orders.

Note: California may require nonmilitary spouses of military servicemembers to provide proof that they meet the criteria for California personal income tax exemption as set forth in the MSRRA.

Income of a military servicemember's nonmilitary spouse for services performed in California is not California source income subject to state tax if the spouse is in California to be with the servicemember serving in compliance with military orders, and the servicemember and spouse have the same domicile in a state other than California.

For additional information or assistance in determining whether the applicant meets the MSRRA requirements, get FTB Pub. 1032.

F What is a Permanent Place of Business

A corporation has a permanent place of business in California if it is organized and existing under the laws of California or if it is a foreign corporation qualified to transact intrastate business by the SOS. A corporation that has not qualified to transact intrastate business (e.g., a corporation engaged exclusively in interstate commerce) will be considered as having a permanent place of business in California only if it maintains a permanent office in California that is permanently staffed by its employees.

G Withholding Agent

Keep Form 590 for your records. **Do not** send this form to the FTB unless it has been specifically requested.

For more information, contact Withholding Services and Compliance, see General Information H.

The payee must notify the withholding agent if any of the following situations occur:

- The individual payee becomes a nonresident.
- The corporation ceases to have a permanent place of business in California or ceases to be qualified to do business in California.
- The partnership ceases to have a permanent place of business in California.
- The LLC ceases to have a permanent place of business in California.
- The tax-exempt entity loses its tax-exempt status.

The withholding agent must then withhold and report the withholding using Form 592, Resident and Nonresident Withholding Statement, and remit the withholding using Form 592-V, Payment Voucher for Resident and Nonresident Withholding. Form 592-B, Resident and Nonresident Withholding Tax Statement, is retained by the withholding agent

and a copy is given to the payee.

H Publications, Forms, and Additional Information

You can download, view, and print California tax forms and publications at ftb.ca.gov.

To have publications or forms mailed to you or to get additional nonresident withholding information, contact the Withholding Services and Compliance.

WITHHOLDING SERVICES AND
COMPLIANCE MS F182
FRANCHISE TAX BOARD
PO BOX 942867
SACRAMENTO CA 94267-0651

Telephone: 888.792.4900
916.845.4900
Fax: 916.845.9512

OR to get forms by mail write to:

TAX FORMS REQUEST UNIT MS F284
FRANCHISE TAX BOARD
PO BOX 307
RANCHO CORDOVA CA 95741-0307

For all other questions unrelated to withholding or to access the TTY/TDD numbers, see the information below.

Internet and Telephone Assistance

Website: ftb.ca.gov
Telephone: 800.852.5711 from within the United States
916.845.6500 from outside the United States
TTY/TDD: 800.822.6268 for persons with hearing or speech impairments

Asistencia Por Internet y Teléfono

Sitio web: ftb.ca.gov
Teléfono: 800.852.5711 dentro de los Estados Unidos
916.845.6500 fuera de los Estados Unidos
TTY/TDD: 800.822.6268 personas con discapacidades auditivas y del habla



County of El Dorado

OFFICE OF AUDITOR-CONTROLLER

360 FAIR LANE
PLACERVILLE, CALIFORNIA 95667
Phone: (530) 621-5487 FAX: (530) 295-2535

JOE HARN, CPA
Auditor-Controller

BOB TOSCANO
Assistant Auditor-Controller

PAYEE DATA RECORD

(Required in lieu of IRS W-9 when receiving payment from the County of El Dorado)

Version: June 2011

1	INSTRUCTIONS: Complete all information on this form. Sign, date, and return to the address shown at the bottom of this page. Prompt return of this fully completed form will prevent delays in processing payments. Information provided in this form will be used by the County of El Dorado to prepare Information Returns (1099), for withholding on payments to nonresident payees, and for reporting to the Employment Development Department (EDD). See reverse side for more information and Privacy Statement.		
2	PAYEE'S LEGAL BUSINESS NAME (Type or Print)		
	INDIVIDUALS AND SOLE PROPRIETORS – ENTER NAME AS SHOWN ON SSN (Last, First, M.I.)		PHONE NUMBER:
	MAILING ADDRESS		BUSINESS ADDRESS
	CITY, STATE, ZIP CODE		CITY, STATE, ZIP CODE
3	ENTER FEDERAL EMPLOYER IDENTIFICATION NUMBER (FEIN): <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		NOTE: Individuals and sole proprietors are required to provide their SSN (FEIN may be provided in addition to but not in lieu of the SSN)
	<input type="checkbox"/> PARTNERSHIP CORPORATION: <input type="checkbox"/> ESTATE OR TRUST <input type="checkbox"/> MEDICAL (e.g., dentistry, psychotherapy, chiropractic, etc.) <input type="checkbox"/> LIMITED LIABILITY COMPANY <input type="checkbox"/> LEGAL (e.g., attorney services) <input type="checkbox"/> EXEMPT (nonprofit) <input type="checkbox"/> ALL OTHER		
4	<input type="checkbox"/> INDIVIDUAL OR SOLE PROPRIETOR ENTER SOCIAL SECURITY NUMBER: <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
	<small>(SSN required by authority of California Revenue and Tax Code Section 18646)</small>		
5	Applicable <u>only</u> if the business address provided in Part 2 is <u>not</u> a physical California address		
	NOTE: If you are a California nonresident providing services to County of El Dorado in California, seven percent (7%) of the payment will be withheld and remitted to the California Franchise Tax Board (FTB) unless you are exempt or have obtained a waiver from FTB. Mark if any of the following apply: <input type="checkbox"/> Exempt from withholding of California income (attach California Form 590) <input type="checkbox"/> Obtained Franchise Tax Board waiver of State withholding (attach a copy) If you are a California nonresident and charge California sales tax, a valid California sales tax permit number is required: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
6	I hereby certify under penalty of perjury that the information provided on this document is true and correct. Should my residency status change, I will promptly notify the County of El Dorado at the address listed below.		
	AUTHORIZED PAYEE REPRESENTATIVE'S NAME (Type or Print)		TITLE
	SIGNATURE	DATE	TELEPHONE
6	Please return completed form to:		
	Department/Office: <u>County of El Dorado, Procurement & Contracts</u>		
	Mailing Address: <u>360 Fair Lane</u>		
	City/State/Zip: <u>Placerville, CA 95667</u>		
	Telephone: <u>530 621 5830</u> Fax: <u>530 295 2537</u> 13-0158 38 of 152		

PAYEE DATA RECORD

(REVERSE)

<p>1</p>	<p>Requirement to Complete Payee Data Record</p> <p>A completed Payee Data Record is required for payments to all non-governmental entities and will be kept on file at the County of El Dorado Auditor-Controller's Office.</p> <p>Payees who do not wish to complete the Payee Data Record may elect to not do business with the County of El Dorado. If the payee does not complete the form and the required payee data is not otherwise provided, payment may be reduced for federal backup withholding and nonresident State income tax withholding. Amounts reported on Information Returns (1099) are in accordance with the Internal Revenue Code and the California Revenue and Taxation Code.</p>
<p>2</p>	<p>Enter the payee's legal business name. Sole proprietorships must also include the owner's full name. An individual must list his/her full name. The mailing address should be the address at which the payee chooses to receive correspondence. Do not enter payment address or lock box information here.</p>
<p>3</p>	<p>Check the box that corresponds to the payee business type. Check only one box. Corporations must check the box that identifies the type of corporation. The County of El Dorado requires that all parties entering into business transactions that may lead to payment(s) from the County provide their Taxpayer Identification Number (TIN). The TIN is required by the California Revenue and Taxation Code Section 18646 to facilitate tax compliance enforcement activities and the preparation of Form 1099 and other information returns as required by the Internal Revenue Code Section 6109(a).</p> <p>The TIN for individuals and sole proprietorships is the Social Security Number (SSN). Only partnerships, estates, trusts, limited liability corporations and corporations will enter their Federal Employer Identification Number (FEIN).</p> <p>4 Are you a California resident or nonresident?</p> <p>A corporation will be defined as a "resident" if it has a permanent place of business in California or is qualified through the Secretary of State to do business in California.</p> <p>A partnership is considered a resident partnership if it has a permanent place of business in California. An estate is a resident if the decedent was a California resident at time of death. A trust is a resident if at least one trustee is a California resident.</p> <p>For individuals and sole proprietors, the term "resident" includes every individual who is in California for other than a temporary or transitory purpose and any individual domiciled in California who is absent for a temporary or transitory purpose. Generally, an individual who comes to California for a purpose that will extend over a long or indefinite period will be considered a resident. However, an individual who comes to perform a particular contract of short duration will be considered a nonresident.</p> <p>Payments to all nonresidents may be subject to withholding. Nonresident payees performing services in California or receiving rent, lease, or royalty payments from property (real or personal) located in California will have 7% of their total payments withheld for State income taxes. However, no withholding is required if total payments to the payee are \$1,500 or less for the calendar year. Nonresidents who have been granted a waiver on payments of California source income from the California Franchise Tax Board must submit a copy of the waiver.</p> <p>For information on Nonresident Withholding, contact the Franchise Tax Board at the numbers listed below: Withholding Services and Compliance Section: 1-888-792-4900 E-mail address: wscs.gen@ftb.ca.gov For hearing impaired with TDD, call: 1-800-822-6268 Website: www.ftb.ca.gov</p> <p>California nonresidents charging California sales tax are required to provide their California sales tax number.</p>
<p>5</p>	<p>Provide the name, title, signature, and telephone number of the authorized individual completing this form. Provide the date the form was completed.</p>
<p>6</p>	<p>This section must be completed by the department/office requesting the information.</p>
	<p>Privacy Statement</p> <p>Section 7(b) of the Privacy Act of 1974 (Public Law 93-579) requires that any federal, State, or local governmental agency, which requests an individual to disclose their social security account number, shall inform that individual whether that disclosure is mandatory or voluntary, by which statutory or other authority such number is solicited, and what uses will be made of it.</p> <p>It is mandatory to furnish the information requested. Federal law requires that payment for which the requested information is not provided is subject to federal backup withholding and State law imposes noncompliance penalties of up to \$20,000.</p> <p>You have the right to access records containing your personal information, such as your SSN. To exercise that right, please contact the County of El Dorado Auditor-Controller's Office in writing.</p> <p>All questions should be referred to the County of El Dorado Auditor-Controller's Office.</p>

CERTIFICATE OF INSURANCE FORM FOR CONTRACTORS, ARCHITECTS AND/OR ENGINEERS

CERTIFICATE ISSUER PHONE ()	DATE EXECUTED: THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. COMPANIES AFFORDING COVERAGE		
INSURED PHONE ()	COMPANY A LETTER COMPANY B LETTER COMPANY C LETTER COMPANY D LETTER COMPANY E LETTER	COMPANY RATING COMPANY RATING COMPANY RATING COMPANY RATING COMPANY RATING	
PROJECT DESCRIPTION PROJECT TITLE: PROJECT NUMBER: LOCATION:			

THIS IS TO CERTIFY that policies of insurance listed below have been issued to the insured named above for the policy period indicated. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusion and conditions of such policies.

CL	Type of Insurance Coverage	Policy Number	Policy Effective Date	Policy Expiration Date	Limits of Liability (in Thousands)
	GENERAL LIABILITY <input type="checkbox"/> Commercial General Liability <input type="checkbox"/> Occurrence <input type="checkbox"/> Claims Made <input type="checkbox"/> Owner's & Contractor's Protective <input type="checkbox"/> General Aggregate * <input type="checkbox"/> Per Project <input type="checkbox"/> Per Location				GENERAL AGGREGATE \$ PRODUCTS-COMP/OPS AGGREGATE \$ PERSONAL & ADVERTISING INJURY \$ EACH OCCURRENCE \$ FIRE DAMAGE (ANY ONE FIRE) \$ MEDICAL EXPENSES (ANY ONE PERSON) \$ DEDUCTIBLE \$
	ARCHITECT'S AND/OR ENGINEER'S PROFESSIONAL LIABILITY <input type="checkbox"/> Claims Made <input type="checkbox"/> Project				GENERAL AGGREGATE \$ EACH CLAIM \$ DEDUCTIBLE \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> Any Auto <input type="checkbox"/> All Owned Autos <input type="checkbox"/> Scheduled Autos <input type="checkbox"/> Hired Autos <input type="checkbox"/> Non-Owned Autos <input type="checkbox"/> Garage Liability				COMBINED SINGLE LIMIT \$ BODILY INJURY (PER PERSON) \$ BODILY INJURY (PER ACCIDENT) \$ PROPERTY DAMAGE \$ DEDUCTIBLE \$
	EXCESS LIABILITY <input type="checkbox"/> Umbrella Form <input type="checkbox"/> Other Than Umbrella Form				EACH OCCURRENCE \$ AGGREGATE \$
	<input type="checkbox"/> WORKER'S COMPENSATION				-----STATUTORY-----
	EMPLOYER'S LIABILITY				(EACH ACCIDENT) \$ (DISEASE - POLICY LIMIT) \$ (DISEASE - EACH EMPLOYEE) \$
	OTHER <input type="checkbox"/> Installation Floater <input type="checkbox"/> Builder's Risk <input type="checkbox"/>				\$ \$ \$

* The General Aggregate limit, under Limits of Insurance, applies separately to each of the projects away from premises owned by or rented by you.

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS/ADDITIONAL INSURED: The County of El Dorado its officers, officials, employees and volunteers are made additional insured, but only insofar as the operations under this contract are concerned. OTHER ADDITIONAL ISSURED:

CERTIFICATE HOLDER	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED OR TERMINATED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL GIVE THIRTY (30) DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, IN ADVANCE OF THE EFFECTIVE DATE OF SUCH CANCELLATION OR TERMINATION. AUTHORIZED REPRESENTATIVE SIGNATURE, TITLE, TYPED NAME, SSN AND PHONE NUMBER:
--------------------	---

CONTRACTOR'S GUARANTEE

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

BID #13-968-042

As Contractor for the above referenced project, we hereby agree to repair or replace any or all work provided hereunder which is defective due to faulty materials, poor workmanship, or defective equipment at no expense to the County of El Dorado, ordinary wear and tear and unusual abuse or neglect excepted, during the term of the contract and provide the manufacturer one (1) year warranty period from the date of final acceptance of the work.

We further agree to repair or replace any and all adjacent areas which have been damaged or displaced due to our work performed under this contract at no expense to the County of El Dorado during the term of this contract for a period of one (1) year from the date of final acceptance of the work.

If a warranty or guarantee exceeding one (1) year is provided by the supplier or manufacturer of any equipment or materials used in this Project, or if a warranty or guarantee exceeding one (1) year is required elsewhere in these Contract Documents, then the guarantee for such equipment or materials shall be extended for such term. We expressly agrees to act as co-guarantor of such equipment and materials, and we shall supply County with all warranty and guaranty documents relative to equipment and materials incorporated in the job and guaranteed by its suppliers or manufacturers.

We agree that this guarantee and the rights and obligations accruing there from shall be in addition and not by way of limitation in any manner whatsoever to the rights, obligations, warranties or remedies otherwise provided for by law.

In the event of our failure to comply with the above mentioned conditions with (ten) 10 days after being notified in writing by the County of El Dorado, we hereby authorize the County of El Dorado to proceed to have said defects repaired and made good at our expense and we will honor and pay all costs and charges therefore upon written demand.

EXECUTED on this _____ day of _____, 2013.

CONTRACTOR

By _____

Title _____

By _____

Title _____

**PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT
BID #13-968-042**

CONDITIONS OF THE CONTRACT

Article 1

GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 County: The County of El Dorado, a political subdivision of the State of California.

1.1.2 Owner: The County of El Dorado is the Owner and is identified as the Owner in the Contract and these Contract Conditions. The term Owner, and pronouns in place of the same shall mean the County of El Dorado acting by and through its duly authorized representative.

1.1.3 Owner's Representative: The Chief Administrative Office, Facilities Manager, or designated representative.

1.1.4 Architect: The person holding a valid California State Architect's license, whose firm has been designated within the Contract Documents as the Architect to provide services on the Project. When the Architect is referred to within the Contract Documents and no Architect has in fact been designated, then the matter shall be referred to the County and shall be interpreted as Owner's Representative.

1.1.5 Project Manager: Project Manager or such other designated representative of the Owner. The Project Manager has such duties and authority as may be set forth in the Contract Documents.

1.1.6 Contractor: The person or entity identified as such in the Contract and is referred to throughout the Contract Documents as if singular in number. The term Contractor refers to the Contractor or the Contractor's authorized representative.

1.1.7 Inspector: The individual designated by the Owner as the Inspector as set forth in Paragraph 2.1.2.

1.1.8 Subcontractor: Those contractors, of whatever tier, furnishing labor or material, or both, for the Work under the Contract with the Contractor.

1.1.9 Substantial Completion: The stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

1.1.10 Final Acceptance: Conditions upon which the County will accept Work as satisfactorily completed in accordance with the Contract Documents. Requirements include, but are not limited to;

1. All Systems having been tested and accepted as having met requirements of the Contract Documents.
2. All as-built drawings and 2 copies of the manufacturer's product data and installation instructions having been submitted by the Contractor, reviewed by the Architect, and accepted by the Owner.
3. All punch list work, as directed by the Owner, having been completed by the Contractor.
4. Acceptance of the Work by the Purchasing Agent.

1.1.11 Final Payment: The Final Payment shall be the only Payment made to Contractor and shall not be considered to be the payment of any or all of the retention.

1.1.12 Architect's Supplemental Instructions/Instruction Bulletins: A written order of the Architect and reviewed by the Owner's Representative directing the Contractor to provide supplemental instructions,

interpretations, or conduct minor changes in work involving neither extra cost nor extra time and being consistent with the scope and functioning of the project.

- 1.1.13 **Construction Change Directive:** A written order issued by the Architect and signed by the Owner directing a change in the Work and stating a proposed basis for adjustment, if any, of Contract Time or Sum. The Owner may by Change Directive, without invalidating the Contract and without Contractor's agreement, order changes in the Work. This procedure will be used in the absence of agreement between Owner and Contractor, for subsequent inclusion in a Change Order.
- 1.1.14 **Change Order:** A Change Directive signed by the Owner and Contractor stating their agreement upon all of the following: 1) a change in the Work, 2) the amount of the adjustment in the Contract Price, if any, and 3) the extent of the adjustment in the Contract Time, if any.
- 1.1.15 **Contract Documents:** The Contract Documents shall include the documents described in Article 2 of the Contract, including Architect's Supplemental Instructions, Construction Change Directives, and Change Orders.
- 1.1.16 **Work:** The construction and services required by the Contract Documents, including all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.
- 1.1.17 **Project:** The total construction of the Work performed under the Contract Documents.
- 1.1.18 **Plans:** The graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams, specifically the Plans entitled "Placerville Jail Sewer In-Line Shredder Project".
- 1.1.19 **Technical Specifications:** That portion of the Contract Documents Division 1 through 26 consisting of the technical written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- 1.1.20 **Claim:** A demand or assertion by the Contractor seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. Claims must be made by written notice and shall include a demand for the Owner's decision. The responsibility to substantiate claims and to resolve the claims of subcontractors of whatever tier shall rest with the Contractor.
- 1.1.21 **Work Not Included:** Except for such auxiliary work as shown or specified, or is necessary as part of the construction, the following is NOT included in this contract: Any work shown but marked "Not in Contract" (NIC) or otherwise designated to be done under another contract or by Owner.
- 1.1.22 **Furnish (material):** To supply and deliver to the project ready for installation and in operating condition.
- 1.1.23 **Install (service or labor):** To place in final position, complete, anchored, connected, and in operable condition with respect to required codes and/or governing agency requirements.
- 1.1.24 **Provide:** To furnish and install complete. When "Furnish", "Install", or "Provide" is stated, "Provide" is implied.
- 1.1.25 **Construct:** To "Furnish" materials to "Install" in final position, complete, anchored, and connected with respect to required codes, requirements, Contract Documents, and details.
- 1.1.26 **Day(s):** All references to "day" or "days" in these Contract Documents shall be defined as calendar-day or calendar-days.

1.2 CONTRACT DOCUMENTS

1.2.1 One Document: The Contract Documents are one document and any work shown or mentioned shall be performed or furnished. The Contractor admits and agrees that the Contract Documents exhibit the intent and purpose of the Owner in regard to the Work, and that they are not complete in every detail and are to be considered as showing the purpose and intent only; and he further agrees to furnish all labor or material for any detail that is necessary to carry out the intent and purpose of the Specifications without extra charge.

1.2.2 Misuse of Words or Punctuation: The misplacement, addition, or omission of any word, letter, or punctuation mark will not in any way change the intent or meaning of the Contract Documents. Any part of the Work, or any article pertaining thereto which is not specifically set forth in these Contract Documents, but which is necessary for the proper completion of the Work, is to be supplied and set in place at the Contractor's expense, the same as if it had been mentioned in these Contract Documents. The Contractor shall furnish all things necessary to make a good and workmanlike job in accordance with the intent and purpose of the Contract Documents.

1.3 ASSIGNMENT OF CONTRACT

1.3.1 Mutual Consent: Neither party to the Contract shall assign the Contract without the written consent of the other party, nor shall the Contractor assign any moneys due or to become due to him hereunder without the written consent of the Owner.

1.3.2 Assignment Under Anti-Trust Claims: In accordance with Section 4552 of the California Government Code, and Section 7103 of the Public Contract Code, Contractor and subcontractors shall conform to the following requirements:

1. In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, Contractor or subcontractors offers and agrees to assign to the Owner 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 Section 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 Owner tenders Final Payment to the Contractor, without further acknowledgment by the parties.
2. If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Government Code Sections 4550-4554, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery. Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under Government Code Sections 4550-4554 if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

1.4 WAIVER OF "COMMON PRACTICE"

1.4.1 The Contractor shall waive "common practice" and "common usage" as construction criteria wherever the Contract Documents details, plans, technical specifications, governing codes, or ordinances require greater quantity or better quality than common practice or common usage would require.

1.5 EXCESSIVE COSTS

1.5.1 **Failure to Comply with Contract:** If Contractor fails to comply with any Contract requirements, including any required coordination with other contractors, and that failure results in additional costs to Owner, then Contractor shall be liable for such additional costs.

1.5.2 **Construction Methods:** If Contractor's construction methods and techniques result in additional costs to Owner, after notice, such Contractor shall be responsible for cost attributable to his methods and techniques.

Article 2

OWNER

2.1 OWNER'S REPRESENTATIVE

2.1.1 **Owner Representative:** The Owner will be represented by the Owner's Representative who shall oversee the performance of the Contract on behalf of the Owner.

2.1.2 **Owner May Appoint Inspector:** Owner shall be entitled to appoint an agent as Inspector who shall see that the performance of the Work is in strict accordance with the Contract Documents on behalf of the Owner.

2.1.3 **Communication:** In order that the Owner may act upon expert advice and upon good procedure, all communications from the Contractor shall be in writing and will be through said Owner's Representative or Inspector, as the Owner may direct, and all communications and instructions from the Owner to the Contractor will be so routed. The Owner reserves the right to alter this procedure without the consent of the Contractor. All communications not in compliance herewith, shall be considered non-binding on the Owner.

2.2 RIGHTS OF OWNER

2.2.1 **Right to Clean Up:** Subject to the strict prohibition against maintaining a nuisance, if a dispute arises between the Contractor, Subcontractors, or separate contractors as to the responsibility under their respective Contracts for maintaining the premises and surrounding area free from waste materials and rubbish the Owner may, but need not, clean up and allocate the cost among those responsible as the Inspector determines to be just.

2.2.2 **Right to Accept Imperfect Work:** If any part or portion of the Work completed under this Contract is defective and not in accordance with the Plans or Contract Documents, and if the imperfection is judged by Owner to be not of sufficient magnitude or importance so as to make the Work unacceptable, then Owner shall have the right and authority to retain such Work but will make such deductions in Contract Price as may be equitable and reasonable. However, Owner does not by this section; waive any other rights provided for herein.

2.2.3 **Right to do Adjacent Work:** The Owner reserves the right to perform construction or operations on the site of the Work. In doing this Owner may use its own forces or award separate contracts in connection with other construction or operations on the site but not covered by the Contract Documents. Contractor shall defend, indemnify, and hold Owner harmless for costs incurred by Owner that are payable to a separate contractor because of delays, improperly timed activities, or defective construction by the Contractor, unless such costs are incurred due to the sole or active negligence of Owner.

2.2.4 **Right to Finish Contractor's Work:** If the Contractor defaults or neglects to carry out all or any part of the Work in accordance with the Contract Documents, the Owner has the right, exercisable solely at Owner's discretion, to commence and continue completion of the Work with diligence and promptness. In such an event, if the Owner's cost to complete to Work exceeds the remaining balance of the Contract with the Contractor, Contractor shall reimburse the Owner for such excess costs.

2.2.5 **Right of Partial Use of Project:** The Owner may occupy or use any completed or partially completed portion of the Work at any stage, upon agreement of Owner and Contractor.

1. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents.
2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld.
3. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.
4. Unless otherwise agreed upon in writing, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of work not complying with the requirements of the Contract Documents.
5. No claim for acceleration, delay, or hindrance, may be made by Contractor on his own behalf or that of any of his subcontractors, for any delays, accelerations, or hindrances that may arise out of Owner's partial occupancy of the Project.

2.2.6 **Right to Audit:** Contractor shall maintain and make available to the County, State Auditor, or to any of their duly authorized representatives all books, papers, job cost records, detailed cost estimates, claims, and accounts, including payment, property, payroll, personnel, subcontractor records, and financial records related to or which arise out of the Work or under terms of this Contract. Contractor shall maintain such books, records, data and documents in accordance with generally accepted accounting principles and in accordance with these Contract Conditions and federal and state requirements. These books, papers, records, claims, and accounts shall be made available for examination during normal business hours and shall be readily available and accessible at Contractor's principal place of business in California, for audit during normal business hours at such place of business. Contractor shall provide office space, photocopies and other assistance to enable audit or inspection representatives to conduct such audits or inspections. This right to audit books and records directly related to this Contract shall also extend to any first-tier subcontractors employed under this Contract. Contractor shall incorporate this provision in any subcontract entered into as a result of this Contract and shall require its subcontractors to agree to cooperate with the above-listed agencies by making all appropriate and relevant Project records available to those agencies for audit and copying.

All of Contractor's books, papers, job cost records, detailed cost estimates, claims, and accounts, including payment, property, payroll, personnel, subcontractor records, and financial records related to or which arise out of the work or under terms of this Contract shall be retained for access, inspection and/or audit by the County, the State Auditor, or their duly authorized representatives for at least three (3) after County's final payment to Contractor and/or the final resolution of any claims under this Contract. Contractor shall incorporate this provision in any subcontract entered into as a result of this Contract.

2.3 RESPONSIBILITIES OF OWNER

2.3.1 Removal, Relocation, or Protection of Underground Infrastructure: If the Contractor while performing the contract discovers utility facilities not identified by the Owner in the contract plans or specifications, Contractor shall immediately notify the Owner in writing. Owner shall have the sole discretion to perform the repairs or relocation work itself, or to permit the Contractor to do such repairs or relocation work at a reasonable price. In the event that the Owner authorizes the Contractor to perform the work, the parties shall proceed with a written Change Order as set forth in Article 5 herein. Compensation to the Contractor for said costs shall be in accordance with Section 4215 of the Government Code.

Nothing herein shall be construed to require the Owner to locate the presence of any existing services not expressly included in Government Code Section 4215, nor to limit the Owner's rights or remedies set forth therein.

In accordance with the provisions of Section 4215 of the California Government Code, Contractor shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of the Owner or owner of the utility to provide for the removal or relocation of such utility facilities.

Article 3

CONTRACTOR'S RESPONSIBILITIES

3.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS

3.1.1 Reporting Errors in Contract Documents: The Contractor shall carefully study and compare the Contract Documents with each other and shall at once report to the Inspector errors, inconsistencies, or omissions discovered. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency, or omission in the Contract Documents without such notice to the Owner, the Contractor shall assume responsibility for such performance and shall bear all costs for correction.

3.1.2 Reporting Errors in Field Conditions: The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported to the Owner at once.

3.1.3 No Implied Warranty: No warranty is to be implied nor shall any warranty arise by operation of law, or by interpretation of this Contract, that the Plans and Contract Documents are adequate and sufficient to construct the Project.

3.2 SUPERVISION AND CONSTRUCTION PROCEDURES

3.2.1 Supervision of Work: The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract, unless Contract Documents give other specific instructions concerning these matters.

3.2.2 Acts of Employees and Agents: The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor.

Acts Do Not Waive Contractor's Obligation: The Contractor shall not be relieved of obligations to perform the Work in strict accordance with the Contract Documents either by activities or duties of the

Owner's Representative or the Inspector in the administration of the Contract, or by tests, inspections, or approvals required or performed by persons other than the Contractor.

3.3 PROSECUTION OF WORK

3.3.1 Time of the Essence: It is expressly understood and agreed that the time of beginning, rate of progress, and time of completion of the Work are of the essence. The time for completion of this contract shall be **110 working days** commencing from the date shown on the Contractor Notice To Proceed. The time of completion includes the lead time of approximately 60 working days to fabricate the in-line shredder manholes.

3.3.2 Owner and Contractor recognize that time is of the essence of the Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified, plus any extensions thereof. They also recognize the delays, expense, and difficulties involved with proving in a legal proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner the sum of **One Thousand dollars (\$1,000) per day**, as liquidated damages and not as a penalty, for each and every calendar day's delay in finishing the Work in excess of the contract time prescribed herein.

Owner and Contractor recognize that the Jail sewer connections are not to be shut down more than two hours for each grinder manhole installation. Jail sewer disruption shall be scheduled and coordinated with the County. Sewer disruption shall be scheduled for off-peak hours unless otherwise approved by the County. Contractor shall be responsible for damages associated with a Jail sewer shut down lasting longer than two hours.

3.3.3 Work During Operational Hours: The Jail will be operational during the Work. The Contractor shall not interfere or hinder Jail operations. The Contractor shall keep all equipment and materials within designated work areas and out of hallways and doorways. Emergency exit routes shall be maintained at all times.

3.3.4 Construction Schedule: The Contractor shall coordinate the final critical path method (CPM) construction schedule with the Owner. The CPM schedule is required to be submitted within five (5) days of issuance of Notice to Proceed. The CPM schedule will be for Owner's information only. Silence or inaction with regard to Contractor's schedule shall not be construed as acquiescence or acceptance of the schedule as being binding on Owner. Contractor's schedule shall provide for the completion date not to exceed nor shall it provide for the completion date earlier than the time limits for completion set forth in the Contract Documents. Float, whether for the entire Project or for specific tasks therein, shall be deemed to be for the benefit of the Owner. The Contractor shall keep the construction schedule current, and shall submit weekly updates to the Owner's Representative and Inspector, if any. The Contractor shall further prepare and keep current a schedule of submittals which is coordinated with the construction schedule, and which allows the Owner reasonable time to review the submittals.

3.4 SUBMITTALS

3.4.1 Use of Listed Manufacturers; Review of "Or Equals": Contractor shall utilize only the manufacturer designated in its Proposal for major equipment items listed therein. In accordance with the provisions of Section 3400 of the California Public Contract Code, but subject to Subsection (b) thereof, Contractor shall within two (2) business days following the bid opening submit any substitution requests and shall submit data substantiating a request for a substitution of an "or equal" item. Failure to submit such substitution requests and substantiating data within two (2) business days following the bid opening shall constitute submission of a non-responsive bid.

3.4.2 Excessive Submittal Reviews: The cost of reviewing submittals shall be the Owner's responsibility, except that Contractor shall be responsible for the cost of the third and subsequent review of any one submittal.

3.4.3 Submittal Process: Contractor shall submit all submittal specified herein within 5 business days of the date of the Notice of Award letter.

3.5 STATE AND FEDERAL LABOR REQUIREMENTS

3.5.1 Hours of Work:

1. Eight (8) hours of labor shall constitute a legal day's work upon all work done hereunder, and it is expressly stipulated that no workman employed at any time by the Contractor, or by any subcontractor under this Contract, upon the Work, shall be required or permitted to work thereon more than eight (8) hours in any one (1) calendar day and/or more than forty (40) hours in any one (1) calendar week except as provided in Section 1815 of the Labor Code of California, and it is further expressly stipulated that for each and every violation of said last named stipulation, said Contractor shall forfeit, as penalty to the said Owner, \$25.00 for each workman employed in the execution of this Contract, or by any subcontractor under this Contract, for each calendar day during which said workman is required or permitted to labor more than eight (8) hours in any one (1) calendar day or more than forty (40) hours in any one (1) calendar week in violation of the provisions of said Labor Code.
2. In accordance with the provisions of the Labor Code of the State of California, the Contractor, and each subcontractor, shall also keep an accurate record showing the names and actual hours worked for all workers employed by him in connection with the Work contemplated by the Agreement, which record shall be open at all reasonable hours to the inspection of the Owner or its officers or agents, and to the Chief of the Division of Labor Statistics and Law Enforcement or the Department of Industrial Relations, his deputies or agents.

3.5.2 Apprenticeship Employment:

1. Pursuant to the provisions of Section 1777.5 as amended, the Contractor or subcontractor employing tradesmen in any apprenticeable occupation shall apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a Certificate of Approval. The certificate will also fix the ratio of apprentices to journeymen that will be used in the performance of the Contract. All requirements and exceptions to those requirements set forth herein for Apprenticeship Employment are contained in Labor Code Section 1777.5 and are available from the applicable Joint Apprenticeship Committee.
2. The Contractor shall make contributions to funds established for the administration of the apprenticeship programs if he employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.
3. The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

3.5.3 Wage Rates:

1. Pursuant to Labor Code Section 1770 et seq., each laborer or mechanic of Contractor or any subcontractor engaged in work on the Project under this Contract shall be paid not less than the hourly wage rate of per diem wages set forth in the prevailing wage rate schedule published by the Director of Industrial Relations

regardless of any contractual relationship which may be alleged to exist between Contractor or any subcontractor and such laborers and mechanics.

2. Any laborer or mechanic employed to perform work on the Project under this Contract, which work is not covered by any of the foregoing classifications, shall be paid not less than the prevailing rate of per diem wages specified herein for the classification which most nearly corresponds to the work to be performed by him.
3. The foregoing specified prevailing wage rates are minimum rates only, and the Contractor may pay any wage rate in excess of the applicable rate contained in this Contract.
4. Pursuant to Labor Code Section 1775, the Contractor as a penalty to the Owner shall forfeit \$50.00 for each calendar day, or portion thereof for each worker paid less than prevailing rate established by the Department of Industrial Relations for such work or craft in which such worker is employed. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which the worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor.
5. An error on the part of an awarding body does not relieve the Contractor from responsibility for payment of the prevailing rate of per diem wages and penalties pursuant to Labor Code Sections 1770 - 1775.
6. All Contractors and subcontractors are subject to the provisions of Sections 1810-1814 of the California Labor Code which provide that the maximum hours a worker is to be employed is limited to eight (8) hours a day and forty (40) hours a week and the Contractor or subcontractor shall forfeit, as a penalty, \$25.00 for each worker employed in the execution of the Contract for each calendar day during which a worker is required or permitted to labor more than eight (8) hours in any calendar day or more than forty (40) hours in any calendar week and is not paid overtime.
7. Section 1815 of the California Labor Code requires that notwithstanding the provisions of Sections 1810-1814, employees of Contractors who work in excess of eight (8) hours per day and forty (40) hours per week shall be compensated for all hours worked in excess of eight (8) hours per day at not less than 1-1/2 times the basic rate of pay.
8. In the case of federally funded projects, where federal and state prevailing wage requirements apply, compliance with both is required. This project is funded in whole or part by federal funds. Contractor's attention is directed to the requirements of, and compliance with the Copeland Act (18 U.S.C. 874 and 29 CFR Part 3), the Davis-Bacon Act (40 U.S.C. 276a to 276a-7 and 29 CFR Part 5), and the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330 and 29 CFR Part 5). (NOT APPLICABLE)
9. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, Contractor and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by Contractor and subcontractors, Contractor and subcontractors shall pay not less than the federal minimum wage rate which most closely approximates the duties of the employees in question. (NOT APPLICABLE)
10. Interested parties can obtain the current wage information by submitting requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco CA 94142-0603, Telephone (415) 703-4708 or by referring to the website at <http://www.dir.ca.gov/dlsr/PWD>. The rates at the time of the bid advertisement date of a project will remain in effect for the life of the project in accordance with the California Code of Regulations, as modified and effective January 27, 1997.

11. Copies of the applicable state prevailing wage rates are on file with the County of El Dorado, Chief Administrative Office, Facilities Division, 3000 Fairlane Court, Placerville, CA 95667, and they are available to any interested party on request.

3.5.4 Certified Payroll: As required under the provisions of Labor Code Section 1776 Contractor and subcontractors shall keep accurate payroll records:

1. The payroll records shall show the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee by him or her in connection with the Project.
2. A certified copy of all payroll records enumerated above shall be available for inspection at all reasonable hours at the principal office of the Contractor as follows:
 - a. Make available or furnish to the employee or his or her authorized representative on request.
 - b. Make available for inspection or furnished upon request to a representative of the Owner, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.
 - c. Make available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the Owner, the Division of Labor Standards Enforcement, or the Division of Apprenticeship Standards. The requesting party shall, prior to being provided the records, reimburse the costs of preparation by the Contractor, subcontractor, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the Contractor.

3.5.5 Discrimination In Employment: No discrimination shall occur in the employment of persons upon the Work because of race, color, sex, national origin, or ancestry or religion of such persons.

3.5.6 Convict-Made Materials: Except as may be provided by law, the Contractor agrees that no materials manufactured or produced in a penal or correctional institution shall be incorporated in the construction under this Contract.

3.6 TAXES

3.6.1 Contractor Pays Taxes: The Contractor and subcontractors shall pay all local, state, and federal taxes upon labor or materials involved in their branch of the Work, cost of same to be included in the Contract price.

3.7 COMPLIANCE WITH LAW AND LOCAL REQUIREMENTS

3.7.1 Regulations: The Contractor and all subcontractors shall conform to and abide by all city, county, and state laws, ordinances, rules, and regulations, as the same pertain to the Work contemplated by said Plans and Contract Documents.

3.7.2 Permits, Licenses, and Fees: The County shall procure and pay for all permits and inspection fees that may be required to commence, carry on, and complete the Contract. Contractor shall be responsible for all applicable license fees.

The County has received a building permit for this project. The Contractor shall be responsible for following the provisions of the permit. See Appendix A for a copy of the permit.

3.7.3 **Patent Rights, Copyrights, Trade Names, and Royalties:** The Contractor shall indemnify and save harmless the Owner and all persons acting under him for all liability on account of any patent rights, copyrights, or trade names which may affect the articles or materials or their application under the Contract Documents. The Contractor shall pay all royalties, or other charges that may arise, due to methods, types of construction, processes, materials or use of equipment, and shall hold the Owner harmless from any charges whatsoever which may arise, and shall furnish written assurance, satisfactory to the Owner, that such charges have been paid.

3.8 GUARANTEE

3.8.1 **Final Guarantee:** The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year. Contractor warrants and guarantees for a period of one year from the date of the Notice of Acceptance that the Work is free from all defects due to faulty materials or workmanship and Contractor shall promptly make such corrections as may be necessary, including repairs of any damage to other parts of the Work resulting from such defects. Owner will give notice of observed defects with reasonable promptness. In the event that Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects within ten (10) calendar days after being notified in writing by Owner, Owner may do so and charge Contractor the cost thereby incurred.

3.8.2 **Extended Guarantees:** If a guaranty exceeding one year is provided by the supplier or manufacturer of any equipment used in this Project, then the guarantee for such materials shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials, and Contractor shall supply Owner with all warranty and guaranty documents relative to equipment and materials incorporated in the job and guaranteed by their suppliers or manufacturers.

3.9 WARRANTY

3.9.1 **Contract Warranty:** The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new, unless otherwise required or permitted by the Contract, that the Work will be free from defects or flaws and is of the highest quality of workmanship and that the Work will conform with the requirements of the Contract. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

3.10 INDEMNIFICATION

3.10.1 **Owner Not Liable for Damages:** The Owner or its authorized representative shall not in any way or manner be answerable or suffer loss, damage, expense, or liability for any loss or damage that may happen to said Work, or part thereof, or in or about the same during its construction and before acceptance and the said Contractor shall assume all liabilities of every kind or nature arising from said Work, either by accident, negligence, theft, vandalism, or any cause whatever; and shall hold the Owner and its authorized representatives harmless from all liability of every kind and nature arising from accident, negligence, or any cause whatever, other than for the active negligence of the Owner, its officers, agents and employees.

3.10.2 **Owner Not Liable for Debts:** Indebtedness incurred for any cause in connection with this Work must be paid by the Contractor, and the Owner is hereby relieved at all times from any indebtedness or claim other than the Contract price.

3.10.3 **Indemnity:** To the fullest extent allowed by law, Contractor shall defend, indemnify, and hold the County and its officers, directors, and employees, harmless against and from any and all claims, suits, losses, damages, and liability for damages, including attorney's fees and other costs of defense brought for or on account of injuries to or death of any person, including but not limited to, workers and the public, or on account of injuries to or death of County employees or damage to property, or any economic, consequential or special damages which are claimed or which shall in any way arise out of or be connected

with Contractor's services, operations or performance hereunder, regardless of the existence or degree of fault or negligence on the part of the County, the Contractor, subcontractors or employees of any of these, except for the active, or sole negligence of the County its officers and employees, or where expressly prescribed by statute.

The duty to indemnify and hold harmless the County specifically includes the duties to defend set forth in Section 2778 of the Civil Code. The insurance obligations of Contractor are separate, independent obligations under the Contract Documents, and the provisions of this defense and indemnity are not intended to modify nor should they be construed as modifying or in any way limiting the insurance obligations set forth in the Contract Documents.

3.10.4 Environmental Indemnification: To the fullest extent allowed by law, from and after recording of the Notice of Acceptance, Contractor shall indemnify, defend, and save harmless Owner from all losses or damages resulting from injury to or death of any person and damage to property, and any fine, which is occasioned by or arises out of any breach of Environmental and Toxics Warranty, representations, or covenants of Contractor under this Contract. Contractor further agrees to indemnify and hold harmless Owner, its officers, employees, and agents, from and against any and all liability as follows:

1. Including all foreseeable and all unforeseeable consequential damages, directly or indirectly arising out of the use, generation, storage, or disposal of hazardous materials in any location by Contractor, and
2. Including, without limitation, the cost of any required or necessary repair, cleanup, or detoxification and the preparation of any closure or other required plans, whether such action is required or necessary prior to or following filing of the Notice of Acceptance to the full extent that such action is attributable, directly or indirectly, to the presence or use, generation, storage, release, threatened release, or disposal of hazardous materials by any person on the Project prior to filing of the Notice of Acceptance. Contractor's obligations pursuant to the foregoing indemnity shall survive the filing of the Notice of Acceptance of the Project.
3. This agreement as to indemnity and reimbursement as above set forth to be undertaken by the Contractor shall survive the performance of the remainder of said Contract and shall remain in full force and effect notwithstanding such performance.
4. The foregoing duties of indemnity shall not apply to loss, damage, expense, or liability caused solely by the active negligence of the Owner or the Owner's agents, servants or independent contractors.

3.11 WORK REQUIREMENTS

3.11.1 Conduct of Work: The Contractor shall confine the storage of his equipment and materials to limits as designated. He shall at all times exercise due caution and provide all necessary barricades and other safety equipment around the Work to protect the general public from injury to person and property during the entire time of performance of the Work. The Contractor shall not create excessive dust or noise.

3.11.2 Maintenance of Site: Strict prohibition against committing nuisances in or about the Work shall be maintained, and the Contractor shall not in any way obstruct or interfere with movements of traffic on any public right of way without first obtaining the necessary approval of the proper public agency.

3.11.3 Clean Up of Site: The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

3.11.4 Cutting and Patching:

1. The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.
2. The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.12 SUBCONTRACTORS

3.12.1 Contractor Responsible for Subcontractor's Acts: Contractor shall be fully responsible to Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

3.12.2 Contractor's Subcontract: Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to Contractor by the terms of the Contract Documents insofar as applicable to the Work of subcontractors and to give Contractor the same power as regards terminating any subcontract that Owner may exercise over Contractor under any provisions of the Contract Documents. The percentage of retention withheld from any subcontractor by the Contractor shall not exceed the percentage of retention withheld from the Contractor as provided herein.

3.13 SUPERINTENDENT

3.13.1 Work Superintendent: The Contractor will employ and maintain on the worksite a qualified supervisor or Superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the sites. The Superintendent shall have full authority to act on behalf of the Contractor, and all communications given to the Superintendent shall be as binding as if given to the Contractor. The Superintendent shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.

3.14 LABOR AND MATERIALS

3.14.1 Skilled Labor: All labor must be especially skilled for each kind of work, and must be thorough and first class in all respects. Any person whom the Inspector or Owner may deem incompetent or disorderly shall be promptly discharged from the Project and not re-employed.

3.14.2 Quality of Materials: All materials used on this Contract shall be new and the best market quality, unless specified or shown otherwise. All Work executed under this Contract shall be done in the best, most thorough, substantial and workmanlike manner and without flaws. All materials and labor shall be subject to the approval of the Inspector as to its quality and fitness, and shall be immediately removed if it does not meet with his approval. The Inspector may refuse to issue the Certificate for Payment until all defective materials or work have been removed and other material of proper quality substituted therefore. All removal and replacement with same shall be done at the Contractor's expense. Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer.

Article 4

ADMINISTRATION OF CONTRACT

4.1 ADMINISTRATION OF CONTRACT

4.1.1 Contract Communications: Unless otherwise provided in the Contract or when direct communications have specifically been authorized, all parties shall communicate through the Owner's Representative or the Inspector if the Owner so directs. Communications by and with the subcontractors and material suppliers shall be through the Contractor. Communications by Contractor to separate contractors, architect, or Project Manager shall be through the Owner's Representative.

4.1.2 Control of Work: The Owner's Representative or the Inspector will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. The Owner's Representative or the Inspector will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Owner's Representative or the Inspector will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

4.1.3 Recommendation for Payments: Based on his or her observations and evaluations of the Contractor's Applications for Payment, the Owner's Representative will review amounts due the Contractor and will recommend to Owner, payments to Contractor as set forth in the section entitled CERTIFICATION FOR PAYMENTS.

4.1.4 Inspector's Authority: The Inspector will have the authority to stop work whenever necessary to ensure a proper execution of the Work. The Inspector will also have authority to reject Work which does not conform to the Contract Documents. Whenever the Inspector considers it necessary or advisable for implementation of the intent of the Contract Documents, the Inspector will have authority to require additional inspection or testing of the Work in accordance with the following section whether or not such Work is fabricated, installed, or completed. However, neither this authority of the Inspector nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Inspector to the Contractor, subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work. In the event an Inspector is not appointed by the Owner, the Owner's Representative shall have the authority set forth herein.

4.2 INSPECTION AND TESTING

4.2.1 Advance Notice: Contractor shall provide Owner's Representative seventy-two (72) hours notice prior to beginning work at a specific location and for a specific department. Contractor shall notify Owner's Representative and Inspector twenty four (24) hours prior to any day in which Contractor will 1) require an inspection of any portion of the Work, and 2) work in excess of eight (8) hours or any time Contractor intends to work weekends. Any work not performed subject to inspection will not be accepted and will be rejected and/ or ordered removed by Owner, or Inspector.

4.2.2 Access to Work: The Owner's Representative, the Architect, the Project Manager, and the Inspector will at all times have access to the Work. In addition, authorized representatives and agents of any participating Federal or State Agency shall be permitted to inspect all Work, materials, payrolls, and records on personnel, invoices of materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof.

4.2.3 Costs of Tests: The Owner shall bear all costs related to testing for conformance of the Work to the Contract requirements. However, if the Contractor has called for any testing, and that test fails, subsequent tests, and all related costs, shall be borne by the Contractor.

4.2.4 Preparation of Change Directives/Orders: The Owner's Representative or the Inspector, if one is appointed, will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in the section entitled CHANGES IN WORK.

4.3 CLAIMS

4.3.1 Concealed or Unforeseen Conditions: It is understood by both parties that Contractor has made a pre-contract investigation of the site. All concealed, unforeseen, or materially differing conditions are the responsibility of the Contractor in the absence of an actual material, intentional misrepresentation by the Owner as to the conditions on the site. Contractor shall give written notice of any conditions encountered at the site which are unforeseen, concealed, or materially different from those set forth in the Plans or Contract Documents, or ordinarily encountered and generally recognized as inherent in the Work. Such written notice shall be given within five (5) days of his discovery of any such facts.

4.3.2 Notice of Discovery of Hazardous Waste or Unusual Conditions:

1. The Contractor shall promptly, and before the following conditions are disturbed, notify the Owner in writing, in the event the Contractor encounters any of the following:
 - a. Material that the Contractor believes may be hazardous waste, as defined in section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
 - b. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in the contract.
2. The Owner shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work shall issue a change order under the procedures described herein.
3. In the event a dispute arises between the Owner and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for in the contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the Contractor and the Owner.

4.3.3 Time Limits on Claims: Claims by Contractor must be made within ten (10) calendar-days after occurrence of the event giving rise to such Claim, except that claims made due to delay or hindrances which Contractor claims was caused by Owner shall be made within five (5) calendar-days after occurrence of the event giving rise to such Claim. Claims must be made by written notice. Failure to make such claim in writing in the time set forth herein shall bar Contractor from recourse for such claim. All claims must be filed on or before the payment date of Final Payment.

4.3.4 Claims for Additional Costs:

1. If Contractor wishes to make a Claim for an increase in the Contract Price, he shall give the Owner written notice thereof within the time set forth in Paragraph 4.3.3. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall, as soon as possible, advise Owner of his intent to do the Work.

2. Increases in Contract Price due to Claims shall be calculated based on the Cost Reimbursement method detailed in Paragraph 5.4.1.3.
3. Under no circumstances shall Contractor recover any administrative overhead costs or recover on the basis of any "Home Office" damages formula, "Total Cost" recovery formula, or any other such formula.

4.3.5 Claims for Additional Time:

1. If the Contractor wishes to make Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate probable effect of delay on progress of the Work.
2. If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction.
3. The Owner shall not be liable for any damages on account of any reasonable delay or hindrance of the Owner. However, Contractor shall be entitled to an extension of time for any delay or hindrance caused by the Owner. Any delay or hindrance by Owner which is unreasonable and not within the contemplation of the parties may subject Owner to a claim for damages. Contractor shall make any claims in writing within the time set forth in Paragraph 4.3.3., for any unreasonable delay or hindrance caused by Owner, and specifying the cause thereof as required in paragraph "Submittal of Claims".

4.3.6 Submittal of Claims: Any disputes relating to this Contract, or its breach, which is not disposed of by agreement shall be promptly submitted as a claim to the Owner's Representative who shall issue a written response on the dispute. Claims shall be submitted by the Contractor to the Owner's Representative with adequate supporting data and include a demand for the Owner's Representative's decision. Adequate supporting data shall include, but is not limited to, a statement of the reasons for the asserted entitlement, the certified payroll, invoice for material and equipment rental, and an itemized breakdown of any adjustment sought.

4.3.7 Submission Under Penalty of Perjury: The Contractor shall certify, at the time of submission of a claim, as follows:

"I certify under penalty of perjury under the laws of the State of California, that the claim is made in good faith, that the supporting data are accurate and complete, and that the amount requested accurately reflects the contract adjustment for which the Owner is liable.

By: _____
“(Contractor's signature)”

4.4 DISPUTES RESOLUTION

4.4.1 Continue Work During Dispute: In the event of any dispute between the Owner and the Contractor, the Contractor will not stop Work but will prosecute the work diligently to completion in the manner directed by the Owner, and the dispute shall be resolved as set forth herein after completion of the Work. However, all disputes must be submitted by Contractor in accordance with the subsequent provisions of this section.

4.4.2 Requirements for Filing a Claim: For any claim subject to this Article, the following requirements apply: the claim shall be in writing and include the documents necessary to substantiate the claim. Claims must

be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by this contract for the filing of claims.

1. For claims of less than fifty thousand dollars (\$50,000.00), the Owner shall respond in writing to any written claim within forty five (45) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claims or relating to defenses or claims the Owner may have against the Contractor, any additional documentation supporting the claim or relating to defenses to the claim the Owner may have against the Contractor.

If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the Owner and the Contractor.

The Owner's written response to the claim, as further documented, shall be submitted to the Contractor within fifteen (15) days after receipt of the further documentation or within a period of time not greater than that taken by the Contractor in producing the additional information, whichever is greater.

2. For claims of over fifty thousand dollars (\$50,000.00) and less than or equal to three hundred seventy-five thousand dollars (\$375,000.00), the Owner shall respond in writing to all written claims within sixty (60) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to the defenses or claims the Owner may have against the Contractor.

If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the Owner and the Contractor.

The Owner's written response to the claim, as further documented, shall be submitted to the Contractor within thirty (30) days of receipt of the further documentation, or a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater.

3. If the Contractor disputes the Owner's written response, or the Owner fails to respond within the time prescribed, the Contractor may so notify the Owner, in writing, either within fifteen (15) days of receipt of the Owner's written response or within fifteen (15) days of Owner's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the Owner shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute.
4. If following the meet and confer conference the claim or any portion remains in dispute, the Contractor may file a claim pursuant to Chapter 1 (commencing with section 900) and Chapter 2 (commencing with section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code, and in accordance with Section 20104.2 of the Public Contract Code.

4.4.3 Owner's Review of Claim: The Owner's Representative shall review the facts pertinent to the claim, secure assistance from legal and other advisors, coordinate with the contract administrators, and promptly provide a written response. The response shall be furnished to the Contractor by certified mail, return receipt requested, or any other method that provides evidence of receipt. The Owner's Representatives' response shall be final and conclusive except as is otherwise provided herein.

4.4.4 Claims Exempt from Review: The procedures and remedies provided in this Section 4.4 do not apply to:

1. Any claims by the Owner.
2. Any claim for or respecting personal injury or death or reimbursement or other compensation arising out of or resulting from liability for personal injury or death.

3. Any claim or dispute relating to stop payment requests or stop notices.
4. Any claim related to the approval, refusal to approve, or substitution of subcontractors, regardless of tier, and suppliers.

4.4.5 Suit in El Dorado County Only: Any litigation arising out of this Contract shall be brought in El Dorado County. The Owner and the Contractor shall follow procedures established for all civil actions filed to resolve claims pursuant to Public Contract Code section 20104 et seq., including but not limited to section 20104.4.

4.4.6 Payment of Undisputed Portion of Claim: Payment by Owner of undisputed portion of claim; interest on arbitration award or judgment.

1. Owner shall pay Contractor such portion of a claim which is undisputed except as otherwise provided in the contract.
2. In any suit filed pursuant to Public Contract Code section 20104.4, the provisions of section 20104.6 shall apply.
3. The rate of interest payable on unpaid and undisputed claims shall be 6 percent per annum. Interest shall begin to accrue 61 days after the Contractor submits to the Owner information in sufficient detail to enable the Owner to accept the claim statement.
4. The rate of interest payable on any judgment or award in arbitration shall not exceed 6% per annum in accordance with Civil Code Section 3287 et seq.

Article 5

CHANGES IN WORK

5.1 WAIVER

5.1.1 Waivers of Contract Provisions: It is expressly understood and agreed that no waiver granted by the Inspector or the Owner of any term, provision, or covenant of this Contract shall constitute a precedent for breach of the same or any other terms, provisions, or covenants of this Contract.

5.2 CHANGES

5.2.1 Owner May Order Changes in Work: The Contractor agrees that the Owner, without invalidating the Contract, may order changes in Work by altering, adding to, or deducting from the Work, the Contract Amount and Time being adjusted according to the provisions of Section 5.4 and Section 5.5. Contractor agrees to enter into a modification of his original Contract for such changes.

5.2.2 Cost Proposals: Upon request of the Owner for a quotation on the change to the Work, the Contractor shall promptly submit to Owner's Representative, and the Inspector, if one is appointed, in writing a detailed breakdown of the work and of the amount of deduction or addition claimed. In no case shall Cost Proposals be provided later than ten (10) calendar days from the date requested. The Owner's request for quotations on alterations to the Work shall not be considered authorization to proceed with the work prior to issuance of a Change Order, nor shall such request justify any delay in existing work. If Contractor fails to provide Cost Proposals within ten (10) calendar days, Owner may prepare the Cost Proposal based on estimates of labor, materials, and equipment. This proposal, prepared by Owner, shall be binding on the Contractor, will become the basis for Contract Price adjustment, and shall not be subject to dispute or claim.

5.2.3 **Contract Change Instrument:** Changes in work involving a change in Contract Price or Contract Time shall be done only pursuant to an Architect's Supplemental Instructions, Change Order, or Construction Change Directive as set forth below in this article.

5.2.4 **Changes Shall Conform to Contract:** Changes in work shall be performed in conformance with applicable provisions of the Contract Documents, and the Contractor shall proceed promptly unless otherwise provided in the Architect's Supplemental Instructions, Change Order, or Change Directive.

5.3 CONTRACT CHANGE INSTRUMENTS

5.3.1 **Architect's Supplemental Instructions (ASI):** The Owner's Representative or the Architect may order minor changes in work by use of an Architect's Supplemental Instruction. These minor changes will involve neither changes in the Contract Price or Contract Time. If the Contractor disagrees that the change does not involve a change in cost or time, then a Change Order or Change Directive shall be used.

5.3.2 **Change Order (CO):** The Change Order shall be used in cases where Owner and Contractor agree on the change in work, the amount of or method of computing the Contract Amount, and the amount of adjustment in Contract Time.

5.3.3 **Construction Change Directive (CCD):** In the event that the Owner and Contractor do not agree on the proposed change in work, and/or the proposed adjustment of Contract Price and Time, or in the event it is essential that the Contractor proceed expeditiously and without delay, then Owner may, by issuance of a Construction Change Directive, order changes in work, and the Contractor shall promptly proceed with the change in work involved.

1. **Acceptance of Change Directive:** If Contractor agrees with the Change Directive, the Contractor shall by his signature thereon, indicate his acceptance of the terms of the Directive, including adjustments to price and time, and the Change Directive shall then be followed by a Change Order.
2. **Non-Acceptance of Change Directive:** If the Contractor disagrees with the method of computing an increase in Contract Price, then the amount of adjustment shall be computed by the Cost Reimbursement method detailed in Basis for Adjustment. Disagreements with amounts or credits, under the Cost Reimbursement method, or time, shall be considered a dispute, and processed under the section on Disputes Resolution.

5.4 BASIS OF ADJUSTMENT

5.4.1 **Methods of Adjustment:** The amount of adjustments to Contract Price, whether a credit or payment, shall be computed by one of the methods detailed below. The method used shall be at the sole determination of the Owner.

1. **Unit Prices:** Those prices stipulated in the Bid Proposal shall be utilized where they are applicable. In the event the change in original quantity is in excess of twenty five (25) percent of the original bid quantity, and the total dollar value of that bid is greater than \$5,000, the Owner shall review the unit price to determine if a new unit price shall be renegotiated. Unit prices for new items shall be negotiated and mutually agreed upon.
2. **Lump Sum:** A total lump sum for the Work negotiated and mutually acceptable to the Contractor and Owner. Lump sum quotations for modifications to the Work shall include substantiating documentation with an itemized breakdown of Contractor's and subcontractor's costs, including labor, materials, rentals, approved services, overhead, and profit all calculated as specified in the Cost Reimbursement method which follows.

3. **Cost Reimbursement (Extra Work):** In this method, the payment for Extra Work shall be made on a time and expense basis that is on an accounting of the Contractor's forces, materials, equipment, and other items of cost as required and used to do the Work. Payment will be made for the documented actual cost of the following:
 - a. Costs of direct labor, excluding supervisory personnel, including social security, old age and unemployment insurance, fringe benefits required by agreement, labor insurance and labor taxes established by law.
 - b. Costs of materials, supplies, and equipment, including cost of transportation and sales tax, whether incorporated if paid for by the Contractor or his subcontractor.
 - c. Rental costs, prevailing in the area, of machinery and equipment for the actual time used, and including transportation costs for items having value in excess of \$100.00.
 - d. Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.

To the above cost the Contractor shall be allowed a markup of twenty (20) percent on direct labor charges and fifteen (15) percent for all other cost items. When any or all of the Extra Work is done by one of the Contractor's subcontractors, the markups set forth above shall be applied to the subcontractor's actual costs to which a five (5) percent markup shall be allowed the Contractor. These markups shall be considered to be full compensation, covering the cost of general supervision, administration, overhead, profit, and any and all other general expenses, including, but not limited to, uniforms, hand tools, safety equipment, travel and lodging.

5.5 EXTENSION OF TIME FOR COMPLETION

- 5.5.1 **Contractor Delayed or Hindered:** Should the Contractor be delayed or hindered in the completion of the Work by the neglect of the Owner, or by fire, by strikes, lockouts, embargoes or earthquakes, and any other causes the Inspector approves as not having been reasonably foreseeable at the time of execution of the Contract Documents, then the time allowance herein fixed for the completion of the Work shall be extended for a period equivalent to the time lost by reason of any or all of the causes aforesaid. Time extensions must be requested in accordance with Section 4.3.
- 5.5.2 **Agreement on Time Extension:** In addition, the Contractor and the Owner reserve the right to mutually agree in writing upon an extension of time for completion for causes other than enumerated above.
- 5.5.3 **Time Extension Not Waiver:** The granting of an extension of time by the Owner for performance by the Contractor shall not operate as a waiver or stop the Owner from claiming damages due to any other delays, prior or subsequent, which were not approved by the Owner as provided herein.

Article 6

PAYMENTS AND COMPLETION

6.1 GENERAL

- 6.1.1 **Contract Price:** The Contract Price is stated in the Contract is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

6.1.2 **Waiver:** Neither the acceptance of the Work by the Owner nor the payment of any part or all of the sum due the Contractor hereunder shall constitute a waiver by the Owner of any claim which the Owner may have against the Contractor or Surety under this Contract or otherwise.

6.1.3 **Manner of Paying Warrants:** Payment becomes due under the terms of this Contract in the manner prescribed by law. The Auditor shall cause a warrant for the Certified amount to be drawn upon the proper fund of the Treasurer of the Owner, which warrant shall be approved and issued to Contractor within that period of time customarily required to process said warrants in the ordinary course of Owner's business..

6.2 APPLICATIONS FOR PAYMENT

6.2.1 **Submittal of Applications:** The Contractor shall submit to the Owner OR Owner's Representative, an Application for Payment form, which shall be provided by Owner. Such application shall be supported by such data substantiating the Contractor's right to payment as the Owner may require, such as copies of requisitions from subcontractors and material suppliers.

6.2.2 **Basis for Payment:** The Payment shall be based upon the Contract Lump Sum price and upon completion of the Work and issuance of the Notice of Acceptance.

6.2.3 **Work Free of Liens:** The Contractor warrants that upon submittal of an Application for Payment, all work for which Certificates for Payment have been previously issued and payments received from the Owner shall be free and clear of liens, claims, security interests, or encumbrances against Contractor by subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment in relation to the Work.

6.3 CERTIFICATION FOR PAYMENT

6.3.1 **Certification Determination:** The Owner's Representative will, within seven (7) days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certification for Payment, with a copy to the Contractor, for such amount as determined to be properly due, or notify the Contractor of the reasons for withholding certification in whole or in part as provided in section 6.4.1.

6.3.2 The Owner shall pay or cause to be paid to Contractor, an amount equal to ninety five percent (95%) as noted in section 6.4.3 of the amount set forth in the approved Certificate for Payment within thirty (30) days of receipt of an Application for Payment approved by the Owner's representative as provided for in Paragraph 6.3.1 above, and shall retain the remaining five percent (5%) as noted in 6.4.3 until the time provided for in section 6.6.4. The Owner shall withhold amounts pursuant to stop notices received in addition to the retainage. Failure of Owner to make payments provided herein in a timely manner shall not constitute a default by the Owner of the Contract, but may entitle the Contractor to interest as provided by law.

6.4 WITHHOLDING FROM PAYMENTS

6.4.1 **Reasons for Withholding:** The Owner, upon recommendation of the Inspector, may withhold payments, or on account of subsequently discovered evidence nullify the whole or a part of any progress or retention payments to such extent as may be necessary to protect the Owner from loss on account of:

1. Defective work or material not remedied or replaced.
2. The filing of claims or Stop Notices to withhold, or reasonable evidence indicating probable filing of such claims or notices.

3. Failure of the Contractor to make payments properly to subcontractors, or for materials or labor.
4. Failure to make payments to any person or entity for financial obligations of the Contractor under terms of this Contract.
5. A reasonable doubt that the Contract can be completed for the balance then unpaid.
6. Damage to another contractor.
7. Performance of work in violation of the terms of the Contract Documents.
8. Excessive costs to Owner.
9. Failure of Contractor to comply with requirements for timely submittal of specified documentation, including but not limited to construction schedules, cost proposals, and submittals.

6.4.2 **Release of Payment:** When the above grounds for withholding are removed, payment shall be made for amounts withheld because of them.

6.4.3 **Method of Retainage:** The Department will retain 5% of the value of each progress payment from each progress payment. The retained funds shall be retained until thirty five (35) days after recordation of the Notice of Acceptance.

6.5 SUBSTITUTE SECURITIES FOR RETENTION

6.5.1 **Substitution of Securities:** Bidders are hereby put on notice that the successful bidder may substitute securities for any monies withheld by the County of El Dorado to insure performance of the Contract pursuant to Public Contract Section 22300. This section provides that the Contractor may elect to receive 100 percent of payments due under the Contract Documents from time to time, without retention from any portion of the payment by the County of El Dorado, by depositing eligible securities of equivalent value with the County of El Dorado or qualified escrow agent in accordance with the provisions of Public Contract Code Section 22300. Eligible securities shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit from a qualified institution. Any such escrow agreement shall follow the form set forth in Public Contract Code Section 22300(f) and provided by the Owner.

6.6 FINAL COMPLETION AND PAYMENT OF RETAINAGE

6.6.1 **Affidavit of Payment:** After the date of Substantial Completion of the Work, and before final acceptance of the Work, the Contractor shall file with the Owner his affidavit, sworn to before a Notary Public, stating that all workmen and persons employed, all firms supplying materials, and all subcontractors upon the project for either labor or material have been paid in full, except certain items, if any, to be set forth in such affidavit covering disputed claims, including claims for acceleration, disruption, delays, inefficiencies, and hindrance, or items in connection with which Stop Notices have been filed under the provisions of the Statutes of the State of California. The filing of such affidavit by the Contractor shall be one of the prerequisites to the making, by the Owner, of the final retainage payment on the Contract.

6.6.2 **Final Inspection:** Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of the Application for Payment, the Owner will promptly make such inspection. The Contractor shall complete all punch list items within two days of receipt of the written punch list. When the Owner's Representative finds the work acceptable under the Contract Documents and the Contract fully performed, the Owner's Representative will promptly recommend to Owner that Owner may consider

the Project complete, that the Purchasing Agent may accept the project and that the Notice of Acceptance may be issued.

- 6.6.3** Final Certification: Before issuance of payment, Contractor shall file, with Owner, a certificate in which he certifies that to the best of the Contractor's knowledge, information, and belief, and on the basis of observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents.
- 6.6.4** Payment of Retention: Thirty-five (35) days after the Notice of Acceptance has been filed, provided the Work is fully completed and the Contract fully performed, the balance due under the Contract shall be paid, less any monies held for stop notices. Payment shall not be construed as an absolute acceptance of the work done up to the time of such payment. The Contractor, if requested by the Owner, shall furnish receipts or other vouchers showing his payments for materials and labor. Owner may withhold from payment an amount not to exceed 150 percent of any amount in dispute.
- 6.6.5** Notice of Acceptance: The Work shall be accepted in writing in the form of a Notice of Acceptance when the whole of the work has been completed satisfactorily to the Owner. In judging the Work, no allowance for deviations from the original Contract Documents will be made unless already approved in writing at the proper times and in the manner as called for herein.

Article 7

PROTECTION OF PERSONS AND PROPERTY

7.1 PROTECTION OF WORK, PROPERTY, AND PERSONS

- 7.1.1** Responsible for Damage to Owner's Property: The Contractor shall be entirely responsible for any damage to the property of the Owner due to careless handling of tools and/or materials or other causes attributed to the Contractor's Work in performing this Contract.
- 7.1.2** Responsible for Safety: The Contractor will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury, or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
- 7.1.3** Safety and Convenience: The Contractor will comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction. The Contractor will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. The Contractor will notify owners of adjacent utilities when prosecution of the Work may affect them.
- 7.1.4** Remedy Damages: The Contractor will remedy all damage, injury, or loss to any property caused, directly or indirectly, in whole or part, by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or anyone of whose acts any of them would be liable, except damage or loss attributable to the sole or active negligence of the Owner or the Inspector or anyone employed by them and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor.

Article 8

INSURANCE AND BONDS

8.1 INSURANCE

GENERAL INSURANCE REQUIREMENTS

The Contractor shall provide proof of a policy of insurance satisfactory to the El Dorado County Risk Management Division and documentation evidencing that the Contractor maintains insurance that meets the following requirements:

1. Full Workers' Compensation and Employers' Liability Insurance covering all employees of the Contractor as required by law in the State of California.
2. Commercial General Liability Insurance of not less than Two Million Dollars (\$2,000,000) combined single limit per occurrence for bodily injury and property damage, including but not limited to endorsements for the following coverage: Premises, personal injury, operations, products and completed operations, blanket contractual, and independent contractors liability. This insurance can consist of a minimum \$1 Million primary layer of CGL and the balance as an excess/umbrella layer, but only if the County is provided with written confirmation that the excess/umbrella layer "follows the form" of the CGL policy.
3. Automobile Liability Insurance of not less than One Million Dollars (\$1,000,000) is required in the event motor vehicles are used by the Contractor in performance of the contract.
4. In the event Contractor is a licensed professional and is performing professional services under this contract, Professional Liability Insurance is required with a limit of liability of not less than One Million Dollars (\$1,000,000).
5. Explosion, Collapse and Underground coverage is required when the scope of work includes XCU exposures. For the purpose of this contract, XCU coverage is not required.

PROOF OF INSURANCE REQUIREMENTS

1. Contractor shall furnish proof of coverage satisfactory to the El Dorado County Risk Management Division as evidence that the insurance required herein is being maintained. The insurance will be issued by an insurance company acceptable to the Risk Management Division, or be provided through partial or total self-insurance likewise acceptable to the Risk Management Division.
2. The County of El Dorado, its officers, officials, employees, and volunteers shall be included as additional insureds, but only insofar as the operations under this Contract are concerned. This provision shall apply to all general liability and excess liability policies. Proof that the County is named additional insured shall be made by providing the Risk Management Division with a certified copy, or other acceptable evidence, of an endorsement to Contractor's insurance policy naming the County additional insured.
3. In the event Contractor cannot provide an occurrence policy, Contractor shall provide insurance covering claims made as a result of performance of this contract for not less than three (3) years following completion of performance of this Contract.
4. Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
5. Contractor shall require each of its subcontractors to procure and maintain commercial general liability insurance, automobile liability insurance, and workers compensation insurance of the types and in the amounts specified above, or shall insure the activities of its subcontractors in its own policy in like amounts. Contractor shall also require each of its subcontractors to name Contractor and County of El Dorado as additional insureds.

INSURANCE NOTIFICATION REQUIREMENTS

1. Contractor agrees no cancellation or material change in any policy shall become effective except upon thirty (30) days prior written notice to the County of El Dorado, Chief Administrative Office, Facilities Division, Russ Fackrell at 3000 Fairlane Court, Placerville, CA 95667.
2. Contractor agrees that the insurance required herein shall be in effect at all times during the term of this agreement. In the event said insurance coverage expires at any time or times during the term of this Contract, Contractor shall immediately provide a new certificate of insurance as evidence of the required insurance coverage. In the event Contractor fails to keep in effect at all times insurance coverage as herein provided, County may, in addition to any other remedies it may have, terminate this Contract upon the occurrence of such event. New certificates of insurance are subject to the approval of the Risk Management Division.

ADDITIONAL STANDARDS

Certificates shall meet such additional standards as may be determined by the Department either independently or in consultation with the Risk Management Division, as essential for protection of the County.

COMMENCEMENT OF PERFORMANCE

Contractor shall not commence performance of this Contract unless and until compliance with each and every requirement of the insurance provisions is achieved.

MATERIAL BREACH

Failure of Contractor to maintain the insurance required herein, or to comply with any of the requirements of the insurance provisions, shall constitute a material breach of the entire Contract.

REPORTING PROVISIONS

Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the County, its officers, officials, employees or volunteers.

PRIMARY COVERAGE

The Contractor's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees or volunteers shall be in excess of the Contractor's insurance and shall not contribute with it.

PREMIUM PAYMENTS

The insurance companies shall have no recourse against the County of El Dorado its officers, agents, employees, or any of them for payment of any premiums or assessments under any policy issued by any insurance company.

CONTRACTOR'S OBLIGATIONS

Contractor's indemnity and other obligations shall not be limited by the insurance required herein and shall survive the expiration of this Contract.

8.2 BONDS

8.2.1 **General Requirements for Bonds:** Before commencing any Work under the Contract, the Contractor shall provide all bonds to the Owner. These bonds shall be in the amounts and for the purposes specified below. They shall be Surety bonds and shall be issued by corporations duly and legally licensed and qualified to transact business in the State of California. They shall be maintained by him and at his expense during the entire life of the Contract or later as provided.

8.2.2 **Performance Bond:** One bond shall be in the amount of 100 percent of the Awarded Contract and shall guarantee the faithful performance of the Contract and shall insure the Owner during the life of the Contract and the Guarantee period. The Contractor may provide, subject to approval by the Owner, a separate guarantee bond upon completion of and acceptance of the work.

- 8.2.3 **Payment Bond:** One bond shall be in the amount of 100 percent of the Awarded Contract and shall guarantee the payment in full of all claims for labor and materials in accordance with the provisions of the laws of the State of California.
- 8.2.4 **Change of Surety:** If, at any time a Surety on such bonds becomes irresponsible or loses its right to do business in the State of California, the Owner may require another Surety which the Contractor shall furnish within ten (10) calendar days after receipt of written notice to do so.
- 8.2.5 **Authentication of Bonds:** Evidence of authority of an attorney-in-fact acting for the corporate Surety must be provided in the form of a certificate as to his power of attorney and to the effect that it is not terminated and remains in full force and effect on the date of the bonds. The form of the bonds shall be in accordance with those provided in the Draft Agreement.

Article 9

UNCOVERING AND CORRECTION OF WORK

9.1 DEVIATION FROM CONTRACT DOCUMENTS

- 9.1.1 **Improper Work:** If the Contractor shall vary from the Contract Documents in the form or quality of the Work, or the amount or value of the materials herein provided for, the Owner shall have the right to order such improper work or materials removed, remade, or replaced. In the event that the Work is ordered changed, any other work disturbed or damaged by such alteration shall be made good at the Contractor's expense.

9.2 CORRECTION OF WORK

- 9.2.1 **Covered or Completed Work:** If any work is covered contrary to the written instructions of the Owner's Representative, or the Inspector, if one is appointed, it must, if requested, be uncovered for observation and replaced at the Contractor's expense.
- 9.2.2 **Inspection of Covered Work:** If the Owner's Representative or the Inspector, if one is appointed, considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, upon request, will uncover, expose, or otherwise make available for observation, inspection, or testing as the Inspector may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction; if, however, such Work is not found to be defective, the Contractor will be allowed an increase in the Contract price or an extension of the Contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and construction, and an appropriate Change Order shall be issued.
- 9.2.3 **Rejected Work:** The Contractor shall promptly remove from the premises all Work rejected by Owner for failure to comply with the Contract Documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the work either during the term of the Contract or during the warranty period, in accordance with the Contract Documents and without expense to the Owner and shall bear the expense of making good all Work of other contractors destroyed or damaged by such removal or replacement.
- 9.2.4 **Cost of Correction:** All removal and replacement Work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected Work within ten (10) days after receipt of written notice, the Owner may remove such Work and store the materials at the expense of the Contractor. Owner also may perform such Work or repairs itself and charge the expense to the Contractor.

Article 10

SUSPENSION OF CONTRACT

10.1 SUSPENSION OF WORK

10.1.1 Owner May Suspend: The Owner may suspend the Work or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the Contractor, by written notice to the Contractor and the Inspector which shall fix the date on which work shall be resumed.

10.1.2 Resumption of Work: The Contractor shall resume that Work on the dates so fixed. The Contractor shall be allowed an increase in the Contract price or an extension of the Contract time, or both, directly attributed to any suspension.

“END OF DOCUMENT”

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

00001 - PROJECT TITLE PAGE

00015 - LIST OF DRAWINGS

DIVISION 1 – GENERAL REQUIREMENTS

01100 - SUMMARY

01300 - ADMINISTRATIVE REQUIREMENTS

01400 - QUALITY REQUIREMENTS

01500 - TEMPORARY FACILITIES AND CONTROLS

01575 - TEMPORARY EROSION AND SEDIMENTATION CONTROL

01600 - PRODUCT REQUIREMENTS

01700 - EXECUTION REQUIREMENTS

01732 - WASTE MANAGEMENT

01780 - CLOSEOUT SUBMITTALS

DIVISION 2 -- SITE CONSTRUCTION

02230 - SITE CLEARING

02317 - TRENCHING FOR SITE UTILITIES

02535 - SANITARY SEWER PIPING

02640 - MANHOLES AND COVERS

02821 - CHAIN LINK FENCE

DIVISION 3 -- CONCRETE

03300 - CAST-IN-PLACE CONCRETE

DIVISION 11 -- EQUIPMENT

11330 - MUFFIN MONSTER MANHOLE

DIVISION 26 -- ELECTRICAL

260500 - COMMON WORK RESULTS FOR ELECTRICAL

260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

260529 - HANGARS AND SUPPORTS FOR ELECTRICAL SYSTEMS

260533 - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

260543 - UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

262726 - WIRING DEVICES

End of Section

SECTION 00001

PROJECT TITLE PAGE

PLACERVILLE JAIL SEWER IN-LINE SHREDDER PROJECT

COUNTY BID #13-968-042

EL DORADO COUNTY CAO

TECHNICAL SPECIFICATIONS

PREPARED BY

NICHOLS CONSULTING ENGINEERS, Chtd.

8795 FOLSOM BLVD., SUITE 250

SACRAMENTO, CA 95826

(916) 388-5655

NOVEMBER 2012

SECTION 00015

LIST OF DRAWINGS

G-1 TITLE SHEET

G-2 NOTES, LEGEND, AND ABBREVIATIONS

CIVIL DRAWINGS

C-1 SITE AND DEMOLITION PLAN

C-2 SEWER LAYOUT PLAN & PROFILE

D-1 CIVIL DETAILS

D-2 MUFFIN MONSTER MANHOLE DETAILS

ELECTRICAL DRAWINGS

E-1 CALCULATIONS, DIAGRAMS, NOTES, SCHEDULES, SYMBOLS

E-2 SITE ELECTRICAL PLAN

E-3 DETAILS

END OF LIST OF DRAWINGS

SECTION 01100

SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: El Dorado County Jail Sewer In-Line Shredder Project
- B. Owner's Name: El Dorado County, Chief Administrative Office.
- C. Consultant's Name: Nichols Consulting Engineers.
- D. Owner's (Agency) Representative: County Facilities Manager Russ Fackrell, referred to in the contract documents as the Owner.
- E. The Project is the installation of sewer in-line shredders and prefabricated manholes into the existing sewer services of the El Dorado County Jail, Placerville, California. Also included is the installation of grinder electrical controllers, a chain link fence enclosure, electrical outlets, electrical connections, and all other work items as shown on the plans and required by these specifications.
- F. The Contractor shall construct the project as shown on the Contract Documents. Any discrepancies between the Contract Documents and the actual conditions shall be brought to the immediate attention of the Engineer.
- G. The Contract Documents include these specifications, drawings, and County of El Dorado Irrigation District Design and Construction Standards. When a sentence in a contract document is a general direction, the sentence shall apply to the Contractor.
- H. Project Manual: The document shall include all submittals, request for information, construction schedules, shop drawings, red-lines, manufacturer's manuals and maintenance guidelines, closeout submittals, and the like. Project Manual shall be compiled by the Contractor to be reviewed by the Engineer.

1.02 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is shown on drawings and specified in Section 02230.

1.03 WORK BY OWNER

- A. El Dorado County will not participate in construction of this project.

1.04 OWNER OCCUPANCY

- A. El Dorado County will occupy adjacent areas during the entire construction period. See Special Provisions Section 1.22 E regarding barricades.
- B. Cooperate with El Dorado County to minimize conflict and to facilitate El Dorado County's and jail operations. See notes on the drawings regarding on work areas that must be accessible to El Dorado County employees and customers.
- C. Schedule the Work to accommodate El Dorado County occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to the areas shown on the plans and direct routes between those areas.
- B. Arrange use of site and premises to allow:
 - 1. Work by Others.
 - 2. Work by El Dorado County.
 - 3. Use of site and premises by the public.

- C. Provide access to and from site as required by law and by El Dorado County:
 - 1. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Existing building spaces may not be used for storage.
- E. Time Restrictions:
 - 1. Site access must be maintained at all times.
- F. Utility Outages and Shutdown:
 - 1. Limit disruption of utility services to the extent possible.
 - 2. Sewer service shutdown to install the in-line shredder manholes shall be limited to 1 hour per manhole.
 - 3. Prevent accidental disruption of utility services to other facilities.
- G. Construction Water: Construction water may be obtained from existing hydrants. Obtain a water meter from the El Dorado Irrigation District. Fee to be paid by Contractor.

1.06 WORK SEQUENCE

- A. Coordinate construction schedule and operations with El Dorado County.
- B. Contractor is required to submit a construction sequencing plan in accordance with Section 01700 - Execution Requirements.

1.07 MOBILIZATION / DEMOBILIZATION – MEASUREMENT AND PAYMENT

- A. All work required in the Division 1 sections of the Technical Specifications (e.g. 01100 Summary, 01300 Administrative Requirements etc.) except as noted in the individual sections and all of the Special Provisions will be paid for under the bid item Mobilization / Demobilization. The **Lump Sum** price for Mobilization / Demobilization shall not exceed 5% of the total bid minus the lump sum amount for Mobilization / Demobilization. Demolition and removal work will be paid separately.
- B. Payment for Mobilization / Demobilization will be made as follows:
 - a) Fifty percent (50%) of the total amount bid for Mobilization and Demobilization will be paid with the first progress payment after at least five percent (5%) of the original Contract Amount for other items of work has been performed.
 - b) When at least ten percent (10%) of the original Contract Amount for other items of work has been performed, an amount will be included in the next monthly progress payment to increase the total amount of Mobilization and Demobilization paid to seventy-five percent (75%) of the total amount bid for Mobilization and Demobilization.
 - c) When at least twenty percent (20%) of the original Contract Amount for other items of work has been performed, an amount will be included in the next monthly progress payment to increase the total amount of Mobilization and Demobilization paid to ninety percent (90%) of the total amount bid for Mobilization and Demobilization.
 - d) Upon substantial completion, one-hundred percent (100%) of the remaining contract price for Mobilization and Demobilization will be included in the estimate for payment.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01300

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pre-construction meeting.
- B. Progress meetings.
- C. Construction progress schedule.
- D. Submittals for review, information, and project closeout.
- E. Number of copies of submittals.
- F. Submittal procedures.
- G. Project Manual

1.02 RELATED SECTIONS

- A. Section 01100 - Summary.
- B. Section 01700 - Execution Requirements: Additional coordination requirements.
- C. Section 01780 - Closeout Submittals: Project record documents.

1.03 PROJECT COORDINATION

- A. Owner: El Dorado County Chief Administrative Office
- B. Engineer: County Senior Inspector, Construction Management Division.
- C. Cooperate with the Engineer in allocation of mobilization areas of site; for site access, traffic, and parking facilities.
- D. During construction, coordinate use of site and facilities through the Engineer.
- E. Comply with Engineer's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- F. Comply with instructions of the Engineer for use of temporary utilities and construction facilities.
- G. Coordinate field engineering and layout work under instructions of the Engineer.
- H. Make the following types of submittals compiled in the Project Manual to Engineer:
 - 1. Requests for interpretation/information.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Manufacturer's instructions and field reports.
 - 6. Applications for payment and change order requests.
 - 7. Progress schedules.
 - 8. Coordination drawings.
 - 9. Closeout submittals.

1.04 MEASUREMENT AND PAYMENT

- A. The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Mobilization / Demobilization" as described in Section 01100 Summary.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRE-CONSTRUCTION MEETING

- A. Owner will schedule a meeting after Notice of Award.
- B. Attendance Required:
 - 1. El Dorado County, Project Manager, Engineer.
 - 2. Consultant.
 - 3. General Contractor.
 - 4. Subcontractors.
- C. Agenda:
 - 1. Identify the names and addresses for notification.
 - 2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, Contract closeout procedures, protection of the work and access for El Dorado County.
 - 3. Scheduling.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum weekly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, El Dorado County, Consultant, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems which impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of progress schedule.
 - 7. Corrective measures to regain projected schedules.
 - 8. Planned progress during succeeding work period.
 - 9. Maintenance of quality and work standards.
 - 10. Effect of proposed changes on progress schedule and coordination.
 - 11. Other business relating to Work.
- E. Record minutes and distribute copies within two days after meeting to participants, with one copy each to Owner and Engineer.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 5 days after date of the Agreement, submit preliminary schedule defining planned operations.
- B. If preliminary schedule requires revision after review, submit revised schedule within 5 days.
- C. Within 2 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 1 day after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

3.04 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
- B. Product data.
- C. Shop drawings.
- D. Samples for selection.
- E. Samples for verification.
- F. Submit to Engineer.
- G. If applicable, samples will be reviewed only for aesthetic, color, or finish selection.
- H. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01780 - CLOSEOUT SUBMITTALS.

3.05 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information to Engineer:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project Manual consisting but not limited to submittals, substitution requests, red-line as-built drawings, weight certificates, product literature, and other project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.

- B. Submit for El Dorado County's benefit during and after project completion.

3.07 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:
 - 1. Small Size Sheets, not larger than 8-1/2 x 11 inches: Submit two (2) copies.
- B. Documents for Information: Submit two (2) copies.
- C. Documents for Project Closeout: Make one (1) reproduction of submittal originally reviewed. Submit one (1) extra of submittals for information.
- D. Samples: Submit the number specified in individual specification sections
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to unless specifically so stated.

3.08 SUBMITTAL PROCEDURES

- A. Transmit each submittal with AIA Form G810 or approved equivalent.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify project subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Deliver submittals to Engineer at business address.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 10 days excluding delivery time to and from the date of submission.
- H. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- I. When revised for resubmission, identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

END OF SECTION

SECTION 01400

QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Quality Assurance testing and inspection will be carried out by the County.
- B. References and standards.
- C. Control of installation.
- D. Tolerances.
- E. Manufacturers' field services.

1.02 RELATED SECTIONS

- A. Section 01600 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCES

- A. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2005b.
- B. ASTM D 1557 - 09 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))
- C. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2004a.
- D. ASTM E 329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2005b.
- E. ASTM E 543 - Standard Practice for Agencies Performing Nondestructive Testing; 2004.

1.04 SUBMITTALS

- A. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for El Dorado County's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation. Copies shall be included in the Project Manual.

1.05 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copies of standards at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from El Dorado County before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of El Dorado County shall be altered from the Contract Documents by mention or inference

otherwise in any reference document.

1.06 TESTING AND INSPECTION

- A. Quality Assurance testing and inspection required during construction will be carried out by the El Dorado County. Contractor shall notify County minimum 24 hours in advance before testing or inspection is required. Contractor shall assist County personnel during testing and inspection.

1.07 MEASUREMENT AND PAYMENT

- B. The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Mobilization / Demobilization".

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from El Dorado County before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

- A. Monitor installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from El Dorado County before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 TESTING AND INSPECTION

- A. See individual specification sections for testing and inspection required.
- B. Responsibilities:
 - 1. Deliver to County at designated location, adequate samples of materials proposed to be used which require testing or are required to perform Quality Assurance, along with proposed mix designs.
 - 2. Cooperate with laboratory or County personnel, and provide access to the Work.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.

- c. To facilitate tests/inspections.
- d. To provide storage and curing of test samples.
- 4. Notify El Dorado County 24 hours prior to expected time for operations requiring testing/inspection services.
- C. Re-testing required because of non-conformance to specified requirements will be performed by El Dorado County. Cost for re-testing including obtaining samples if required will be charged to the Contractor by deducting testing charges from the Contract Price.

3.04 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.05 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not conforming to specified requirements.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary sanitary facilities.
- C. Temporary Controls: Barriers, enclosures, and fencing.
- D. Security requirements.
- E. Vehicular access and parking.
- F. Waste removal facilities and services.
- G. Project identification sign.

1.02 TEMPORARY UTILITIES

- A. Provide and pay for all electrical power, lighting, and water required for construction purposes.
- B. Existing facilities may be used.
- C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.04 BARRIERS

- A. Provide barriers at limits of pavement reconstruction to prevent unauthorized entry to construction areas by County employees and customers, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide protection for plants designated to remain. Replace damaged plants.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 FENCING

- A. Construction: Commercial grade chain link fence.
- B. Coordinate with Project Coordinator.
- C. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.06 SECURITY

- A. Provide security and facilities to protect Work, existing facilities, and El Dorado County's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with El Dorado County's security program.

1.07 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with El Dorado County.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.

- D. Designated existing on-site roads may be used for construction traffic.
- E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.08 WASTE REMOVAL

- A. Refer to Section 01732 "Waste Management" for more detailed information.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- C. Provide containers with lids. Remove trash from site weekly.
- D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

1.09 PROJECT IDENTIFICATION

- A. Provide project identification sign.
- B. Erect on site at location provided by Owner.
- C. No other signs are allowed without El Dorado County permission except those required by law.

1.10 FIELD OFFICES

- A. Office: Weather tight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture.
- B. Locate offices a minimum distance of 30 feet from existing and new structures.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Final Application for Payment inspection.
- B. Remove underground installations to a minimum depth of 2 feet.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.

1.12 MEASUREMENT AND PAYMENT

- A. The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Mobilization / Demobilization".

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01575

TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Prevention of erosion due to construction activities.
- B. Prevention of sedimentation of waterways, open drainage ways, and storm and sanitary sewers due to construction activities.
- C. Restoration of areas eroded due to insufficient preventive measures.
- D. Compensation of El Dorado County for fines levied by authorities having jurisdiction due to non-compliance by Contractor.

1.02 RELATED SECTIONS

- A. Section 02230 - Site Clearing: Limits on clearing; disposition of vegetative clearing debris.
- B. Section 03300 - Cast-in-Place Concrete: Concrete for temporary and permanent erosion control structures indicated on drawings.

1.03 REFERENCES

- A. EPA (NPDES) - National Pollutant Discharge Elimination System (NPDES), Construction General Permit; current edition; <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>.
- B. EPA 832-R-92-005 - Storm Water Management for Construction Activities; U.S. Environmental Protection Agency; 1992.

1.04 PERFORMANCE REQUIREMENTS

- A. Comply with requirements of State of California Erosion and Sedimentation Control Manual.
- B. Best Management Practices Standard: EPA 832-R-92-005.
- C. Best Management Practices Standard: State of California, Department of Transportation Construction-Site Best Management Practices (BMPs) Manual, latest Edition.
- D. Develop, submit to Engineer for approval, and follow a Storm Water Pollution Prevention Plan and submit periodic inspection reports.
- E. Do not begin clearing, grading, or other work involving disturbance of ground surface cover until applicable permits have been obtained; furnish all documentation required to obtain applicable permits.
 - 1. Obtain and pay for permits and provide security required by authority having jurisdiction.
- F. Timing: Put preventive measures in place as soon as possible after disturbance of surface cover and before precipitation occurs.
- G. Storm Water Runoff: Control increased storm water runoff due to disturbance of surface cover due to construction activities for this project.
 - 1. Prevent runoff into storm and sanitary sewer systems, including open drainage channels, in excess of actual capacity or amount allowed by authorities having jurisdiction, whichever is less.
 - 2. Anticipate runoff volume due to the most extreme short term and 24-hour rainfall events that might occur in 2 years.
- H. Erosion On-Site: Minimize wind, water, and vehicular erosion of soil on project site due to construction activities for this project.

1. Prevent movement of sediment and soil from temporary stockpiles of soil.
 2. Prevent development of ruts due to equipment and vehicular traffic.
 3. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to El Dorado County.
- I. Erosion Off-Site: Prevent erosion of soil and deposition of sediment on other properties caused by water leaving the project site due to construction activities for this project.
1. Prevent windblown soil from leaving the project site.
 2. Prevent tracking of mud onto public roads outside site.
 3. Prevent mud and sediment from flowing onto sidewalks and pavements.
 4. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to El Dorado County.
- J. Sedimentation of Waterways On-Site: Prevent sedimentation of waterways on the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
1. If sedimentation occurs, install or correct preventive measures immediately at no cost to El Dorado County; remove deposited sediments; comply with requirements of authorities having jurisdiction.
 2. If sediment basins are used as temporary preventive measures, pump dry and remove deposited sediment after each storm.
- K. Sedimentation of Waterways Off-Site: Prevent sedimentation of waterways off the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
1. If sedimentation occurs, install or correct preventive measures immediately at no cost to El Dorado County; remove deposited sediments; comply with requirements of authorities having jurisdiction.
- L. Open Water: Prevent standing water that could become stagnant.
- M. Maintenance: Maintain temporary preventive measures until permanent measures have been established.

1.05 SUBMITTALS

- A. Storm Water Pollution Prevention Plan:
1. Submit one (1) week after Notice to Proceed.
 2. Include:
 - a. Site plan identifying soils and vegetation, existing erosion problems, and areas vulnerable to erosion due to topography, soils, vegetation, or drainage.
 - b. Site plan showing grading; new improvements; temporary roads, traffic accesses, and other temporary construction; and proposed preventive measures.
 - c. Where extensive areas of soil will be disturbed, include storm water flow and volume calculations, soil loss predictions, and proposed preventive measures.
 - d. Schedule of temporary preventive measures, in relation to ground disturbing activities.
 - e. Other information required by law.
 - f. Format required by law is acceptable, provided any additional information specified is also included.

3. Obtain the approval of the Plan by El Dorado County.
- B. Certificate: Mill certificate for silt fence fabric attesting that fabric and factory seams comply with specified requirements signed by legally authorized official of manufacturer; indicate actual minimum average roll values; identify fabric by roll identification numbers.
- C. Inspection Reports: Submit report of each inspection; identify each preventive measure, indicate condition, and specify maintenance or repair required and accomplished.

1.06 MEASUREMENT AND PAYMENT

- A. The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Clearing, Grubbing and Environmental Protection".

PART 2 PRODUCTS

2.01 MATERIALS

- A. Mulch: Use one of the following:
 1. Straw or hay.
 2. Erosion control matting or netting.
- B. Bales: Air dry, rectangular straw bales.
 1. Cross Section: 14 by 18 inches, minimum.
 2. Bindings: Wire or string, around long dimension.
- C. Bale Stakes: One of the following, minimum 3 feet long:
 1. Steel U- or T-section, with minimum mass of 1.33 lb per linear foot.
 2. Wood, 2 by 2 inches in cross section.
- D. Fiber rolls: wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll.
- E. Silt Fence Fabric: Polypropylene geotextile resistant to common soil chemicals, mildew, and insects; non-biodegradable; in longest lengths possible; fabric including seams with the following minimum average roll lengths:
 1. Average Opening Size: 30 U.S. Std. Sieve, maximum, when tested in accordance with ASTM D 4751.
 2. Ultraviolet Resistance: Retaining at least 70 percent of tensile strength, when tested in accordance with ASTM D 4355 after 500 hours exposure.
 3. Tear Strength: 55 lb-f, minimum, when tested in accordance with ASTM D 4533.
 4. Color: Manufacturer's standard, with embedment and fastener lines preprinted.
 5. Manufacturers:
 - a. BP Amoco, Amoco Fabrics and Fibers; www.geotextile.com.
 - b. TC Mirafi; www.tcmirafi.com.
 - c. Synthetic Industries; www.fixsoil.com.
- F. Silt Fence Posts: One of the following, minimum 5 feet long:
 1. Steel U- or T-section, with minimum mass of 1.33 lb per linear foot.
 2. Softwood, 4 by 4 inches in cross section.
 3. Hardwood, 2 by 2 inches in cross section.

G. Concrete: See Section 03300.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine site and identify existing features that contribute to erosion resistance; maintain such existing features to greatest extent possible.

3.02 PREPARATION

A. Schedule work so that soil surfaces are left exposed for the minimum amount of time.

3.03 SCOPE OF PREVENTIVE MEASURES

A. In all cases, if permanent erosion resistant measures have been installed temporary preventive measures are not required.

B. Construction Entrances: Traffic-bearing aggregate surface.

1. Width: As required; 20 feet, minimum.
2. Length: 50 feet, minimum.
3. Provide at each construction entrance from public right-of-way.
4. Where necessary to prevent tracking of mud onto right-of-way, provide wheel washing area out of direct traffic lane, with drain into sediment trap or basin.

C. Linear Sediment Barriers: Made of silt fences.

1. Provide linear sediment barriers:
 - a. Along downhill perimeter edge of disturbed areas, including soil stockpiles.
 - b. Along the toe of cut slopes and fill slopes.
 - c. Across the entrances to culverts that receive runoff from disturbed areas.
2. Space sediment barriers with the following maximum slope length upslope from barrier:
 - a. Slope Between 2 and 5 Percent: 75 feet.

D. Storm Drain Curb Inlet Sediment Trap: Protect each curb inlet using one of the following measures:

1. Filter fabric wrapped around hollow concrete blocks blocking entire inlet face area; use one piece of fabric wrapped at least 1-1/2 times around concrete blocks and secured to prevent dislodging; orient cores of blocks so runoff passes into inlet.

E. Soil Stockpiles: Protect using one of the following measures:

1. Cover with polyethylene film, secured by placing soil on outer edges.

F. Mulching: Use only for areas that may be subjected to erosion for less than 6 months.

3.04 INSTALLATION

A. Traffic-Bearing Aggregate Surface:

1. Excavate minimum of 6 inches.
2. Place geotextile fabric full width and length, with minimum 12 inch overlap at joints.
3. Place and compact at least 6 inches of 1.5 to 3.5 inch diameter stone.

B. Silt Fences:

1. Store and handle fabric in accordance with ASTM D 4873.

2. Where slope gradient is less than 3:1 or barriers will be in place less than 6 months, use nominal 16 inch high barriers with minimum 36 inch long posts spaced at 6 feet maximum, with fabric embedded at least 4 inches in ground.
 3. Install with top of fabric at nominal height and embedment as specified.
 4. Embed bottom of fabric in a trench on the upslope side of fence, with 2 inches of fabric laid flat on bottom of trench facing upslope; backfill trench and compact.
 5. Fasten fabric to wood posts using one of the following:
 - a. Five 17-gage staples with 3/4 inch wide crown and 1/2 inch legs.
 6. Fasten fabric to steel posts using wire, nylon cord, or integral pockets.
- C. Fiber Rolls: placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff. Fiber rolls may also be used for inlet protection and as check dams under certain situations
- D. Straw Bale Rows:
1. Install bales in continuous rows with ends butting tightly, with one bale at each end of row turned uphill.
 2. Install bales so that bindings are not in contact with the ground.
 3. Embed bales at least 4 inches in the ground.
 4. Anchor bales with at least two stakes per bale, driven at least 18 inches into the ground; drive first stake in each bale toward the previously placed bale to force bales together.
 5. Fill gaps between ends of bales with loose straw wedged tightly.
 6. Place soil excavated for trench against bales on the upslope side of the row, compacted.

3.05 MAINTENANCE

- A. Inspect preventive measures weekly, within 24 hours after the end of any storm that produces 0.5 inches or more rainfall at the project site, and daily during prolonged rainfall.
- B. Repair deficiencies immediately.
- C. Silt Fences:
1. Promptly replace fabric that deteriorates unless need for fence has passed.
 2. Remove silt deposits that exceed one-third of the height of the fence.
 3. Repair fences that are undercut by runoff or otherwise damaged, whether by runoff or other causes.
- D. Straw Bale Rows:
1. Promptly replace bales that fall apart or otherwise deteriorate unless need has passed.
 2. Remove silt deposits that exceed one-half of the height of the bales.
 3. Repair bale rows that are undercut by runoff or otherwise damaged, whether by runoff or other causes.
- E. Fiber Rolls: Repair or replace split, torn, unraveling, or slumping fiber rolls. Inspect fiber rolls when rain is forecast. Perform maintenance as needed or as required by the Project Coordinator. Inspect fiber rolls following rainfall events and at least daily during prolonged rainfall. Perform maintenance as needed or as required by the Project Coordinator. Maintain fiber rolls to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches three quarters (3/4) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the Project Coordinator or disposed of

outside the highway right-of-way in conformance with the Standard Specifications.

- F. Clean out temporary sediment control structures weekly and relocate soil On-Site.
- G. Place sediment in appropriate locations On-Site; do not remove from site.

3.06 CLEAN UP

- A. Remove temporary measures after permanent measures have been installed, unless permitted to remain by the Owner.
- B. Clean out temporary sediment control structures that are to remain as permanent measures.
- C. Where removal of temporary measures would leave exposed soil, shape surface to an acceptable grade and finish to match adjacent ground surfaces.

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Spare parts and maintenance materials.

1.02 RELATED SECTIONS

- A. Section 01400 - Quality Requirements: Product quality monitoring.

1.03 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
 - 1. Submit within 5 days after date of Notice to Proceed.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Compile paper submittals in Project Manual (Section 01300, paragraph 3.06)

1.04 MEASUREMENT AND PAYMENT

- A. The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Mobilization / Demobilization".

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra products of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Include accepted requests in Project Manual.

- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to El Dorado County.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
- D. Substitution Submittal Procedure:
 - 1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.

3.02 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Prevent contact with material that may cause corrosion, discoloration, or staining.
- E. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01700

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Construction Progress Schedule
- C. Construction Sequencing Plan
- D. Pre-installation meetings.
- E. Surveying for laying out the work.
- F. Coordination and ordering of prefabricated manholes.
- G. Cleaning and protection.
- H. Starting of systems and equipment.
- I. Demonstration and instruction of El Dorado County personnel.
- J. Closeout procedures, except payment procedures.

1.02 RELATED SECTIONS

- A. Section 01100 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01300 – Administrative Requirements
- C. Section 01400 - Quality Requirements: Testing and inspection procedures.

1.03 SUBMITTALS

- A. Construction Progress Schedule.
 - 1. Submit construction progress schedule for Owner approval 5 days after date of agreement. See Section 01300-3.03 “construction Progress Schedule” for more information. Do not start work prior to approval of Construction Progress Schedule except as directed by the Engineer.
 - 2. The plan shall contain detailed sequencing, routing, and schedule information.
- B. Construction Sequencing Plan: The construction sequencing plan shall be submitted to the Owner for review and approval 5 days prior to begin of construction. In general, the plan shall propose detailed steps for installing the Muffin Monster Manholes and new sewer pipes to allow for minimal closure of the jail sewer system. The sewer flow shall not be interrupted for more than 2 hours and shall occur during off-peak hours. The locations where manholes will be installed shall be excavated around the existing sewer pipes and the concrete manhole bases shall be constructed below the sewer pipes without breaking the pipes. The pipes shall not be broken until the sewer flow to the pipe has been shut off and the manhole is about to be installed. When the manhole has been installed and connected to the sewer pipes, the sewer flow shall immediately be restored.
- C. Survey Work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.

3. Submit surveys and survey logs for the project record.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities. Include in Project Manual.

1.04 QUALIFICATIONS

- A. For survey work, employ a land surveyor registered in California and acceptable to El Dorado County. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.
- B. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in the State of California.

1.05 PROJECT CONDITIONS

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment if required.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere. No dust from Contractor operations or material handling can be allowed to visibly impact County operations or cross property boundaries. The Contractor shall prevent airborne dust by applying water in such amount as to eliminate visible dust clouds but not generate storm water run-off.
- D. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
 1. Minimize amount of bare soil exposed at one time.
 2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
 3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- E. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.06 COORDINATION

- A. See Section 01100 for occupancy-related requirements.
- B. Coordinate with manufacturer of prefabricated manholes – manhole height, lead time, transportation, unloading, setting into place, training and instructions.
- C. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- D. Notify affected utility companies and comply with their requirements.
- E. Coordinate completion and clean-up of work of separate sections.
- F. After El Dorado County occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of El Dorado County's activities.

1.07 MEASUREMENT AND PAYMENT

- A. The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Mobilization / Demobilization".

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01600.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. Construction progress schedule shall be prepared by the Contractor and shall lay out the work items to ensure that transfer station operations will not be affected during construction.
- B. Transfer station operating hours are Monday through Friday 6:30 AM to 6:00 PM and Saturday and Sunday 8:00 AM through 6:00 PM.
- C. After hours is 7 days a week 6:00 PM through 6:30 AM.
- D. Prepare detailed plan that shows work items and estimated construction duration.

3.04 LAYING OUT THE WORK

- A. Layout of the new work shall be done by a California licensed land surveyor.
- B. Verify locations of survey control points prior to starting work.
- C. Promptly notify the Engineer of any discrepancies discovered.
- D. Control datum for survey is that indicated on Drawings.
- E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- F. Utilize recognized engineering survey practices. All survey work and construction staking shall be performed by a professional Land Surveyor licensed in California.
- G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
- F. Periodically verify layouts by same means.
- G. Maintain a complete and accurate log of control and survey work as it progresses.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown. Pothole to determine location and depth of existing utilities. Install new work in a manner that connects to existing.
 - 2. Report discrepancies to El Dorado County before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
 - 2. Relocate items indicated on drawings.
 - 3. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- C. Services (Including but not limited to Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to

- equipment and operational components; if necessary, modify installation to allow access or provide access panel.
2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 4. Verify that abandoned services serve only abandoned facilities.
- D. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work.
- E. Adapt existing work to fit new work:
1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to El Dorado County.
- F. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- G. Do not begin new construction in alterations areas before demolition is complete.
- H. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Execute cutting and patching including excavation and fill to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.
- B. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- C. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- D. Restore work with new products in accordance with requirements of Contract Documents.
- E. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- G. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.

3.08 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, and other closed or remote spaces, prior to enclosing the space.
- C. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

3.10 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate maintenance of products to El Dorado County's personnel two weeks prior to date of Substantial Completion.
- B. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.

3.11 FINAL CLEANING

- A. Clean site; sweep paved areas, rake clean landscaped surfaces.
- B. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.12 CLOSEOUT PROCEDURES

- A. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in Contractor's Notice of Substantial Completion.
- B. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to El Dorado County-occupied areas.
- C. Complete items of work determined by El Dorado County's final inspection.

END OF SECTION

**SECTION 01732
WASTE MANAGEMENT**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Product Substitutions
- B. Waste Management Procedures

1.02 WASTE MANAGEMENT REQUIREMENTS

- A. El Dorado County requires that this project generate the least amount of trash and waste possible.
- B. Soil, asphalt concrete, and rock materials generated during pavement demolition shall be hauled and delivered to the nearest landfill by the Contractor. There will be a gate fee for these materials.
- C. Unrecyclable construction debris shall be hauled and disposed of at the nearest landfill unless otherwise required.
- D. Construction debris stockpile areas are indicated on the plans. Contractor shall use these areas if necessary, however direct loading and off-haul is encouraged.
- E. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- F. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- G. Required Recycling, Salvage, and Reuse: The following may not be disposed of in landfills or by incineration:
 - 1. Aluminum and plastic beverage containers.
 - 2. Corrugated cardboard.
 - 3. Wood pallets.
 - 4. Clean dimensional wood: May be used as blocking or furring.
 - 5. Land clearing debris, including brush, branches, logs, and stumps: See Section 02230 for use options.
 - 6. Concrete: May be crushed and used as riprap, aggregate, sub-base material, or fill.
 - 7. Asphalt paving: May be recycled into paving for project.
 - 8. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
- H. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- I. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.03 RELATED REQUIREMENTS

- A. Section 01300 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. Section 01500 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- C. Section 01600 - Product Requirements: Waste prevention requirements related to delivery, storage, handling, and product substitutions.
- D. Section 01700 - Execution Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, cleaning, and return of materials.
- E. Section 02230 - Site Clearing: Handling and disposal of land clearing debris.
- F. Section 02225 - Demolition and Pavement Removal: Construction debris disposal at the nearest landfill.

1.04 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction Debris and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.05 SUBMITTALS

See Section 01300 - Administrative Requirements, for submittal procedures.

1.06 MEASUREMENT AND PAYMENT

The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Mobilization / Demobilization".

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 01300 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01500 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 01600 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 01700 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

END OF SECTION

SECTION 01780

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Warranties and bonds.

1.02 RELATED SECTIONS

- A. Section 01300 - Administrative Requirements: Project Manual
- B. Section 01700 - Execution Requirements: Contract closeout procedures.

1.03 SUBMITTALS

- A. Project Manual
 - 1. Project Record Documents: Submit documents to Owner with claim for final Application for Payment.
 - 2. Warranties and Bonds:
 - i. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
 - ii. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing the date of acceptance as the beginning of the warranty period.

1.04 MEASUREMENT AND PAYMENT

- A. The work required under this Section will not be measured separately. Payment for work required and performed under this Section shall be included in the lump sum price for "Mobilization / Demobilization".

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Compile project record documents, warranties, bonds, and other required documents in Project Manual and submit to Engineer.
- B. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Manufacturer's instruction for assembly, installation, and adjusting.
- C. Ensure entries are complete and accurate, enabling future reference by El Dorado County.
- D. Store record documents separate from documents used for construction.
- E. Record information concurrent with construction progress.
- F. Specifications: Legibly mark and record at each product section description of actual products

installed, including the following:

1. Product substitutions or alternates utilized.
 2. Changes made by Addenda and modifications.
- G. Record Drawings: Legibly mark each item to record actual construction including:
1. Field changes of dimension and detail.
 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work. Except for items put into use with El Dorado County's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Retain warranties and bonds until time specified for submittal.

END OF SECTION

SECTION 02230

SITE CLEARING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Clearing of vegetation.
- B. Removal of existing debris and other items obstructing the work.

1.02 RELATED SECTIONS

1.03 PROJECT CONDITIONS

- A. Minimize production of dust due to clearing operations; do not use water if that will result in run-off or other pollution.
- B. Comply with other requirements specified in Section 01700 – Execution Requirements.

1.04 MEASUREMENT AND PAYMENT

- A. Site Clearing:
 - 1. Measurement: Separate measurement of the work required under this Section will not be performed.
 - 2. Payment: All cost associated with the work required under this Section shall be included in the **Lump Sum** price **Clearing, Grubbing and Environmental Protection** as stated in the bid schedule. Payment will be made for costs associated with clearing of vegetation and removal of existing debris, and other items obstructing the work. The price and payment shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, and for performing all work required for which separate payment is not otherwise provided.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 EXISTING UTILITIES AND BUILT ELEMENTS

- A. Protect existing utilities to remain from damage.
- B. Do not disrupt public utilities without permit from authority having jurisdiction.
- C. Protect existing structures and other elements that are not to be removed.

3.02 VEGETATION

- A. Scope: Remove grass where required for new work.
- B. Do not remove or damage vegetation beyond the limits indicated on Drawings.
- C. Vegetation Removed: Do not burn, bury, or leave on site, except as indicated.
- D. Restoration: If vegetation outside removal limits or within specified protective fences is damaged or destroyed due to subsequent construction operations, replace at no cost to County of El Dorado.

3.03 DEBRIS

- A. Remove debris and trash from site.
- B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 02317
TRENCHING FOR SITE UTILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Trenching for site utilities.
- B. Backfilling and compacting of trenches for underground utilities.
- C. Underground utility location.
- D. Potholing to verify location and depth of existing underground utilities.

1.02 RELATED SECTIONS

1.03 REFERENCES

- A. Section 02221 Trench Excavation, Backfill and Compaction of the EID Technical Specifications.
- B. ASTM C 136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2006.
- C. ASTM D 1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN m/m³)); 2002.
- D. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); 2005.
- E. ASTM D 3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.
- F. ASTM D 4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2005.

1.04 SUBMITTALS

- A. Samples: 10 lb sample of each type of fill; submit to Project Coordinator.
- B. Materials Sources: Submit name of imported materials source.

1.05 PROJECT CONDITIONS

- A. Provide sufficient quantities of fill to meet project schedule and requirements. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where designated or according to Project Coordinator's instructions..
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.
- C. Verify that survey bench marks and intended elevations for the Work are as indicated.
- D. Protect plants and other features to remain.
- E. Protect bench marks, survey control points, existing structures, fences, and paving from excavating equipment and vehicular traffic.
- F. Perform underground utility location and potholing along the alignments of proposed structures and pipes to positively locate existing underground facilities in their horizontal and vertical location. The elevations of the existing sewer pipes shall be used to determine the required height of the prefabricated manholes. The manholes shall be ordered based on the potholing information, grade rings and manhole cover requirements and finish grades at the site.

1.06 MEASUREMENT AND PAYMENT

- A. Trenching as required to construct sanitary sewer lines and clean-outs, underground electrical conduits or as required for other purposes will not be measured separately. Payment for trenching shall be included in the unit prices for the related work item.
- B. **Utility Location and Potholing** will not be measured separately. The contract **Lump Sum** price as stated in the Bid Schedule shall include full compensation for all for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, and for performing all work required for which separate payment is not otherwise provided.

PART 2 PRODUCTS

2.01 FILL MATERIALS

- A. Backfill: Subsoil excavated on-site free from organic matter, debris, and rocks larger than 6 inches in diameter or length.
- B. Bedding: Sand conforming to Section 02221 of the EID Technical Specifications..

2.02 SOURCE QUALITY CONTROL

- A. See Section 01400 - Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities that remain and protect from damage.

3.02 TRENCHING

- A. Notify Owner of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- B. Slope banks of excavations deeper than 4 feet to angle of repose or less unless shored.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Cut trenches wide enough to allow inspection of installed utilities.
- E. Hand trim excavations. Remove loose matter.
- F. Remove large stones and other hard matter which could damage piping or impede consistent backfilling or compaction.
- G. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.
- H. Remove excavated material that is unsuitable for re-use from site.
- I. Stockpile excavated material to be re-used in area designated on site.
- J. Remove excess excavated material from site.

3.03 PREPARATION FOR UTILITY PLACEMENT

- A. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- B. Compact subgrade to relative compaction equal to or greater than requirements for subsequent fill material.
- C. Until ready to backfill, maintain excavations and prevent loose soil from falling into excavation.

3.04 BACKFILLING

- A. Backfill to contours and elevations indicated.
- B. Fill up to subgrade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage other work.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.
- F. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth.
- G. Slope grade away from building minimum 2 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- H. Correct areas that are over-excavated.
 - 1. Thrust bearing surfaces: Fill with concrete.
 - 2. Other areas: Use general fill, flush to required elevation, compacted to minimum 95 percent of maximum dry density.
- I. Compaction Density Unless Otherwise Specified or Indicated:
 - 1. Under paving, and similar construction: 95 percent of maximum dry density.

3.05 TOLERANCES

- A. Top Surface of General Backfilling: Plus or minus 1 inch from required elevations.
- B. Top Surface of Backfilling Under Paved Areas: Plus or minus 1 inch from required elevations.

3.06 FIELD QUALITY CONTROL

- A. See Section 01400 - Quality Requirements, for general requirements for field inspection and testing.
- B. Compaction density testing on compacted trench backfill in accordance with ASTM D2922 will be performed by the County. Cease work in the area of testing for the duration of the test and assist County taking tests.
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- D. Frequency of Tests: Per County's request (approx.1 test per 100 linear feet).

3.07 CLEAN-UP

- A. Remove unused stockpiled materials; leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- B. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

END OF SECTION

SECTION 02535

SANITARY SEWER PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sanitary sewerage drainage piping, fittings, and accessories.
- B. Connection of building sanitary drainage system to on-site sewer service.
- C. Cleanout Access.

1.02 RELATED SECTIONS

- C. Section 02317 - Trenching for Site Utilities: Excavating, bedding, and backfilling.
- D. Section 02640 - Manholes and Covers.
- E. Section 03300 - Cast-in-Place Concrete: Concrete for cleanout base pad construction.

1.03 MEASUREMENT AND PAYMENT

- A. Measurement: By the **Linear Foot**.
- B. Payment: The contract unit price per linear foot paid for **6" PVC ASTM D3034 SDR-35 Sanitary Sewer Pipe** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and doing all work involved in installing and connecting 6" PVC sewer pipe, as shown on the plans and as specified in these Contract Specifications and as directed by the Engineer.
- C. **Sanitary Sewer Cleanout** will be measured by **Each** installed and accepted. The contract unit price per each paid for Sanitary Sewer Cleanout shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and doing all work involved in installing and connecting sanitary sewer clean-out, as shown on the plans and as specified in these Contract Specifications and as directed by the Engineer.

1.04 REFERENCES

- A. ASTM D 2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications; 2005.
- B. ASTM D 2751 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings; 2005.
- C. ASTM D 3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2004a.

1.05 DEFINITIONS

- A. Bedding: Fill placed under, beside and directly over pipe, prior to subsequent backfill operations.

1.06 SUBMITTALS

- A. Project Record Documents:
 - 1. Record location of pipe runs, connections, catch basins, cleanouts, and invert elevations.
 - 2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable code for materials and installation of the Work of this section.

1.08 PROJECT CONDITIONS

- A. Coordinate the Work with termination of sanitary sewer connection outside building, connection to existing sewer service, and trenching.

PART 2 PRODUCTS

2.01 SEWER PIPE MATERIALS

- A. Plastic Pipe: ASTM D3034 SDR-35 Poly Vinyl Chloride (PVC) pipe, DR-18; inside nominal diameter of 6 inches, bell and spigot style gasket sealed joint end.
- B. Fittings: Same material as pipe molded or formed to suit pipe size and end design, in required tee, bends, elbows, cleanouts, reducers, traps and other configurations required.

2.02 PIPE ACCESSORIES

- A. Warning Tape: Magnetic detectable conductor, clear plastic covering, imprinted with "Sewer Service" in large letters.

2.03 BEDDING AND COVER MATERIALS

- A. Pipe Bedding Material: As specified in Section 02317.
- B. Pipe Cover Material: As specified in Section 02317.

PART 3 EXECUTION

3.01 TRENCHING

- A. See Section 02317 for additional requirements.
- B. Hand trim excavation for accurate placement of pipe to elevations indicated.
- C. Backfill around sides and to top of pipe with cover fill, tamp in place and compact, then complete backfilling.

3.02 INSTALLATION - PIPE

- A. Verify that trench cut is ready to receive work and excavations, dimensions, and elevations are as indicated on layout drawings.
- B. Install pipe, fittings, and accessories in accordance with manufacturer's instructions. Seal watertight.
 - 1. Plastic Pipe: Also comply with ASTM D 2321.
- C. Lay pipe to slope gradients noted on layout drawings; with maximum variation from true slope of 1/8 inch in 10 feet.
- D. Connect to building sanitary sewer outlet, through installed sleeves.
- E. Install trace wire 6 inches above top of pipe; coordinate with Section 02317.

3.03 FIELD QUALITY CONTROL

- A. Perform field inspection and testing in accordance with Section 01400.
- B. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to County of Sacramento.

3.04 PROTECTION

- A. Protect pipe and bedding cover from damage or displacement until backfilling operation is in progress.

END OF SECTION

SECTION 02640
MANHOLES AND COVERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Modular precast concrete grade rings with tongue-and-groove joints covers, anchorage, and accessories.
- B. Sanitary sewer manhole rim and cover.
- C. Cast-in-place reinforced concrete manhole base.
- D. Concrete collar.

1.02 RELATED SECTIONS

- A. Section 03300 - Cast-in-Place Concrete.
- B. Section 11330 - Muffin Monster Manhole.

1.03 REFERENCES

- A. EID Technical Specifications, Section 02601 - Manholes
- B. ASTM A 48/A 48M - Standard Specification for Gray Iron Castings; 2003.
- C. ASTM C 478 - Standard Specification for Precast Reinforced Concrete Manhole Sections; 2006a.
- D. ASTM C 923 - Standard Specification for Resilient Connectors between Reinforced Concrete Manhole Structures, Pipes and Laterals; 2002.

1.04 SUBMITTALS

- A. Shop Drawings: Indicate manhole locations, elevations, piping sizes and elevations of penetrations.
- B. Product Data: Provide manhole covers, component construction, features, configuration, and dimensions.

1.05 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three (3) years documented experience.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530.1/ASCE 6/TMS 602 or applicable building code, whichever is more stringent.

1.07 MEASUREMENT AND PAYMENT

- A. Payment for materials and work required under this section will not be measured separately and shall be included in the unit price for "Grinder (Muffin Monster) with Manhole & Installation".

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Manhole Risers: Reinforced precast concrete in accordance with ASTM C478 (ASTM C478M) and AASHTO M199, with resilient connectors complying with ASTM C923 (ASTM C923M).
- B. Concrete: As specified in Section 03300 - Cast-In-Place Concrete.

2.02 COMPONENTS

- A. Grade Rings: 30" inside diameter.

- B. Cover: 30" Traffic Rated manhole cover printed "SEWER"; Deeter Foundry ring and cover or approved equivalent.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify items provided by other sections of Work are properly sized and located.
- B. Verify that built-in items are in proper location, and ready for roughing into Work.
- C. Verify excavation for manholes is correct.

3.02 PREPARATION

- A. Coordinate placement of inlet and outlet pipe or duct sleeves required by other sections.

3.03 MANHOLES

- A. Place concrete base pad, trowel top surface level.
- B. Set cover frames and covers level without tipping, to correct elevations.
- C. Coordinate with other sections of work to provide correct size, shape, and location.

END OF SECTION

SECTION 02821
CHAIN LINK FENCE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fence framework and accessories for approx. 8 feet high fence with chain link cover to create a complete enclosure.
- B. Man gate.
- C. Excavation for post bases; concrete foundation for posts.
- D. Connect fence to building.

1.02 RELATED SECTIONS

- A. Section 03300 - Cast-in-Place Concrete: Concrete anchorage for posts.

1.03 REFERENCES

- A. ASTM A 123/A 123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2002.
- B. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2005.
- C. ASTM A 392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric; 2003.
- D. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete; 2005.
- E. ASTM F 567 - Standard Practice for Installation of Chain-Link Fence; 2000.
- F. ASTM F 1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures; 2004.

1.04 SUBMITTALS

- A. Product Data: Provide data on posts, accessories, fittings and hardware.
- B. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions and depth, hardware anchorage, schedule of components and any other pertinent information to construct the enclosure for the electrical equipment.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of experience.

1.06 MEASUREMENT AND PAYMENT

- D. Measurement: By the **Linear Foot**.
- E. Payment: The contract unit price per linear foot paid for **Chain-Link Fence** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and doing all work involved in constructing chain-link fence enclosure complete in place, connecting to the adjacent building, and covering the top to make a complete enclosure around the electrical equipment, with locking gate, as schematically indicated on the plans and as specified in these Contract Specifications and as directed by the Engineer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Chain Link Fences and Gates:
 - 1. Master-Halco, Inc.: www.fenceonline.com.
 - 2. Merchants Metals: www.merchantsmetals.com.
 - 3. Substitutions: See Section 01600 - Product Requirements.

2.02 MATERIALS

- A. Posts, Rails, and Frames: ASTM F 1083 Schedule 40 hot-dipped galvanized steel pipe, welded construction, minimum yield strength of 25 ksi.
- B. Wire Fabric: ASTM A 392 zinc coated steel chain link fabric.
- C. Concrete: ASTM C 94/C 94M, ready-mixed; Normal Portland Cement, 3,000 psi strength at 28 days, 3 inch slump; 3/4 inch nominal sized coarse aggregate.

2.03 COMPONENTS

- A. Terminal Posts: 2-7/8" x 0.160" (o.d. x wall thickness) or as submitted by the manufacturer and approved.
- B. Line Posts: 2-7/8" x 0.120" (o.d. x wall thickness) or as submitted by the manufacturer and approved.
- C. Corner Posts: 2-7/8" x 0.160" (o.d. x wall thickness) or as submitted by the manufacturer and approved.
- D. Terminal and Line Post Concrete Foundation: 10" x 24" (dia. x depth)
- E. Fabric: 2 inch diamond mesh interwoven wire, 6 gage minimum thickness, top selvage knuckle end closed, bottom selvage twisted tight.
- F. Tension Wire: 6 gage thick steel, single strand.
- G. Tie Wire: Aluminum alloy steel wire.

2.04 ACCESSORIES

- A. Caps: Cast steel galvanized; sized to post diameter, set screw retainer.
- B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; steel.

2.05 FINISHES

- A. Components (Other than Fabric): Galvanized in accordance with ASTM A 123/A 123M, at 1.7 oz/sq ft.
- B. Hardware: Hot-dip galvanized to weight required by ASTM A 153/A 153M.
- C. Accessories: Same finish as framing.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install framework, fabric, accessories and gates in accordance with ASTM F 567.
- B. Place fabric on outside of posts and rails.
- C. Set intermediate posts plumb, in concrete footings with top of footing 2 inches above finish grade. Slope top of concrete for water runoff.
- D. Do not stretch fabric until concrete foundation has cured 28 days.

- E. Stretch fabric between terminal posts.
- F. Position bottom of fabric at above finished grade.
- G. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.
- H. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- I. Install bottom tension wire stretched taut between terminal posts.

3.02 ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From True Position: 1 inch.
- C. Components shall not infringe adjacent property lines.

END OF SECTION

SECTION 03300
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete for chain link fence foundation.
- B. Reinforced manhole base.
- C. Manhole collar.
- D. All other items of this concrete requiring concrete.

1.02 RELATED SECTIONS

1.03 REFERENCES

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Re-approved 2002).
- B. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.
- C. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 1999.
- D. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 1988 (Re-approved 2002).
- E. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2006.
- F. ASTM C 33 - Standard Specification for Concrete Aggregates; 2003.
- G. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete; 2005.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements.
- B. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent construction for concrete accessories.
- C. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
- B. Follow recommendations of ACI 305R when concreting during hot weather.
- C. Follow recommendations of ACI 306R when concreting during cold weather.

1.06 MEASUREMENT AND PAYMENT

- A. Miscellaneous Concrete Elements:
 - 1. Separate measurement and payment will not be performed for Miscellaneous Concrete Elements required on this project. Full compensation for work, materials and incidentals required to construct Miscellaneous Concrete Elements shall be included in the related work.

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. As specified in the El Dorado Irrigation District Standard Construction Specifications.

2.02 CONCRETE MATERIALS

- A. Concrete Materials: As specified in the El Dorado Irrigation District Technical Specifications Section 02601.

2.03 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Shall conform to the El Dorado Irrigation District Standard Construction Specifications.

2.04 MIXING

- A. Transit Mixers: Shall conform to the El Dorado Irrigation District Standard Construction Specifications.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Compact subgrade to 95% relative compaction.

3.03 PLACING CONCRETE

- A. Ensure reinforcement will not be disturbed during concrete placement.

END OF SECTION

SECTION 11330

MUFFIN MONSTER MANHOLE

SERIES 30005-0008 ELECTRIC GRINDER – FIBERGLASS MANHOLE - CONTROLLER

PART 1 GENERAL

1.1 SUMMARY

- A. This section of the specification describes the Muffin Monster Manhole. The equipment shall be installed as shown on the plans, as recommended by the supplier, and in compliance with all OSHA, local, state and federal codes and regulations.
- B. The number of Muffin Monster Manholes shall be 2 .

1.2 RELATED SECTIONS

- A. Section 02640 Manholes and Covers
- B. Section 03300 - Cast-in-Place Concrete
- C. Electrical Sections included in these specifications.

1.3 REFERENCES

- A. The Muffin Monster Manhole shall, as applicable, meet the requirements of the following industry standards:
 - 1. American Society for Testing and Materials (ASTM) D3753-81: Fiber-Reinforced Polyester Manholes.
- B. The Muffin Monster Manhole Grinder(s) shall, as applicable, meet the requirements of the following industry standards:
 - 1. American Society for Testing and Materials (ASTM) A36: Carbon Steel Plate
 - 2. American Society for Testing and Materials (ASTM) A536-84: Ferritic Ductile Iron Castings
 - 3. American Society for Testing and Materials (ASTM) A48-83: Grey Iron Casting
 - 4. American National Standards Institute (ANSI) B16.42-1979, Class 150 Flanges
 - 5. American Iron and Steel Institute (AISI) 303 Stainless Steel
 - 6. American Iron and Steel Institute (AISI) 304 Stainless Steel
 - 7. American Iron and Steel Institute (AISI) 316 Stainless Steel
 - 8. American Iron and Steel Institute (AISI) 4130 Heat Treated Alloy Steel
 - 9. American Iron and Steel Institute (AISI) 4140 Heat Treated Alloy Steel
 - 10. American Iron and Steel Institute (AISI) 8620 Heat Treated Alloy Steel
 - 11. American Iron and Steel Institute (AISI) 17-4 Stainless Steel
 - 12. Society of Automotive Engineers (SAE) 660 Bearing Bronze
- C. Controllers shall, as applicable, meet the requirements of the following Regulatory Agencies:
 - 1. National Electrical Manufacturer's Association (NEMA) Standards
 - 2. National Electric Code (NEC)

3. Underwriters Laboratory (UL and cUL)
4. International Electrotechnical Commission (IEC)

1.4 DOCUMENTS

A. Submittals

Supplier shall submit 2 sets of submittals. Submittals shall include equipment descriptions, functional descriptions, dimensional and assembly drawings, catalog data, and job specific drawings.

B. Operation and Maintenance Manuals

The supplier shall provide 2 Operation & Maintenance manuals. An electronic version shall be supplied to create additional copies. The manuals shall include equipment descriptions, operating instructions, drawings, troubleshooting techniques, a recommended schedule, and the recommended lubricants.

1.5 QUALITY ASSURANCE

A. Identification

1. Equipment shall be identified with a corrosion resistant nameplate affixed in a conspicuous location.
2. Nameplate information shall include manufacturer's name and address, equipment model number, and serial number.

B. Manufacturer

1. Supplier shall be ISO9001 certified and have a minimum 30 years experience as a manufacturer of municipal waste water equipment and a minimum 5,000 prior installations of similar equipment.
2. Supplier shall provide a list of at least 10 reference sites for similar equipment for verification by the Engineer or Owner's Representative.
3. Supplier shall conduct factory testing and verification of equipment prior to shipment.
4. Supplier shall have factory owned bi-coastal service centers.

C. Installation & Start-up

1. Supplier shall provide services of a factory trained representative to check installation and review start-up of equipment and controls.
2. Supplier Representative shall inspect and approve site installation and supervise a review of the operation of the equipment.
3. Supplier Representative shall provide training on operation and maintenance requirements of the equipment.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Packaging

1. Containers or skids shall be constructed for normal shipping, handling, and storage.
2. Containers shall provide adequate protection for the equipment in a dry indoor environment between +40° F (+4.5° C) and +100° F (+37.8° C).

1.7 WARRANTY

Manufacturer's standard 12-month limited warranty shall be provided on equipment.

1.8 MEASUREMENT AND PAYMENT

- A. Measurement: **Grinder (Muffin Monster) with Manhole & Installation** will be measured by **Each** installed, functioning and accepted.
- B. Payment: The contract unit price per each paid for **Grinder (Muffin Monster) with Manhole & Installation** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and doing all work involved in ordering, purchasing, coordination with manufacturer, transporting to the site, unloading, and installing Muffin Monster Manhole and grinder as shown on the plans and as specified in these Contract Specifications and as directed by the Engineer. The contract unit price shall also include but not be limited to necessary excavation for manhole and to make connections to existing piping, sewer piping, cast-in-place reinforced manhole base, anchors, grade rings, traffic rated cast iron rim and cover, concrete collar, steel chain of sufficient length to lift pump, closing gap in channel between grinder and channel bottom, backfill and compaction, electrical connections, testing, and training to provide a fully functioning unit. The contractor shall consider that the lead time for the manholes is approximately 60 days.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Muffin Monster Manhole shall be in accordance with these specification and plans and shall be supplied by one of the following manufacturers:
 - 1. JWC Environmental, 290 Paularino Ave, Costa Mesa, CA 92626; Tel: 800-331-2277
www.jwce.com
 - 2. Approved equal.
 - a. Manufacturers requesting to be selected as an approved equal shall submit certified documentation including installation lists with phone numbers, equipment drawings, flow performance curves, electrical schematics and cut sheets, O&M draft showing compliance with these specifications. Selected equipment manufacturers shall be added to the list of approved manufacturers.
 - b. Selected approved equal manufacturers shall conduct an onsite test within ten (10) days of installation demonstrating compliance with all areas of this specification.

2.2 MUFFIN MONSTER MANHOLE

A. Summary

Grinder shall reduce or shred influent solids for protection of downstream equipment. Grinder shall be two shafted design consisting of individual cutters and spacers of equal diameter on both shafts. Grinder shall have high flow or slotted side rails. Grinder shall have an immersible motor and speed reducer for cutter drive.

Each manhole shall have a minimum ½-inch wall thickness, able to withstand a static load of 150 lb/ft per foot of depth with less than ¼-inch deflection. The manhole shall be fabricated with polyester resin, in one integral piece that is structurally strong, lightweight, watertight and corrosion resistant to salt water, ground water, corrosive soil conditions and many commonly encountered industrial chemicals.

The interior surface shall have a smooth white isophthalic gelcoat surface integral to the laminate and not applied as a spray on secondary process.

B. Grinder Components

- 1. Cutters and Spacers
 - a. Cutting stack shall be a nominal height of 8 inches (203 mm).

- b. Cutter shall be an individual disk constructed of 8620 steel surface ground to thickness of .438-inches +.000/-.001 (11 mm +.000/-.003).
 - c. Cutters shall be heat treated to produce a hardness of 60-65 Rockwell C.
 - d. Cutters shall have 7 cam shaped teeth. Tooth height shall not be greater than ½-inch (13 mm) above the root diameter of the cutter.
 - e. Spacers shall be an individual disk constructed of 8620 steel surface ground to a thickness of .446-inches +.001/-.000 (11.3 mm +.003/-.000).
 - f. Spacers shall have a hardness of 40-45 Rockwell C.
 - g. Spacers shall have a smooth outside diameter with no tooth profiles.
2. Shafts
- a. Shafts shall be ASTM 4140 alloy steel with a minimum tensile strength of 149,000 PSI (1,027 kPA).
 - b. Shafts shall measure a nominal 2-inches (51 mm) across flats of hex.
 - c. Shafts shall be hardened to 38-42 Rockwell C.
3. Seal Cartridges
- a. Seal cartridges shall be rated to a maximum of 90 PSI (620 kPA).
 - b. Seal cartridges shall not require flushing.
 - c. Dynamic and rotating seal faces shall be tungsten carbide with 6% nickel binder.
 - d. O-rings shall be constructed of Buna-N (Nitrile).
 - e. Radial and axial loads shall be borne by sealed, oversized, deep-groove ball bearings.
4. Housings and Covers
- a. Top cover and end housings shall be ASTM A536-84 ductile iron.
 - b. Bottom cover shall be ASTM A36 steel.
 - c. End housing shall have integral bushing deflectors to guide solids away from seal cartridges. End housings shall have directional flow arrows cast into the external side walls.
5. Side Rails
- a. Side rails shall be ASTM A536-84 ductile iron.
 - b. Side rails shall have evenly-spaced horizontal slots to increase flow and decrease water head loss through the grinder. Slots shall only be located on the upstream or influent side of the rail and the effluent side of the rail shall be void of slots to allow for unobstructed flow.
 - c. Inside profile of the cutters shall be concave and follow the radial arc of the cutters.
 - d. Clearance between the outside diameter of cutters and concave arc of the side rail shall not exceed 5/16-inch (7.9 mm).
6. Speed Reducer
- a. Reducer shall be manufactured by Sumitomo Machinery Corporation of America.
 - b. Reducer shall be internal planetary mechanism with trochoidal curved tooth profile.
 - c. Reducer shall be a vertically mounted with 29:1 single reduction.
 - d. Reducer shall be grease lubricated.

7. Motor
 - a. Motor shall be manufactured by Baldor Electric Company.
 - b. Motor shall be XPNV immersible – type, 5 hp (3.75 kW), 1770 rpm, 208- 230/460 volt, 3 phase, 60 Hz. and shall have a 40' power cable factory installed.
 - c. Motor shall have a minimum service factor of 1.15, 91% minimum efficiency factor at full load, minimum 76% power factor at full load and rated at UL NEMA 6P (IP67+).

C. Manhole Components

- a. Fiberglass barrel shall be 48 inches (121.92 cm) in diameter.
- b. Inlet and outlet pipe stubs, 6 inch (15.24 cm) with corresponding slip flange bolting connections for connection to incoming and outgoing pipes shall be supplied.
- c. Stainless steel (T-304) anchoring brackets (4) for anchoring manhole to concrete base shall be supplied.
- d. A ½ inch (1.27 cm) thick expanded polystyrene bead board for placement on concrete slab under manhole shall be supplied.
- e. Internally-mounted fiberglass ladder with non-slip traction surface (meet or exceed OSHA General Industry Standards, Part 1910.27 for "Fixed Ladders" shall be supplied.
- f. Non-traffic areas above grade manhole shall have lockable fiberglass lid able to withstand 1000 lbs. (453.6 kg) toplod.
- g. Traffic area manhole shall have concentric manway able to withstand 16,000 pounds vertical dynamic wheel load plus lateral forces with opening of 30 inches I.D. min. for use with cast-iron cover.
- h. Factory installed and tested internally-mounted 306 SS (316 SS optional) guide rails for grinder installation and removal shall be supplied.
- i. Steel chain welded to manhole cover with sufficient slack to lift grinder.

D. CONTROLLER

1. Controller shall provide control of the grinder and be designed to control one (1) 5 hp motor at 208-230/460 volts, 3 phase, 60 Hz. The controller shall have indicator lights, switches and other control devices.
 - a. Enclosure shall be fiberglass reinforced polyester NEMA 4X.
 - b. Enclosure shall house the control devices, motor starters, and PLC.
 - c. Grinder ON-OFF/RESET-REMOTE three-position 22mm type, NEMA 4X selector switch.
 - d. In the OFF/RESET position, the grinder shall not run.

2.3 GRINDER PERFORMANCE

- A. The grinder shall be capable of processing up to 335 GPM with a maximum headloss of twelve (12) inches based on clear wastewater at a typical downstream water level of four (4) inches.
- B. Grinder shall provide peak shaft torque of 4,756 lb-in/hp (721 Nm/kW).
- C. Grinder shall provide peak force at cutter tip of 2,051 lb_f/hp (12,234 N/kW).
 1. In the ON position, the grinder shall run continuously.
 2. In the REMOTE position, the grinder shall start and stop as controlled by an external device.
 3. Selector switch shall be the only method for resetting the controller after a failure.

4. Pilot Lights
 - a. Lights shall be LED type 22 mm, rated NEMA 4X.
 - b. Lights shall indicate POWER ON, RUN, and FAIL.
5. Programmable Logic Controller (PLC)
 - a. PLC shall be manufactured by Panasonic.
 - b. PLC shall have a minimum of 16K of memory.
6. Motor Starter
 - a. Starter shall be a full-voltage reversing type with 120 volt operating coils.
 - b. Overload relays shall be adjustable and sized to full load amperes (FLA) of the motor.
7. Control Transformer
 - a. Control transformer shall be minimum 130 VA.
 - b. Control transformer primary and secondary shall be fused for over current protection.
8. Current Transducer
 - a. Current transducer shall be manufactured by Veris Industries.
 - b. Current transducer shall have adjustable set point from 1-135A with 200 ms or less response time.
9. Fail Conditions
 - a. When a grinder jam obstruction occurs, the controller shall stop the grinder and reverse the rotation to clear the obstruction. If the obstruction is cleared, the controller shall return the grinder to normal operation. If three (3) reverses occur within a 30 second interval, the controller shall stop the grinder motor in a jam condition and activate the grinder FAIL indicator and relay.
 - e. When a power failure occurs while the grinder is operating, the grinder shall resume operation once power is restored.
 - f. When a power failure occurs while the grinder is in a fail condition, once power is restored the fail indicator shall reactivate and remain until reset.
 - g. Reset of the grinder shall be accomplished from the controller only.

PART 3 EXECUTION

3.1 INSTALLATION

Muffin Monster Manholes shall be installed in accordance with supplier's installation instructions, and in accordance with all OSHA, local, state, and federal codes and regulations.

3.2 TESTING

Test of grinder(s) shall demonstrate correct alignment, smooth operation. Test period shall demonstrate simulated jam condition for grinder.

3.3 TRAINING

A field training course shall be provided for operation and supervisory staff members. Field instruction shall cover items for successful operation contained in the operation & maintenance manuals.

END OF SECTION

SECTION 26 05 00

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Sleeves for raceways and cables;
 - 2. Sleeve seals;
 - 3. Grout;
 - 4. Common electrical installation requirements;
 - 5. And all other electrical work related to this contract.

1.02 MEASUREMENT AND PAYMENT

- A. Measurement and payment for all labor, materials, tools, equipment, and incidentals described in the specification sections related to the electrical work of this contract shall be included in the lump sum price of this section.
- B. Measurement: By **Lump Sum**.
- C. Payment: The lump sum contract price paid for **Electrical** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and doing all work involved in installing and connecting electrical conduits, wiring, panels, outlets, pull boxes, junctions, grinder controller boxes, conduit sleeves, anchors and conduit cover for outside wall mounted conduits, trenching, and backfill, as shown on the plans and as specified in these Contract Specifications and as directed by the Engineer.

1.03 SUBMITTALS

- A. Product Data: For sleeve seals.

PART 2 - PRODUCTS

2.01 SLEEVES FOR RACEWAYS AND CABLES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- C. Sleeves for Rectangular Openings: Galvanized sheet steel.
 - 1. Minimum Metal Thickness:
 - 2. For sleeve cross-section rectangle perimeter less than **50 inches (1270 mm)** and no side more than **16 inches (400 mm)**, thickness shall be **0.052 inch (1.3 mm)**.
 - 3. For sleeve cross-section rectangle perimeter equal to, or more than, **50 inches (1270 mm)** and 1 or more sides equal to, or more than, **16 inches (400 mm)**, thickness shall be **0.138 inch (3.5 mm)**.

2.02 SLEEVE SEALS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

- a. Advance Products & Systems, Inc.
 - b. Calpico, Inc.
 - c. Metraflex Co.
 - d. Pipeline Seal and Insulator, Inc.
 - e. Approved equal
2. Sealing Elements: EPDM or NBR interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 3. Pressure Plates: Carbon steel. Include two for each sealing element.
 4. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.03 GROUT

- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3 - EXECUTION

3.01 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

- A. Comply with NECA 1.
- B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
- C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
- D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
- E. Right of Way: Give to piping systems installed at a required slope.

3.02 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- C. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
- E. Cut sleeves to length for mounting flush with both surfaces of walls.
- F. Extend sleeves installed in floors 2 inches (50 mm) above finished floor level.
- G. Size pipe sleeves to provide ¼-inch (6.4-mm) annular clear space between sleeve and raceway or cable, unless indicated otherwise.
- H. Seal space outside of sleeves with grout for penetrations of concrete and masonry

- I. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
- J. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Division 07.
- K. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials. Comply with requirements in Division 07.
- L. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
- M. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel or cast-iron pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- N. Underground, Exterior-Wall Penetrations: Install cast-iron pipe sleeves. Size sleeves to allow for 1-inch (25-mm) annular clear space between raceway or cable and sleeve for installing mechanical sleeve seals.

3.03 SLEEVE-SEAL INSTALLATION

- A. Install to seal exterior wall penetrations.
- B. Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.04 FIRESTOPPING

- A. Apply firestopping to penetrations of fire-rated floor and wall assemblies for electrical installations to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07.

END OF SECTION 26 05 00

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 4 - GENERAL

4.01 SUMMARY

- A. This Section includes the following:
 - 1. Building wires rated 600 V and less.
 - 2. Connectors, splices, and terminations rated 600 V and less.

4.02 SUBMITTALS

- A. Product Data: For each type of product indicated.

4.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 5 - PRODUCTS

5.01 CONDUCTORS AND CABLES

- A. Copper Conductors: Comply with NEMA WC 70.
- B. Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN, THHN2-THWN, XHHW

5.02 CONNECTORS AND SPLICES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. AFC Cable Systems, Inc.
 - 2. Hubbell Power Systems, Inc.
 - 3. O-Z/Gedney; EGS Electrical Group LLC.
 - 4. 3M; Electrical Products Division.
 - 5. Tyco Electronics Corp.
 - 6. Approved equal.
- B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 6 - EXECUTION

6.01 CONDUCTOR MATERIAL APPLICATIONS

- A. Branch Circuits: Stranded copper unless otherwise noted.

6.02 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Exposed Branch Circuits, Including in Crawlspace: Type THHN-THWN, THHN2-THWN, single conductors in raceway.

- B. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless-steel, wire-mesh, strain relief device at terminations to suit application.

6.03 INSTALLATION OF CONDUCTORS AND CABLES

- A. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- B. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- C. Identify and color-code conductors and cables according to Division 26 Section "Identification for Electrical Systems."
- D. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- E. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- F. Wiring at Outlets: Install conductor at each outlet, with at least 9 inches (225 mm) of slack.

6.04 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Tests and Inspections:
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.
- C. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION 26 05 19

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

6.05 SUMMARY

- A. This Section includes methods and materials for grounding systems and equipment.

6.06 SUBMITTALS

- A. Product Data: For each type of product indicated.

6.07 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

PART 7 - PRODUCTS

7.01 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Stranded Conductors: ASTM B 8.

7.02 CONNECTORS

- A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.
 - 1. Pipe Connectors: Clamp type, sized for pipe.

PART 8 - EXECUTION

8.01 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.
- B. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.

8.02 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 - 1. All conduits.

8.03 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Bonding Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
 - 1. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.

END OF SECTION 26 05 26

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 9 - GENERAL

9.01 SUMMARY

- A. Section includes:
 - 1. Hangers and supports for electrical equipment and systems.

9.02 PERFORMANCE REQUIREMENTS

- A. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.
- B. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

9.03 SUBMITTALS

- A. Product Data: For steel slotted support systems.
 - 1. Trapeze hangers. Include Product Data for components.
 - 2. Steel slotted channel systems. Include Product Data for components.

9.04 QUALITY ASSURANCE

- A. Comply with NFPA 70.

PART 10 - PRODUCTS

10.01 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Allied Tube & Conduit.
 - b. Cooper B-Line, Inc.; a division of Cooper Industries.
 - c. ERICO International Corporation.
 - d. GS Metals Corp.
 - e. Thomas & Betts Corporation.
 - f. Unistrut; Tyco International, Ltd.
 - g. Wesanco, Inc.
 - h. Approved equal.
 - 2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
 - 3. Channel Dimensions: Selected for applicable load criteria.
- B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.
- C. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

- D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
- E. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
 - 1. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
 - a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Cooper B-Line, Inc.; a division of Cooper Industries.
 - 2) Empire Tool and Manufacturing Co., Inc.
 - 3) Hilti Inc.
 - 4) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - 5) MKT Fastening, LLC.
 - 6) Approved equal.
 - 2. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
 - 3. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
 - 4. Hanger Rods: Threaded steel.

10.02 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

PART 11 - EXECUTION

11.01 APPLICATION

- A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.
- B. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
- C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
 - 1. Secure raceways and cables to these supports with conduit clamps.

11.02 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, EMT, IMC, and RMC may be supported by openings through structure members, as permitted in NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).

D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. To Steel: Welded threaded studs complying with AWS D1.1/D1.1M, with lock washers and nuts, and Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
6. To Light Steel: Sheet metal screws.

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

11.03 INSTALLATION OF FABRICATED METAL SUPPORTS

A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

11.04 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05 mm).

B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 26 05 29

SECTION 26 05 33

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 12 - GENERAL

12.01 SUMMARY

- A. This Section includes raceways, fittings, and boxes for electrical wiring.
- B. See Division 26 Section "Underground Ducts and Raceways for Electrical Systems" for exterior ductbanks and manholes, and underground handholes, boxes, and utility construction.

12.02 SUBMITTALS

- A. Product Data: For conduit and boxes.

12.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 13 - PRODUCTS

13.01 METAL CONDUIT AND TUBING

- A. Rigid Steel Conduit: ANSI C80.1.
- B. EMT: ANSI C80.3.
- C. Fittings for Conduit, EMT; listed for type and size raceway with which used, and for application and environment in which installed.
 - 1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
 - 2. Fittings for EMT: Steel set-screw or compression type.

13.02 NONMETALLIC CONDUIT AND TUBING

- A. RNC: NEMA TC 2, Type EPC-80-PVC, unless otherwise indicated.
- B. Fittings for RNC: NEMA TC 3; match to conduit or tubing type and material.

13.03 BOXES, ENCLOSURES, AND CABINETS

- A. Cast-Metal Outlet and Device Boxes: NEMA FB 1, ferrous alloy, Type FD, with gasketed cover.
- B. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

PART 14 - EXECUTION

14.01 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
 - 1. Exposed Conduit: Rigid steel conduit.
 - 2. Underground Conduit: Rigid steel conduit, RNC, Type EPC-80-PVC, direct buried.
 - 3. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
- B. Comply with the following indoor applications, unless otherwise indicated: **LYMDWK9MBN7Z**
 - 1. Exposed, Not Subject to Physical Damage: Rigid steel conduit, and EMT. **LYDRGFVQVHWK**
 - 2. Exposed, Not Subject to Severe Physical Damage: Rigid steel conduit, and EMT.

3. Exposed and Subject to Severe Physical Damage: Rigid steel conduit.
 4. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250.
- C. Minimum Raceway Size: 1/2-inch (16-mm) above ground, 3/4-inch (21-mm) underground trade size.
- D. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.

14.02 INSTALLATION

- A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- B. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Complete raceway installation before starting conductor installation.
- D. Support raceways as specified in Division 26 Section "Hangers and Supports for Electrical Systems."
- E. Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- F. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- G. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire.
- H. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
 1. Where required by NFPA 70.

14.03 INSTALLATION OF UNDERGROUND CONDUIT

- A. Direct-Buried Conduit:
 1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Division 31 for pipe less than 6 inches (150 mm) in nominal diameter. All trenches shall slope down away from building so that conduits terminating outside the building terminate below the height of the floor.
 2. Install backfill as specified in Division 31."
 3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches (300 mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified in Division 31."
 4. Install manufactured duct elbows for stub-ups at poles and equipment and at building entrances through the floor, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow.

5. Warning Tape: Bury warning tape approximately 12 inches (300 mm) above direct-buried conduits.

14.04 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07."

END OF SECTION 26 05 33

SECTION 26 05 43

UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

PART 15 - GENERAL

15.01 SUMMARY

A. This Section includes the following:

1. Conduit.
2. Handholes and boxes.

15.02 SUBMITTALS

A. Product Data: For conduit, handholes, and boxes.

15.03 QUALITY ASSURANCE

- A. Comply with ANSI C2.
- B. Comply with NFPA 70.

PART 16 - PRODUCTS

16.01 CONDUIT

- A. Rigid Steel Conduit: Galvanized. Comply with ANSI C80.1.
- B. RNC: NEMA TC 2, Type EPC-80-PVC, UL 651, with matching fittings by same manufacturer as the conduit, complying with NEMA TC 3 and UL 514B.

16.02 HANDHOLES AND BOXES

- A. Description: Comply with SCTE 77.
 1. Color: Gray.
 2. Configuration: Units shall be designed for flush burial and have open bottom, unless otherwise indicated.
 3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
 4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
 5. Cover Legend: Molded lettering, As indicated for each service.
- B. Fiberglass Handholes and Boxes with Polymer Concrete Frame and Cover: Sheet-molded, fiberglass-reinforced, polyester resin enclosure joined to polymer concrete top ring or frame.
 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Armorcast Products Company.
 - b. Carson Industries LLC.
 - c. Christy Concrete Products.
 - d. Synertech Moulded Products, Inc.; a division of Oldcastle Precast.
 - e. Jensen Precast
 - f. Christy; a division of Oldcastle Precast

g. Approved equal.

PART 17 -

EXECUTION

17.01 EARTHWORK

- A. Excavation and Backfill: Comply with Division 31 but do not use heavy-duty, hydraulic-operated, compaction equipment.
- B. Restore surface features at areas disturbed by excavation and reestablish original grades, unless otherwise indicated. Replace removed sod immediately after backfilling is completed.
- C. Restore areas disturbed by trenching, storing of dirt, cable laying, and other work. Restore vegetation and include necessary top-soiling, fertilizing, liming, seeding, sodding, sprigging, and mulching. Comply with Division 32 Sections "Turf and Grasses" and "Plants."
- D. Cut and patch existing pavement in the path of underground ducts and utility structures according to Division 01."

17.02 INSTALLATION OF HANDHOLES AND BOXES OTHER THAN PRECAST CONCRETE

- A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting ducts to minimize bends and deflections required for proper entrances. Use box extension if required to match depths of ducts, and seal joint between box and extension as recommended by the manufacturer.
- B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch (12.7-mm) sieve to No. 4 (4.75-mm) sieve and compacted to same density as adjacent undisturbed earth.
- C. Elevation: In paved areas and trafficways, set so cover surface will be flush with finished grade. Set covers of other handholes 1 inch (25 mm) above finished grade.
- D. Install handholes and boxes with bottom below the frost line.
- E. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

17.03 GROUNDING

- A. Ground underground ducts and utility structures according to Division 26 Section "Grounding and Bonding for Electrical Systems."

END OF SECTION 26 05 43

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 18 - GENERAL

18.01 SUMMARY

- A. Section Includes:
 - 1. Identification for conductors.
 - 2. Underground-line warning tape.
 - 3. Equipment identification labels.
 - 4. Miscellaneous identification products.

18.02 SUBMITTALS

- A. Product Data: For each electrical identification product indicated.

18.03 QUALITY ASSURANCE

- A. Comply with ANSI A13.1.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Comply with ANSI Z535.4 for safety signs and labels.
- E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

PART 19 - PRODUCTS

19.01 CONDUCTOR IDENTIFICATION MATERIALS

- A. Snap-Around Labels: Slit, pre-tensioned, flexible, preprinted, acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

19.02 UNDERGROUND-LINE WARNING TAPE

- A. Tape:
 - 1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical and communications utility lines.
 - 2. Printing on tape shall be permanent and shall not be damaged by burial operations.
 - 3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.
- B. Color and Printing:
 - 1. Comply with ANSI Z535.1 through ANSI Z535.5.
 - 2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE.

19.03 EQUIPMENT IDENTIFICATION LABELS

- A. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm).

19.04 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Paint: Comply with requirements in Division 09 for paint materials and application requirements. Select paint system applicable for surface material and location (exterior or interior).
- B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 20 - EXECUTION

20.01 INSTALLATION

- A. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Apply identification devices to surfaces that require finish after completing finish work.
- C. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- D. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
- E. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape 12" directly above line. Use multiple tapes where width of multiple lines installed in a common trench exceeds 16 inches (400 mm) overall.
- F. Painted Identification: Comply with requirements in Division 09 for surface preparation and paint application.

20.02 IDENTIFICATION SCHEDULE

- 1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for branch-circuit conductors.
 - a. Color shall be factory applied.
 - b. Colors for 208/120-V Circuits:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - c. Colors for 480/277-V Circuits:
 - 1) Phase A: Brown.
 - 2) Phase B: Orange.
 - 3) Phase C: Yellow.
- B. Locations of Underground Lines: Identify with underground-line warning tape for power wiring.
- C. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power systems unless equipment is provided with its own identification.
 - 1. Labeling Instructions:

- a. Indoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label or Engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with **1/2-inch- (13-mm-)** high letters on **1-1/2-inch- (38-mm-)** high label; where two lines of text are required, use labels **2 inches (50 mm)** high.
- b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
- c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
- d. Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

END OF SECTION 26 05 53

SECTION 26 27 26

WIRING DEVICES

PART 21 - GENERAL

21.01 SUMMARY

- A. This Section includes the following:
 - 1. Receptacles with integral GFCI, and associated device plates.

21.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

21.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 22 - PRODUCTS

22.01 MANUFACTURERS

- A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
 - 1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
 - 2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
 - 3. Leviton Mfg. Company Inc. (Leviton).
 - 4. Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).
 - 5. Approved equal.

22.02 GFCI RECEPTACLES

- A. General Description: Straight blade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped. Terminals suited for stranded wiring.
- B. Duplex GFCI Convenience Receptacles, 125 V, 15 A:

22.03 WALL PLATES

- A. Single and combination types to match corresponding wiring devices.
 - 1. Material for Damp Locations: Cast ferroalloy with spring-loaded lift cover, and listed and labeled for use in "wet locations."

PART 23 - EXECUTION

23.01 INSTALLATION

- A. Comply with NECA 1.
- B. Conductors:

1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
 2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
 3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
- C. Device Installation:
1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
 2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
 3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
 4. Connect devices to branch circuits using pigtails that are not less than 9 inches (152 mm) in length.
 5. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
 6. Tighten unused terminal screws on the device.
 7. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.
- D. Receptacle Orientation:
1. Install ground pin of vertically mounted receptacles down.

23.02 IDENTIFICATION

- A. Comply with Division 26 Section "Identification for Electrical Systems."
1. Receptacles: Identify panelboard and circuit number from which served.

23.03 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
1. Test Instruments: Use instruments that comply with UL 1436.
 2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.
- B. Tests for Convenience Receptacles:
1. Line Voltage: Acceptable range is 105 to 132 V.
 2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is not acceptable.
 3. Ground Impedance: Values of up to 2 ohms are acceptable.
 4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
 5. Using the test plug, verify that the device and its outlet box are securely mounted.
 6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new, and retest as specified above.

END OF SECTION 26 27 26

COUNTY OF EL DORADO

CHIEF ADMINISTRATIVE OFFICE



**CONTRACT
SPECIFICATIONS FOR
EL DORADO COUNTY JAIL
SEWER IN-LINE SHREDDER PROJECT
PLACERVILLE CALIFORNIA**

CONTRACT NO. _____

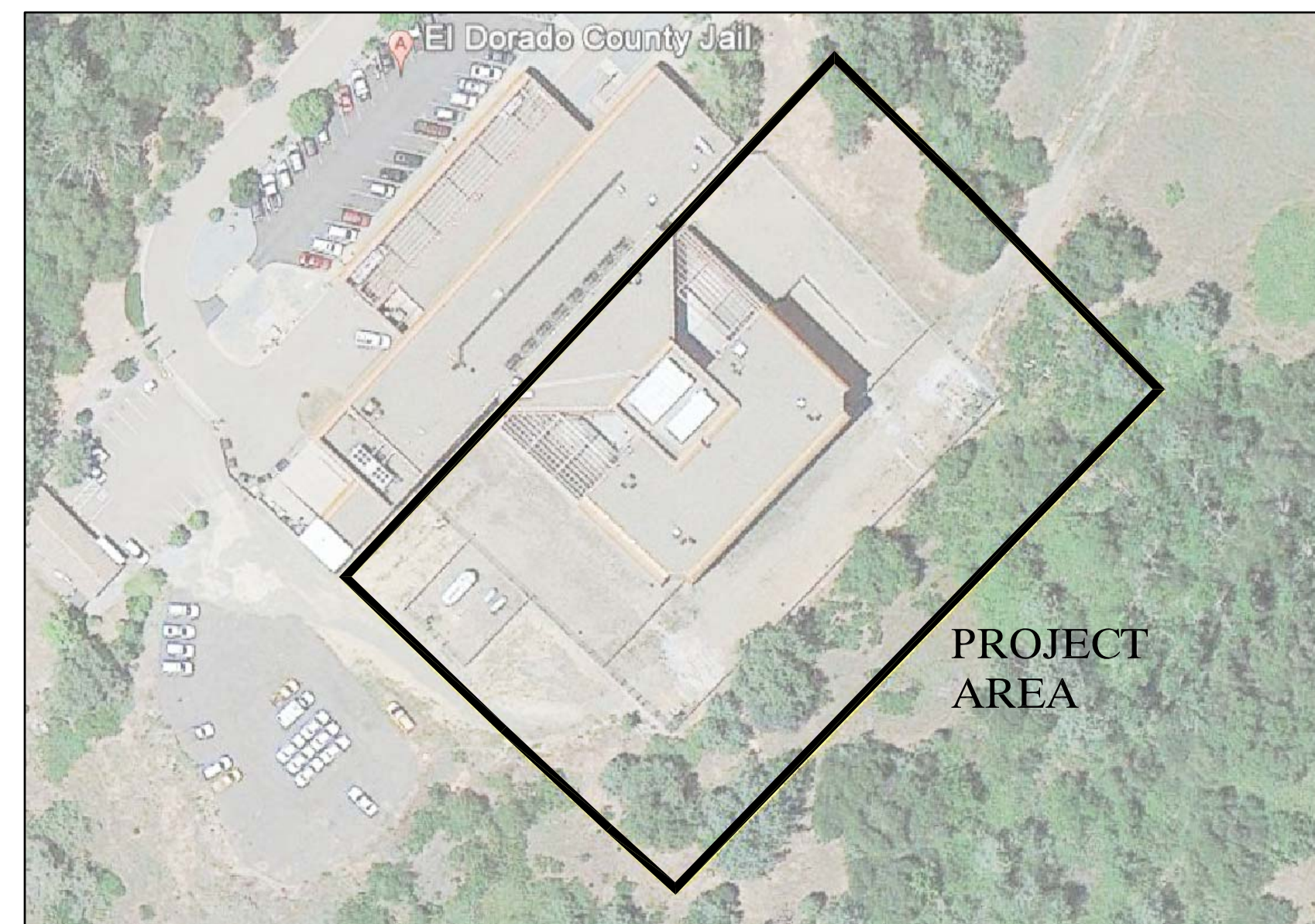
NOVEMBER 2012



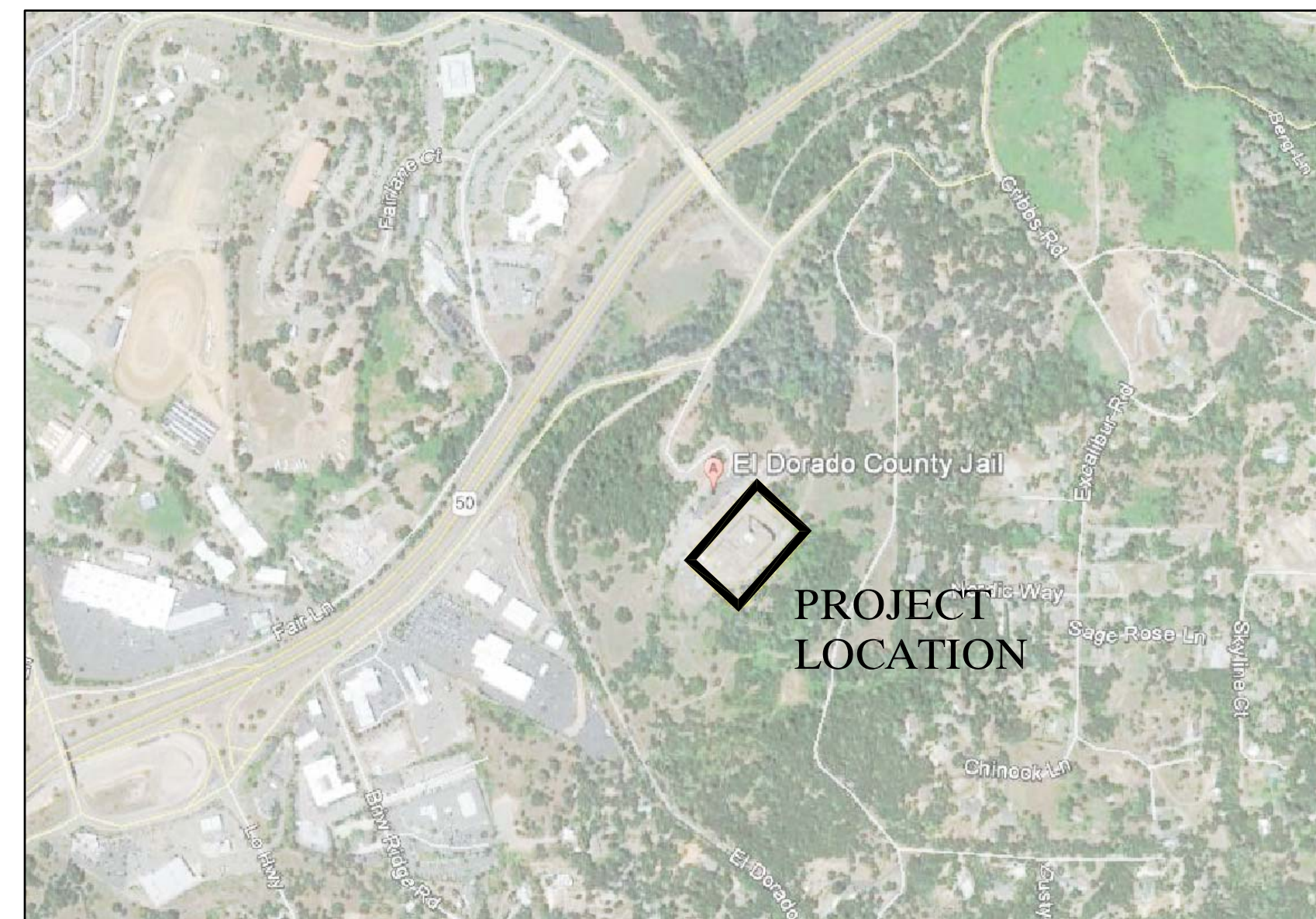
11/27/12

EL DORADO COUNTY JAIL SEWER IN-LINE SHREDDER PROJECT

300 FORNI ROAD
PLACERVILLE, CALIFORNIA 95667



LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

SHEET INDEX	
DRAWING NO.	DESCRIPTION
G1	TITLE SHEET
G2	NOTES, LEGEND & ABBREVIATIONS
C1	SITE AND DEMOLITION PLAN
C2	SEWER LAYOUT PLAN & PROFILE
D1	CIVIL DETAILS
D2	MUFFIN MONSTER MANHOLE DETAILS
E0.1	CALCULATIONS, DIAGRAMS, NOTES, SCHEDULES, SYMBOLS
E1.1	SITE ELECTRICAL PLAN
E5.1	DETAILS

OWNER



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**EL DORADO COUNTY
JAIL SEWER IN-LINE
SHREDDER PROJECT**

OWNER

**EL DORADO COUNTY
3000 FAIRLANE CT - SUITE 1
PLACERVILLE, CA 95667**



NO.	DATE	DESCRIPTION
0	11/27/12	ISSUED FOR CONSTRUCTION

PROJECT NO:	A501.21.35
DESIGNED BY:	JEH/FGH
DRAWN BY:	JW/JEH
CHECKED BY:	FGH/JWN
DATE:	11/19/12
DATE:	11/27/12

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SHEET TITLE

TITLE SHEET



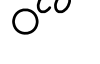
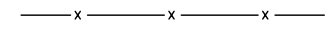
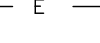




DRAWING	G1
SHEET	1 OF 9

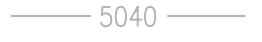















GENERAL SEWER NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND EID'S LATEST VERSION OF THE TECHNICAL SPECIFICATIONS AND STANDARD DRAWINGS.
- CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION CONFERENCE WITH EID INSPECTION 5 WORKING DAYS IN ADVANCE OF DOING WORK WITHIN THEIR JURISDICTION. CONSTRUCTION SHALL BE STARTED NO LATER THAN FIVE (5) DAYS AFTER THE PRECONSTRUCTION CONFERENCE.
- LOCATION OF ALL UNDERGROUND FACILITIES ARE APPROXIMATE ONLY - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL FACILITIES PRIOR TO ANY EXCAVATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND FACILITIES AFFECTED BY THE WORK AND SHALL CONTACT UNDERGROUND SERVICES ALERT (USA) 48 HOURS PRIOR TO ANY EXCAVATION WORK FOR DETERMINATION AND LOCATION OF UNDERGROUND UTILITIES (PHONE 1-800-642-2444).
- CONNECTIONS TO EXISTING SEWER FACILITIES SHALL BE DONE BY A LICENSED CONTRACTOR IN ACCORDANCE WITH EID TIE-IN PROCEDURES PER TECHNICAL SPECIFICATIONS.
- WHERE EXCAVATIONS FOR ANY FACILITIES CONSTRUCTION EXCEED 5 FEET IN DEPTH, CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM CAL/OSHA IN SACRAMENTO (PHONE 1-916-623-2800).
- SERVICE INSTALLATIONS IN ROADWAYS WITH CUTS OR FILLS GREATER THAN 6 FEET IN HEIGHT AND SLOPES STEEPER THAN 3:1 SHALL HAVE THE CLEAN OUT SET AT FINISH GRADE NEXT TO THE ROAD IN THE LOCATION DIRECTED BY THE DISTRICT. THE SERVICE LINE SHALL THEN BE EXTENDED 5 FEET BEYOND THE SLOPE CATCH POINT WITH PVC SDR 35 SIZED TO MATCH THE SERVICE. PLACE STEEL T-POSTS PAINTED GREEN AT THE END OF THIS SERVICE LINE.
- ALL LIDS SHALL BE MARKED "SEWER".
- ALL CURBS SHALL BE WET STAMPED WITH AN "S" BRAND WHERE SEWER SERVICES INTERCEPT.
- LINED MANHOLES REQUIRED.
- CONTRACTOR SHALL HAVE A COPY OF THE EID'S CONSTRUCTION STANDARDS ON THE JOB.
- ALL REVISIONS TO THESE DRAWINGS MUST BE APPROVED IN WRITING BY EID.
- THE CONTRACTOR SHALL NOTIFY THE EID INSPECTOR 48 HOURS PRIOR TO START OR RESTART OF WORK.
- STAKING INFORMATION: MINIMUM SPACING SHALL BE 50 FEET (25 FEET IN RADIUS) UNLESS OTHERWISE DIRECTED BY EID. INFORMATION WILL INCLUDE OFFSET, TYPE OF FACILITY AND CUT TO FLOW LINE ON THE FRONT OF THE STAKE AND ELEVATION AND STATION NUMBER ON THE BACK. ANGLE POINTS AND APPURTENANCES TO BE STAKED INCLUDING LINE AND CURB STAKES AS NEEDED, CUT SHEETS REQUIRED WHERE SUBGRADE HAS NOT BEEN MADE.
- ON REPLACEMENT PROJECTS, THE EXISTING FACILITY MUST REMAIN IN SERVICE UNTIL THE NEW UTILITY IS ACCEPTED AND PUT INTO SERVICE.

LEGEND

PROPOSED FEATURES	
	SANITARY SEWER PIPE
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	CHAIN LINK FENCE
	ELECTRIC CONDUIT
	ELECTRICAL JUNCTION
	GFCI OUTLET
	DETAIL IDENTIFICATION NUMBER
	NUMBER OF SHEET ON WHICH DETAIL IS LOCATED

EXISTING FEATURES	
	MAJOR CONTOUR
	MINOR CONTOUR
	DRAIN INLET
	SEWER CLEANOUT
	SEWER MANHOLE
	LIGHT
	ELECTRIC BOX
	FENCE LINE
	STORM DRAIN LINE
	SANITARY SEWER LINE
	FLOWLINE
	GRATE
	INVERT ELEVATION
	RIM ELEVATION

ABBREVIATIONS

NOT ALL ABBREVIATIONS LISTED ARE USED IN THESE PLANS

AB	AGGREGATE BASE	MFR	MANUFACTURER
AC	ASPHALT CONCRETE OR ACRE	MH	MANHOLE
A/G	ABOVE GROUND	MAX	MAXIMUM
		MD	MAXIMUM DRY DENSITY
APPROX.	APPROXIMATE	MJ	MECHANICAL JOINT
ASSY	ASSEMBLY	MI	MILE
AVG.	AVERAGE	MIN	MINIMUM
AWWA	AMERICAN WATER WORKS ASSOCIATION	MISC	MISCELLANEOUS
		MSB	MAIN SWITCH BOARD
		MVC	MIDDLE OF VERTICAL CURVE
BMP	BEST MANAGEMENT PRACTICES	N	NORTH
BOW	BOTTOM OF WALL	NEC	NATIONAL ELECTRICAL CODES
BSP	BLACK STEEL PIPE	NIC	NOT IN CONTRACT
BW	BOTTOM OF WALL	NTS	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	# OR NO.	NUMBER
C&G	CURB AND GUTTER	O.C.	ON CENTER
CB	CATCH BASIN	OG	ORIGINAL GRADE
CF	CUBIC FEET	OWS	OIL/WATER SEPARATOR
CL	CENTERLINE		
CLR	CLEAR	±	PLUS OR MINUS
CMP	CORRUGATED METAL PIPE	PT.	POINT
CO	CLEAN OUT	PCC	PORTLAND CEMENT CONCRETE
COMM	COMMUNICATION	PVC	POLYVINYL CHLORIDE
CONC	CONCRETE	PMT	PAVEMENT
CONST	CONSTRUCT	POS	POSITIVE
CP	CONTROL POINT	PSI	POUNDS PER SQUARE INCH
CY	CUBIC YARD	PL	PROPERTY LINE
* OR DEG	DEGREE(S)	PUE	PUBLIC UTILITY EASEMENT
DI	DROP INLET	PVI	POINT OF VERTICAL INTERSECTION
Ø OR DIA.	DIAMETER	(P)	PROPOSED
D.I.	DUCTILE IRON		
DWG	DRAWING	R	RADIUS
DW, DWY	DRIVEWAY	RCP	REINFORCED CONCRETE PIPE
		REVEG	REVEGETATION
EA	EACH	RIM	RIM ELEVATION
EASE.	EASEMENT	RT,R	RIGHT
E	EAST	R/W, ROW	RIGHT-OF-WAY
EG	EXISTING GRADE		
ELEC	ELECTRIC	S	SLOPE, SOUTH
EP	EDGE OF PAVEMENT	SCH??	SCHEDULE XX PIPE
EL	ELEVATION	SD	STORM DRAIN
EVC	END OF VERTICAL CURVE	SDR	STANDARD DIMENSION RATIO
EX	EXISTING	SDMH	STORM DRAIN MANHOLE
		SF	SQUARE FOOT/FEET
FCA	FLANGE COUPLER ADAPTER	SH	SHEET
FH	FIRE HYDRANT	SSMH	SANITARY SEWER MANHOLE
FG	FINISH GRADE	SSCO	SANITARY SEWER CLEAN OUT
FFC	FRONT FACE CURB	SS	SANITARY SEWER, STAINLESS STEEL
FES	FLARED END SECTION	STA	STATION
FL	FLOWLINE	STD	STANDARD
FLG	FLANGED	SY	SQUARE YARD
FT or "	FOOT, FEET		
FV	FLUSH VALVE	TAC	TOP OF ASPHALT
		TBC	TOP BACK OF CURB
G	GAS	TC	TOP OF CURB
GR	GRATE	TOW	TOP OF WALL
GV	GATE VALVE	TW	TOP OF WALL
GB	GRADE BREAK	TYP	TYPICAL
GSP	GALVANIZED STEEL PIPE		
		UGE	UNDERGROUND ELECTRIC LINES
HP	HIGH POINT	UGT	UNDERGROUND TELEPHONE LINES
HOR	HORIZONTAL	U/G	UNDERGROUND
HDPE	HIGH DENSITY POLYETHYLENE		
HMAC	HOT MIXED ASPHALT CONCRETE	VC	VERTICAL CURVE
		VG	VALLEY GUTTER
IN. or "	INCH		
INT	INTERSECTION	W	WATER
IE	INVERT ELEVATION	WL	WATERLINE
IRR.	IRRIGATION	W	WEST
		W/	WITH
LT,L	LEFT	WM	WATER METER
LEN	LENGTH		
LF	LINEAR FEET		
LFG	LANDFILL GAS		
LP	LOW POINT		
LS	LUMP SUM		

Nichols Consulting Engineers, Chtd.
 8795 Folsom Blvd., Suite 250
 Sacramento, CA 95826
 (916) 388-5655 * Fax (916) 388-5676



**EL DORADO COUNTY
 JAIL SEWER IN-LINE
 SHREDDER PROJECT**

OWNER
EL DORADO COUNTY
 3000 FAIRLANE CT - SUITE 1
 PLACERVILLE, CA 95667



NO.	DATE	DESCRIPTION
0	11/27/12	ISSUED FOR CONSTRUCTION

PROJECT NO:	A501.21.35
DESIGNED BY:	JEH/FGH
DRAWN BY:	JW/JEH
CHECKED BY:	FGH/JWN
DATE:	11/19/12
DATE:	11/27/12

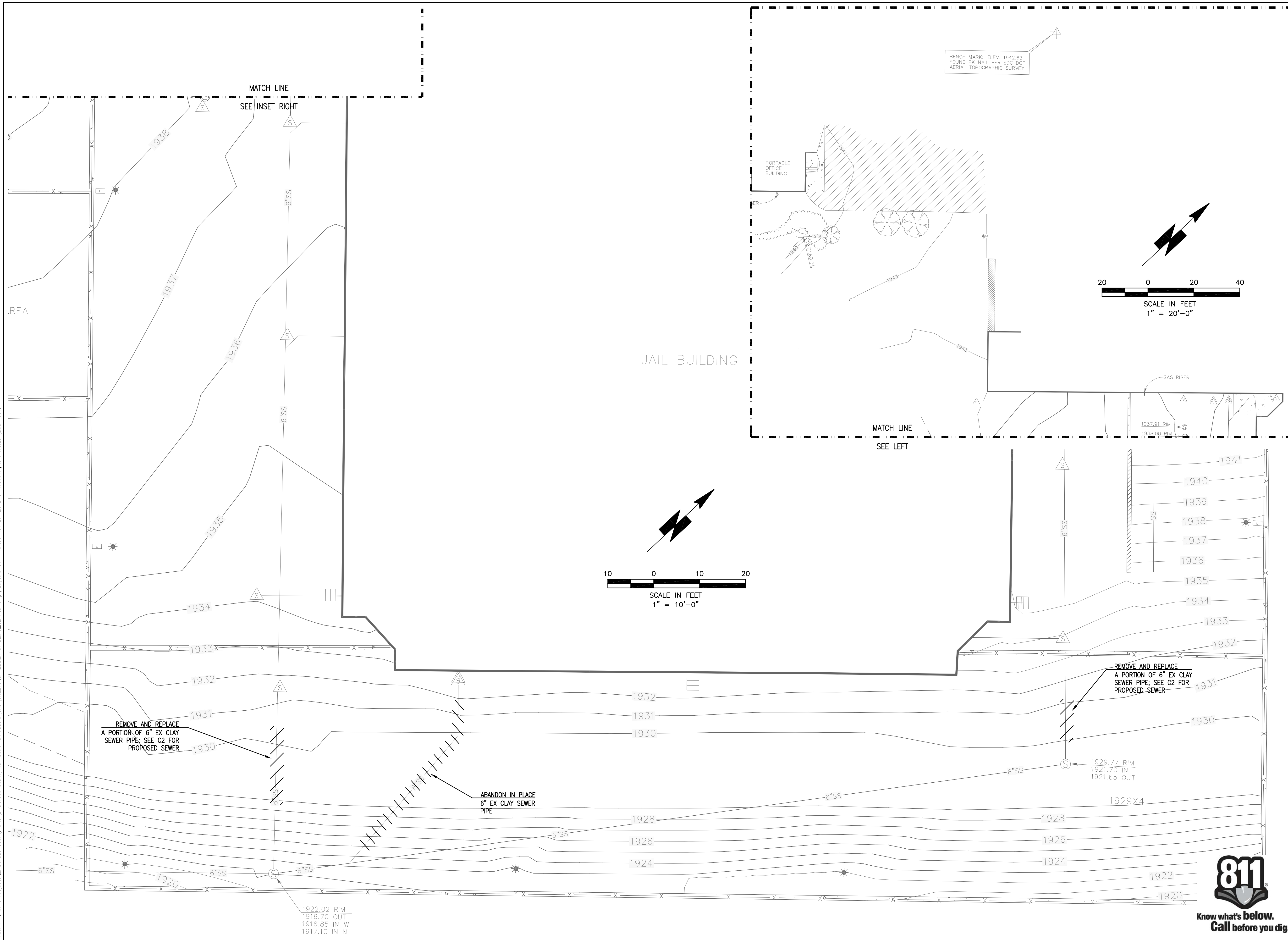
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SHEET TITLE
**NOTES,
 LEGEND &
 ABBREVIATIONS**

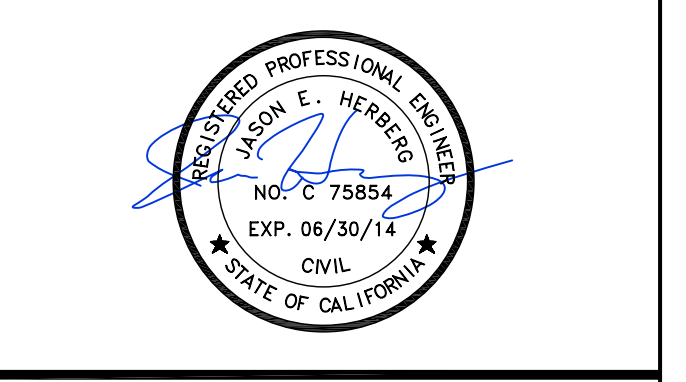
DRAWING	G2
SHEET	2 OF 9



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SHEET TITLE
**SITE AND
 DEMOLITION
 PLAN**

DRAWING
C1

SHEET 3 OF 9





**EL DORADO COUNTY
 JAIL SEWER IN-LINE
 SHREDDER PROJECT**

OWNER
EL DORADO COUNTY
 3000 FAIRLANE CT - SUITE 1
 PLACERVILLE, CA 95667



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0	11/27/12	ISSUED FOR CONSTRUCTION

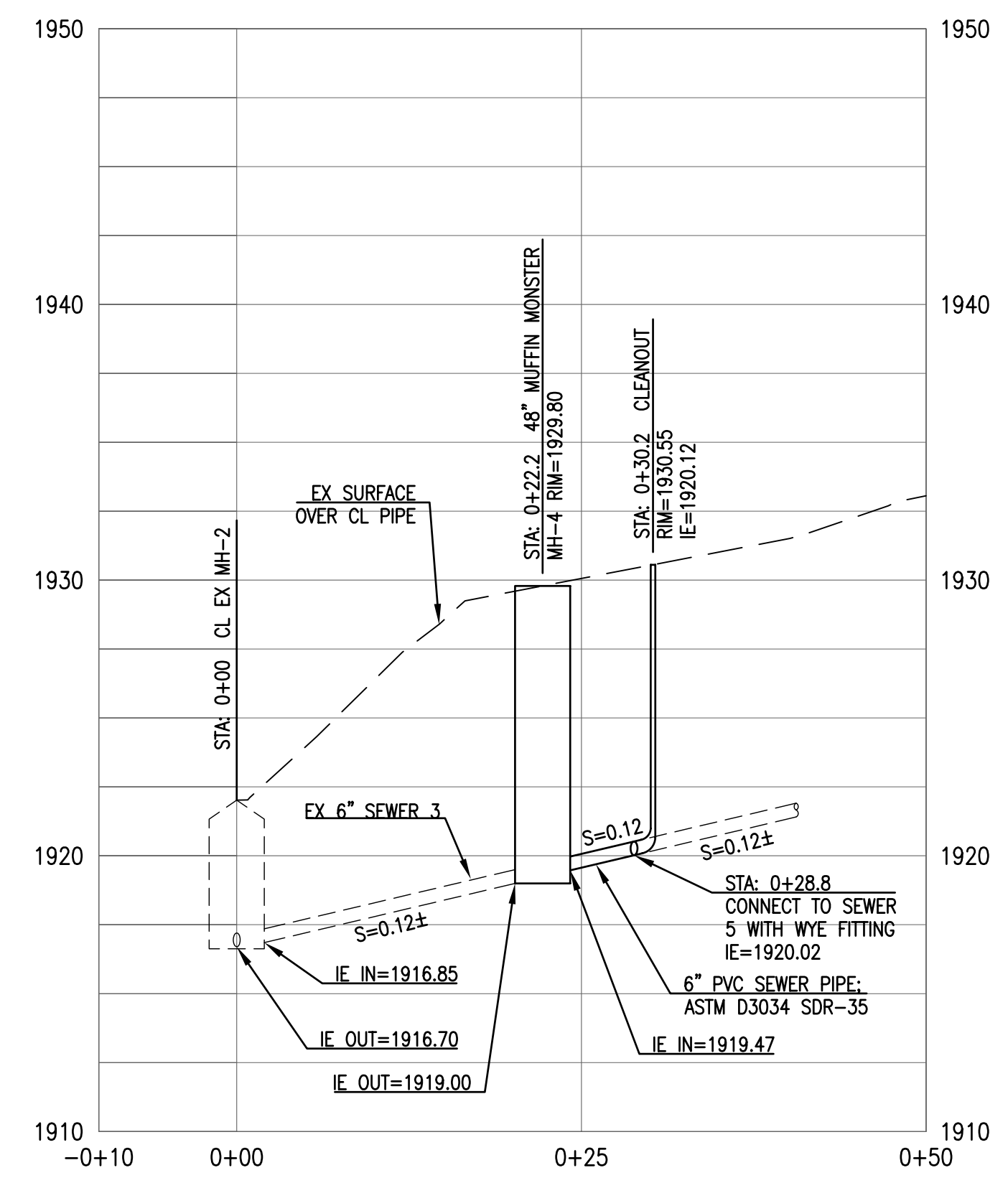
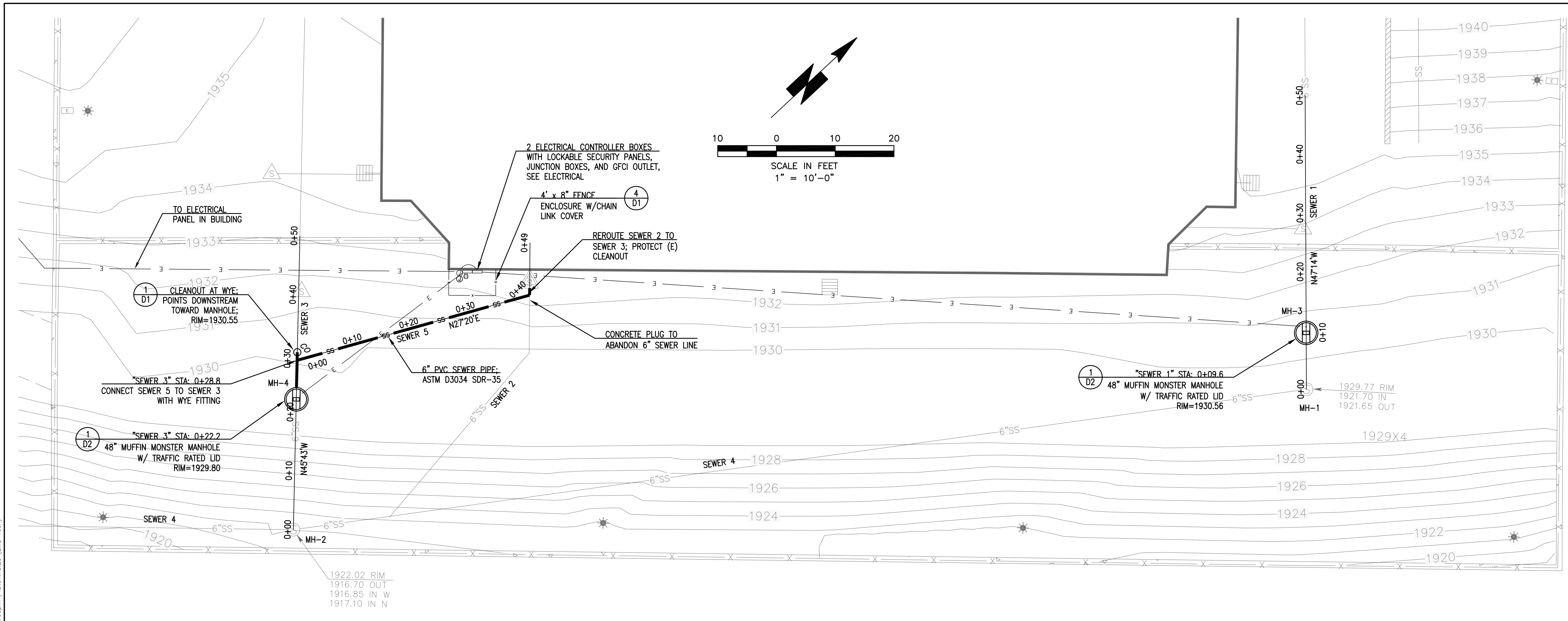
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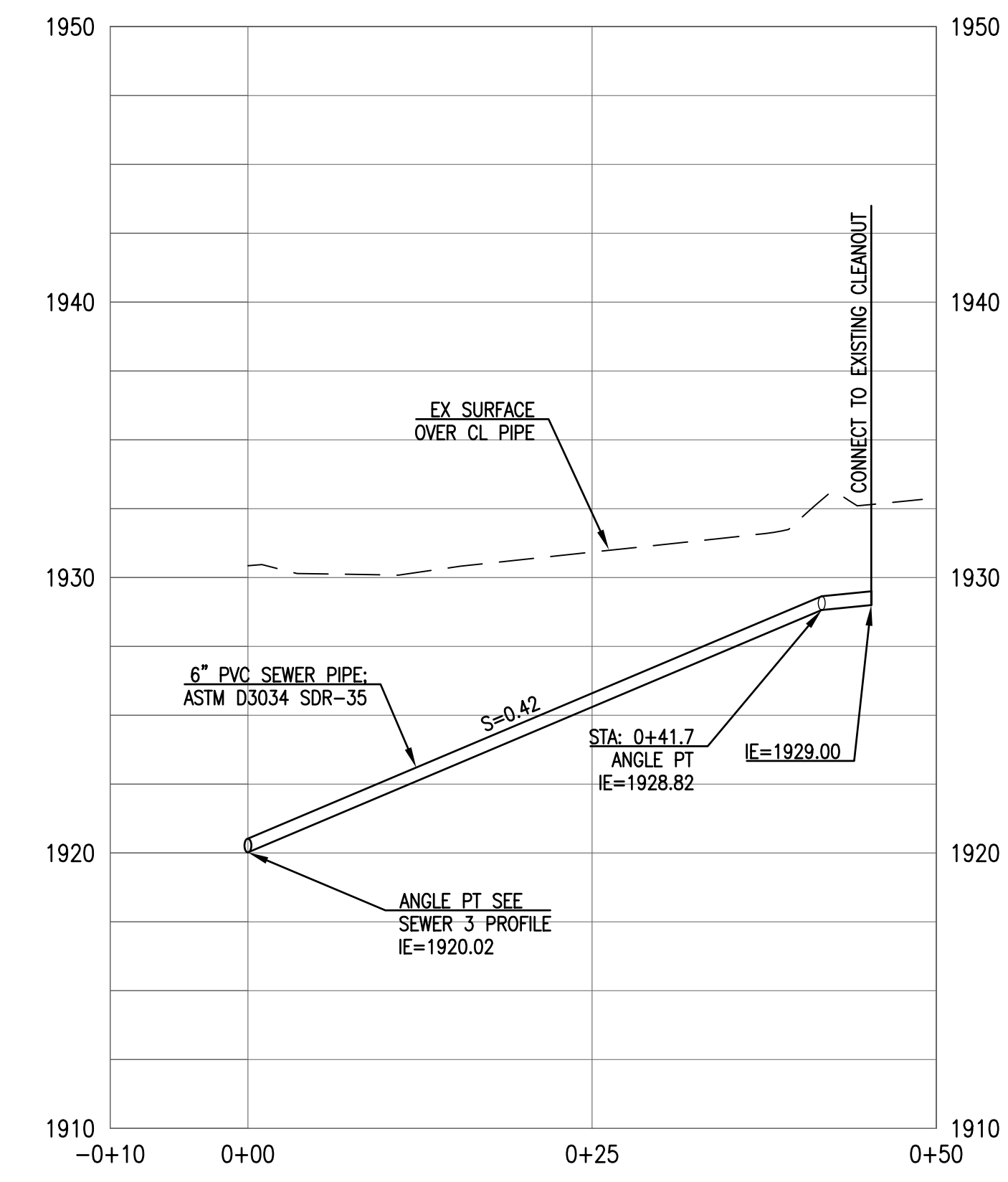
SHEET TITLE

**SEWER LAYOUT
 PLAN & PROFILE**

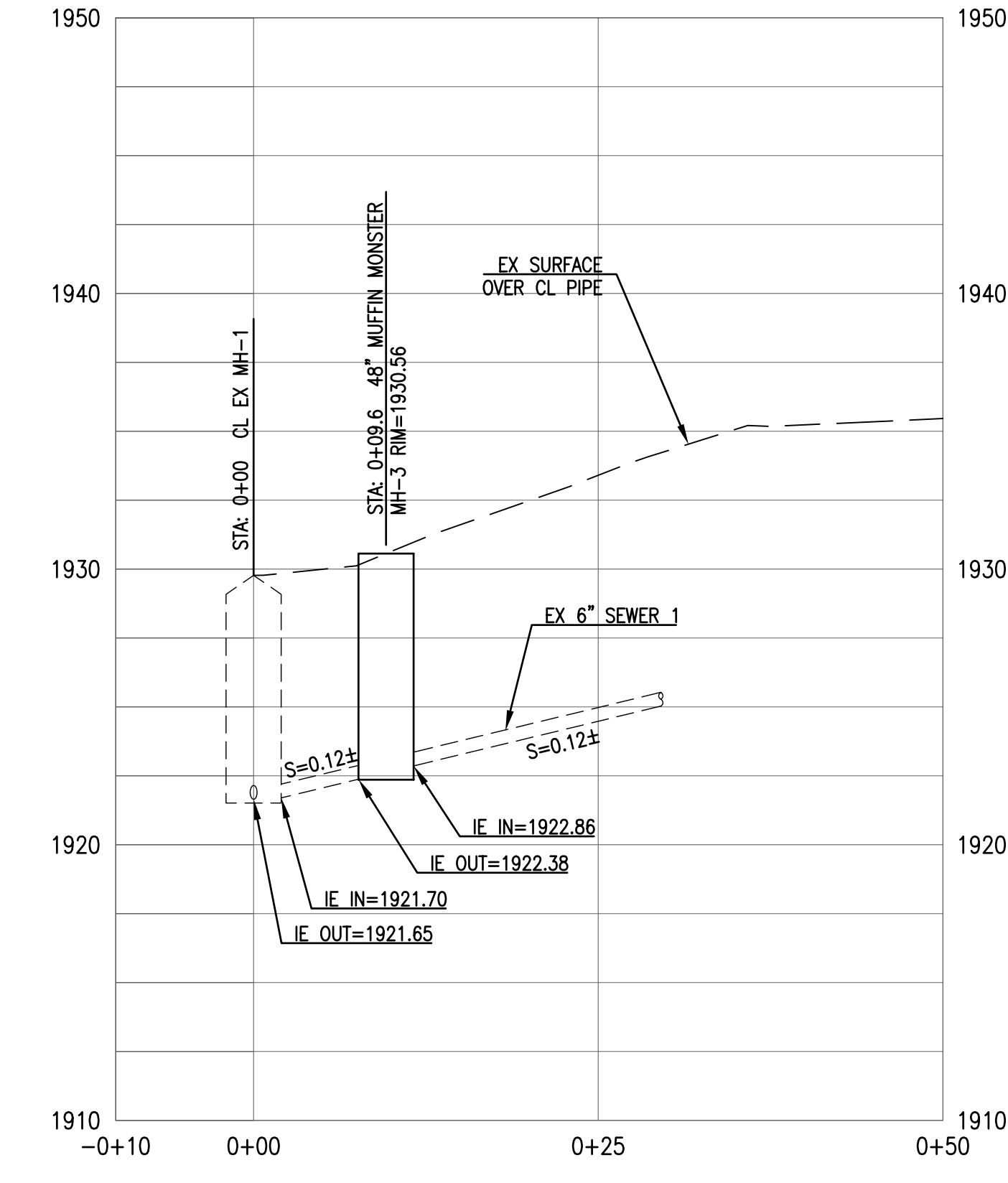
DRAWING	C2
SHEET	4 OF 9



SEWER 3 PROFILE



SEWER 5 PROFILE



SEWER 1 PROFILE

NOTE:
 SEWER INVERTS ARE APPROXIMATE. POT HOLE
 TO VERIFY DEPTH AND LOCATION OF SEWER
 PIPES PRIOR TO ORDERING MANHOLES.

SCALE:
 HORIZONTAL: 1" = 10'
 VERTICAL: 1" = 5'



File: P:\Active Projects\El Dorado County CAD\El Dorado County Jail Sewer Shredder\CAD\SHEETS\SHREDDER C1 DEMO_C2 P&F.dwg | Layout: C2 | Printed Nov 26, 2012 @ 12:00pm | ID: JH-18.2x (LMS Tech)



EL DORADO COUNTY JAIL SEWER IN-LINE SHREDDER PROJECT

OWNER
EL DORADO COUNTY
 3000 FAIRLANE CT - SUITE 1
 PLACERVILLE, CA 95667



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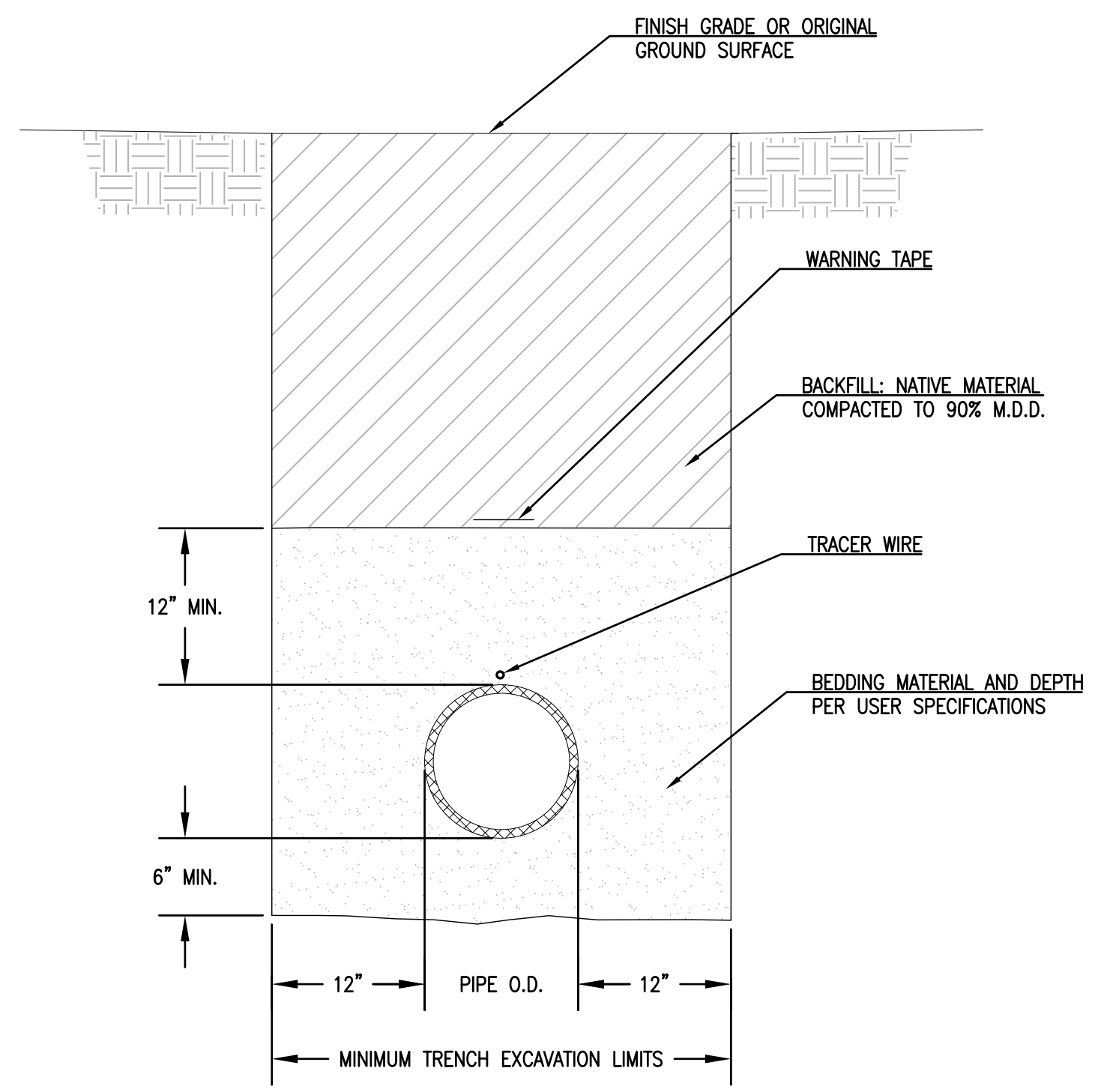
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SHEET TITLE

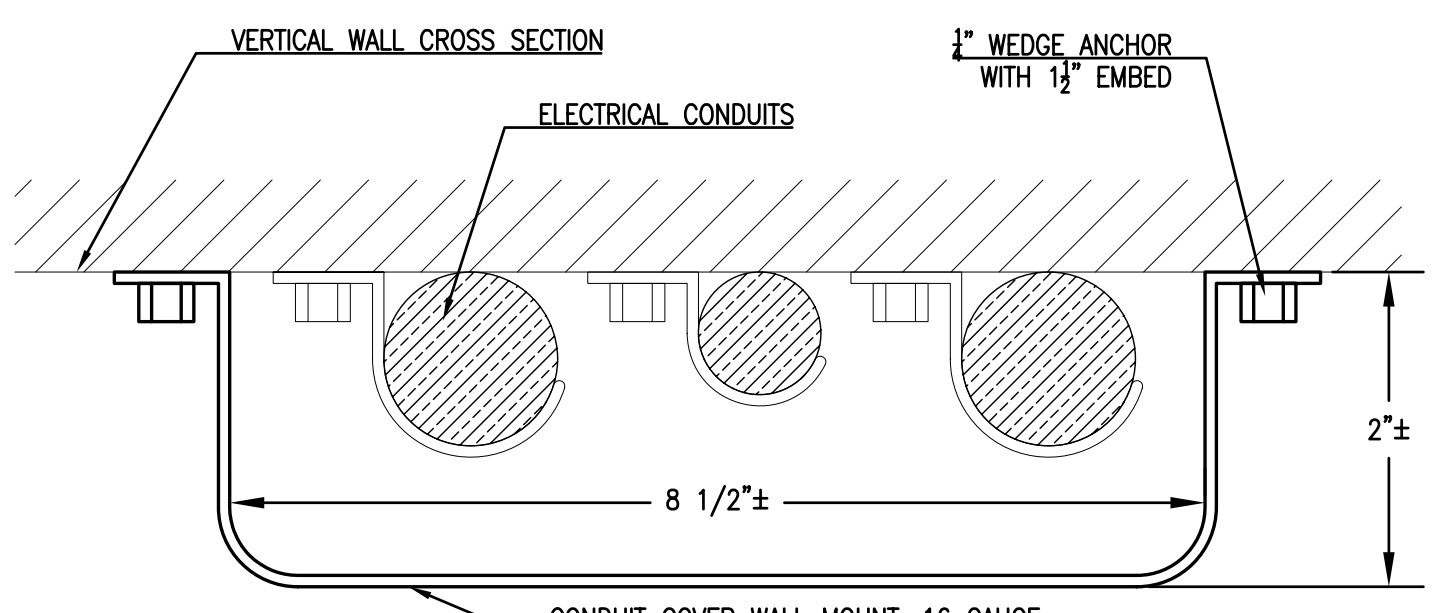
**CIVIL
 DETAILS**

DRAWING
D1

SHEET 5 OF 9

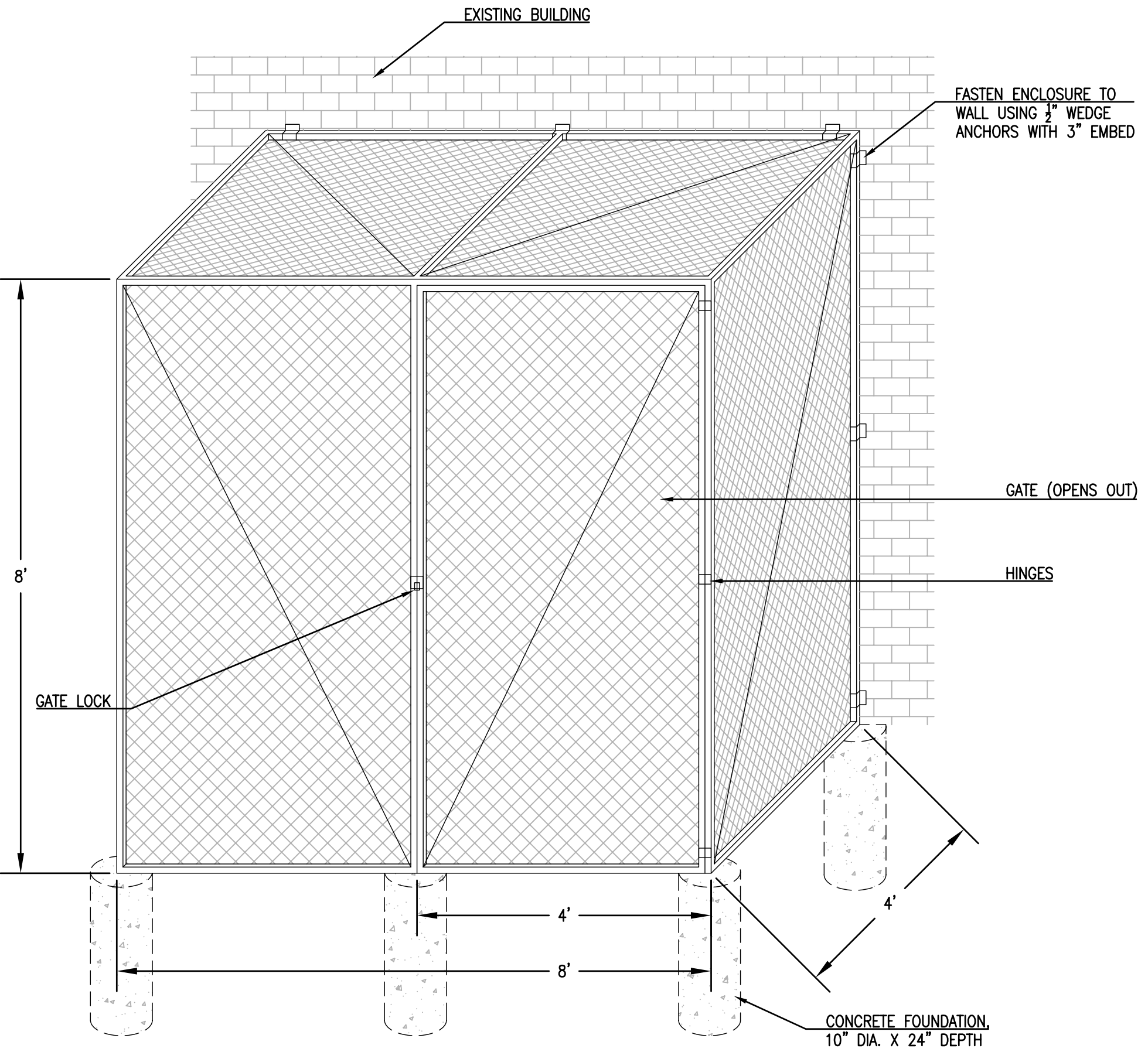


3
 D1 SEWER PIPE TRENCH
 N.T.S.

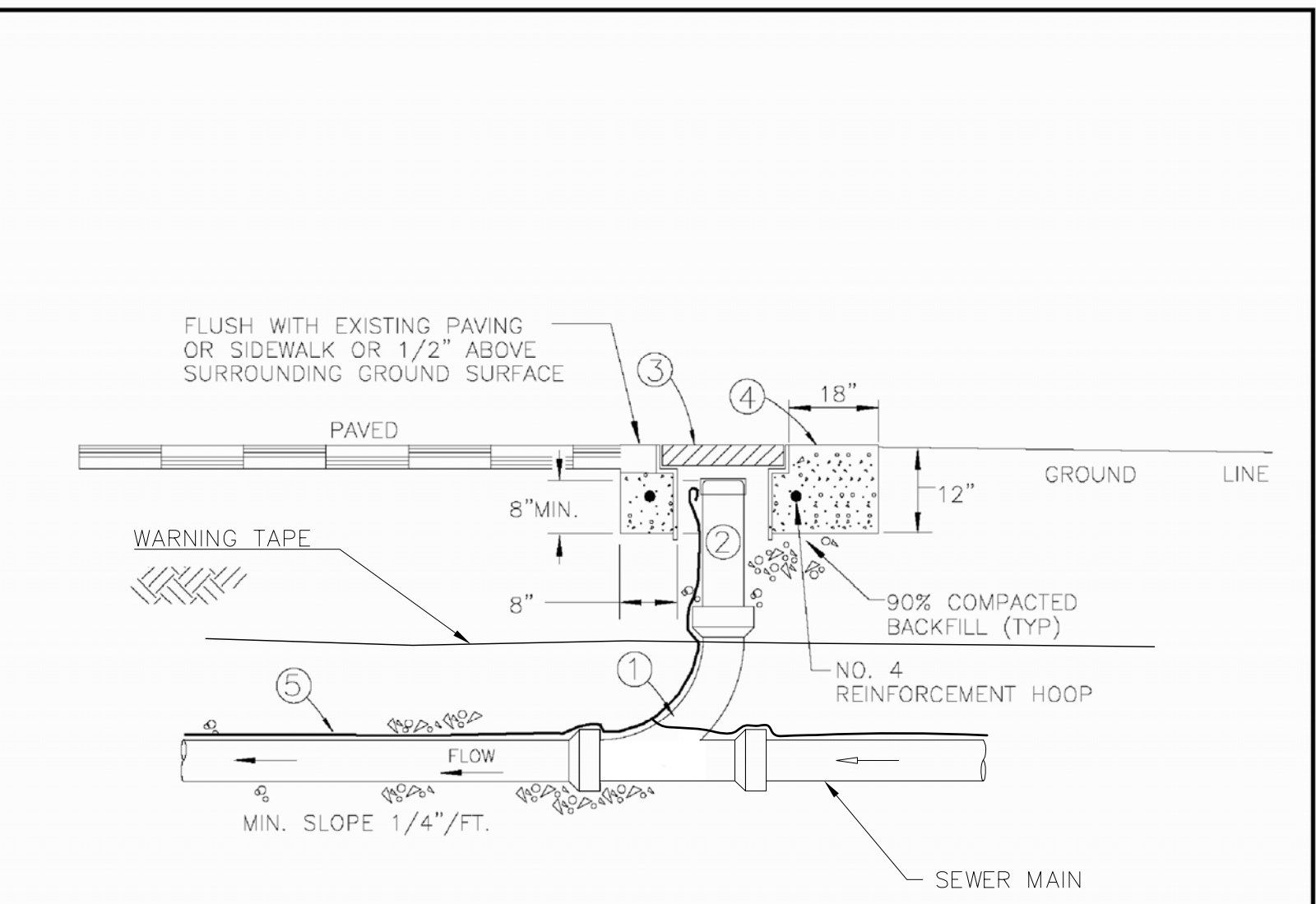


2
 D1 WALL-MOUNTED ELECTRICAL CONDUIT COVER
 N.T.S.

- NOTES:
1. WALL MOUNTED CONDUIT COVER SHALL BE INSTALLED WHERE ELECTRICAL CONDUITS ARE TO BE ANCHORED TO OUTSIDE BUILDING WALL.
 2. ANCHOR CHANNEL TO WALL EVERY 12 INCHES.
 3. SEE ELECTRICAL FOR LOCATION.



4
 D1 CHAIN LINK FENCE ENCLOSURE SCHEMATIC
 N.T.S.



1
 D1 SEWER CLEANOUT BASED ON EID STANDARD DETAILS
 N.T.S.

ITEM #	DESCRIPTION
1	LONG RADIUS 90° SWEEP WYE
2	PVC PIPE W/ LOOSE FITTING CAP
3	G5 CONCRETE TRAFFIC UTILITY BOX W/ IRON LID MARKED SEWER
4	CONCRETE COLLAR
5	TRACING WIRE

CONSTRUCTION NOTES

1. MAINLINE DIAMETERS 10-INCH AND GREATER SHALL BE SUBMITTED FOR APPROVAL.
2. 120' MAXIMUM DISTANCE FROM MANHOLE.

EL DORADO IRRIGATION DISTRICT

IN-LINE CLEANOUT

DRAWN BY A. URTEAGA	SCALE NONE	REVISION	DATE	BY	EID STANDARD DRAWING NO.
APPROVED B. MUELLER	DATE 05/09				S10

H:\ENGINEERING EFFICIENCY EFFORT\TASK-STANDARD DETAILS\SEWER\S10 - END OF MAIN CLEANOUT.DWG



**EL DORADO COUNTY
 JAIL SEWER IN-LINE
 SHREDDER PROJECT**

OWNER
EL DORADO COUNTY
 3000 FAIRLANE CT - SUITE 1
 PLACERVILLE, CA 95667



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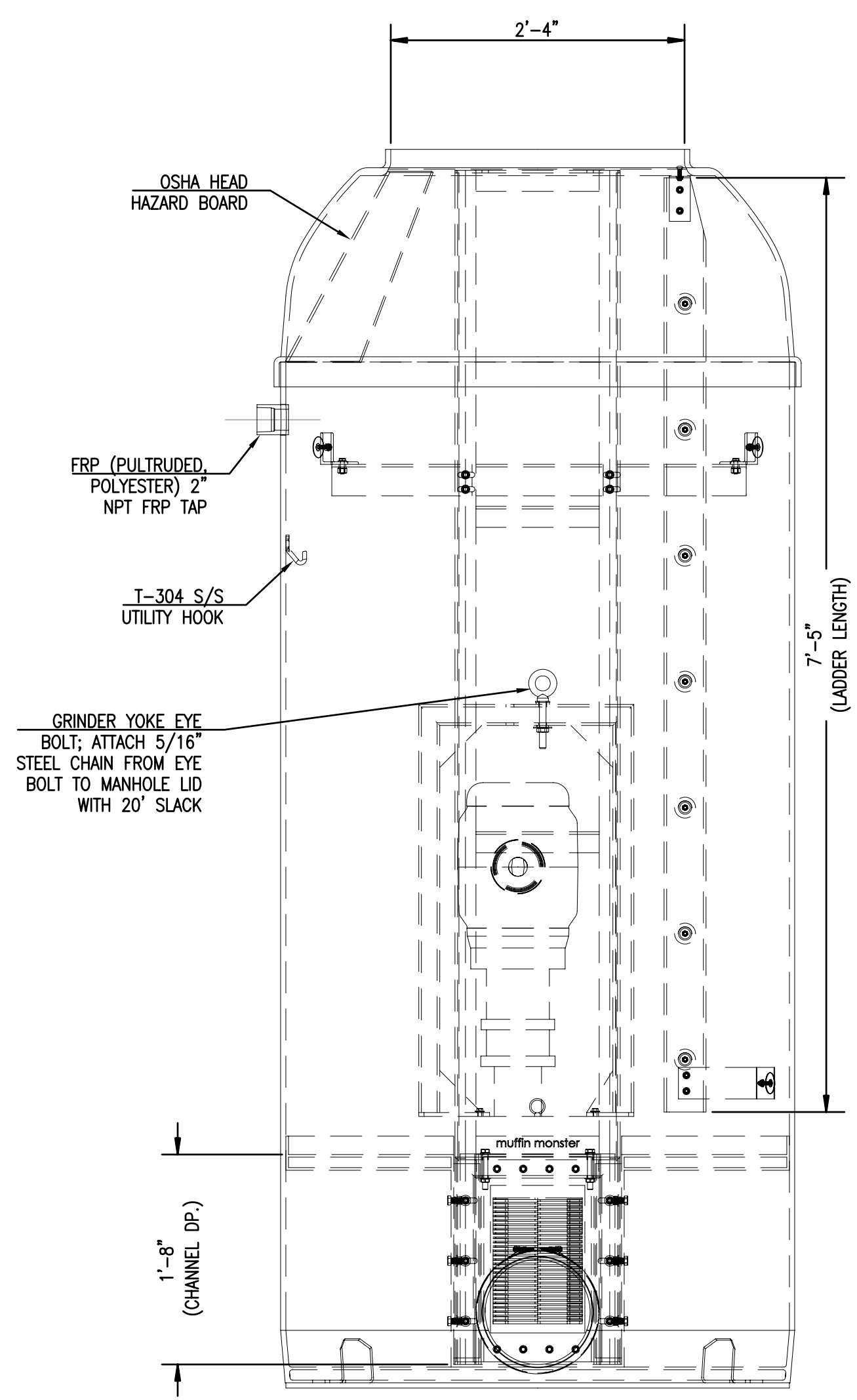
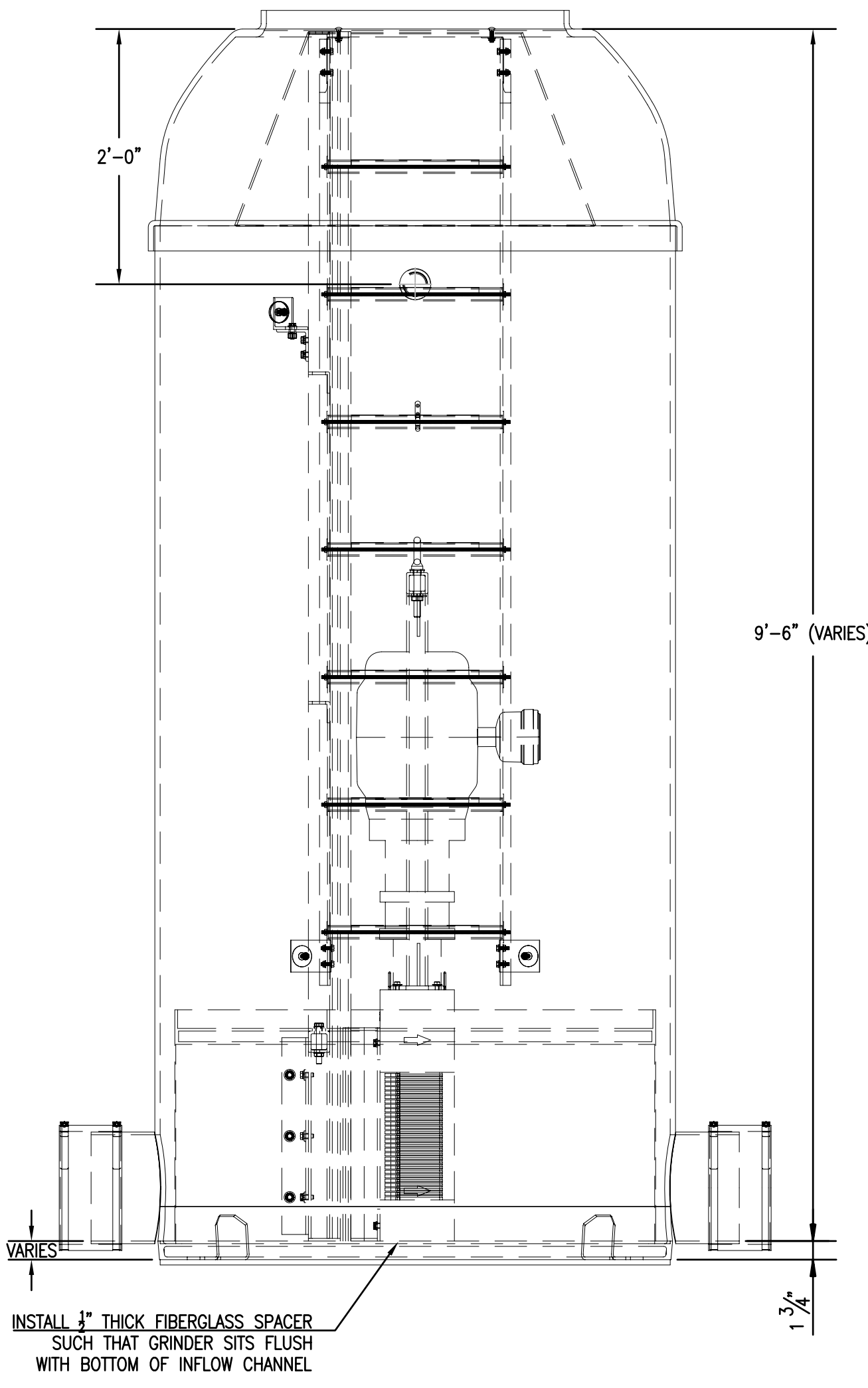
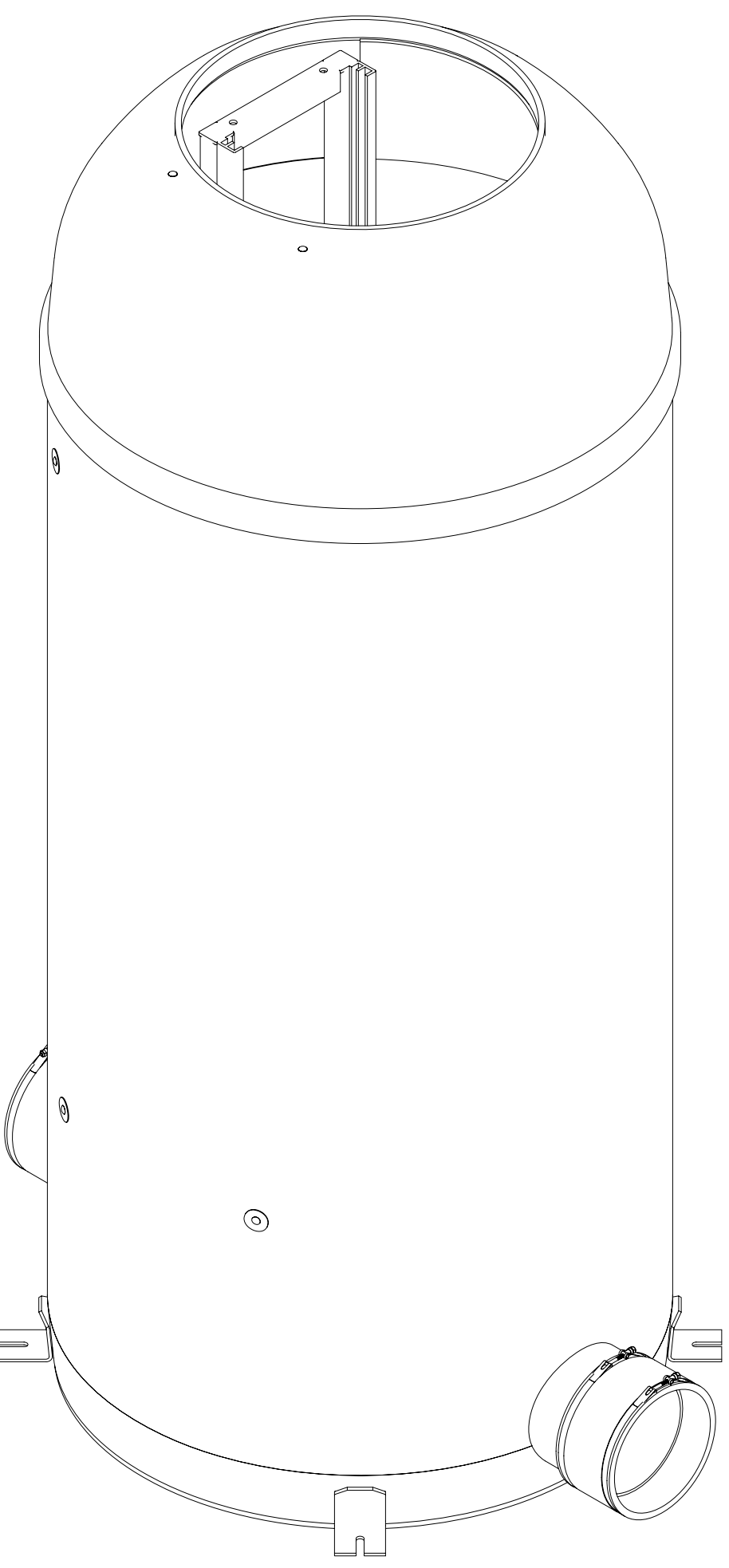
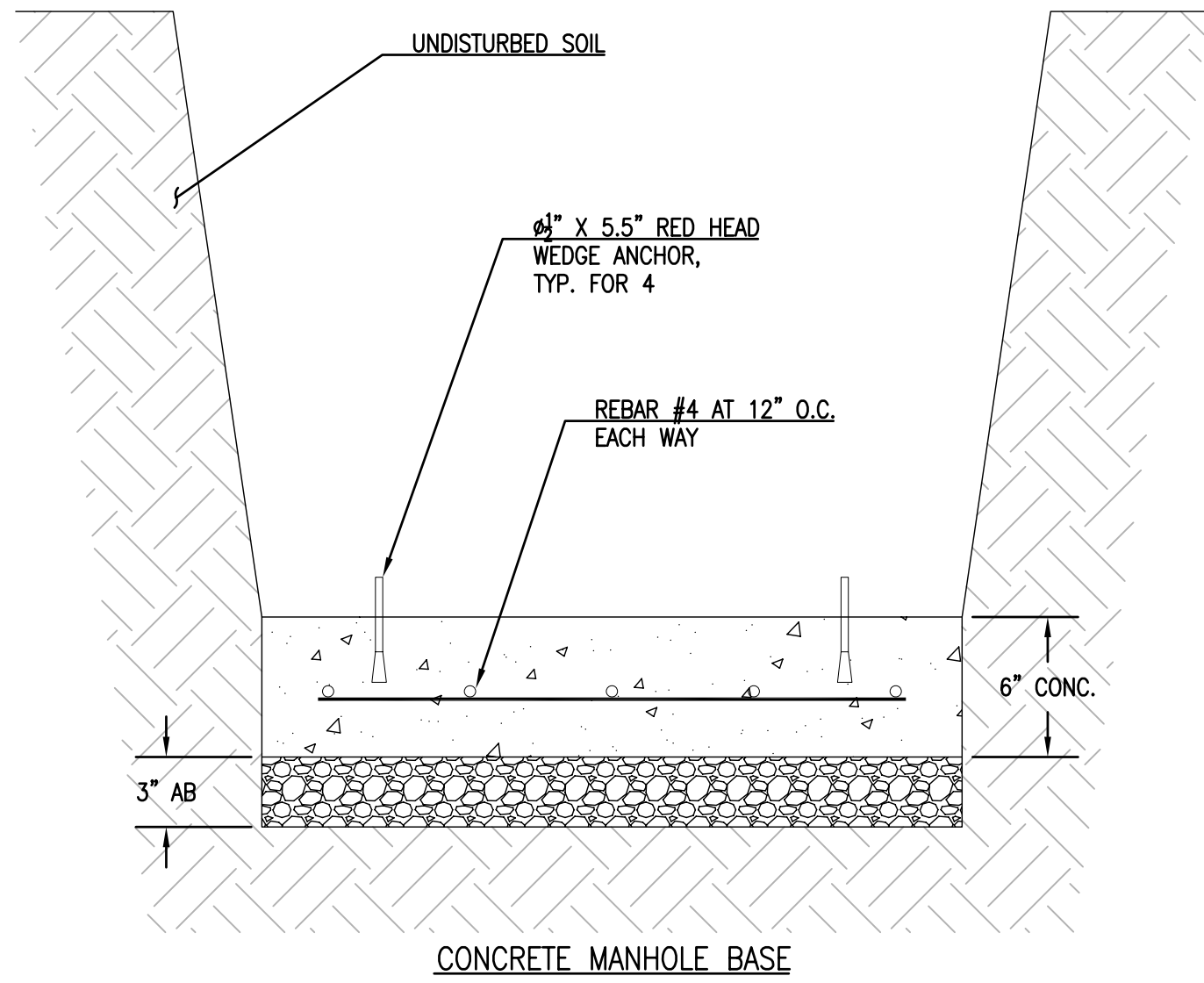
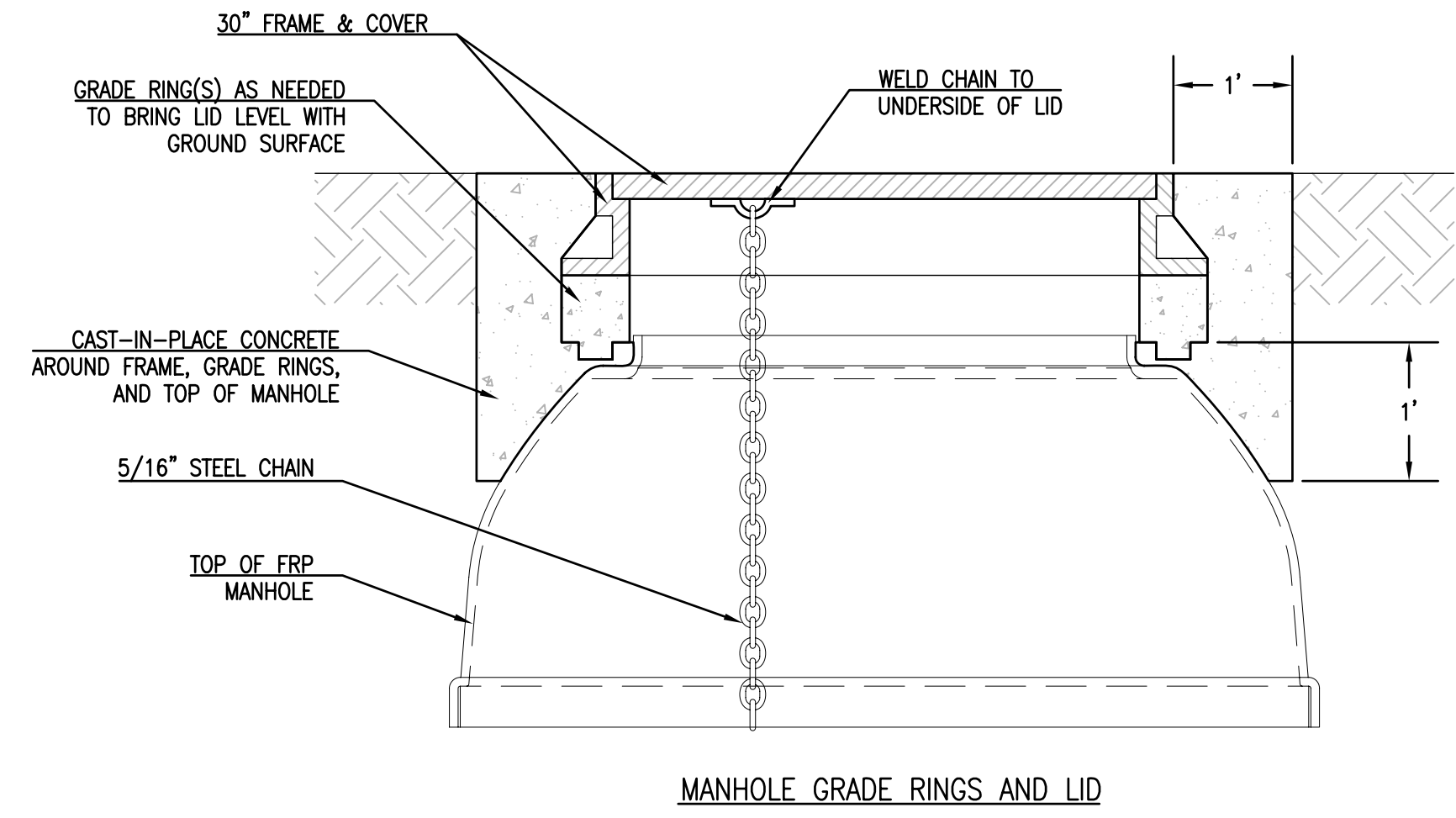
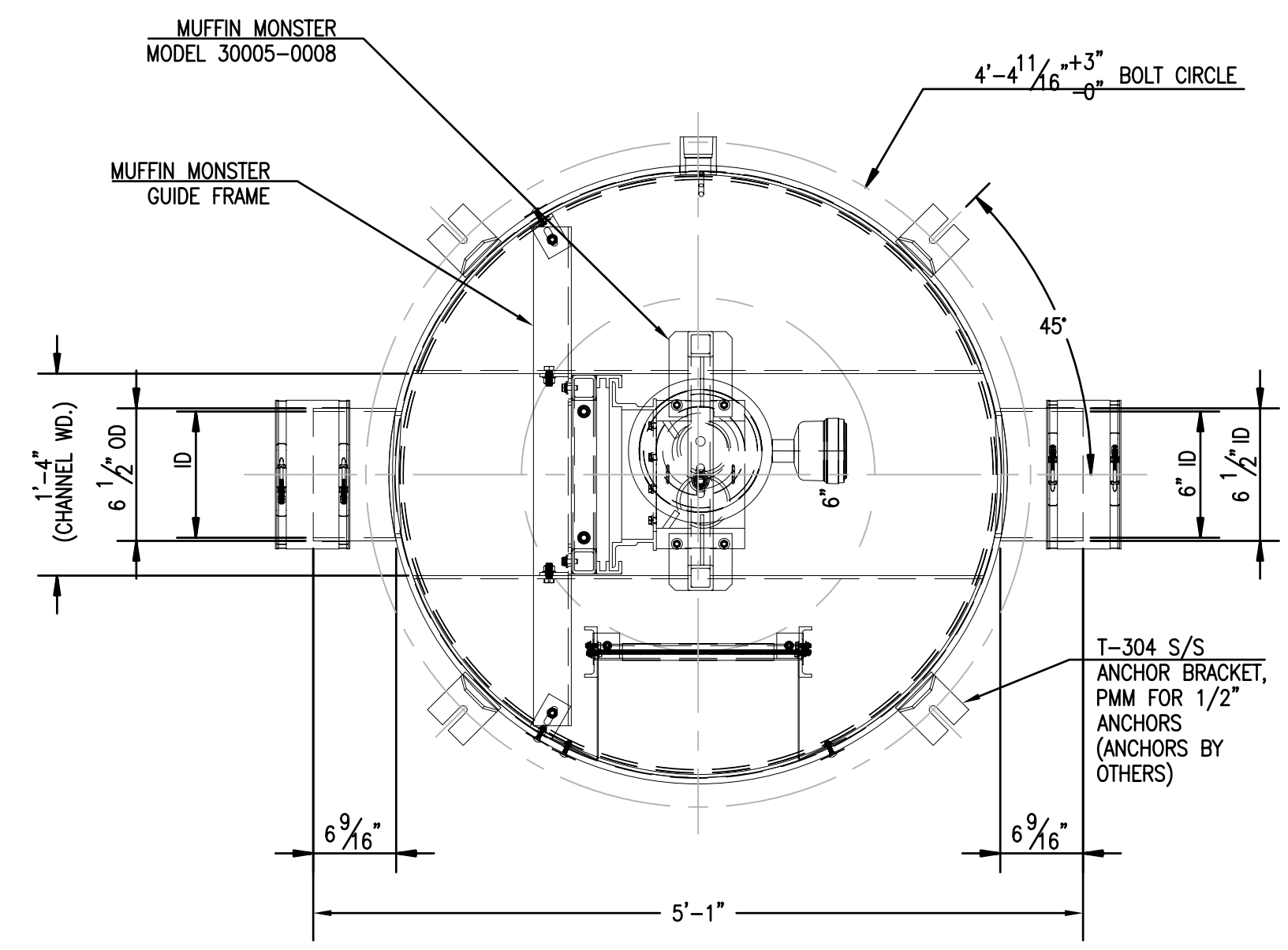
PROJECT NO:	A501.21.35
DESIGNED BY:	JEH/FGH
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SHEET TITLE

**MUFFIN MONSTER
 MANHOLE DETAILS**

DRAWING	D2
SHEET	6 OF 9



- NOTES:
- MATERIAL IS FRP (FIBERGLASS REINFORCED PLASTIC).
 - NEOPRENE BOOTS ARE SECURED WITH S/S BANDS (SHIPPED SEPERATELY).
 - THE MANHOLE BARREL THICKNESS IS 1/2" (MIN) FRP.
 - MOLDED INTERIOR OF TANK & CHANNEL COLOR IS WHITE.
 - MINIMUM GLASS CONTENT IS 30%, EXCLUSIVE OF RESIN RICH SURFACES.
 - ANCHOR BRACKET & BOLTS ARE TYPE 304 STAINLESS STEEL.
 - MUFFIN MONSTER GUIDE FRAME IS FACTORY INSTALLED.

1 MUFFIN MONSTER MANHOLE, TRAFFIC LID TYPE
 D2 N.T.S.

File: P:\Active Projects\El Dorado County CA\01 El Dorado County Jail Sewer Shredder\CAD\SHEETS\SHREDDER DETAILS D1_D2.dwg | Layout: D2 | Printed Nov. 26, 2012 @ 12:59pm | ID: JH.B.26 (LMS Tech)

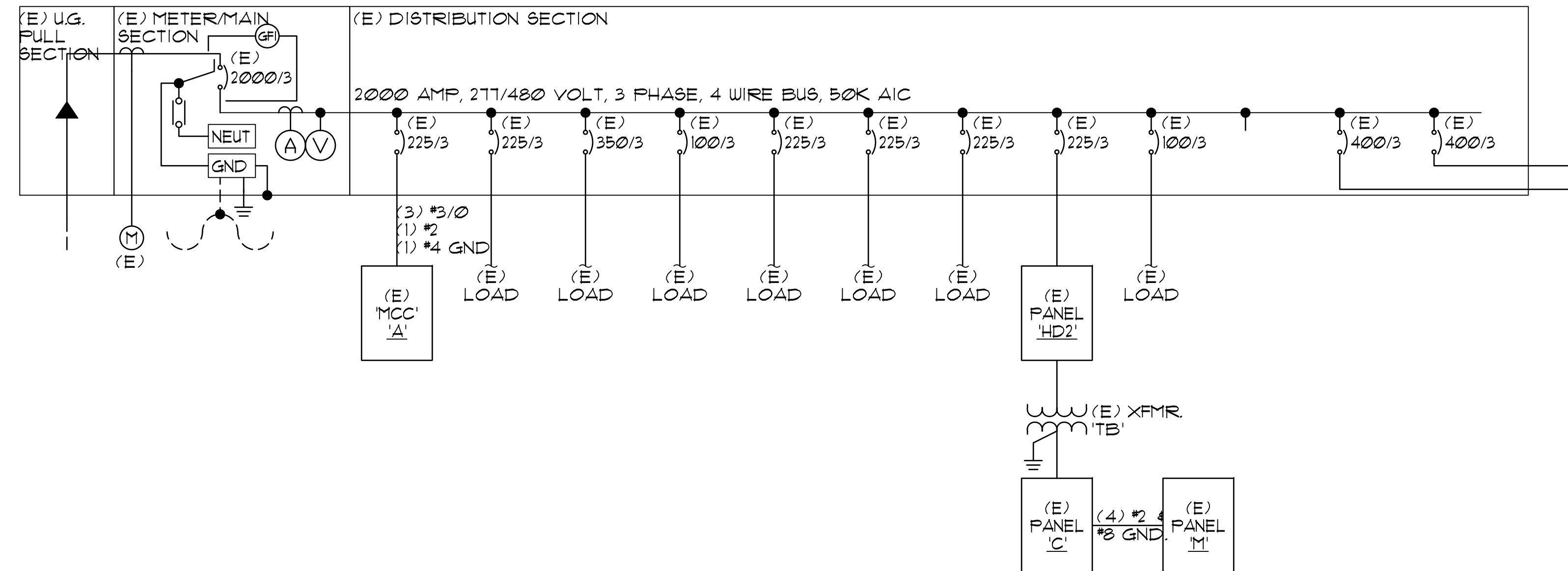
GENERAL NOTES

- THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS APPROVED BY THE BUILDING DEPARTMENT.
- THE ELECTRICAL TRADE SHALL VISIT JOB SITE AND VERIFY DIMENSIONS AND CONDITIONS BEFORE BIDDING. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY, AND NOT INTENDED TO SHOW ROUTING OF CABLES AND CONDUITS WHICH SHALL BE DETERMINED IN THE FIELD. U.O.N. DEVICES ARE NOT SHOWN TO SCALE, AND THEREFORE CANNOT ALWAYS BE SHOWN IN THEIR EXACT LOCATION.
- THE ELECTRICAL DRAWINGS ARE NOT INTENDED TO SERVE AS STAND ALONE DOCUMENTS TO COMMUNICATE THE ENTIRE SCOPE OF ELECTRICAL WORK. THE ELECTRICAL CONTRACTOR SHALL OBTAIN A COMPLETE SET OF CONSTRUCTION DOCUMENTS INCLUDING ALL DRAWINGS, SPECIFICATIONS, AND MANUALS.
- WORK INCLUDES ALL LABOR, MATERIALS AND EQUIPMENT TO REMOVE AND INSTALL ELECTRICAL ITEMS SPECIFIED AS SHOWN OR NOT SHOWN WHICH CAN BE REASONABLY ASSUMED TO BE REQUIRED AND NECESSARY TO PROVIDE COMPLETE AND WORKABLE SYSTEMS.
- THE FACILITY SHALL REMAIN IN OPERATION DURING ALL PHASES OF WORK. WHERE SYSTEM SHUTDOWNS AND POWER OUTAGES ARE UNAVOIDABLE, SUCH WORK SHALL BE SCHEDULED WITH THE FACILITY MANAGER AND SHALL OCCUR AT SUCH TIMES AS TO CAUSE THE LEAST DISRUPTION OF NORMAL FACILITY FUNCTIONS. INCLUDE ALL PREMIUM LABOR IN BID PROPOSAL TO COVER WORK REQUIRED TO BE PERFORMED BEFORE OR AFTER "NORMAL" WORKING HOURS.
- COORDINATE SEQUENCE OF WORK WITH THE ENGINEER. MAKE ALL NECESSARY CONNECTIONS AS REQUIRED TO MAINTAIN POWER DURING THE STAGES OF WORK.
- EXISTING DEVICES SHOWN WERE TAKEN FROM EXISTING DRAWINGS, NOT "AS BUILT" DRAWINGS AND LIMITED SITE SURVEYS, AND MAY NOT BE COMPLETELY ACCURATE. THE ELECTRICAL TRADE SHALL VISIT JOB SITE AND VERIFY CONDITIONS PRIOR TO BIDDING. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- ALL ELECTRICAL WORK SHALL CONFORM WITH THE MOST RECENTLY ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ALL STATE AND LOCAL CODES & REQUIREMENTS.
- ALL EQUIPMENT INSTALLED OR CONNECTED BY ELECTRICAL TRADE SHALL BE LABELED OR CERTIFIED FOR ITS USE BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING RECERTIFICATION OR RELABELING BY A NATIONALLY RECOGNIZED TESTING LABORATORY FOR ANY EQUIPMENT MODIFIED AS PART OF THIS WORK.
- REFER TO THOSE DRAWINGS SHOWING OTHER WORK, AND COORDINATE PLACEMENT OF WORK WITH THAT OF OTHER TRADES. REPORT ANY CONFLICT TO ARCHITECT PRIOR TO INSTALLING WORK. ADJUST WORK AS DIRECTED BY THE ENGINEER.
- REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT. REFER TO CIVIL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR POWER AND CONTROL REQUIREMENTS AND WIRING DIAGRAMS.
- WHERE ELECTRICAL CONDUIT ENTERS A WALL, CEILING OR FLOOR, THE OPENING AROUND THE CONDUIT SHALL BE TIGHTLY SEALED.
- CORE DRILL EXISTING WALLS AND FLOORS AS REQUIRED TO FACILITATE CONDUIT INSTALLATION. SEAL ALL PENETRATIONS WATER AND SMOKE TIGHT AND IN CONFORMANCE WITH CBC SECTION 709 AND C.E.C. 300-21. FIRE STOP MATERIAL SHALL BE A TESTED ASSEMBLY APPROVED BY THE FIRE MARSHAL. NO REBAR SHALL BE CUT DURING CORE DRILL OPERATION.
- CONDUIT INSIDE BUILDING SHALL BE EMT OR RSC. FLEXIBLE STEEL CONDUIT MAY BE USED IN SHORT LENGTHS WHERE FLEXIBILITY IS REQUIRED FOR MOVEMENT OR VIBRATION.
- PROVIDE A GROUNDING CONDUCTOR IN ALL FLEXIBLE CONDUITS.
- THE COMPLETE SYSTEM SHALL BE GROUNDED PER NEC ART. 250.
- CLEAN OUT AND REMOVE FROM SITE ALL SURPLUS MATERIALS AND DEBRIS RESULTING FROM THIS WORK.

120/208V, 3 Ph, 4W.											
100 AMP BUS						10K ISC			SURFACE MOUNTED NEMA 1		
DESCRIPTION	KVA	BKR	CKT	Ph. A	Ph. B	Ph. C	CKT	BKR	KVA	DESCRIPTION	
1 B-1	1.1	30/1	1	2.9			2	20/1	1.8	CH-1	1
1 B-2	1.1	30/1	3	2.9			4	20/1	1.8	CH-1	1
1 DWH	0.8	20/1	5			1.3	6	20/1	0.5	DWH	1
1 DWH	0.8	20/1	7	1.7			8	20/1	0.8	DWH	1
1 DWH	0.5	20/1	9			1.3	10	20/1	0.8	DWH	1
1 SPARE		20/1	11				12	20/1		SPARE	1
1 SPARE		20/1	13	0.8			14	20/2	0.8	CIRC. PUMP	1
1 SPARE		20/1	15			0.8	16	20/1	0.8		1
1 SPARE		20/1	17			0.5	18	15/2	0.5	CIRC. PUMP	1
1 SPACE		1P	19	0.5			20	0.5			1
1 SPACE		1P	21			2.0	22	2.0		WJ HEATER	1
3 RECEPTACLE	0.2	20/1	23			2.2	24	25/2	2.0		1
			25				26				1
			27				28	3P		SPACE	1
			29				30				1
SUBTOTAL:						5.9	7.1	4.0			
CONNECTED LOAD						17.0	KVA		MAIN LUGS ONLY		
25% LIGHTING LOAD							KVA				
25% LARGEST MOTOR						0.5	KVA				
1st 10.0 KVA RECEPTACLE LOAD @ 100%							KVA				
PLUS REMAINDER @ 50%							KVA				
TOTAL LOAD						17.5	KVA / 0.360 FACTOR =		49 AMPS		
1 (E) LOAD (E) CIRCUIT BREAKER											
2 (N) LOAD (E) CIRCUIT BREAKER											
3 (N) LOAD (N) CIRCUIT BREAKER RATING TO MATCH (E)											

277/480V, 3Ph, 4W.											
600 AMP						42K ISC			SURFACE MOUNTED NEMA 1		
No.	BREAKER FRAME	TRIP	STARTER SIZE	KVA	HP	NAMEPLATE	ACCESSORIES				
1	100	50	2	17.5	15	CWP-1	H-O-A. PILOT LIGHT RESET SWITCH				
2	100	50	2			SPARE	H-O-A. PILOT LIGHT RESET SWITCH				
3	100	30	1			SPARE	H-O-A. PILOT LIGHT RESET SWITCH				
4	100	30	1			SPARE	H-O-A. PILOT LIGHT RESET SWITCH				
5	100	30	-			SPARE	H-O-A. PILOT LIGHT RESET SWITCH				
6						SPACE					
7						SPACE					
8	100	30	1			SPARE	H-O-A. PILOT LIGHT RESET SWITCH				
9	100	50	2			SPARE	H-O-A. PILOT LIGHT RESET SWITCH				
10	100	20	-	6.3	5	SEWER GRINDER 1					
11	100	20	-	6.3	5	SEWER GRINDER 2					
12						SPACE					
CONNECTED LOAD				30.1	KVA						
25% LARGEST MOTOR				4.4	KVA						
TOTAL LOAD				34.5	KVA / 0.831 FACTOR =		41 AMPS				
1 (E) LOAD (E) CIRCUIT BREAKER											
2 (N) LOAD (E) CIRCUIT BREAKER											
3 (N) LOAD (N) CIRCUIT BREAKER RATING TO MATCH (E)											

(E) MAIN SWITCHBOARD - "MSB"



(E) ONE LINE DIAGRAM

NO SCALE

A
E0.1

SHEET NOTES

- ALL CONDUCTORS ARE COPPER, U.O.N

ELECTRICAL SYMBOLS

- \$ SINGLE POLE TOGGLE SWITCH, 446" UON
- ⊕ FUSED DISCONNECT SWITCH WITH TIME DELAY FUSES SIZED PER UNIT NAMEPLATE OR AS NOTED. DISCONNECT SHALL ACCEPT MAXIMUM RECOMMENDED FUSE SIZE.
- ⊕ ⊖ DUPLEX RECEPTACLE, NEMA 5-15R, 48" UON
- ⊕ ⊖ JUNCTION BOX, SIZE, TYPE AND PLATE AS REQUIRED
- SWITCHBOARD, SEE ONE LINE DIAGRAM
- BRANCH CIRCUIT PANEL, SEE PANEL SCHEDULES
- SIGNAL OR CONTROL PANEL, TYPE AS INDICATED
- IDENTIFICATION TAG FOR EQUIPMENT PROVIDED BY OTHERS. CONNECT EQUIPMENT AS INDICATED OR AS REQUIRED.
- NUMBERED NOTE TAG - SEE NUMBERED NOTES, SAME SHEET
- INDICATES DETAIL "A" AT SHEET "E1"

ONE LINE DIAGRAM SYMBOLS

- ▲ LANDING LUGS, COORDINATE SIZE W/ FEEDERS.
- ⊕ ⊖ BUS DISCONNECTING LINK
- ⊕ ⊖ THERMAL MAGNETIC CIRCUIT BREAKER SIZED AS NOTED
- ⊕ ⊖ ANALOG VOLT METER W/ SELECTOR SWITCH
- ⊕ ⊖ ANALOG AMPERE METER W/ SELECTOR SWITCH
- ⊕ ⊖ PROVISIONS AS REQUIRED BY LOCAL UTILITY FOR AMP METER, VOLT METER, TEST BLOCKS, AND CURRENT TRANSFORMERS
- ⊕ ⊖ GROUNDING ELECTRODE, SIZE AND TYPE AS INDICATED

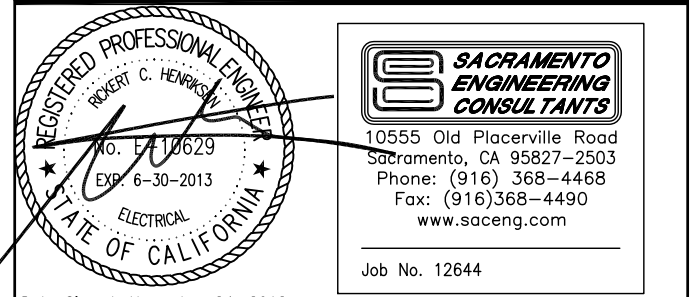
ABBREVIATIONS LIST

A	AMPERE	N.I.E.S.	NOT IN ELECTRICAL SECTION OF WORK
AC	ALTERNATING CURRENT	(N)	NEW
AMP	AMPERE	NEUT.	NEUTRAL
A.F.F.	ABOVE FINISHED FLOOR	NTS	NOT TO SCALE
AL	ALUMINUM	PRI.	PRIMARY
B.C.	BARE COPPER	PVC	POLYVINYL CHLORIDE
BLDG.	BUILDING		CONDUIT
C.	CONDUIT	(R)	EXISTING TO BE RELOCATED
C.O.	CONDUIT ONLY, WITH PULL LINE	(RR)	REMOVE AND REPLACE
CU	COPPER	SEC.	SECONDARY
(E)	EXISTING TO REMAIN	TTB	TELEPHONE TERMINAL BOARD
(ER)	EXISTING RELOCATED	TYP.	TYPICAL
EMT	ELECTRICAL METALLIC TUBING	UG	UNDERGROUND
G	GROUND	UON	UNLESS OTHERWISE NOTED
GND.	GROUND	V	VOLTS
H.I.D.	HIGH INTENSITY DISCHARGE	W	WIRES
J-BOX	JUNCTION BOX	WP	WEATHERPROOF WHILE IN USE
KVA	KILO VOLT AMP	W/	WITH
MH	METAL HALIDE	XFMR	TRANSFORMER
MSB	MAIN SWITCHBOARD	φ	PHASE

WIRE AND CONDUIT LEGEND

- METALLIC CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING.
- - - CONDUIT RUN UNDERFLOOR OR UNDERGROUND.
- CIRCUIT HOME RUN
- NO CROSSBARS ON CONDUIT INDICATE 1/2" METALLIC CONDUIT WITH TWO #12 AWG THIN/THIN-2 CONDUCTORS W/ CONDUIT GROUND PATH. CROSSBARS INDICATE NUMBER OF #12 AWG THIN/THIN-2 CONDUCTORS IN METALLIC CONDUIT. CONDUCTOR SIZE OTHER THAN #12 NOTED ON DRAWING.
- CONDUIT W.P.
- #10 #10 EXAMPLE: THREE CIRCUITS IN HOME RUN - FOUR #10 AWG THIN/THIN-2 CONDUCTORS AND ONE #10 AWG THIN/THIN-2 GROUNDING CONDUCTOR IN 3/4" C.

Nichols Consulting Engineers, Chtd.
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(916) 388-5655 * Fax (916) 388-5676



Date Signed: November 24, 2012

EL DORADO COUNTY JAIL SEWER IN-LINE SHREDDER PROJECT

OWNER
EL DORADO COUNTY
3000 FAIRLANE CT - SUITE 1
PLACERVILLE, CA 95667



NO.	DATE	DESCRIPTION
1	11/27/12	ISSUED FOR CONSTRUCTION

PROJECT NO:	A501.21.35
DESIGNED BY:	JS
DRAWN BY:	JS
CHECKED BY:	RH
DATE:	11/19/12
DATE:	11/27/12

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SHEET TITLE

CALCULATIONS, DIAGRAMS, NOTES, SCHEDULES, SYMBOLS

DRAWING
E0.1
SHEET 7 OF 9

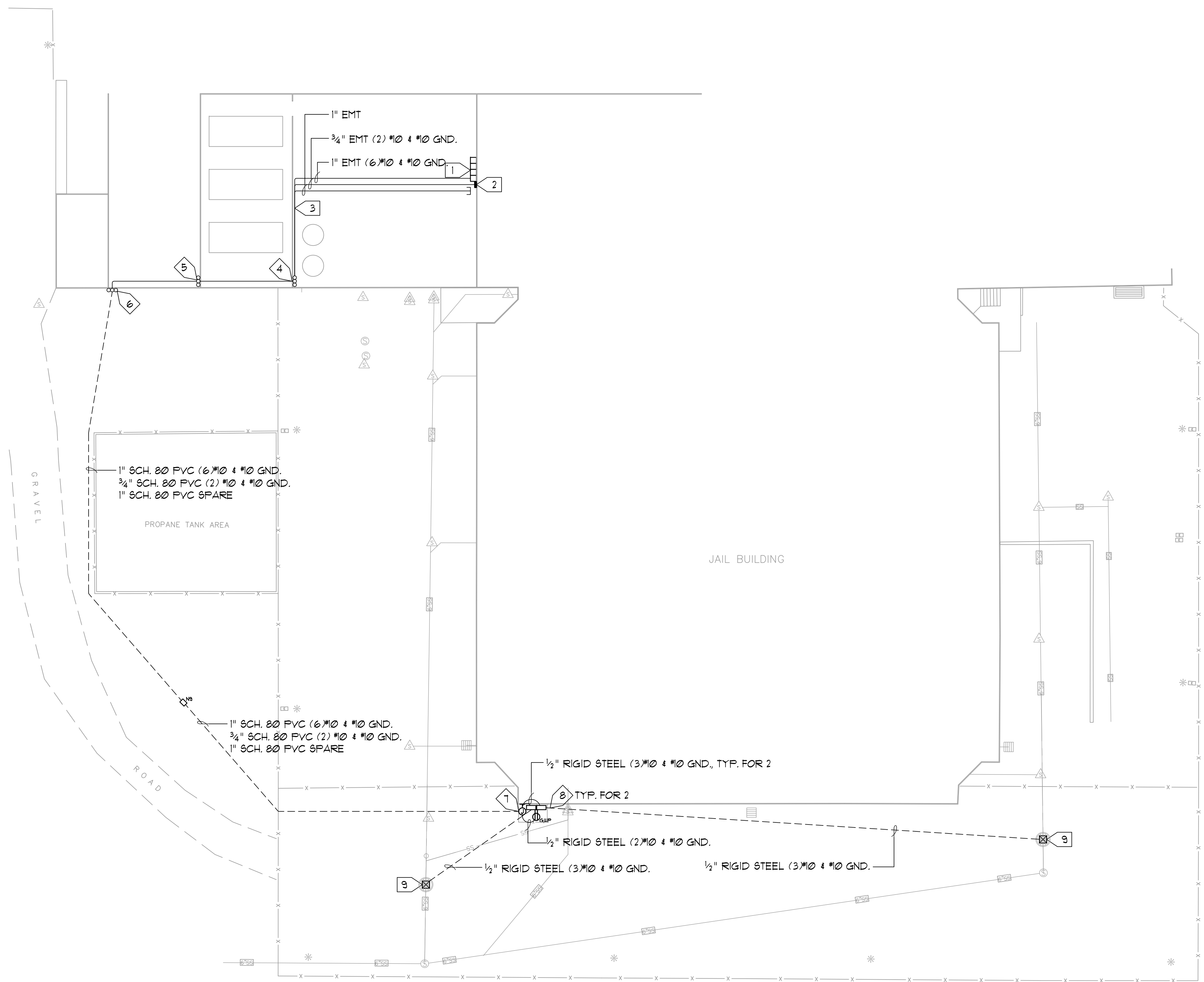


SHEET NOTES

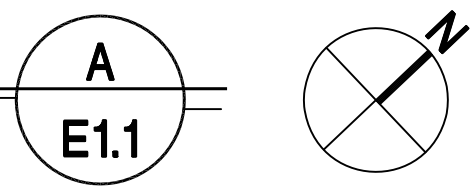
- EXISTING UNDERGROUND UTILITIES INDICATED ON THESE PLANS WERE TAKEN FROM EXISTING DRAWINGS. ADDITIONAL UNDERGROUND UTILITIES MAY BE PRESENT. THE ELECTRICAL TRADE SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL UTILITIES AT THE SITE PRIOR TO EXCAVATING. USE HAND LABOR WHERE NECESSARY TO AVOID DISRUPTION OF EXISTING UTILITIES.
- BEFORE DIGGING CALL THE UNDERGROUND SERVICE ALERT 48 HOURS IN ADVANCE.
- COORDINATE WITH CIVIL DRAWINGS FOR TRENCHING PATHS.
- THE BOTTOM OF THE TRENCH SHALL BE FLAT, SQUARE & CLEAR OF ROCKS & OTHER HARD SURFACES WITH APPROPRIATE RADIUS BENDS. BACKFILL MATERIAL SHALL BE APPROVED BY THE SOILS ENGINEER. COMPACT TO MATCH SURROUNDING SOILS, U.ON.
- TYPICAL FOR FULL BOXES WITH 'N9' DESIGNATION - PROVIDE CHRISTY N9 FULL BOX, B9X12 EXTENSIONS, B9SL SLAB, N9T REINFORCED CONCRETE LID WITH HOLD DOWN BOLTS. PROVIDE 8" DIAMETER, 30" DEEP DRY WELL FILLED WITH FEA GRAVEL UNDER BOX. PROVIDE 2" DRAIN HOLE AT BOTTOM FOR DRAINAGE.
- PROVIDE TRAFFIC RATED LIDS FOR ALL FULL BOXES WHERE NOT PROTECTED FROM DAMAGE.

NUMBERED NOTES

- MOTOR CONTROL CENTER 'MCC-A', PROVIDE TWO NEW BUCKETS W/ 20 AMP, 3 POLE CIRCUIT BREAKER, RATINGS TO MATCH (E).
- PANEL 'M', PROVIDE 20 AMP, 1 POLE CIRCUIT BREAKER, RATINGS TO MATCH (E).
- RUN CONDUITS BELOW CEILING.
- CORE DRILL HOLES IN WALL AT HEIGHT TO CONCEAL FROM VIEW BELOW BEHIND THE PARAPET WALL.
- RUN CONDUITS OVER TOP OF WALL USING LB CONDULETS, THEN DOWN ON THE SURFACE TO A HEIGHT TO CONCEAL FROM VIEW BELOW BEHIND THE PARAPET WALL.
- RUN CONDUITS OVER TOP OF WALL USING CAST FERRALLOY LB CONDULETS TO DROP DOWN WALL WITH RIGID STEEL CONDUIT. SECURE TO WALL W/ RIGID CLAMPBACK STYLE STRAPS. CONVERT TO SCH. 80 PVC BELOW GRADE. ELBOWS SHALL BE RIGID STEEL.
- INSTALL RIGID STEEL ELBOWS, AND EXTEND RIGID STEEL CONDUITS UP TO 8"x8"x4" MIN. NEMA 3R FULL BOX.
- RISE UP INTO CONTROLLER THROUGH EXPLOSION PROOF 'Y' SEALOFF.
- PROVIDE CLASS 1, DIVISION 1 EXPLOSION PROOF CONNECTION TO JUNCTION BOX PROVIDED WITH GRINDER MOTOR, 480V, 3φ, 3W, 5HP.



SITE ELECTRICAL PLAN
SCALE: 1/16"=1'0"



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OWNER
EL DORADO COUNTY
3000 FAIRLANE CT - SUITE 1
PLACERVILLE, CA 95667



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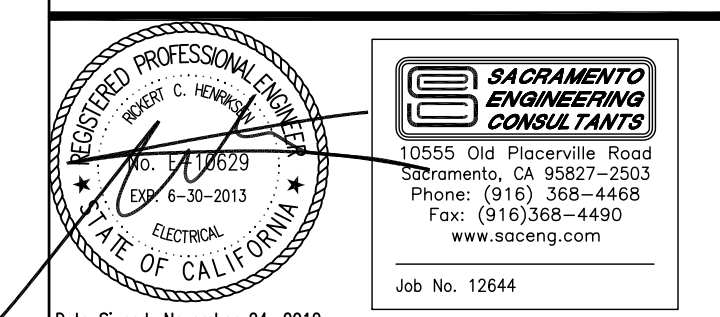
SHEET TITLE

SITE ELECTRICAL PLAN

DRAWING **E1.1**

SHEET 8 OF 9





Date Signed: November 24, 2012

EL DORADO COUNTY JAIL SEWER IN-LINE SHREDDER PROJECT

OWNER
 EL DORADO COUNTY
 3000 FAIRLANE CT - SUITE 1
 PLACERVILLE, CA 95667

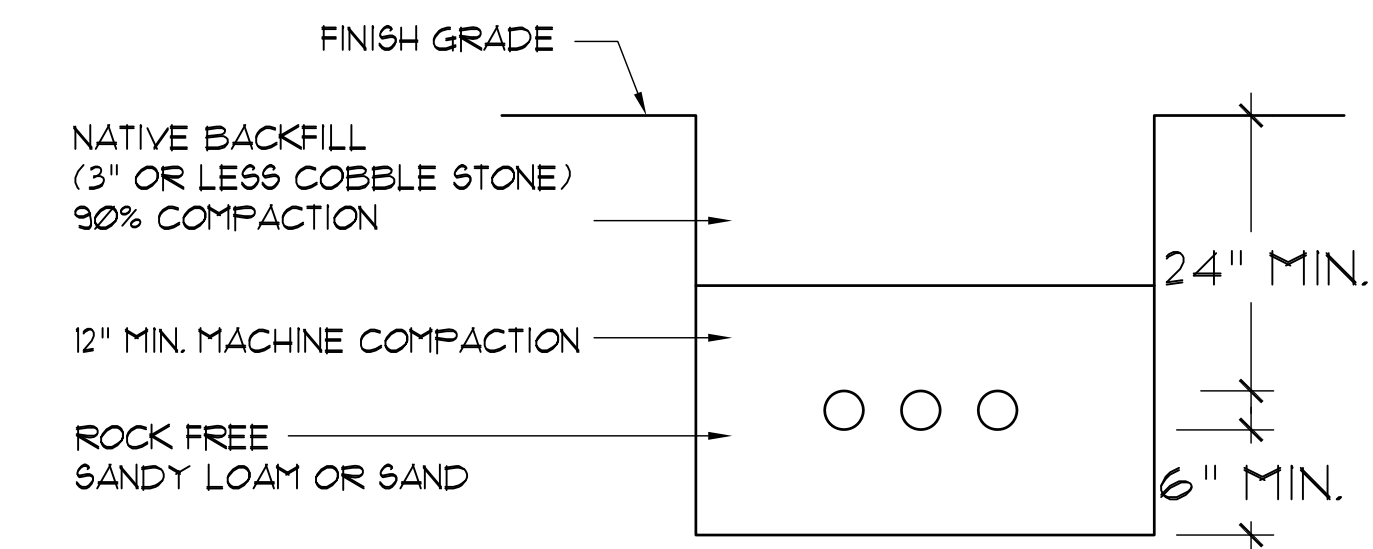


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SHEET TITLE	DETAILS	
DRAWING	E5.1	
SHEET	9	OF 9

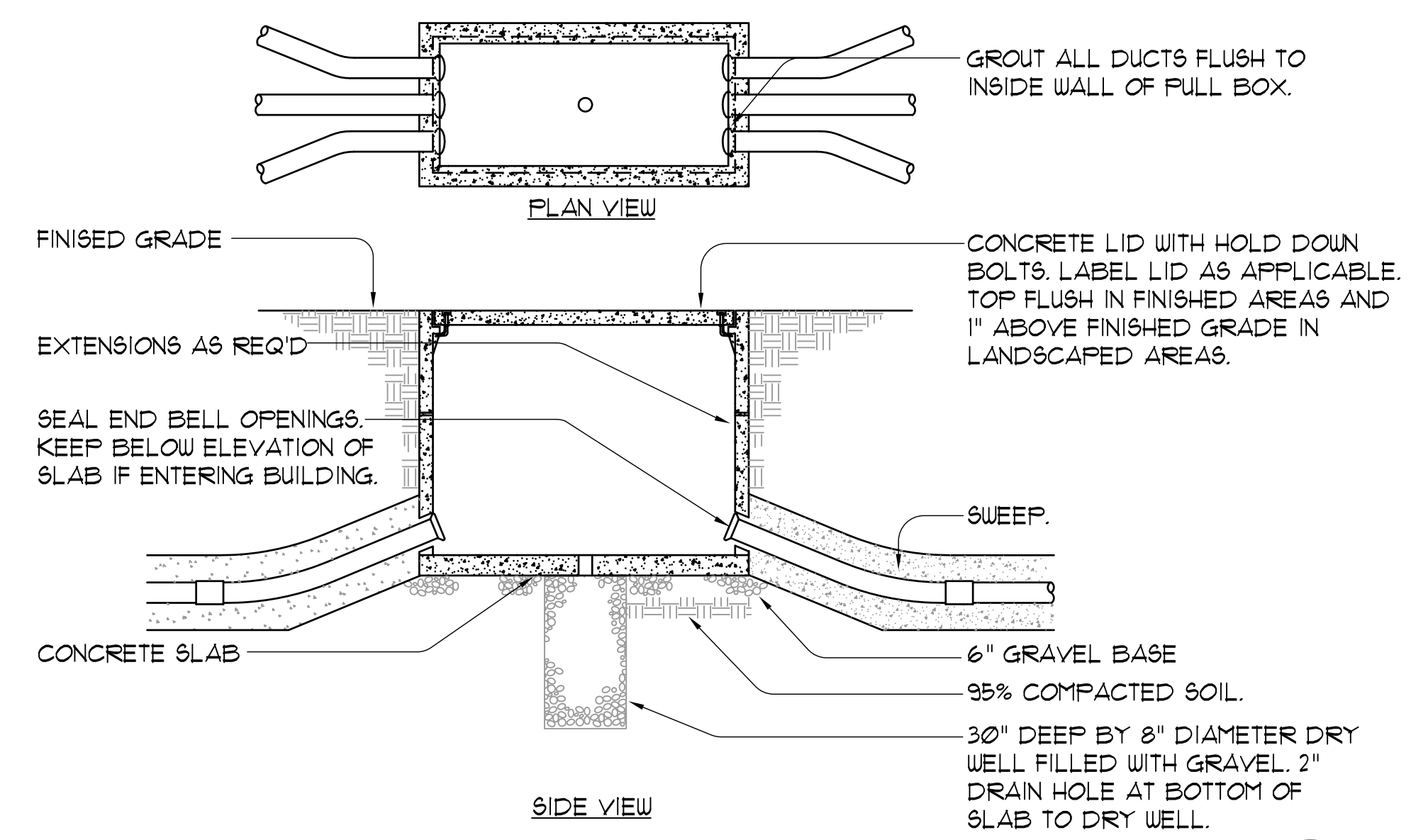


NOTE: TRENCH BOTTOM MUST BE SQUARE. KEEP CUSTOMER OWNED CONDUITS A MINIMUM OF 36" AWAY FROM UTILITY CONDUITS. UNDERGROUND CONDUITS ENTERING BUILDING MUST SLOPE DOWN AWAY FROM BUILDING 1/16" PER FOOT MIN.

TRENCH DETAIL

NO SCALE

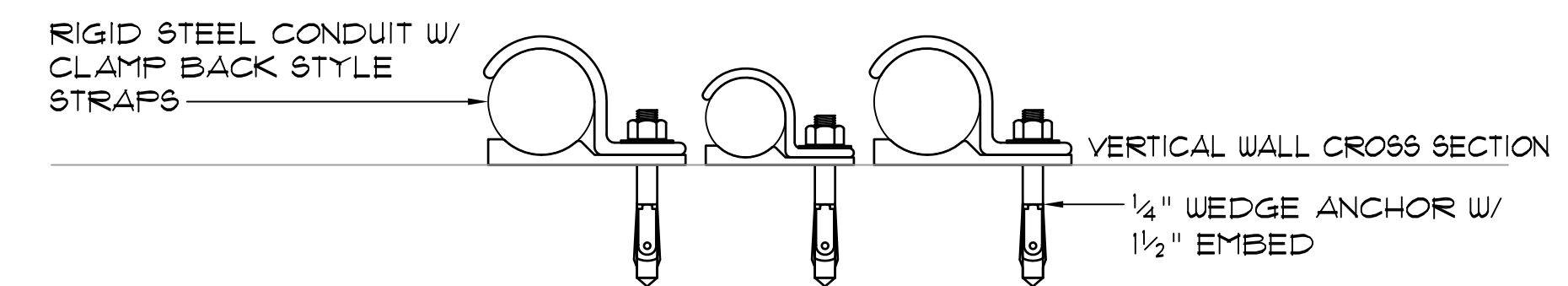
A
E5.1



PULL BOX DETAIL

NO SCALE

B
E5.1



CONDUIT ANCHORAGE DETAIL

NO SCALE

C
E5.1

