



City of Bishop, California

Bidding Information

and

Contract Documents

for

**Sewer Trunk Replacement Project**

in the

City of Bishop, County of Inyo, California

12 September 2019

Approved:

A handwritten signature in blue ink, appearing to read "David Grah", is positioned above the printed name.

David Grah  
Department of Public Works

## Notice To Bidders

Sealed proposals will be received at the City of Bishop Public Works office, City Hall, 377 West Line Street, Bishop, California, 93514 until three o'clock (3:00) in the afternoon on 17 October 2019, for furnishing all labor, materials, tools, implements and machinery to do and complete all work in a manner satisfactory to the City Engineer, for the following project:

### **Sewer Trunk Replacement**

Together with such other incidental items as are necessary to complete the work in the manner and time prescribed and in strict conformity with the contract documents.

At 3:01 in the afternoon on the above date, said proposals will be publicly opened and read aloud.

All proposals shall be made using the forms furnished by the City and shall be enclosed and sealed in an envelope which is addressed to the City Council, Bishop, California, and is clearly labeled:

### **Bid for Sewer Trunk Replacement**

Bid books including plans, specifications, bid forms to be used for bidding on this project and other contract documents can be obtained at the City of Bishop City Hall, 377 West Line Street, Bishop, California, 93514, 760-873-8458, and [publicworks@cityofbishop.com](mailto:publicworks@cityofbishop.com). Only bids referencing all addendums issued for the project shall be considered. To receive addendums and other information issued on the project during the advertisement period, provide your contact information to the Bishop Public Works in City Hall at the above addresses and number at least two working days prior to bid opening.

This project is located between First Street at Clarke Street and the Bishop Wastewater Treatment Plant east of downtown Bishop. This project includes the replacement of the sewer trunk line that carries all sewage to the wastewater treatment plant. The project includes furnishing of all labor, implements, tools, machinery, equipment, materials and all other work required to complete the project.

Bidders may attend a pre-bid review of the project site with project staff at ten o'clock (10:00) in the morning on 3 October 2019. To participate in this review, be at the intersection of First Street and Clarke Street at this date and time.

The estimated range for the construction cost of this phase of the project is from \$700,000 to \$1,000,000.

This project is funded with city funds. As a result, contracting preferences apply to this project.

Technical questions should be directed to the Director of Public Works, City of Bishop, 377 West Line Street, Bishop, California, 93514, 760-873-8458, [publicworks@cityofbishop.com](mailto:publicworks@cityofbishop.com).

The successful bidder shall furnish all items required in the contract documents.

All proposals shall include prices for all items of work for all construction options contained in the contract documents. The City intends to award the contract to the bidder with the lowest responsive bid for the most extensive construction option the City is able to fund from the allotment available for this project. Responsive bid proposals shall include:

1. Completed Bid Form
2. Bid Bond or other security
3. Completed Non-collusion Declaration form
4. Completed Contractor's Certificate Regarding Worker's Compensation form
5. Completed Proposed Equipment and Material Manufacturers form
6. Completed Proposed Subcontractors form
7. Completed Contractor Licenses form
8. If a local business preference is claimed, completed City of Bishop Local Business Verification form

The City of Bishop hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county, or counties, in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available at City of Bishop and available from the California Department of Industrial Relations' Internet web site at <http://www.dir.ca.gov/DLSR/PWD>. Future effective general prevailing wage rates, which have been predetermined and are on file with the California Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

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

The City Council of the City of Bishop, California, reserves the right to reject any and all proposals and to waive any formalities in the proposal.

**Bid Form**

Proposal to City of Bishop for the construction of

**Sewer Trunk Replacement**

**Bidder Information:**

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

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

\_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

**To the Bishop City Council:**

Pursuant to and in compliance with your Notice to Bidders inviting sealed proposals (bids) and the other documents relating thereto, the undersigned bidder, being fully familiar with the terms of the contract documents, local conditions affecting the performance of the contract, the character, quality, quantities, and scope of work, and the cost of the work at the place where the work is to be done, hereby proposes and agrees to perform within the time stipulated in the contract, including all of its component parts and everything required to be performed, and to furnish any and all of the labor, material, tools, equipment, transportation, services, permits, utilities, and all other items necessary to perform the contract and complete in a workman like manner, all of the work required in connection with the construction of said work all in strict conformity with the plans and specifications and other contract documents, including Addenda \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_, for the prices hereinafter set forth.

The bidder, under penalty of perjury, certifies that, except as noted on an attached page, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, and manager: Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency; Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years; Does not have a proposed debarment pending; and Has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years. If there are any exceptions to this certification, insert the exceptions on an attached page.

The undersigned as bidder, declares that the only persons or parties interested in this proposal as principals are those named herein and that this proposal is made without collusion with any person, firm, or corporation; and he proposes and agrees, if the proposal is accepted, that he will execute a contract with the City in the form set forth in the contract documents and that he will accept in full payment thereof the unit prices on the following 2 pages.

**Bid Form:**

<b>Item</b>	<b>Quantity</b>	<b>Unit</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Item Price</b>
1	1	LS	Mobilization		
2	1	LS	Erosion Control		
3	1	LS	Traffic Control		
4	2,550	LF	Sewer (18 inch)		
5	31	LF	Sewer (15 inch)		
6	54	LF	Sewer (12 inch)		
7	20	LF	Sewer (6 inch)		
8	110	LF	Sewer (18 inch C900)		
9	24	LF	Sewer Lateral		
10	2	EA	Force Main		
11	1	EA	Diversion Structure 1 (SSMH 2)		
12	1	EA	Diversion Structure 2 (SSMH 8)		
13	2	EA	Manhole (48 inch)		
14	1	EA	Manhole (60 inch)		
15	4	EA	Manhole (shallow)		
16	1	EA	Relocate Flow Meter Manhole		
17	4	EA	Pull box		
18	550	LF	Conduit		
19	1	LS	Bypass Pumping (ESCSD)		
20	1	LS	Bypass Pumping (between 16+00 and plant)		
21	1	LS	Bypass Pumping (First and Clarke)		
22	1	LS	Canal Bypass		
23	1	LS	Dewatering		
24	1	LS	Canal Crossing Structure		
25	65	CY	Rock Slope Protection		
26	2,235	LF	Access Road		
27	2,770	CY	Borrow Material		
28	1	LS	Fence and Gates		
29	1	LS	Survey Monuments		
30	160,000	SF	Revegetation		
				<b>Total Bid:</b>	

**CY is cubic yard; EA is each; LF is linear foot; LS is lump sum; SF is square foot**

Check one and provide required information:

- No contracting preference is claimed
- California Small Business contracting preference is claimed
- Local business contracting preference is claimed
- Small business subcontracting preference is claimed

In the event the total amount for an individual bid item does not agree with the product of the estimated quantity and unit price bid for that item, the unit price stated for the individual item shall govern and the incorrect total amount for that item shall be corrected. In the event the Total Bid does not agree with the sum of the total amounts bid for the respective bid items, the total amounts for the respective bid items shall govern and the incorrect Total Bid shall be corrected.

Unit prices for all items, extensions and total amount of bid must be shown. The proposal submitted shall be in effect for 30 days after the opening of bids.

Accompanying this proposal is a bid security in the form of a \_\_\_\_\_ (Insert words "certified check", "cashier's check", "bid bond", "cash", or appropriate description of substitute security, as the case may be) in the amount of \$\_\_\_\_\_ which amount is not less than 10% of the total bid, payable to the CITY OF BISHOP.

The undersigned deposits the above-named security as a proposal guarantee and agrees that it shall be forfeited to the City in case this proposal is accepted by the City and the undersigned fails to execute a contract with the City as specified in the contract documents or fails to furnish the required payment and performance bonds, or substitute, and insurance certificates and endorsements. Should the City be required to engage the services of an attorney in connection with the enforcement of this bid, bidder promises to pay City's reasonable attorneys' fees, incurred with or without suit.

The names of all persons interested in the foregoing proposals as principals are as follows. If bidder is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a general partnership, state true name of firm, also names of all individual partners composing firm; if a limited partnership, the names of all general partners and limited partners; if an individual, state first and last names in full; if the bidder is a joint venture, state the complete name of each party.

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Authorized Bidder Representative:

Name (typed or printed): \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
*(Individual's signature – attach evidence of authority to sign)*

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

**Bid Bond**

(10% of Total Bid Amount)

We, \_\_\_\_\_ as Principal,  
and \_\_\_\_\_ as Surety,  
jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein to the

City of Bishop, California

(herein called City) for payment of the penal sum of \_\_\_\_\_  
\_\_\_\_\_  
Dollars (\$ \_\_\_\_\_), lawful money of the United  
States. Principal has submitted the accompanying bid for the construction of

**Sewer Trunk Replacement**

If the Principal is awarded the contract and enters into a written contract, in the form prescribed by the City, at the price designated by his bid, and files two bonds with the City, or substitute security in lieu thereof, one to guarantee payment for labor and materials and the other to guarantee faithful performance, in the time and manner specified by the City, and carries all insurance in type and amount which conforms to the contract documents, and furnishes required certificates and endorsements thereof, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Forfeiture of this bond, or any deposit made in lieu thereof, shall not preclude the City from seeking all other remedies provided by law to cover losses sustained as a result of the Principal's failure to do any of the foregoing.

Principal and Surety agree that if the City is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay City's reasonable attorney's fees incurred with or without suit.

Executed on \_\_\_\_\_

\_\_\_\_\_  
PRINCIPAL

(Seal of Corporation)

By \_\_\_\_\_

Title \_\_\_\_\_

(Attach Acknowledgment of Authorized Representative of Principal)

Any claims under this bond may be addressed to:

\_\_\_\_\_ (Name and address of Surety)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Name and address of Surety's agent for service of  
process in California, if different from above)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Telephone number of Surety's agent in California)

(Attach Acknowledgement)

\_\_\_\_\_ SURETY

By \_\_\_\_\_  
(Attorney-in-Fact)

**Non-collusion Declaration**

The undersigned declares:

I am the \_\_\_\_\_  
of \_\_\_\_\_,  
the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. 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. All statements contained in the bid are true. 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, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on

Date \_\_\_\_\_ at

City, State \_\_\_\_\_

Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

**Contractor's Certificate Regarding Worker's Compensation**

Description of Contract: City of Bishop **Sewer Trunk Replacement**

Labor Code Section 3700 Provides (in part):

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

- A. By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this State.
  
- B. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees.”

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

Dated: \_\_\_\_\_  
\_\_\_\_\_ (Contractor)

By \_\_\_\_\_  
\_\_\_\_\_ (Official Title)





**Contractor Licenses**

The Contractor’s license classifications required for this project are as follows:

Class A – General Engineering Contractor or  
Class C34 - Pipeline Contractor

These classifications are provided for information purposes only. The Engineer does not warrant that all classifications required for the project are listed.

It is the City’s intent that “plans,” as used in Public Contract Code Section 3300, is defined as the construction contract documents, which include both drawings and specifications.

The contractor hereby confirms that it has all licenses and permits required by federal, state, and local statutes, regulations, and ordinances. The following are the Contractor’s applicable license numbers:

<u>Contractor’s License Number</u>	<u>Expiration Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

I state under penalty of perjury that all information submitted by me and included in this contract is true and correct.

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

Dated: \_\_\_\_\_

**City of Bishop Local Business Verification**

Complete and submit this form to claim Local Business status pursuant to Chapter 3.26, Contracting Preferences, of the Bishop Municipal Code.

Business: \_\_\_\_\_

Contact: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

Bid or Project: \_\_\_\_\_

**1. Business Location:** Provide street addresses or locations of your business for the past six months. Indicate if headquarters, distribution point, or locally-owned franchise.

Addresses or Locations	Headquarters, Distribution Point, or Franchise
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**2. Business License:** Provide issuing jurisdiction and number of local business license and attach a copy. Indicate if no license is required.

Jurisdiction	License number
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**3. Business Employment:** Provide the name and street address of one full-time employee or names and street addresses of two part-time employees employed by your business. If your business has no employees, provide the names and street addresses of local business owners that own 50% or larger share of business.

	Name 1	Name 2
Name:	_____	_____
Street:	_____	_____
City, State, ZIP:	_____	_____
Full, Part Time, or Share:	_____	_____

**Certification:** I acknowledge I have read and understand the criteria for contracting preferences as defined under Chapter 3.26 of the Bishop Municipal Code. I swear and affirm under penalty of perjury that the above information is true and correct and that the business listed above is qualified and eligible to receive a local preference. Bishop Municipal Code available at [www.cityofbishop.com](http://www.cityofbishop.com) or at City Hall.

Signature	Title	Date
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## Agreement

THIS AGREEMENT, made and entered into by and between the

City of Bishop, California

hereinafter referred to as “CITY” and

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a corporation under the laws of the state of \_\_\_\_\_;

hereinafter referred to as “CONTRACTOR”.

CITY and CONTRACTOR agree as follows:

1. SCOPE OF WORK: Contractor shall furnish all materials and shall perform all of the work for the construction of the Sewer Trunk Replacement project in accordance with this agreement and the other contract documents.
2. TIME FOR COMPLETION: The work shall be completed within the times set forth in the contract documents. Time is of the essence and forfeiture due to delay will be assessed as provided for in the contract documents.
3. CONTRACT SUM: CITY will pay CONTRACTOR as described in the Contractor bid and the rest of the contract documents.
4. PAYMENTS: Payment will be made in accordance with the contract documents. The filing of the notice of completion by CITY shall be preceded by acceptance of the work made only by an action of the City Council.
5. COMPLIANCE WITH PUBLIC CONTRACTS LAW: CITY is a public agency in the State of California and is subject to the provisions of law relating to public contracts. It is agreed that all provisions of law applicable to public contracts are a part of this contract to the same extent as though set forth herein and will be complied with by CONTRACTOR.
6. CONTRACT DOCUMENTS: The complete contract includes all of these documents:
  - Notice to Bidders
  - Bid Form
  - Agreement
  - Performance Bond

- Payment Bond
- Worker's Compensation Certificate
- Special Provisions
- Other referenced documents

This Agreement is executed by the CITY pursuant to an action of its Governing Body in session on \_\_\_\_\_, authorizing the same, and CONTRACTOR has caused this Agreement to be duly executed.

Dated:

\_\_\_\_\_ By \_\_\_\_\_  
City Administrator

Dated:

\_\_\_\_\_ By \_\_\_\_\_  
(Contractor)

Title:

\_\_\_\_\_

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

**Performance Bond**  
(100% of the Agreement Amount)

We, \_\_\_\_\_ as Principal,

and \_\_\_\_\_ as Surety,  
jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein to the

**City of Bishop**

(herein called City) for payment of the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of the United States. City has awarded Principal a contract for the construction of

**Sewer Trunk Replacement**

The condition of this obligation is such that if the Principal shall in all things abide by and well and truly keep and perform the covenants, and agreements in the said contract, and any alteration thereof made as therein provided, on his part to be kept and performed at the item and in the manner therein specified, and shall faithfully fulfill the one-year guarantee of all materials and workmanship, and shall indemnify and save harmless the City, the Engineer/Architect, the City's Representative, and their consultants, and each of their directors, officers, employees, and agents, as therein stipulated, this obligation shall become null and void, otherwise, it shall be and remain in full force and effect.

Surety agrees that no change, extension of time, alteration, or addition to the terms of the contract, or the work to be performed thereunder, or the plans and specifications shall in any way affect its obligation on this bond, and it does hereby waive notice thereof.

Principal and Surety agree that should Owner become a party to an action on this bond, that each shall pay Owner's reasonable attorney's fees incurred therein in addition to the sum above set forth.

Executed in two original counterparts on  
20\_\_\_\_

\_\_\_\_\_

PRINCIPAL

(Seal of Corporation)

By \_\_\_\_\_

Title \_\_\_\_\_

Any claims under this bond may be addressed to:

\_\_\_\_\_ (Name and address of Surety)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Name and address of Surety's agent for  
service of process in California, if different  
from above)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Telephone number of Surety's agent in  
California)

(Attach Acknowledgement)

\_\_\_\_\_ SURETY

By \_\_\_\_\_  
(Attorney-in-Fact)

APPROVED:

\_\_\_\_\_  
(Attorney for CITY)

**Payment Bond**

(100% of the Agreement Amount)

We, \_\_\_\_\_ as Principal,

and \_\_\_\_\_ as Surety,  
jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein to the

**City of Bishop**

(herein called City) for payment of the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of the United States. City has awarded Principal a contract for the construction of

**Sewer Trunk Replacement**

If Principal or any of his subcontractors fails to pay any of the persons named in Section 3181 of the California Civil Code, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract or during the one-year guarantee period, or for any amounts required to be deducted, withheld, and paid over to the Franchise Tax board from the wages of employees of the contractor and his subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, then Surety will pay the same in an amount not exceeding the sum specified above, and also will pay, in case suit is brought upon this bond, such reasonable attorney's fees as shall be fixed by the court.

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

Surety agrees that no change, extension of time, alteration, or addition to the terms of the contract, or the work to be performed there under, or the plans and specifications shall in any way affect its obligation on this bond, and it does hereby waive notice thereof.

Principal and Surety agree that if the City is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay City's reasonable attorney's fees incurred with or without suit, in addition to above sum.

Executed in two original counterparts on  
20\_\_\_\_

\_\_\_\_\_

PRINCIPAL

(Seal of Corporation)

By \_\_\_\_\_

Title \_\_\_\_\_

Any claims under this bond may be addressed to:

\_\_\_\_\_ (Name and address of Surety)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Name and address of Surety's agent for  
service of process in California, if different  
from above)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Telephone number of Surety's agent in  
California)

(Attach Acknowledgement)

\_\_\_\_\_ SURETY

By \_\_\_\_\_  
(Attorney-in-Fact)

APPROVED:

\_\_\_\_\_  
(Attorney for CITY)

## Special Provisions

### **A. GENERAL PROVISIONS**

#### **1. GENERAL**

Unless otherwise stated, the work embraced herein shall be done in accordance with the 2015 Standard Specifications and the Standard Plans of the State of California, Department of Transportation insofar as the same may apply and in accordance with these Special Provisions. Copies of the Standard Plans and the Standard Specifications may be obtained from the Department of Transportation. In addition the City of Bishop Specifications for Domestic Water and Sanitary Sewer System (1991) shall also apply. Copies may be obtained from the City of Bishop Public Works Department.

When approved by the Engineer, forms, documents, and standards equivalent to those specified may be used.

In the event of conflict between these Special Provisions, the project plans, the City of Bishop Specifications for Domestic Water and Sanitary Sewer System, the Standard Specifications, and the Standard Plans the order of precedent shall be these Special Provisions over the project plans over the technical specifications of the City of Bishop Specifications for Domestic Water and Sanitary Sewer System over the Standard Specifications over the remaining sections of the City of Bishop Specifications for Domestic Water and Sanitary Sewer System over the Standard Plans.

#### **2. GLOSSARY**

All definitions and terms in Section 1-1.07B, Glossary, of the Standard Specifications shall apply, except whenever the following terms are used the intent and meaning shall be as follows.

**Bid Item List:** The bid form corrected for math errors.

**Contract:** Executed agreement between the City and Contractor.

**Contract Documents:** The documents which make up the Contract, including any and all documents incorporated therein; also, any and all written agreements between the City and Contractor which amend or change the Contract. Referred to as the Bid Book in the Standard Specifications.

**City:** The City of Bishop, State of California, working through its Public Works Department.

**Department:** The Public Works Department of the City of Bishop.

**Director:** The Public Works Director of the City of Bishop.

**Department of Transportation:** The Public Works Department of the City of Bishop, except when Department of Transportation publications are cited, such cites are to remain as written and refer to the State of California, Department of Transportation, also known as Caltrans.

**Engineer:** The Public Works Director of the City of Bishop, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

**Laboratory:** The Laboratory of the Public Works Department or other laboratories authorized by the Public Works Department of the City of Bishop to test materials and work involved in the Contract.

**Office Engineer:** The Public Works Director of the City of Bishop.

**Owner:** The City.

**State or State of California:** The City except when State publications or standards are cited, such cites are to remain as written and refer to the State of California.

### **3. CHANGES TO STANDARD SPECIFICATIONS**

The following sections are deleted from the Standard Specifications:

2-1.02, Bid Ineligibility

2-1.06, Bid Documents

2-1.18, Small Business and Non-Small Business Subcontractor Preferences

2-1.27, California Companies

2-1.33D, Opt Out of Payment Adjustments for Price Index Fluctuations

3-1.08, Small Business Participation Report

3-1.11, Payee Data Record,

Delete the numbered list in Section 3-1.18, Contract Execution

Deleted the second and third paragraphs of Section 2-1.33A, Bid Document Completion - General.

Modify Section 5-1.23, Submittals, to identify each sheet by the project name.

Delete the column "Umbrella or excess liability" from Liability Limits table of Section 7-1.06D(2), Liability Limits / Additional Insureds.

### **4. PROPOSAL REQUIREMENTS**

The bidder's attention is directed to the provisions in Section 2, Bidding, of the Standard Specifications and these special provisions for the requirements and conditions which the bidder must observe in the preparation and the submission of the bid. Subcontracting Request forms are not required but each proposal shall list the portion of work that will be done by each subcontractor. A sheet for listing the subcontractors is included in the Proposal.

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract.

### **5. BONDS**

The Contractor, simultaneously with the execution of the contract, shall furnish a payment bond and a performance bond each in an amount equal to 100 percent of the contract amount, or equivalent cash or security in lieu of bonds pursuant to Section 995.710 of the Code of

Civil Procedures. Bonds shall be furnished by surety companies satisfactory to the City on the forms furnished as part of the contract documents. Surety companies, to be acceptable to the City, must be authorized to do business and have an agent for service of process in California.

## **6. SCOPE OF WORK**

The scope of the work shall consist of the reconstruction of a sewer trunk as described in the contract documents for the **Sewer Trunk Replacement** and as provided in the improvement plans.

## **7. PRE-CONSTRUCTION CONFERENCE**

Prior to issuance to the Notice to Proceed, the City will hold a pre-construction conference for the purpose of discussing essential matters pertaining to the pursuit of the satisfactory completion of the project. The Contractor's representatives at this conference shall include all major superintendents for the work and may include subcontractors.

## **8. CONSTRUCTION STAKES**

The Contractor shall request staking by notifying the Engineer at least 7 working days before the staking will be required. The cost of all re-staking shall be paid by the contractor. Construction stakes will be provided at 50 foot intervals along sewer trunk and two offset stakes will be provided at each manhole and lateral. Contractor shall be responsible for most layout from these stakes.

## **9. SUBMITTALS**

In addition to submittals required in the Standard Specifications and elsewhere in these Special Provisions, the Contractor shall submit the following information to the City 7 working days prior to beginning of work for review and approval:

- a) A schedule of work conforming to Section 8-1.02B, Level 1 Critical Path Model Schedule, of the Standard Specifications.
- b) A health and safety plan.
- c) A traffic control plan
- d) Bypass pumping plans
- e) Sewage Spill Prevention and Response Plan (see Sewage Spill Prevention and Response Plan later in these Special Provisions)
- f) Groundwater avoidance plan in conformance with CDFW permit (see Environmental Permit Requirements later in these Special Provisions).
- g) Oil Spill Contingency Plan in conformance with CDFW permit.

Each submittal shall include a cover sheet clearly describing the purpose of the submittal and shall provide sufficient information to determine that the item is in compliance with the requirements.

## **10. PERMITS AND LICENSES**

The following permits and licenses are known to be required for the work:

- a) City of Bishop Business License

b) California Contractors License Classification A or C34.

### **11. TIME OF COMPLETION**

The Contractor shall have 80 working days to complete the work. The Contractor shall note timing requirements for work at the Bishop Creek Canal in the Environmental Permit Requirements section of these Special Provisions.

### **12. LIQUIDATED DAMAGES**

Liquidated damages shall be \$1000 per day.

### **13. MEASUREMENT AND PAYMENT**

All work will be measured and paid for as shown on the bid form and the contract documents.

Item quantities shall be measured by planned, actual, or lump sum in accordance with these special provisions. Item quantities to be measured for payment by planned quantities shall be based on theoretical or calculated quantities of completed work based on the plans. Item quantities to be measured for payment by actual quantities shall be determined by measurement of completed work.

The price paid for bid items shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in completing those items of work complete in place in accordance with the contract documents.

When the contract does not include a contract pay item for work required by the contract, full compensation for that work is included in the prices paid for the contract pay items included in the contract.

The Contractor with assistance from the City shall, on or before the tenth day of each calendar month after construction work is started, cause an estimate in writing to be made of the value of the work completed.

A request for payment shall be submitted by the Contractor each month and upon completion of all work for approval and payment by the City.

The City shall retain 10 percent of the estimated value of the work done and 10 percent of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for the fulfillment of the contract by the Contractor, except that at any time after 20 percent of the work has been completed, if the Engineer finds that satisfactory progress is being made, the City may reduce the total amount being retained from payment pursuant to the above requirements to 5 percent of the estimated value of the work and materials and may also reduce the amount retained from any of the remaining partial payments to 5 percent of the estimated value of the work and materials. In addition, on any partial payment made after 95 percent of the work has been completed, the Department may reduce the amount withheld from payment pursuant to the requirements of

this section to such lesser amount as the Department determines is adequate security for the fulfillment of the balance of the work and other requirements of the contract, but in no event will that amount be reduced to less than 125 percent of the estimated value of the work yet to be completed as determined by the Engineer.

Attention is directed to the provisions in Sections 10262 and 10262.5 of the Public Contract Code concerning prompt payment to subcontractors.

**14. RESOLUTION OF CLAIMS**

All public works claims between the Contractor and City relating to this contract where the total claims of both parties are equal or less than \$375,000 shall be resolved in accordance with Public Contract Sections 20104 et seq., which are incorporated herein by reference. There shall be no claims for labor compliance issues.

**15. SEWAGE SPILL PREVENTION AND RESPONSE PLAN**

The contractor’s written Sewage Spill Prevention and Response Plan shall include:

- Procedures and practices for sewage spill prevention
- Procedures and practices for stopping, cleaning up, and decontamination sewage spills
- Plan for monitoring during bypass pumping
- Procedures and practices to prevent or contain sewage dust from becoming airborne from sewage-contaminated materials removed from the work

**16. BYPASS PUMPING PLAN**

The contractor is responsible for the means and methods of bypass pumping operations and shall be responsible for any penalties that result from failure of those operations. The contractor shall develop and implement a bypass pumping plan for the project. The contractor’s bypass pumping plan shall fully describe how the contractor will temporarily bypass wastewater flows and canal flows, if applicable, through the work when required.

Anticipated bypass flows during the construction period are:

<b>Line</b>	<b>Average Daily</b>	<b>Minimum Daily</b>	<b>Maximum Daily</b>	<b>Historic Peak Hour</b>
Bishop Sewer Trunk	0.74 MGD	0.41 MGD	1.12 MGD	1.84 MGD
Estimated ESCSD Sewer Branch	0.33 MGD			
Estimated Bishop Creek Canal	15 CFS		38 CFS	

MGD: Million gallons per day  
 CFS: Cubic Feet per Second

Estimated flows in Bishop sewer branches are:

<b>Manhole</b>	<b>% of Bishop Trunk Flow</b>
WA2	40
PA2	35
EC1	20
SO1	5

**Bypass Pumping Plan Requirements:**

- Plan shall show that contractor or contractor’s pumping subcontractor if one is used has at least 5 years experience with comparable sewage bypass pumping on at least 5 comparable projects.
- Plan shall show how contractor will verify anticipated bypass flow rates with actual flow measurements over a 10 day period prior to each bypass pumping operation.
- Contractor must obtain engineer’s approval of final design flow rates before each bypass pumping operation begins.
- Flows may be bypassed as generally shown in the plans or in a manner proposed by contractor and approved by engineer that provides equivalent function and protection.
- Plan shall show proposed flow schematics depicting the proposed bypass sequence including required redundancy.
- Plan shall provide proposed pump capacities and power requirements.
- Plan shall include bypass line routing information.
- Plan shall show pipe anchoring.
- Plan shall include a schedule that shows duration of pumping including milestones for installation, maintenance and removal of equipment and accessories.
- Plan shall show traffic and access impacts including to driveways and shall minimize impacts.
- Plan shall demonstrate pipes withstand 2 times maximum anticipated pressure.
- Plan shall demonstrate how pumping at First and Clarke and on the ESCSD line shall be continuously monitored and how immediate response will be provided in case of trouble. Continuous monitoring at these location shall be provided by full time staffing by qualified persons or by effecting automated measures if they are approved by the engineer.
- Plan shall indicate how pumping between 16+00 and plant shall be monitored and how response will be provided in case of trouble.
- Full time qualified attendants able to operate and maintain equipment with mobile phone communication to contractor superintendent and engineer.
- Plan shall show that a minimum of two pumps are provided at each pumping location.
- Plan shall show that pump capacity at each location is sufficient to pump the anticipated peak hour flow with the largest pump out of service.
- Plan shall show that pumps shall be fully automatic, self-priming (dry), close-coupled centrifugal units that do not require use of foot valves or vacuum pumps for priming.
- Plan shall show that pumps shall be capable of passing 3-inch diameter solids, rags, rocks, hair and other debris encountered in municipal wastewater.
- Plan shall show that pumps and other equipment shall be quiet and appropriate for 24 hour per day use in residential neighborhoods.

- Plan shall include flashers, fencing, or other means to warn the public of any above ground portions of the bypass lines and equipment.
- Plan shall show that bypass pumping shall be appropriate for low-flow-cold-weather operation.
- Plans shall show that all piping and equipment shall have zero leakage.
- Written approval from the engineer is required prior to the start of bypass pumping at each location.

## **17. TRAFFIC CONTROL**

The contractor's traffic control plan shall include:

- Construction signing
- Types and location of traffic control devices
- Draft notification letters

The plan shall conform to the California Manual of Uniform Traffic Control Devices.

The City Engineer will review the submittal and provide written comments on the proposed plan. Upon resolution of issues the Engineer shall accept the plan in writing.

Acceptance by the Engineer of a traffic control plan shall in no way relieve the Contractor of his responsibility for safety. Acceptance of the traffic control plan by the City Engineer indicates that the plan generally appears to conform to the contract requirements. Such acceptance shall in no way be construed as confirmation of the technical accuracy or adequacy of the contents of the plan and shall not relieve the Contractor of the obligation to institute traffic control measures in full compliance with contract requirements, and which function safely and correctly, and are in conformance with applicable statutes, ordinances, and regulations.

Notifications: Draft notifications to properties shall be submitted to the Engineer for review and approval before Contractor distributes notices. The Contractor shall submit a copy to the Engineer of all notifications delivered.

The Contractor shall prepare and deliver project information notices to all properties adjacent to the project to ensure properties receive the notices no less than 7 calendar days prior to beginning any construction. The notice will include:

- Impacts of construction to property
- General scope of project including description of project and limits, hours and days of operation, phasing information, lane closure, and parking restrictions
- Contractor contact and telephone number
- Other appropriate information requested by the Engineer.

When full-street and driveway closures are necessary for vehicles, the Contractor shall notify the affected properties 3 working days prior to each closure event.

Flagging: Flagging shall be paid entirely by the contractor. Assigned flaggers must control traffic and warn public of any dangerous conditions results from work activities. All flaggers must maintain flagging apparel. Flaggers shall be used during active construction operations whenever one-way traffic control is used on a two-way street.

Open Trenches and Excavation: Except for the minimum area needed to resume construction the following day, trenches and excavation in roadways shall be plated or backfilled and compacted to at least the bottom of the pavement section by the end of each work day.

Bishop Creek Canal: One smooth firm lane shall be kept open and safe at all times on the dirt access road on the east side of the Bishop Creek Canal for use by vehicles and recreational users including bicycles and pedestrians.

### **18. AS BUILT RECORDS**

The Contractor shall collect and furnish as-built information of the project. The information shall include all cases where actual field construction differs from the designed information. All concealed work, including but not limited to all utility locations shall be referenced. Dimensions shall be shown from easily identifiable and durable reference points.

### **19. GENERAL SAFETY**

Contractor shall transmit to the City copies of reports and other documents related to accidents and injuries encountered during this work. Where there is conflict between applicable safety orders, laws and regulations and policies, the more stringent measures shall apply.

### **20. CHEMICALS**

The Contractor shall provide two copies of Material Safety Data Sheets to the City for all chemicals used during this project at least three days prior to bringing them on site. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

If the Contractor encounters hazardous substances during this work, he shall immediately notify the City and the County Environmental Services Office. Hazardous substances shall be disposed of in accordance with the requirements of Inyo County Department of Environmental Health.

### **21. ENVIRONMENTAL PERMIT REQUIREMENTS**

The project is subject to the provisions of environmental permits issued by the California Department of Fish and Wildlife (CDFW), Lahontan Regional Water Quality Control Board (Lahontan), and the United States Army Corps of Engineers. The plans and special provisions are developed in accordance with these permits. Copies of these permits are available from the City of Bishop in conjunction with this bidding information and contract documents package. In addition to requirements provided elsewhere, the contractor shall comply with the following permit provisions:

- The city will provide a Designated Biologist to help ensure compliance with CDFW and Lahontan permit provisions. The contractor shall cooperate with the Designated Biologist.
- A Mitigation and Monitoring Plan (MMP), prepared by TEAM Engineering and dated 17 July 2017, is incorporated by reference in the Lahontan permit. This plan addresses special revegetation requirements for disturbance in the Alkali Meadow area. The Contractor is responsible for the Revegetation of Temporarily Disturbed Areas described in Section 2.1 which consists of collecting and distributing soil, duff, and vegetation, as specified elsewhere. The City and Designated Biologist will be responsible for the maintenance and monitoring described in the MMP.
- No work shall be conducted within the Bishop Creek Canal in the months of November , December, and January. This restriction also applies to the months of May and June, when work is not expected to be underway.
- Prior to any work in and near the Bishop Creek Canal, all workers involved in that work shall participate in training provided by the Designated Biologist about sensitive environmental issues.
- All workers involved in work in and near the Bishop Creek Canal shall receive copies of CDFW permit.
- Vegetation shall not be removed or damaged in and near the Bishop Creek Canal outside of limits marked by Designated Biologist.
- At the end of each workday, the contractor shall place an escape ramp at each end of any open trenches or pits to allow animals to climb out overnight. The ramp may be constructed of fill or wood and shall be no steeper than 30 degrees (about 1.75H to 1V).
- The contractor shall submit a plan of measures to avoid contaminating groundwater. It could be noted that potential for contaminating groundwater is not considered to be unusually high for the anticipated work. Typical pumping of water from the excavation in the canal such as shown on the plans should be adequate to protect groundwater from contamination.
- Prior to the start of construction, work area shall be isolated from Bishop Creek Canal and bypassed canal flow. To isolate the work area watertight barriers shall be constructed around the work area and bypassed flow shall be discharged downstream. Barriers shall be constructed of material that does not allow for the release of soils or fine sediment.
- Prior to diversion of the Bishop Creek Canal, the contractor shall use hand tools to remove all submerged aquatic vegetation from the area that will be dewatered.
- The contractor shall cooperate with the Designated Biologist in the capture and relocation of stranded aquatic life observed in the dewatered areas.
- Canal flow shall be bypassed in a manner that limits turbidity, siltation, and pollution.
- When canal flow is bypassed by pipes using gravity flow, pipe intake velocity shall be limited to 1 foot per second.
- When canal flow is bypassed by pumping, intakes shall use CDFW-approved fish screening devices.
- Equipment shall be pressure washed or steam-cleaned prior to use in and near the Bishop Creek Canal to ensure it is free of water, mud, and debris that could harbor and transport invasive, non-native aquatic species.

- Equipment and vehicles operated in or near the Bishop Creek Canal shall be checked daily and maintained to prevent deleterious material leaks.
- No equipment maintenance shall be conducted in or near the Bishop Creek Canal.
- The contractor shall submit an Oil Spill Contingency Plan. At minimum, this plan shall include spill containment measures, a plan for clean-up and disposal of contaminated soil, and the prohibition of fuel storage sites and parked vehicles in and near the Bishop Creek Canal. The plan shall provide that all equipment carry an oil spill containment kit suitable for containing an oil spill of less than one gallon.
- Contractor shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a streambed, or be placed in locations that may be subjected to high storm flows.
- Concrete washout shall not be performed in or near the Bishop Creek Canal.

## **B. BID ITEMS**

### **1. Mobilization**

Mobilization shall be measured lump sum.

### **2. Erosion Control**

It is anticipated that this project will obtain a waiver for National Pollutant Discharge Elimination System (NPDES) coverage under the Statewide construction stormwater permit. Protection from stormwater degradation caused by construction is the responsibility of the contractor. Standard temporary best management practices (BMP's) are outlined in the Storm Water Pollution Prevention Plan (SWPPP) and shown on the plans. Copies of the SWPPP are available from the City of Bishop in conjunction with this bidding information and contract documents package. BMP's shall be field adjusted to the satisfaction of the City, Engineer, Permitting Agencies, and/or other City representatives including the Designated Biologist. The installation, maintenance, monitoring, and removal of temporary BMPs are the responsibility of the contractor. This item shall be measured lump sum and paid based on percentage of contract time expired.

### **3. Traffic Control**

Traffic control shall be measured lump sum and paid based on percentage of contract time expired.

### **4 through 8. Sewer**

Sewer shall be PVC and shall include removal of existing sewer line in conflict with the new sewer line, connection of existing and new laterals, couplings, and pavement restoration. Portions of existing sewer line in conflict with the new sewer line near the intersection of First Street and Clarke Street are known to be encased in concrete. The exact extent of the encasement is unknown. Surplus soil that is free of debris may be disposed of at the City of Bishop Wastewater Treatment Facility at 980 Poleta Road. Sewer Line shall be measured actual.

### **9. Sewer Lateral**

Sewer lateral shall be 4 inch PVC. Sewer lateral shall include removal of existing sewer laterals in conflict with the new sewer laterals, an inline cleanout at the street right of way line, and pavement and other surface restoration. Sewer lateral may attach to sewer line with single gasket PVC sewer saddle wye. Sewer laterals shall be measured actual.

### **10. Force Main**

Force Main shall include removal and abandonment of existing force mains, as required, and shall conform to the requirements for PVC water line. Force Main shall be measured actual.

### **11 and 12. Diversion Structure**

Diversion Structure (also called diversion manhole) shall include frame, cover, adapter, slide gate, stop gates, trash rack, floor grating, and plug valve, as applies. Cover shall be Jensen A-1032 or equal. Diversion Structure shall be measured actual. Material under structure may be crushed rock.

**13 through 15. Manhole**

Manhole (48 inch and 60 inch) shall conform to City of Bishop Standard Detail S-1 except for inside diameter in the case of 60 inch manhole. Eccentric cone sections may be replaced with flat tops if approved by the engineer. Manhole (48 inch and 60 inch) shall include frame and cover per City of Bishop Standard Detail S-2, except frame and cover. Frame and cover for 48 and 60 inch manholes shall be Jensen A-1032 or equal except for sanitary sewer manholes (SSMH's) 10, 11, 12, and PA1 which shall be Jensen A-1024 or equal. Twenty four inch covers for shallow manholes shall be Jensen A-1032 or equal. Manholes other than 48 and 60 inch manholes shall otherwise conform to plans. Manhole shall be measured actual.

**16. Relocate Flow Meter Manhole**

Relocate Flow Meter Manhole shall consist of relocating rings, top, and frame from existing flow meter manhole to a new location on the new trunk line. Relocate Flow Meter Manhole shall include replacing existing 36 inch cover with a Jensen A-1462-R5 adapter and A-1032 cover, or equals. Remaining portion of existing manhole shall be filled with  $\frac{3}{4}$  sack slurry or Class 2 aggregate base. Relocated rings and top shall be installed on a new poured-in-place manhole base. Poured-in-place base shall conform to City of Bishop Standard Detail S-1. Flow meter equipment will be relocated by others and contractor shall coordinate work with relocation of equipment. Relocate Flow Meter Manhole shall be measured actual.

**17. Pull Box**

Pull Boxes shall have lids marked SCADA. Caltrans pull boxes are considered tamper-proof. Conductors shall be run by others. Pull Box shall be measured actual.

**18. Conduit**

Conductors shall be run by others. Conduit shall be measured actual.

**19 through 21. Bypass Pumping**

Bypass Pumping items shall be measured lump sum and shall be paid based on percentage of total estimated time (considering current anticipated schedule of work) each bypass pumping location has been in operation, to a 100% maximum.

**22. Canal Bypass**

Canal Bypass shall be measured lump sum and shall be paid based on percentage of estimated time (considering current anticipated schedule of work) canal bypass has been in operation, to a 100% maximum.

**23. Dewatering**

Dewatering shall be measured lump sum and shall be paid based on percentage of estimated time (considering current schedule of work) dewatering activity for work at canal, to a 100% maximum.

**24. Canal Crossing Structure**

Canal Crossing Structure shall be measured lump sum and shall be paid based on percentage estimated complete.

**25. Rock Slope Protection**

Rock Slope Protection shall be measured planned.

**26. Access Road**

Access Road shall consist of grading and compacting roadway of native material along trunk alignment so it is suitable for occasional use by vehicles and equipment. Access Road shall be measured actual.

**27. Borrow Material**

Borrow Material is material imported to construct mound along new sewer trunk. Borrow Material shall include placement and shall be suitable to support Access Road and Revegetation activities. Borrow Material shall be measured planned.

**28. Fence and Gates**

Fence and Gates shall include all fence and gate work shown on the plans or otherwise required for the work. Fence and Gates shall be measured lump sum.

**29. Survey Monuments**

Survey Monuments shall consist of constructing Caltrans Type B, C, or D survey monument wells at the intersection of Clarke Street and First Street. Marker disks and concrete for marker disks will be placed by others. Survey Monuments shall be measured planned.

**30. Revegetation**

Revegetation shall consist of collecting and distributing the top 3 inches of soil, duff, and included processed vegetation, if any. In the Alkali Meadow area, the top 6 inches shall be collected and distributed. Vegetation may be included with soil and duff if processed by chopping so pieces are of 4 inch maximum dimension. Soil and duff shall be collected within the entire area disturbed by construction between 3+60 and 25+60. Collected soil and duff may be stockpiled along the outside edges of disturbed area and shall be evenly distributed back over the disturbed area except for the access road at the completion of construction. Soil, duff, and vegetation collected from the Alkali Meadow area shall be stockpiled separately from the other collected material and shall be distributed back to the Alkali Meadow area. The term clearing and grubbing is used for Revegetation in some parts of the plans. The quantity for Revegetation is the area soil and duff is collected. Revegetation shall be measured planned.

## **A. MATERIALS AND GATES**

### **1. Portland Cement Concrete**

Concrete shall be 711 Materials, Mix 650016F4, or equal.

### **2. Geotechnical Information**

Geotechnical information for the project is available from the City of Bishop in conjunction with this bidding information and contract documents package.

### **3. Conduit**

Electrical conduit shall be Type 3.

### **4. PVC Sewer Pipe**

Except for "C900" (also referred to as "C-905" on the plans) sanitary sewer, sanitary sewer shall be plastic pipe. "C900" sanitary sewer shall meet the requirements for PVC Water Pipe. Other sewer pipe shall be Standard Dimension Ratio (SDR) 35 polyvinyl chloride (PVC) solid wall sewer pipe made of compounds conforming to ASTM D1784 and manufactured in accordance with the material requirements of ASTM D3034 or ASTM F679. Sewer pipe other than "C900" shall meet all dimensional, chemical, and physical requirements as outlined in ASTM D3034 and ASTM F679 or ASTM F679 ANNEX. Sewer pipe shall be installed according to the requirements of ASTM D2321. Joints in sewer pipe other than "C900" shall meet the requirements of ASTM D3212 and shall be formed using a Rieber gasket system for sealing that meets the requirements of ASTM F477.

### **5. Synthetic Fiber Reinforcement**

The synthetic fibers specified shall conform to the requirements of ASTM C1116, Section 4.1.3 and Note 3, as well as International Conference of Building Officials Evaluation Service (ICBO ES) Acceptance Criteria 32, Sections 4.1.1 and 4.1.2. Both of these specifications apply to the use of synthetic fibers as secondary reinforcement in concrete. At the request of the project engineer the synthetic fiber vendor shall furnish a Letter of Certification stating compliance with these specifications and signed by a registered Professional Engineer.

Synthetic fibers shall be either nylon multifilament fiber or polypropylene collated fibrillated fiber or monofilament fiber.

Nylon multifilament or polypropylene monofilament fibers shall be introduced at the rate of 1 pound per cubic yard at the standard length of  $\frac{3}{4}$  inch.

Polypropylene collated fibrillated fiber shall be introduced at the rate of 1.5 pounds per cubic yard at the standard length of  $\frac{3}{4}$  inch.

Synthetic fibers shall be added at the concrete batch plant and mixed with the other ingredients for 3 to 5 minutes. The concrete producer shall list the type and quantity of synthetic fiber added on each delivery ticket.

### **6. Aggregate Base**

Aggregate base shall be Class 2 and may be 100 percent reclaimed material.

**7. Crushed Rock**

Crushed rock shall be the product of crushing rock or gravel. The portion of the material that is retained on a 3/8-inch sieve shall contain at least 50 percent of particles having three or more fractured faces. Not over 5 percent shall be pieces that show no such faces resulting from crushing. Of that portion which passes the 3/8-inch sieve but is retained on the Number 4 sieve, not more than 10 percent shall be gravel particles. Crushed rock will be designated by nominal size and shall conform to the following gradations:

Sieve Size	Percent Passing		
	1"	3/4"	1/2"
1 1/2 inch	100	-	-
1 inch	90-100	100	-
3/4 inch	30-60	90-100	100
1/2 inch	0-20	30-60	90-100
3/8 inch	-	0-20	20-60
Number 4	0-5	0-5	0-15
Number 8	-	-	0-5
ASTM C 131 Test Grading	A	B	B

Sieve Size	Percent Passing			
	3/8"	1/4"	3/16"	Rock Dust
1/2 inch	100	-	-	-
3/8 inch	90-100	-	-	100
1/4 inch	-	100	-	-
Number 4	30-60	75-100	100	90-100
Number 8	0-10	0-25	40-75	-
Number 16	-	0-5	0-10	-
Number 30	-	-	-	20-60
Number 200	-	0-2	0-2	5-20
ASTM C 131 Test Grading	C	D	D	-

Crushed rock shall meet the following requirements:

TEST	Test Method Number	Requirements in percent
Percentage Wear	ASTM C 131	
100 Revolutions		15 Maximum
500 Revolutions		52 Maximum

**8. PVC Water Pipe**

Water line shall be polyvinyl chloride (PVC) water distribution pipe conforming to American Water Works Association (AWWA) C900 DR14 requirements with integral bell and spigot joints, shall meet the requirements of ANSI/NSF 61 "Drinking Water System Components - Health Effects", and shall be manufactured to cast iron outside diameters (CIOD) in

accordance with AWWA C900. The bell shall consist of an integral thickened wall section with an elastomeric seal. The wall thickness in the bell section shall conform to the requirements of Section 6.2 of ASTM D3139, "Standard Specification for Joint for Plastic Pressure Pipes Using Flexible Elastomeric Seals". The seal shall meet the requirement of ASTM F477 "Standard for Elastomeric Seals (Gaskets) for Joining Plastic Pipe." Fittings and valves shall conform to the provisions of the Bishop Specifications.

## **9. Asphalt Concrete**

Asphalt concrete shall be Hot Mix Asphalt Type B. The grading of the aggregate on the top lift shall be 1/2 inch, maximum, medium. Asphalt binder shall be Grade PG 64-28 conforming to current California Department of Transportation specifications. Comparable commercial "cold mix" asphalt concrete suitable for the application may be used if approved in writing in advance by the engineer.

## **10. Slide Gate**

### **A. Manufacturers:**

1. Plasti-fab, or Engineer Approved Equal

### **B. Description: FRP Wedging Titesal Slide Gate & Embedded Guide Frame Assembly**

1. Construction: Slide gate is sandwich construction with FRP skins, foam core, & internal structural steel.
  1. Resin: McWhorter 712-3765
  2. Catalyst: hi-point 90
  3. Gate laminate sequence: V, 4M, foam, 2M, V
  4. Surface Coat: Silmar SIL 66bq-250A with Grey Pigment and Wax.
  5. Guide Frame: Pultruded FRP (Vinyl-Ester) with Neoprene seals.
  6. Joints: Bonded with Plexus MA-300.
  7. Hardware: Type 304 stainless steel.
2. Nominal Size:
  1. 21-inch Wide Clear Opening
  2. 42-inch Opening Height
3. Leakage: Below that allowed by AWWA C-563
  1. Leakage:
    1. At the maximum operating head pressure the leakage of the gate shall not exceed 100cc per minute per foot of wetted perimeter.
    2. Slide gate shall have seals that wedge into the guide frame seat on closure.

### **C. DESIGN CRITERIA**

1. Composition of the slide gate laminate shall be in accordance with the recommendations shown in the Quality Assurance Report for Reinforced Thermostat Plastic (RTP) Corrosion Resistant Equipment prepared under the sponsorship the Society of the Plastics Industry, Inc. (SPI) and the Material Technology Institute of the Chemical Process Industries, Inc. (MTI) for "Hand

Lay-up Laminates” and shall meet the specifications for Type 1, Grade 10 laminates shown in Appendix M-1 of said report.

1. Visual inspection for defects shall be made without the aid of magnification and defects shall be classified as shown in Table 1 Level II of ANSI/ASTM D2563-0, approved 1977, (or any subsequent revision)
2. Deflection
  1. Deflection across the gate width shall be limited to: L/360 or ¼” (6mm), whichever is less, at the maximum operating head.
3. Head Pressure
  1. Gate shall be designed for head pressure to the top of the gate disk.
4. Gate Size as shown on the contact drawings and/or gate schedule.
5. Surface Conditions
  1. All slide gates shall be flat and level.
  2. Warpage throughout the entire gate shall not produce a crown of more than 1/16” (1.6mm) in any direction.
  3. Gates having reinforcing members bolted or bonded to flat sheet stock will not be acceptable.
6. Sealed Area
  1. Slide gate shall seal on three sides – no top seal.

**D. PHYSICAL PROPERTIES**

1. Structural characteristics for a 1/8” glass mat laminate shall meet the following minimum physical properties:

Tensile strength	15,000 psi
Flexural Modulus	1,000,000 psi
Flexural Strength	20,000 psi
Compressive Strength	22,000 psi
Impact Strength	9.0 ft-lbs/in.
Water absorption	0.13% (in 24 hours)

2. Seals: Extruded Virgin EPDM Seals shall have the following physical characteristics:

Specific Gravity	1.25
Hardness	55 – 65 Shore A Durometer
Tensile Strength	1500 psi min.
Elongation	300%
Low temperature brittleness	- 40°C

**E. Submittals**

1. Submit the following for acceptance:
  1. Approval Drawings
    1. Showing all critical dimensions.
    2. Showing principal parts and materials.
  2. Spare parts list (when applicable).

**11. Stop Gate**

**A. Manufacturers:**

1. Plasti-fab, or Engineer Approved Equal

## B. Description: Fiberglass Stop Gate

1. Construction: Sandwich construction with FRP skins, Foam Core, & Internal Structural Steel
  1. Color: Grey
  2. Resin: McWhorter 712-3765
  3. Guide Frame: Pultruded FRP (Vinyl-Ester) with Neoprene seals
  4. Joints: Bonded with Plexus MA-300
  5. Hardware: Type 304 Stainless Steel
  6. Weight (Gate only): 14 lbs.
2. Stop Gate Design:
  1. Flanged FRP Embedded Guide Frame #101, Invert
3. Nominal Size:
  1. 18-inch wide Clear Opening
  2. 36-inch Opening Height
4. Leakage: Below that allowed by AWWA C-563
  1. Leakage:
    1. At the maximum operating head pressure the leakage of the gate shall not exceed 100cc per minute per foot of wetted perimeter.
    2. Stop gate shall have seals that wedge into the guide frame seat on closure.

## C. DESIGN CRITERIA

1. Composition of the slide gate laminate shall be in accordance with the recommendations shown in the Quality Assurance Report for Reinforced Thermostat Plastic (RTP) Corrosion Resistant Equipment prepared under the sponsorship the Society of the Plastics Industry, Inc. (SPI) and the Material Technology Institute of the Chemical Process Industries, Inc. (MTI) for "Hand Lay-up Laminates" and shall meet the specifications for Type 1, Grade 10 laminates shown in Appendix M-1 of said report.
  1. Visual inspection for defects shall be made without the aid of magnification and defects shall be classified as shown in Table 1 Level II of ANSI/ASTM D2563-0, approved 1977, (or any subsequent revision)
2. Deflection
  1. Deflection across the gate width shall be limited to:  $L/360$  or  $\frac{1}{4}$ " (6mm), whichever is less, at the maximum operating head.
3. Head Pressure
  1. Gate shall be designed for head pressure to the top of the gate disk.
4. Gate Size as shown on the contact drawings and/or gate schedule.
5. Surface Conditions
  1. All stop gates shall be flat and level.
  2. Warpage throughout the entire gate shall not produce a crown of more than  $\frac{1}{16}$ " (1.6mm) in any direction.
  3. Gates having reinforcing members bolted or bonded to flat sheet stock will not be acceptable.
6. Sealed Area

1. Stop gate shall seal on three sides – no top seal.

**D. PHYSICAL PROPERTIES**

1. Structural characteristics for a 1/8” glass mat laminate shall meet the following minimum physical properties:

Tensile strength	15,000 psi
Flexural Modulus	1,000,000 psi
Flexural Strength	20,000 psi
Compressive Strength	22,000 psi
Impact Strength	9.0 ft-lbs/in.
Water absorption	0.13% (in 24 hours)

2. Seals: Extruded Virgin EPDM Seals shall have the following physical characteristics:

Specific Gravity	1.25
Hardness	55 – 65 Shore A Durometer
Tensile Strength	1500 psi min.
Elongation	300%
Low temperature brittleness	- 40°C

**E. Submittals**

1. Submit the following for acceptance:
  1. Approval Drawings
    1. Showing all critical dimensions.
    2. Showing principal parts and materials.
    3. Spare parts list (when applicable).

**12. Transition Couplings**

**A. Manufacturers:**

1. Hymax by Krausz, USA, or Engineer Approved Equal

**B. Description:**

1. Construction: AWWA C-219
  1. End Rings: ASTM A283 Grade C Steel
  2. Center Rings: ASTM A283 Grade C Steel
  3. Gaskets: EPDM Compounded for Sewage
  4. Bridge: AISI 304 Stainless Steel
  5. Spherical Spacers: AISI 304 Stainless Steel
  6. Coating: 100% Fusion Bonded Epoxy, 14 MIL DFT
  7. Hardware: AISI Stainless Steel

**C. Performance Criteria**

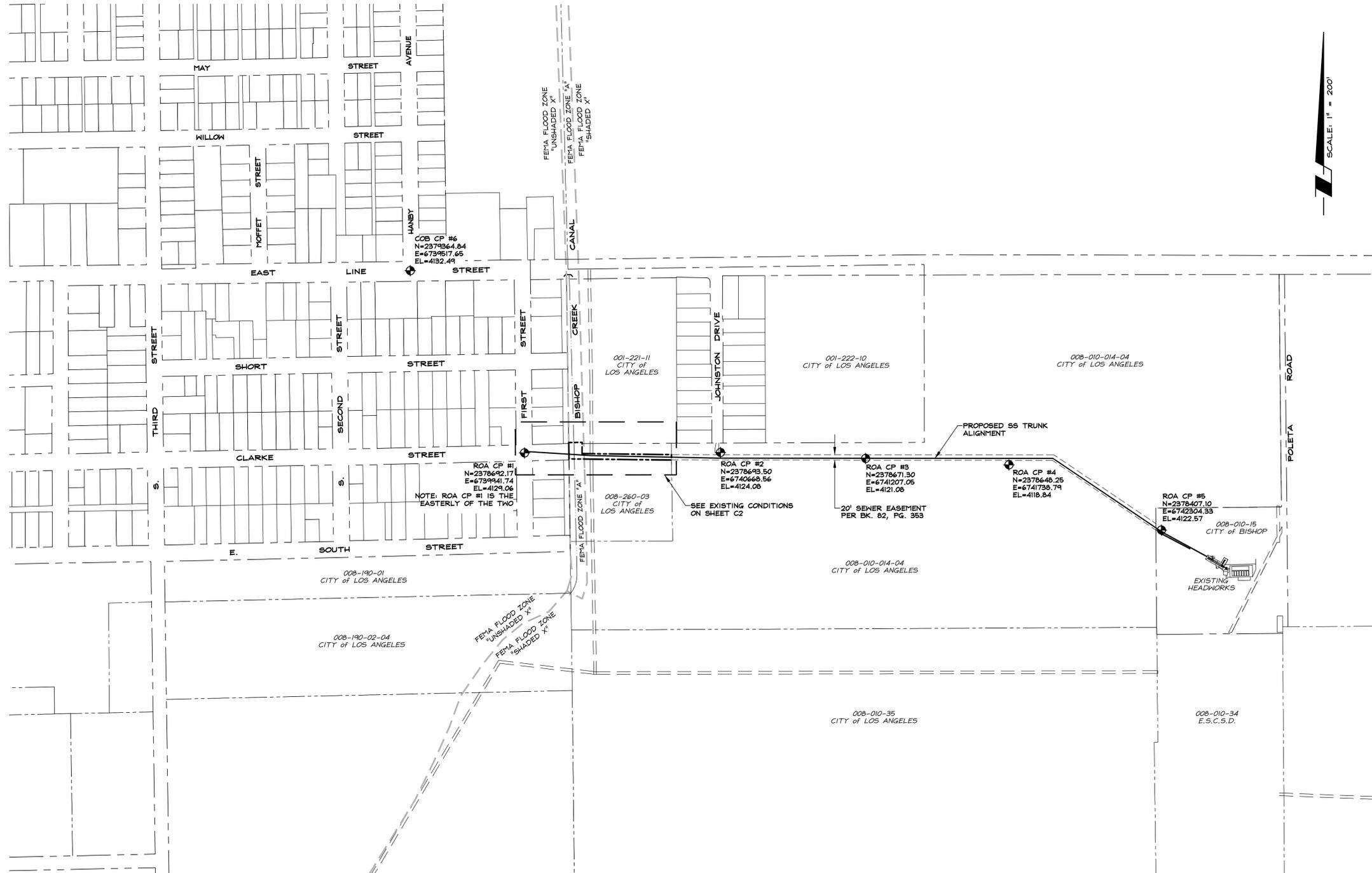
1. Working Temperature: EPDM, -20°F to 125°F
2. Dynamic Deflection: Up to 4° per side
3. Min. Pipe Insertion: 4-inches
4. Maximum Offset for Misaligned Pipes: 0.51-inches
5. Maximum Out of Roundness: 0.51-inches

6. Working Pressure: 1.5-16-inch: 260 PSI, 18-24-inch: 232 PSI
7. Rated Pressure: 1.5-16-inch: 390 PSI, 18-24-inch: 350 PSI
8. Vacuum Test: 12 PSI

# IMPROVEMENT PLANS

# SANITARY SEWER TRUNK REPLACEMENT

## CITY OF BISHOP, CALIFORNIA



**CITY OF BISHOP AREA MAP**  
SCALE: N.T.S.

SCALE: 1" = 200'

### PROJECT SUMMARY

TITLE: SANITARY SEWER TRUNK REPLACEMENT  
 OWNER/APPLICANT: DAVID GRAH, P.E., DIRECTOR OF PUBLIC WORKS  
 CITY OF BISHOP  
 377 WEST LINE STREET  
 BISHOP, CA 93514  
 (760) 873-8458  
 PROJECT AREA: 6.78± AC  
 FLOOD ZONE: ZONE 'A' & SHADED 'X' & UNSHADED 'X' PER FIRM MAP 06027C0352D DATED 8/16/2011

### SHEET INDEX

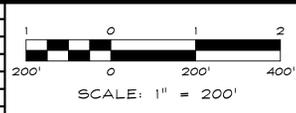
C1	COVER PAGE
C2	EXISTING CONDITIONS, LEGEND & ABBREVIATIONS
C3	PLAN & PROFILE STA. 1+00 TO 7+00
C4	PLAN & PROFILE STA. 7+00 TO 13+00
C5	PLAN & PROFILE STA. 13+00 TO 19+00
C6	PLAN & PROFILE STA. 19+00 TO 25+00
C7	PLAN & PROFILE STA. 25+00 TO 28+00
C8	COB-ESCSO DIVERSION MANHOLE DETAIL
C9	DIVERSION MANHOLE DETAIL
C10	BMP PLAN
C11	DETAILS 1 OF 3
C12	DETAILS 2 OF 3
C13	DETAILS 3 OF 3
C14	BYPASS PUMPING PLAN - SITE 1
C15	BYPASS PUMPING PLAN - SITE 2
C16	BISHOP CREEK CANAL CROSSING PLAN
C17	BISHOP CREEK CANAL CROSSING DETAILS

### APPROVAL SIGNATURE

DAVID GRAH, PUBLIC WORKS DEPARTMENT, P.E.

9/9/19  
DATE

NO.	DATE	REVISION BLOCK	BY



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www.roanderson.com

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**SANITARY SEWER TRUNK REPLACEMENT**  
CITY OF BISHOP

**COVER PAGE**



DRAWN: EYK	JOB: 1621-005
ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: 1"=200'	SHEET: C1
DATE: 09.04.2019	OF: 17 SHEETS

9/4/19

**SYMBOLS**

EXISTING	PROPOSED	
○	●	BOULDER
○	●	CENTERLINE MONUMENT
—	—	SIGN
U	U	VAULT
T	T	ELECTRICAL TRANSFORMER PAD
P	P	UTILITY PULL-BOX
☆	☆	STREET LIGHT
●	●	UTILITY POLE
⋈	⋈	UTILITY GUY ANCHOR
⊠	⊠	GAS METER
⊙	⊙	SANITARY SEWER MANHOLE
⊙	⊙	SEWER CLEANOUT
⊠	⊠	STORM DRAIN CATCH BASIN
⊙	⊙	STORM DRAIN DROP INLET
⊠	⊠	STORM DRAIN FLARED END SECTION
⊙	⊙	STORM DRAIN MANHOLE
⋈	⋈	FIRE HYDRANT
⊠	⊠	WATER METER
⊙	⊙	VALVE
●	●	FLUSH VALVE ASSEMBLY
○	○	TREE
△	△	GRADE BREAK
⊕	⊕	CONTROL POINT
⊕	⊕	TEST PIT
△	△	REVISION NUMBER

**STANDARD ABBREVIATIONS**

ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BM	BEST MANAGEMENT PRACTICE
CDM	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
CL	CENTERLINE
COMM	COMMERCIAL
COMP	COMPRESSION
CTS	COPPER TUBE SIZE
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FIP	FEMALE IRON PIPE
FL	FLANGE
IPT	IRON PIPE THREAD
MIP	MALE IRON PIPE
MJ	MECHANICAL JOINT
NS	NATIONAL STANDARD
PROP	PROPERTY
PSI	POUNDS PER SQUARE INCH
O.C.	ON CENTER
RES	RESIDENTIAL
RWQCB	REGIONAL WATER QUALITY CONTROL BOARD (LAHONTAN REGION)
SDR	STANDARD DIMENSION RATIO
USACE	UNITED STATES ARMY CORPS OF ENGINEERS

**SPECIFIC ABBREVIATIONS THIS PLAN SET**

AC	ASPHALT CONCRETE
BK	BOOK
CFS	CUBIC FEET PER SECOND
CMIP	CORRUGATED METAL PIPE
CONC	CONCRETE
CP	CONTROL POINT
CPLG	COUPLING
CONST	CONSTRUCT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
EA	EACH
E	EAST/EASTING
EL	ELEVATION
ESCSD	EASTERN SIERRA COMMUNITY SERVICE DISTRICT
EX	EXISTING
EP	EDGE OF PAVEMENT
FG	FINISH GRADE
FL	FLANGE
FL	FLOW LINE
FRP	FIBERGLASS REINFORCED PLASTIC
f/f	FOOT PER FOOT
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
IE	INVERT ELEVATION
LF	LINEAL FEET
LT	LEFT
MAX	MAXIMUM
MFG	MANUFACTURING
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH/NORTHING
NO	NORMALLY OPENED
NC	NORMALLY CLOSED
PE	PLAIN END
PG	PAGE
PSF	POUNDS PER SQUARE FOOT
PVC	POLYVINYL CHLORIDE
R	RADIUS
RFC	RESTRAINED FLANGED COUPLING ADAPTOR
REF	REFERENCE
REQ'D	REQUIRED
ROS	RECORD OF SURVEY
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
S	SLOPE
SCH	SCHEDULE
SD	STORM DRAIN
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
STA	STATION
TBD	TO BE DETERMINED
TP	TEST PIT
TYP	TYPICAL
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WITH

**HATCHING**

	PROPOSED ACCESS ROADWAY
	PROPOSED FILL SLOPES

**LINE TYPES**

EXISTING	PROPOSED	
---	---	CENTERLINE
---	---	MAJOR CONTOUR
---	---	MINOR CONTOUR
---	---	EASEMENT
---	---	EP AND/OR LIP OF GUTTER
---	---	FLOW LINE
x-x-x-x	x-x-x-x	FENCE
---	---	RIGHT-OF-WAY/PROPERTY LINE
---	---	ELECTRICAL CONDUIT LINE
O/H	O/H	OVERHEAD POWER LINE
---	---	SANITARY SEWER
---	---	WATER
---	---	LIMITS OF CONSTRUCTION ACTIVITY

NOTE: NOT ALL SYMBOLS, ABBREVIATIONS, LINETYPES & HATCHING, INCLUDING CALTRANS ABBREVIATIONS, LISTED MAY BE APPLICABLE TO THIS PROJECT.

**SURVEY CONTROL**

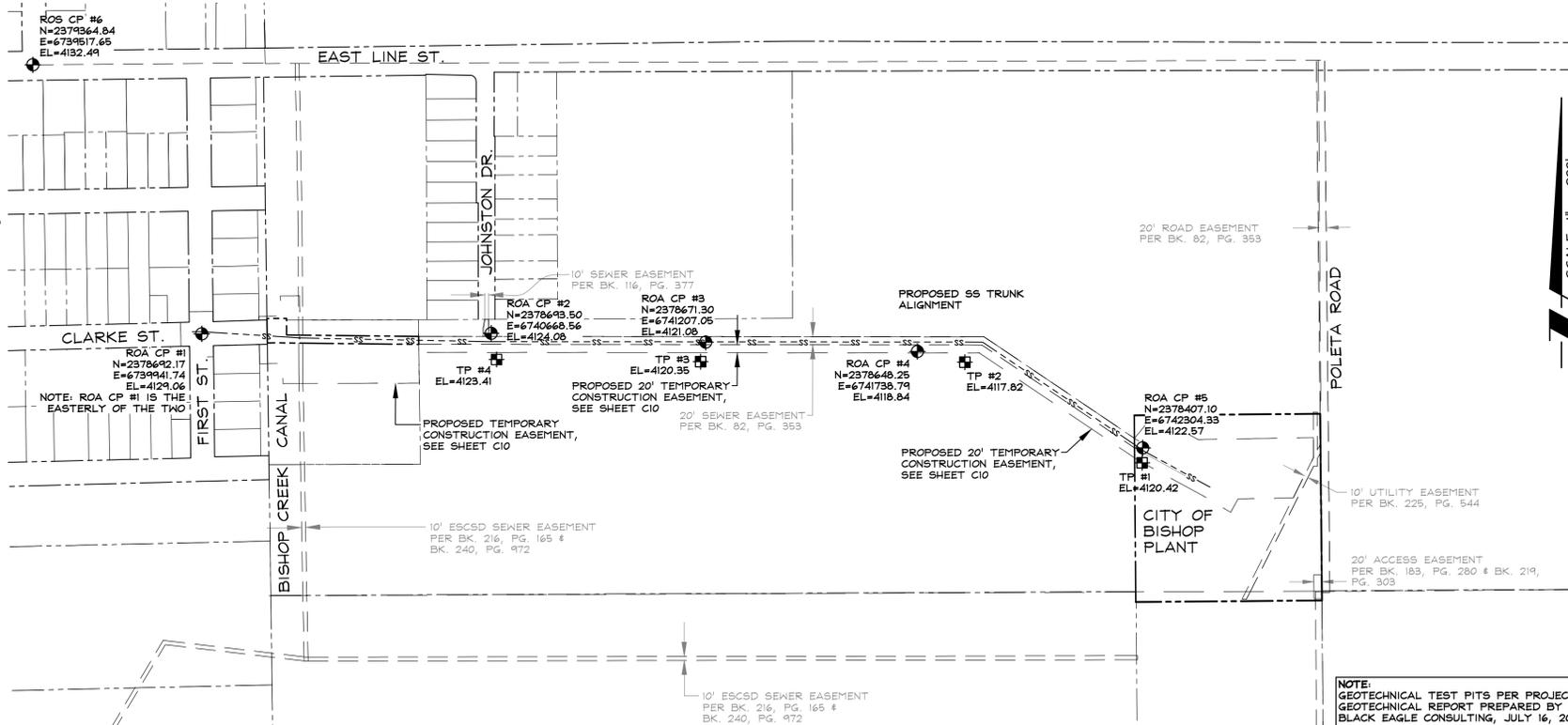
**VERTICAL DATUM**

VERTICAL DATUM AND ROA CONTROL POINTS, DATED 06/01/2012, FOR THIS PROJECT IS NAVD 88 BASED UPON CITY OF BISHOP CONTROL NETWORK RECORD OF SURVEY NUMBER 10-003 CONTROL POINT #6 (COB CP#6).

ELEVATION: 4132.49'

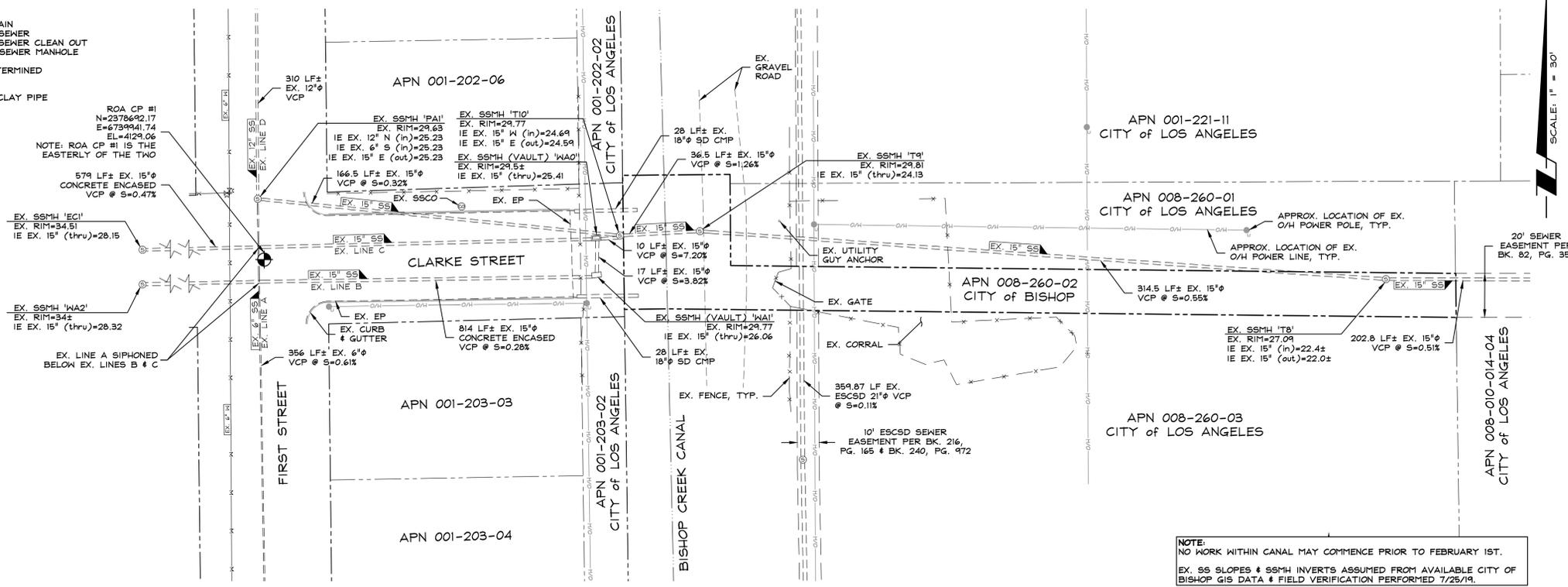
**HORIZONTAL DATUM**

BEARINGS SHOWN ON THIS SURVEY ARE REFERENCED TO GRID NORTH AS DEFINED BY THE CALIFORNIA COORDINATE SYSTEM 1983 (CCS83), ZONE 4, AS SHOWN ON CITY OF BISHOP CONTROL NETWORK RECORD OF SURVEY NUMBER 10-003.



**PROPERTY LINES, PERMANENT AND TEMPORARY EASEMENTS AND CONTROL POINTS**

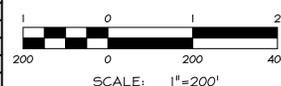
SCALE: 1" = 200'



**EXISTING CONDITIONS**

SCALE: 1" = 30'

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 RENO 4060 Double Diamond Pkwy, Unit 15 Reno, NV 89521 P 775.782.2322 F 775.782.7084

**SANITARY SEWER TRUNK REPLACEMENT**  
 CITY OF BISHOP

**EXISTING CONDITIONS, LEGEND & ABBREVIATIONS**

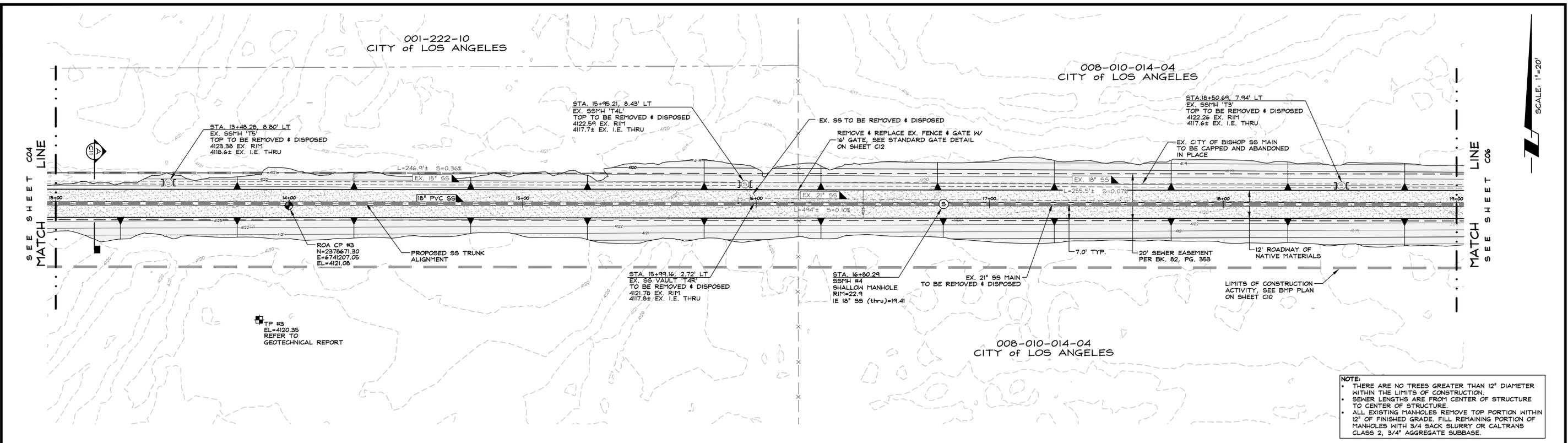
REGISTERED PROFESSIONAL ENGINEER  
 JONATHAN LESPERANCE  
 No. C84438  
 Civil  
 STATE OF CALIFORNIA

DRAWN: EYK	JOB: 1621-005
ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: SEE SCALE	SHEET: C2
DATE: 09.04.2019	OF 17 SHEETS

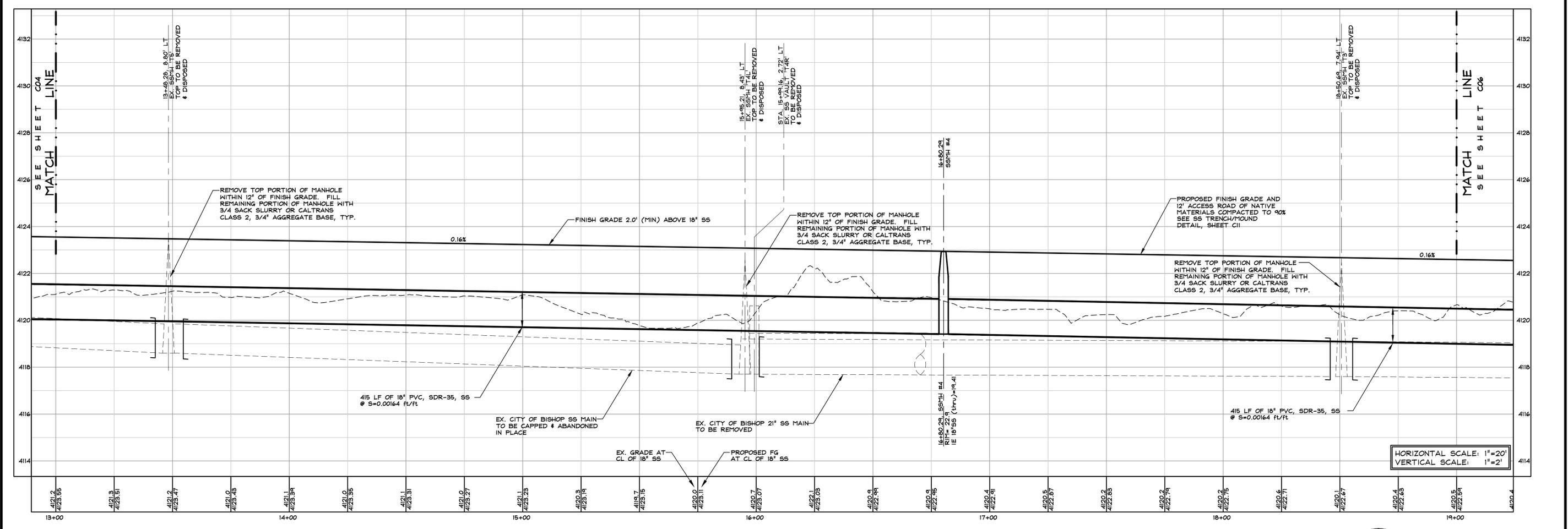
9/4/19



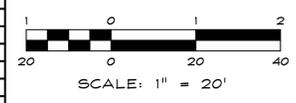




NOTE:  
 • THERE ARE NO TREES GREATER THAN 12" DIAMETER WITHIN THE LIMITS OF CONSTRUCTION.  
 • SEWER LENGTHS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.  
 • ALL EXISTING MANHOLES REMOVE TOP PORTION WITHIN 12" OF FINISHED GRADE. FILL REMAINING PORTION OF MANHOLES WITH 3/4 SACK SLURRY OR CALTRANS CLASS 2, 3/4" AGGREGATE SUBBASE.



NO.	DATE	REVISION	BY



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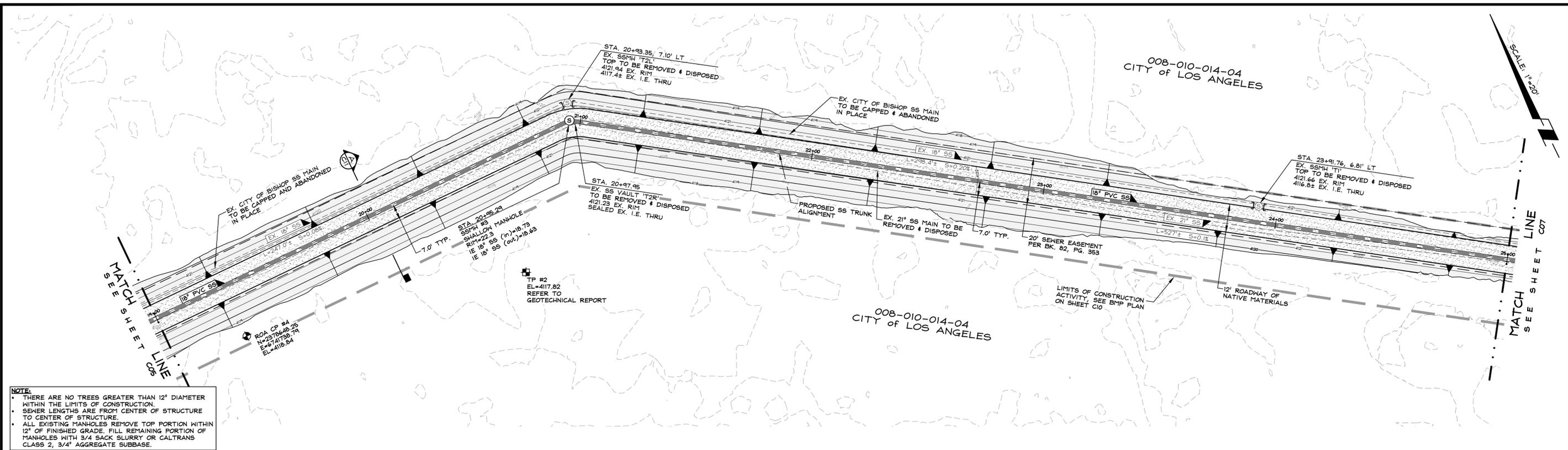
**SANITARY SEWER TRUNK REPLACEMENT**  
**CITY of BISHOP**

**PLAN and PROFILE**  
 Sta. 13+00 to 19+00

**REGISTERED PROFESSIONAL ENGINEER**  
 JONATHAN LESPERANCE  
 No. C84438  
 Civil  
 STATE OF CALIFORNIA

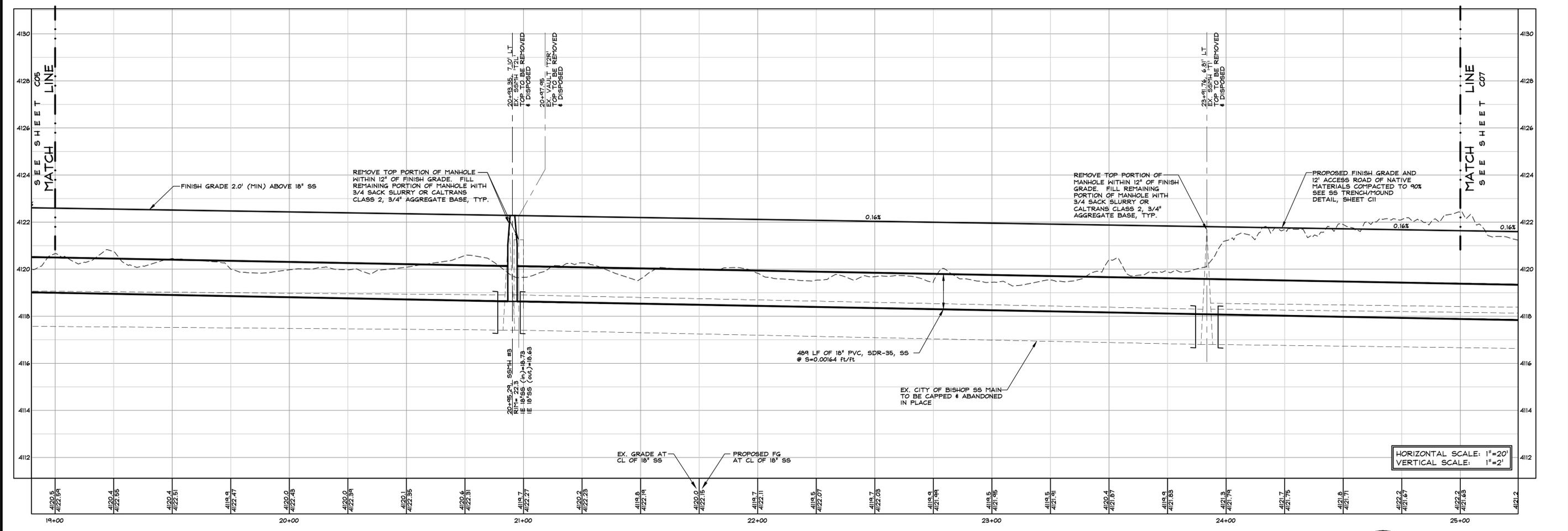
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ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: 1" = 20'	SHEET: C5
DATE: 09.04.2019	OF: 17 SHEETS

9/4/19

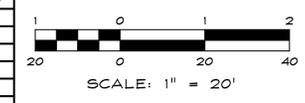


**NOTE:**

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- SEWER LENGTHS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- ALL EXISTING MANHOLES REMOVE TOP PORTION WITHIN 12" OF FINISHED GRADE. FILL REMAINING PORTION OF MANHOLES WITH 3/4 SACK SLURRY OR CALTRANS CLASS 2, 3/4" AGGREGATE SUBBASE.



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## SANITARY SEWER TRUNK REPLACEMENT

### CITY of BISHOP

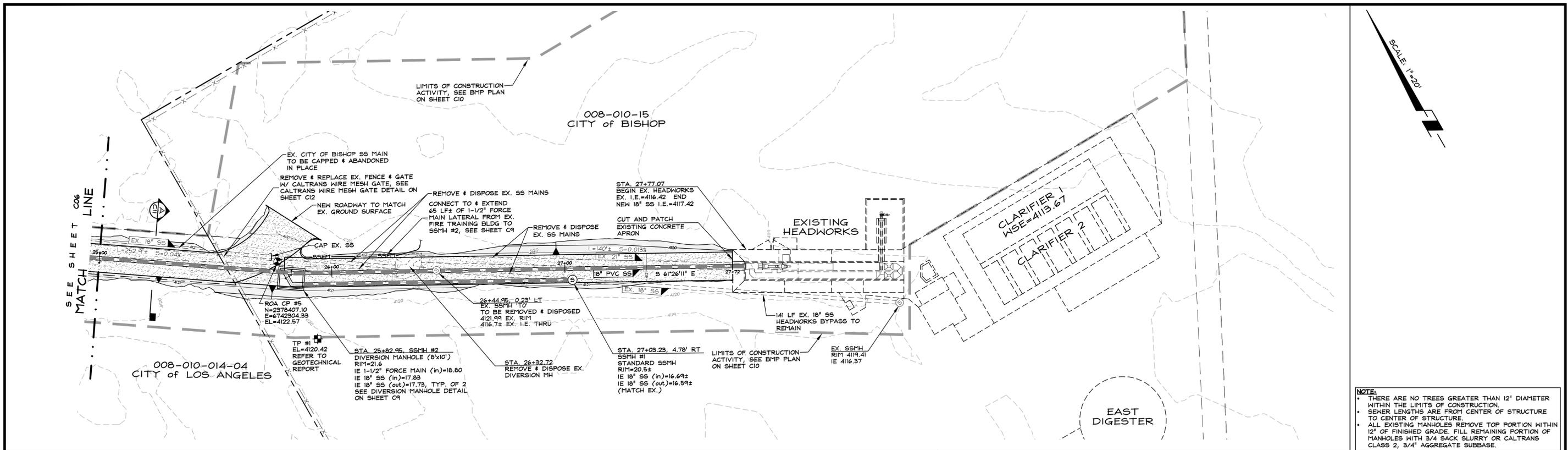
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Sta. 19+00 to 25+00

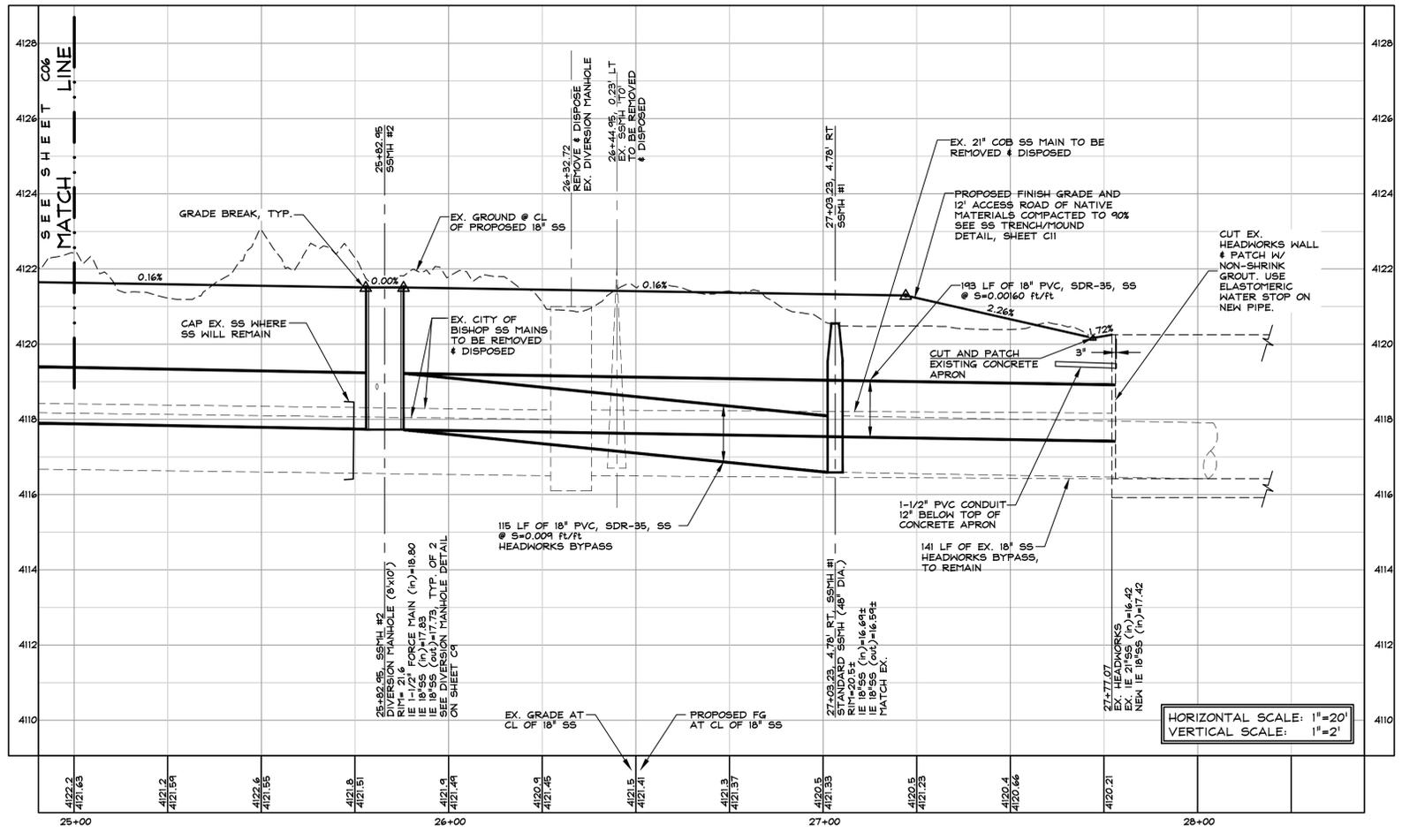


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ENGINEER: JEL	DRAWING: SEE PLOT STAMP
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DATE: 09.04.2019	OF: 17 SHEETS

9/4/19

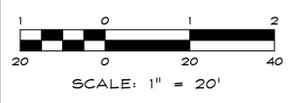


- NOTE:**
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  - SEWER LENGTHS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
  - ALL EXISTING MANHOLES REMOVE TOP PORTION WITHIN 12" OF FINISHED GRADE. FILL REMAINING PORTION OF MANHOLES WITH 3/4 SACK SLURRY OR CALTRANS CLASS 2, 3/4" AGGREGATE SUBBASE.



HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'

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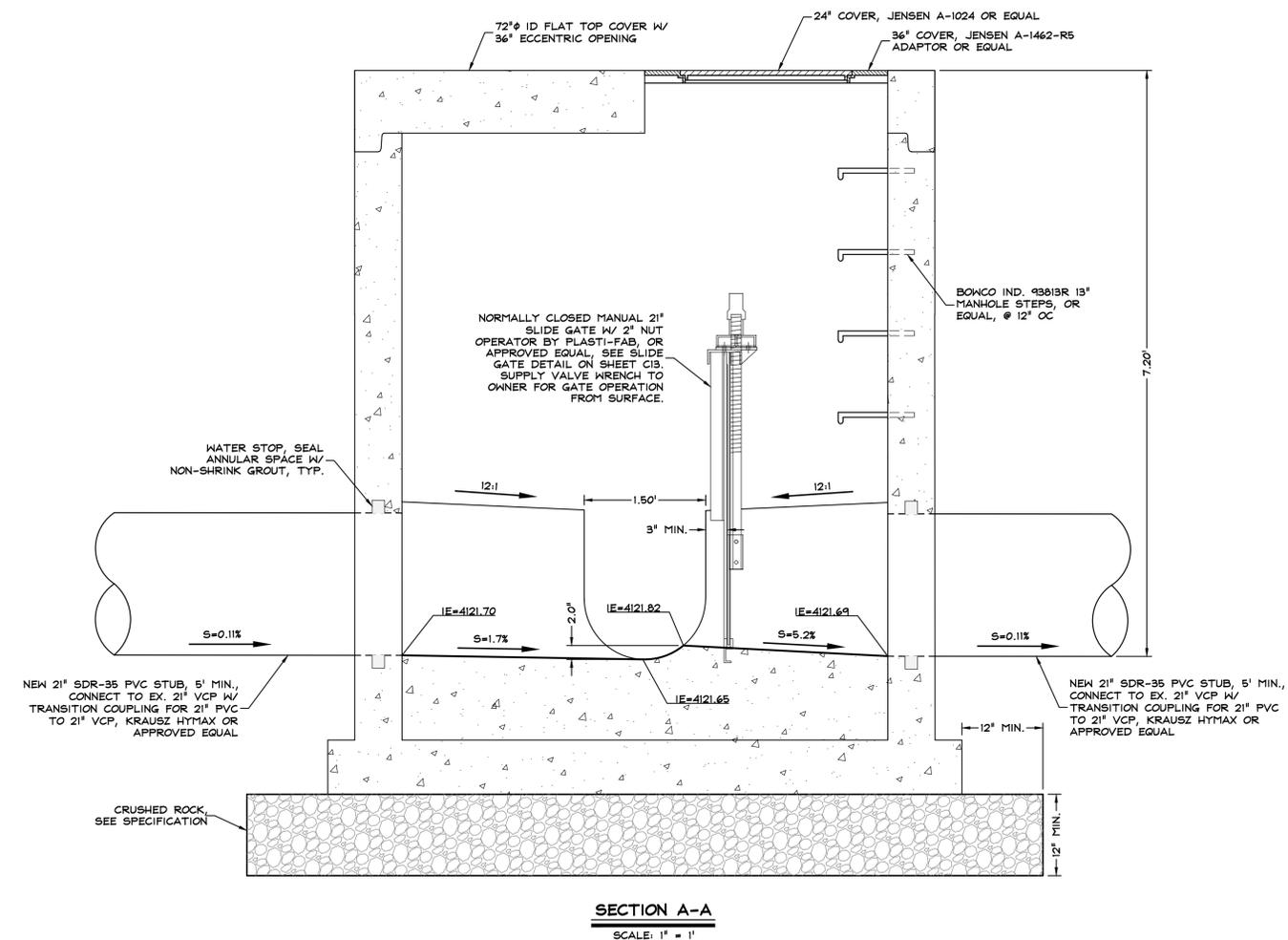
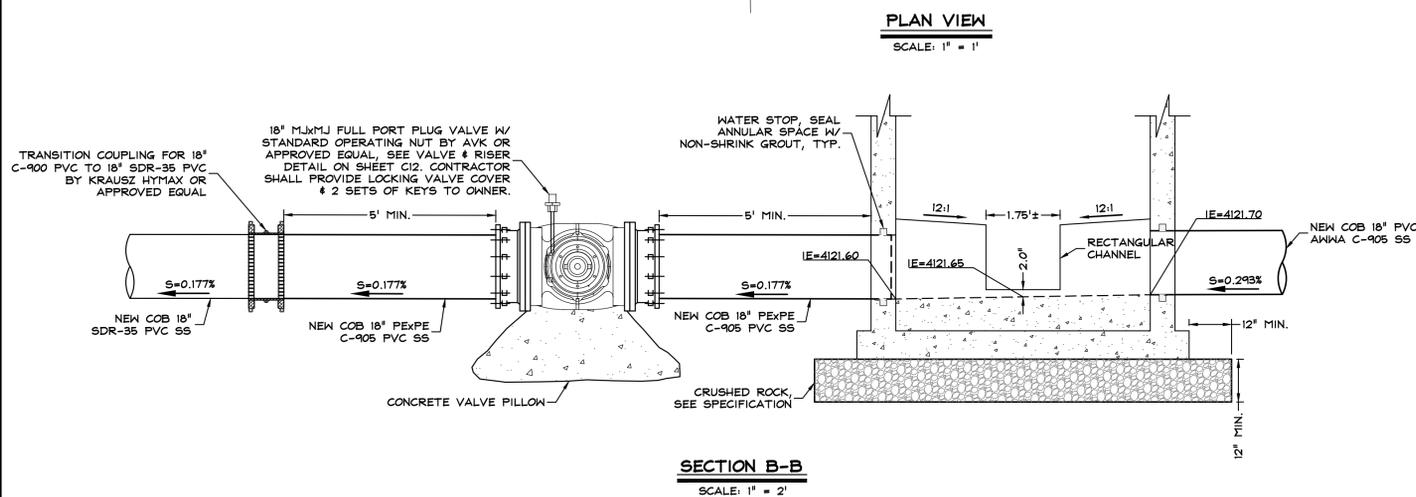
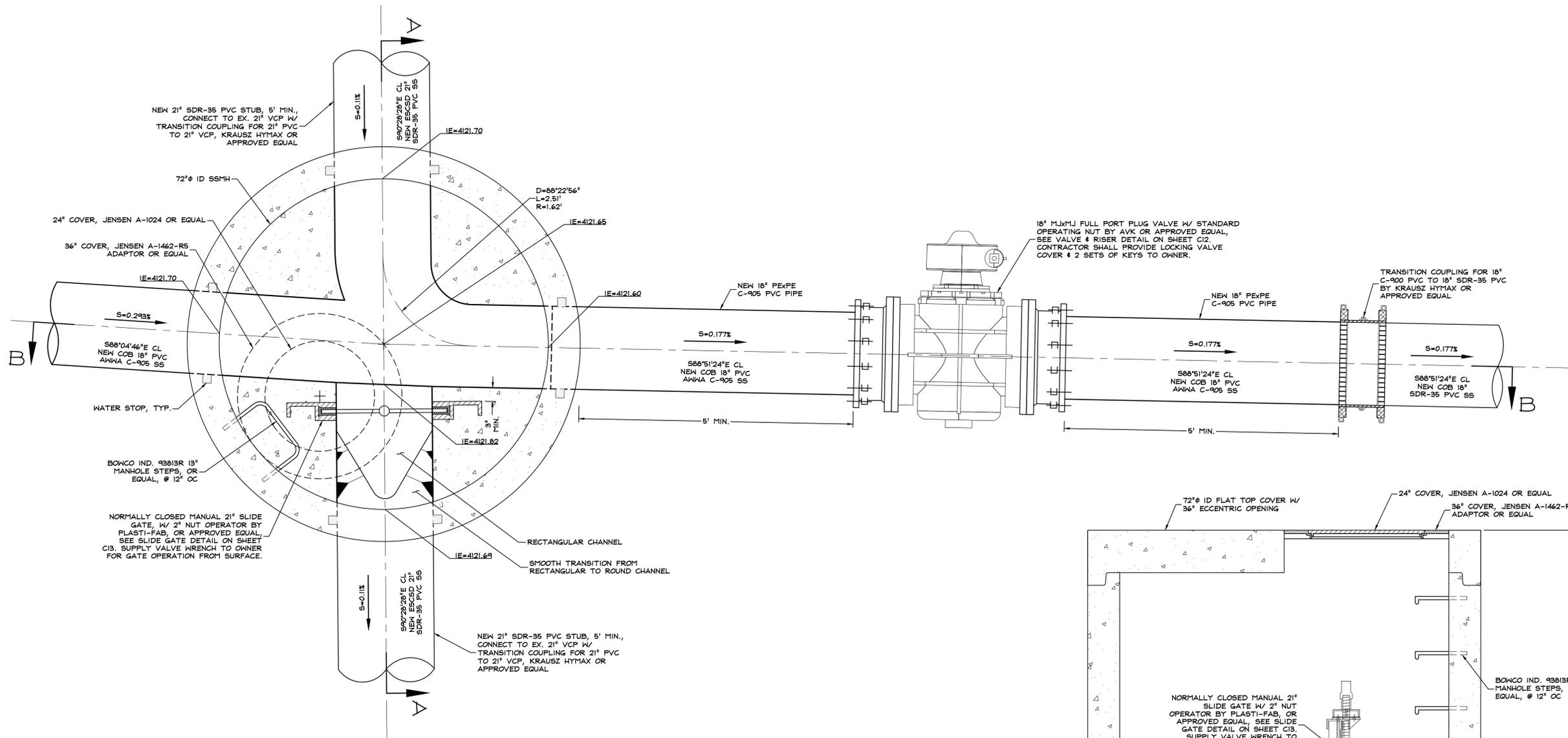
**SANITARY SEWER TRUNK REPLACEMENT**  
**CITY of BISHOP**

**PLAN and PROFILE**  
**Sta. 25+00 to 28+00**



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ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: AS NOTED	SHEET: C7
DATE: 09.04.2019	OF: 17 SHEETS

9/4/19



NOTE:  
SUBGRADE PREPARATION TO CONSIST OF CLEAN EXCAVATIONS EXPOSING FIRM & UNYIELDING SUBSTRATE. REMOVE ALL ORGANIC, DELETERIOUS OR OVERSIZE (>4") MATERIAL.

NO.	DATE	REVISION	BY



**R/O Anderson**  
R.O. ROANDERSON, CORP.  
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RENO 9260 Double Diamond Pkwy, Unit 15 Reno, NV 89521  
775-782-2322 775-782-7084

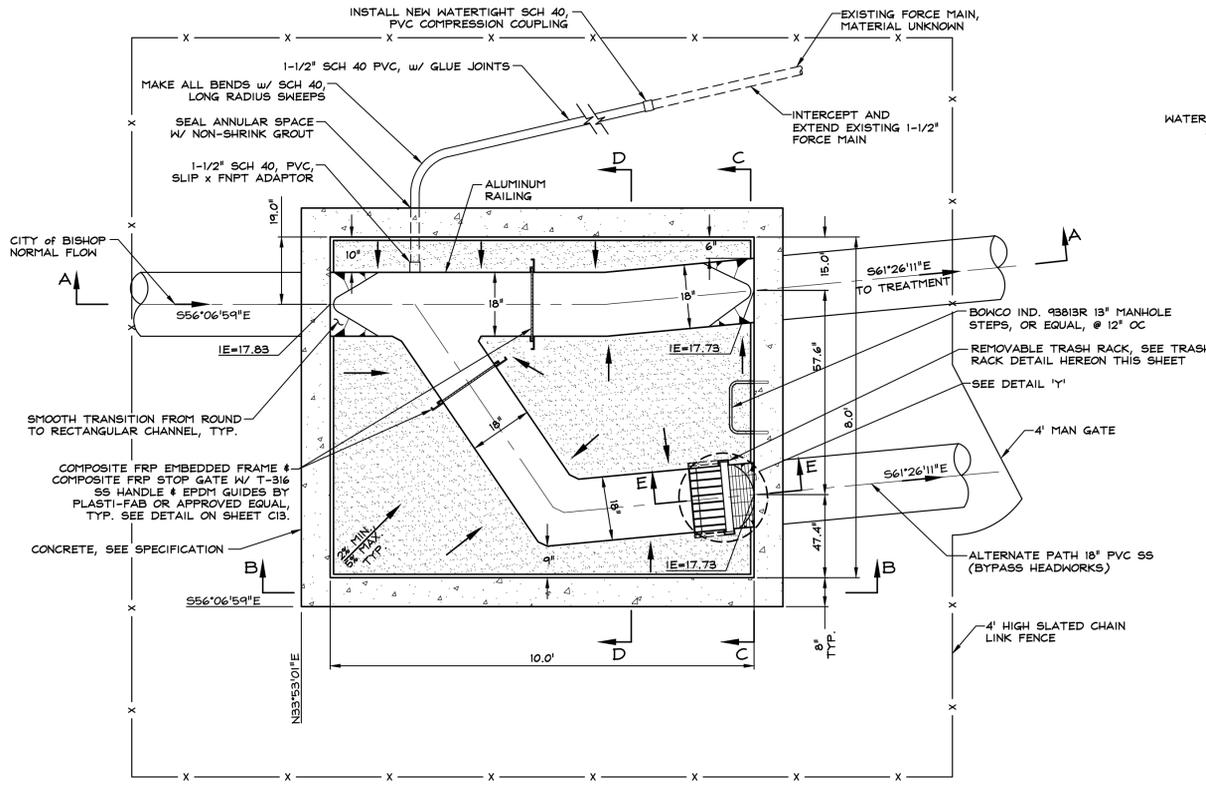
**SANITARY SEWER TRUNK REPLACEMENT**  
CITY OF BISHOP

**COB-ESCSO DIVERSION MANHOLE**  
DETAIL

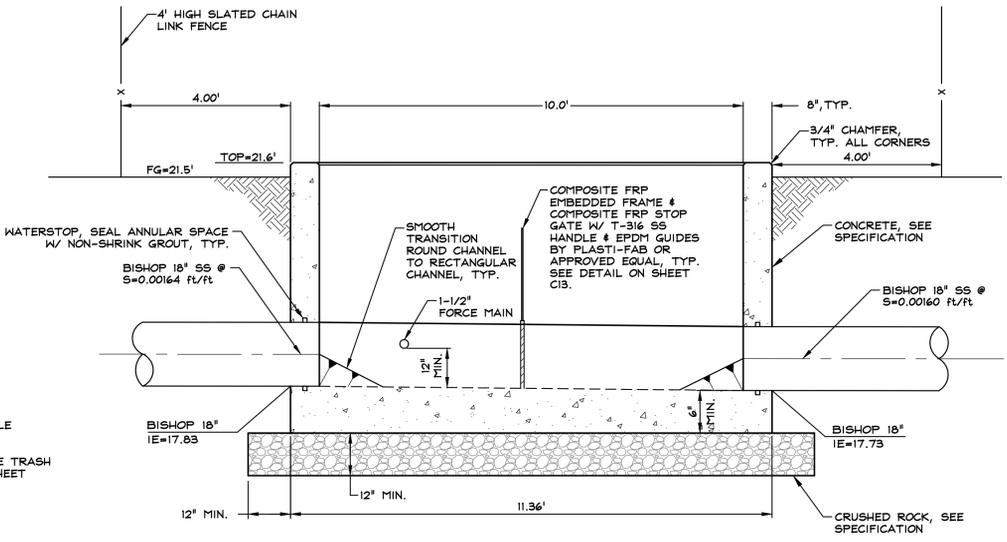
REGISTERED PROFESSIONAL ENGINEER  
JONATHAN LESPERANCE  
No. C84438  
Civil  
STATE OF CALIFORNIA

DRAWN: EYK	JOB: 1621-005
ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: 1" = 1'	SHEET: C8
DATE: 09.04.2019	OF: 17 SHEETS

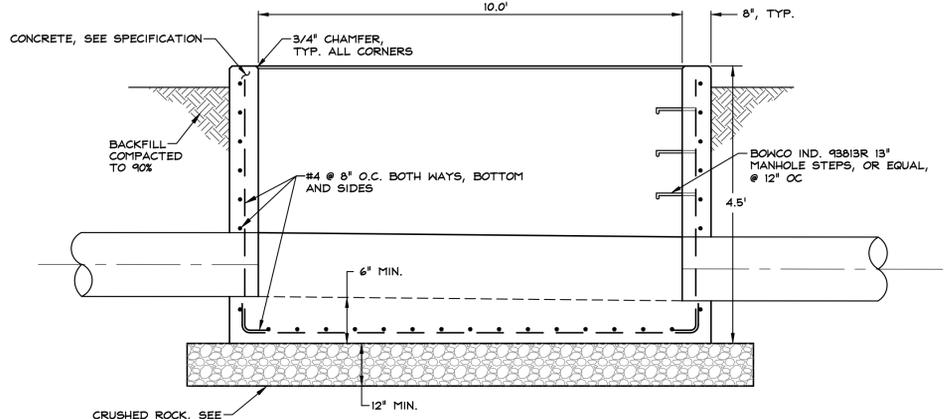
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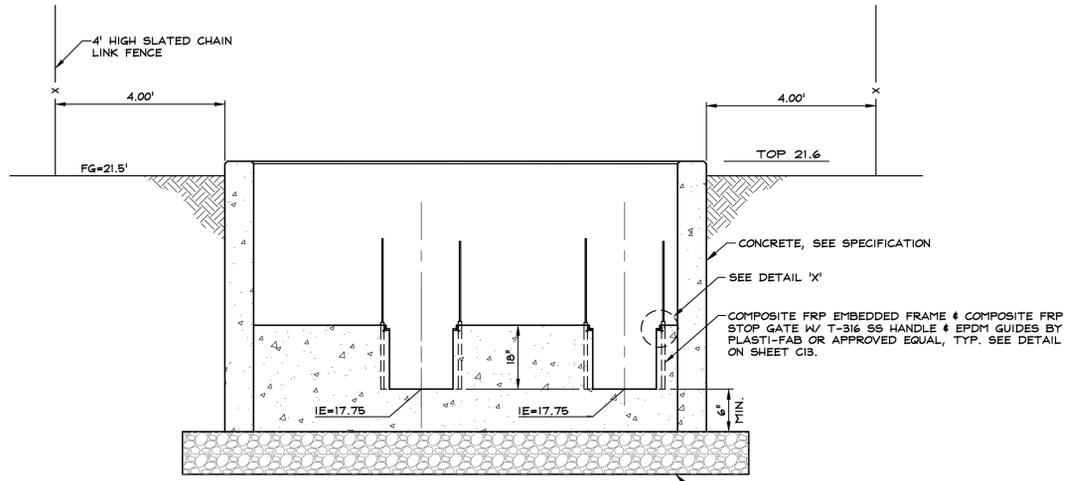
PLAN VIEW  
SCALE: 1"=2'



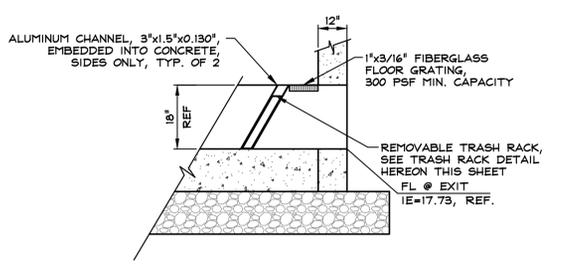
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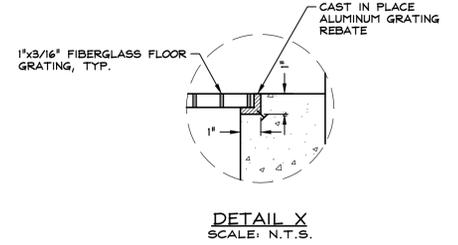
STRUCTURAL SECTION B-B  
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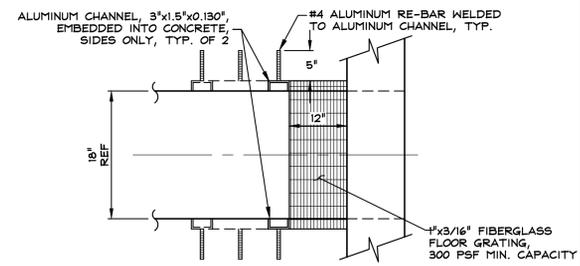
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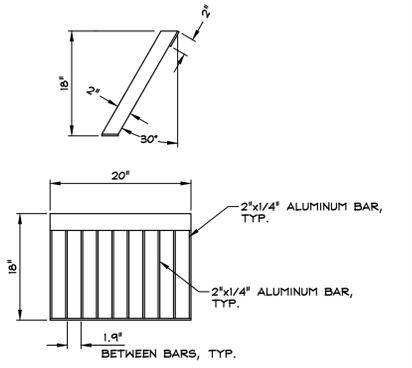
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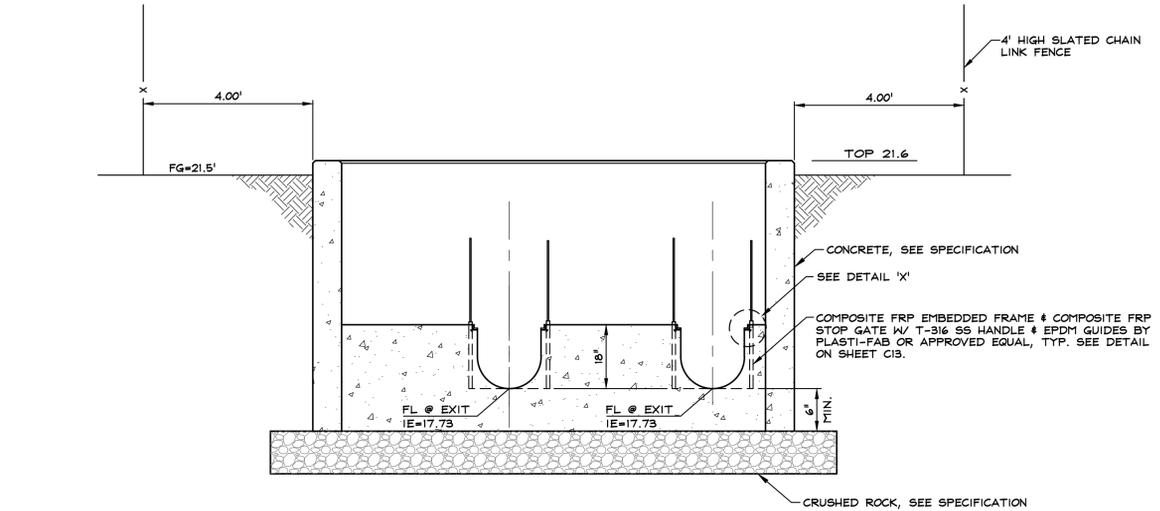
DETAIL X  
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DETAIL Y  
SCALE: N.T.S.



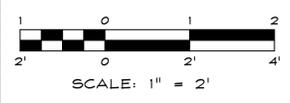
TRASH RACK DETAIL  
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SECTION C-C  
SCALE: 1"=2'

NOTE:  
SUBGRADE PREPARATION TO CONSIST OF CLEAN EXCAVATIONS  
EXPOSING FIRM & UNYIELDING SUBSTRATE. REMOVE ALL  
ORGANIC, DELETERIOUS OR OVERSIZE (>4") MATERIAL.

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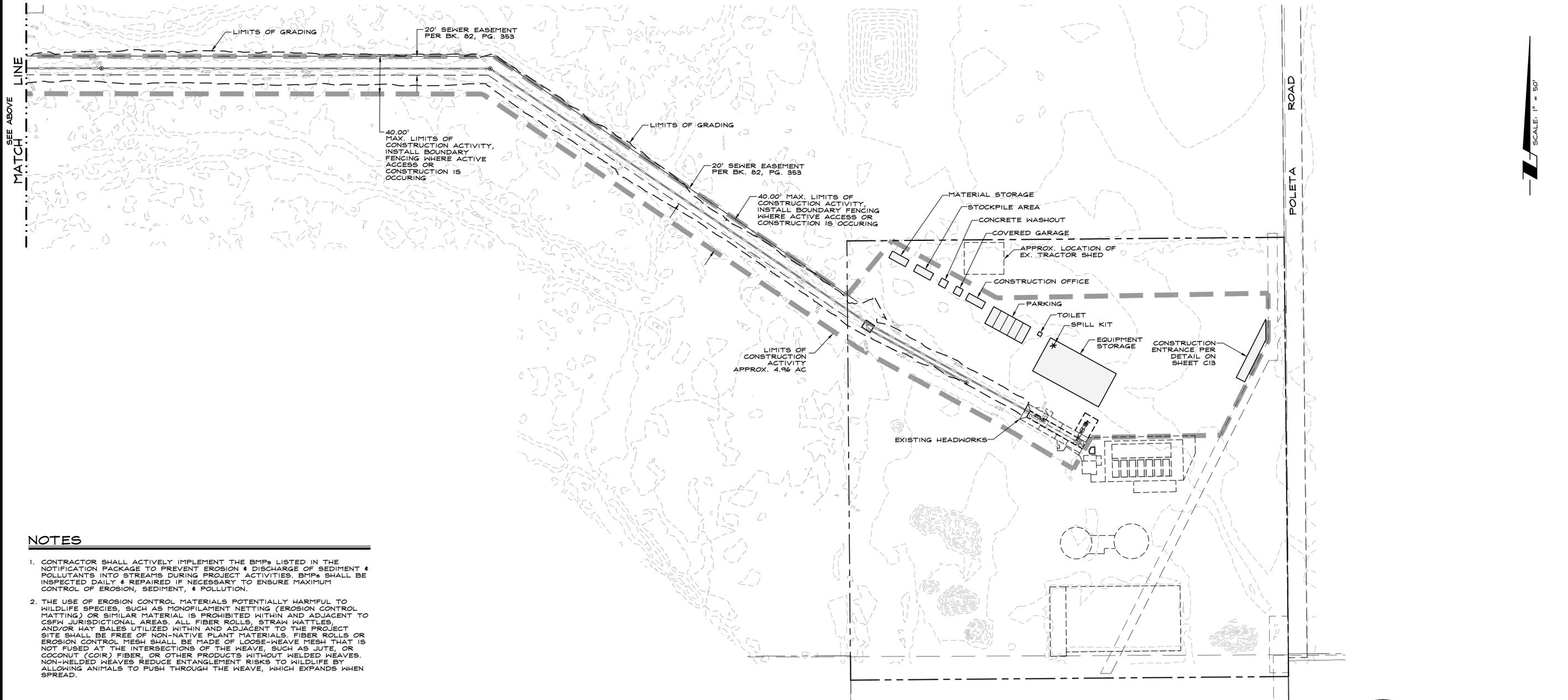
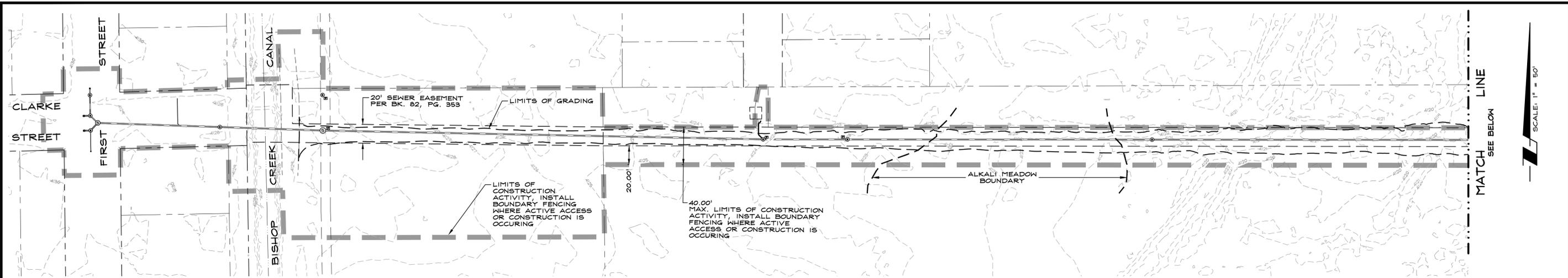
**SANITARY SEWER TRUNK REPLACEMENT**  
CITY OF BISHOP

**DIVERSION MANHOLE DETAIL**



DRAWN: EYK	JOB: 1621-005
ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: SEE SCALE	SHEET: C9
DATE: 09.04.2019	OF: 17 SHEETS

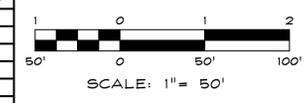
9/4/19



**NOTES**

1. CONTRACTOR SHALL ACTIVELY IMPLEMENT THE BMPs LISTED IN THE NOTIFICATION PACKAGE TO PREVENT EROSION & DISCHARGE OF SEDIMENT & POLLUTANTS INTO STREAMS DURING PROJECT ACTIVITIES. BMPs SHALL BE INSPECTED DAILY & REPAIRED IF NECESSARY TO ENSURE MAXIMUM CONTROL OF EROSION, SEDIMENT, & POLLUTION.
2. THE USE OF EROSION CONTROL MATERIALS POTENTIALLY HARMFUL TO WILDLIFE SPECIES, SUCH AS MONOFILAMENT NETTING (EROSION CONTROL MATTING) OR SIMILAR MATERIAL IS PROHIBITED WITHIN AND ADJACENT TO CSFW JURISDICTIONAL AREAS. ALL FIBER ROLLS, STRAW WATTLES, AND/OR HAY BALES UTILIZED WITHIN AND ADJACENT TO THE PROJECT SITE SHALL BE FREE OF NON-NATIVE PLANT MATERIALS. FIBER ROLLS OR EROSION CONTROL MESH SHALL BE MADE OF LOOSE-WEAVE MESH THAT IS NOT FUSED AT THE INTERSECTIONS OF THE WEAVE, SUCH AS JUTE, OR COCONUT (COIR) FIBER, OR OTHER PRODUCTS WITHOUT WELDED WEAVES. NON-WELDED WEAVES REDUCE ENTANGLEMENT RISKS TO WILDLIFE BY ALLOWING ANIMALS TO PUSH THROUGH THE WEAVE, WHICH EXPANDS WHEN SPREAD.

NO.	DATE	REVISION	BLOCK	BY



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 RENO 4060 Double Diamond Pkwy, Unit 15 Reno, NV 89523 P 775-782-2322 F 775-782-7084

**SANITARY SEWER TRUNK REPLACEMENT**  
**CITY OF BISHOP**

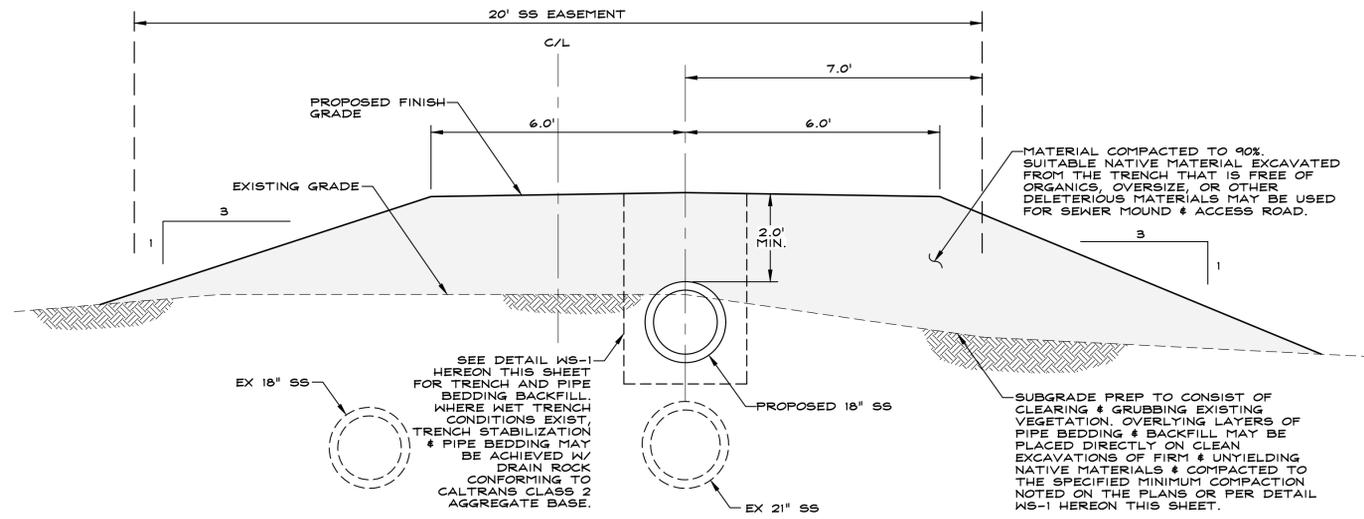
**BMP PLAN**



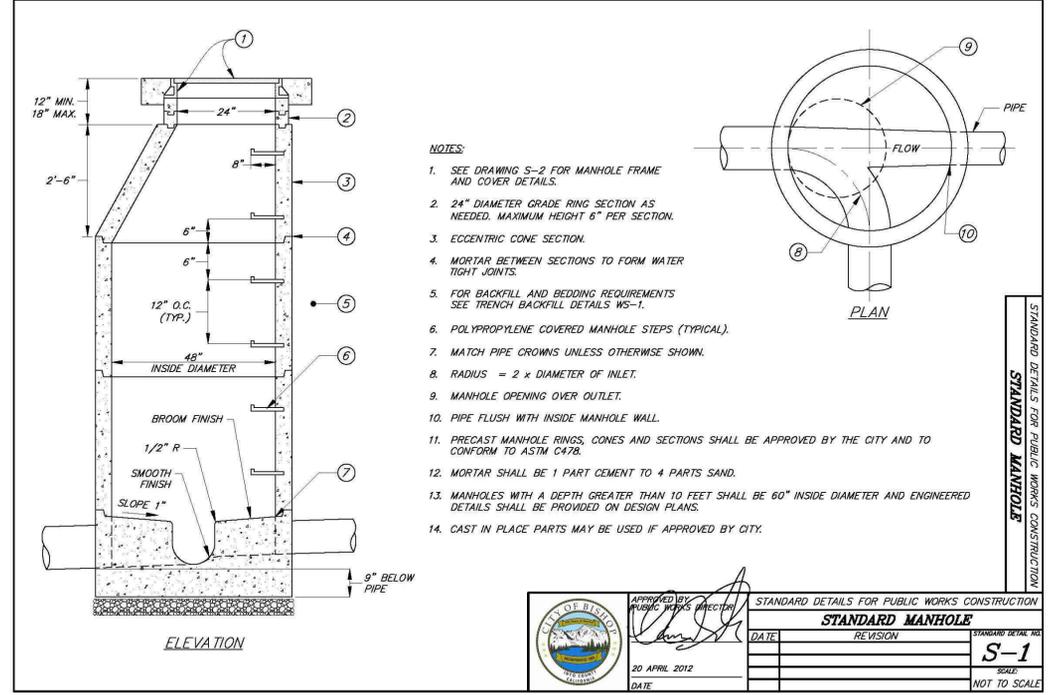
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ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: 1" = 50'	SHEET: C10
DATE: 09.04.2019	OF 17 SHEETS

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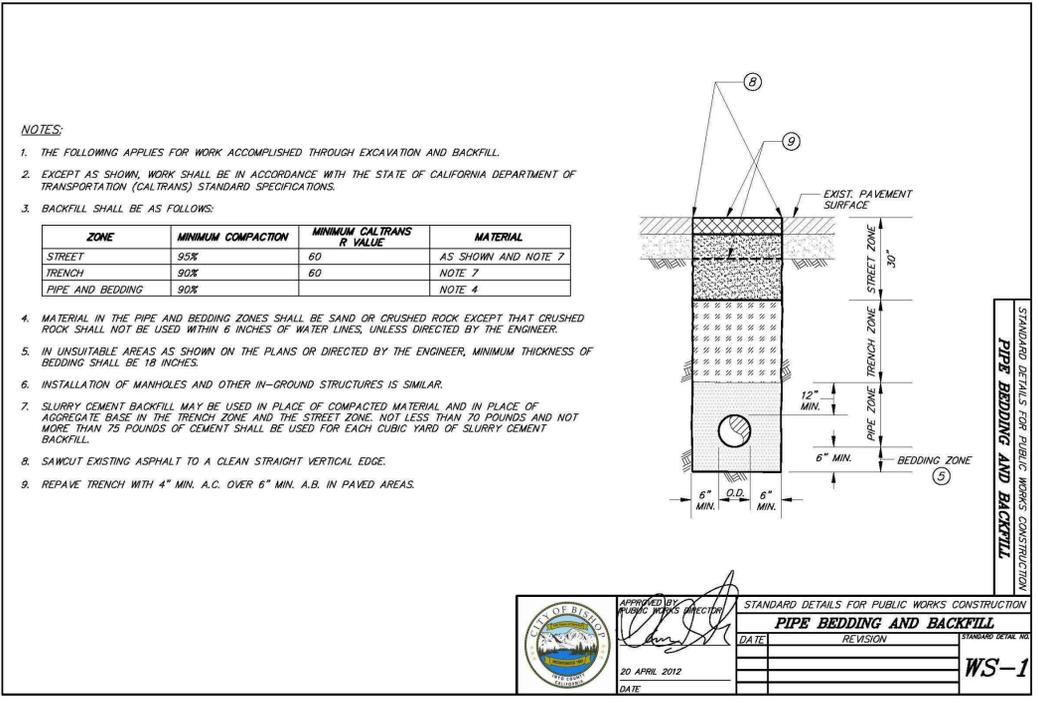
9/4/19



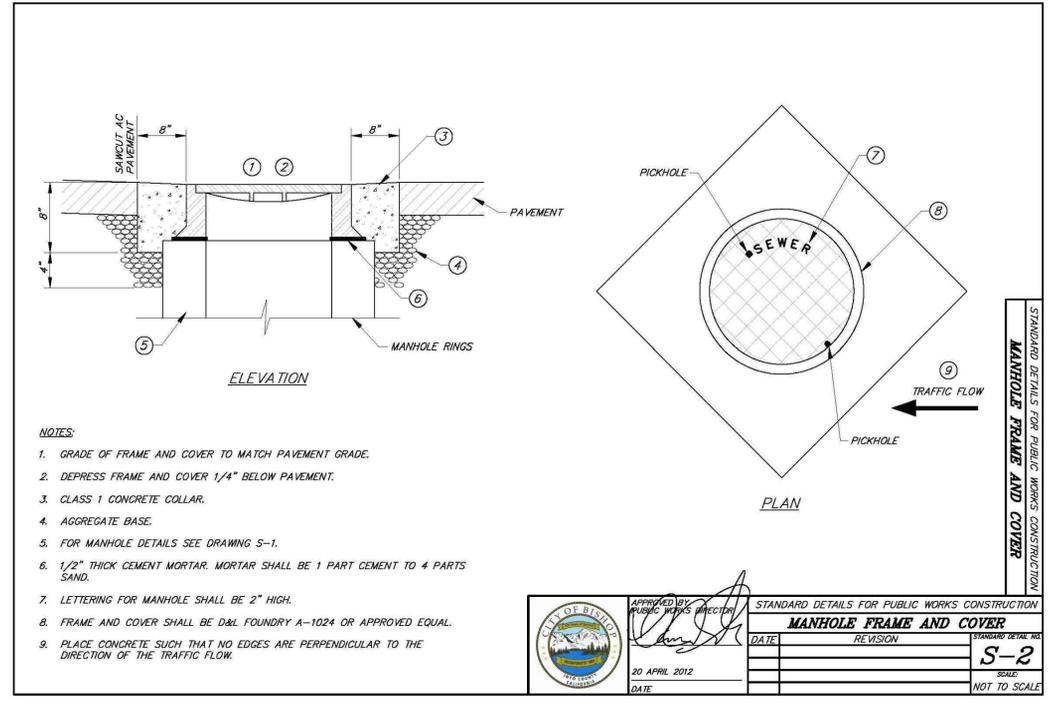
**S.S. TRENCH/MOUND DETAIL**  
NO SCALE



**STANDARD MANHOLE DETAIL**  
NO SCALE



**PIPE BEDDING AND BACKFILL**  
NO SCALE



**MANHOLE FRAME AND COVER**  
NO SCALE

Y:\client\_files\1621-005\CADD\Engineering\Improvement Plans\1621-005\_C12.dwg 04/20/19 10:51:52 AM EJC: kds

NO.	DATE	REVISION BLOCK	BY

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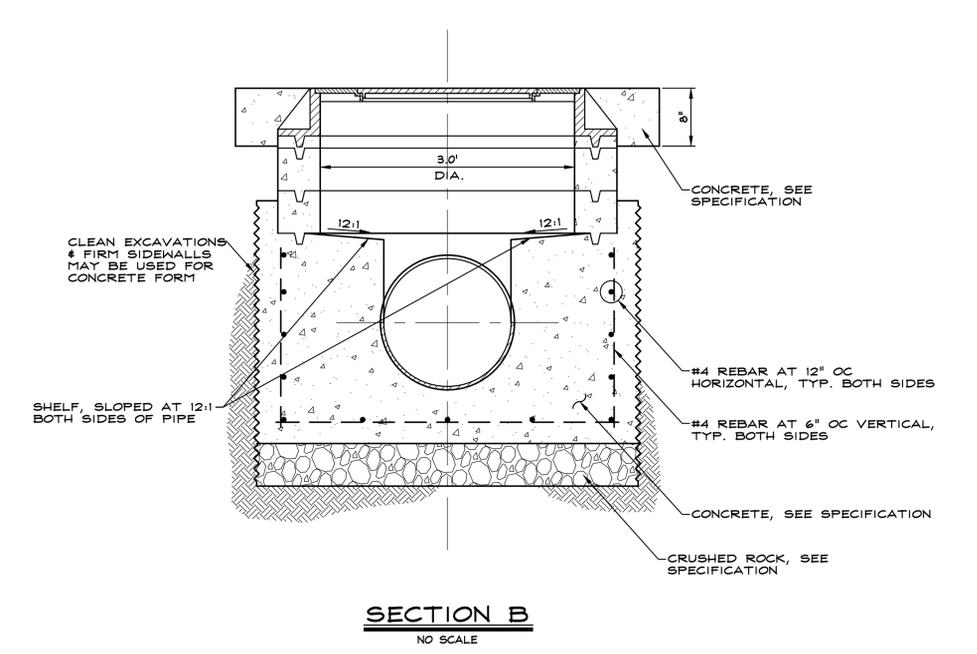
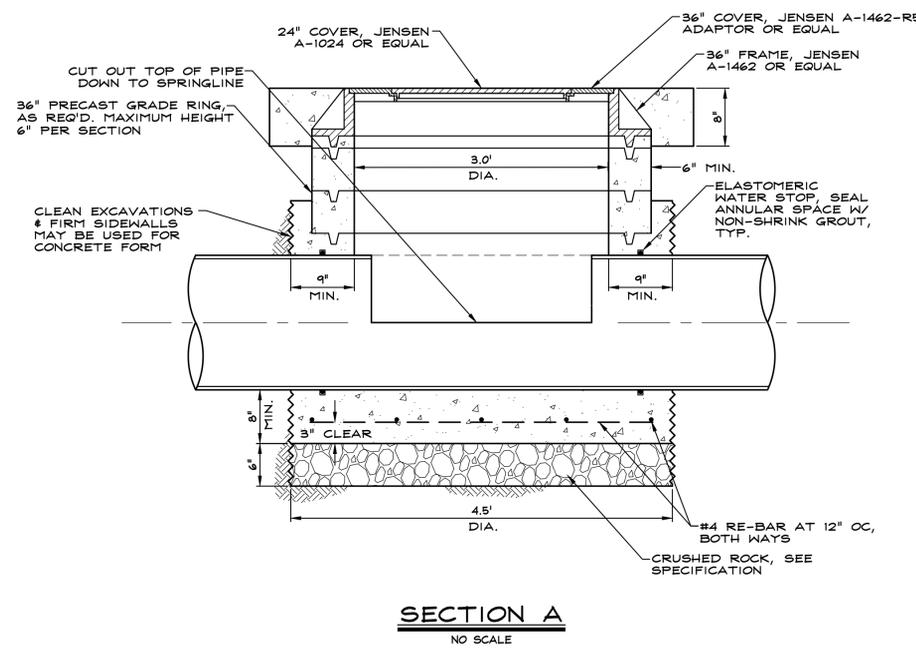
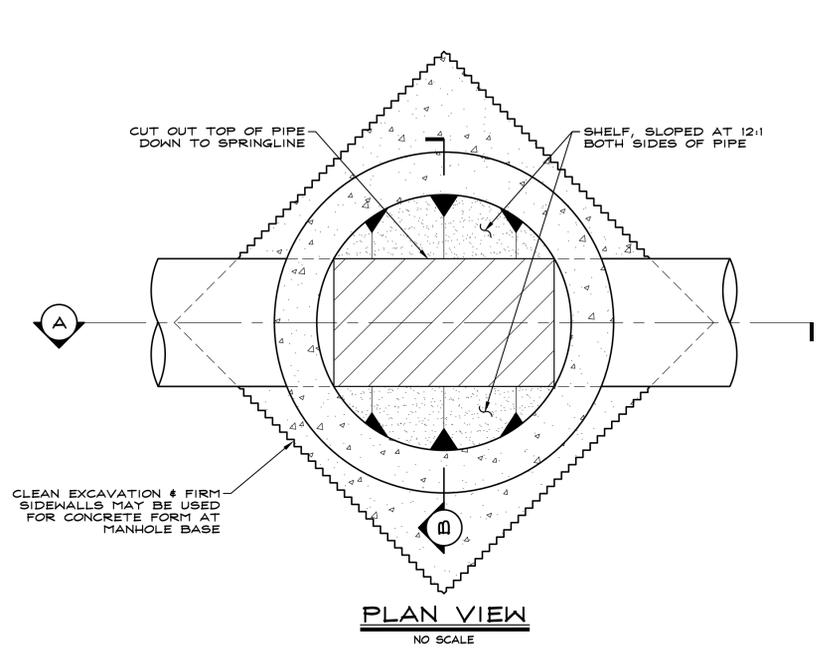
**SANITARY SEWER TRUNK REPLACEMENT**  
CITY OF BISHOP

**DETAILS**  
1 OF 3

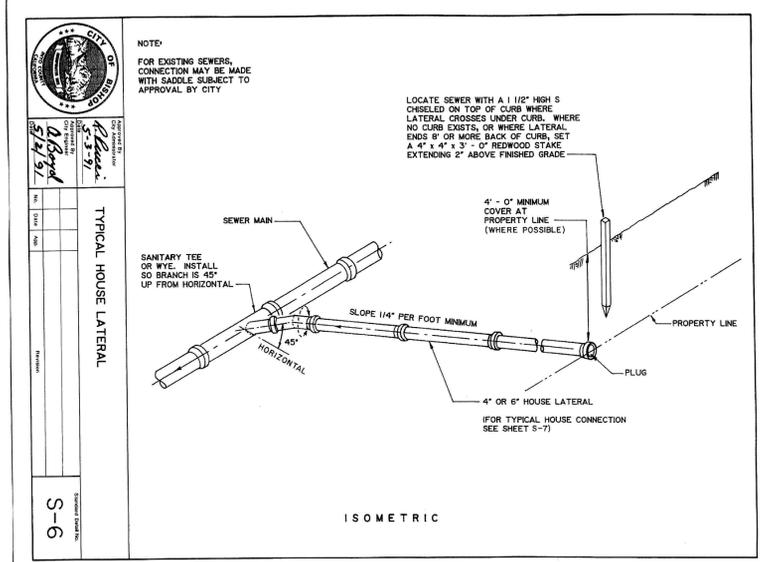
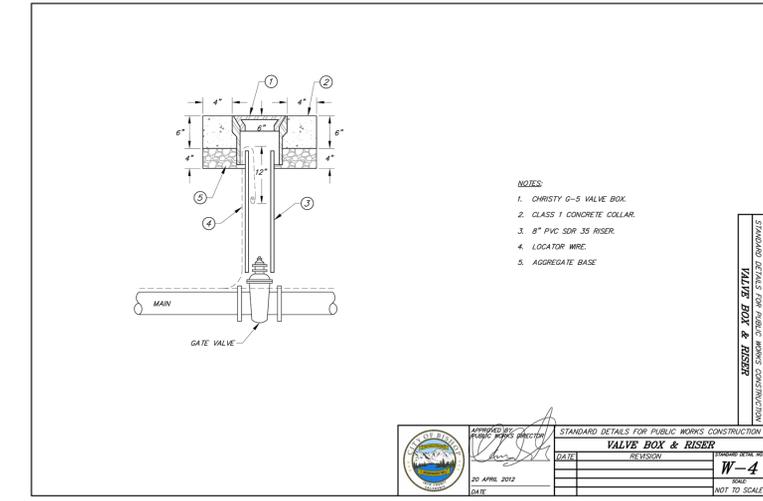
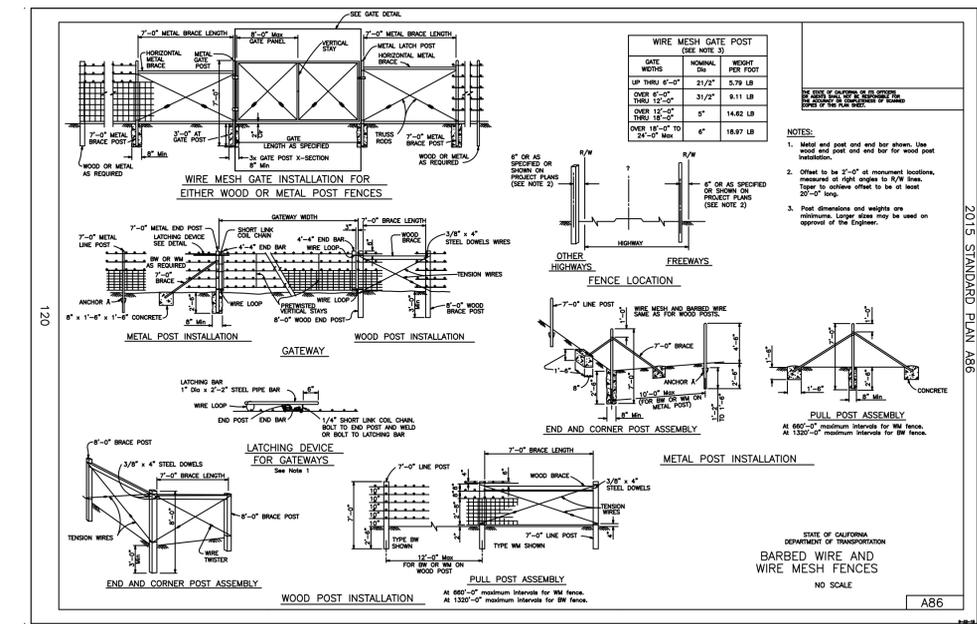
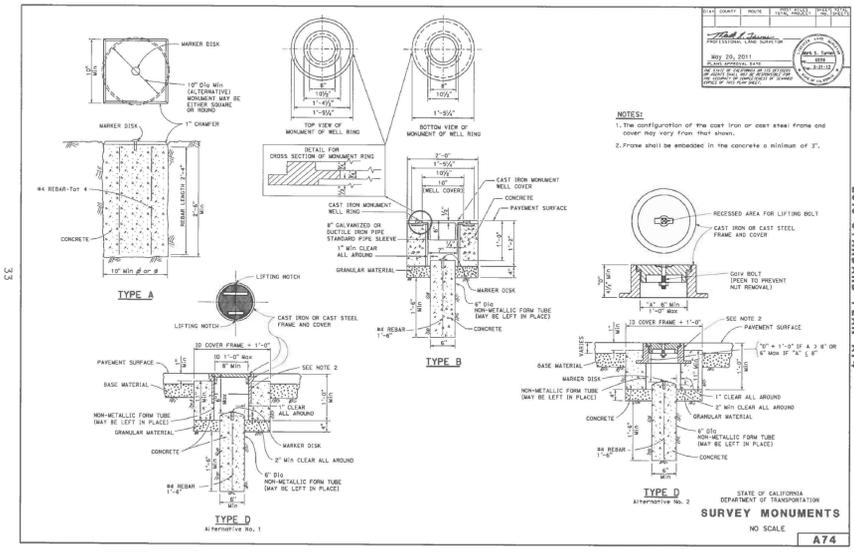
REGISTERED PROFESSIONAL ENGINEER  
JONATHAN LESPERANCE  
No. C84438  
Civil  
STATE OF CALIFORNIA

DRAWN: EYK	JOB: 1621-005
ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: NO SCALE	SHEET: C11
DATE: 09.04.2019	OF: 17 SHEETS

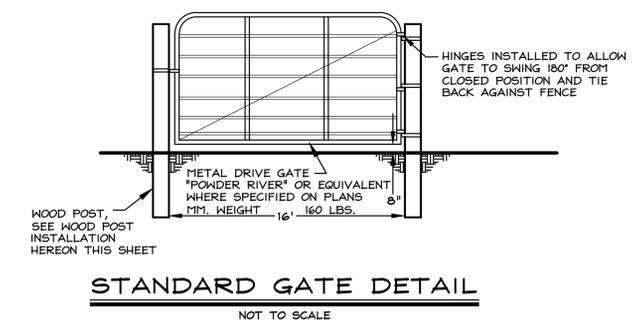
9/4/19



**SHALLOW MANHOLE DETAIL - STRAIGHT THROUGH**  
NO SCALE



**CALTRANS WIRE MESH GATE DETAIL**  
NOT TO SCALE

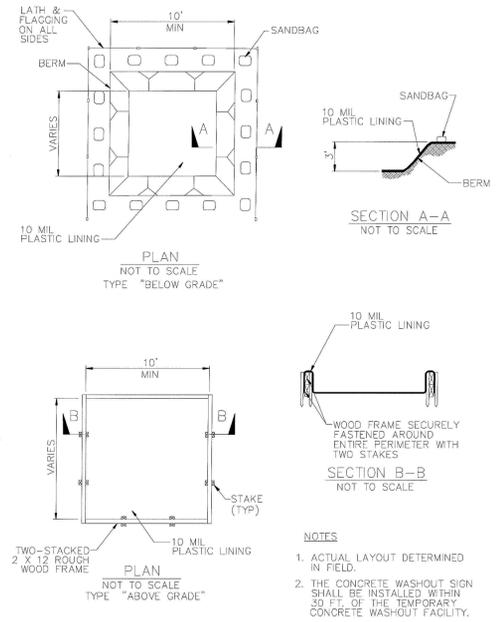


NO.	DATE	REVISION BLOCK	BY

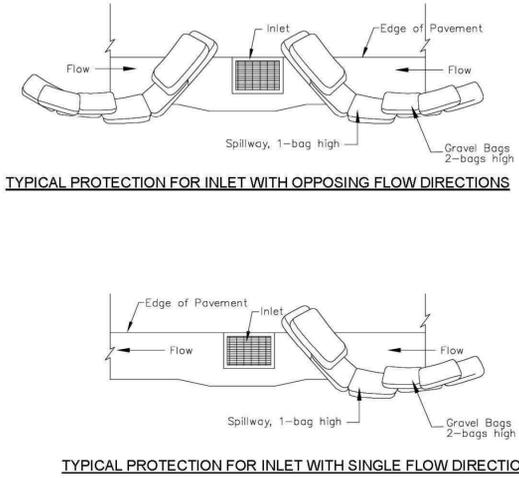
  

<b>R/O Anderson</b> HINDEN 1625 Esmeralda Ave P.O. Box 22291 Minden, NV 89423 P 775-782-2322 F 775-782-7084	<b>Sanitary Sewer Trunk Replacement</b> CITY OF BISHOP	<b>DETAILS</b> 2 OF 3	DRAWN: EYK ENGINEER: JEL SCALE: NO SCALE DATE: 09.04.2019 OF 17 SHEETS

**Concrete Waste Management WM-8**

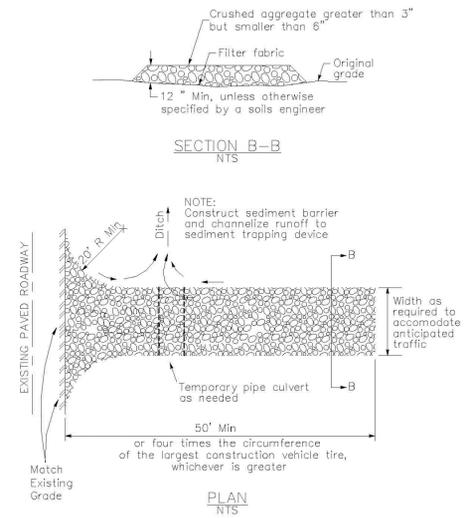


**Storm Drain Inlet Protection SC-10**

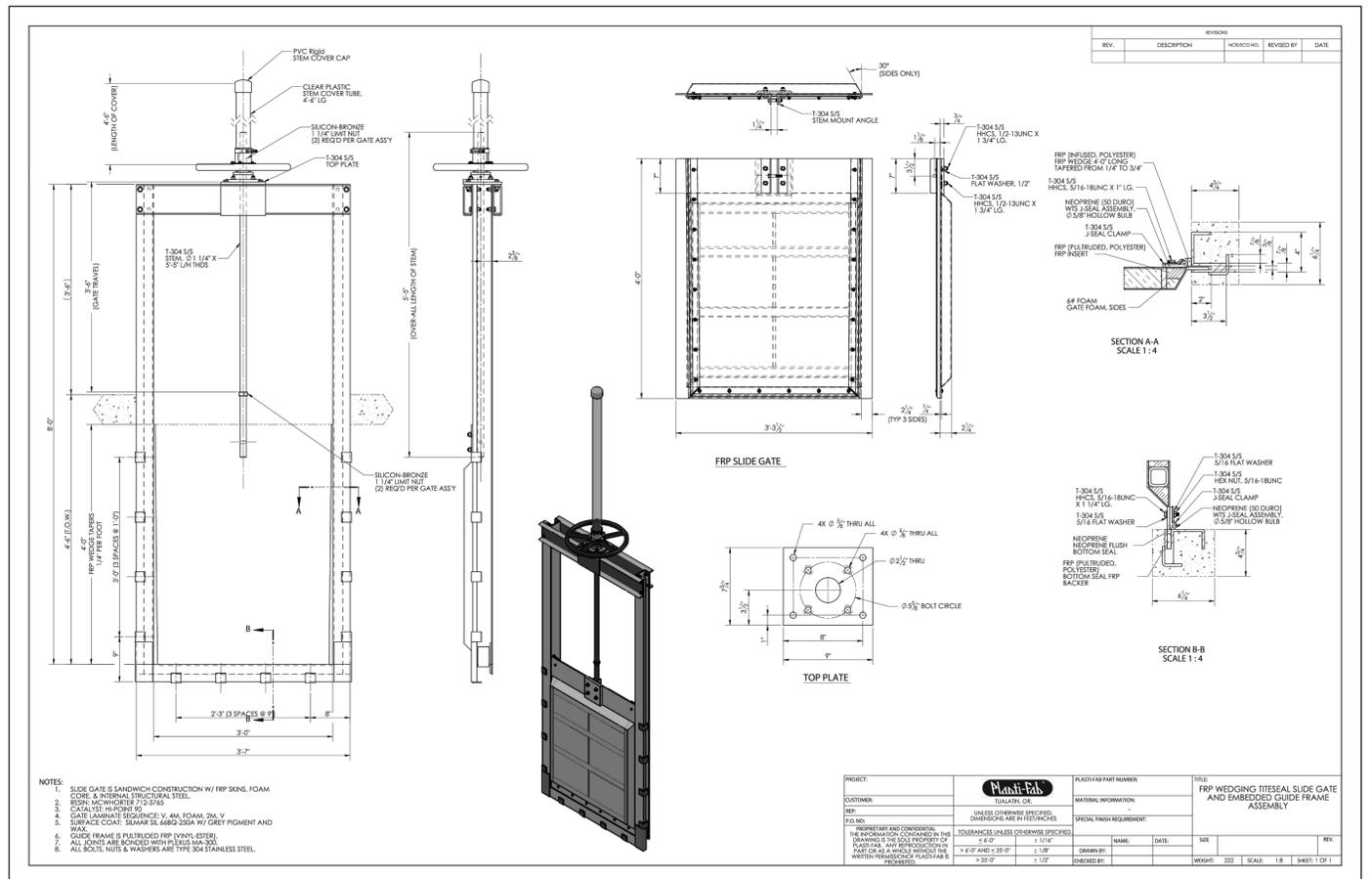
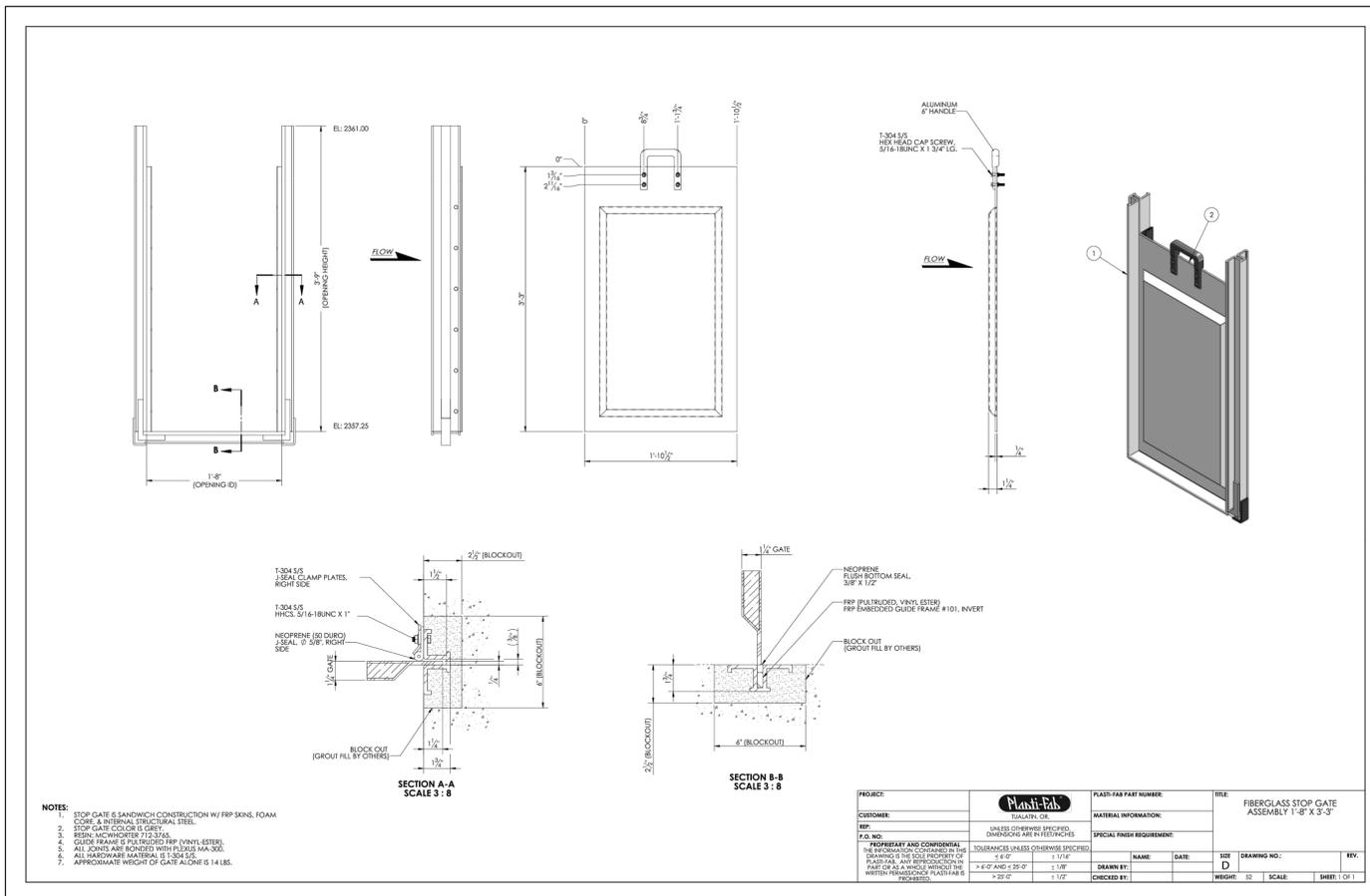
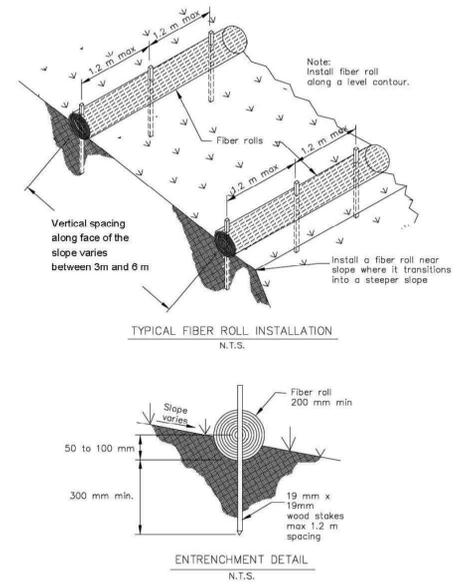


- NOTES:**
1. Intended for short-term use.
  2. Use to inhibit non-storm water flow.
  3. Allow for proper maintenance and cleanup.
  4. Bags must be removed after adjacent operation is completed.
  5. Not applicable in areas with high silts and clays without filter fabric.

**Stabilized Construction Entrance/Exit TC-1**



**Fiber Rolls SC-5**



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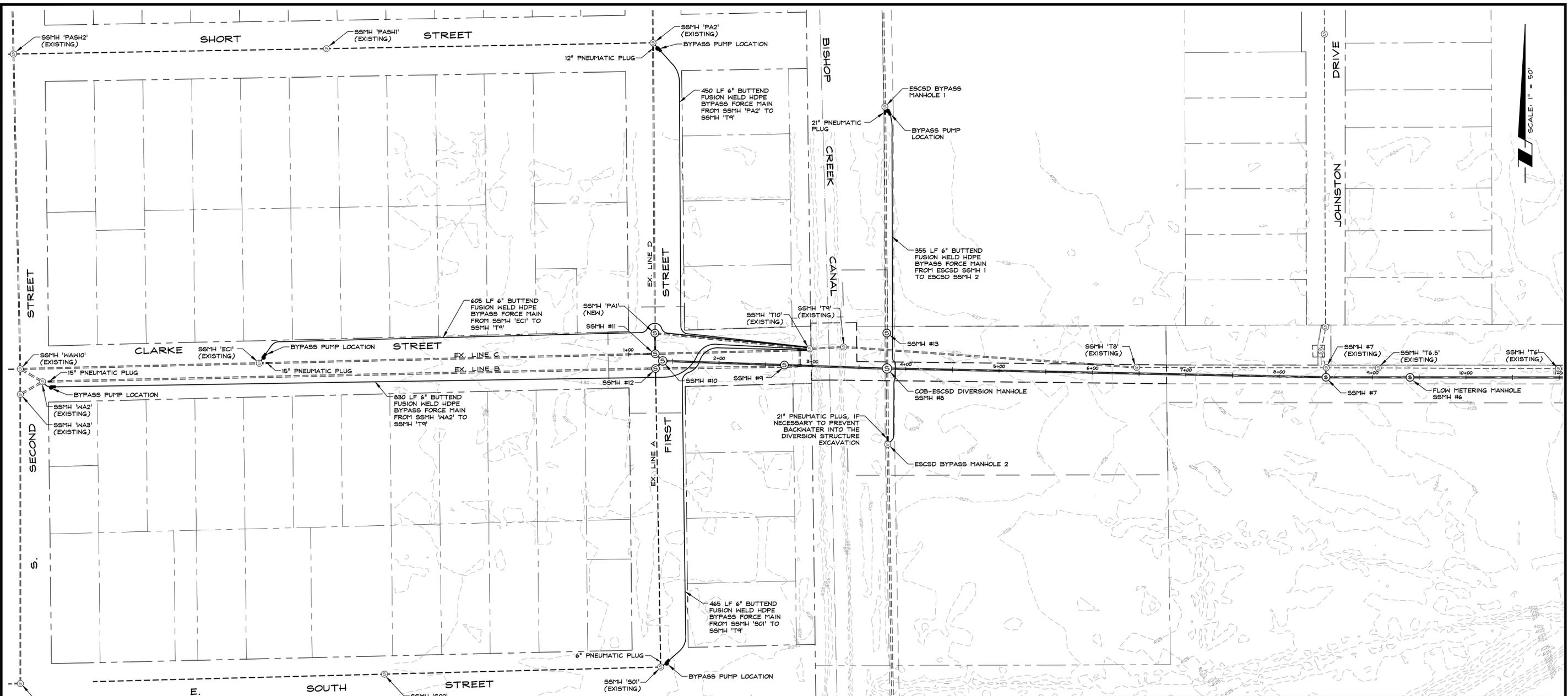
**SANITARY SEWER TRUNK REPLACEMENT**  
CITY OF BISHOP

**DETAILS**  
3 OF 3

**JONATHAN LESPERANCE**  
No. C84438  
Civil  
STATE OF CALIFORNIA

DRAWN: EYK  
ENGINEER: JEL  
SCALE: NO SCALE  
DATE: 09.04.2019

JOB: 1621-005  
DRAWING: SEE PLOT STAMP  
SHEET: C13  
OF: 17 SHEETS



SCALE: 1" = 50'

**NOTE:**  
 PROVIDE MEANS OF PROTECTION FOR BYPASS LINES LOCATED WITHIN STREET SECTIONS. DO NOT BLOCK VEHICULAR TRAFFIC OR RESIDENTIAL DRIVEWAY ACCESS.  
 WORK IN THE CANAL IS PROHIBITED BETWEEN NOVEMBER 1 AND JANUARY 31, AND ALSO BETWEEN MAY 1 AND JUNE 30, PURSUANT TO THE CDFM PERMIT.  
 WORK IS PROHIBITED BETWEEN APRIL 1 AND SEPTEMBER 15 PURSUANT TO THE CDFM PERMIT.

- PROPOSED SEQUENCE OF WORK**
1. CONSTRUCT NEW CITY OF BISHOP BYPASS MANHOLE (SSMH #1) (STATION 27+03.23, 4.78' RIGHT)
  2. CONSTRUCT NEW 18" SANITARY SEWER FROM APPROXIMATELY STATION 15+50 TO 4+00.
  - 2A. AS AN ALTERNATE, THE CONTRACTOR MAY ELECT TO CLEAN & INSPECT (VIA CCTV) THE SUITABILITY OF DIVERTING FLOWS INTO THE NORTHERLY EXISTING 21" SANITARY SEWER MAIN AT STATION 15+92.20 & CONSTRUCT THE NEW 18" SANITARY SEWER TRUNK LINE FROM SSMH #1 TO APPROXIMATELY STATION 4+00.
  3. CONSTRUCT TEMPORARY SEWER BYPASS. PLUG DOWNSTREAM SIDES OF EXISTING SSMH 'T4L' & INTERCEPT FLOWS. BYPASS PUMP FROM 'T4L' (STATION 15+95.21, 0.49' LEFT) TO NEW SSMH #1 BYPASS MANHOLE.
  4. CONSTRUCT NEW 18" SANITARY SEWER FROM EXISTING HEADWORKS STATION 27+77.07 TO APPROXIMATELY STATION 15+50.
  5. BYPASS PUMP ESCSD FLOWS FROM ESCSD MANHOLE #1 TO ESCSD MANHOLE #2.
  6. CONSTRUCT NEW COB-ESCSD DIVERSION MANHOLE SSMH #8 & PLUG UPSTREAM SIDE OF NEW 18" SANITARY SEWER. CONNECT TO NEW 18" SANITARY SEWER AT STATION 4+00. RETURN ESCSD FLOWS INTO DIVERSION MANHOLE & FLOW TO CITY OF BISHOP VIA NEW 18" SANITARY SEWER.
  7. BYPASS CITY OF BISHOP FLOWS IN BOTH EXISTING LINES C & D TO EX. SSMH 'T10'. CONSTRUCT NEW SANITARY SEWER FROM NEW SSMH #9 TO NEW SSMH #10 & CONSTRUCT NEW SSMH #12. NOTE: ADDITIONAL LATERALS CONNECT TO EXISTING LINES A & B BETWEEN THE POINT OF BYPASSING & LIMITS OF CONSTRUCTION ACTIVITY. FLOW IS MINIMAL & WILL NEED TO BE BYPASSED TO SSMH 'T10' DURING THE WORK.
  8. CONSTRUCT BISHOP CREEK CANAL CROSSING FROM DIVERSION NEW MANHOLE SSMH #8 TO NEW SSMH #9. REFER TO SPECIAL CONSTRUCTION ON SHEETS C16 & C17. RETURN FLOWS IN EXISTING LINES A & B TO NEW FLOW PATTERN TO SSMH #12.
  9. BYPASS CITY OF BISHOP FLOWS IN EXISTING LINES C & D TO EX. SSMH 'T10'. CONSTRUCT NEW SANITARY SEWER FROM NEW SSMH #10 TO NEW SSMH #11 & CONSTRUCT REPLACEMENT SSMH 'PA1'. RETURN FLOWS IN EXISTING LINES C & D TO NEW FLOW PATTERN INTO NEW SSMH #10. CONSTRUCT SINGLE 4" LATERAL AT TERMINUS OF CLARKE STREET. NOTE: ADDITIONAL LATERALS CONNECT TO EXISTING LINES C & D BETWEEN THE POINT OF BYPASSING & THE LIMITS OF CONSTRUCTION ACTIVITY. FLOW IS MINIMAL & WILL NEED TO BE BYPASSED TO SSMH 'T10' DURING THE WORK.
  10. REMOVE EXISTING SANITARY SEWER & SSMH 'T10' & SSMH 'T9' FROM CANAL. REMOVE CANAL BYPASS OPERATION.
  11. EXTEND FORCE MAINS FROM JOHNSTON DRIVE & FIRE TRAINING CENTER LIFT STATIONS TO NEW SANITARY SEWER.
  12. COMPLETE REMAINING WORK.

NO.	DATE	REVISION	BLOCK	BY



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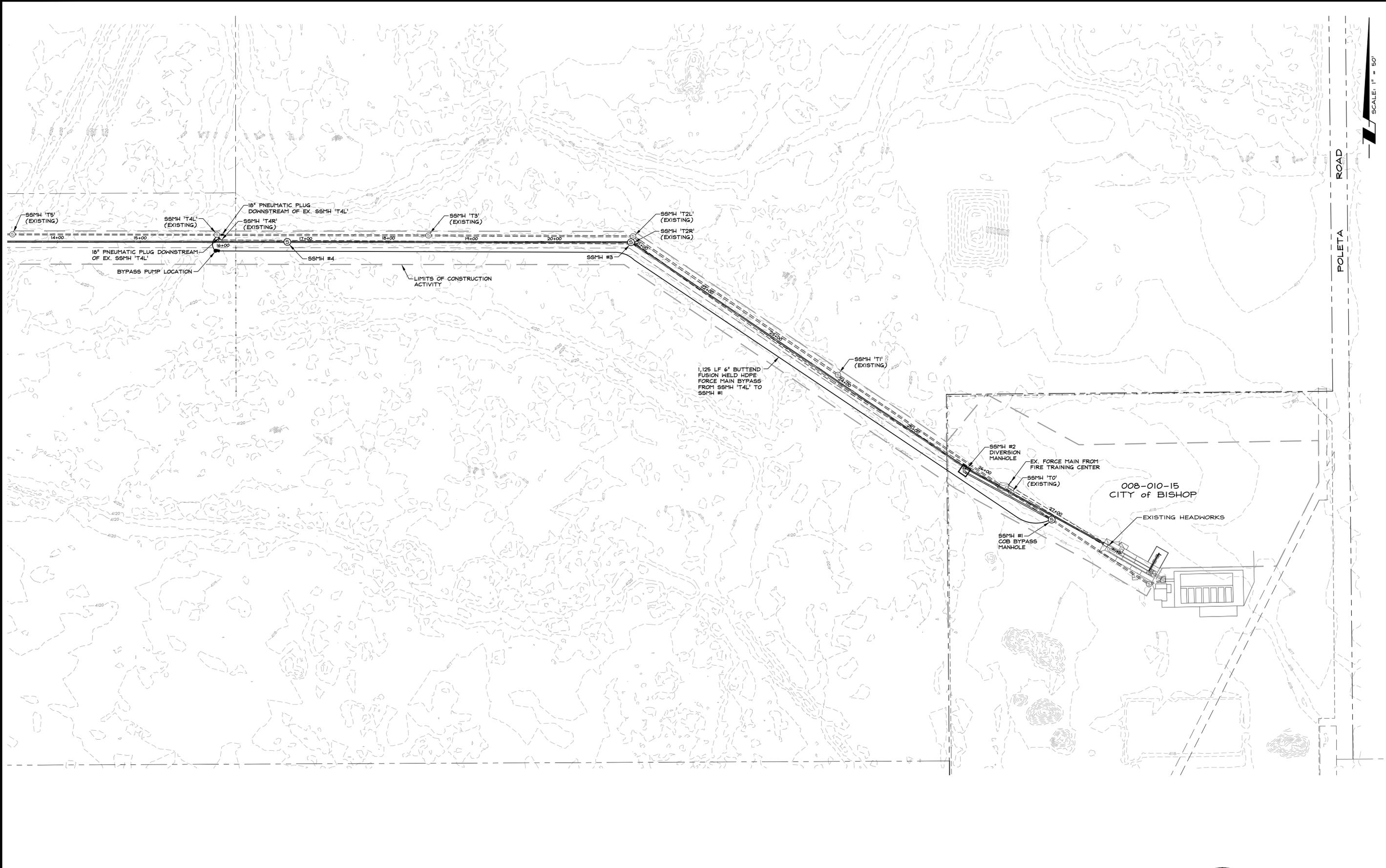
**SANITARY SEWER TRUNK REPLACEMENT BYPASS PUMPING PLAN**  
 CITY OF BISHOP  
 SITE 1

**PROPOSED SEQUENCE OF WORK**



DRAWN: EYK	JOB: 1621-005
ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: 1"=50'	SHEET: C14
DATE: 09.04.2019	OF 17 SHEETS

9/4/19



SCALE: 1" = 50'

ROAD POLETA

NO.	DATE	REVISION BLOCK	BY



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**SANITARY SEWER TRUNK REPLACEMENT BYPASS PUMPING PLAN**  
**CITY OF BISHOP**

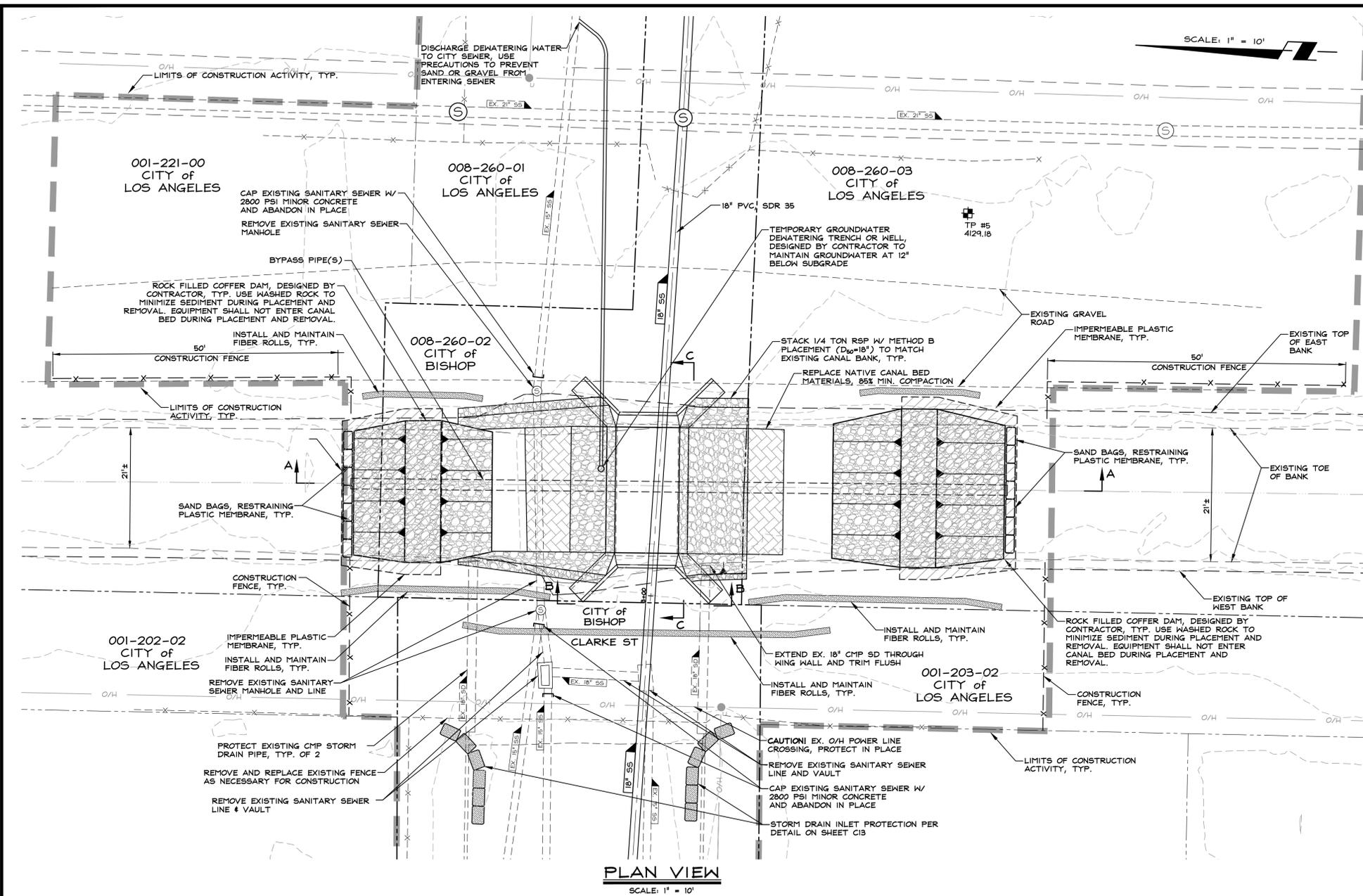
**BYPASS PUMPING PLAN**  
**SITE 2**



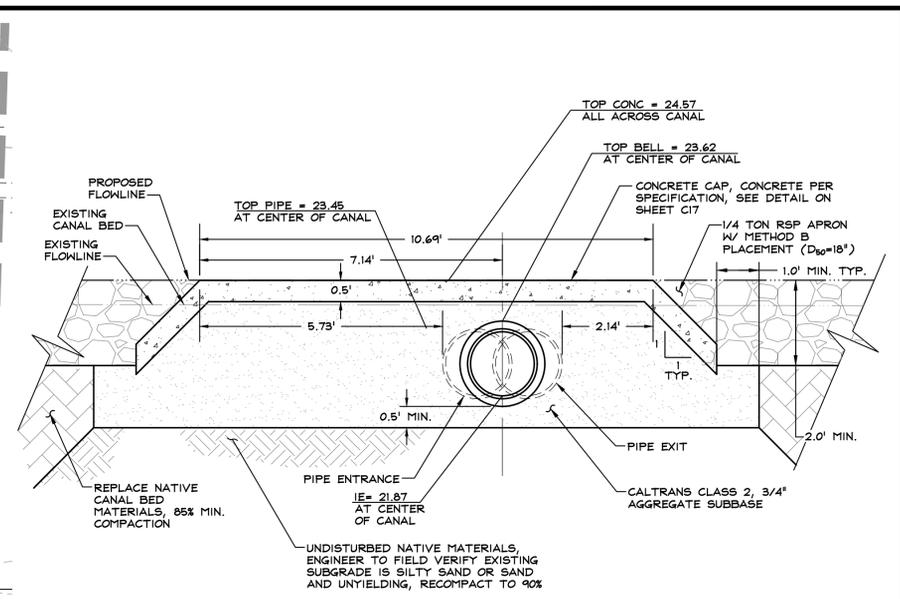
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ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: 1" = 50'	SHEET: <b>C15</b>
DATE: 09.04.2019	OF 17 SHEETS

9/4/19

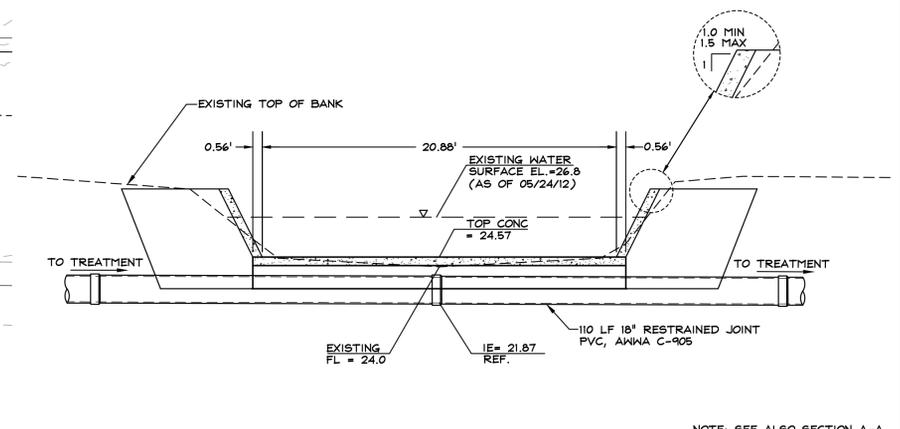
Y:\Client\_Files\1621-005-City of Bishop\Sanitary Sewer Trunk Replacement - Plans\1621-005\_C15.dwg 04/20/19 10:33:02 AM Eric\_Kas



**PLAN VIEW**  
SCALE: 1" = 10'

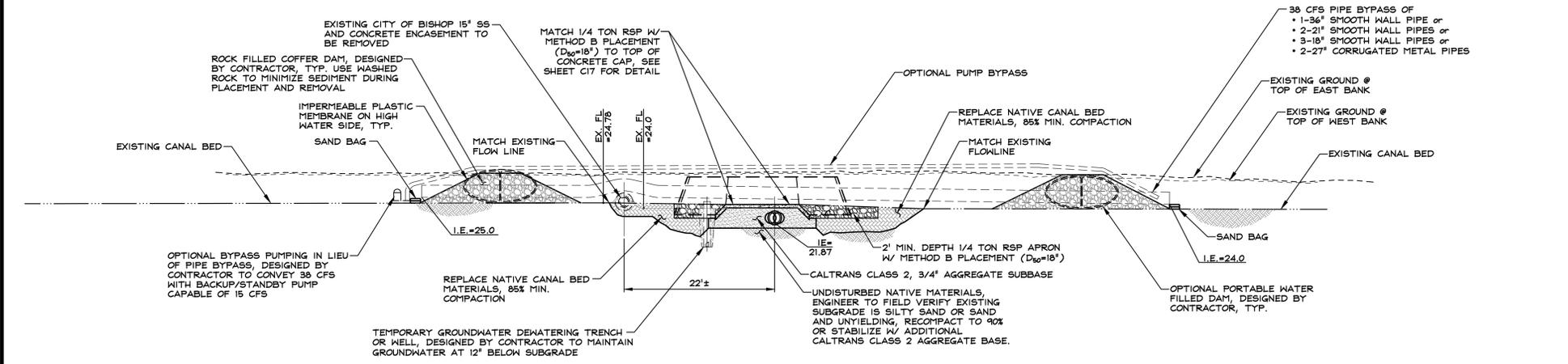


**SECTION B-B**  
SCALE: 1" = 2'



**SECTION C-C**  
SCALE: 1" = 5'

NOTE: SEE ALSO SECTION A-A ON SHEET C17.

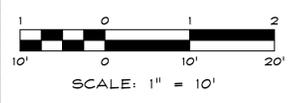


**SECTION A-A**  
NOT TO SCALE

**NOTES**

1. THE AREAS WITHIN 3 FEET HORIZONTALLY OF THE WATER SURFACE OF THE BISHOP CREEK CANAL ARE CONSIDERED TO BE RIPARIAN AREAS. THE CONTRACTOR SHALL MINIMIZE HIS DISTURBANCE TO THE RIPARIAN AREAS WHERE THE EXISTING VEGETATION IS NOT TO BE REPLACED WITH CONCRETE OR 1/4 TON RSP WITH METHOD B PLACEMENT (D<sub>90</sub>=18"). THE CONTRACTOR SHALL REPLACE VEGETATION IN THE RIPARIAN AREAS, THAT ARE NOT CONCRETE OR 1/4 TON RSP WITH METHOD B PLACEMENT (D<sub>90</sub>=18"), WHERE VEGETATION IS REMOVED OR DAMAGED TO THE EXTENT (IN THE ENGINEER'S OPINION) THAT IT IS UNLIKELY TO SHOW SIGNIFICANT GROWTH IN THE FOLLOWING SPRING. THE VEGETATION SHALL BE REPLACED WITH SOD MATS THAT ARE SALVAGED FROM RIPARIAN AREAS WHERE THE VEGETATION IS TO BE REPLACED WITH CONCRETE OR 1/4 TON RSP WITH METHOD B PLACEMENT (D<sub>90</sub>=18"). SALVAGED SOD MATS SHOULD BE A MINIMUM OF 6 INCHES THICK, BE KEPT CONTINUOUSLY MOIST DURING STORAGE, PLACED ON UNCOMPACTED GROUND AND FLOODED AFTER PLACEMENT TO ENSURE GOOD CONTACT BETWEEN THE SOD AND THE GROUND.
2. PRESSURE TEST 18" PVC AT CANAL CROSSING TO 5 PSI IN ACCORDANCE WITH STANDARDS FOR SEWER PIPE.
3. STORAGE AND STAGING TO BE OUTSIDE OF CANAL AND RIPARIAN AREAS.
4. WORK IN THE CANAL IS PROHIBITED BETWEEN NOVEMBER 1 AND JANUARY 31, AND ALSO BETWEEN MAY 1 AND JUNE 30, PURSUANT TO THE CDFW PERMIT.
5. WORK IS PROHIBITED BETWEEN APRIL 1 AND SEPTEMBER 15 PURSUANT TO THE CDFW PERMIT.

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9260 Double  
Diamond Pkwy, Unit 1B  
Reno, NV 89521  
p 775.782.2322  
f 775.782.7064

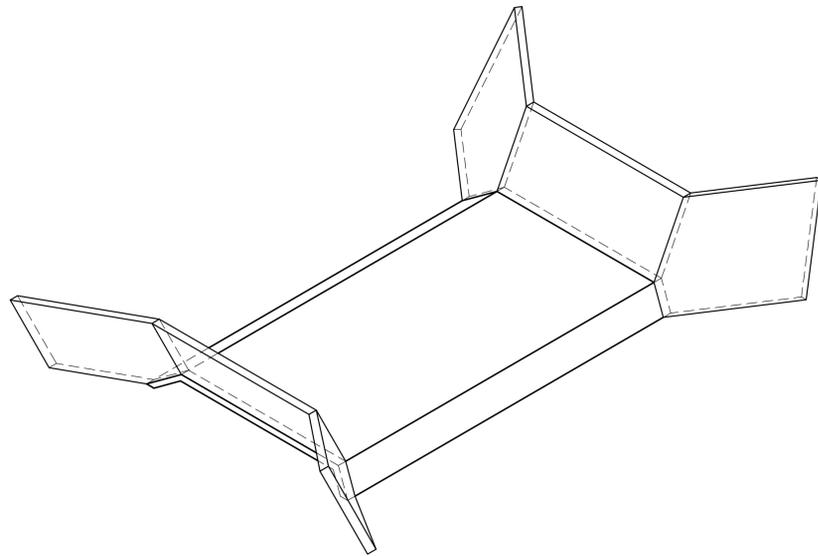
**SANITARY SEWER TRUNK REPLACEMENT**  
CITY OF BISHOP

**BISHOP CREEK CANAL CROSSING PLAN**

**JONATHAN LESPERANCE**  
No. C84438  
Civil  
STATE OF CALIFORNIA

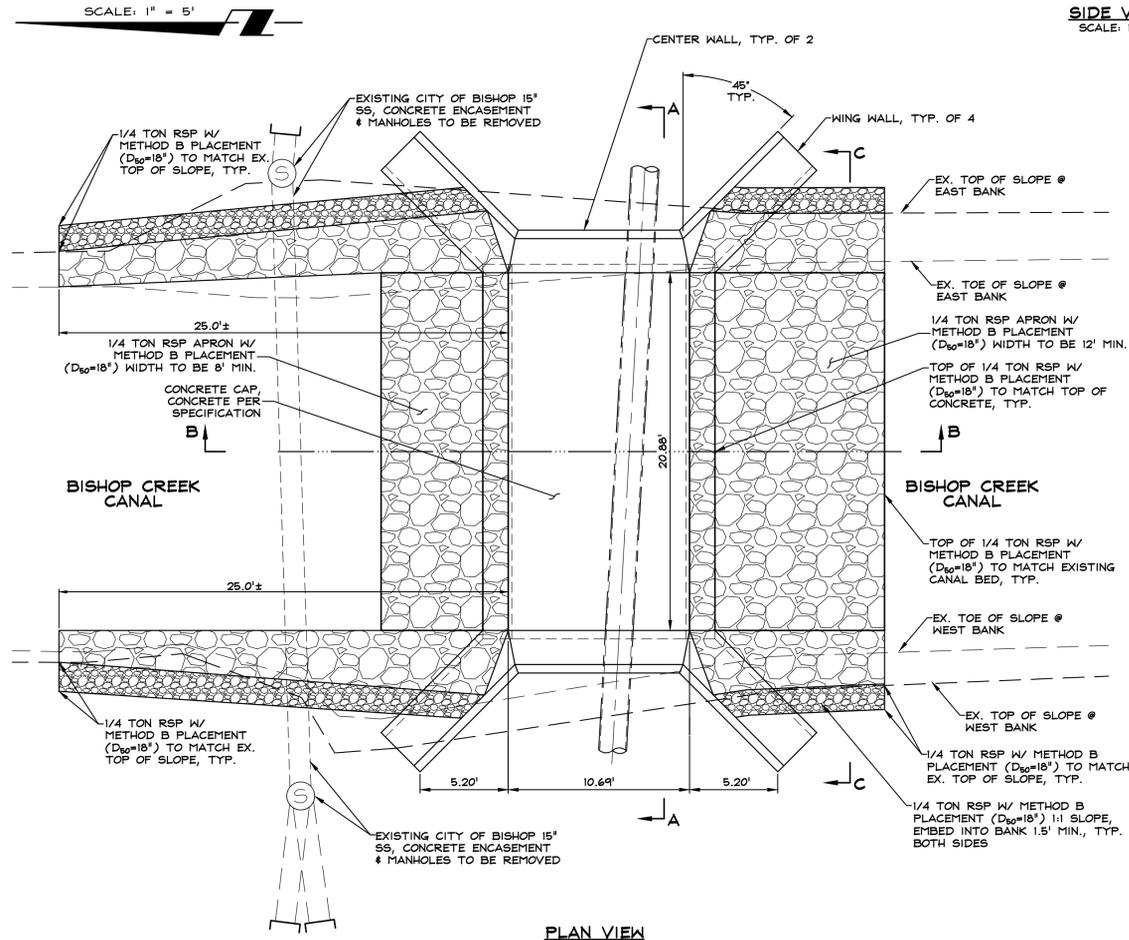
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ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: SEE SCALE	SHEET: <b>C16</b>
DATE: 09.04.2019	OF 17 SHEETS

9/4/19

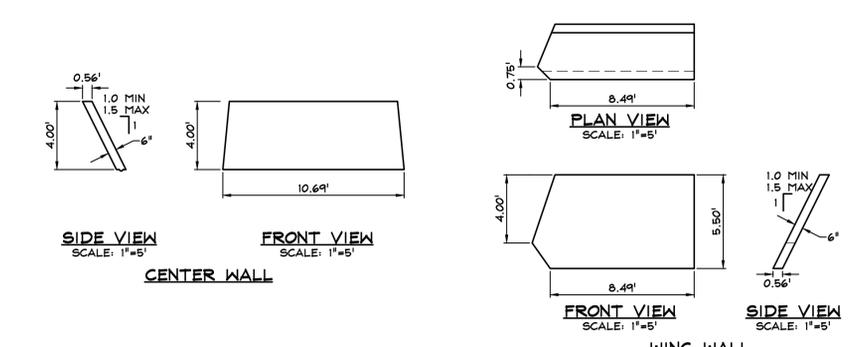


**CANAL CROSSING STRUCTURE, ISOMETRIC VIEW**

NOT TO SCALE

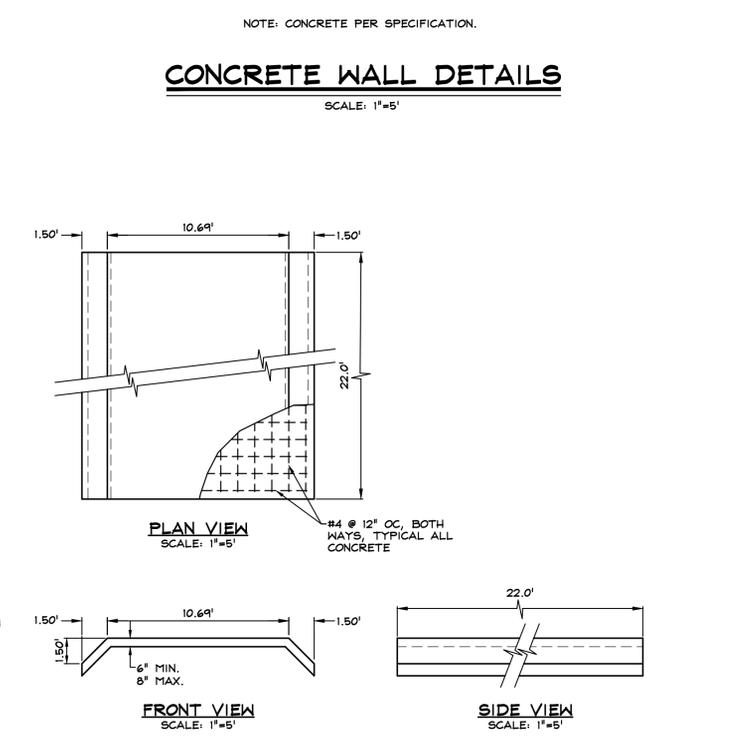


**PLAN VIEW**  
SCALE: 1"=5'



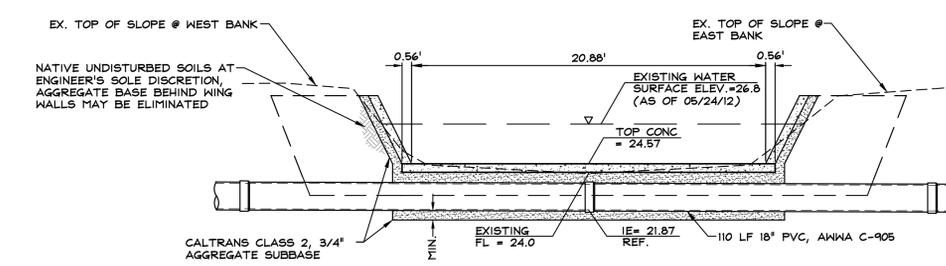
**CONCRETE WALL DETAILS**

SCALE: 1"=5'

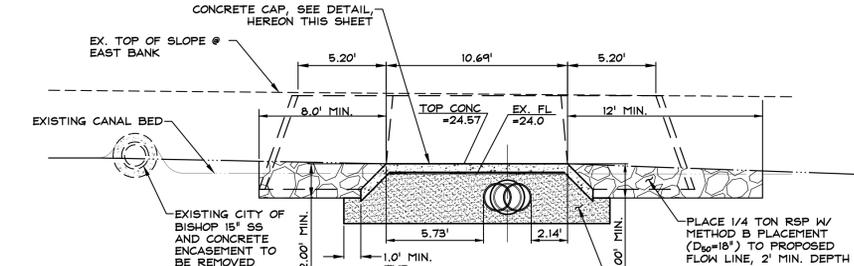


**CONCRETE CAP DETAIL**

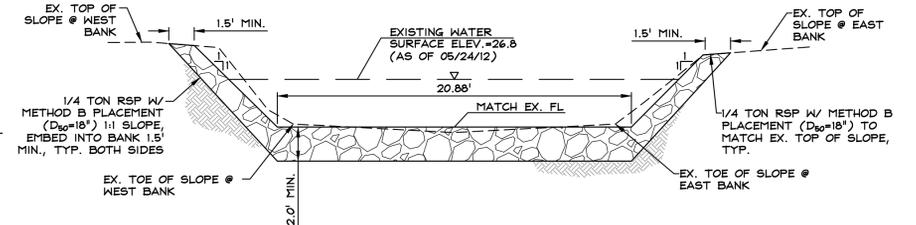
SCALE: 1"=5'



**SECTION A-A**  
SCALE: 1"=5'



**SECTION B-B**  
SCALE: 1"=5'

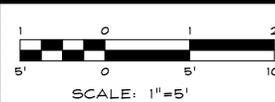


**SECTION C-C**  
SCALE: 1"=5'

**CANAL CROSSING STRUCTURE**

SCALE: 1"=5'

NO.	DATE	REVISION BLOCK	BY



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RENO: 9260 Double Diamond Pkwy, Unit 1B, Reno, NV 89521, p 775-782-2322, f 775-782-7084

**SANITARY SEWER TRUNK REPLACEMENT**  
CITY OF BISHOP

**BISHOP CREEK CANAL CROSSING DETAILS**

REGISTERED PROFESSIONAL ENGINEER  
JONATHAN LESPERANCE  
No. C84438  
Civil  
STATE OF CALIFORNIA

DRAWN: EYK	JOB: 1621-005
ENGINEER: JEL	DRAWING: SEE PLOT STAMP
SCALE: SEE SCALE	SHEET: C17
DATE: 09.04.2019	OF 17 SHEETS

9/4/19