DOCUMENT 00 91 02 – ADDENDUM NO. 2

PROJECT: Ord Village Lift Station & Force Main Replacement Project

CIP NO.: OS-0147

FROM: District Engineer
Marina Coast Water District
11 Reservation Road
Marina, CA 93933

ISSUED: January 15, 2021

TO: **Prospective Bidders**

This Addendum forms a part of the Bidding Documents and will be incorporated into Contract Documents. Insofar as the Specifications or Drawings or both are inconsistent, this Addendum governs. Acknowledge receipt of the Addendum by inserting its number in Document 00410 – Bid Form. **FAILURE TO DO SO WILL SUBJECT BID TO DISQUALIFICATION**.

PART 1 – BIDDER INFORMATION ITEMS

A. The Bid Date remains unchanged (2:00 on January 28, 2021).

B. The Add Alternate bid items are incorporated into the Base Bid. All new manholes and the new wet well shall be made of pre-cast polymer concrete.

C. The presentation slides and attendance lists from the Pre-Bid Meeting and Site Visit are attached.

D. Reference drawings of the existing pump station and force main are attached.

PART 2 - CHANGES TO PROJECT MANUAL

A. Document 00 41 00, Bid Form, is reissued in its entirety (attached). The alternate items are removed.

B. Section 01 20 00, Measurement and Payment, is reissued in its entirety (attached). The alternate items are removed. Several items are clarified.

C. Section 02 41 00, Demolition, is reissued in its entirety (attached). The depth of underground removal is clarified.

D. City of Seaside Details S-601 and S-102 are added to Appendix C, City of Seaside Encroachment Permit Conditions. These details show trench pavement restoration and concrete curb, gutter and sidewalk restoration.

PART 3 - CHANGES TO DRAWINGS

A. Sheet 10, Plan & Profile (6 of 6) is reissued. A table of manhole depths is added.

B. Sheet 15, Sewer Details (1 of 4), is reissued. Details for concrete foundation pads are added.

C. Sheet 18, Sewer Details (4 of 4), is reissued. The label for Detail 1 is corrected.

PART 4 – QUESTIONS RECEIVED

Q1 Will work along the railroad require special permits or insurance?
A1 No. The rail line is inactive, owned by the Transportation Agency of Monterey County. Also, the work does not require entering the railroad parcel, since pipeline grouting is accessed from outside.

Q2 Would the District consider HDPE as an alternate material to PVC for the force main?
A2 Bid the project with C900 PVC pipe, and you may submit HDPE as a cost reducing alternative after the bid. Understand that the proposed pipe must have a similar inner diameter and pressure class as the specified material.

Q3 Will fog seal or slurry seal be required for repaved trench sections? See 32 12 16-2
A3 The City of Seaside requires slurry seal for the full lane width over repaired trenches. Provide the same slurry seal repair for streets in the Army Housing area.

Q4 Please provide a bid item for the waterline shown on sheet 5.
A4 Include the cost of the water service lateral in Bid Item 4, Lift Station - Civil.

Q5 Please provide a bid item and detail for the low point blow off on sheet 7 station 16+20.29.
A5 The Blow-off Detail is mislabeled on Sheet 18. The corrected sheet is included in this Addendum. Include the cost of the Blow-Off in Bid Item 11, which is revised to include it.

Q6 Please provide the locations and depth of the laterals referenced in item 12.
A6 Service laterals are for houses within Okinawa Road. Assume the lateral replacement extends to the back of the sidewalk.

Q7 Please provide the depth of manholes to be epoxy lined (C6-C10) referenced in item 15.
A7 A table is added to Sheet 10 listing the manhole depths.

Q8 Please provide a project map denoting different jurisdictions per 01 14 00-3 and 01 14 00-4.
A8 Highway and rail right-of-way limits are shown on Sheet 4. The boundary between Seaside and Army Housing is defined by street. The City of Seaside owns Monterey Road, Coe Avenue and the parcel for the new pump station. Presidio of Monterey owns all other residential streets within the force main alignment.

Q9 Is there a detail for the generator foundation slab?
A9 Details are added to sheet 15 for the generator and electrical equipment slabs.

Q10 Within the plan sheets, the following note appears multiple times: "4. Force Main Shall Be Fully Restrained". Shall I take this to mean that the 10" Force Main shall be restrained for its entire 3,920' length? The reason I ask is because there is also a restrained joint length table within the specifications.
A10 All pipe joints for the force main are to be restrained. The change was made late so the restrained length tables were not removed from the plans. Locking gasket restraints for PVC pipe (Bulldog or similar) are allowed per section 33 11 13.90. Mechanical joint restraints are required at fittings.

Q11 Can you clarify the limits of the pipelines to be grout filled?
A11 Pipelines crossing Highway 1 and the rail corridor are to be fully filled with slurry/grout. Limits and pipe sizes are shown on Sheet 4A. All other pipelines to be abandoned may be drained and plugged at the ends per Section 02 22 20.

Q12 Can you clarify what a cast-around manhole is?
A12 Cast around manholes are added to an existing "live" sewer main to add a turning point. The concrete base is cast around the pipe, and the top of the pipe is then cut out. The bottom of the pipe remains as the new channel. The work requires coming back at start-up and plugging the old outlet pipe. There are two of these next to the new pump station, paid for under the Bid item 4 – Pump Station Civil, and one at the northern end of the Project, paid under Bid Item 13.

Q13 Does the polymer manhole supplier provide an impression ring for the base due to the thinner wall section?
A13 The polymer manhole supplier provides a short barrel section which may be used as an impression form or may be cast into the base.

Q14 How long does it take to reconfigure a pump from dry pit to wet pit?
A14 The Flygt representative states that the conversion can be made in the field on the day the pump is pulled from the existing pump station. Assume half a work day per pump.

Q15 Where Cast in Place SSMH bases are constructed do they require Raven Type coating, and if so does the channel require coating?
A15 Cast-in-place Portland cement concrete requires an epoxy coating. The wetted channel may be left uncoated. Pre-cast polymer concrete bases are allowed per Section 33 05 62.

Q16 Do the interior concrete surfaces of the Valve Vault and ARV require field applied coating?
A16 The valve vault does not require a coating. The ARV vault is a new manhole, so a provide polymer concrete unit.

Q17 Could you please provide a bid item for trench restoration along with concrete replacement?
A17 Include the cost of trench restoration with the cost of the related pipe.

Q18 Sheet 2 note 1 under grading notes states that there is 1590 cy of cut and 1540 cy of fill. Can you please clarify where this is located?

A18 The cut and fill quantities are for construction at the new pump station site (excavation to install manholes, wet well and vaults) and demolition at the old pump station site. Any excess fill should be used to backfill removed manholes and structures.

Q19 Do the pumps being relocated need to be repainted?
A19 No.

Q20 What are the by-passing requirements for relining existing manholes?
A20 The manholes to be relined are straight in-out manholes, so using a flow-through plug is recommended (Stemar or similar). If by-pass pumping is required, design for the existing lift station capacity of 860 gpm, and provide 24-hour reliability (back-up power and night/weekend/holiday watch).

Q21 Can you clarify the trench compaction requirements (Sheet 18, Detail 5)?
A21 The detail shows both paved and unpaved areas. Compaction under and around the pipe is 95% Modified Proctor. Under pavement, the trench backfill is also at 95% Modified proctor. If not under pavement, the trench backfill is at 90% Modified Proctor.

Q22 Can you clarify how deep below grade the demolition extends.
A22 Manhole demolition is covered in Section 02 22 20. Remove the lid, cone and if needed, top barrel to a minimum of 4-ft below final grade. Building demolition is covered in Section 02 41 00, which is reissued to clarify the 4-ft below finial grade requirement.

END OF DOCUMENT

MARINA COAST WATER DISTRICT

11 RESERVATION ROAD • MARINA, CA 93933-2099
Home Page: www.mcwd.org
TEL: (831) 384-6131 • FAX: (831) 883-5995

ORD VILLAGE LIFT STATION AND FORCE MAIN REPLACEMENT (OS-0147)

Pre-Bid Conference (Mandatory)

January 12, 2021 2PM
IOP Conference Room
920 2nd Ave. , Marina, CA 93933

Pre-Bid Conference SIGN-IN SHEET

	Name	Contractor/Firm	E-Mail	Site Visit Represented
1.	Don Wilcox	MCWD	dwilcox@mcwd.org	X
2.	Mike Wegley	MCWD	mwegley@mcwd.org	☐
3.	Elise Ramirez	MCWD	eramirez@mcw.org	X
4.	Andy Sterbenz	Schaaf & Wheeler	asterbenz@swsv.com	X
5.	Garbriela Raya	Monterey Peninsula Engineering	gabriela@mpe2000.com	X
6.	Gavin McElhinney	Ranger Pipelines	estimating@rangerpipelines.com	X
7.	Steven Dooley	Teichert Construction	estimating@teichert.com	X
8.	Jason Bates	Specialty Construction	jbates@specialtyconstruction.com	X
9.	Conor Murphy	Schaaf & Wheeler	cmurphy@swsv.com	☐
10.	Mike Jardin	CA Trenchless	mjardin@californiatrenchless.com	X
11.	Carlos Garcia	Precision Grade, Inc.	cgarcia@precisiongrade.com	X
12.	Sean McIntyre	Sanco Pipelines	estimating@sancopipelines.com	X
13.	Scott Schumacher	Anderson Pacific	scott@andpac.com	☐
14.	Melanie Carrido	Psomas	Melanie.Carrido@Psomas.com	X
15.	Su Yildirim	Cratus, Inc.	estimating@cratusinc.com	☐
16.	Jim Stripe	Civil Pacific, Inc.	Loren@CivilPacificInc.com; jim@civilpacific.com	X
17.	Tina Corbett	Pacific Underground Construction	tina@pacificunderground.com	X

Name	Contractor/Firm	E-Mail	Site Visit Represented
18. Greg Runnalls	The Don Chapin Company	Grunnalls@donchapin.com	X
19. Garrett Loughran	Brough Construction	garrettl@broughconstruction.com	X
20. Ken Tatarka	McGuire & Hestor		X
21. Mike Hardin	California Trenchless		☐
22. Bryan Mann			☐
23. Jeremy Hynum			☐
24. Jeric Lagmay			X
25. Nick Jouras	Anderson Pacific	njouras@andpac.com	X
26. Joe Pineda	MCWD	jpineda@mcwd.org	X
27.			☐
28.			☐
29.			☐
30.			☐
31.			☐
32.			☐
33.			☐
34.			☐
35.			☐
36.			☐
37.			☐
38.			☐

Marina Coast Water District
Pre-Bid Meeting
Ord Village Lift Station and Force Main Replacement Project

January 12, 2021

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

1

Sign-In

- This meeting is Mandatory
- Please use the Chat feature and enter your Name, Company and e-mail address
- Also, all participants must send an e-mail to sverduzco@mcwd.org to be added to the plan holders list. Include your phone number so it can be associated with the Zoom meeting record.

2

Agenda

- Introductions
- Bid Period information
- Project Overview
- Key Bid Documents and Contract Requirements
- Site Visit Information

3

Introductions

- Owner – Marina Coast Water District
- Design Engineer – Schaaf & Wheeler
- Construction Manager – TBD
- Environmental Support – Denise Duffy & Associates

4

Bid Period Information

- Bid Opening: Thursday, January 28, 2021. 2:00 p.m.
- Location: 11 Reservation Road, Marina
- Participate via Zoom. Meeting log-in is in Addendum 1
- Bids Valid: Subject to Award within 60 calendar days
- Engineer's Estimate: $2,250,000 to $2,500,000

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Project Documents

- Digital copies only:
  - Download: MCWD Website > Projects & Engineering > Open Bids & Proposals
  - https://www.mcwd.org/engineering_bids.html
  - Central Coast Builder's Exchange: https://www.ccbabuilds.com/opr/
- Addenda will be posted to the website with the plans
- Sign-up as a plan holder to receive e-mail notices of addenda

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Questions During Bidding

- **All questions must be submitted in writing to:**
  - Don Wilcox, MCWD, dwilcox@mcwd.org
  - May call to confirm receipt: (831) 883-5935
- **Responses will be issued in Addenda.**
- **Verbal statements are not binding.**
- **Deadline for questions:**
  - Wednesday, January 20, 2021, 5:00 p.m.

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Project Overview

- **Construction of a new lift station and force main**
  - 8-ft diameter polymer concrete wet well
  - New motor control center
  - 4,050 LF of 10-inch PVC force main
  - 1,350 LF of new PVC gravity sewers, 10-inch and 12-inch
  - 10 new polymer concrete manholes
  - Reline 5 existing manholes
- **Transfer existing pumps and generator to the new station**
- **Demolition and removal of the existing lift station**
  - Building surveys showed no lead paint or asbestos to remediate
  - Protect existing monitoring wells in-place
  - Certain items are to be recovered and returned to MCWD Corp Yard
- **Abandon pipelines crossing under Highway 1**

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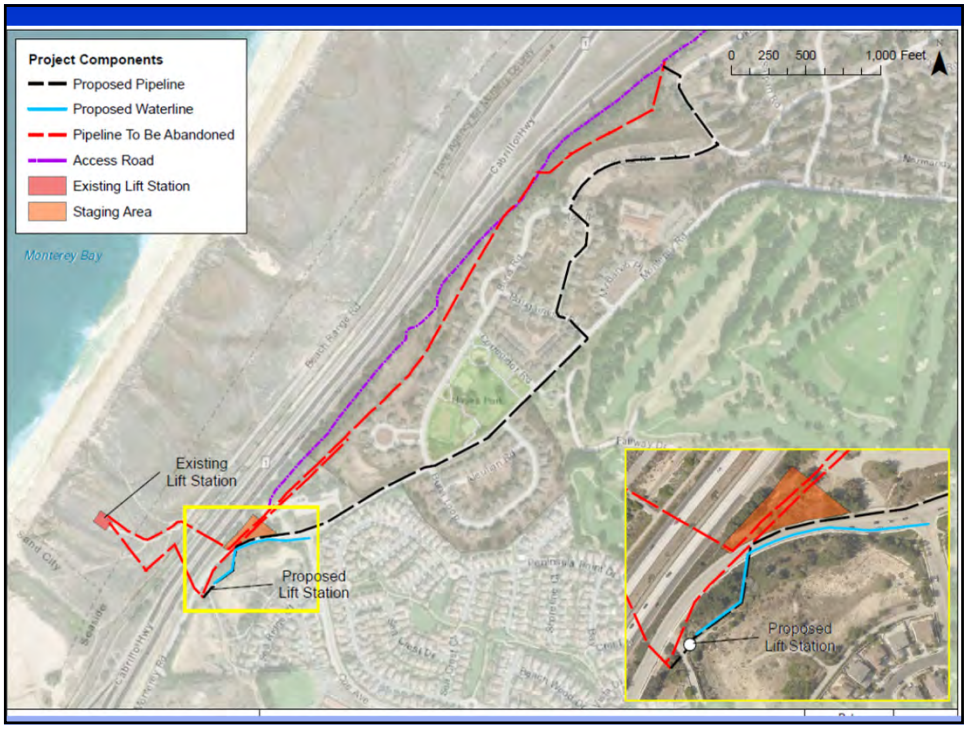

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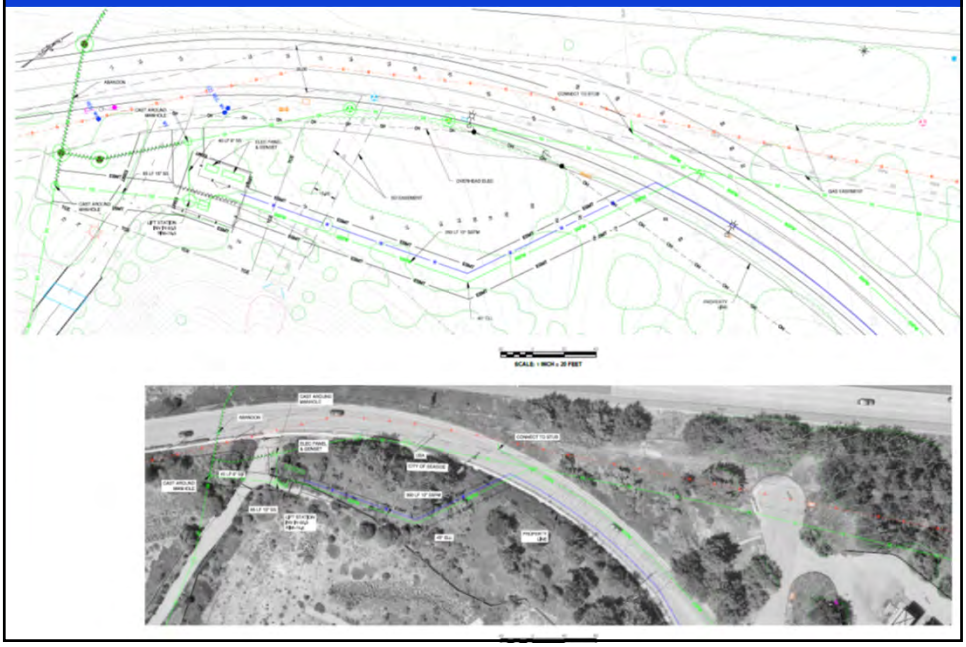
New Lift Station



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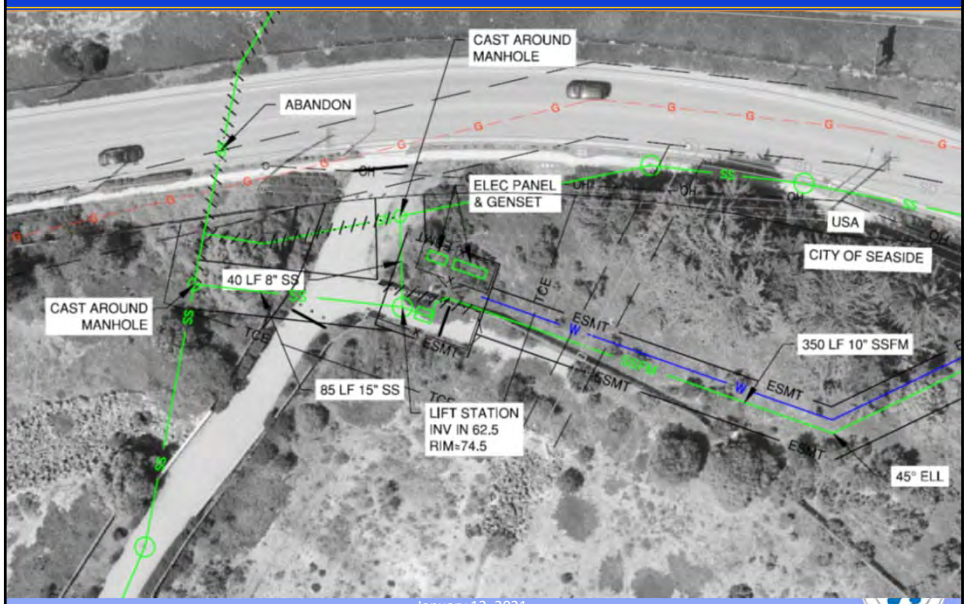
New Lift Station



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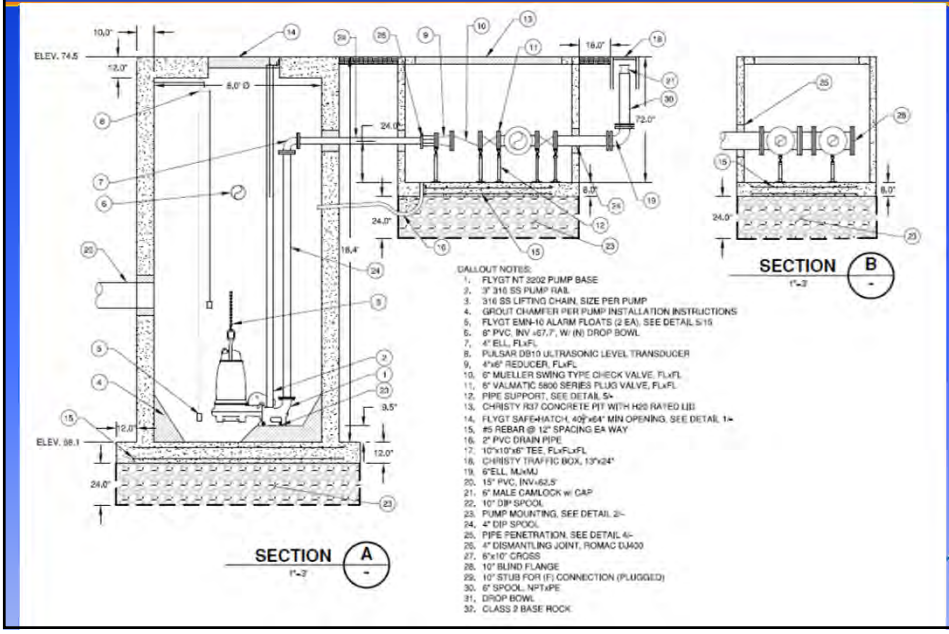
New Pump Station



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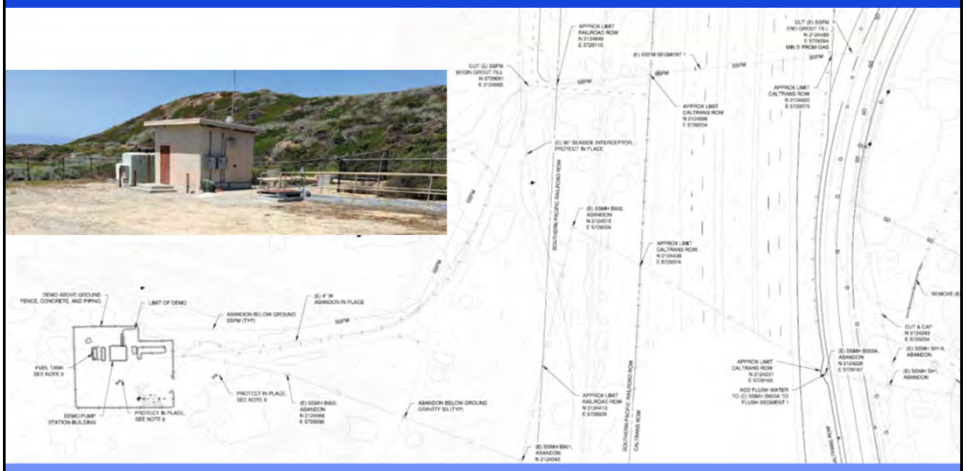
Old Pump Station



January 12, 2021

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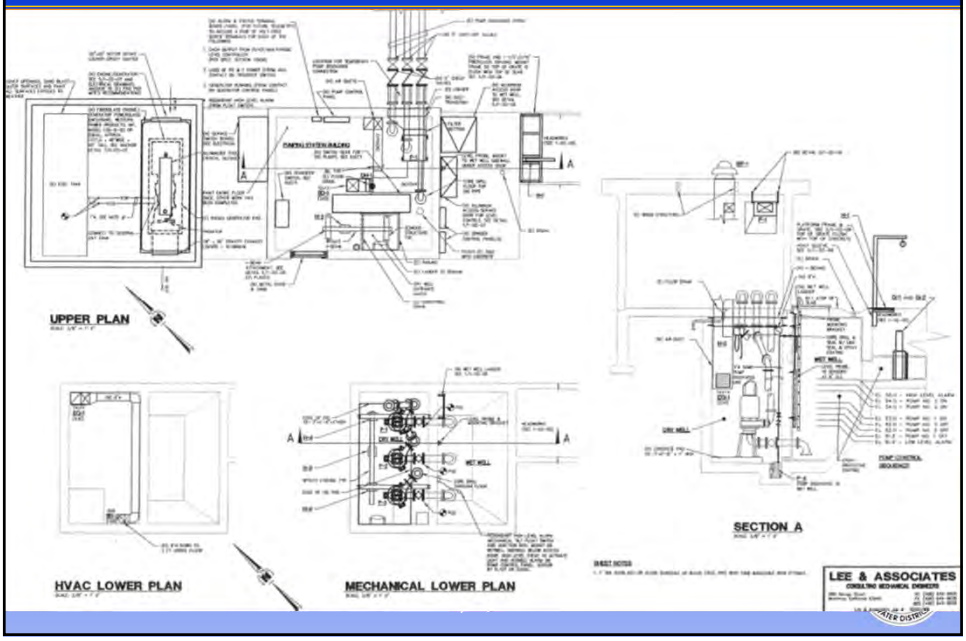
Old Pump Station



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Restrictions

- **Force main alignment is through a residential area**
  - Door hangers
  - Maintain driveway access
  - Work hours may be limited during school year
- **New pump station is a percolation lot parcel**
  - Target underground work to dry months
- **State Park Access**
  - Limit traffic along Beach Range Road (bike path)
  - Biological monitoring of the demo work
- **The new pump station has to be operational before the old station can be demolished and the pipelines under Highway 1 abandoned**

January 12, 2021

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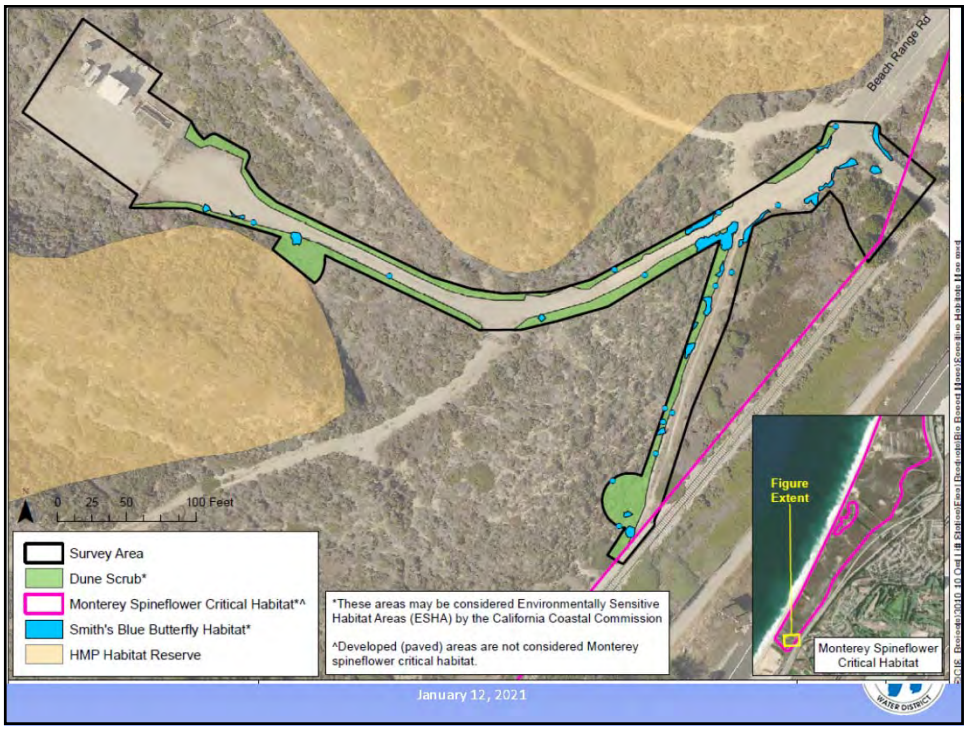

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Permits

- PG&E design is complete
- Caltrans Encroachment Permit is issued and extended
- City of Seaside Encroachment Permit (submitted by Contractor)
- Presido of Monterey Housing Office (contact only)
- Coastal Commission (un)development permit (submitted)
- Air Board Demo Permit (not submitted)
- State Parks
  - Work within the park is subject to biological monitoring

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Key Bid Documents/Contract Requirements

- Document 00 43 93 is a checklist of items to submit with the bid
- Acknowledge all addenda on the Bid Form, Document 00 41 00
  - Document 00 41 00 will be reissued with Addendum 2 to make the alternate items (polymer concrete) the base bid
- District Ordinance 53, Local Hiring for Public Works
  - Good faith effort to have 80% of the workforce be residents of Monterey, Santa Cruz or San Benito Counties.
  - Requirement includes sub-contractors
  - Acknowledge on Document 00 45 28
- Bid Bond or Security: 10% of bid price
- Basis of Bid
  - Unit Price Items
  - Allowance values are pre-entered
  - Award based on the Base Bid price

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Contract Times

- Substantial Completion: 335 calendar days
- Final Completion: 365 calendar days

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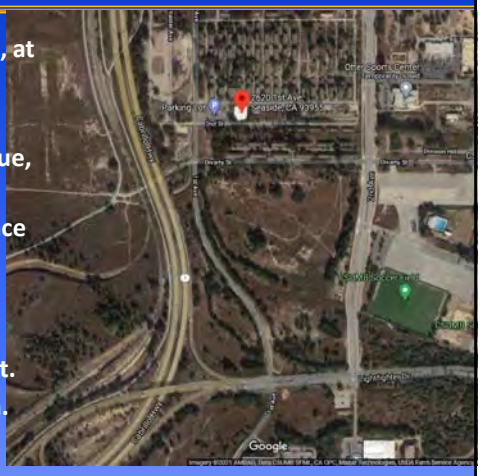
Site Visit Information

- Site visit tomorrow, January 13, 2021, at 1:00 p.m.
- Participation is mandatory
- Meet at parking lot for 2620 1st Avenue, Marina, CA 93933
- All attendees must wear a mask or face covering
- Escorted tour of the existing pump station within the State Park
- Driving tour of the new FM alignment.
- Strip maps will be provided at sign-in.



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BID FORM

ORD VILLAGE LIFT STATION & FORCE MAIN RPLACEMENT

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Marina Coast Water District

11 Reservation Road

Marina, CA 93933

ATTN: District Engineer

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	**Addendum Date**
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization/Demobilization	LS	1		
2	Sheeting, Shoring and Bracing	LS	1		
3	Traffic Control	LS	1		
4	Lift Station – Civil	LS	1		
5	Lift Station – Electrical	LS	1		
6	Retrofit and Relocate Existing Pumps	LS	1		
7	Relocate Generator	LS	1		
8	10-inch C900 Force Main	LF	3,920		
9	12-inch Gravity Sewer	LF	1,090		
10	10-inch Gravity Sewer	LF	240		
11	2-inch ARV and 4-inch Blow Off	LS	1		
12	Service Lateral Tie-In to new Sanitary Sewer	EA	8		
13	Pre-Cast Manhole	EA	7		
14	Cast-Around Manhole	EA	1		
15	Rehabilitate Existing Manholes	EA	5		
16	Abandon Existing Manholes	EA	6		
17	Flush and Abandon Existing Pipelines	LS	1		
18	Demolish Existing Lift Station	LS	1		
19	SCADA Integration Allowance	ALW	1	$30,000	$30,000
20	Permit Allowance	ALW	1	$25,000	$25,000
21	Remediation Allowance	ALW	1	$50,000	$50,000
Total of All Unit Price Bid Items					$

ALW=Allowance, CF=Cubic Foot, CY=Cubic Yard, DY=Day, HR=Hour, LF=Linear Foot, LS=Lump Sum, SF=Square Foot, SY=Square Yard

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Lump Sum and Unit Price Bids = Total Bid Price $ _____

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The items listed in Document 00 43 93, Bid Submittal checklist, are submitted with and made a condition of this Bid.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

_____

_____

_____

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

_____

Bidder's Contractor
License No.: _____

(where applicable)

SECTION 01 20 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Methods of Measurement

B. Description of Bid Items

1.02 METHODS OF MEASUREMENT

A. Materials and items of work which are to be paid for on the basis of measurement shall be measured in accordance with the method stipulated in the particular sections involved. In determining quantities, all measurements shall be made in a horizontal plane unless otherwise specified.

B. Measurements shall be in accordance with U.S. Standard Measures. A pound is an avoirdupois pound. A ton is 2,000 pounds avoirdupois. The unit of liquid measure is the U.S. gallon. The unit of length is feet. The unit of volume is cubic yards.

C. Material not used from a transporting vehicle shall be determined by the ENGINEER and deducted from the certified tag.

D. When material is to be measured and paid for on a volume basis and it would be impractical to determine the volume, or when requested by the CONTRACTOR in writing and approved by the ENGINEER in writing, the material will be weighed and converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the ENGINEER and shall be agreed to by the CONTRACTOR before such method of measurement of pay quantities will be adopted.

E. Full compensation for all expense involved in conforming to the above requirements for measuring and weighing materials shall be considered as included in the unit prices paid for the materials being measured or weighed and no additional allowances will be made therefore.

F. Quantities of material wasted or disposed of in a manner not called for under the Contract; or rejected loads of material, including material rejected after it has been placed by reason of failure of the CONTRACTOR to conform to the provisions of the Contract; or material not unloaded from the transporting vehicle; or material placed outside the lines indicated on the plans or given by the ENGINEER; or material remaining on hand after completion of the Contract, will not be paid for and such quantities will not be included in the final total quantities. No compensation will be allowed for hauling rejected material.

G. Bid items include all work necessary to complete the specific item described and not otherwise included in other bid items. The CONTRACTOR shall include in each bid item ***all*** costs required to construct the work in accordance with the Contract Documents and as identified below.

1.03 DESCRIPTION OF BID ITEMS

A. Bid Item 1: Mobilization/Demobilization.

1. The lump sum bid price for this item shall constitute full compensation for mobilization and demobilization including but not limited to equipment shipping and delivery, equipment set up, materials shipping and delivery, utility coordination, permitting including the Monterey County Demolition Permit and the City of Seaside Encroachment Permit, removal of Contractor's equipment, and project closeout. The Mobilization/Demobilization bid item shall not be in excess of ten percent (10%) of the total bid schedule. Twenty-five percent (25%) of the total Mobilization / Demobilization bid price shall be considered the cost of Demobilization and will not be paid until completion of the work.

B. Bid Item 2: Sheeting, Shoring and Bracing

1. The lump sum bid price for this item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide sheeting, shoring and bracing of excavations, trenches and grading as required in the Contract Documents. Cost shall include any engineering or geotechnical investigations performed by the Contractor.

C. Bid Item 3: Traffic Control

1. The lump sum bid price for this item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide traffic control around the work as required in the Encroachment Permit(s).

D. Bid Item 4: Lift Station - Civil.

1. The lump sum bid price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a duplex sewer lift station, as shown on the plans. This item includes excavation, base rock, pre-cast polymer concrete wet well and base, precast concrete valve vault, backfill and compaction, site grading and paving, ductile iron pipes, valves, fittings, appurtenances, and fences.
2. The price shall also include two cast-around manholes and the 8-inch and 15-inch PVC gravity sewers connecting them to the wet well.
3. The price shall also include in-kind replacement of wood fences, access driveway bollards and landscape irrigation systems.
4. The price shall also include costs for dewatering excavations and treating or disposing of removed water.

E. Bid Item 5: Lift Station – Electrical

1. The lump sum bid price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide the meter pedestal, automatic transfer switch, motor control center (PLC, two VFDs and SCADA Telemetry), instruments, controls, conduits, cables, equipment pads, antenna mast, and all electrical equipment and appurtenances not paid under other items.

2. The price shall include costs for SCADA integration and programming.

F. Bid Item 6: Retrofit and Relocate Existing Pumps.

1. The lump sum bid price shall include the removal of three pumps from existing lift station and converting the pumps from NT to NP installation (slide rail), installing and testing two (2) pumps into new lift station and providing third pump to OWNER as a spare. The work of this item shall be sequenced with the start-up and testing of the new pump station.
2. This item includes all components provided by the pump manufacturer, as listed in Section 33 32 20.

G. Bid Item 7: Relocate Generator.

1. The lump sum bid price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to relocate the existing 175 kW diesel electric generator set from the existing lift station and installing it at the new lift station. The price shall include anchoring hardware, providing and terminating power and control cables, and functional testing of the installed equipment.

H. Bid Item 8: 10-inch C900 Force Main.

1. The unit bid price per linear foot for this item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a 10-inch PVC C900 pipeline by open trench construction from the pump station to the terminal manhole, as shown on the plans. The price shall include furnishing and installing all pipe, tracer wire, fittings, air relief valves and appurtenances as described on the plans, and hydrostatically testing these structures according to the specifications, and making final connections to other portions of the Work. The price shall also include the removal and disposal of existing pavement, removal and disposal of excess excavation, backfill of excavations, and traffic control.
2. The price shall also include costs for restoring the streets and all other properties, back to initial condition.
3. The price shall also include costs for dewatering excavations and treating or disposing of removed water.

I. Bid Item 9: 12-inch Gravity Sewer Pipe PVC SDR 26.

1. The unit bid price per linear foot shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide all 12-inch PVC gravity sewer pipes as shown on the plans.
2. The price shall include furnishing and installing all PVC sewer pipes, fittings, cleanouts, building laterals, flushing inlets, and hydrostatically testing these structures according to the specifications. The price shall also include trenching, excavation, bedding, backfill, the removal and disposal of existing pavement, removal and disposal of excess excavation, and traffic control.
3. The price shall also include costs for restoring the streets and all other properties, back to initial condition.
4. The price shall also include costs for dewatering excavations and treating or disposing of removed water.

J. Bid Item 10: 10-inch Gravity Sewer Pipe PVC SDR 26.

1. The unit bid price per linear foot shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide all 10-inch PVC gravity sewer pipes as shown on the plans.
2. The price shall include furnishing and installing all PVC sewer pipes, fittings, cleanouts, building laterals, flushing inlets, and hydrostatically testing these structures according to the specifications. The price shall also include trenching, excavation, bedding, backfill, the removal and disposal of existing pavement, removal and disposal of excess excavation, and traffic control.
3. The price shall also include costs for restoring the streets and all other properties, back to initial condition.
4. The price shall also include costs for dewatering excavations and treating or disposing of removed water.

K. Bid Item 11: 2-inch Air-Vac Valve and 4-inch Blow-Off.

1. The lump sum bid price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide the combination air-release and vacuum breaker valve, with fittings, isolation valve and manhole, as shown on the plans. This item includes excavation, base rock, cast-in-place base, pre-cast concrete manhole with ring and lid, backfill and compaction.
2. Item also includes the 4-inch low point blow-off valve, including all fittings, pipe, valves, valve cans, lids, appurtenances, trench excavation, bedding, backfill and pavement restoration.

L. Bid Item 12: Service Lateral Tie-in to New Sanitary Sewer

1. The unit bid price per service shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide all sewer service lateral tie-ins gravity sewer pipes as shown on the plans. The price shall include excavation, backfill, surface restoration, pipe and fittings as specified.
2. This bid item's quantity shall be adjustable (increase or decrease) without limit to accommodate actual quantities found in the field.

M. Bid Items 13: Pre-Cast Manholes.

1. The unit bid price per manhole shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide all pre-cast polymer concrete sewer manholes as shown on the plans.
2. The price shall include furnishing and installing all cast-in-place manhole bases, pre-cast polymer concrete sewer manholes, and grade rings and lids as described on the plans, epoxy-coating the manhole base, and hydrostatically testing these structures according to the specifications. The price shall also include trenching, excavation, bedding, backfill, the removal and disposal of existing pavement, removal and disposal of excess excavation, and traffic control.
3. The price shall also include costs for restoring the streets and all other properties, back to initial condition.
4. The price shall also include costs for dewatering excavations and treating or disposing of removed water.

N. Bid Items 14: Cast-Around Manholes.

1. The unit bid price per manhole shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide all cast-around polymer concrete sewer manholes as shown on the plans.
2. The price shall include furnishing and installing all cast-around manhole bases, pre-cast polymer concrete sewer manholes, and grade rings and lids as described on the plans, epoxy-coating the manhole base, and hydrostatically testing these structures according to the specifications. The price shall also include trenching, excavation, bedding, backfill, the removal and disposal of existing pavement, removal and disposal of excess excavation, and traffic control.
3. The price shall also include costs for restoring the streets and all other properties, back to initial condition.
4. The price shall also include costs for dewatering excavations and treating or disposing of removed water.

O. Bid Item 15: Rehabilitate Existing Manholes:

1. The unit bid price per manhole for this item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide mortar lining and epoxy coating for five existing manholes, including replacement rims and lids. Payment shall include surface preparation, minor concrete spot repairs and temporary by-pass pumping.
2. Manholes are 4-ft diameter, nominally 8-feet deep.

P. Bid Item 16: Abandon Existing Manholes:

1. The unit bid price per manhole for this item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide sand backfill for abandoning manholes in-place. Payment shall include all pipeline plugs or appurtenances required for the work.

Q. Bid Item 17: Flush and Abandon Existing Pipelines

1. The lump sum bid price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to flush the existing force main and gravity sewers to be abandoned, capturing and disposing of flushing water, exposing and cutting the pipelines at the locations indicated on the Drawings, and setting grout plugs at each end of the abandoned segments. This item includes backfilling and compacting removed soil and restoring the site.
2. The price shall also include filling existing pipelines with cement slurry within the limits shown on the plans.

R. Bid Item 18: Demolish Existing Lift Station

1. The lump sum bid price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to abandon the existing sewer lift station including pedestals, electrical equipment, mechanical equipment, fences and pavement as shown on the plans. This item includes pumping out the existing lift station wet well, excavation, removal and disposal of lids, removing and disposing of pipes, breaking out of floors and inverts, backfilling and compacting removed soil and restoring the site.
2. The price shall also include costs for dewatering excavations and treating or disposing of removed water.

S. Bid Item 19: SCADA Integration Allowance.

1. This allowance shall be compensation for work performed by the District's SCADA Integrator, as directed in the Contract Documents. The allowance shall include materials, equipment, programming and support for start-up and testing. The value of this allowance is pre-entered in the Bid Form.
2. Payment for SCADA Integration Allowance will be made at actual cost plus a 5% General Contractor's mark-up, which price shall constitute full compensation for the completion of all such work as required per the Contract Documents.
3. Additional items of work subcontracted to the District SCADA Integrator beyond those required in the Contract Documents (if any) shall be included in Bid Item No. 5, Lift Station Electrical.

T. Bid Item 20: Permit Allowance.

1. This allowance is for the reimbursement of the permit fees charged by the City of Seaside for Encroachment and Construction Permits. The value of this allowance is pre-entered in the Bid Form.
2. Payment under this item shall be for the actual cost of the permit fees, as reflected on the issuing agency invoices. Contractor's costs with respect to obtaining permits shall be included under Bid Item 1, Mobilization/Demobilization.

U. Bid Item 21: Remediation Allowance.

1. This allowance is for the reimbursement of pre-demolition remediation of potential environmental conditions at the existing lift station prior to demolition. The value of this allowance is pre-entered in the Bid Form.
2. Payment under this item shall be for the actual cost of material testing, permitting, selective removal of material(s), waste transport to disposal facility, disposal fees and reporting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 02 41 00

DEMOLITION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Demolishing and removing existing buildings and structures, and associated foundations and slabs, and all associated equipment and materials and other improvements within the limits indicated on the Drawings.

B. Removing concrete paving, sidewalks, driveways and asphaltic concrete pavement.

C. Removing other improvements, including pipe culverts, sewers, and miscellaneous concrete/masonry structures.

D. Recycling or disposing of demolished/removed materials and equipment.

E. Restoring the sites by rough grading.

1.02 REGULATORY REQUIREMENTS

A. Remove items containing lead paint at buildings and structures before beginning demolition or removal of those structures. Removal shall be by a licensed lead abatement contractor.

B. Conform to applicable federal, state and local codes for demolition activities, disposal of debris, and for recycling or salvaging of materials.

C. Coordinate removal work with utility companies.

1.03 SUBMITTALS

A. Submittals shall conform to requirements of Section 01 30 00, Contractor Submittals

B. Submit a Demolition/Removal Plan, including:

1. Proposed methods, equipment, and sequence of operations for demolition of buildings and structures. Describe coordination for shutting off, capping, and removing temporary utilities.
2. Proposed methods, equipment, materials and sequence of operations for removal of pavements and other improvements.
3. Proposed moving, demolition and removal schedule.
4. Proposed plan for reclamation/disposal of equipment, materials, waste and debris, including permits, as applicable, of reclamation/disposal facilities, and for recycling or salvaging materials.

C. Obtain permit from the Monterey Bay Air Resources District for building demolition, as required.

D. Submit load tickets from disposal or recycling facilities for all removed materials.

1.04 SCHEDULE

A. Demolition of the existing pump station and gravity manholes shall not commence until the replacement pump station is tested and fully operational.

1.05 OWNERSHIP OF MATERIAL AND EQUIPMENT

A. All materials and equipment designated for demolition and removal become the property of the Contractor.

B. Items to be retained by Owner:
1. Submersible wastewater pumps. See Section 33 32 20
2. Diesel-Electric Generator and enclosure, to be relocated to replacement pump station.
3. Items to be removed and delivered to the Owner's Corporation Yard at 2840 4th Avenue, Marina, CA 93933.
   a. Diesel Fuel Tank at Generator (drain and disconnect).
   b. PLC Cabinet and control components
   c. ARI air relief valve from force main
   d. Pressure transducer from force main
   e. Floats from wet well
   f. Radio antenna
   g. Copper louver
   h. Surge valve
   i. Check Valves (3)
   j. Water service backflow preventer (1" RP)

C. Items to remain:
1. Two monitoring wells as indicted on the Drawings. Protect these in place during the Work.

1.06 STORAGE AND HANDLING

A. Remove equipment and materials and all waste and debris resulting from demolition from site. Remove material as work progresses to avoid clutter.

1.07 ENVIRONMENTAL CONTROLS

A. Inspections for asbestos and lead paint at the existing site have been performed, and the results are provided in the Appendix. Materials with paint that contains in excess of 0.5 percent lead are identified in the report. Asbestos materials were not detected.

B. Notify and protect workers in accordance with applicable Federal, State, and Local laws, regulations and ordinances. Note: The lead-based paint does not create a hazardous waste condition, so disposal is not affected.

C. If, in the course of the Work, materials are exposed which may require remediation, special handling or special disposal, Contractor shall notify the Engineer and test those

materials to determine if remediation is required. If remediation is required, segregate and dispose of those materials separately.

D. Minimize spread of dust and flying particles. If required by governing regulations, use temporary enclosures and other suitable methods to prevent the spread of dust, dirt and debris.

E. Use appropriate controls to limit noise from demolition to levels designated in City ordinances and following OSHA regulations.

F. Do not use water where it can create dangerous or objectionable conditions, such as localized flooding, erosion, or sedimentation of nearby ditches or streams.

PART 2 - PRODUCTS

2.01 EQUIPMENT AND MATERIALS FOR DEMOLITION

A. Use equipment approved under Paragraph 1.03 of this section.

2.02 BACKFILL MATERIALS

A. Suitable materials consist of:
1. Excess soils excavated during other portions of the Work.
2. Any locally obtained mineral soil capable of meeting the compaction requirements of this section.
3. Any materials containing vegetable or organic matters, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Notify Engineer in writing at least 48 hours before starting demolition of each property.

B. Prior to demolition, make an inspection with Engineer to determine the condition of existing structures and features adjacent to items designated for demolition.

C. Do not proceed with demolition or removal operations until after the joint inspection and subsequent authorization by Engineer.

3.02 PREPARATION

A. Identify known below-grade utilities to be preserved, if any. Stake and flag locations.

3.03 PROTECTION OF PERSONS AND PROPERTY

A. Provide safe working conditions for employees throughout demolition and removal operations. Observe safety requirements for work below grade.

B. Maintain safe access to adjacent property and buildings. Do not obstruct roadways adjacent to the work.

C. Perform demolition/removal activities in a manner to prevent damage to adjacent property.

D. The Contractor shall be responsible for safety of adjacent structures.

E. Erect and maintain enclosures, barriers, warning lights, and other required protective devices.

3.04 PROTECT THE FOLLOWING FROM DAMAGE OR DISPLACEMENT:

A. Adjacent properties not designated for demolition/removal under this contract.

B. Trees and plants identified to remain by the project biologist.

C. Utilities designated to remain.

D. Pavement and utility structures not designated for demolition/removal under this contract.

E. Bench marks, monuments, and existing structures not designated for demolition/removal under this contract.

3.05 UTILITY SERVICES

A. Follow rules and regulations of authorities or companies having jurisdiction over communications, pipelines, and electrical distribution services.

B. Notify and coordinate with utility company when temporary interruption of utility service is necessary.

3.06 BUILDING DEMOLITION

A. Demolish all buildings and structures as shown on the plans.

B. Proceed with demolition from the top of the structure to the ground.

C. Carefully remove structural framing members.

D. Do not overload existing roof or structures.

E. Remove foundations of demolished structures.

F. Fires are not permitted.

3.07 BELOW-GRADE STRUCTURES

A. Remove all major mechanical items, including pipes and conduits greater than 2-inch diameter.

B. Demolish and remove concrete walls to the depth indicated on the plans. Minimum depth of removal shall be 4-feet below finished grade.

C. Clean floors and walls to remove any visible oils or petroleum products. Break out floors or inverts in at least two places to allow draining. Backfill as shown on the drawings.

3.08 REMOVALS

A. Remove pavements and other improvements by methods that will not damage underground utilities that are not designated for removal under this contract.

B. Minimize amount of earth loadings during removal operations.

3.09 DISPOSAL

A. Dispose of removed equipment, materials, waste and debris in a manner conforming to applicable laws and regulations.

B. Remove from the site all items contained in or upon the structure. Conform to requirements of Section 01 56 00, Temporary Environmental Controls.

C. To the extent possible, concrete and asphalt shall be recycled.

1. Segregate concrete, asphalt and other materials into separate truckloads to facilitate processing at the disposal facility.

D. Document costs for transport and disposal of any materials requiring remediation and disposal at facilities other than municipal landfills.

3.10 BACKFILL

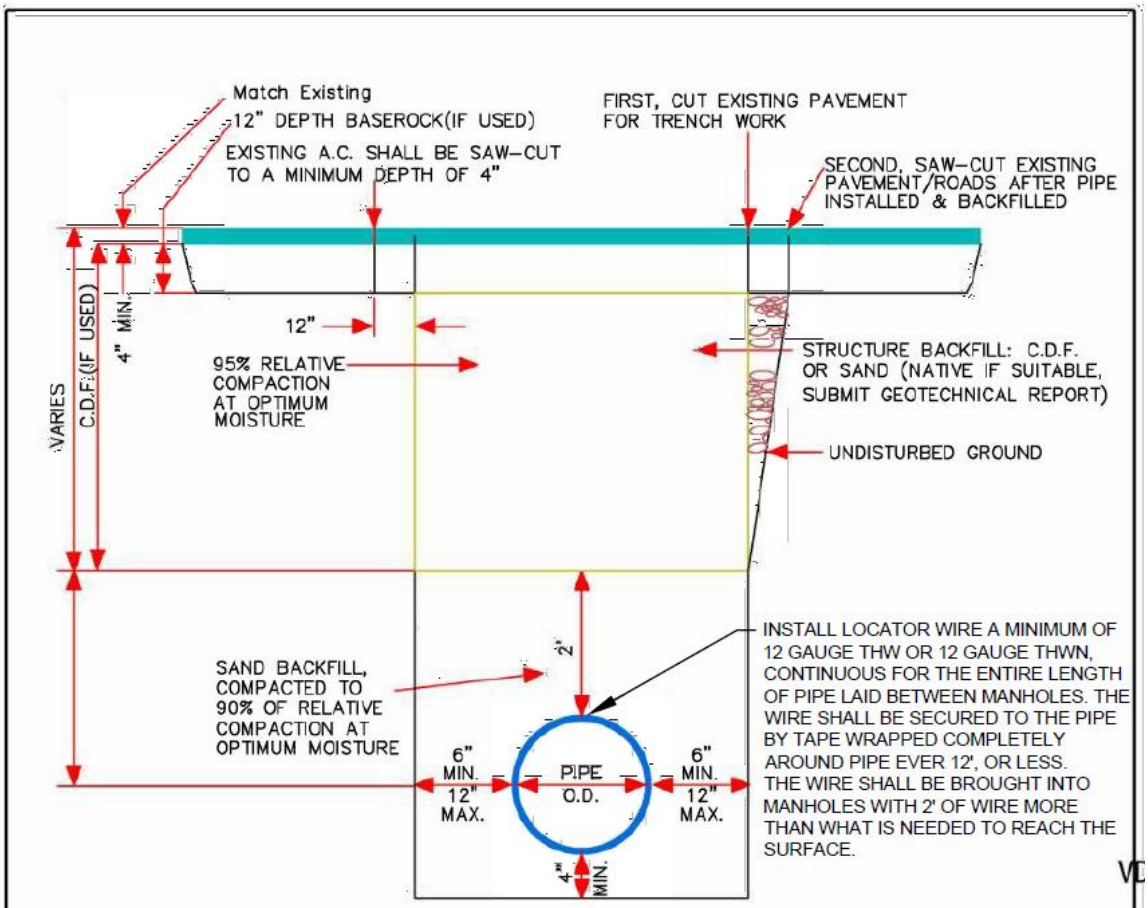
A. Backfill removal areas level with adjacent natural ground.

B. Place and compact backfill in 8- to 12-inch lifts.

C. Compact backfill to not less than 90 percent of maximum dry density as determined by ASTM D 698.

END OF SECTION

Add to Appendix C, City of Seaside Encroachment Permit Conditions



1. AGGREGATE SHALL BE ¾" OR 1½" CLASS II BASEROCK, MINIMUM DEPTH 12"
2. TRENCHES SHALL BE EXCAVATED IN A NEAT & WORKMAN LIKE MANNER AT THE STREET SURFACE AND THE SHAPE SHALL BE RECTANGULAR. APPLY TACK COAT TO CUT EDGE OF EXISTING PAVEMENT.
3. SAND BACKFILL SHALL MEET CALTRANS SECTION 19-3.
4. NO BEDDING REQUIRED FOR DUCTILE IRON PIPE, EXCEPT WHEN WATER IS IN THE TRENCH.
5. DEPTH FROM FINISH GRADE TO TOP OF PIPE SHALL BE 36" MINIMUM.
6. ALL REPAIR TRENCHES IN EXISTING STREETS SHALL BE BACKFILLED PER DETAIL ABOVE, THEN ADHERE TO THE FOLLOWING AS APPLICABLE:
   A) CONTROL DENSITY FILL (C.D.F.) OVER PIPE UP TO WITHIN 4" OF FINISHED GRADE, STEEL PLATED WITH COLD-MIX EDGES FOR A MINIMUM OF 24 HOURS BEFORE FINAL PAVING. COMPACTION TESTING OF CDF NOT REQUIRED, OR,
   B) PROVIDE MINIMUM OF 12" OF CLASS II BASE, OR MATCH EXISITING THICKNESS, OVER COMPACTED BACKFILL. CERTIFIED COMPACTION REPORTS SHALL BE SUBMITTED TO THE CITY INSPECTOR.
   C) C.D.F REQUIRED IN BROADWAY AVE., FREMONT BLVD., DEL MONTE BLVD., LA SALLE AVE., HILBY AVE, AND NOCHE BUENA ST., GENERAL JIM MOORE BLVD
   D) C.D.F. REQUIRED WHEN WIDTH OF TRENCH IS LESS THAN 18" OR TOTAL PATCH AREA LESS THAN 100 SQUARE FEET.
7. HOT MIX ASPHALT GREATER THAN 5.5" IN THICKNES SHALL BE PLACED & COMPACTED IN TWO LIFTS. HMA SHALL BE TYPE "A", ½" MEDIUM MIX. SUBMIT COMPACTION REPORTS AS REQUESTED.
8. SLURRY SEAL PAVEMENT FROM LIP OF GUTTER TO LIP OF GUTTER FROM LINE A STATION 10+00.00 TO 25+24.00 AND LIP OF GUTTER TO LIP OF GUTTER ALONG LINE B.

CITY OF SEASIDE CALIFORNIA

PUBLIC WORKS DEPARTMENT

Drawing File No. S-601

APPROVED: _____

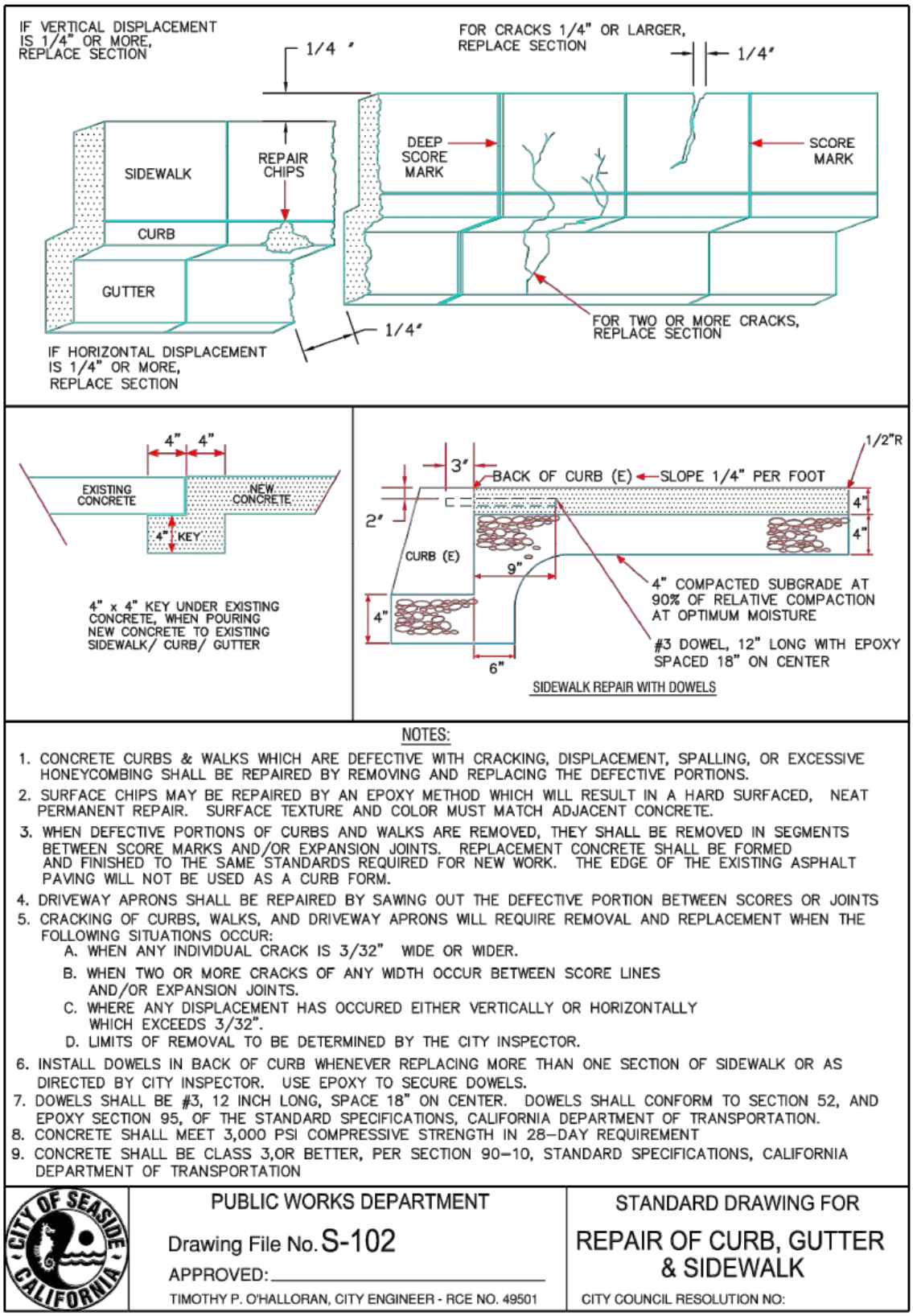
TIMOTHY P. O'HALLORAN, CITY ENGINEER - RCE NO. 49501

STANDARD DRAWING FOR

TRENCH BACKFILL
SDR LESS THAN 26

CITY COUNCIL RESOLUTION NO:

Add to Appendix C, City of Seaside Encroachment Permit Conditions



NOTES:

1. CONCRETE CURBS & WALKS WHICH ARE DEFECTIVE WITH CRACKING, DISPLACEMENT, SPALLING, OR EXCESSIVE HONEYCOMBING SHALL BE REPAIRED BY REMOVING AND REPLACING THE DEFECTIVE PORTIONS.
2. SURFACE CHIPS MAY BE REPAIRED BY AN EPOXY METHOD WHICH WILL RESULT IN A HARD SURFACED, NEAT PERMANENT REPAIR. SURFACE TEXTURE AND COLOR MUST MATCH ADJACENT CONCRETE.
3. WHEN DEFECTIVE PORTIONS OF CURBS AND WALKS ARE REMOVED, THEY SHALL BE REMOVED IN SEGMENTS BETWEEN SCORE MARKS AND/OR EXPANSION JOINTS. REPLACEMENT CONCRETE SHALL BE FORMED AND FINISHED TO THE SAME STANDARDS REQUIRED FOR NEW WORK. THE EDGE OF THE EXISTING ASPHALT PAVING WILL NOT BE USED AS A CURB FORM.
4. DRIVEWAY APRONS SHALL BE REPAIRED BY SAWING OUT THE DEFECTIVE PORTION BETWEEN SCORES OR JOINTS
5. CRACKING OF CURBS, WALKS, AND DRIVEWAY APRONS WILL REQUIRE REMOVAL AND REPLACEMENT WHEN THE FOLLOWING SITUATIONS OCCUR:
   A. WHEN ANY INDIVIDUAL CRACK IS 3/32" WIDE OR WIDER.
   B. WHEN TWO OR MORE CRACKS OF ANY WIDTH OCCUR BETWEEN SCORE LINES AND/OR EXPANSION JOINTS.
   C. WHERE ANY DISPLACEMENT HAS OCCURED EITHER VERTICALLY OR HORIZONTALLY WHICH EXCEEDS 3/32".
   D. LIMITS OF REMOVAL TO BE DETERMINED BY THE CITY INSPECTOR.
6. INSTALL DOWELS IN BACK OF CURB WHENEVER REPLACING MORE THAN ONE SECTION OF SIDEWALK OR AS DIRECTED BY CITY INSPECTOR. USE EPOXY TO SECURE DOWELS.
7. DOWELS SHALL BE #3, 12 INCH LONG, SPACE 18" ON CENTER. DOWELS SHALL CONFORM TO SECTION 52, AND EPOXY SECTION 95, OF THE STANDARD SPECIFICATIONS, CALIFORNIA DEPARTMENT OF TRANSPORTATION.
8. CONCRETE SHALL MEET 3,000 PSI COMPRESSIVE STRENGTH IN 28-DAY REQUIREMENT
9. CONCRETE SHALL BE CLASS 3,OR BETTER, PER SECTION 90-10, STANDARD SPECIFICATIONS, CALIFORNIA DEPARTMENT OF TRANSPORTATION

CITY OF SEASIDE CALIFORNIA

PUBLIC WORKS DEPARTMENT

Drawing File No. S-102

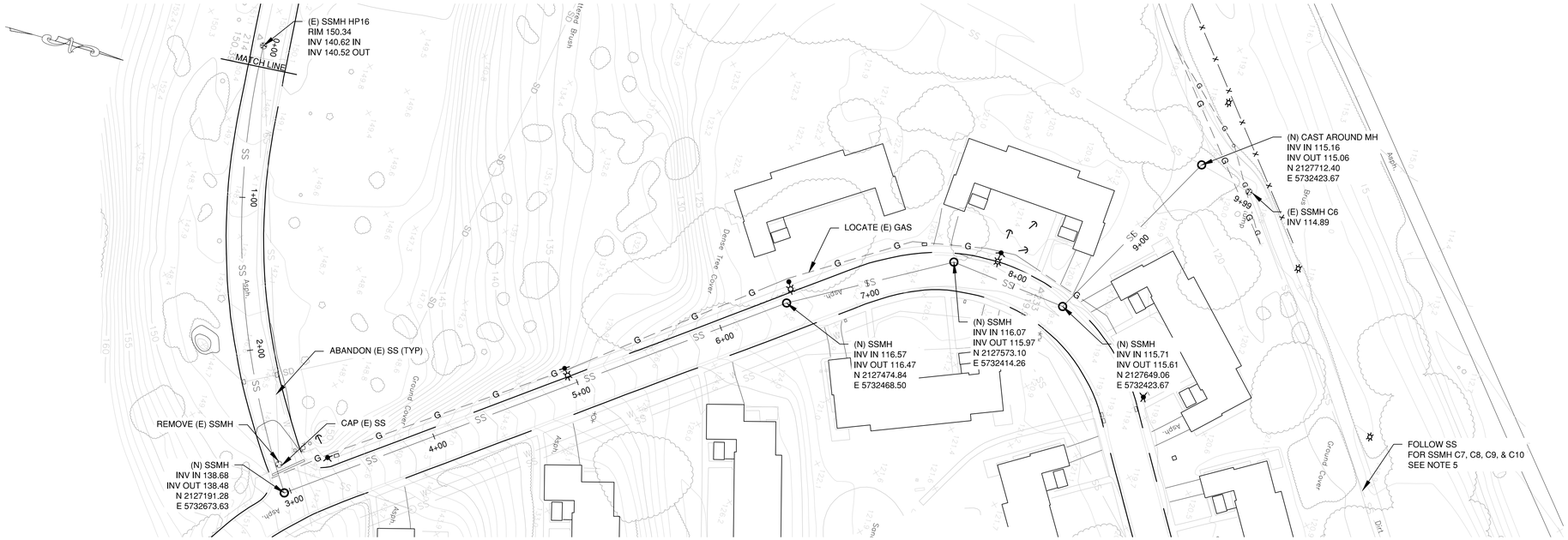
APPROVED: _____

TIMOTHY P. O'HALLORAN, CITY ENGINEER - RCE NO. 49501

STANDARD DRAWING FOR

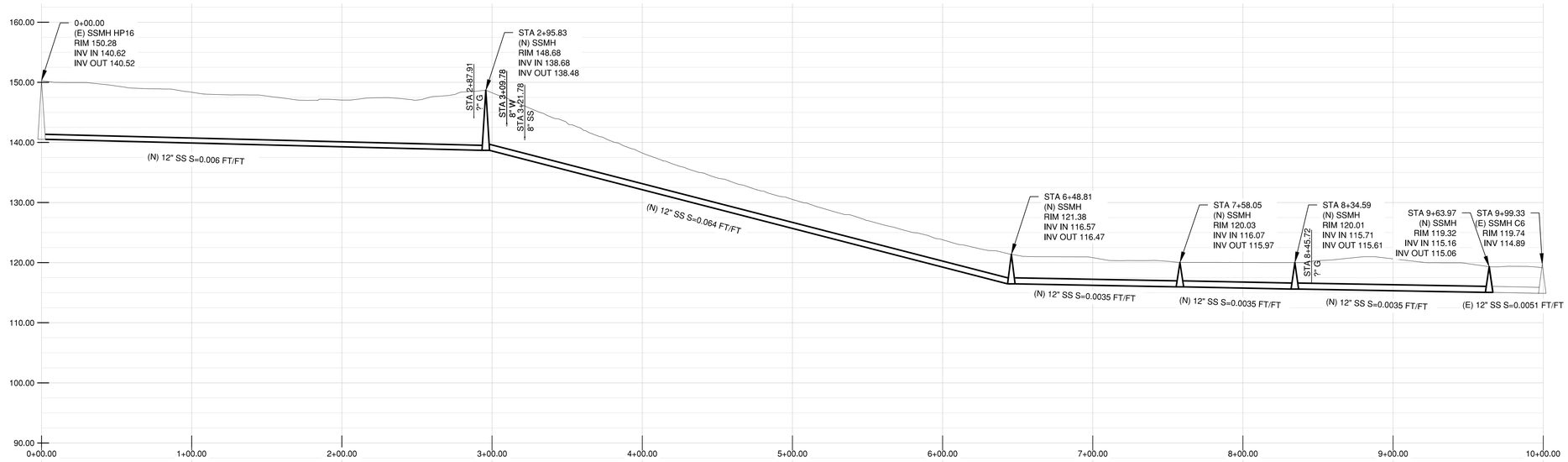
REPAIR OF CURB, GUTTER & SIDEWALK

CITY COUNCIL RESOLUTION NO:



40 0 40 80

SCALE: 1 INCH = 40 FEET



PROFILE

HOR. SCALE: 1"=40'
VER. SCALE: 1"=10'

REHABILITATE MANHOLES	
MANHOLE	DEPTH (FT)
C6	5
C7	5
C8	10
C9	12
C10	5

NOTES:
1. PIPE LOCATIONS ARE APPROXIMATE. ALL PIPES SHALL BE FIELD VERIFIED.
2. MINIMUM 12" CLEARANCE WHEN CROSSING PIPELINES.
3. NEW MANHOLES TO BE EPOXY-LINED WITH RAVEN 405 OR EQUAL.
4. FOR CROSSING (E) SEWER LATERALS WITH LESS THAN 12" CLEARANCE, SEE DETAIL 2/19
5. REHABILITATE MANHOLES C6, C7, C8, C9, & C10 (NOT SHOWN)

NO.	REVISION DESCRIPTION	DATE	APPR
1	ADDENDUM 2	1/15/21	AAS

MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93933
(831) 384-6131

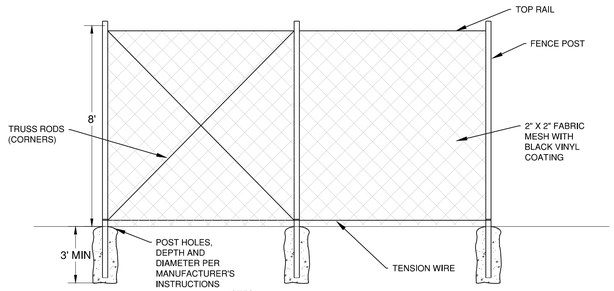
Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
3 QUAIL RUN CIRCLE, STE. 101
SALINAS, CA 93907
(831) 883-4848

REGISTERED PROFESSIONAL ENGINEER
ANDREW A. STOBERL
No. 69703
CIVIL
STATE OF CALIFORNIA

ORD VILLAGE FORCE MAIN REPLACEMENT
PLAN & PROFILE (6 OF 6)

DATE: 12/04/2020
SCALE: 1" = 40'
DESIGN: CJM
DRAWN: CJM
CHECK: AAS

SHEET 10 OF 31



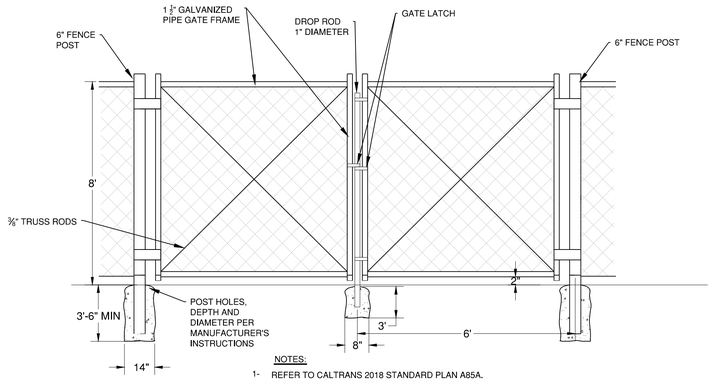
NOTES:

1- REFER TO CALTRANS 2018 STANDARD PLAN A85.
2- SEE CALTRANS 2018 STANDARD PLAN A85 FOR CHAIN LINK GATE INSTALLATION.

FENCE DETAIL

NTS

1 / 13



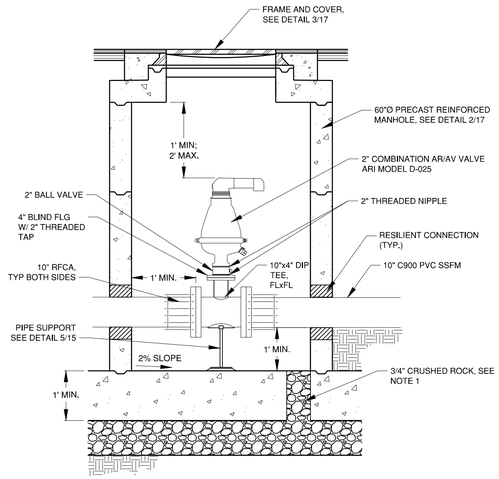
NOTES:

1- REFER TO CALTRANS 2018 STANDARD PLAN A85A.
2- SEE CALTRANS 2018 STANDARD PLAN A85A FOR CHAIN LINK GATE INSTALLATION.
3- ALL FENCE MATERIAL SHALL BE GALVANIZED.

GATE DETAIL

NTS

2 / 13



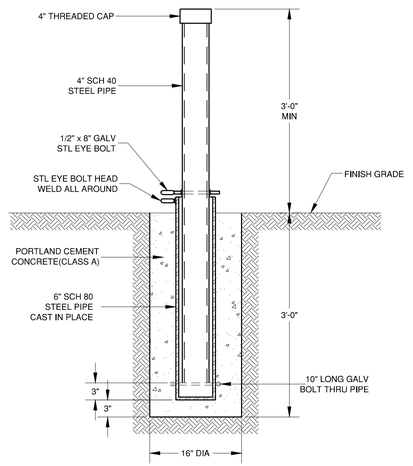
NOTES:

1. SLOPE BASE TO ONE CORNER, CORE DRILL 4" HOLE THROUGH BASE AND FILL WITH CRUSHED ROCK.
2. ALL HARDWARE AND FASTENERS SHALL BE 316 SS.
3. PIPE PENETRATIONS THROUGH MANHOLE SHALL INCLUDE ASTM C923 RESILENT CONNECTORS SUCH AS KOR-N-SEAL, A-LOK OR EQUAL PER DETAIL

AR/AV ASSEMBLY

NTS

3 / 6

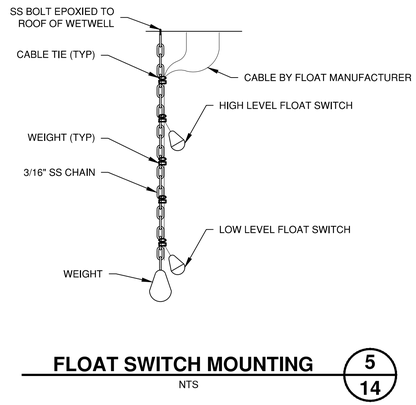


NOTE: PAINT GUARD POST TO MATCH SITE FENCING

REMOVABLE GUARD POST

NTS

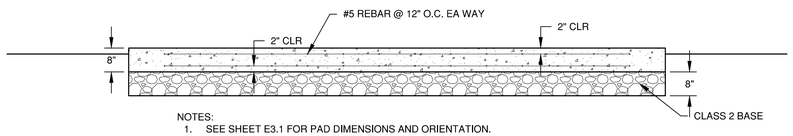
4 / 13



FLOAT SWITCH MOUNTING

NTS

5 / 14



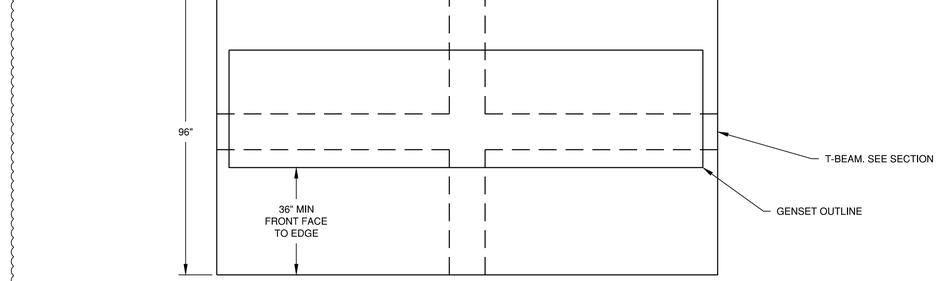
NOTES:

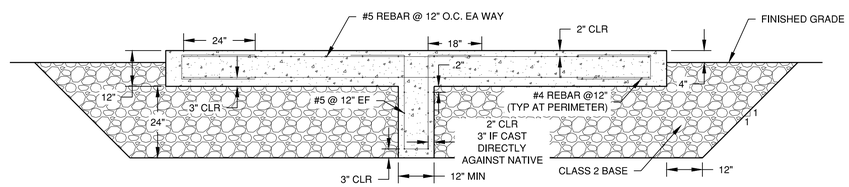
1. SEE SHEET E3.1 FOR PAD DIMENSIONS AND ORIENTATION.
2. SLOPE GRADE AWAY FROM PAD.

POWER PEDESTAL PAD

1/2"=1'

7 / -





NOTES:

1. SEE SHEET E4.0 FOR PAD ORIENTATION.
2. SLOPE GRADE AWAY FROM PAD.

GENSET PAD

1/2"=1'

6 / -

NO.	REVISION DESCRIPTION	DATE	APPR
2	ADDENDUM 2	1/15/21	AAS

MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93933
(831) 384-6131

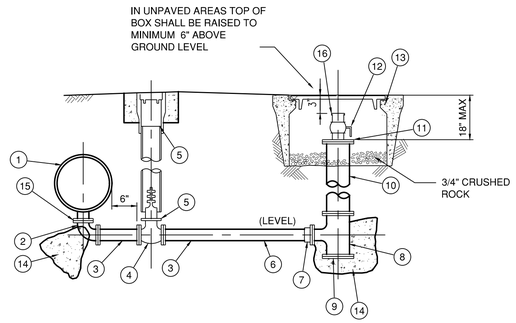
Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
3 QUAIL RUN CIRCLE, STE. 101
SALINAS, CA 93907
(831) 883-4848

REGISTERED PROFESSIONAL ENGINEER — ANDREW A. STOBBART — No. 69703 — CIVIL — STATE OF CALIFORNIA

ORD VILLAGE FORCE MAIN REPLACEMENT
SEWER DETAILS (1 OF 4)

DATE:	12/04/2020
SCALE:	AS NOTED
DESIGN:	CJM
DRAWN:	CJM
CHECK:	AAS

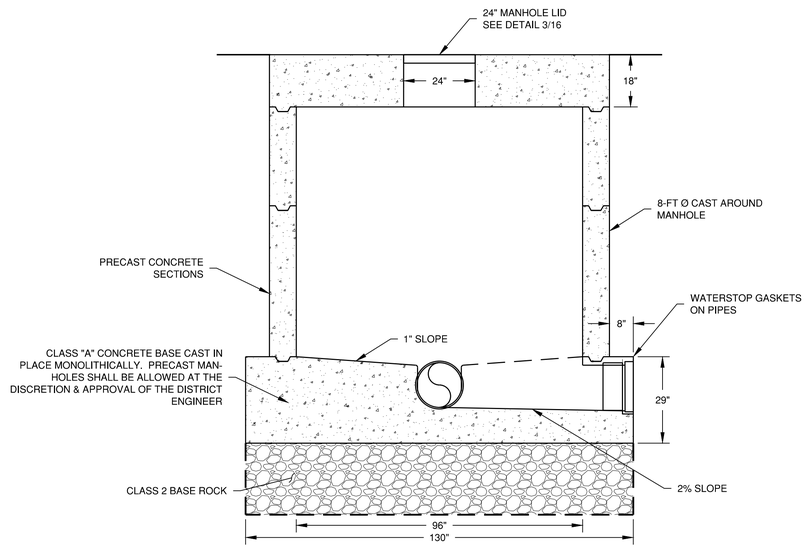
SHEET 15 OF 31



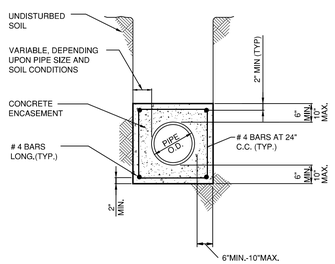
MATERIALS

1. PIPE DIA. x 4" D.I. OR WSP TEE, FLANGED
2. 4" D.I. 90° ELL, FLG. x FLG.
3. 4" x AS REQ'D D.I. SPOOL
4. 4" RW GATE VALVE, FLG. x FLG. ONE VALVE REQUIRED FOR MAINS LESS THAN 24-INCHES IN DIAMETER. TWO VALVES ARE REQUIRED, AS SHOWN, FOR MAINS 24-INCHES IN DIAMETER AND LARGER.
5. VALVE AND VALVE BOX INSTALLATION PER M.C.W.D. STD. PLAN W-7
6. 4" x AS REQ'D FLG. x PE D.I. PIPE
7. 4" D.I. FLANGE COUPLING ADAPTER
8. 8" x 4" D.I. TEE
9. 8" D.I. BLIND FLANGE
10. 8" x AS REQ'D D.I. PIPE
11. 8" BLIND FLANGE W/ 2 1/2 " TAP
12. 2 1/2" BRASS NIPPLE AND 2 1/2" BALL VALVE, IP THREAD
13. 8" MINIMUM DIAMETER VALVE BOX
14. THRUST BLOCKS PER MCWD STD. PLAN W-13
15. INSULATING KIT SHALL BE PROVIDED AS REQUIRED BY CORROSION STUDY & DISTRICT.
16. 2 1/2" BRASS NIPPLE, I.P. THREAD X FH THREAD, WITH PROTECTIVE CAP

BLOW-OFF 1/7
NTS



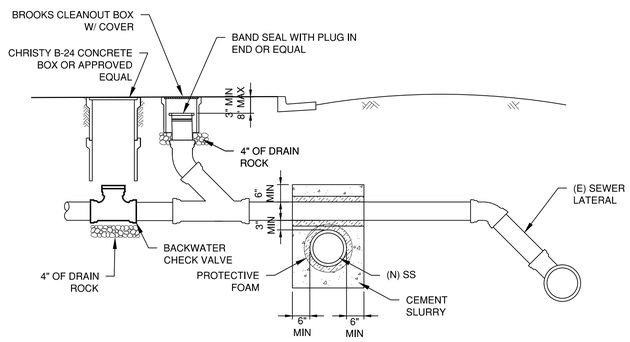
CAMH1 3/-
NTS



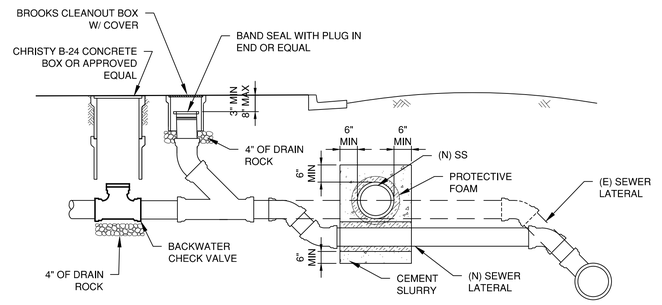
NOTES:

1- CONCRETE ENCASEMENT SHALL BE USED WHEN COVER IS UNDER 4' OR OVER 20'
2- ENCASEMENT TO BE PLACED AGAINST UNDISTURBED NATURAL GROUND OR FILL COMPACTED TO 90% RELATIVE DENSITY
3- NO. 4 STEEL REINFORCING BARS SHALL BE USED AS SPECIFIED.
4- UNLESS NOTED OTHERWISE, ENCASEMENT SHALL BE CLASS "B" CONCRETE.
5- WHERE SLOPED TRENCHES ARE USED, WALLS WILL NOT BEGIN TO SLOPE CLOSER THAN 12" FROM THE TOP OF THE PIPE.
6- DUCTILE IRON PIPE MAY BE PERMISSIBLE IN LIEU OF CONCRETE ENCASEMENT AS APPROVED BY THE ENGINEER.

CONCRETE ENCASEMENT 4/-
NTS

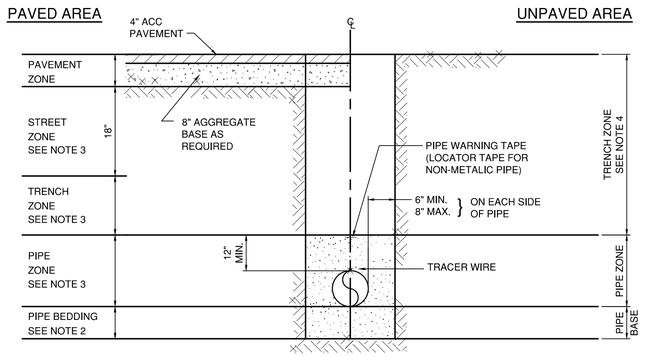


OPTION 1



OPTION 2

LATERAL CROSSING 2/10
NTS



TRENCH SECTION

NOTES:

1- ALL WORKS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02223.
2- FOR PIPE SIZES 4-INCH THROUGH 10-INCH DIAMETER, PIPE BASE SHALL BE A MINIMUM OF 4-INCHES IN DEPTH; FOR 12-INCH DIAMETER PIPE AND LARGER, PIPE SHALL BE A MINIMUM OF 6-INCHES IN DEPTH.
3- 95% COMPACTION OF IMPORTED BACKFILL OR NATIVE BACKFILL AS APPROVED BY DISTRICT ENGINEER
4- 90% COMPACTION OF IMPORTED BACKFILL OR NATIVE BACKFILL AS APPROVED BY DISTRICT ENGINEER

PIPE BEDDING DETAIL 5/-
NTS

NO.	REVISION DESCRIPTION	DATE	APPR
⚠	ADDENDUM 2	1/15/21	AAS

MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93933
(831) 384-6131

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3 QUAIL RUN CIRCLE, STE. 101
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REGISTERED PROFESSIONAL ENGINEER ANDREW A. STERBOUL No. 69703 CIVIL STATE OF CALIFORNIA

ORD VILLAGE FORCE MAIN REPLACEMENT
SEWER DETAILS (4 OF 4)

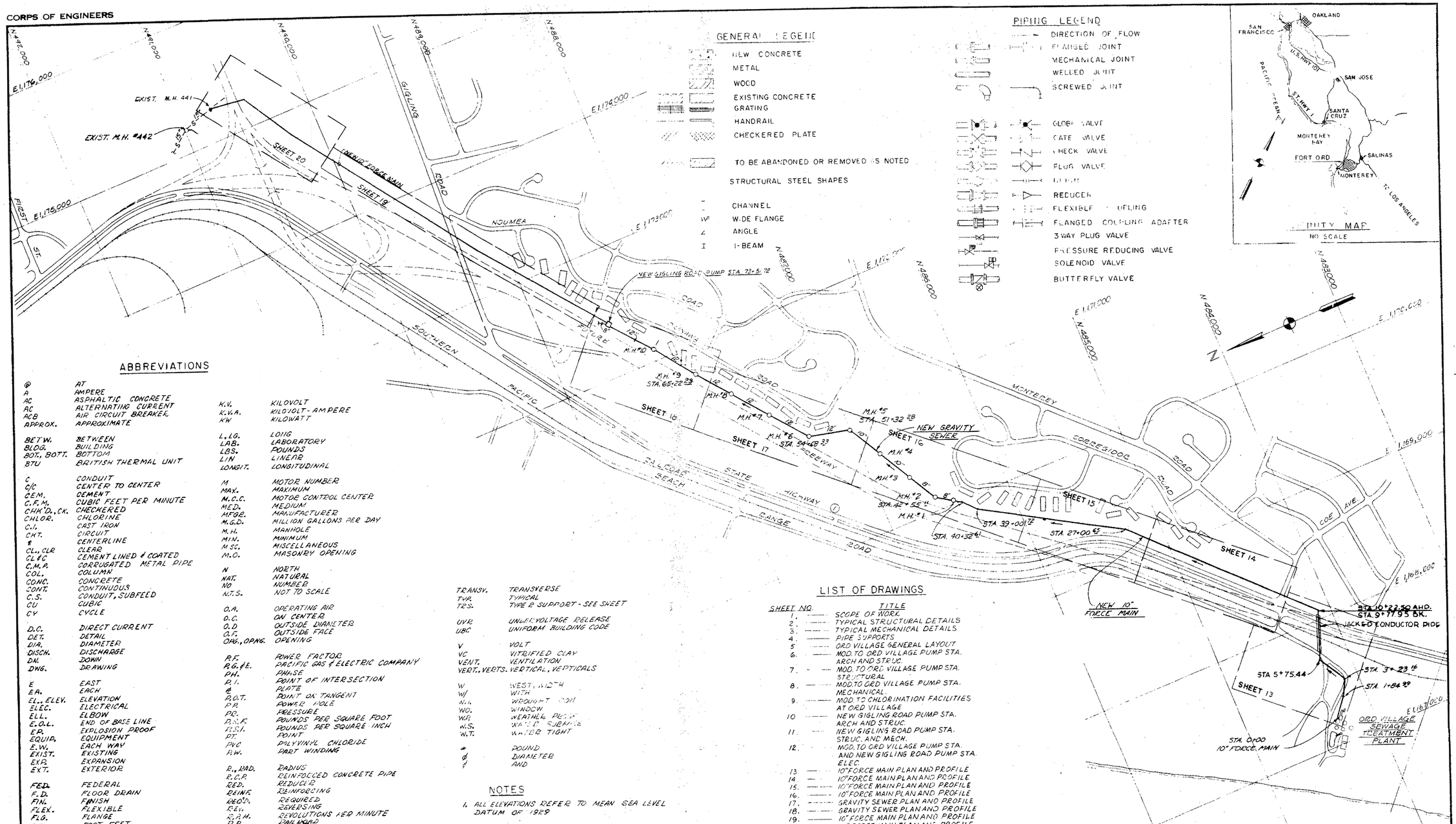
DATE: 12/04/2020
SCALE: AS NOTED
DESIGN: CJM
DRAWN: CJM
CHECK: AAS

SHEET 18 OF 31

CORPS OF ENGINEERS

U. S. ARMY

001



UNITY MAP
NO SCALE

GENERAL LEGEND

- NEW CONCRETE
- METAL
- WOOD
- EXISTING CONCRETE
- GRATING
- HANDRAIL
- CHECKERED PLATE
- TO BE ABANDONED OR REMOVED AS NOTED

STRUCTURAL STEEL SHAPES

- C CHANNEL
- WF WIDE FLANGE
- ∠ ANGLE
- I I-BEAM

PIPING LEGEND

- DIRECTION OF FLOW
- FLANGED JOINT
- MECHANICAL JOINT
- WELDED JOINT
- SCREWED JOINT
- GLOBE VALVE
- GATE VALVE
- CHECK VALVE
- PLUG VALVE
- UNION
- REDUCER
- FLEXIBLE COUPLING
- FLANGED COUPLING ADAPTER
- 3 WAY PLUG VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- BUTTERFLY VALVE

ABBREVIATIONS

@	AT
A	AMPERE
AC	ASPHALTIC CONCRETE
AC	ALTERNATING CURRENT
ACB	AIR CIRCUIT BREAKER
APPROX.	APPROXIMATE
BETW.	BETWEEN
BLDG.	BUILDING
BOT., BOTT.	BOTTOM
BTU	BRITISH THERMAL UNIT
C	CONDUIT
C/C	CENTER TO CENTER
CEM.	CEMENT
C.F.M.	CUBIC FEET PER MINUTE
CHK'D., CK.	CHECKERED
CHLOR.	CHLORINE
C.I.	CAST IRON
CKT.	CIRCUIT
℄	CENTERLINE
CL., CLR	CLEAR
CL℄C	CEMENT LINED & COATED
C.M.P.	CORRUGATED METAL PIPE
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
C.S.	CONDUIT, SUBFEED
CU	CUBIC
CY	CYCLE
D.C.	DIRECT CURRENT
DET.	DETAIL
DIA.	DIAMETER
DISCH.	DISCHARGE
DN.	DOWN
DWG.	DRAWING
E	EAST
EA.	EACH
EL., ELEV.	ELEVATION
ELEC.	ELECTRICAL
ELL.	ELBOW
E.O.L.	END OF BASE LINE
EP.	EXPLOSION PROOF
EQUIP.	EQUIPMENT
E.W.	EACH WAY
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
FED.	FEDERAL
F.D.	FLOOR DRAIN
FIN.	FINISH
FLEX.	FLEXIBLE
FLG.	FLANGE
FT.	FOOT, FEET
F.V.N.R.	FULL VOLTAGE, NON REVERSING
GA.	GAGE
GAL.	GALLONS
GALV.	GALVANIZED
G.P.M.	GALLONS PER MINUTE
GR	GRADE
G.S.	GALVANIZED STEEL
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HORIZ.	HORIZONTAL
H.P.	HORSE POWER
HR., HRS.	HOUR, HOURS
H.W.	HIGH WATER
HWY.	HIGHWAY
I.D.	INSIDE DIAMETER
I.E.	INVERT ELEVATION
I.F.	INSIDE FACE
IMP.	IMPEDANCE
INV.	INVERT
JT.	JOINT
K.V.	KILOVOLT
K.V.A.	KILOVOLT-AMPERE
KW	KILOWATT
L.,LG.	LONG
LAB.	LABORATORY
LBS.	POUNDS
LIN	LINEAR
LONGIT.	LONGITUDINAL
M	MOTOR NUMBER
MAX.	MAXIMUM
M.C.C.	MOTOR CONTROL CENTER
MED.	MEDIUM
MFGR.	MANUFACTURER
M.G.D.	MILLION GALLONS PER DAY
M.H.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
N	NORTH
NAT.	NATURAL
NO	NUMBER
N.T.S.	NOT TO SCALE
O.A.	OPERATING AIR
O.C.	ON CENTER
O.D	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OPG., OPNG.	OPENING
P.F.	POWER FACTOR
P.G.&E.	PACIFIC GAS & ELECTRIC COMPANY
PH.	PHASE
P.I.	POINT OF INTERSECTION
℄	PLATE
P.O.T.	POINT ON TANGENT
PP	POWER POLE
PR.	PRESSURE
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PT.	POINT
PVC	POLYVINYL CHLORIDE
P.W.	PART WINDING
R., RAD.	RADIUS
R.C.P.	REINFORCED CONCRETE PIPE
RED.	REDUCER
REINF.	REINFORCING
REQ'D.	REQUIRED
REV.	REVERSING
R.P.M.	REVOLUTIONS PER MINUTE
R.R.	RAILROAD
S	SLOPE
SCH.	SCHEDULE
SEC.	SECOND, SECONDARY
SED.	SEDIMENTATION
SEL.	SELECTOR
S.G.	SPECIFIC GRAVITY
SH., SHT.	SHEET
SOL.	SOLUTION
SPEC.	SPECIFICATION
SQ.	SQUARE
STA.	STATION
STD.	STANDARD
STL.	STEEL
STR.	STRUCTURE
SW.	SWITCH
SYM.	SYMMETRICAL
T℄B	TOP & BOTTOM
T℄G	TONGUE & GROOVE
T.A.P.	TYPE A PIPE - SEE SHEET
T.A.H.S.	TYPE A HANDRAIL SUPPORT - SEE SHEET
TEMP.	TEMPERATURE
TOT.	TOTAL
TRANSV.	TRANSVERSE
TYP.	TYPICAL
TYS.	TYPE S SUPPORT - SEE SHEET
UVR.	UNDERVOLTAGE RELEASE
UBC	UNIFORM BUILDING CODE
V	VOLT
VC	VITRIFIED CLAY
VENT.	VENTILATION
VERT., VERTS.	VERTICAL, VERTICALS
W	WEST, WIDTH
W/	WITH
W.I.	WROUGHT IRON
WO.	WINDOW
W.P.	WEATHER PROOF
W.S.	WATER SURFACE
W.T.	WATER TIGHT
#	POUND
∅	DIAMETER
&	AND

NOTES

1. ALL ELEVATIONS REFER TO MEAN SEA LEVEL DATUM OF 1929
2. COORDINATES REFER TO THE CALIFORNIA COORDINATE SYSTEM ZONE II
3. ALL DRAWINGS SHOWING OR INDICATING EQUIPMENT SHALL BE COORDINATED WITH EQUIPMENT MANUFACTURER'S APPROVED DRAWINGS.

SECTION IDENTIFICATION NUMBER OR DETAIL LETTER

SHEET ON WHICH DETAIL OR SECTION IS TAKEN

SHEET ON WHICH DETAIL OR SECTION IS DRAWN

DETAIL & SECTION REFERENCE SYMBOL

LIST OF DRAWINGS

SHEET NO.	TITLE
1.	SCOPE OF WORK
2.	TYPICAL STRUCTURAL DETAILS
3.	TYPICAL MECHANICAL DETAILS
4.	PIPE SUPPORTS
5	ORD VILLAGE GENERAL LAYOUT
6.	MOD. TO ORD VILLAGE PUMP STA. ARCH AND STRUC.
7.	MOD. TO ORD VILLAGE PUMP STA. STRUCTURAL
8.	MOD. TO ORD VILLAGE PUMP STA. MECHANICAL
9.	MOD. TO CHLORINATION FACILITIES AT ORD VILLAGE
10	NEW GIGLING ROAD PUMP STA. ARCH AND STRUC.
11.	NEW GIGLING ROAD PUMP STA. STRUC. AND MECH.
12.	MOD. TO ORD VILLAGE PUMP STA. AND NEW GIGLING ROAD PUMP STA. ELEC.
13	10" FORCE MAIN PLAN AND PROFILE
14	10" FORCE MAIN PLAN AND PROFILE
15.	10" FORCE MAIN PLAN AND PROFILE
16.	10" FORCE MAIN PLAN AND PROFILE
17.	GRAVITY SEWER PLAN AND PROFILE
18.	GRAVITY SEWER PLAN AND PROFILE
19.	10" FORCE MAIN PLAN AND PROFILE
20.	10" FORCE MAIN PLAN AND PROFILE & DETAILS.

GRAPHIC SCALE

300 200 100 0 300' 600'

1" = 300'

REVISION	DATE	DESCRIPTION	BY	BY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN: J.P.F.
CHECKED: N.A.S. Jr.
PREPARED:
SUBMITTED:
RECOMMENDED:
APPROVED:
DATE: 14 JAN 1964

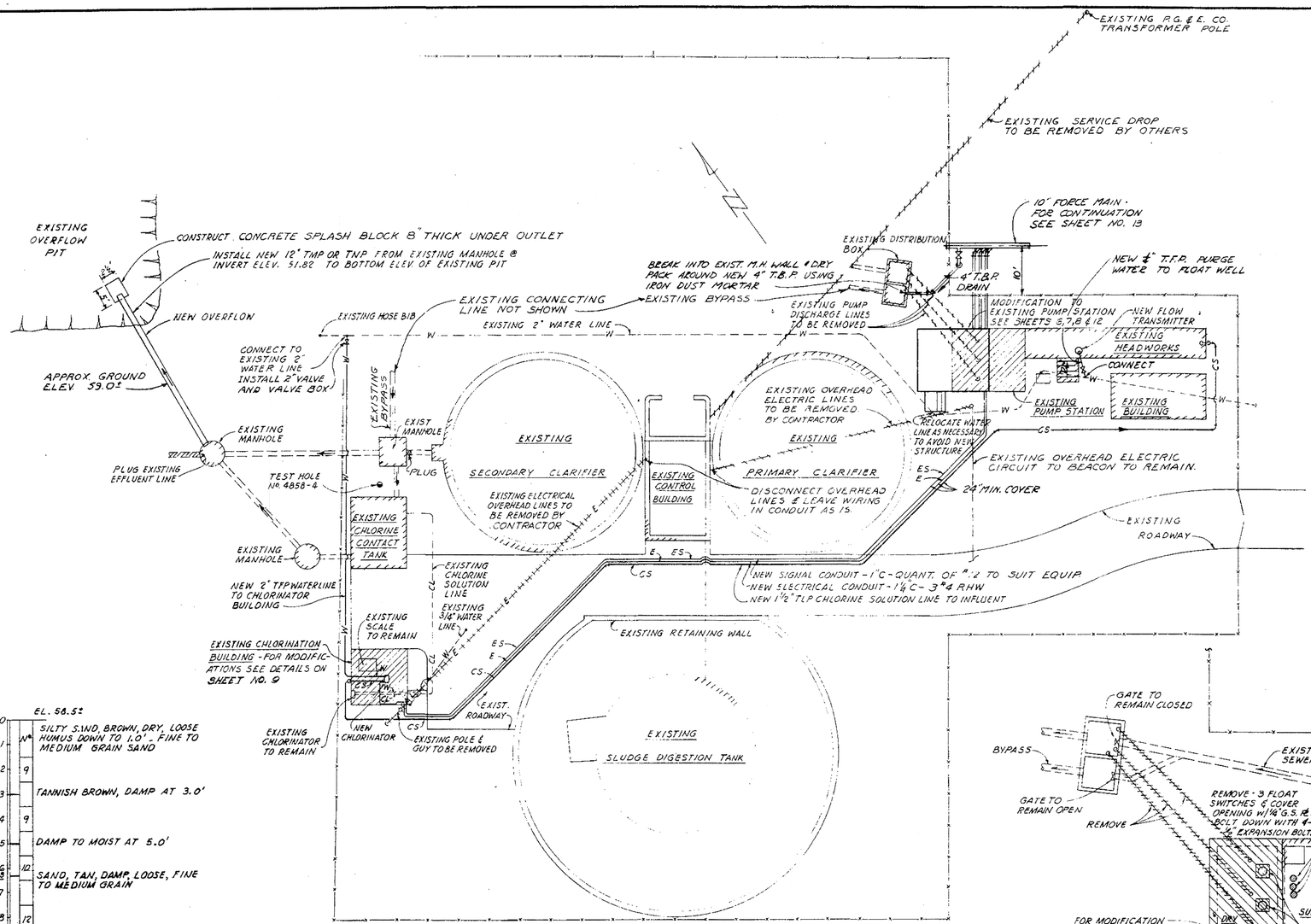
FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT PLANT & FORCE MAIN

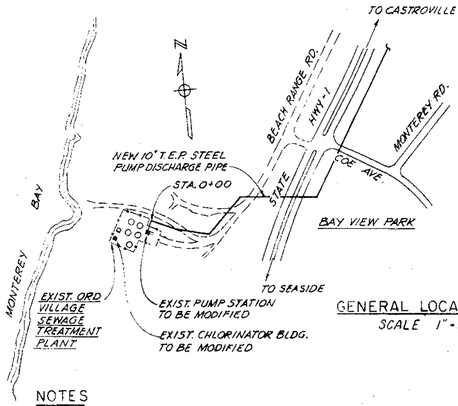
SCOPE OF WORK

CHIEF, ENGINEERING DIVISION
CHIEF, DESIGN BRANCH

PREPARED UNDER THE DIRECTION OF
ROBERT E. MATHE
COL., CORPS OF ENGINEERS, U.S.A.
DISTRICT ENGINEER

SCALE 1" = 300'
SPEC. No. 3022
SHEET 1
DWG. No. 71-07-26
FILE No. 186-25-141

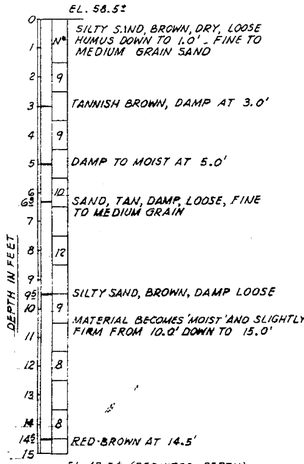




GENERAL LOCATION MAP
SCALE 1" = 300'

NOTES

1. FOR ABBREVATIONS SEE SHEET NO. 1
2. FOR EQUIPMENT SCHEDULE SEE SHEET NO. 8
3. WATER PIPING SHALL BE TYPE F PIPE UNLESS OTHERWISE NOTED. MINIMUM COVER OF WATER PIPING TO BE 3'-0".



* N = NUMBER OF BLOWS PER FOOT OF PENETRATION DRIVING A 2" O.D. STANDARD SAMPLER WITH 140 LB. HAMMER @ 30" FREE FALL

TEST HOLE NO. 4858-4
6 NOV. 1960

SITE PLAN
SCALE 1" = 10'

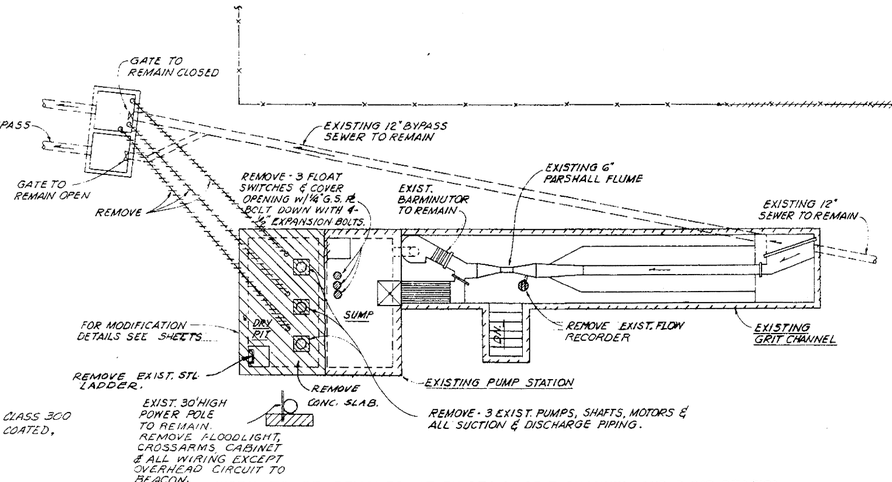
LEGEND

- EXISTING STRUCTURE OR EQUIPMENT TO BE MODIFIED OR REMOVED
- EXISTING PIPE OR WIRE
- EXISTING PIPE OR WIRE TO BE REMOVED
- NEW PIPE OR WIRE
- FENCE, EXISTING
- CHLORINE GAS
- CHLORINE SOLUTION
- ELECTRICAL
- ELECTRICAL SIGNAL
- WATER

PIPE TYPES

TYPE A PIPE (T.A.P.) CAST IRON, MECHANICAL JOINT
TYPE B PIPE (T.B.P.) CAST IRON, FLANGED
TYPE C PIPE (T.C.P.) CAST IRON, SOIL PIPE
TYPE D PIPE (T.D.P.) STEEL, CEMENT-MORTAR LINED, CLASS 300
TYPE E PIPE (T.E.P.) STEEL, CEMENT-MORTAR LINED & COATED, CLASS E 300
TYPE F PIPE (T.F.P.) GALVANIZED STEEL, WEIGHT A
TYPE G PIPE (T.G.P.) BLACK STEEL, WEIGHT A
TYPE H PIPE (T.H.P.) BLACK STEEL, WEIGHT B
TYPE J PIPE (T.J.P.) SOFT COPPER TUBING
TYPE K PIPE (T.K.P.) HARD DRAWN COPPER TUBING
TYPE L PIPE (T.L.P.) POLYVINYL CHLORIDE, SCHEDULE 80
TYPE M PIPE (T.M.P.) REINFORCED CONCRETE, BELL & SPIGOT, RUBBER GASKET - CLASS II
TYPE N PIPE (T.N.P.) VITRIFIED CLAY, PLASTIC JOINT.

TYPE P PIPE (T.P.P.) WROUGHT IRON, BLACK, STANDARD WEIGHT
TYPE Q PIPE (T.Q.P.) BLACK STEEL, WEIGHT A, WRAPPED



WORK TO BE REMOVED AT EXISTING GRIT CHANNEL AND PUMP STATION
SCALE 1" = 5'-0"

GRAPHIC SCALE

1"=5'	5'	0	5'	10'
1"=10'	10'	0	10'	20'
1"=300'	300'	0	300'	600'

REVISION	DATE	DESCRIPTION	BY	BY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN J.P.F.
CHECKED N.A.S. Jr.
PREPARED
SUBMITTED:
SHAFT WELL SEED SECTION

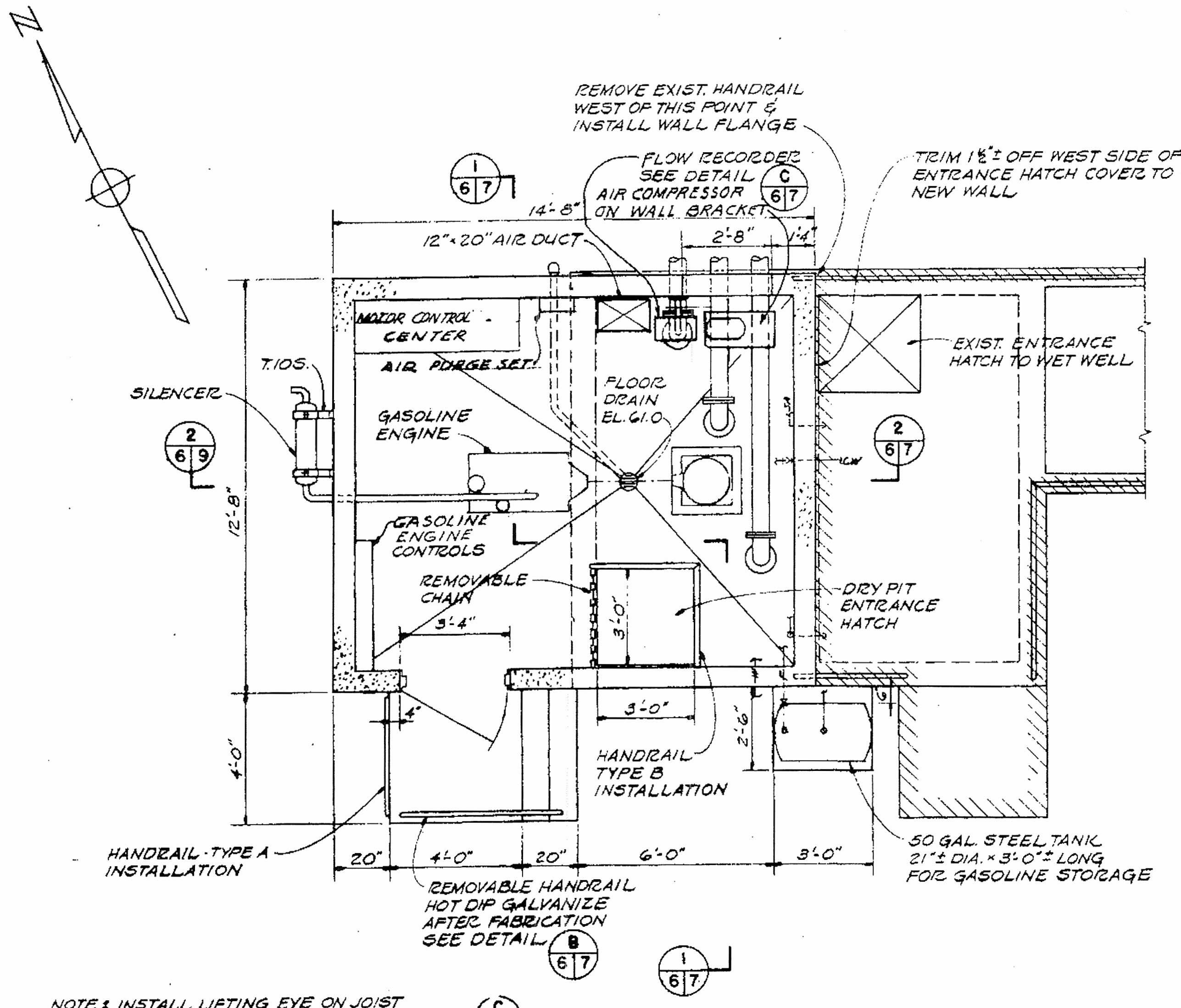
FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT PLANT & FORCE MAIN

GENERAL LAYOUT

APPROVAL RECOMMENDED: Henry Dettman, CHIEF, DESIGN BRANCH
APPROVED: [signature], CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1964

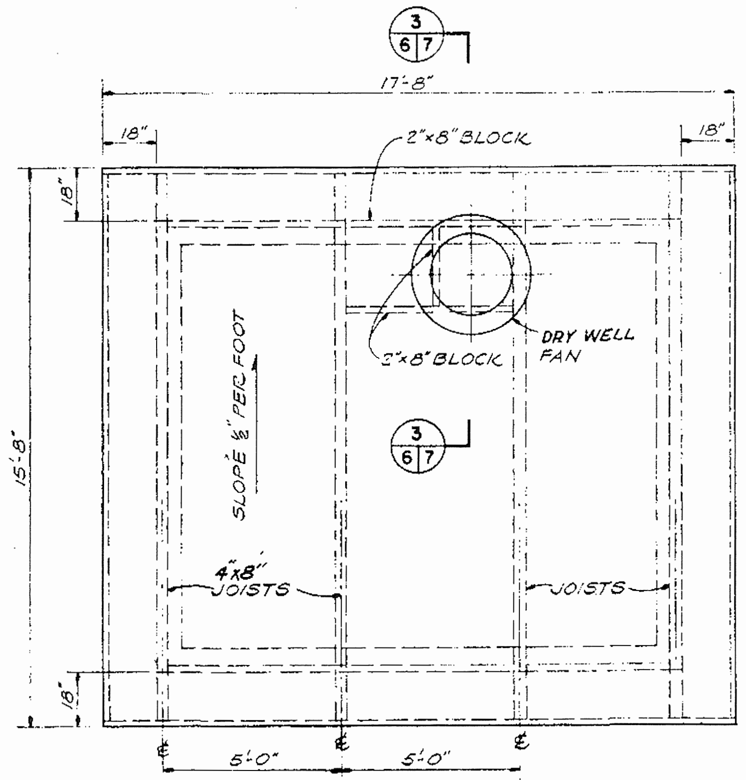
PREPARED UNDER THE DIRECTION OF
ROBERT E. MATHE
COL., CORPS OF ENGINEERS, U.S.A.
DISTRICT ENGINEER

SCALE: AS NOTED
SPEC. No. 3022
DRWG. No. 71-07-26
SHEET 5
FILE No. 186-25-141



NOTE: INSTALL LIFTING EYE ON JOIST ABOVE DRY PIT ENTRANCE HATCH, SEE DETAIL C 6 7 INSTALL LIFTING EYES ON JOISTS OVER GASOLINE ENGINE & MOTOR FOR PUMP NO. 2.

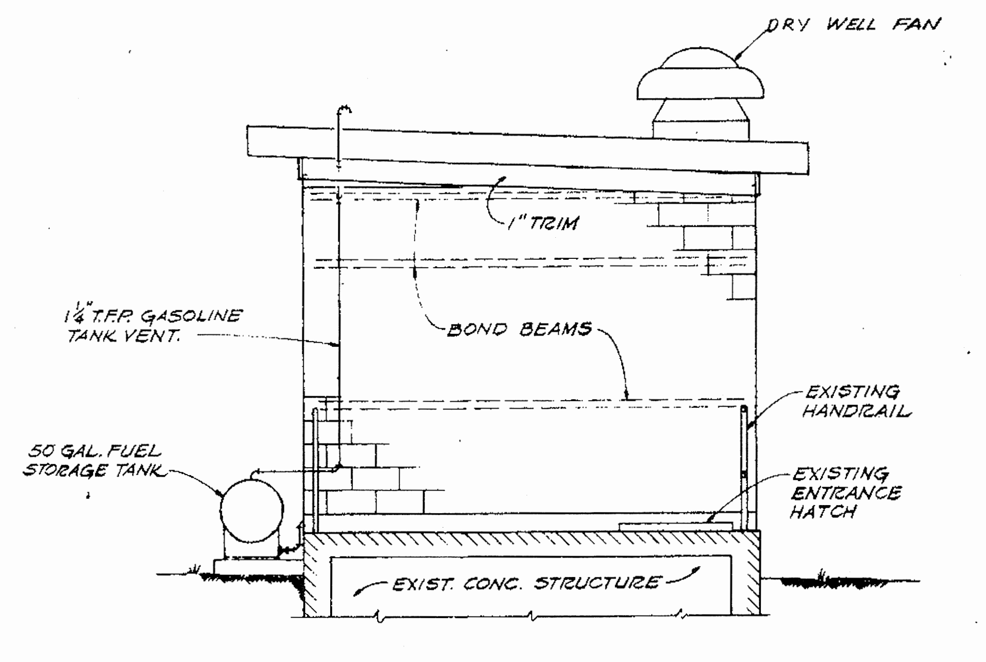
FLOOR PLAN
SCALE ⅜"=1'-0"



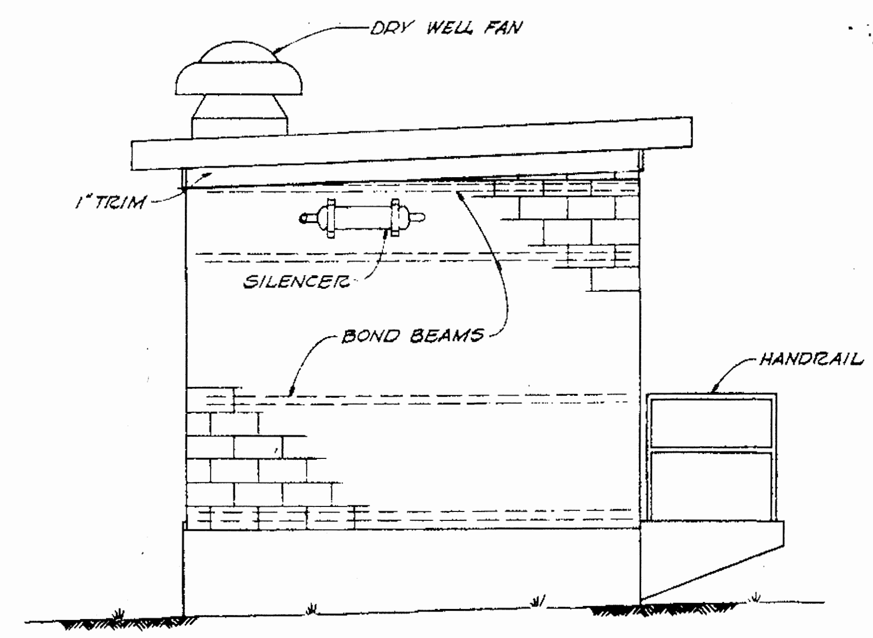
ROOF PLAN
SCALE ⅜"=1'-0"

EQUIPMENT LOADS
ROOF & SLAB SOFFIT LIFTING EYES - 1000 LBS CAPACITY MOTOR - 500 LBS PUMP - 800 LBS GAS ENGINE - 800 LBS

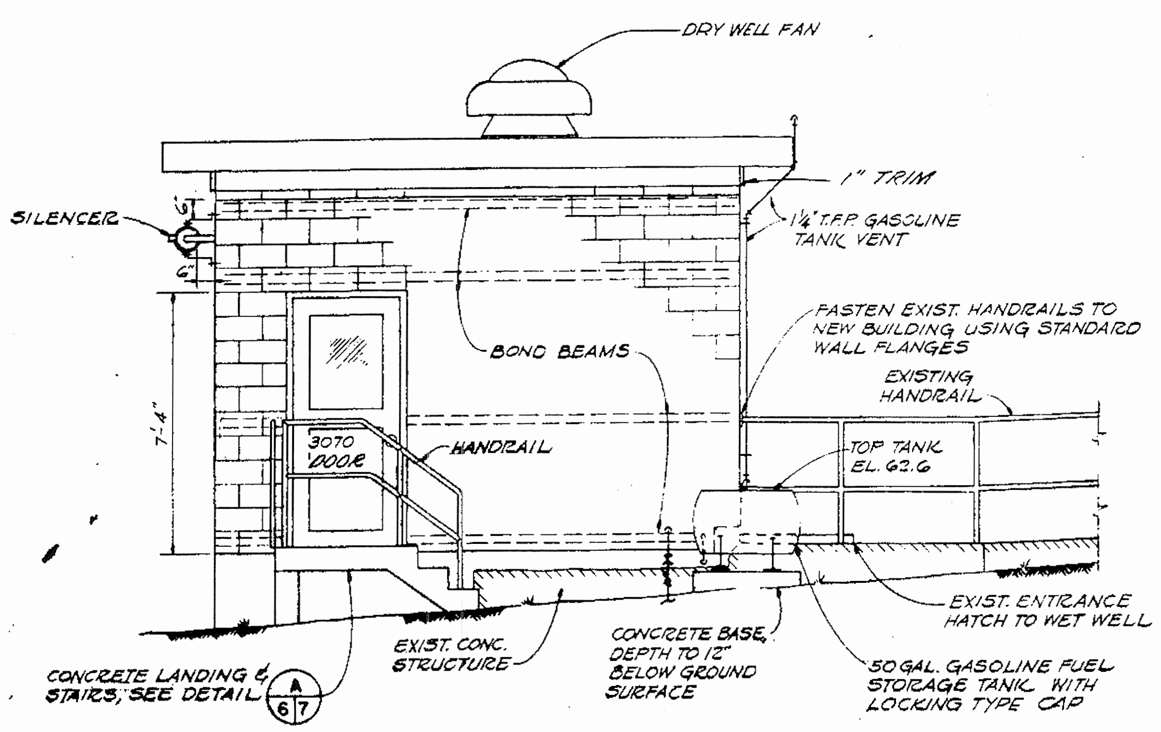
FOR OTHER TYPE LOADS & ALLOWABLE STRESSES, SEE SHEET NO. 2



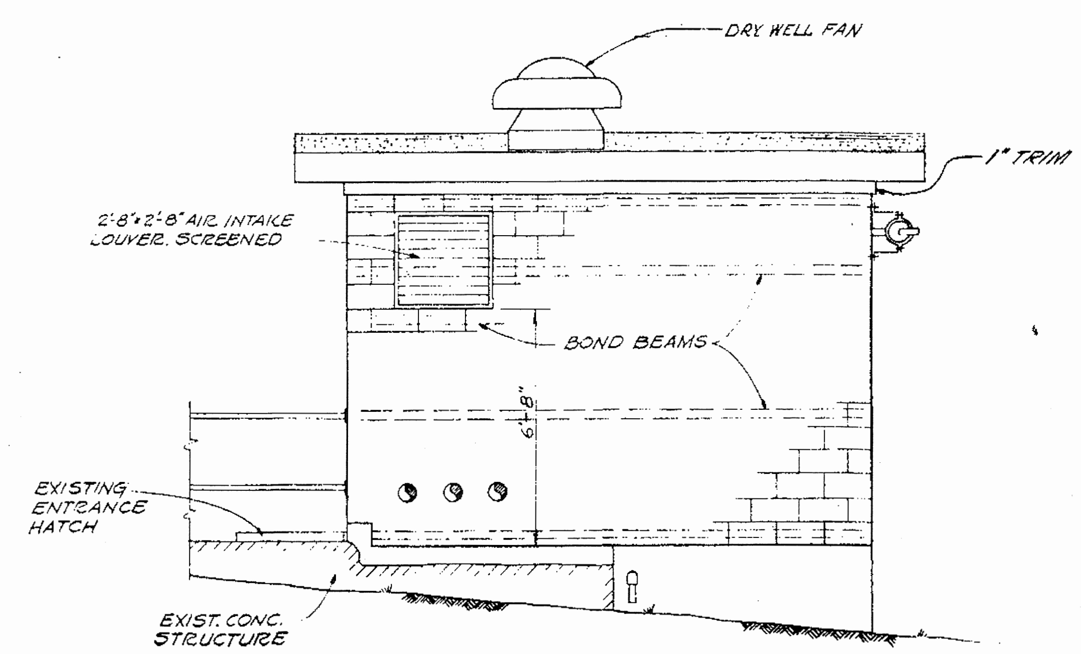
EAST ELEVATION
SCALE ⅜"=1'-0"



WEST ELEVATION
SCALE ⅜"=1'-0"



SOUTH ELEVATION
SCALE ⅜"=1'-0"



NORTH ELEVATION
SCALE ⅜"=1'-0"

GRAPHIC SCALE
1'6"0 1' 2' 3' 4' 5' 6' 7'
⅜"=1'-0"

LEGEND

EXISTING STRUCTURE

NOTES

1. ALL STRUCTURES & EQUIPMENT SHOWN ON THIS SHEET ARE INCLUDED IN THIS CONTRACT EXCEPT THOSE INDICATED AS EXISTING.
3. FOR HANDRAIL TYPES - TYPE A, ETC. - SEE SHEET NO. 3
4. FOR NOTES, LEGEND, & ABBREVIATIONS, SEE SHEET NO. 1 & NO. 5
5. FOR MASONRY DETAILS, SEE SHEET NO. 2

REVISION	DATE	DESCRIPTION	BY

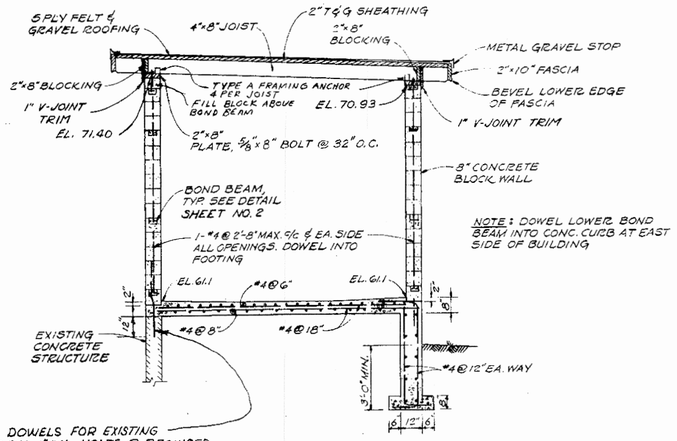
U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN: J.P.F.
CHECKED: N.A.S. Jr.
PREPARED: [signature]
SUBMITTED: E.C. [signature] CHIEF, MIL. DES. SECTION
APPROVAL RECOMMENDED: [signature] CHIEF, DESIGN BRANCH
APPROVED: [signature] CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1964

FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT PLANT & FORCE MAIN
MODIFICATIONS TO ORD VILLAGE PUMP STATION - ARCH. AND STRUCT.

PREPARED UNDER THE DIRECTION OF
ROBERT F. MATHE
COL., CORPS OF ENGINEERS, U.S.A. DISTRICT ENGINEER

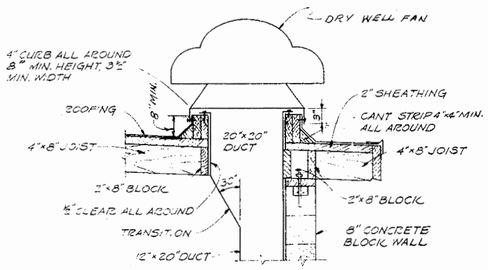
SCALE: AS NOTED | SPEC. No. 3022
SHEET 6 | DWG. No. 71-07-26
FILE No. 186-25-141



TYPICAL DOWELS FOR EXISTING WALLS. DRILL 1" DIA. HOLES @ REQUIRED SPACING. SET DOWELS IN GROUT CONSISTING OF 1 PART CONCRESIVE #1020-2 EPOXY ADHESIVE (OR EQUAL) & 2 PARTS CLEAN DRY SAND.

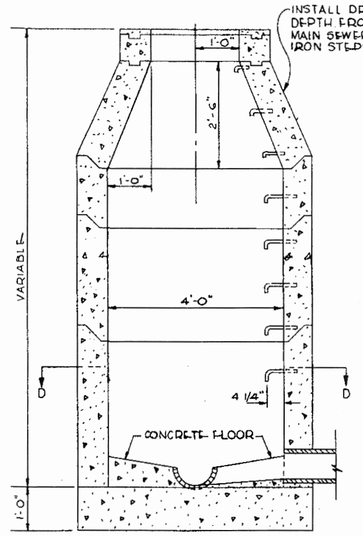
SECTION (1/6|7)

SCALE: 3/8"=1'-0"

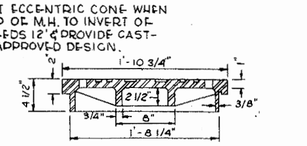


SECTION (3/6|7)

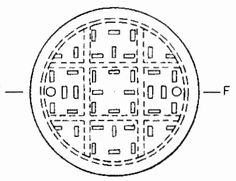
SCALE: 3/4"=1'-0"



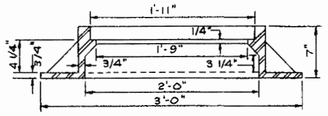
TYPICAL SECTION WITH PRECAST REINFORCED CONCRETE MANHOLE



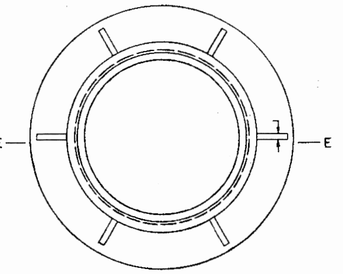
SECTION F-F



PLAN OF COVER



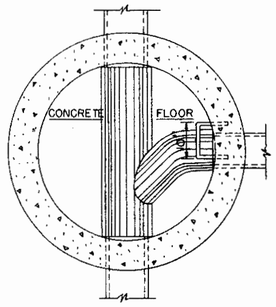
SECTION E-E



PLAN OF FRAME

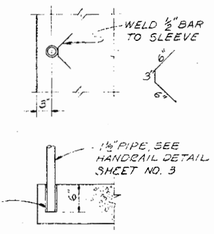
CAST IRON COVERS AND COVER FRAMES

SCALE: 1 1/2"=1'-0"



HORIZONTAL SECTION D-D

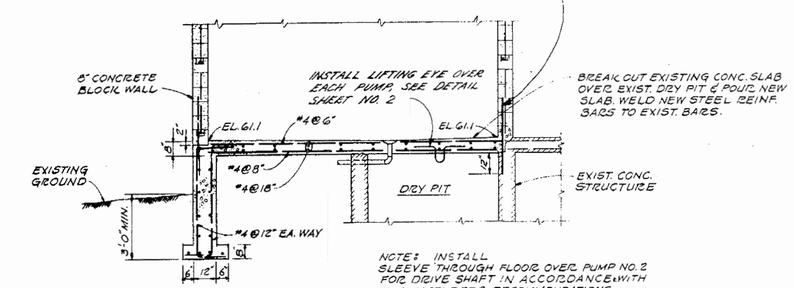
SCALE: 3/4"=1'-0"



DETAIL (B/6|7)

REMOVABLE HANDRAIL SUPPORT

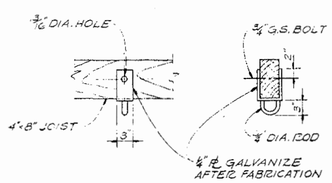
NO SCALE



NOTE: INSTALL SLEEVE THROUGH FLOOR OVER PUMP NO. 2 FOR DRIVE SHAFT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

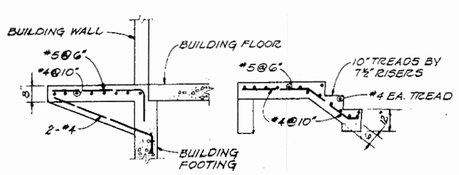
SECTION (2/6|7)

SCALE: 3/8"=1'-0"



DETAIL (C/6|7)

NO SCALE



NOTE: FOR REINF. OF BUILDING FLOOR & FOOTING, SEE SECTION (2/6|7)

DETAIL (A/6|7)

LANDING & STAIRWAY

SCALE: 3/8"=1'-0"

MANHOLE NOTES

1. COVER FRAMES SHALL BE SECURELY INSTALLED IN A BED OF CEMENT MORTAR
2. INSTALL WRUNGS OR STEPS AS SHOWN ONLY WHEN DEPTH FROM TOP OF MANHOLE TO INVERT OF MAIN SEWER EXCEEDS 12 FEET.
3. WHENEVER MANHOLES ARE SUBJECT TO TRAFFIC LOADS, CAST IRON COVERS AS SHOWN - SHALL BE USED
4. WHENEVER MANHOLES ARE NOT SUBJECT TO TRAFFIC LOADS, THE COVERS MAY BE CAST-IRON WITHOUT THE RIBS, UNLESS OTHERWISE INDICATED.
5. PIPE & PIPE FITTINGS FOR DROP MANHOLE CONNECTIONS SHALL BE VITRIFIED CLAY OR CONCRETE CONFORMING TO THE SEWER SPECIFICATIONS.
6. CAST IN PLACE CONCRETE MANHOLES SHALL HAVE A MINIMUM WALL THICKNESS OF 6", REINFORCED WITH #4 BARS @ 12" OC BOTH WAYS AT CENTER OF WALL. FOUNDATION & FLOOR DETAILS WILL BE THE SAME AS SHOWN FOR PRECAST MANHOLES. INSIDE DIMENSIONS SHALL BE AS INDICATED FOR PRECAST MANHOLES
7. AT MANHOLE #A PROVIDE DROP CONNECTION SIMILAR TO DETAIL (A/11|H)

NOTES

1. ALL STRUCTURE & EQUIPMENT SHOWN ON THIS SHEET ARE INCLUDED IN THIS CONTRACT EXCEPT THOSE INDICATED AS EXISTING.
2. FOR ADDITIONAL REINFORCING DETAILS, MASONRY DETAILS & NAILING SCHEDULE SEE SHEET #2

GRAPHIC SCALES

3/8"=1'-0"

3/4"=1'-0"

REVISION	DATE	DESCRIPTION	BY	BY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

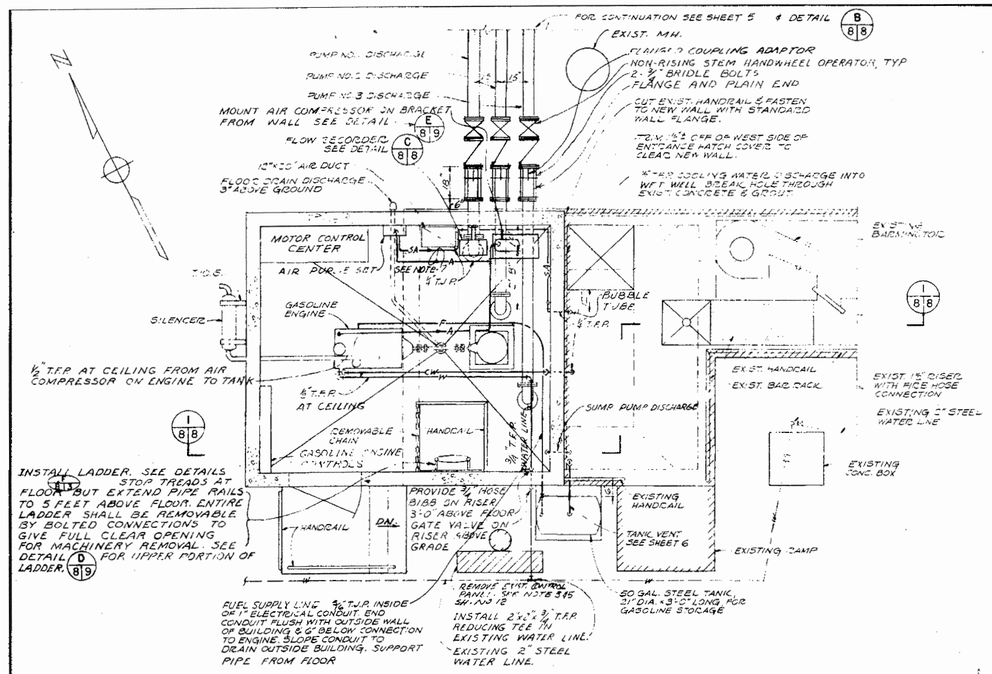
DRAWN: J.R.F.
CHECKED: N.A.S. Jr.
PREPARED:
SUBMITTED:

FORT ORD, CALIFORNIA
ORD VILLAGE TREAMENT
PLANT & FORCE MAIN
MODIFICATIONS TO ORD VILLAGE PUMP STATION - STRUCTURAL

RECOMMENDED: Harry Bottman, CHIEF, DESIGN BRANCH
APPROVED: [signature], CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1964

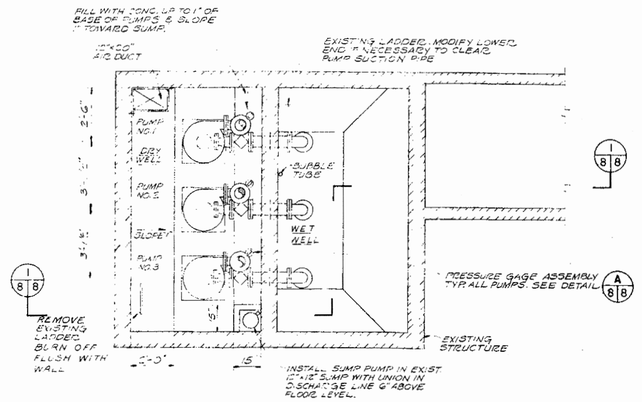
PREPARED UNDER THE DIRECTION OF: ROBERT E. MATHE, DIST. ENGR., COL., CORPS OF ENGINEERS, U.S.A.

SCALE: AS NOTED | SPEC. No. 3022
SHEET 7 | DRWG. No. 71-07-26
FILE No. 186-25-141



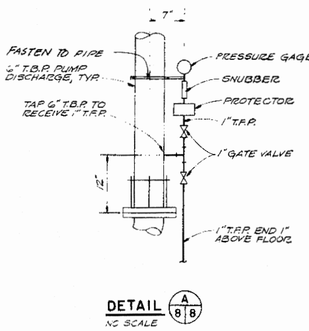
UPPER PLAN

SCALE: ⅜"=1'-0"



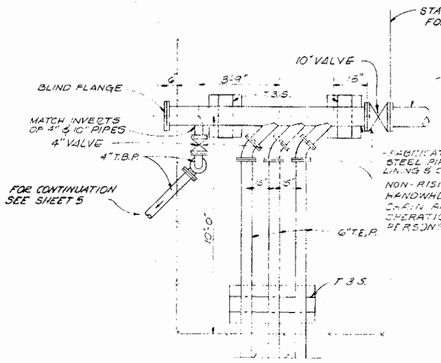
LOWER PLAN

SCALE: ⅜"=1'-0"



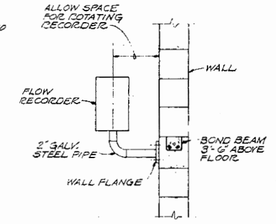
DETAIL A 8|8

NO SCALE



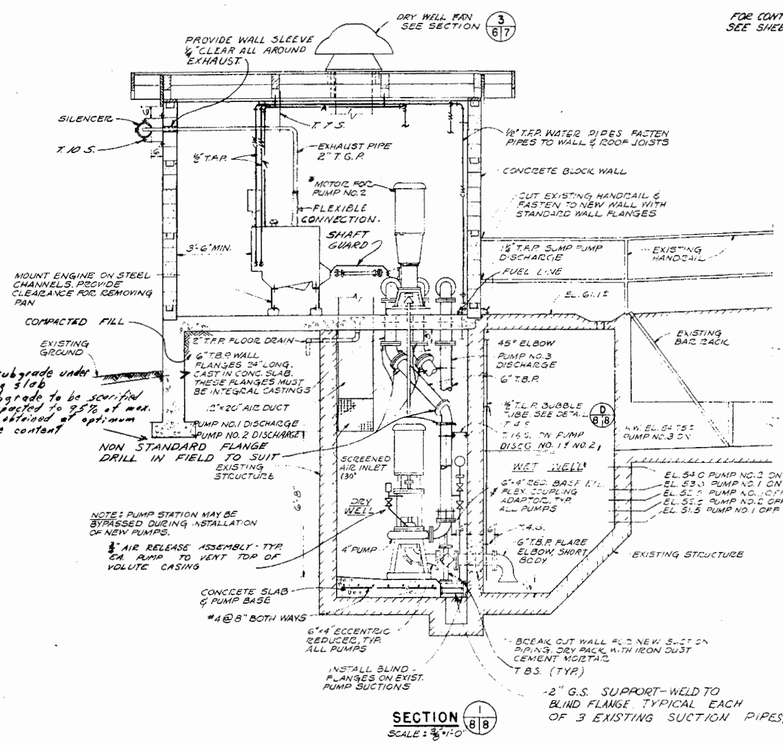
DETAIL B 8|8

SCALE: ⅜"=1'-0"



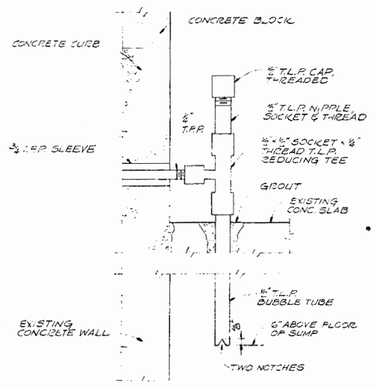
DETAIL C 8|8

NO SCALE



SECTION 1 8|8

SCALE: ⅜"=1'-0"



DETAIL D 8|8

NO SCALE

LEGEND

NEW CONCRETE

NOTES

1. ALL STRUCTURES & EQUIPMENT SHOWN ON THIS SHEET ARE INCLUDED IN THIS CONTRACT EXCEPT THOSE INDICATED AS EXISTING.
2. FOR PIPE TYPES - T.B.P. ETC. - SEE SHEET NO. 5
3. FOR PIPE SUPPORT DETAILS - T.I.O.S. ETC. - SEE SHEET NO. 4
4. THIS SHEET TO BE COORDINATED WITH APPROVED EQUIPMENT MANUFACTURER'S DRAWINGS.
5. FOR LEGEND, NOTES, & ABBREVIATIONS, SEE SHEET NO. 1
6. FOR MECHANICAL DETAILS, SEE SHEET NO. 4
7. AIR PIPING SHALL BE NEATLY STACKED & SUPPORTED. LOCATIONS ARE FOR CLARITY ONLY.
8. FOR SCHEMATIC AIR PIPING, SEE SH. NO. 9

MECHANICAL EQUIPMENT TO BE FURNISHED AND INSTALLED OR REUSED

NAME	NEW	EXISTING	CONTRACTOR FURNISHED	GOVERNMENT FURNISHED	DESCRIPTION
BARMINUTOR	NO	YES	NO	YES	
SEWAGE PUMPS	YES	NO	YES	NO	4" VERTICAL, DRY PIT CENTRIFUGAL TYPE, 460 G.P.M., 30 H.P., AUTOMATIC CONTROL
SUMP PUMP	YES	NO	YES	NO	1½" SUBMERSIBLE TYPE, ½ H.P. MIN
DRY WELL FAN	YES	NO	YES	NO	CENTRIFUGAL TYPE EXHAUST FAN, 1920 C.F.M., ½ H.P.
GEAR HEAD	YES	NO	YES	NO	COMBINATION RIGHT ANGLE DRIVE UNIT
GASOLINE ENGINE	YES	NO	YES	NO	STATIONARY INDUSTRIAL TYPE, HEAT EXCHANGER COOLED, AUTOMATIC STARTING INCLUDING AIR COMPRESSOR
AIR COMPRESSOR	YES	NO	YES	NO	1/4 HP, 1.8 SCFM @ 75#, 10 GAL. RECEIVER.

GRAPHIC SCALE

12"6"0 1' 2' 3' 4' 5' 6' 7'

⅜"=1'-0"

REVISION	DATE	DESCRIPTION	BY	BY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN: J P F
CHECKED: N A S Jr
PREPARED:
SUBMITTED:
APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH
APPROVED: CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1969

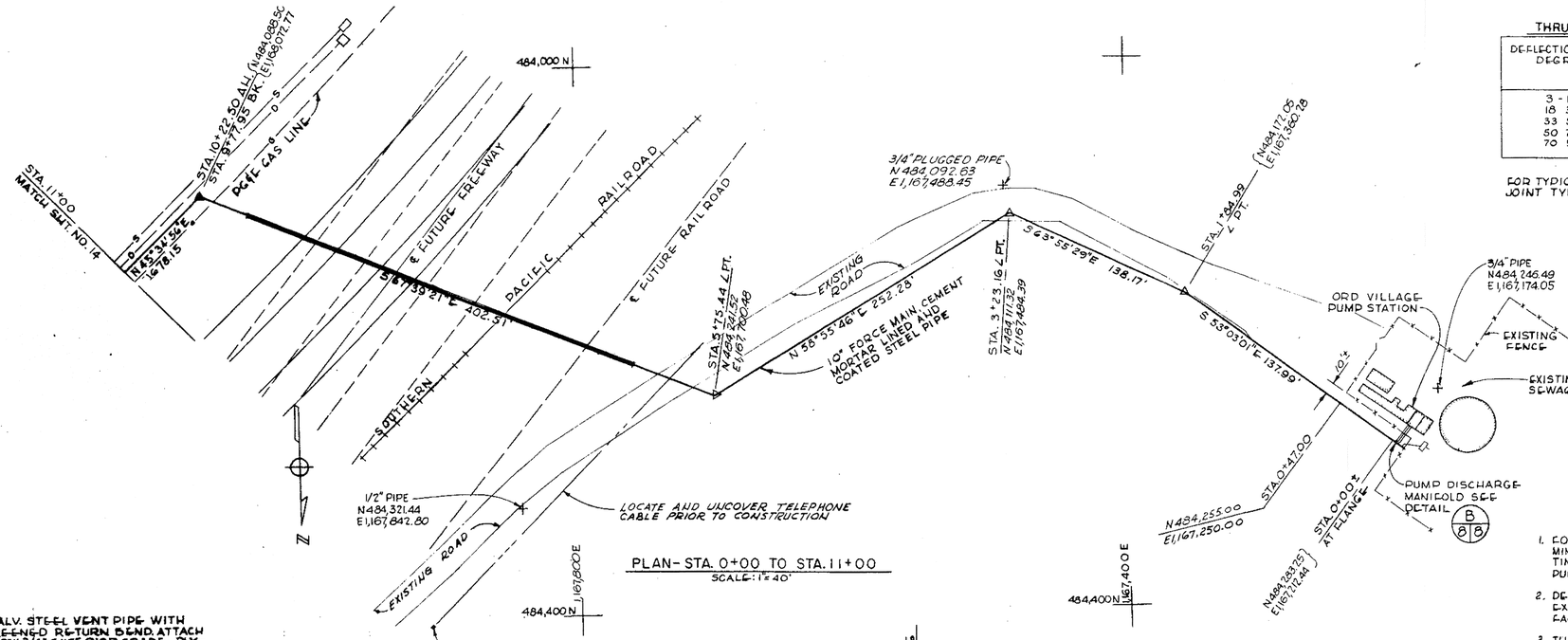
FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT PLANT & FORCE MAIN

MODIFICATIONS TO ORD VILLAGE PUMP STATION - MECHANICAL

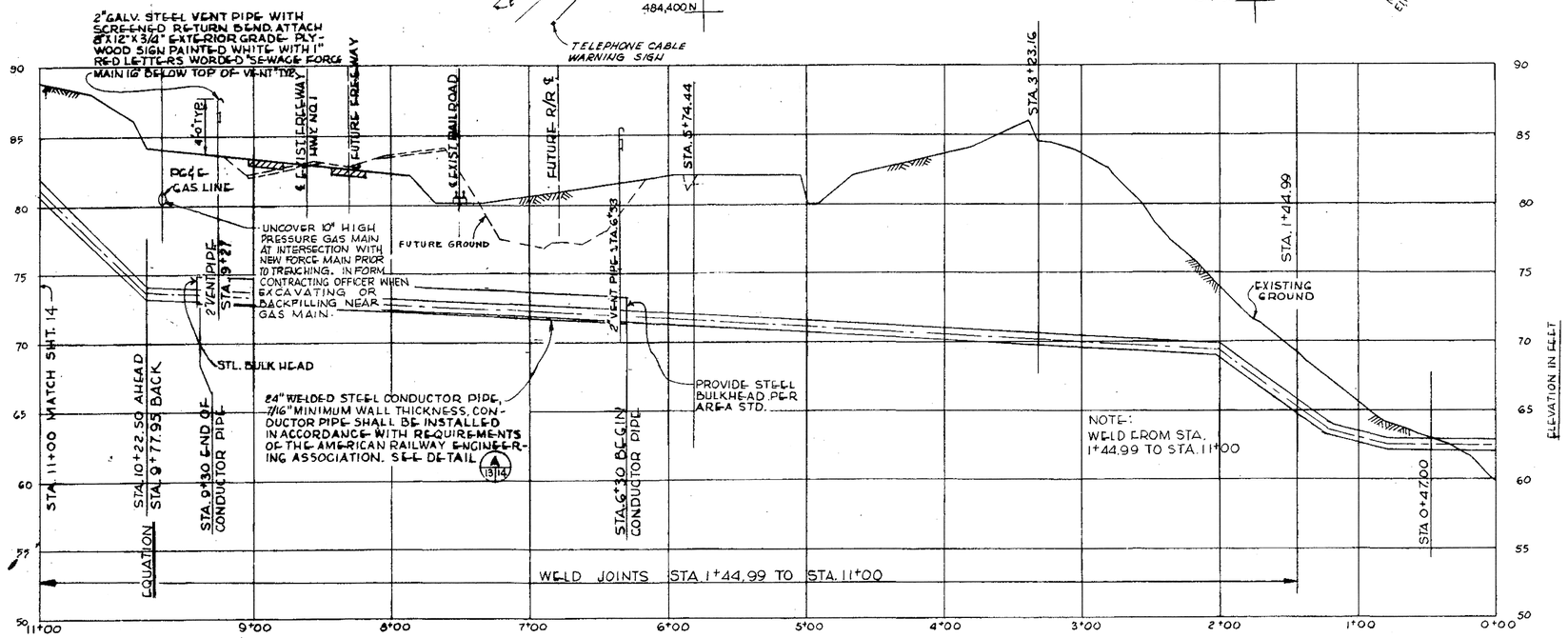
PREPARED UNDER THE DIRECTION OF
ROBERT E. MATTIC
CHIEF, ENGINEERING DIVISION
DIST. CORPS OF ENGINEERS, U.S.A.

SCALE: AS NOTED | SPEC. No 3022
SHEET 8 | DRWG. No. 71-07-26
FILE No. 186-25-141

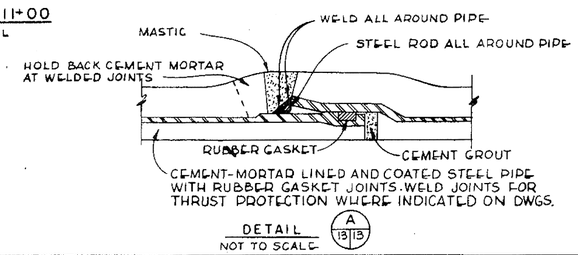
SAFETY DAYS



PLAN- STA. 0+00 TO STA. 11+00
SCALE: 1"=40'



PROFILE - STA. 0+00 TO STA. 11+00
SCALE: 1"=40' HORIZONTAL
1"=4' VERTICAL



DETAIL A 13 13
NOT TO SCALE

THRUST PROTECTION AT BENDS

DEFLECTION ANGLE-DEGREES	PIPE JOINTS MUST BE WELDED EACH WAY FROM BENDS THE FOLLOWING DISTANCES
3 - 18	40
18 33	80
33 50	120
50 70	160
70 90	200

FOR TYPICAL WELDED JOINT OF RUBBER JOINT TYPE STEEL PIPE SEE DETAIL A 13 13

NOTES

1. FORCE MAIN SHALL BE INSTALLED WITH 36" MINIMUM COVER AND SHALL SLOPE CONTINUOUSLY UPWARD FROM ORD VILLAGE PUMP STA. TO M.H. # 1.
2. DEFLECTION AT PIPE JOINTS SHALL NOT EXCEED MAX. RECOMMENDED BY MANUFACTURER.
3. THE PROFILE AS DRAWN IS BASED ON MAX. VERTICAL DEFLECTION OF 3°-30' (2.44' PER 40' LENGTH OF PIPE)
4. ELEVATIONS REFER TO MEAN SEA LEVEL DATUM OF 1929
5. COORDINATES REFER TO THE CALIFORNIA COORDINATE SYSTEM, ZONE IV.
6. LOCATION OF INTERFERENCES HORIZONTALLY AND VERTICALLY ARE APROX. ONLY. CONTRACTOR SHALL LOCATE EACH INTERFERENCE AND DETERMINE EXACT DEPTH BEFORE COMMENCING WITH ANY TRENCH WORK.
7. SEE SHEET NO. 1 FOR NOTES, LEGEND, AND ABBREVIATIONS.

REVISION	DATE	DESCRIPTION	BY	BY

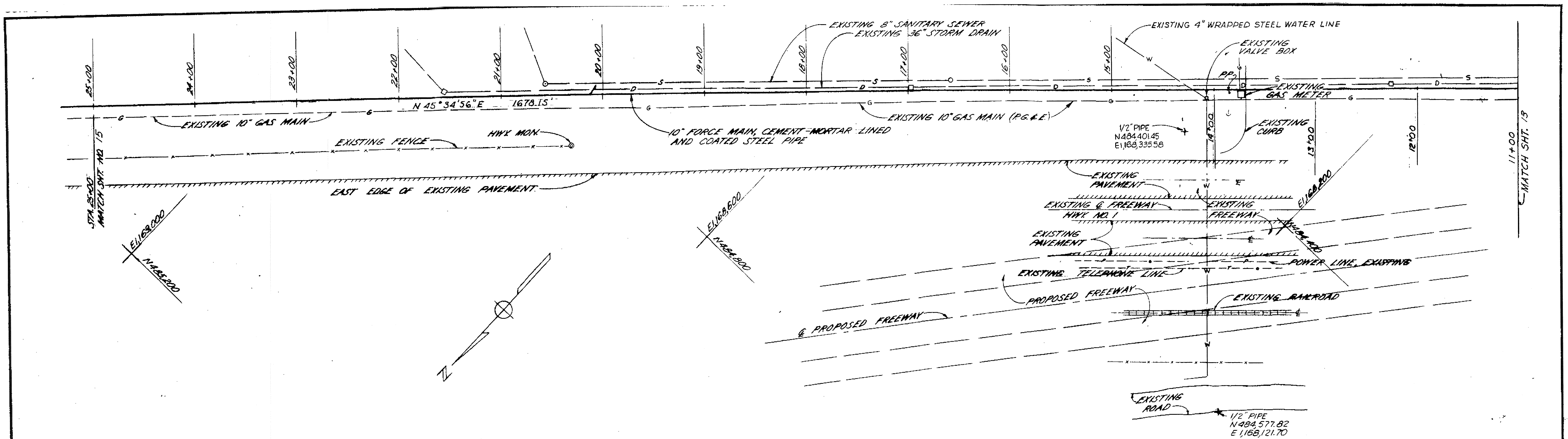
U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN: J. P. F.
CHECKED: N. A. S. Jr.
PREPARED: [illegible] CHIEF, PAVING & UTILITIES UNIT
SUBMITTED: [illegible] CHIEF, MIL. DESIGN SECTION

FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT PLANT & FORCE MAIN
10" FORCE MAIN - PLAN & PROFILE

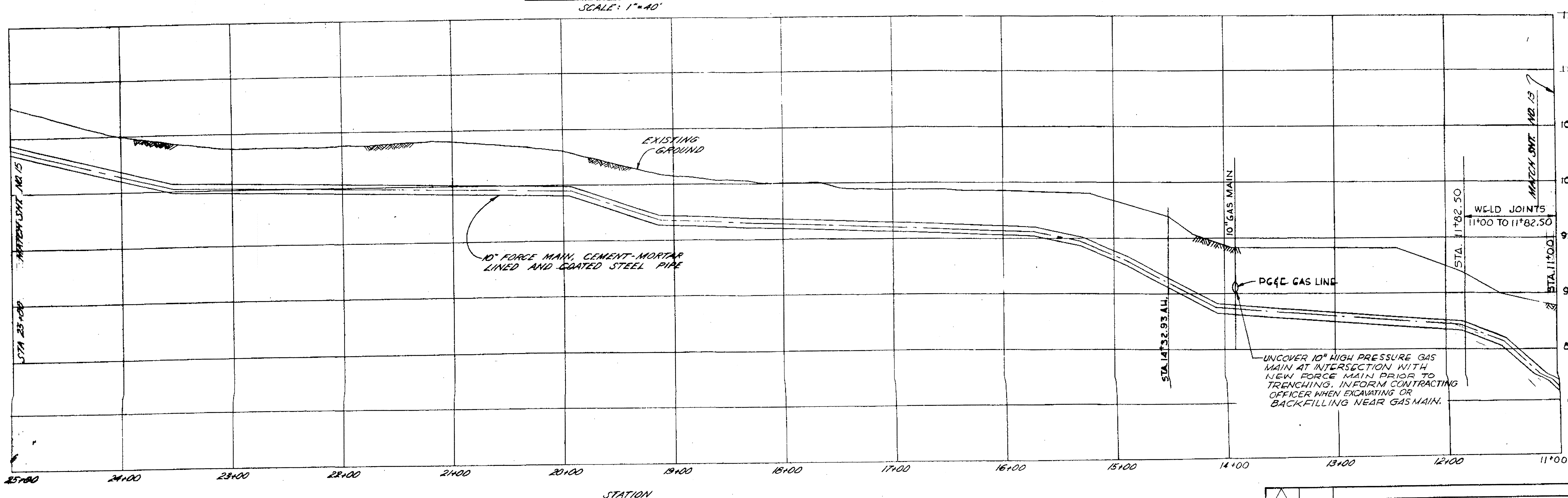
APPROVAL RECOMMENDED: Harry Seymour, CHIEF, DESIGN BRANCH
APPROVED: [illegible], CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1964
PREPARED UNDER THE DIRECTION OF: ROBERT E. MATHE, CHIEF, CONSTR. SERVICES DIVISION
SCALE: AS NOTED
SPEC. No. 3022
SHEET 13
DRWG. No. 71-07-26
FILE No. 186-25-141

L.J. CAFETY DAVC L.J.



PLAN — STA. 11+00 – TO STA. 25+00

SCALE: 1" = 40'

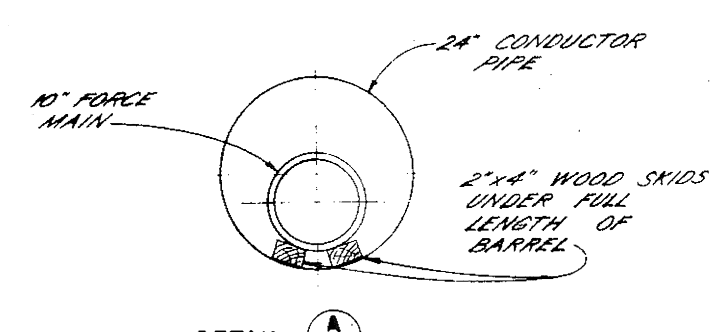


PROFILE — STA. 11+00 – TO STA. 25+00

SCALE: 1" = 40' HORIZONTAL
1" = 4' VERTICAL

NOTES

1. SEE SHT. NO. 13 FOR NOTES



DETAIL (A 13|14)

NO SCALE

REVISION	DATE	DESCRIPTION	BY	BY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT
PLANT & FORCE MAIN

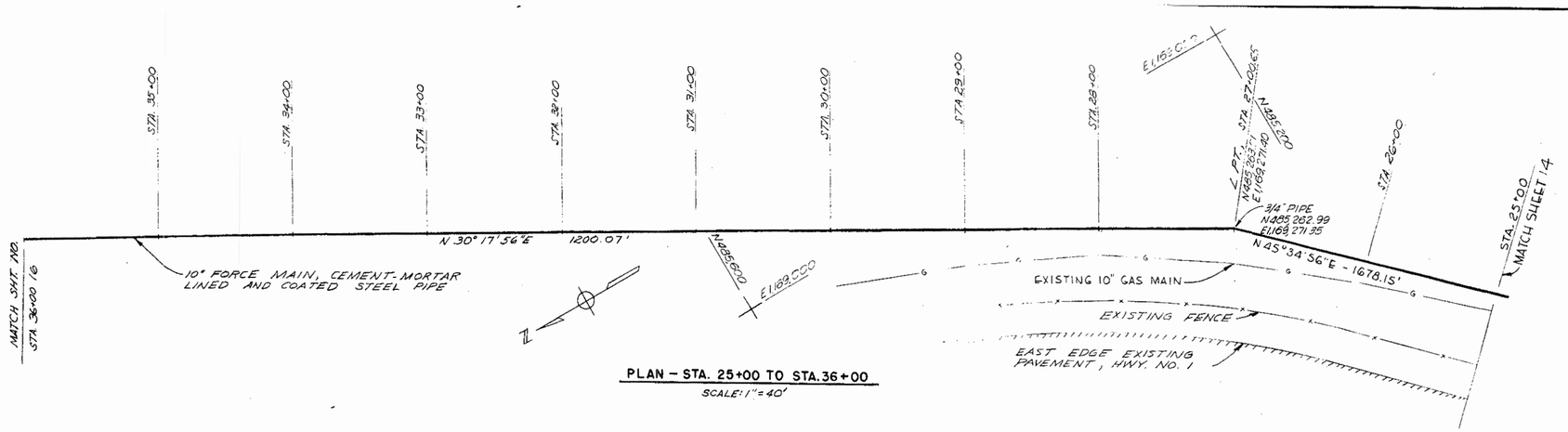
10" FORCE MAIN – PLAN & PROFILE

DRAWN J.P.F.
CHECKED N.A.S. Jr.
PREPARED [signature] CHIEF PAV. UTIL. UNIT
SUBMITTED: [signature] CHIEF MIL. DES. SECTION
APPROVAL RECOMMENDED: [signature] CHIEF, DESIGN BRANCH
APPROVED: [signature] CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1964

PREPARED UNDER THE DIRECTION OF
ROBERT E. MATHE
COL., CORPS OF ENGINEERS, U.S.A. DISTRICT ENGINEER

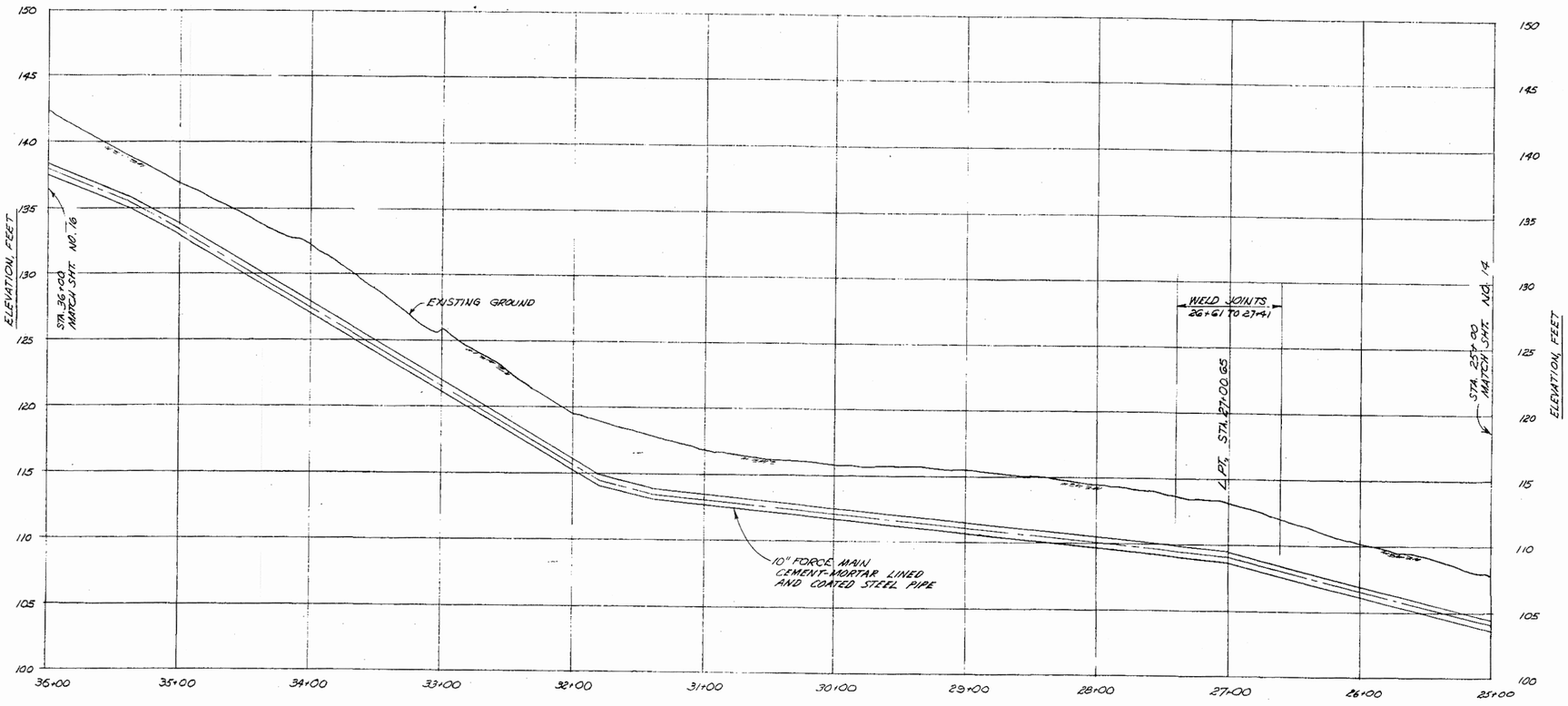
SCALE: AS NOTED | SPEC. No. 3022
SHEET 14 | DRWG. No. 71-07-26 | FILE No. 186-25-141

SAFETY PAYS



PLAN – STA. 25+00 TO STA. 36+00

SCALE: 1" = 40'



PROFILE – STA. 25+00 TO STA. 36+00

SCALE: 1" = 40' HORIZONTAL
1" = 4' VERTICAL

NOTES

1. SEE SHEET NO. 13 FOR NOTES

REVISION	DATE	DESCRIPTION	BY	AY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN: J.P.F.
CHECKED: N.A.S. Jr.
PREPARED:
SUBMITTED:

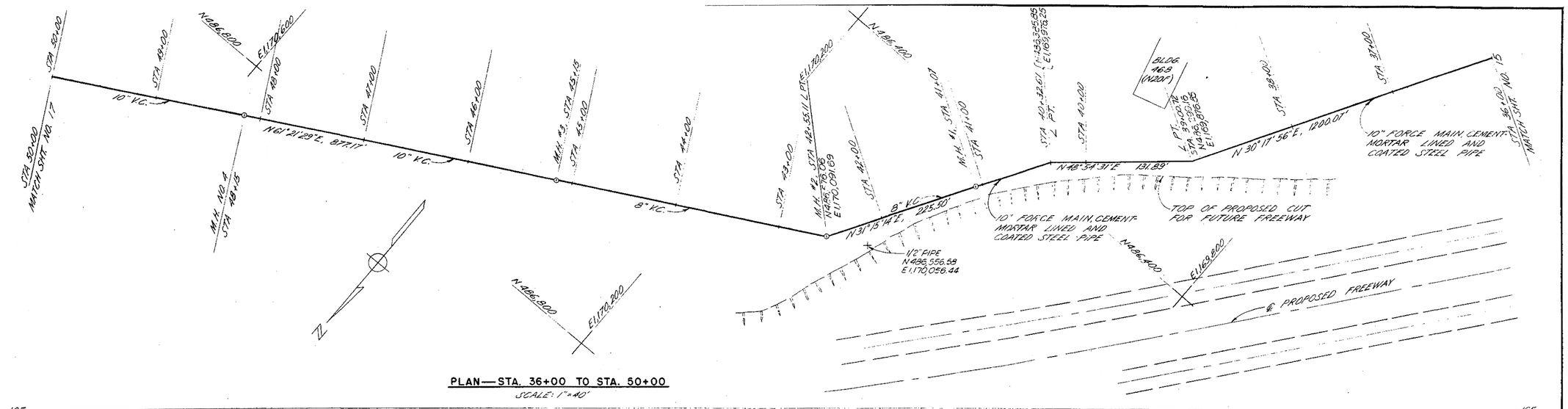
FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT PLANT & FORCE MAIN
10" FORCE MAIN - PLAN & PROFILE

APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH
APPROVED: Chief, Engineering Division
DATE: 14 JAN 1964

PREPARED UNDER THE DIRECTION OF: ROBERT E. MATHE, COL., CORPS OF ENGINEERS, U.S.A., DISTRICT ENGINEER

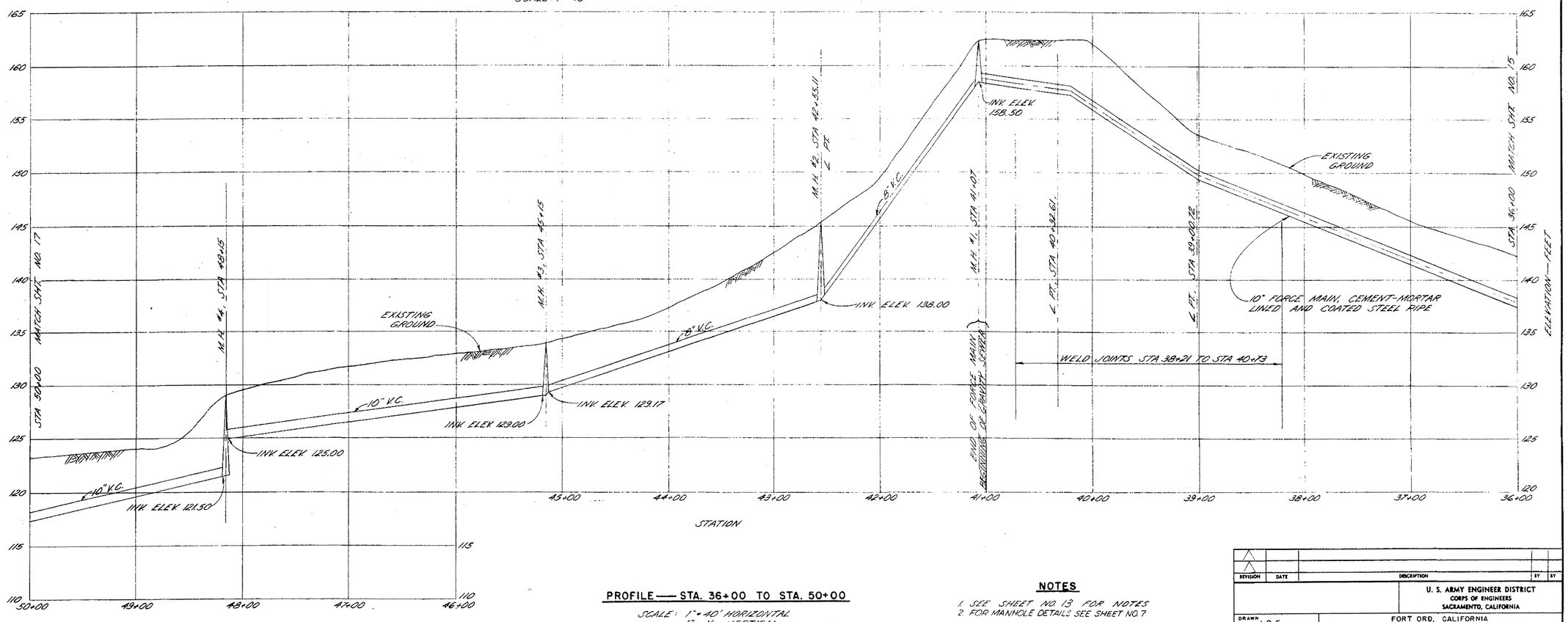
SCALE: AS NOTED | SPEC. No. 3022 | SHEET 15 | DRWG. No. 71-07-26 | FILE No. 186-25-141

SAFETY DAYS



PLAN — STA. 36+00 TO STA. 50+00

SCALE: 1" = 40'



PROFILE — STA. 36+00 TO STA. 50+00

SCALE: 1" = 40' HORIZONTAL
1" = 4' VERTICAL

NOTES

1. SEE SHEET NO. 13 FOR NOTES
2. FOR MANHOLE DETAILS SEE SHEET NO. 7

REVISION	DATE	DESCRIPTION	BY	BY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN: J. P. F.
CHECKED: N. A. S. Jr.
P. E. PANELS:
SUBMITTED:
RECOMMENDED:
CHIEF, DESIGN BRANCH
APPROVED:
CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1964

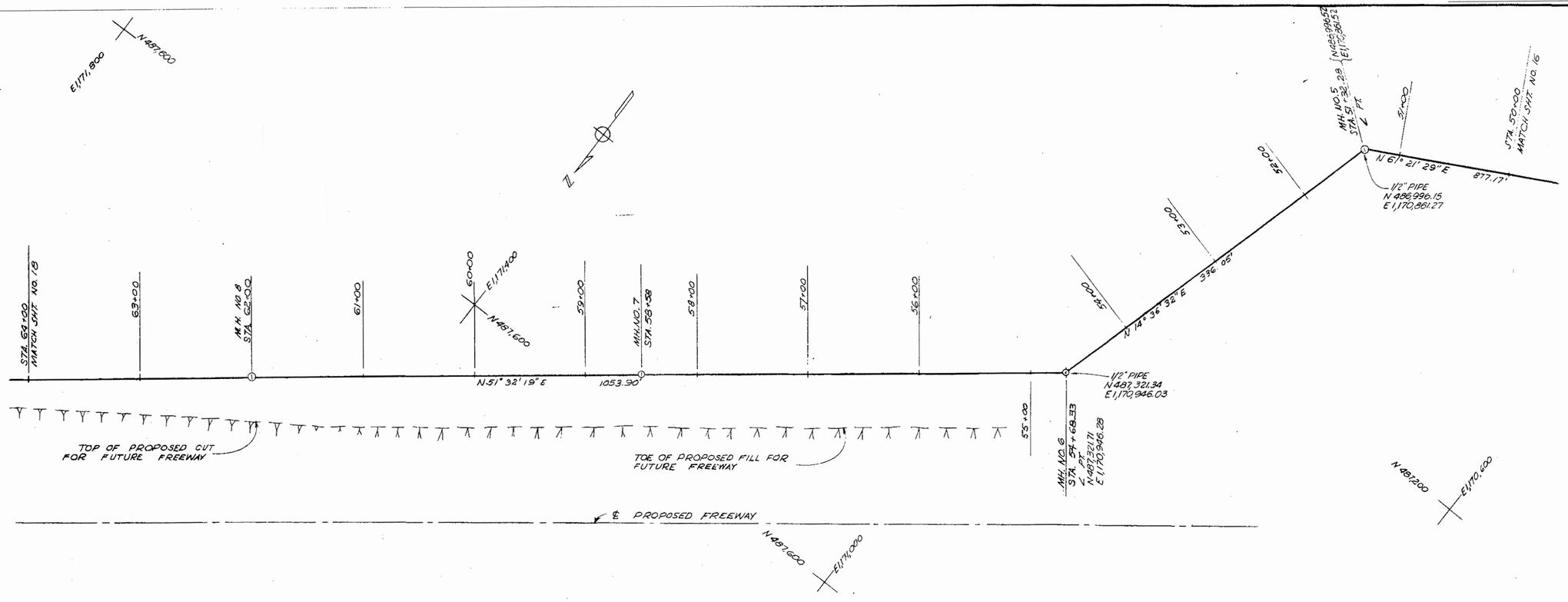
FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT PLANT & FORCE MAIN

10" FORCE MAIN - PLAN & PROFILE

PREPARED UNDER THE DIRECTION OF
ROBERT E. MATHE
COL., CORPS OF ENGINEERS, U. S. A.
DISTRICT ENGINEER

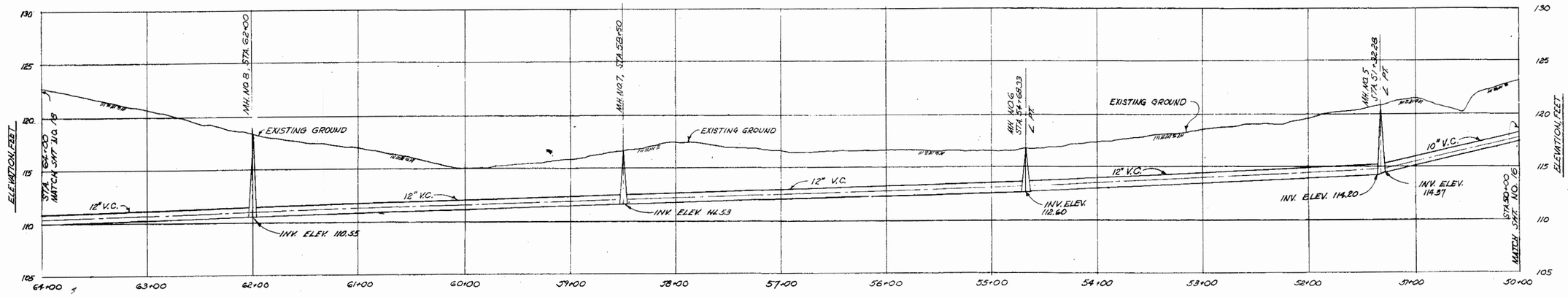
SCALE: AS NOTED
SPEC. No. 3022
SHEET 16
DRWG. No. 71-07-26
FILE No. 18C 5-141

SAFETY DAYS



PLAN – STA. 50+00 TO STA. 64+00

SCALE : 1" = 40'



PROFILE – STA. 50+00 TO STA. 64+00

SCALE : 1" = 40' HORIZONTAL
1" = 4' VERTICAL

NOTES

1. SEE SHT NO 13 FOR NOTES
2. FOR MANHOLE DETAILS SEE SHEET NO 7.

REVISION	DATE	DESCRIPTION	BY	BY

U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN: J.P.F.
CHECKED: N.A.S. Jr.
PREPARED:
SUBMITTED:
APPROVAL RECOMMENDED:
APPROVED:
DATE: 14 JAN 1964

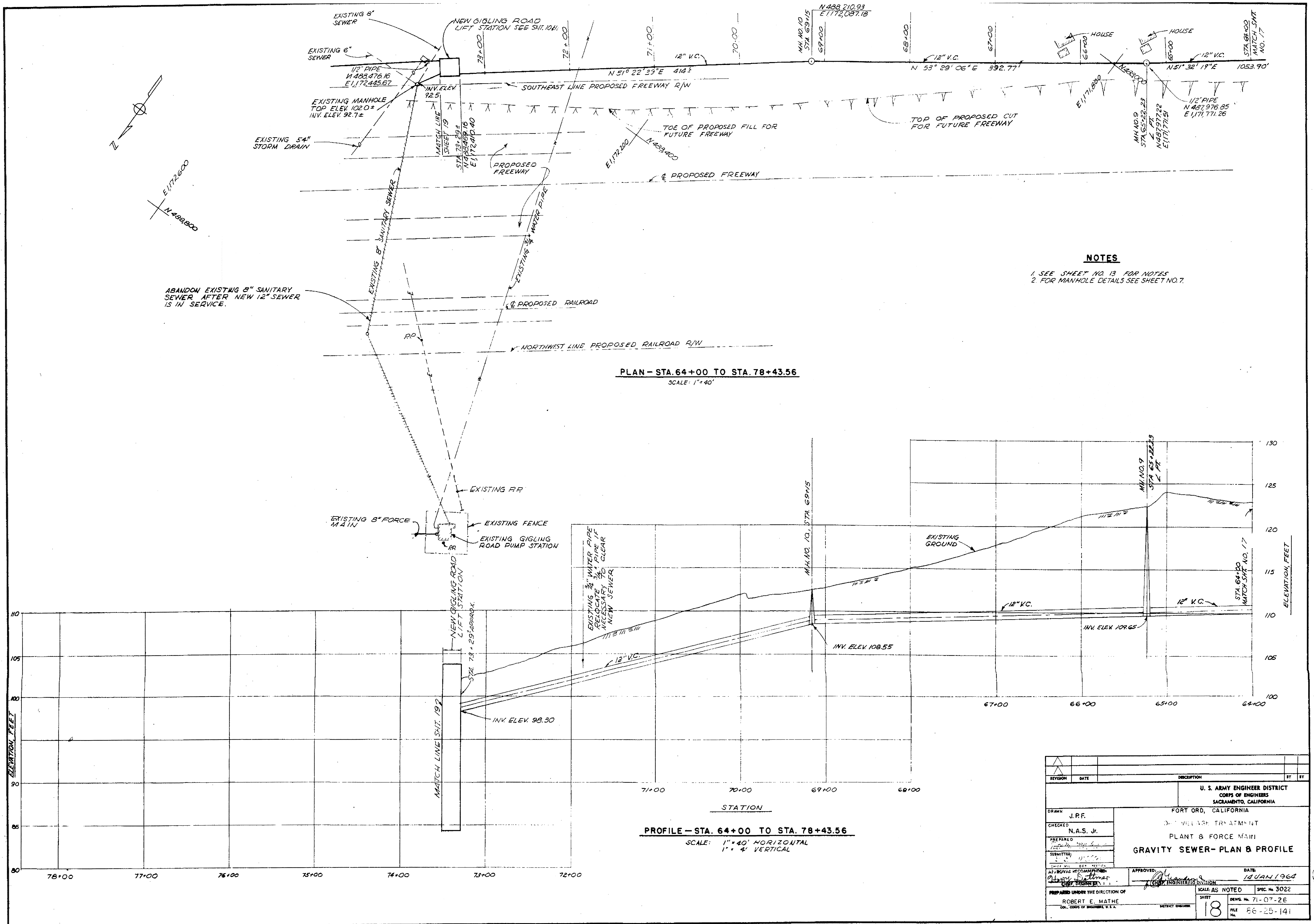
FORT ORD, CALIFORNIA
ORD VILLAGE TREATMENT
PLANT & FORCE MAIN

GRAVITY SEWER-PLAN & PROFILE

CHIEF, ENGINEERING DIVISION
CHIEF, DESIGN BRANCH

PREPARED UNDER THE DIRECTION OF
ROBERT E. MATHE
COL., CORPS OF ENGINEERS, U.S.A.
DISTRICT ENGINEER

SCALE: AS NOTED
SPEC. No. 3022
SHEET 17
DWG. No. 71-07-26
FILE No. 186-25-141


EXISTING 8" SEWER
NEW GIGLING ROAD LIFT STATION SEE SHT. 10&11
EXISTING 6" SEWER
1/2" PIPE N 488,476.16 E 1,172,445.67
INV. ELEV. 92.5
EXISTING MANHOLE TOP ELEV. 102.0± INV. ELEV. 92.7±
SOUTHEAST LINE PROPOSED FREEWAY R/W
N 51° 22' 23" E 414±
12" V.C.
MH. NO. 10 STA 69+15
N 488,210.93 E 1,172,087.18
N 53° 29' 06" E 392.77'
HOUSE
N 51° 32' 19" E 1053.90'
STA 64+00 MATCH SHT. NO. 17
1/2" PIPE N 487,976.85 E 1,171,771.26
MH. NO. 9 STA 65+22.23
TOP OF PROPOSED CUT FOR FUTURE FREEWAY
TOE OF PROPOSED FILL FOR FUTURE FREEWAY
EXISTING 54" STORM DRAIN
MATCH LINE SHEET 19
PROPOSED FREEWAY
℄ PROPOSED FREEWAY
EXISTING 8" SANITARY SEWER
EXISTING 3/4" WATER PIPE
ABANDON EXISTING 8" SANITARY SEWER AFTER NEW 12" SEWER IS IN SERVICE.
℄ PROPOSED RAILROAD
NORTHWEST LINE PROPOSED RAILROAD R/W
NOTES
1. SEE SHEET NO. 13 FOR NOTES
2. FOR MANHOLE DETAILS SEE SHEET NO. 7.
PLAN – STA. 64+00 TO STA. 78+43.56
SCALE: 1" = 40'
EXISTING R.R.
EXISTING 8" FORCE MAIN
EXISTING FENCE
EXISTING GIGLING ROAD PUMP STATION
NEW GIGLING ROAD LIFT STATION
STA. 73+29 APPROX.
MATCH LINE SHT. 19
EXISTING 3/4" WATER PIPE RELOCATE 3/4" PIPE IF NECESSARY TO CLEAR NEW SEWER
MH. NO. 10, STA. 69+15
MH. NO. 9 STA 65+22.23
EXISTING GROUND
12" V.C.
INV. ELEV. 98.30
INV. ELEV. 108.55
INV. ELEV. 109.65
STA 64+00 MATCH SHT. NO. 17
ELEVATION, FEET
STATION
PROFILE – STA. 64+00 TO STA. 78+43.56
SCALE: 1" = 40' HORIZONTAL 1" = 4' VERTICAL
REVISION
DATE
DESCRIPTION
BY
U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA
DRAWN J.P.F.
CHECKED N.A.S. Jr.
PREPARED
SUBMITTED
FORT ORD, CALIFORNIA
PLANT & FORCE MAIN
GRAVITY SEWER – PLAN & PROFILE
APPROVAL RECOMMENDED:
CHIEF, DESIGN BR.
APPROVED:
CHIEF, ENGINEERING DIVISION
DATE: 14 JAN 1964
PREPARED UNDER THE DIRECTION OF
ROBERT E. MATHE
COL., CORPS OF ENGINEERS, U. S. A.
DISTRICT ENGINEER
SCALE: AS NOTED
SPEC. No. 3022
SHEET 18
DRWG. No. 71-07-26
FILE No. 86-25-141

SAFETY DAYS