



PIPING SYMBOLS

DESCRIPTION VALVES

DESCRIPTION	SINGLE LINE	DOUBLE LINE
GATE		
GLOBE		
PLUG		
CHECK		
SPECIAL		
BUTTERFLY		
WAFER-BUTTERFLY		
BALL		
DIAPHRAGM		
PRESSURE RELIEF		
HOSE BIBB/F.H.		
ANGLE		
PRESSURE REGULATOR		
SOLENOID VALVE		
BACKFLOW PREVENTER		

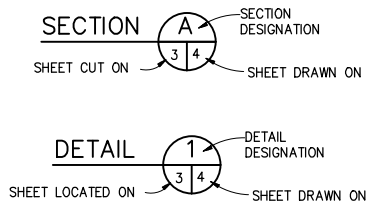
DESCRIPTION SINGLE LINE DOUBLE LINE

DESCRIPTION	SINGLE LINE	DOUBLE LINE
FLANGED PIPE CONNECTION		
BELL AND SPIGOT OR MECHANICAL JT. CONNECTION		
DRAIN		
FLOOR CLEANOUT		
PIPE CLEANOUT		
FLOOR DRAIN		
FLOW SWITCH		
PRESSURE GAUGE & COCK		
PULSATION DAMPENER		
CALIBRATION CYLINDER		
EQUIPMENT		
PUMP		
ROTAMETER		
BACKFLOW PREVENTER		

FITTINGS & MISCELLANEOUS

DIRECTION OF FLOW		
REDUCER		
UNION		
FLEXIBLE COUPLING		
FLANGED COUPLING ADAPTER		
STATIC MIXER		
FLEXIBLE CONNECTOR		
ELBOW		
TEE		
Y STRAINER & FLUSH VALVE		
CAP		
BLIND FLANGE		
INSULATED PIPE		
FLEXIBLE EXPANSION JOINT		

REFERENCE SYMBOLS



GENERAL LEGEND

	INSULATION IN SECTION		BORING LOG AND NUMBER
	EARTH IN SECTION		EXISTING STRUCTURE (E)
	CONCRETE IN SECTION		NEW STRUCTURE (N)
	STEEL IN SECTION		DEMOLITION
	WOOD IN SECTION		(N) CONTOUR ELEVATION LINE
	GRATING		(E) CONTOUR ELEVATION LINE
	CHECKERED PLATE		CENTERLINE
	PAVING		PAVEMENT EDGE IN PLAN
	FINISH GRADE		
	WATER SURFACE		

ABBREVIATIONS

ABAND	ABANDON
AC	ASPHALT CONCRETE
ATT	FIBER OPTIC LINE
BC	BEGIN CURVE
BLDG	BUILDING
BVC	BEGIN VERTICAL CURVE
C	CENTER LINE
CB	CATCH BASIN
CDP	CONTROL DENSITY FILL
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
DI	DUCTILE IRON
DIA.	DIAMETER
(E)	EXISTING
E	EXISTING ELECTRIC LINE
EC	END CURVE
E.F.	EACH FACE
EL	ELEVATION
ELEC	ELECTRICAL DUCT
ELL	ELBOW
EP	EDGE OF PAVEMENT
EVC	END VERTICAL CURVE
E.W.	EACH WAY
FCA	FLANGED COUPLING ADAPTER
FM	FORCE MAIN
G	GAS
GB	GRADE BREAK
GM	GRAVITY MAIN
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
LF	LINEAR FEET
MH	MANHOLE
(N)	NEW
PE	POLYETHYLENE
R	RADIUS
S	SLOPE (FT/FT)
SAV	SEWAGE AIR VACUUM
SD	STORM DRAIN
SFM	SEWER FORCE MAIN
SS	SANITARY SEWER
STA	STATION
T	EXISTING TELEPHONE
TELE	TELEPHONE DUCT
TELE MH	TELEPHONE MANHOLE
TV	EXISTING CABLE TELEVISION LINE
TYP.	TYPICAL
VCP	VITRIFIED CLAY PIPE
VPT	VERTICAL POINT OF TANGENT
W	WATER
W/	WITH

LEGEND

	20" FM	NEW PIPELINE
	FM	EXISTING FORCE MAIN
	W	EXISTING WATER/LINE
	T	EXISTING TELEPHONE LINE
	ATT	EXISTING FIBER OPTIC CABLE
	///	EDGE OF PAVEMENT
	x-x-x-x-x	FENCE
	- - - - -	CENTERLINE
	E	EXISTING ELECTRIC LINE
	TV	EXISTING CABLE TELEVISION LINE
	SS	EXISTING SANITARY SEWER LINE
	SD	EXISTING STORM DRAIN LINE
	G	EXISTING NATURAL GAS LINE
		EARTH IN SECTION

PIPING SCHEDULE

LINE	SYSTEM	SIZE	SERVICE	MATL	PIPE TYPE	VALVE SYSTEM
CLS	HYPOCHLORITE	ALL	B/C/E	PVC	V-1	C
CW	COOLING WATER	ALL	E	BS	X-1	A
DR	DRAIN	ALL	B/C/E	PVC	V-3	
FF	FUEL FILL	ALL	C	FE	0	D
		ALL	E	BS	X-1	D
FM	SANITARY FORCE MAIN	ALL	B	DI	N-1	B
		ALL	C/E	DI	N-2	B
FOR	FUEL OIL RETURN	ALL	E/C	BS	X-1	D
FOS	FUEL OIL SUPPLY	ALL	E/C	BS	X-1	D
GM	SANITARY GRAVITY MAIN	28	B/C/E	HDPE	U-1	
		20	B/C/E	DI	N-1	B
SAN	SANITARY SEWER SLIP-LINE	ALL	B/C/E	HDPE	U-1	
NPW	NON POTABLE WATER	ALL	E	GS	Y-1	A
VTR	VENT THROUGH ROOF	ALL	C/E	GS	Y-1	

GENERAL NOTES

- THE EXISTING UTILITY CROSSINGS OF THE NEW PIPELINE ARE SHOWN ACCORDING TO AVAILABLE INFORMATION. THE GAS, WATER, SEWER, ELECTRIC, TELEPHONE, AND CABLE TELEVISION SERVICE LATERALS ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL THE UTILITY CROSSINGS (BOTH MAINS AND LATERALS) ALONG THE PIPELINE ROUTES. NO GUARANTEE IS MADE THAT ALL THE EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING AND SHALL PROTECT ALL EXISTING UTILITIES (BOTH MAINS AND LATERALS) FROM DAMAGE DUE TO HIS OPERATIONS. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (800) 642-2444, AT LEAST 48 HOURS BEFORE EXCAVATION.
- ANGLE POINTS AND OTHER FITTINGS ON THE NEW PIPELINES ARE LOCATED ON THE DRAWINGS BOTH BY STATIONING, OR DIMENSIONING OFF OF EXISTING GROUND FEATURES. IN CASE OF ANY CONFLICT, THE DIMENSIONS OFF OF EXISTING FEATURES SHALL TAKE PRECEDENCE OVER STATIONING. PIPE ALIGNMENT, INCLUDING ANGLE POINTS AND OTHER FITTINGS MAY BE ADJUSTED TO MEET FIELD CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
- THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH FAVORABLY REVIEWED SHOP DRAWINGS.
- UNLESS NOTED OTHERWISE, THE PLANS REFLECT THE GROUND CONDITIONS EXISTING AT THE TIME OF THE SURVEY. THE CONTRACTOR SHALL REPORT ANY DIFFERENCES NOTED TO THE ENGINEER DURING THE BIDDING PERIOD. THE PLAN MAPS FOR THIS PROJECT WERE SURVEYED AND GROUND CONTROL WAS ESTABLISHED BY TOWILL INC. HORIZONTAL COORDINATES ARE BASED ON HPGN PT. JPL 13 MB 1981 N=2121588.38 E=5996885.16 WITH A HORIZONTAL DATUM OF CCS83 ZONE 3. ELEVATIONS ARE REFERENCED TO NAVD88 BASED ON U.S.C. & G.S. PT. M108 1932 ELEV = 11.97 NAVD88.
- THE OVERHEAD ELECTRIC LINES ARE NOT SPECIFICALLY INDICATED ON THE DRAWINGS BUT MAY EXIST ALONG SOME OF THE PIPELINE ROUTES. THE CONTRACTOR SHALL EXERCISE CAUTION WHILE WORKING NEAR OR UNDER ALL ELECTRIC LINES TO AVOID DAMAGE TO THESE UTILITIES AND INJURY TO CONSTRUCTION WORKERS.
- ALL OPEN TRENCHES SHALL BE BACKFILLED TO MEET THE STANDARD SPECIFICATIONS. IF A TRENCH IS LEFT OPEN, STEEL PLATES SHALL BE USED TO COVER THE TRENCH. ANY OPEN TRENCH SHALL BE LESS THAN 10 FT LONG AND 5 FT WIDE. PROPERLY BARRICADEED, FENCED AND LIGHTED CASING PIPE BORE PITS MAY NOT BE LEFT OPEN DURING NON-WORKING HOURS WHILE CASING PIPES ARE BEING INSTALLED. DO NOT MAKE A CONNECTION BETWEEN THE NEW PIPELINES AND ANY EXISTING UTILITY UNLESS IT IS SPECIFICALLY CALLED FOR ON THE DRAWINGS, OR BY THE ENGINEER IN THE FIELD.
- WHERE NO RECORD IS AVAILABLE TO INDICATE THE ELEVATION OF AN EXISTING UTILITY, THAT UTILITY IS LABELED "VERIFY LOCATION AND ELEVATION" ON THE PROFILE DRAWINGS. EXERCISE CAUTION WHEN EXCAVATING FOR THESE UNKNOWN UTILITY LOCATIONS.

PIPE TYPE LEGEND

SERVICE

B	BURIED
C	CONCRETE ENCASED
E	EXPOSED

SIZE

NOMINAL DIAMETER (Ø) IN INCHES

PIPE TYPE AND VALVE SYSTEM

SEE SPECIFICATION SECTION 15050 UNLESS OTHERWISE NOTED

MATERIAL

BS	BLACK STEEL
DI	DUCTILE IRON
FE	FIBERGLASS
GS	GALVANIZED STEEL
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYLCHLORIDE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1" = 100'
0 25mm = 100m
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED	TKR
DRAWN	ROO
CHECKED	JAF

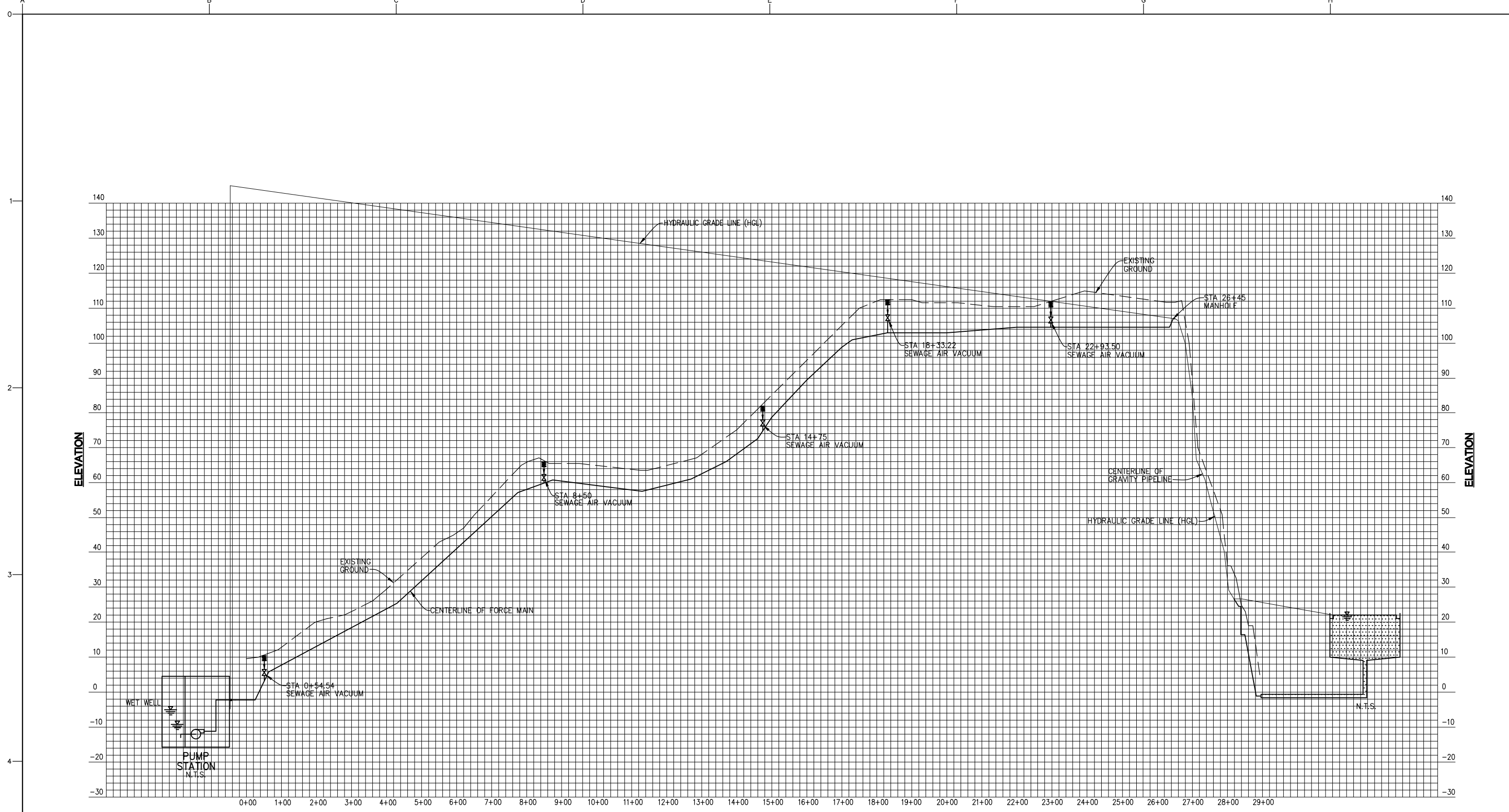
SAUSALITO-MARIN CITY SANITARY DISTRICT  
MARIN COUNTY, CALIFORNIA  
BEACH FORCE MAIN REPLACEMENT  
Kennedy/Jenks Consultants

MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

GENERAL NOTES, LEGEND, SYMBOLS AND ABBREVIATIONS

DWG. NO.	G-2
JOB NO.	960505.02
DATE	3-5-97
SHEET	OF
G-2	





**HYDRAULIC PROFILE**  
 VERTICAL SCALE 1"=15'  
 HORIZONTAL SCALE 1"=150'

N:\96\960505.02\G-5

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NO.	REVISION	DATE	BY

**SCALES**  
 0" = 1"  
 0" = 25mm  
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED: TJS  
 DRAWN: PAP  
 CHECKED: JAF

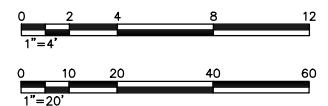
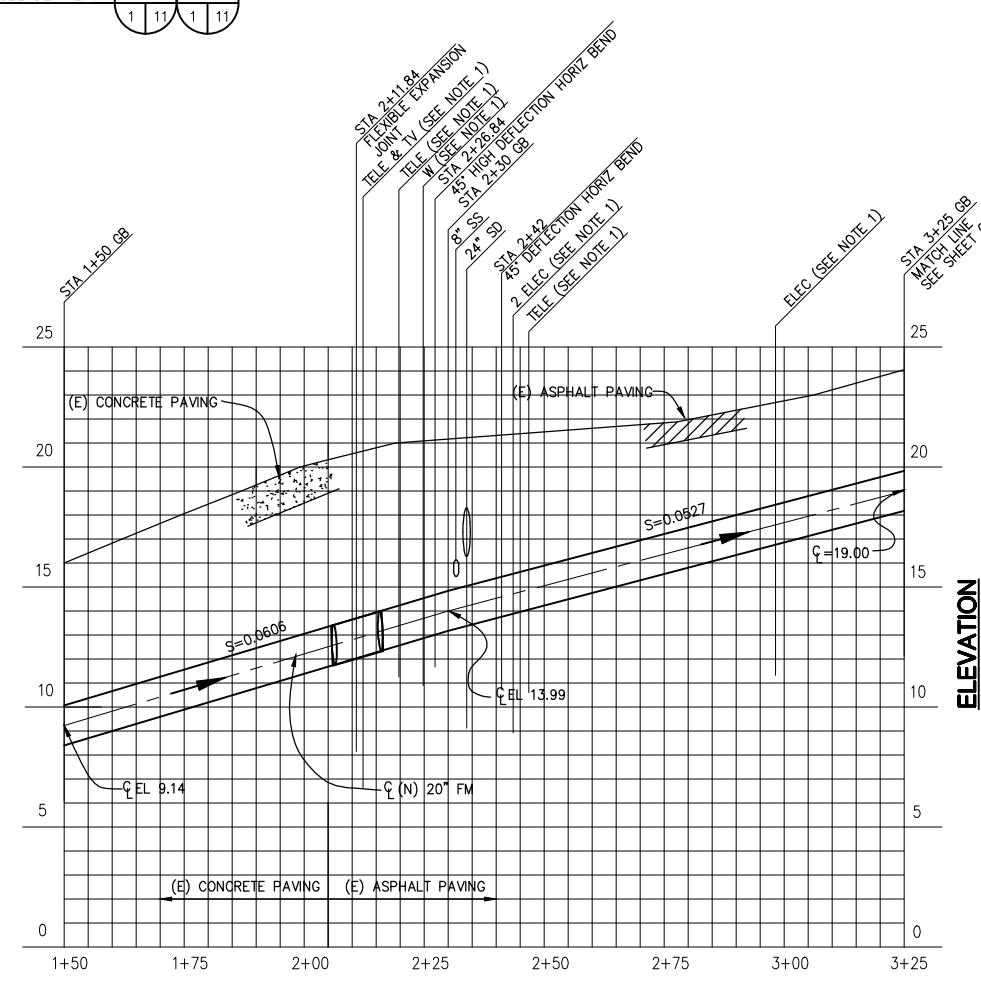
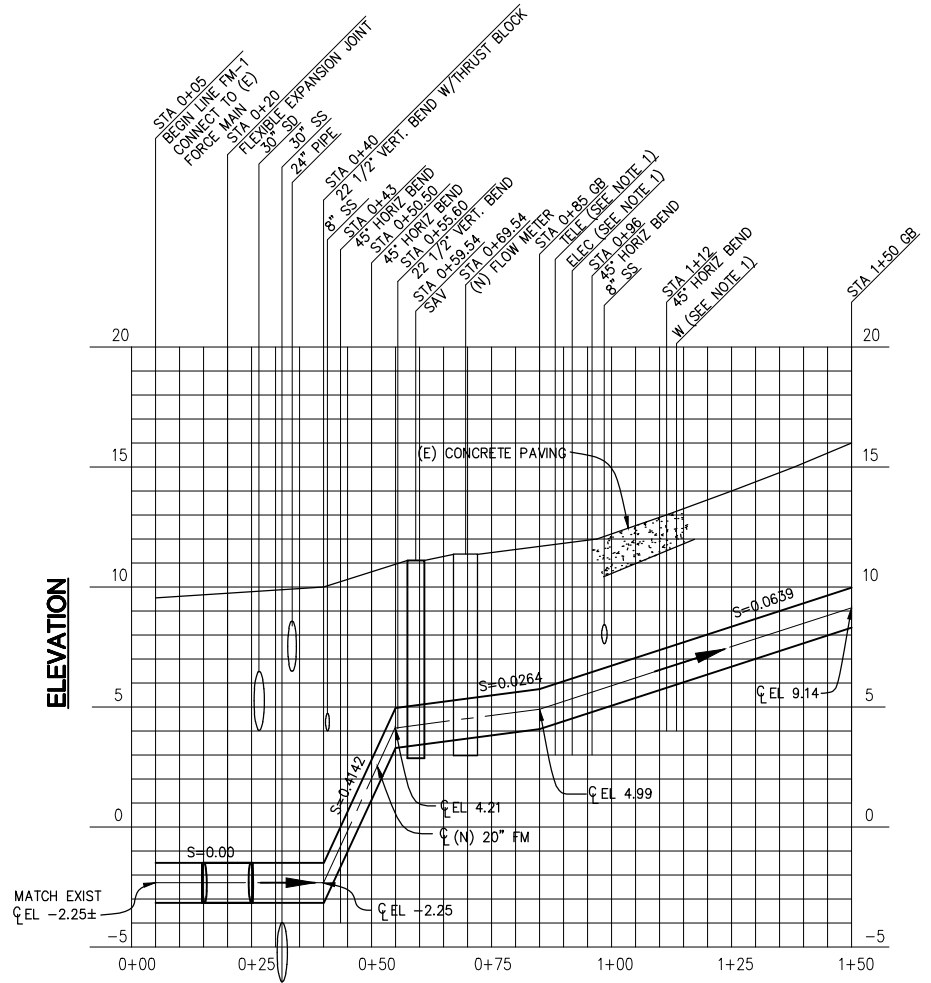
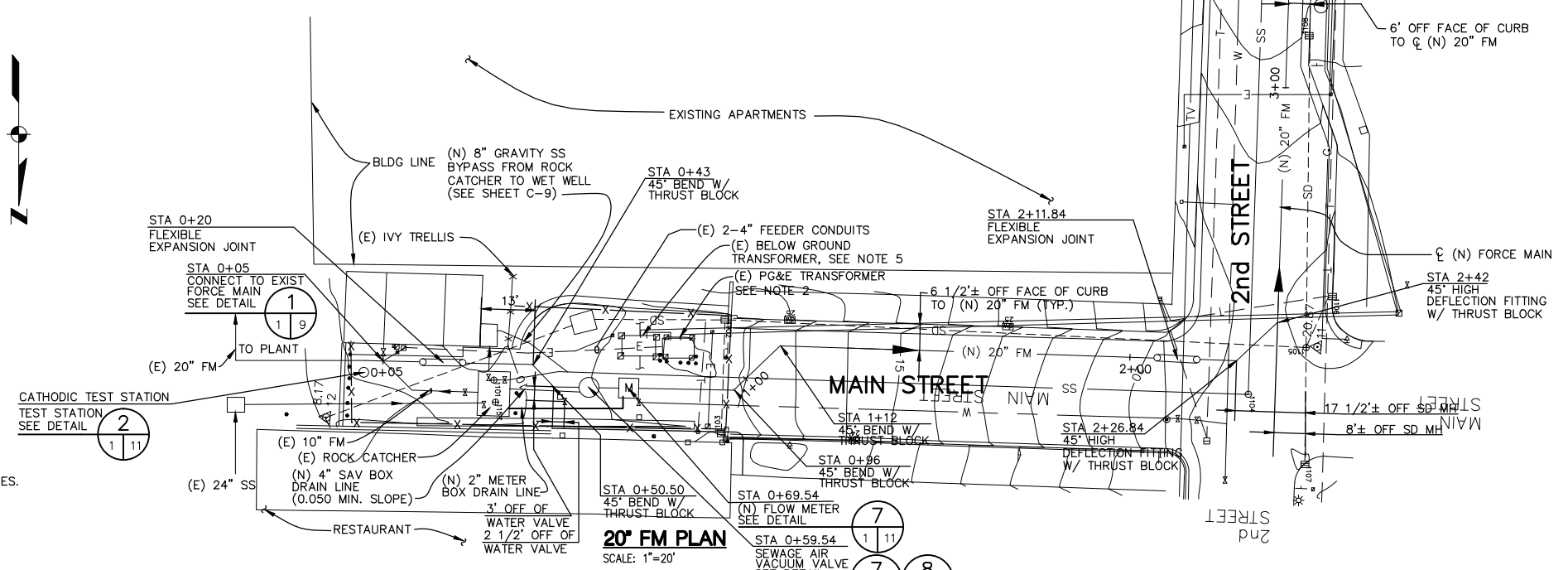
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**MARIN COUNTY, CALIFORNIA**  
**BEACH FORCE MAIN REPLACEMENT**  
**Kennedy/Jenks Consultants**  
 MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

**HYDRAULIC PROFILE**

DWG. NO. 960505.02  
 JOB NO. 960505.02  
 DATE 3-5-97  
 SHEET OF  
**G-5**

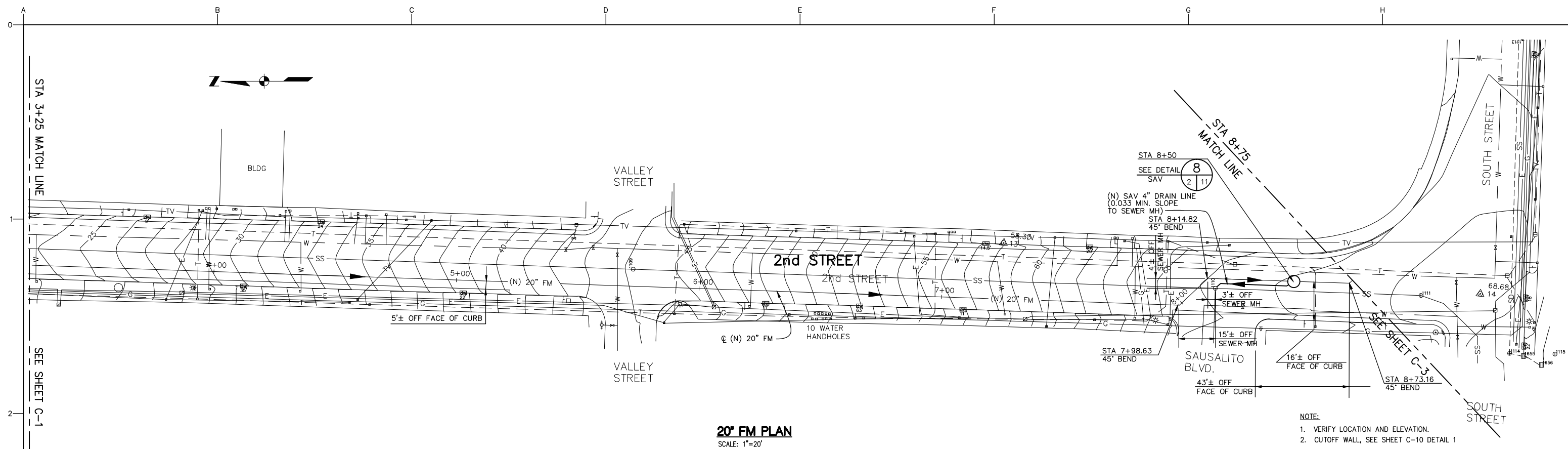
STA 3+25 MATCH LINE SEE SEE SHEET C-2

- NOTES:**
1. VERIFY LOCATION AND ELEVATION IN FIELD.
  2. (E) 120/240V, 3 PHASE PG&E PAD MOUNT TRANSFORMER TO BE REPLACED WITH (N) 240/480V, 3 PHASE TRANSFORMER AND 800 AMP SERVICE TO PUMP STATION, SEE ELECT. DWGS.
  3. DO NOT BLOCK BOTH DRIVEWAYS TO THE APARTMENT COMPLEX AT THE SAME TIME. DO NOT BLOCK DRIVEWAY TO THE RESTAURANT PARKING LOT FOR GREATER THAN 15 MINUTES. THE APARTMENT DRIVEWAYS ARE ON MAIN STREET LOCATED APPROXIMATELY AT STATIONS 1+00 AND 1+60. THE RESTAURANT DRIVEWAY IS LOCATED ON MAIN STREET AT STATION 1+20.
  4. APPROXIMATE FENCED CONSTRUCTION AREA IS SHOWN. AREA OF WORK IS WITHIN THE STREET RIGHT OF WAY BETWEEN THE RESTAURANT AND APARTMENT COMPLEX.
  5. UNDERGROUND ELECTRICAL TRANSFORMER PROVIDES SERVICE TO (E) APARTMENT COMPLEX AND RESTAURANT. CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND FEED AND SERVICE LINES.

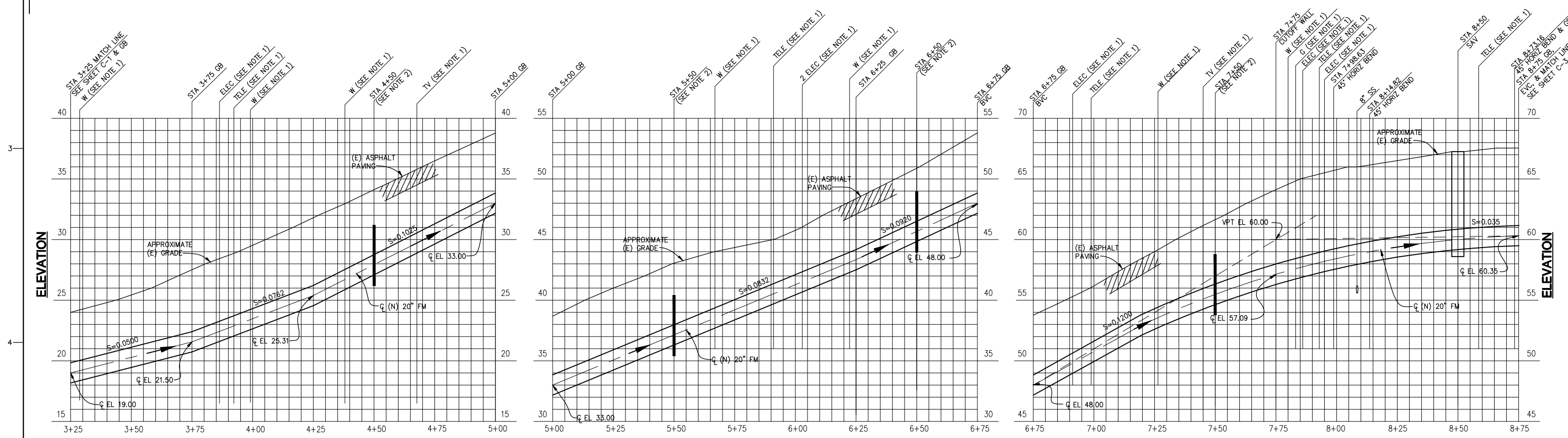


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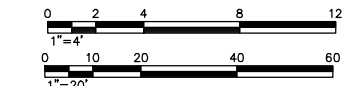
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	<p>NO.</p>	<p>REVISION</p>	<p>DATE</p>	<p>BY</p>	<p>DRAWN JT/GC</p>			<p>JOB NO. 960505.02</p>



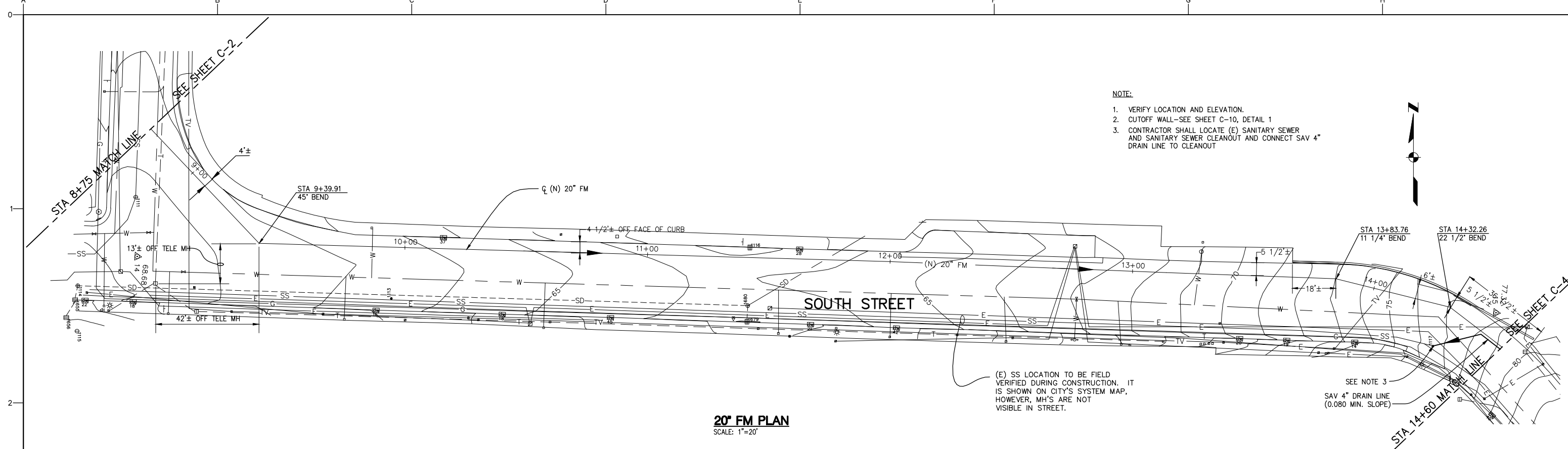
**20' FM PLAN**  
SCALE: 1"=20'



**20' FM PROFILE**  
VERTICAL SCALE 1"=4'  
HORIZONTAL SCALE 1"=20'



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	<p><b>NO.</b></p> <p><b>REVISION</b></p> <p><b>DATE</b></p> <p><b>BY</b></p>		<p><b>SCALES</b></p> <p>0 1" 25mm</p> <p>IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.</p>		<p><b>DATE</b> 3-5-97</p> <p><b>SHEET</b> OF</p> <p><b>C-2</b></p>		<p>JOB NO. 960505.02</p>		

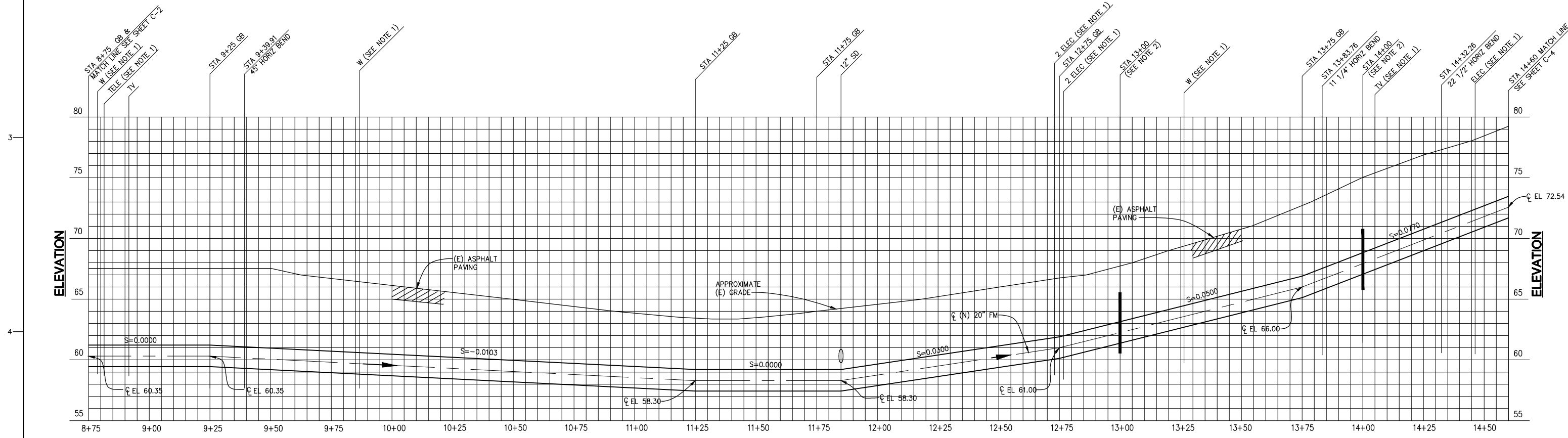


- NOTE:**
1. VERIFY LOCATION AND ELEVATION.
  2. CUTOFF WALL—SEE SHEET C-10, DETAIL 1
  3. CONTRACTOR SHALL LOCATE (E) SANITARY SEWER AND SANITARY SEWER CLEANOUT AND CONNECT SAV 4" DRAIN LINE TO CLEANOUT

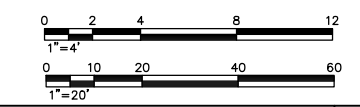
**20' FM PLAN**  
SCALE: 1"=20'

(E) SS LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION. IT IS SHOWN ON CITY'S SYSTEM MAP, HOWEVER, MH'S ARE NOT VISIBLE IN STREET.

SEE NOTE 3  
SAV 4" DRAIN LINE (0.080 MIN. SLOPE)

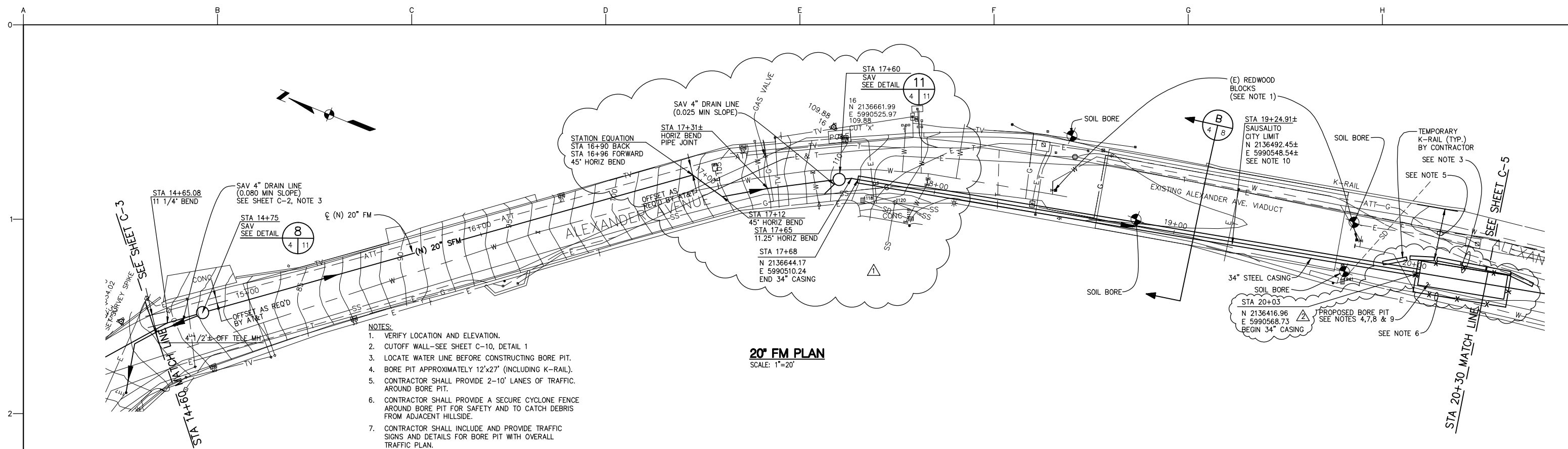


**20' FM PROFILE**  
VERTICAL SCALE 1"=4'  
HORIZONTAL SCALE 1"=20'



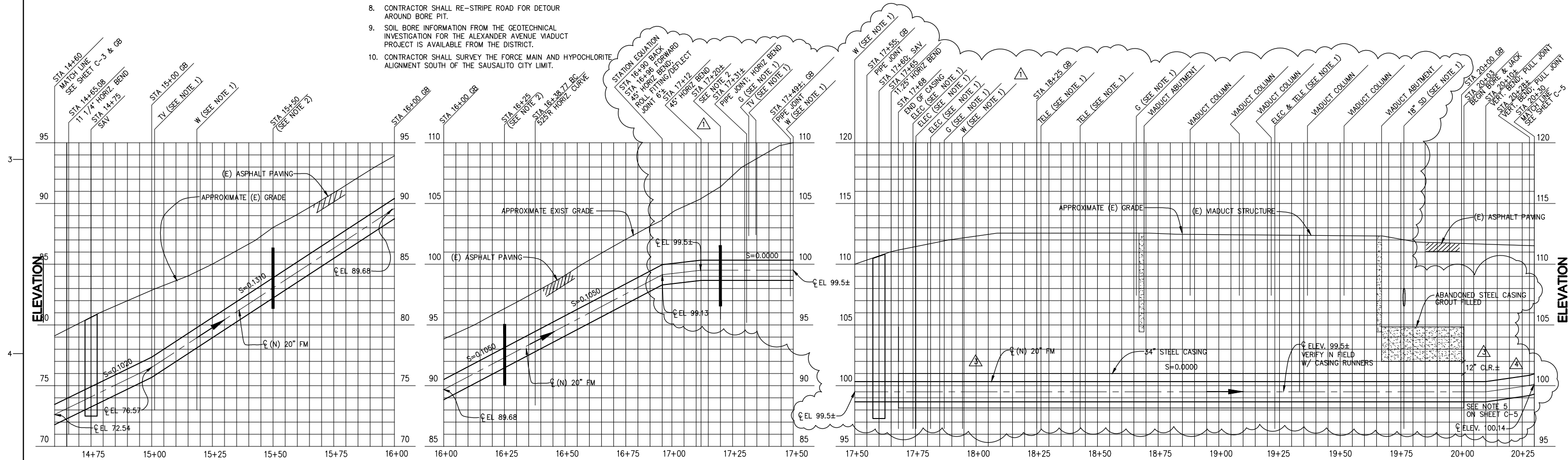
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	<p>NO. _____</p> <p>REVISION _____</p> <p>DATE _____</p> <p>BY _____</p>		<p>IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.</p>		<p>SCALE: 1"=20'</p>		<p>JOB NO. 960505.02</p> <p>DATE 3-5-97</p> <p>SHEET _____ OF _____</p> <p><b>C-3</b></p>		

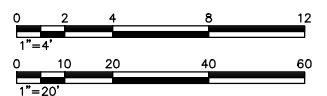


- NOTES:**
1. VERIFY LOCATION AND ELEVATION.
  2. CUTOFF WALL—SEE SHEET C-10, DETAIL 1
  3. LOCATE WATER LINE BEFORE CONSTRUCTING BORE PIT.
  4. BORE PIT APPROXIMATELY 12'x27' (INCLUDING K-RAIL).
  5. CONTRACTOR SHALL PROVIDE 2-10' LANES OF TRAFFIC AROUND BORE PIT.
  6. CONTRACTOR SHALL PROVIDE A SECURE CYCLONE FENCE AROUND BORE PIT FOR SAFETY AND TO CATCH DEBRIS FROM ADJACENT HILLSIDE.
  7. CONTRACTOR SHALL INCLUDE AND PROVIDE TRAFFIC SIGNS AND DETAILS FOR BORE PIT WITH OVERALL TRAFFIC PLAN.
  8. CONTRACTOR SHALL RE-STRIPE ROAD FOR DETOUR AROUND BORE PIT.
  9. SOIL BORE INFORMATION FROM THE GEOTECHNICAL INVESTIGATION FOR THE ALEXANDER AVENUE VIADUCT PROJECT IS AVAILABLE FROM THE DISTRICT.
  10. CONTRACTOR SHALL SURVEY THE FORCE MAIN AND HYPOCHLORITE ALIGNMENT SOUTH OF THE SAUSALITO CITY LIMIT.

**20' FM PLAN**  
SCALE: 1"=20'



**20' FM PROFILE**  
VERTICAL SCALE 1"=4'  
HORIZONTAL SCALE 1"=20'



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NO.	REVISION	DATE	BY
1	REVISION OF BORE ALIGNMENT AND EXTENSION OF CASING NORTH OF VIADUCT	3/26/98	
2	REVISION OF BORE PIT LOCATION AND ALIGNMENT	4/15/98	
3	REVISION OF STEEL CASING ELEVATION BELOW VIADUCT	4/28/98	
4	REVISION OF FM PROFILE SOUTH OF VIADUCT	5/11/98	

**SCALES**

0 1" 25mm

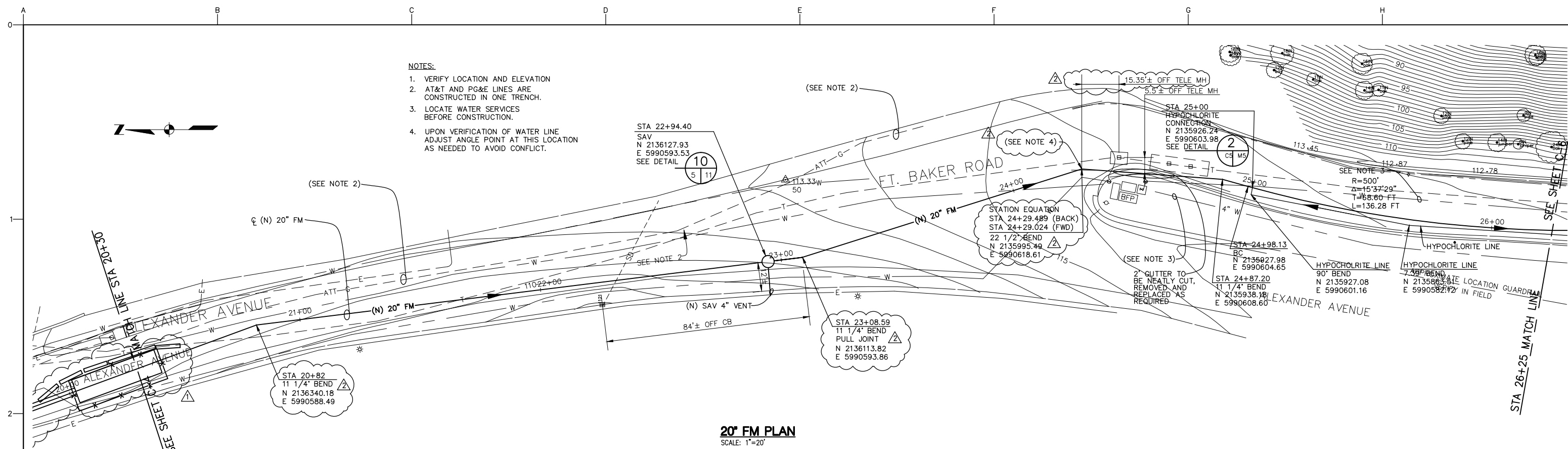
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED: JT/GC  
DRAWN: JT/GC  
CHECKED: JAF

**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

**NEW FORCE MAIN PLAN AND PROFILE**

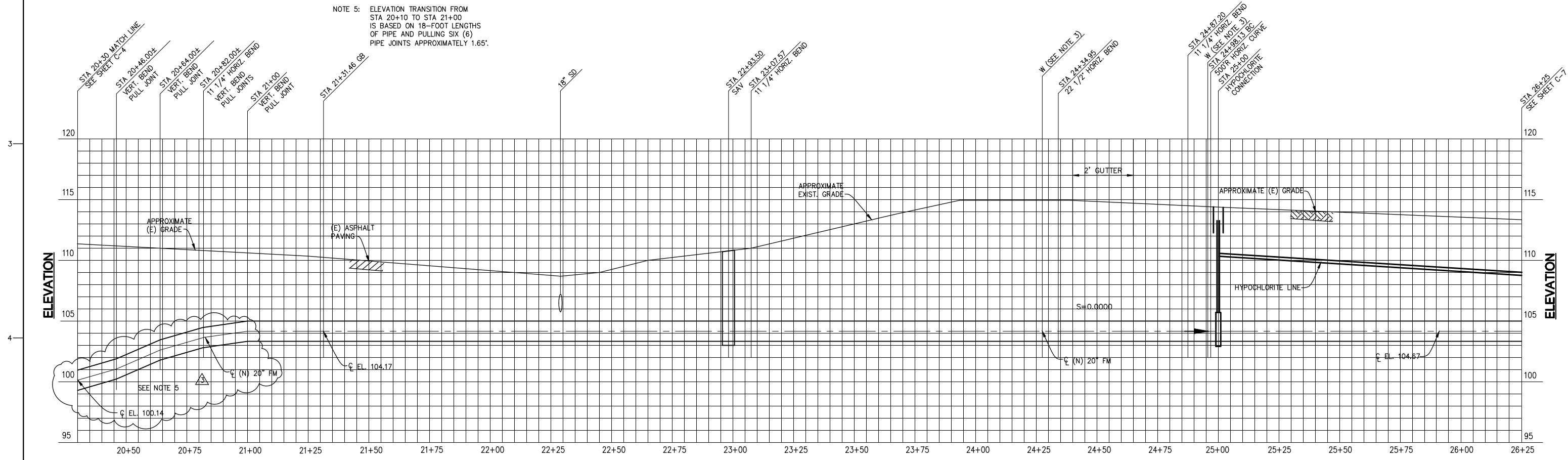
DWG. NO. C-4  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF C-4



**20' FM PLAN**  
SCALE: 1"=20'

- NOTES:**
1. VERIFY LOCATION AND ELEVATION
  2. AT&T AND PG&E LINES ARE CONSTRUCTED IN ONE TRENCH.
  3. LOCATE WATER SERVICES BEFORE CONSTRUCTION.
  4. UPON VERIFICATION OF WATER LINE ADJUST ANGLE POINT AT THIS LOCATION AS NEEDED TO AVOID CONFLICT.

**NOTE 5:** ELEVATION TRANSITION FROM STA 20+10 TO STA 21+00 IS BASED ON 18-FOOT LENGTHS OF PIPE AND PULLING SIX (6) PIPE JOINTS APPROXIMATELY 1.65'.



**20' FM PROFILE**  
VERTICAL SCALE 1"=4'  
HORIZONTAL SCALE 1"=20'

N:\96\960505\02\C-5REV.DWG

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NO.	REVISION	DATE	BY
1	REVISION OF BORE PIT LOCATION AND ALIGNMENT	4/15/98	
2	REVISION OF FM ALIGNMENT SOUTH OF VIADUCT	4/15/98	
3	REVISION OF FM PROFILE SOUTH OF VIADUCT	5/11/98	

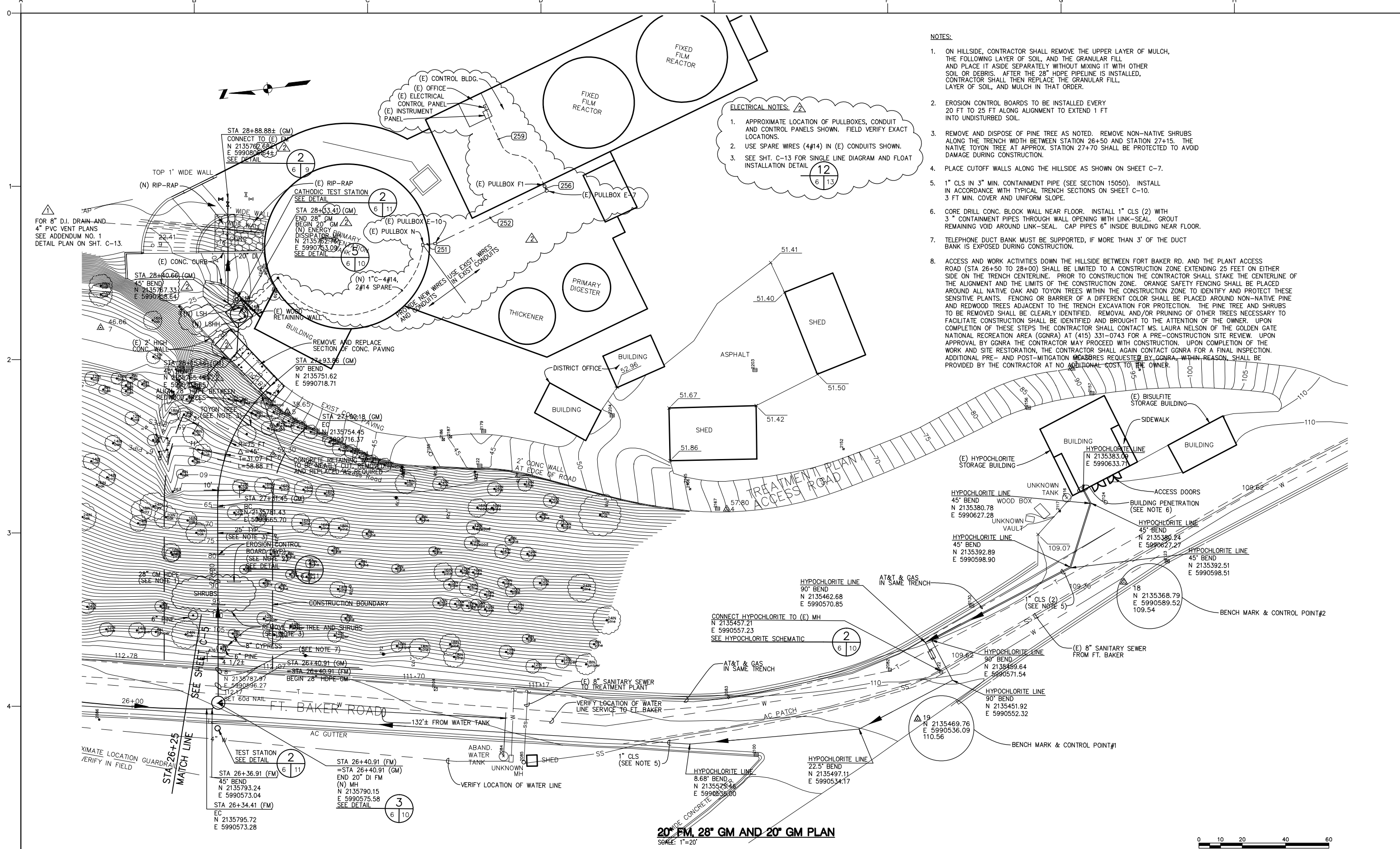
**SCALES**  
0 1" 25mm  
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED  
JT/GC  
DRAWN  
JT/GC  
CHECKED  
JAF

**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
**MARIN COUNTY, CALIFORNIA**  
**BEACH FORCE MAIN REPLACEMENT**  
**Kennedy/Jenks Consultants**  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

**NEW FORCE MAIN**  
**PLAN AND PROFILE**  
**AND HYPOCHLORITE PLAN**

DWG. NO. C-5  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF C-5

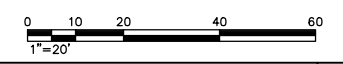


- NOTES:**
- ON HILLSIDE, CONTRACTOR SHALL REMOVE THE UPPER LAYER OF MULCH, THE FOLLOWING LAYER OF SOIL, AND THE GRANULAR FILL AND PLACE IT ASIDE SEPARATELY WITHOUT MIXING IT WITH OTHER SOIL OR DEBRIS. AFTER THE 28" HDPE PIPELINE IS INSTALLED, CONTRACTOR SHALL THEN REPLACE THE GRANULAR FILL, LAYER OF SOIL, AND MULCH IN THAT ORDER.
  - EROSION CONTROL BOARDS TO BE INSTALLED EVERY 20 FT TO 25 FT ALONG ALIGNMENT TO EXTEND 1 FT INTO UNDISTURBED SOIL.
  - REMOVE AND DISPOSE OF PINE TREE AS NOTED. REMOVE NON-NATIVE SHRUBS ALONG THE TRENCH WIDTH BETWEEN STATION 26+50 AND STATION 27+15. THE NATIVE TOYON TREE AT APPROX. STATION 27+70 SHALL BE PROTECTED TO AVOID DAMAGE DURING CONSTRUCTION.
  - PLACE CUTOFF WALLS ALONG THE HILLSIDE AS SHOWN ON SHEET C-7.
  - 1" CLS IN 3" MIN. CONTAINMENT PIPE (SEE SECTION 15050). INSTALL IN ACCORDANCE WITH TYPICAL TRENCH SECTIONS ON SHEET C-10. 3 FT MIN. COVER AND UNIFORM SLOPE.
  - CORE DRILL CONC. BLOCK WALL NEAR FLOOR. INSTALL 1" CLS (2) WITH 3" CONTAINMENT PIPES THROUGH WALL OPENING WITH LINK-SEAL. GROUT REMAINING VOID AROUND LINK-SEAL. CAP PIPES 6" INSIDE BUILDING NEAR FLOOR.
  - TELEPHONE DUCT BANK MUST BE SUPPORTED, IF MORE THAN 3' OF THE DUCT BANK IS EXPOSED DURING CONSTRUCTION.
  - ACCESS AND WORK ACTIVITIES DOWN THE HILLSIDE BETWEEN FORT BAKER RD. AND THE PLANT ACCESS ROAD (STA 26+50 TO 28+00) SHALL BE LIMITED TO A CONSTRUCTION ZONE EXTENDING 25 FEET ON EITHER SIDE ON THE TRENCH CENTERLINE. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL STAKE THE CENTERLINE OF THE ALIGNMENT AND THE LIMITS OF THE CONSTRUCTION ZONE. ORANGE SAFETY FENCING SHALL BE PLACED AROUND ALL NATIVE OAK AND TOYON TREES WITHIN THE CONSTRUCTION ZONE TO IDENTIFY AND PROTECT THESE SENSITIVE PLANTS. FENCING OR BARRIER OF A DIFFERENT COLOR SHALL BE PLACED AROUND NON-NATIVE PINE AND REDWOOD TREES ADJACENT TO THE TRENCH EXCAVATION FOR PROTECTION. THE PINE TREE AND SHRUBS TO BE REMOVED SHALL BE CLEARLY IDENTIFIED. REMOVAL AND/OR PRUNING OF OTHER TREES NECESSARY TO FACILITATE CONSTRUCTION SHALL BE IDENTIFIED AND BROUGHT TO THE ATTENTION OF THE OWNER. UPON COMPLETION OF THESE STEPS THE CONTRACTOR SHALL CONTACT MS. LAURA NELSON OF THE GOLDEN GATE NATIONAL RECREATION AREA (GGNRA) AT (415) 331-0743 FOR A PRE-CONSTRUCTION SITE REVIEW. UPON APPROVAL BY GGNRA THE CONTRACTOR MAY PROCEED WITH CONSTRUCTION. UPON COMPLETION OF THE WORK AND SITE RESTORATION, THE CONTRACTOR SHALL AGAIN CONTACT GGNRA FOR A FINAL INSPECTION. ADDITIONAL PRE- AND POST-MITIGATION MEASURES REQUESTED BY GGNRA, WITHIN REASON, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

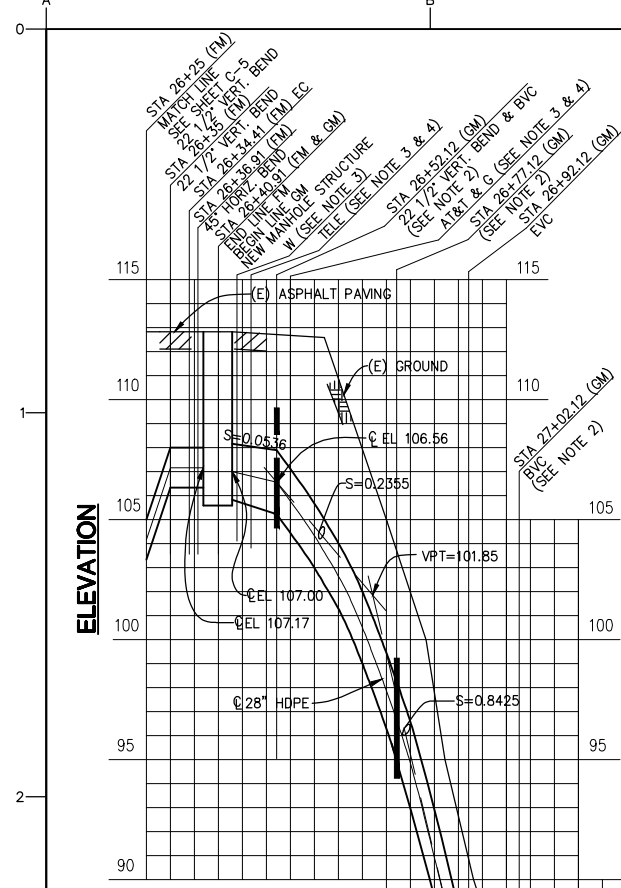
**ELECTRICAL NOTES:**

- APPROXIMATE LOCATION OF PULLBOXES, CONDUIT AND CONTROL PANELS SHOWN. FIELD VERIFY EXACT LOCATIONS.
- USE SPARE WIRES (4#14) IN (E) CONDUITS SHOWN.
- SEE SHT. C-13 FOR SINGLE LINE DIAGRAM AND FLOAT INSTALLATION DETAIL

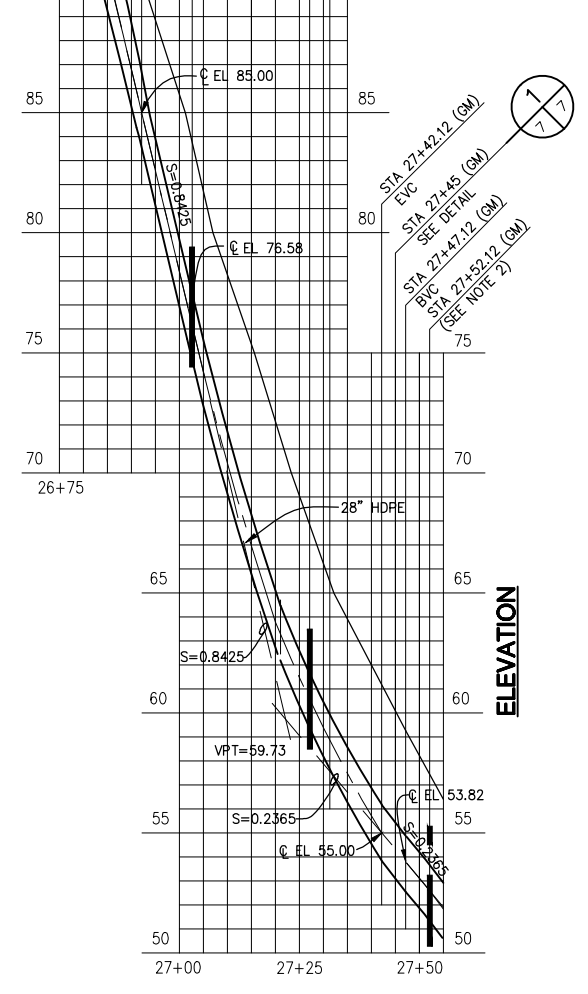
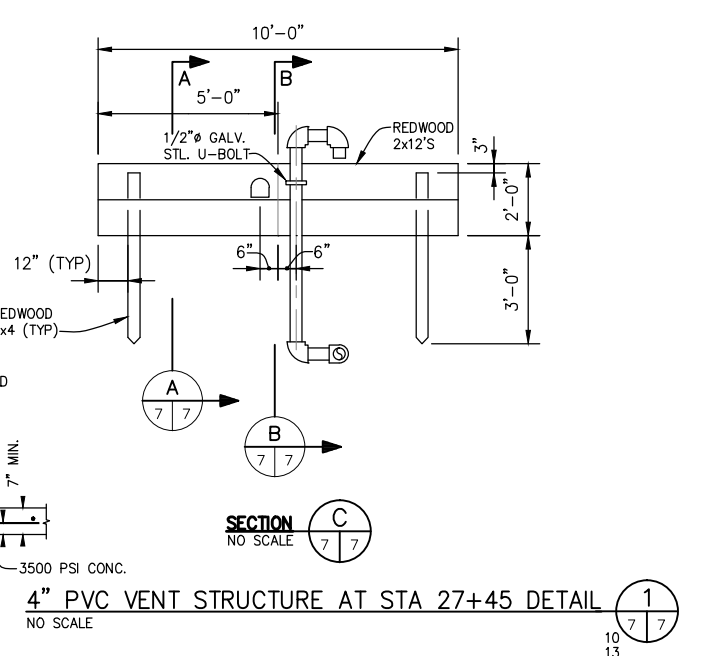
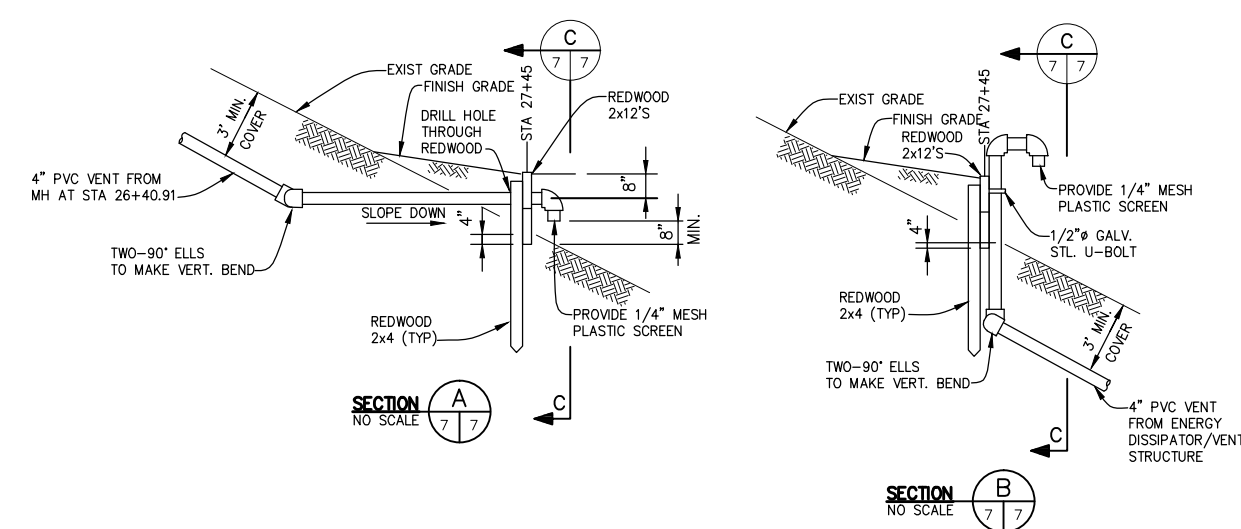
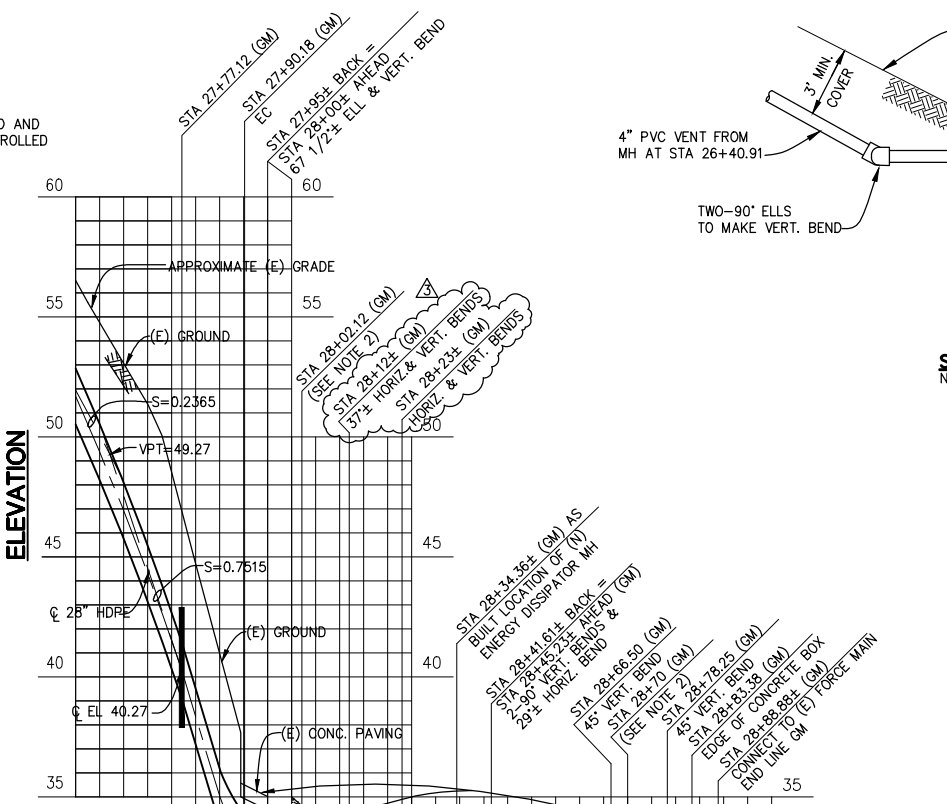
**20" FM, 28" GM AND 20" GM PLAN**  
SCALE: 1"=20'



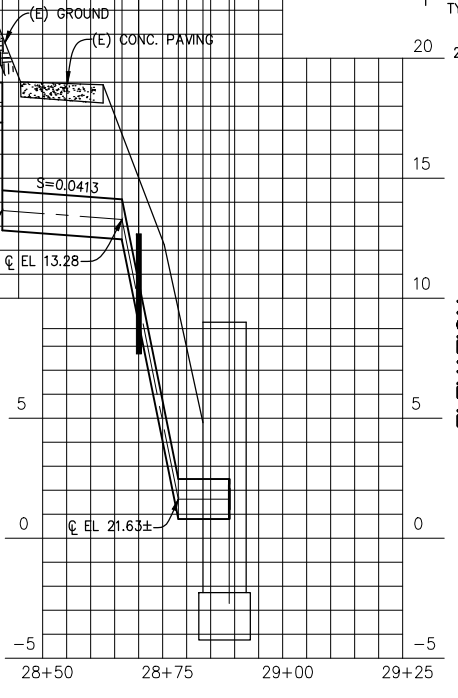
<p><b>USE OF DOCUMENTS</b></p> <p>THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.</p>	<p>ADDENDUM NO. 1</p> <p>8/22/97</p>	<p><b>SCALES</b></p> <p>0" = 1'</p> <p>0" = 25mm</p> <p>IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.</p>	<p>DESIGNED</p> <p>JT/GC</p>	<p><b>SAUSALITO-MARIN CITY SANITARY DISTRICT</b></p> <p>MARIN COUNTY, CALIFORNIA</p> <p><b>BEACH FORCE MAIN REPLACEMENT</b></p> <p>Kennedy/Jenks Consultants</p> <p>MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107</p>	<p><b>NEW FORCE MAIN, GRAVITY MAIN AND HYPOCHLORITE PLAN</b></p>	<p>DWG. NO.</p> <p>C-6</p>
	<p>CLARIFICATION NO. 3</p> <p>3/20/98</p>		<p>DRAWN</p> <p>JT/GC</p>			<p>JOB NO.</p> <p>960505.02</p>
<p>NO.</p> <p>REVISION</p>	<p>DATE</p> <p>BY</p>	<p>CHECKED</p> <p>JAF</p>	<p>DATE</p> <p>3-5-97</p>	<p>SHEET</p> <p>OF</p> <p><b>C-6</b></p>		



1. CONTRACTOR SHALL LOCATE ANY EXISTING UTILITIES IN THE AREA.
2. CUTOFF WALL-SEE SHEET C-10, DETAIL 1
3. VERIFY LOCATION AND ELEVATION
4. CONTRACTOR SHALL SUPPORT TELEPHONE DUCT IF MORE THAN 3' IS EXPOSED AND SHALL BACKFILL UNDER AND UP TO F1/4 OF THE DUCT WITH GROUT OR CONTROLLED DENSITY FILL (CDF).
5. CONTRACTOR SHALL VERIFY EXISTING CLARIFIER ELEVATION AND ADJUST ENERGY DISSIPATOR ACCORDINGLY. V-NOTCH FIELD MEASURED AT EL 24.58 ON 2 OCT 98.



**20" FM, 28" GM AND 20" GM PROFILES**  
 VERTICAL SCALE 1"=4'  
 HORIZONTAL SCALE 1"=20'



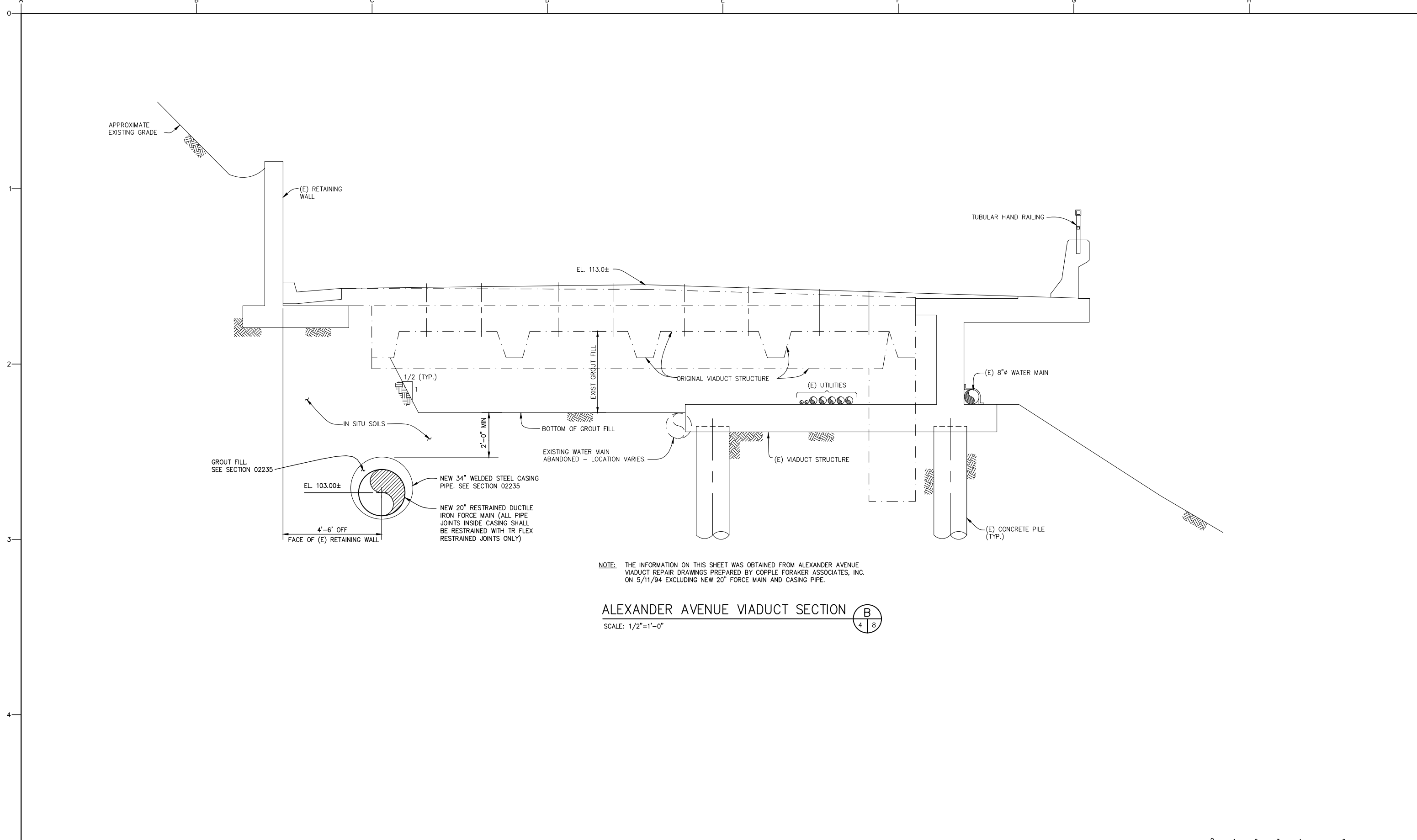
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NO.	REVISION	DATE	BY
1	REVISION TO FIELD MODIFICATION	11/25/98	
2	FIELD MODIFICATION	10/22/98	
3	RFQ NO. 3	3/20/98	

**SCALES**  
 0 1" 25mm  
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED GC  
 DRAWN GC  
 CHECKED JAF  
**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
 MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
 Kennedy/Jenks Consultants  
 MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

**NEW FORCE MAIN AND GRAVITY MAIN PROFILES**  
 DWG. NO. C-7  
 JOB NO. 960505.02  
 DATE 3-5-97  
 SHEET OF C-7



NOTE: THE INFORMATION ON THIS SHEET WAS OBTAINED FROM ALEXANDER AVENUE VIADUCT REPAIR DRAWINGS PREPARED BY COPPLE FORAKER ASSOCIATES, INC. ON 5/11/94 EXCLUDING NEW 20" FORCE MAIN AND CASING PIPE.

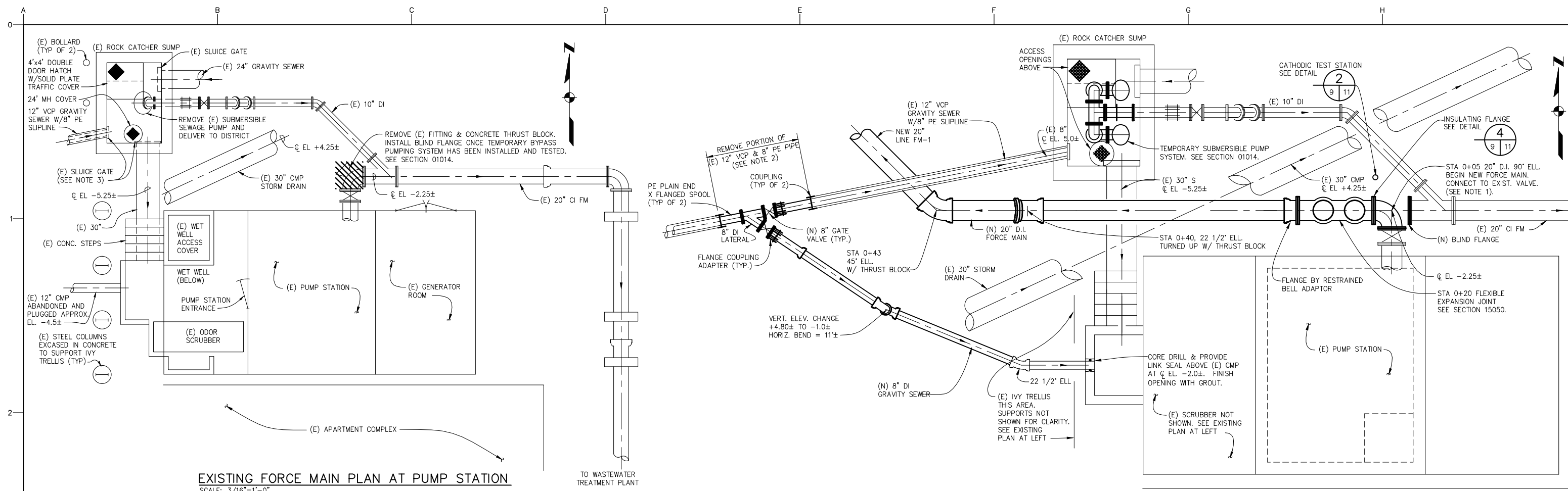
**ALEXANDER AVENUE VIADUCT SECTION B**  
 SCALE: 1/2"=1'-0"



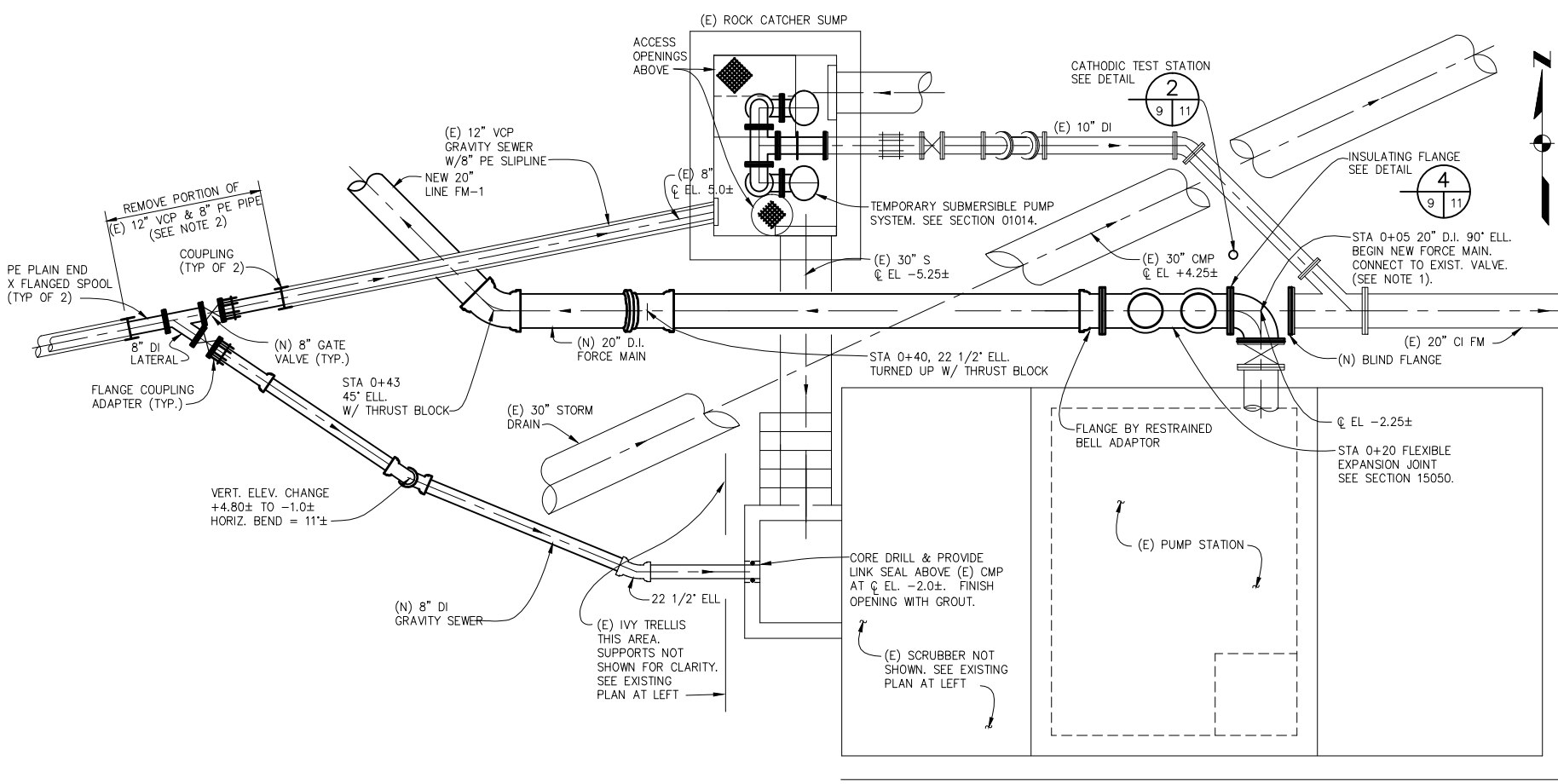
N:\96\960505.02\C-8

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NO.	REVISION	DATE	BY								

C-8

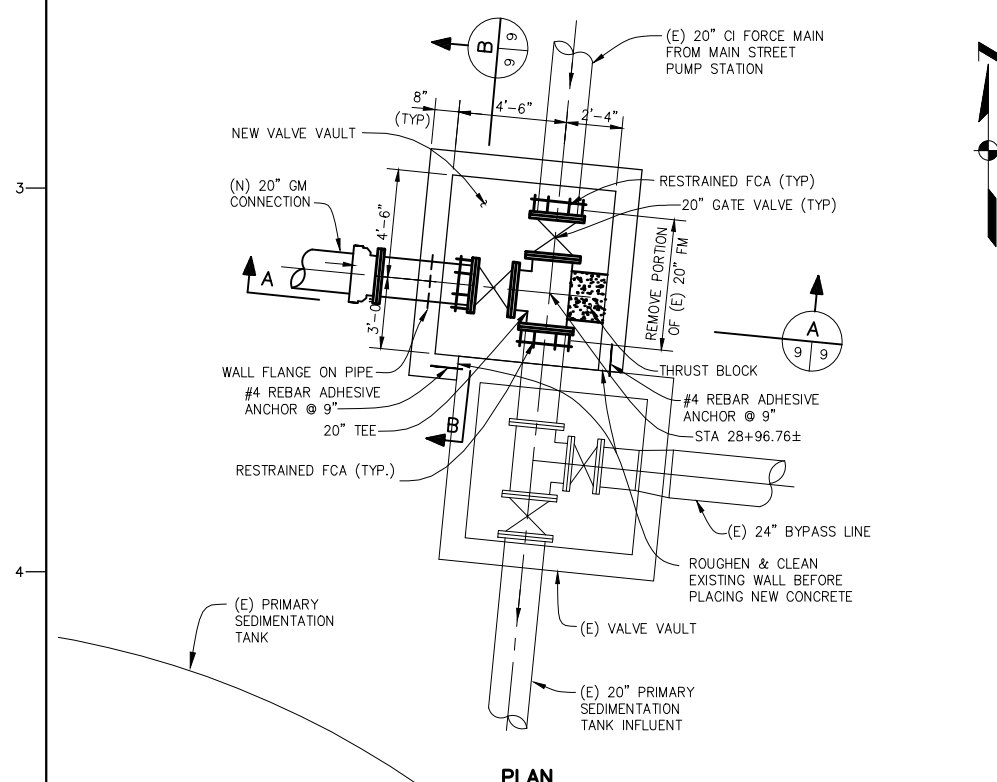


**EXISTING FORCE MAIN PLAN AT PUMP STATION**  
SCALE: 3/16"=1'-0"

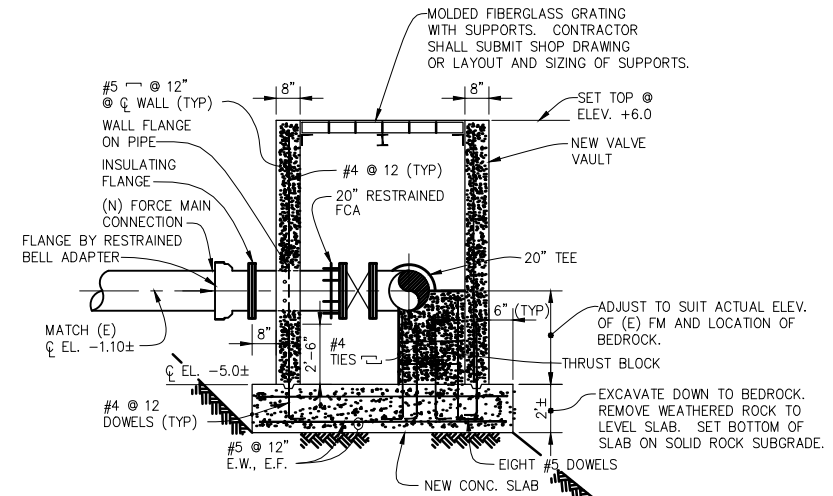


**NEW FORCE MAIN CONNECTION AT EXISTING PUMP STATION DETAIL**  
SCALE: 1/4"=1'-0"

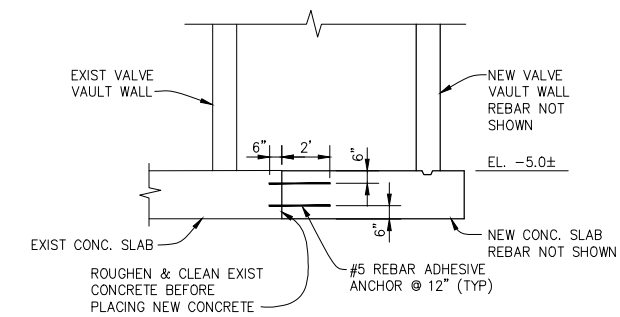
- NOTE:**
- EXISTING DRAWINGS SHOW BOTH FLANGED AND MECHANICAL JOINT FITTINGS ON THE EXISTING 20" FM AT THE EXISTING PUMP STATION. THIS DRAWING ASSUMES THAT THE EXISTING FITTINGS AT THIS LOCATION ARE FLANGED. THE CONTRACTOR SHALL POTHOLE TO DETERMINE JOINT TYPE BEFORE ORDERING NEW FITTINGS.
  - CONTRACTOR SHALL EXPOSE AND VERIFY GRAVITY SEWER SIZE AND MATERIAL, AND CONFIRM LAYOUT & CONNECTION DETAILS BEFORE ORDERING NEW PIPE MATERIALS.
  - SLUICE GATE ON 30" LINE DOES NOT PROVIDE POSITIVE SHUTOFF. CONTRACTOR SHALL SEAL GATE WATERTIGHT OR PROVIDE OTHER TEMPORARY PLUG TO ISOLATE ROCK CATCHER SUMP FOR BYPASS PUMPING AND TO PROVIDE A DRY ENVIRONMENT FOR WORK WITHIN THE PUMP STATION.



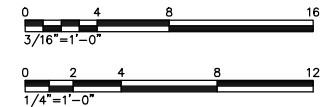
**NEW GRAVITY MAIN CONNECTION AT WASTEWATER TREATMENT PLANT DETAIL**  
SCALE: 1/4"=1'-0"



**SECTION A**  
SCALE: 1/4"=1'-0"



**SECTION B**  
SCALE: 1/4"=1'-0"



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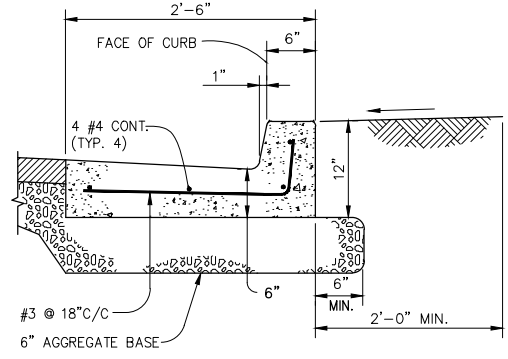
NO.	REVISION	DATE	BY

**SCALES**  
0" = 1'  
0" = 25mm  
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED GC  
DRAWN GC  
CHECKED JAF  
**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

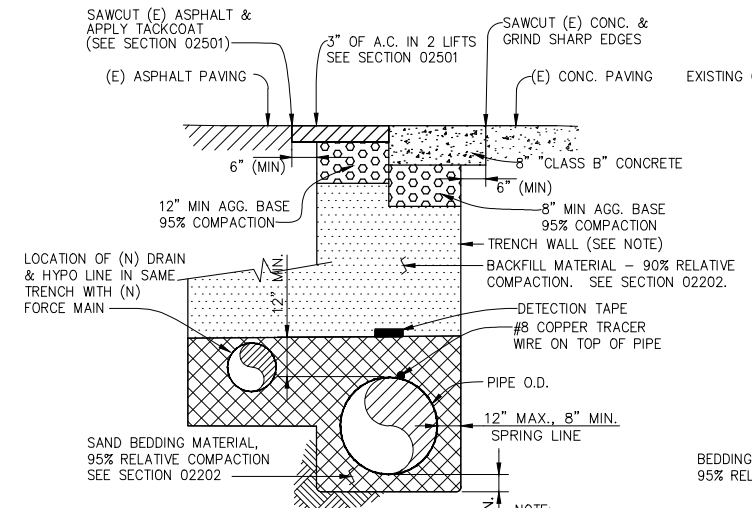
**NEW FORCE MAIN CONNECTION DETAILS**

DWG. NO. C-9  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF  
**C-9**



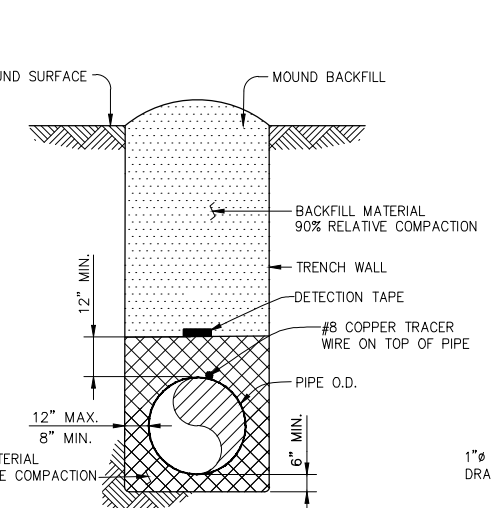
NOTE: ADJUST LAYOUT AND DIMENSIONS TO MATCH EXISTING.

**TYPICAL CONCRETE CURB & GUTTER DETAIL**  
N.T.S.



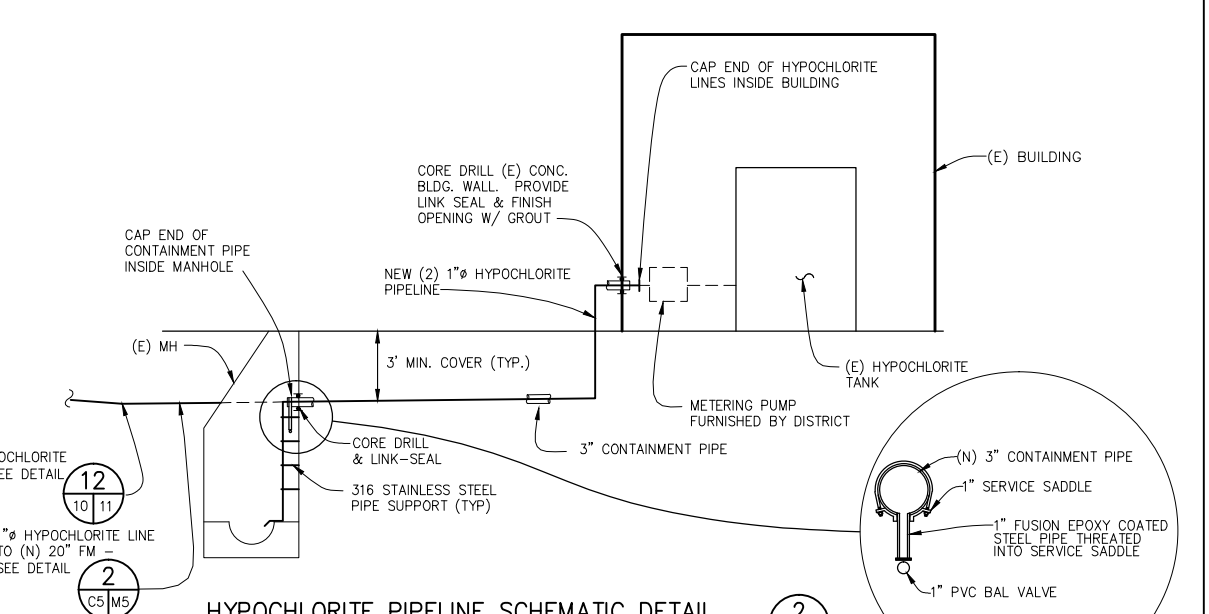
NOTE: CONTRACTOR MAY ENCOUNTER WEATHERED ROCK, COBBLESTONES AND BOULDERS ALONG SECOND ST., SOUTH ST. AND ALEXANDER AVE., AS REFERENCED IN THE GEOLOGIC CHARACTERIZATION REPORT FOR THIS PROJECT BY WILLIAM LETTIS AND ASSOCIATES. COPY AVAILABLE FROM THE DISTRICT.

**TYPICAL PAVED TRENCH SECTION**  
N.T.S.

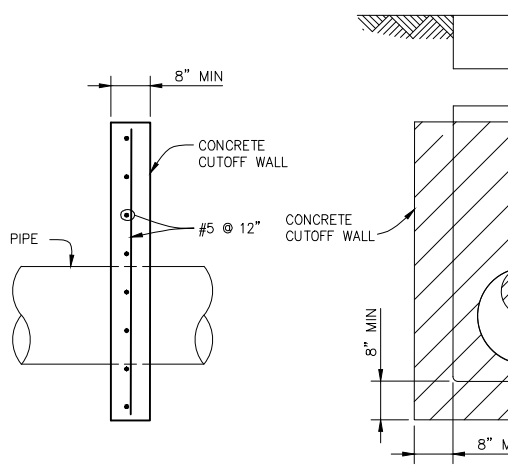


NOTE: CONTRACTOR MAY ENCOUNTER WEATHERED ROCK, COBBLESTONES AND BOULDERS ALONG SECOND ST., SOUTH ST. AND ALEXANDER AVE., AS REFERENCED IN THE GEOLOGIC CHARACTERIZATION REPORT FOR THIS PROJECT BY WILLIAM LETTIS AND ASSOCIATES. COPY AVAILABLE FROM THE DISTRICT.

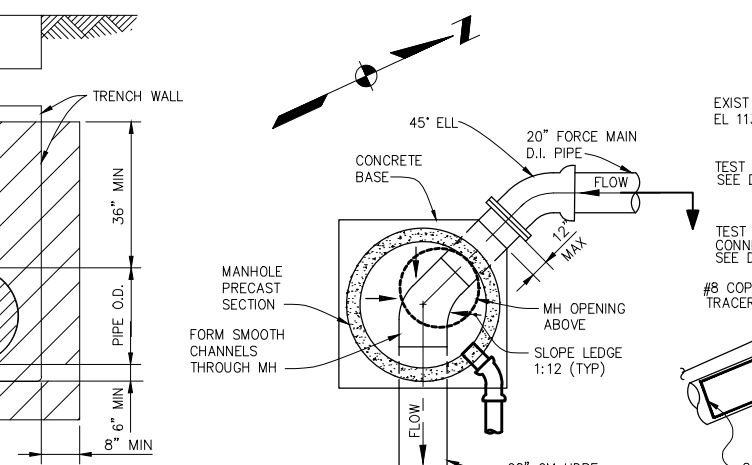
**TYPICAL UNPAVED TRENCH SECTION**  
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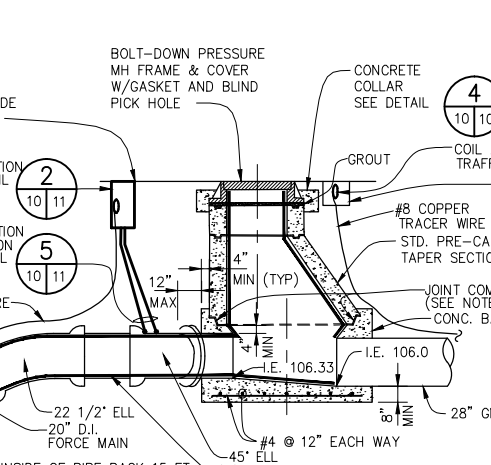
**HYPOCHLORITE PIPELINE SCHEMATIC DETAIL**  
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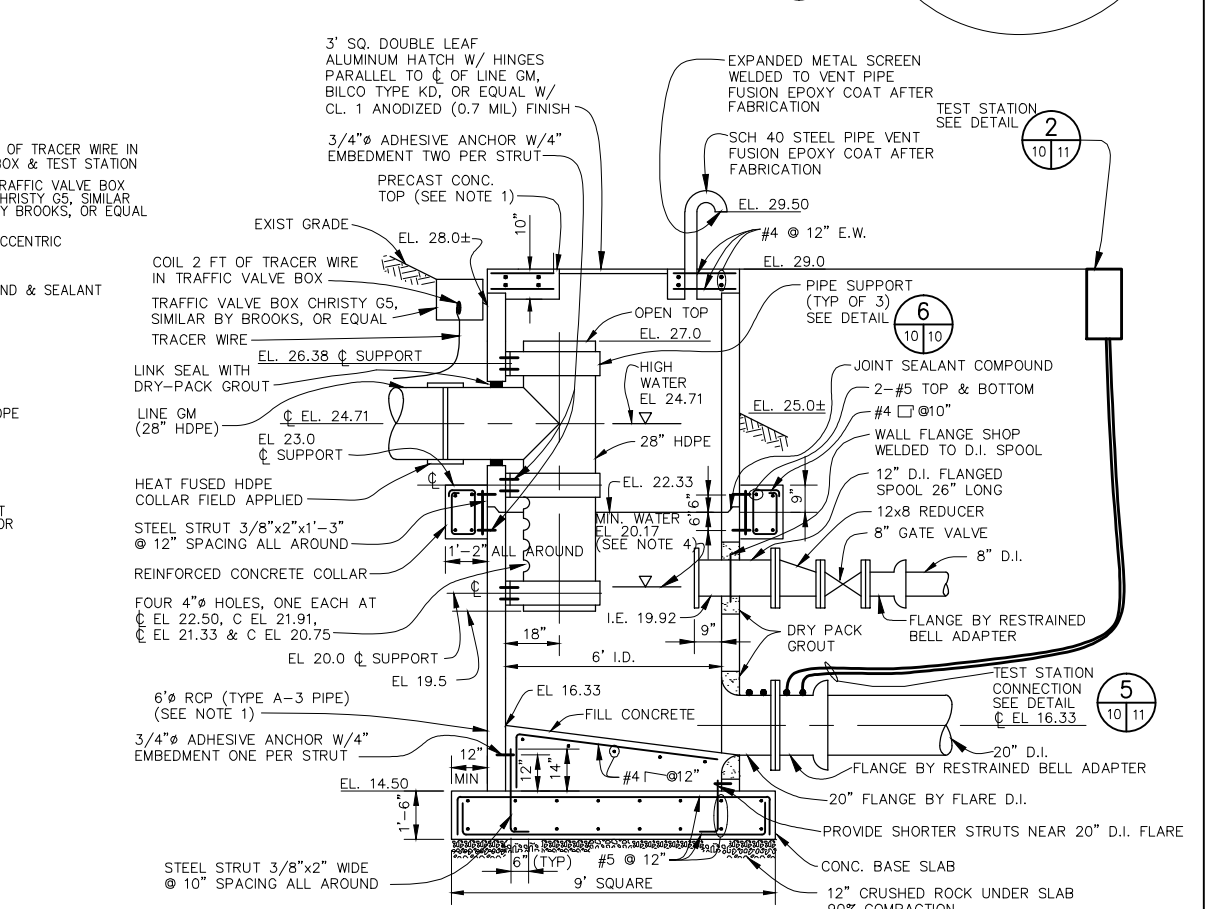
**CUTOFF WALL DETAIL**  
N.T.S.



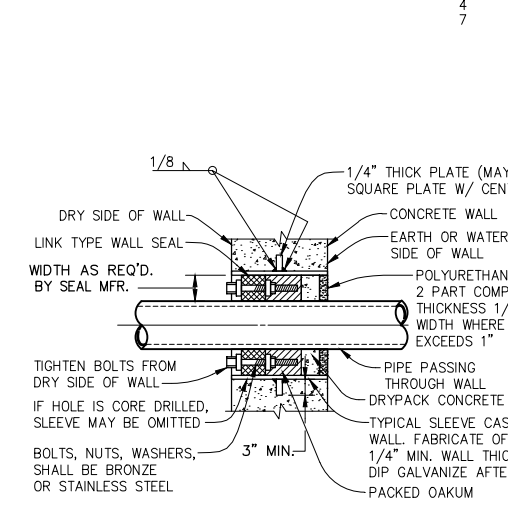
**MANHOLE DETAIL**  
N.T.S.



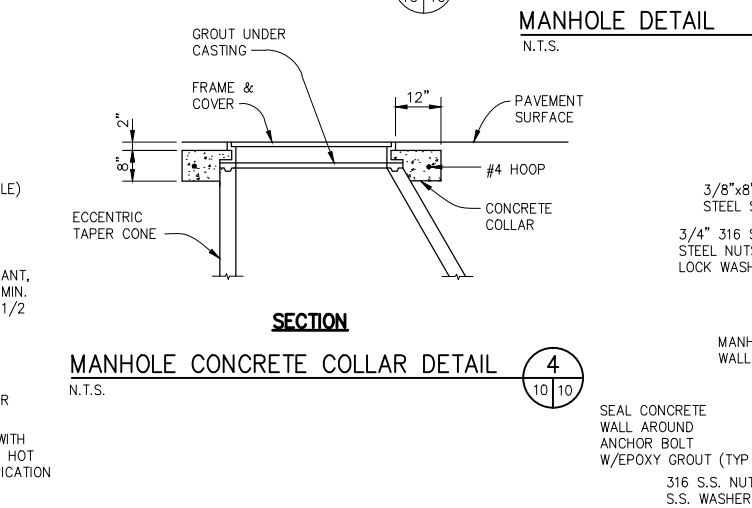
**28" HDPE PIPE SUPPORT DETAIL**  
N.T.S.



**ENERGY DISSIPATOR/VENT STRUCTURE DETAIL**  
N.T.S.



**TYPICAL LINK-SEAL DETAIL**  
N.T.S.



**MANHOLE CONCRETE COLLAR DETAIL**  
N.T.S.

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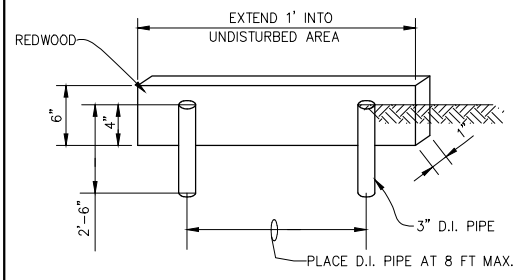
NO.	REVISION	DATE	BY

**SCALES**  
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0 25mm = 10' (TYP.)  
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

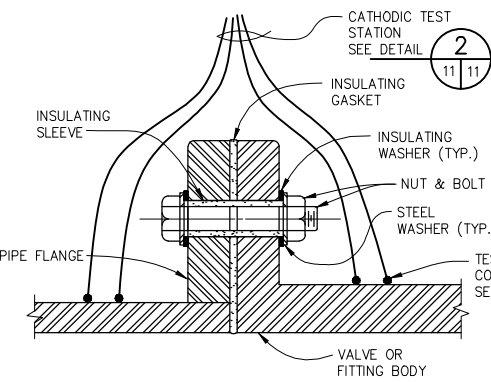
DESIGNED: JT  
DRAWN: JT  
CHECKED: JAF

**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLOOR NORTH, SAN FRANCISCO, CALIFORNIA 94107

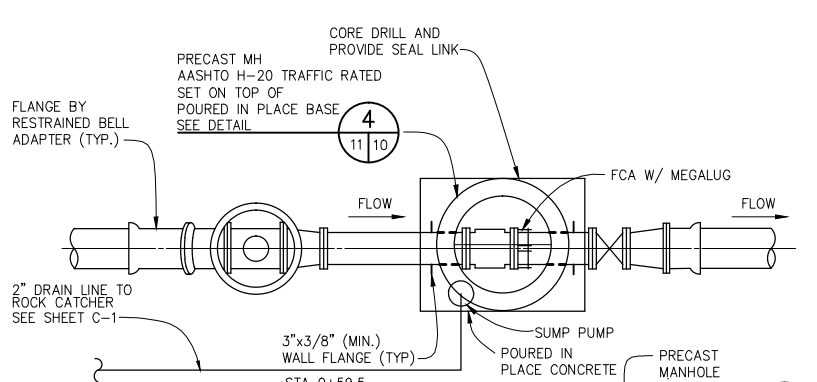
**NEW FORCE MAIN TYPICAL DETAILS**  
DWG. NO. C-10  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF C-10



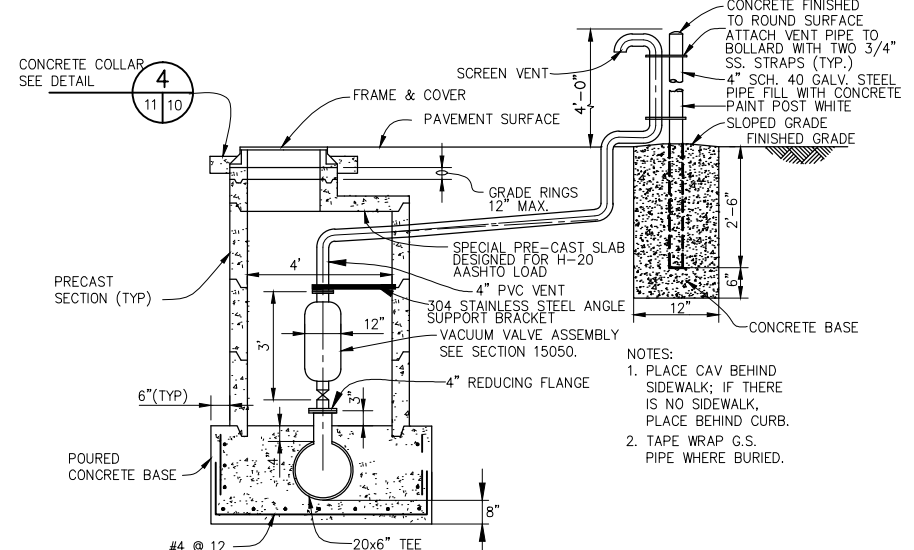
**EROSION BOARD DETAIL** 1  
N.T.S.



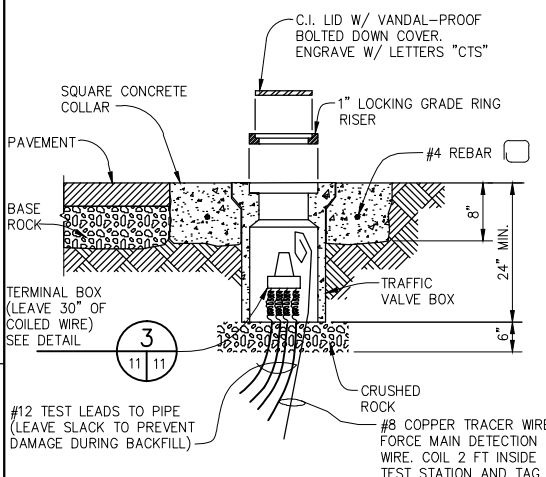
**INSULATING FLANGE DETAIL** 4  
N.T.S.



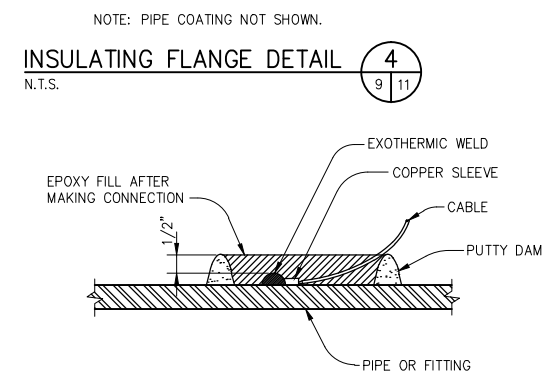
**FLOW METER INSTALLATION DETAIL** 7  
N.T.S.



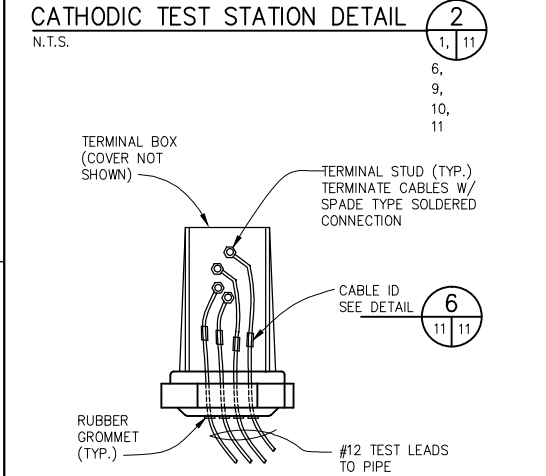
**SEWAGE AIR VACUUM VALVE ASSEMBLY DETAIL** 10  
N.T.S.



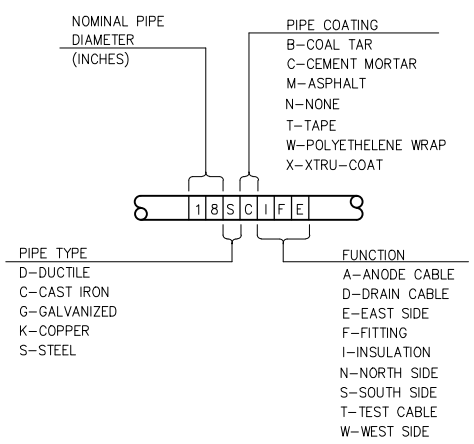
**CATHODIC TEST STATION DETAIL** 2  
N.T.S.



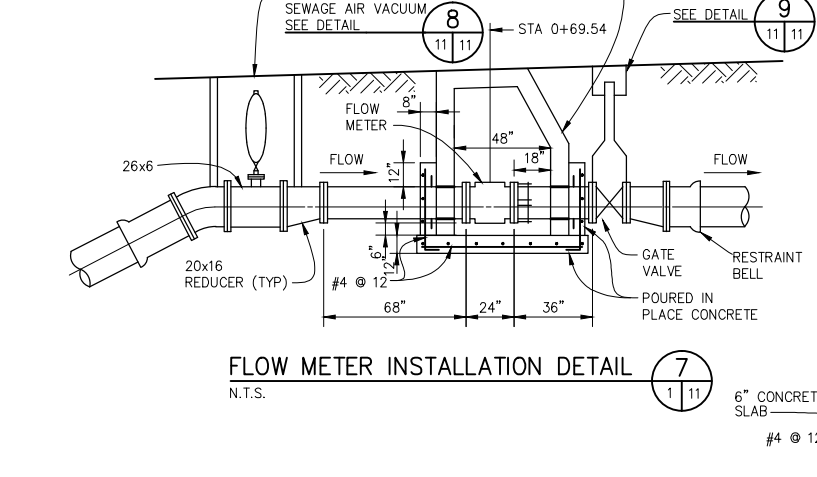
**TEST CABLE CONNECTION TO D.I. PIPE** 5  
N.T.S.



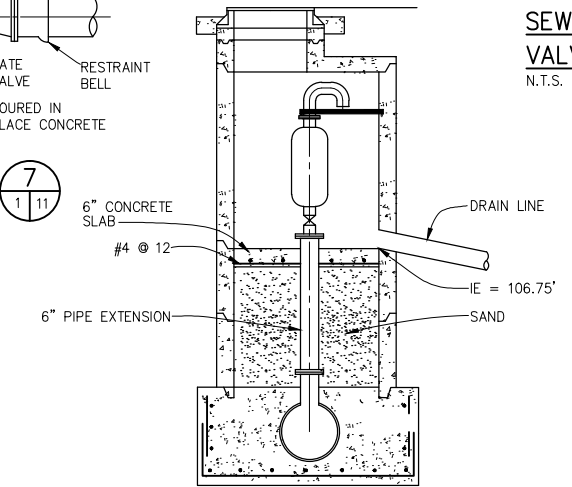
**TERMINAL BOX DETAIL** 3  
N.T.S.



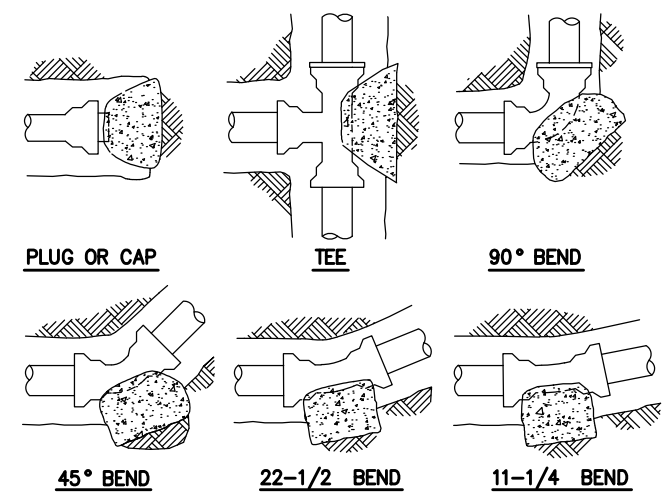
**CABLE IDENTIFICATION DETAIL** 6  
N.T.S.



**SEWAGE AIR VACUUM VALVE ASSEMBLY DETAIL** 8  
N.T.S.



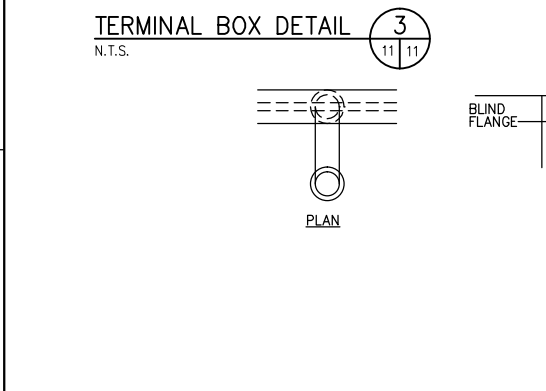
**SEWAGE AIR VACUUM VALVE ASSEMBLY DETAIL** 11  
N.T.S.



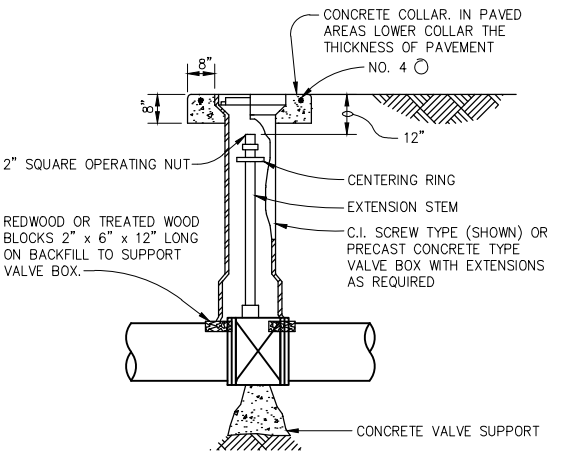
THRUST BLOCK SOIL BEARING AREAS, SQ. FT.					
Pipe Dia., In.	Plug, Cap or Tee	90° Bend	45° Bend	22-1/2° Bend	11-1/4° Bend
16	16	23	13	7	3
20	25	36	20	10	5

- NOTES:
- THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL. NON-BEARING VERTICAL SURFACES SHALL BE FORMED, AND JOINTS SHALL BE KEPT CLEAR OF CONCRETE.
  - BEARING AREAS SHOWN IN TABLE ARE BASED UPON 200 PSI PIPE TEST PRESSURE AND 2500 PSF SOIL BEARING CAPACITY. BEARING AREAS SHALL BE ADJUSTED IF CONDITIONS ARE OTHERWISE.

**TYPICAL THRUST BLOCK INSTALLATION DETAIL**  
N.T.S.



**HYPOCHLORITE DRAIN DETAIL** 12  
N.T.S.



**TYP. BURIED GATE VALVE OPERATOR** 9  
N.T.S.

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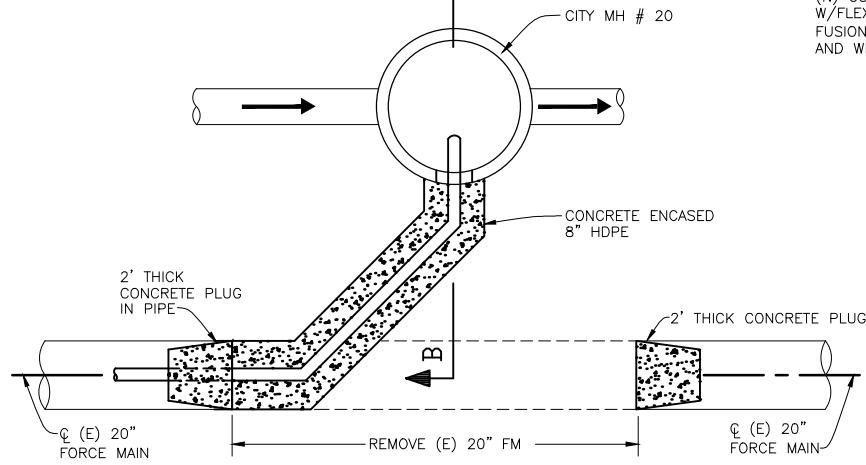
NO.	REVISION	DATE	BY

**SCALES**  
0 1" = 10' (Horizontal)  
0 1" = 25mm (Vertical)  
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED: JT/GC  
DRAWN: JT/GC  
CHECKED: JAF

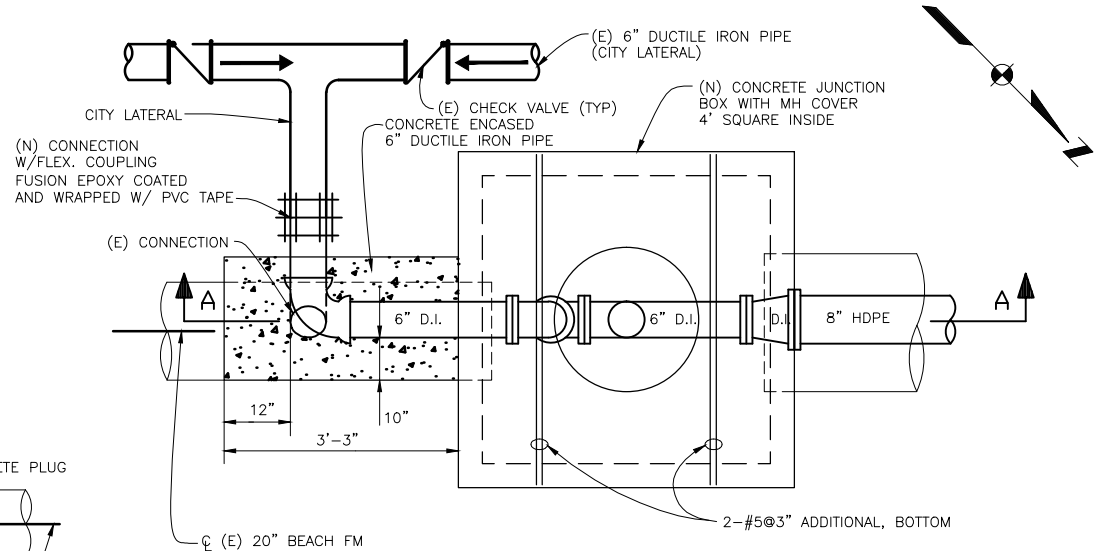
**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

**NEW FORCE MAIN AND TYPICAL DETAILS**  
DWG. NO. C-11  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF C-11



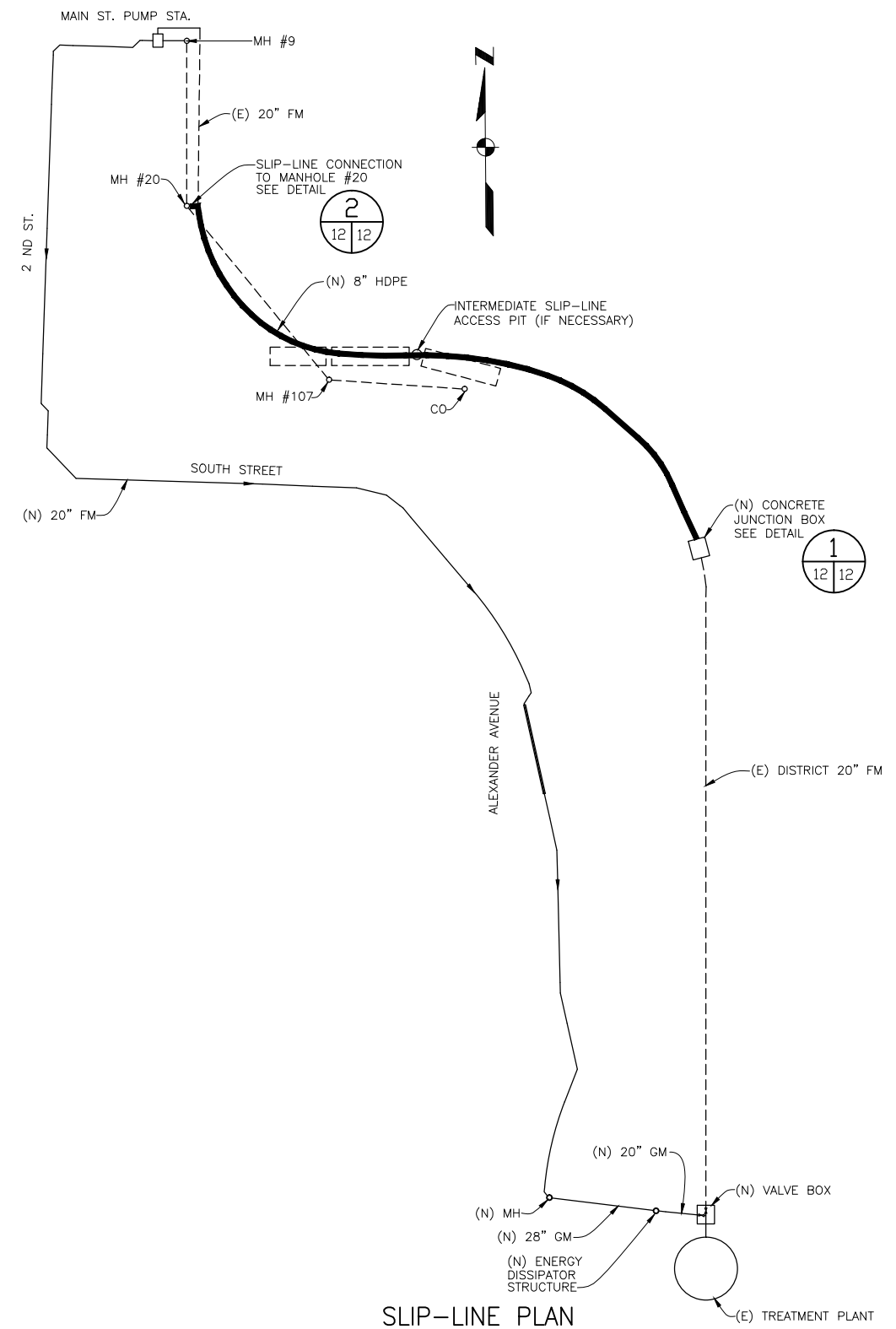
PLAN VIEW - CONNECTION TO MH # 20

DETAIL 2  
N.T.S. 12 12



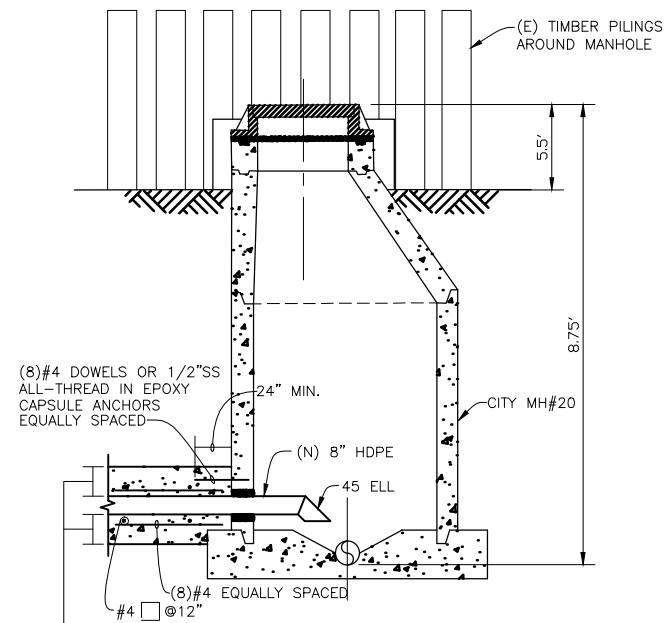
CONNECTION TO CITY LATERAL

DETAIL 1  
N.T.S. 12 12

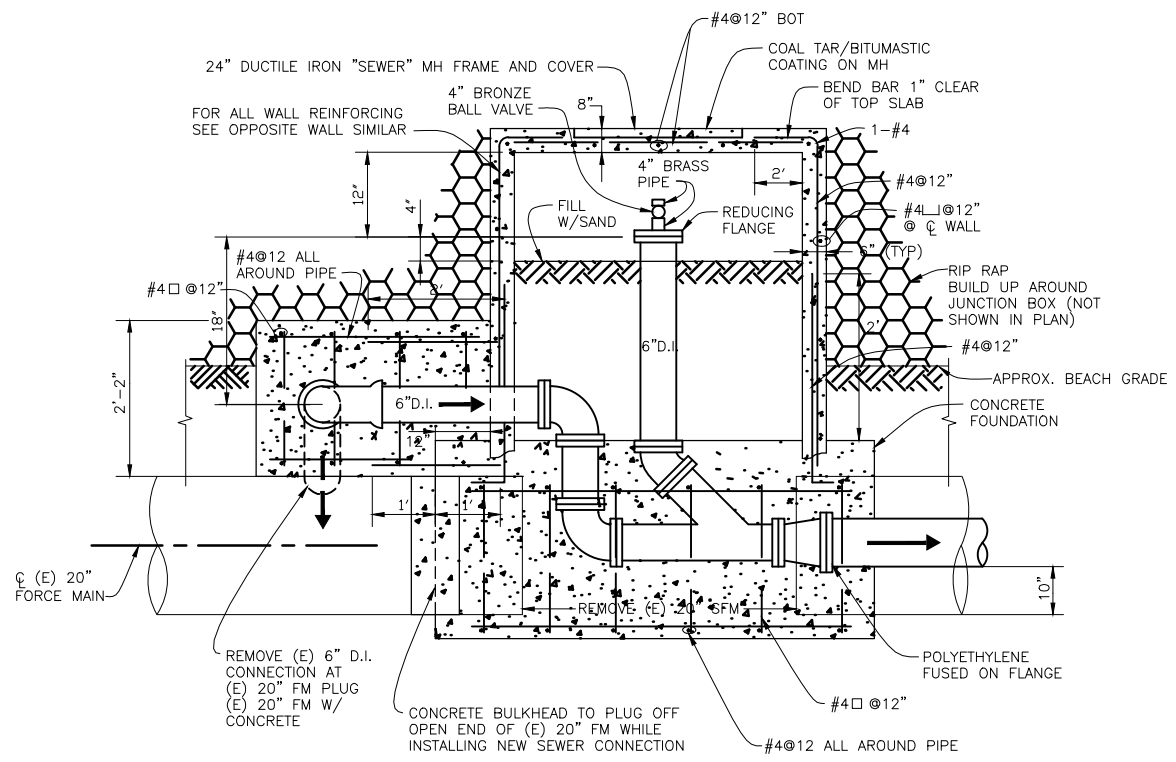


SLIP-LINE PLAN

N.T.S.



SECTION B  
N.T.S. 12 12



SECTION A  
N.T.S. 12 12

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NO.	REVISION	DATE	BY

**SCALES**  
0" = 1"  
0" = 25mm  
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

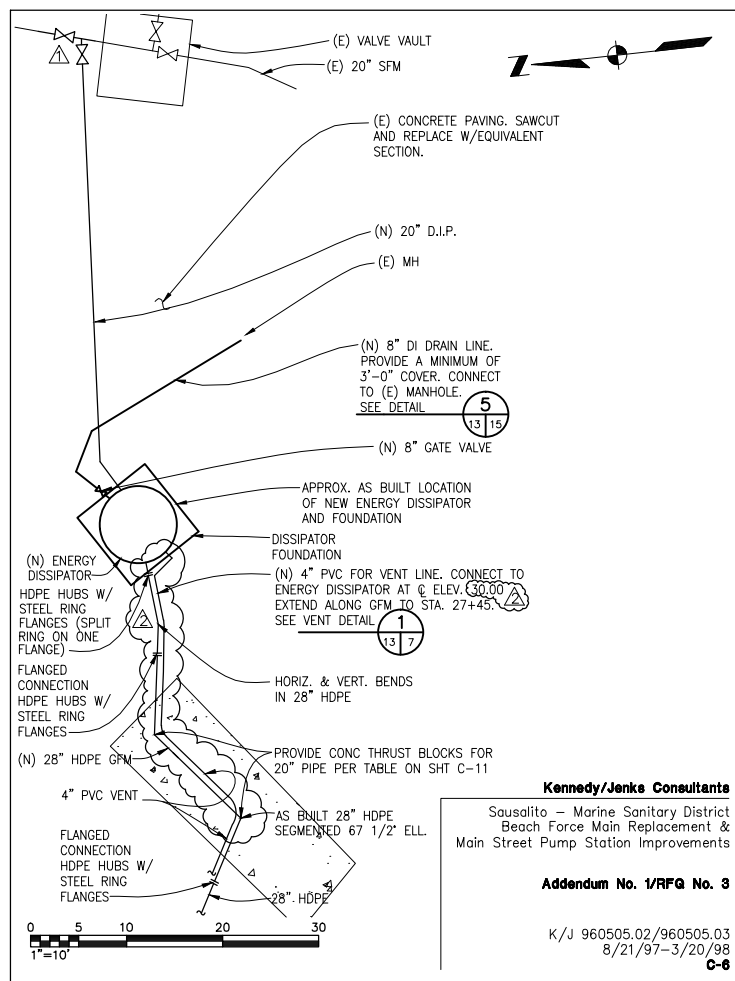
DESIGNED: TJS  
DRAWN: ROO  
CHECKED: JAF

SAUSALITO-MARIN CITY SANITARY DISTRICT  
MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

**SLIP-LINE PLAN AND CONNECTION DETAILS**

DWG. NO. C-12  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF  
**C-12**

N:\96\960505.02\C-12



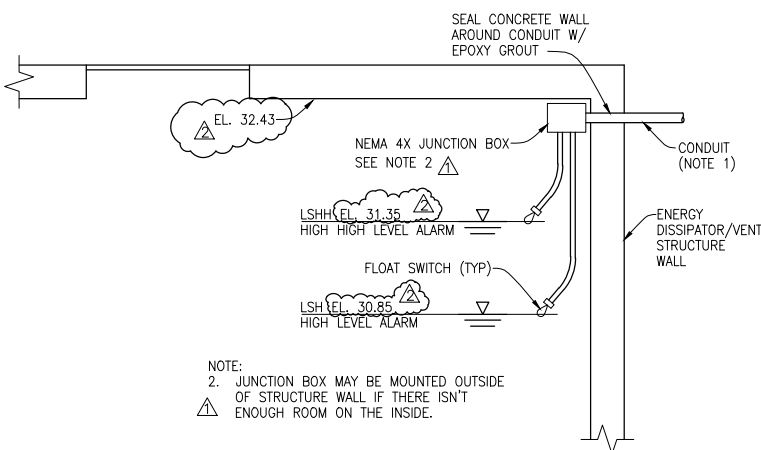
Kennedy/Jenks Consultants

Sausalito - Marine Sanitary District  
Beach Force Main Replacement &  
Main Street Pump Station Improvements

Addendum No. 1/RFQ No. 3

K/J 960505.02/960505.03  
8/21/97-3/20/98  
C-6

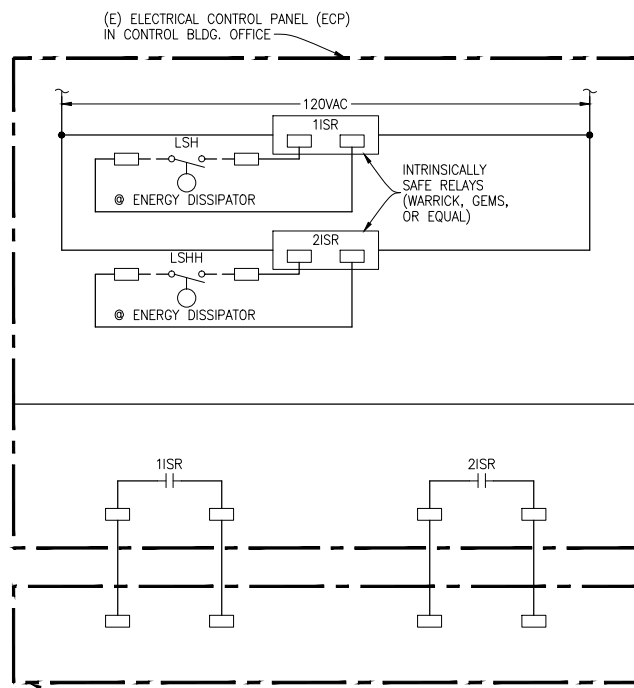
FOR ENERGY DISSIPATOR/VENT  
STRUCTURE SEE DETAIL ON SHEET C-15.



FLOAT INSTALLATION DETAIL 12

SCALE: NONE

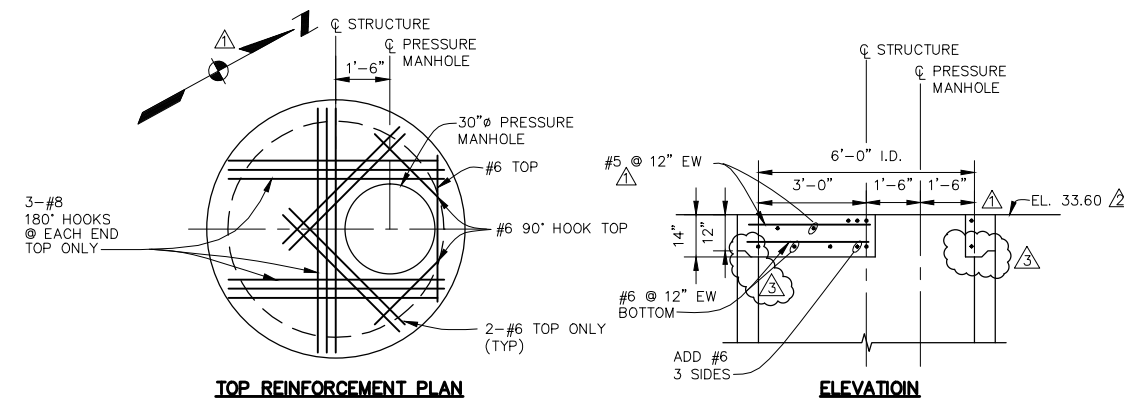
- NOTE:  
1. PROVIDE EYS CONDUIT SEAL



FLOAT INSTALLATION SINGLE LINE DIAGRAM

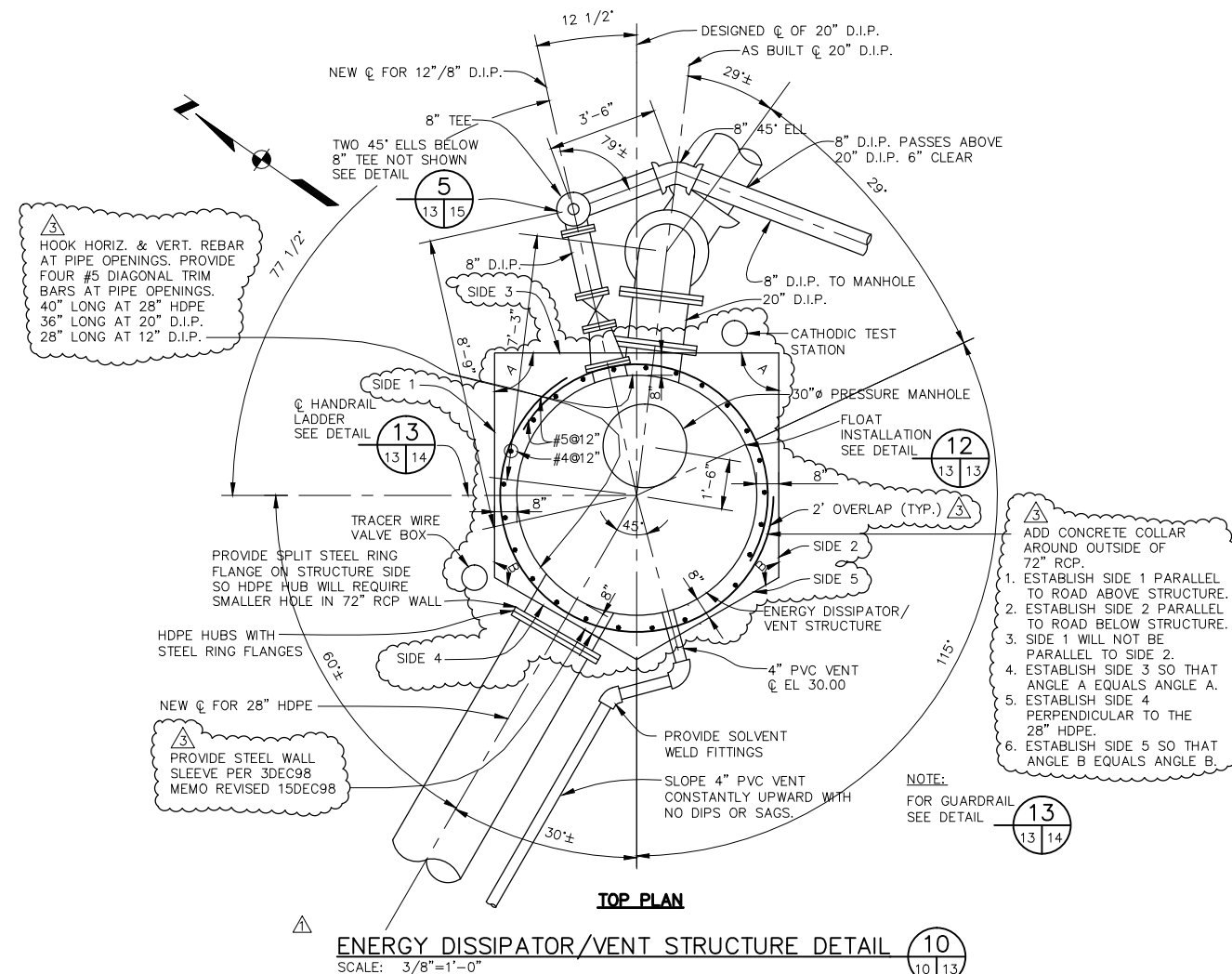
SCALE: NONE

- NOTES:  
1. USE SPARE WINDOWS IN ANNUCIATOR. WINDOW INSCRIPTIONS SHALL READ "ENERGY DISSIPATOR HIGH LEVEL" AND "ENERGY DISSIPATOR HIGH HIGH LEVEL."  
2. USE SPARE CONDUIT & WIRES FROM ECP TO IP IF ANY EXIST. PROVIDE (N) 3/4" - 4 #14, 2 #14 SPARE IF NO SPARE CONDUIT AND WIRES AVAILABLE.



ENERGY DISSIPATOR/VENT STRUCTURE  
TOP SLAB REINFORCEMENT DETAIL 11

SCALE: NONE



ENERGY DISSIPATOR/VENT STRUCTURE DETAIL 10

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

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NO.	REVISION	DATE	BY
1	REVISION TO FIELD MODIFICATION	12/16/98	
2	REVISION TO FIELD MODIFICATION	11/25/98	
3	FIELD MODIFICATION	10/22/98	
4	ISSUED WITH RFQ NO. 3	3/20/98	

SCALES	
0	1"
0	25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.	

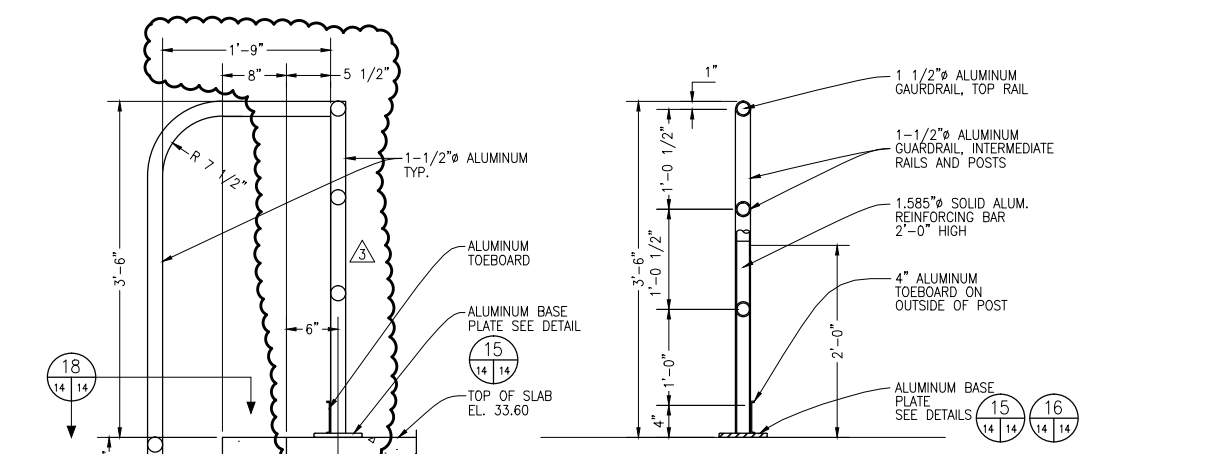
DESIGNED	SPS
DRAWN	PAL
CHECKED	JAF

SAUSALITO-MARIN CITY SANITARY DISTRICT  
MARIN COUNTY, CALIFORNIA  
BEACH FORCE MAIN REPLACEMENT

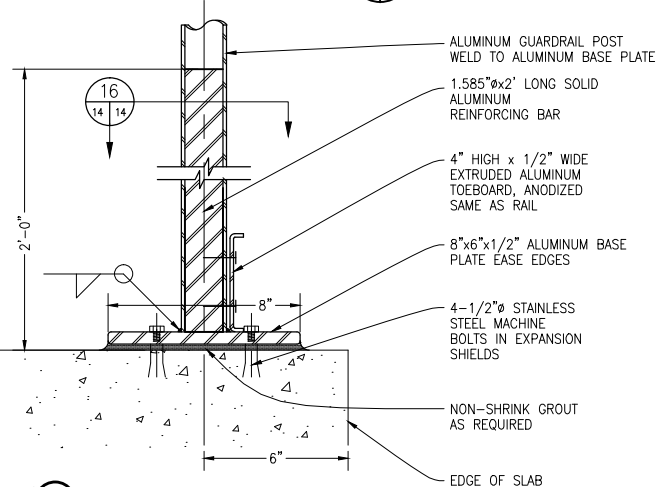
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH. FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

RFQ NO. 3 DETAILS

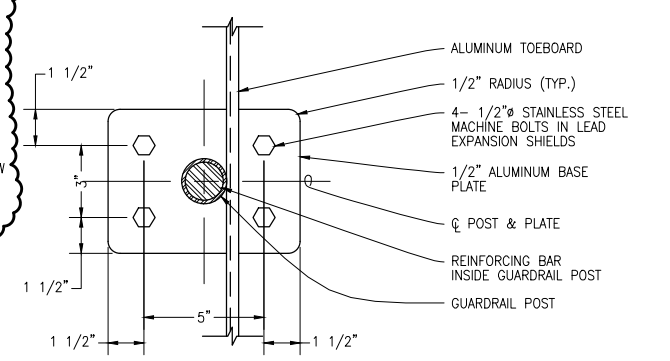
FILE NAME: C-13  
JOB NO.: 960505.03  
DATE: 3/20/98  
SHEET OF: C-13



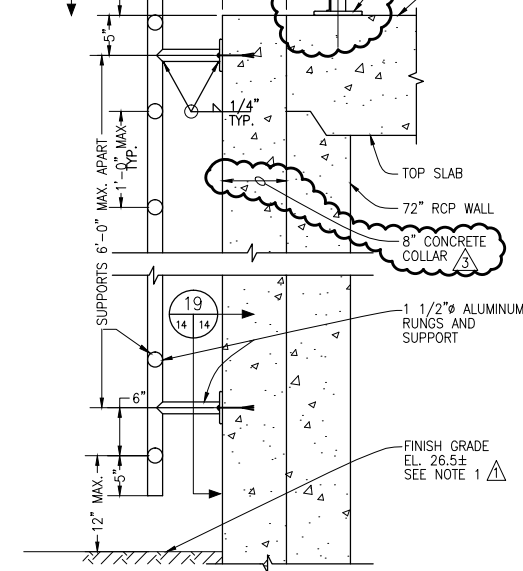
**GUARDRAIL TYPICAL DETAIL 14**  
SCALE: 1" = 1'-0"



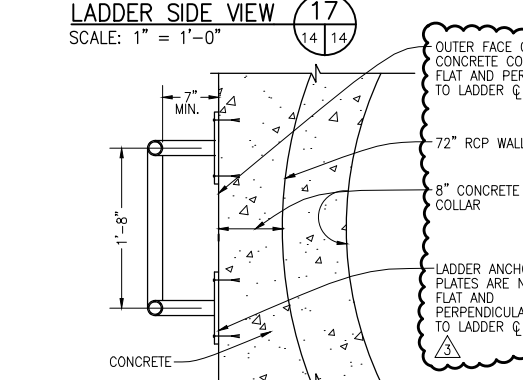
**POST BASE DETAIL 15**  
SCALE: 3" = 1'-0"



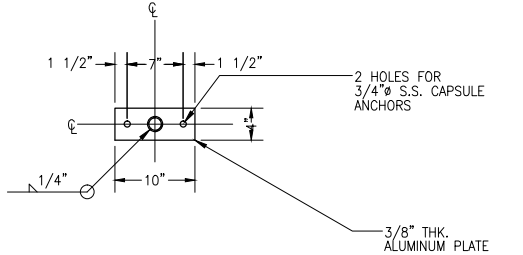
**GUARDRAIL POST BASE PLATE 16**  
SCALE: 3" = 1'-0"



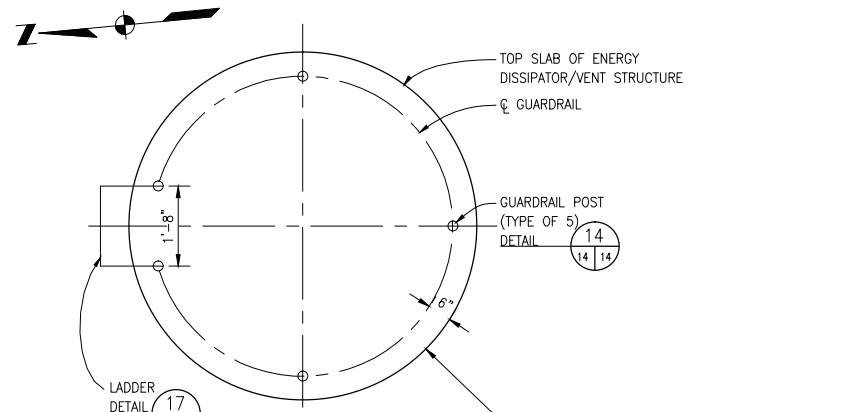
**LADDER SIDE VIEW 17**  
SCALE: 1" = 1'-0"



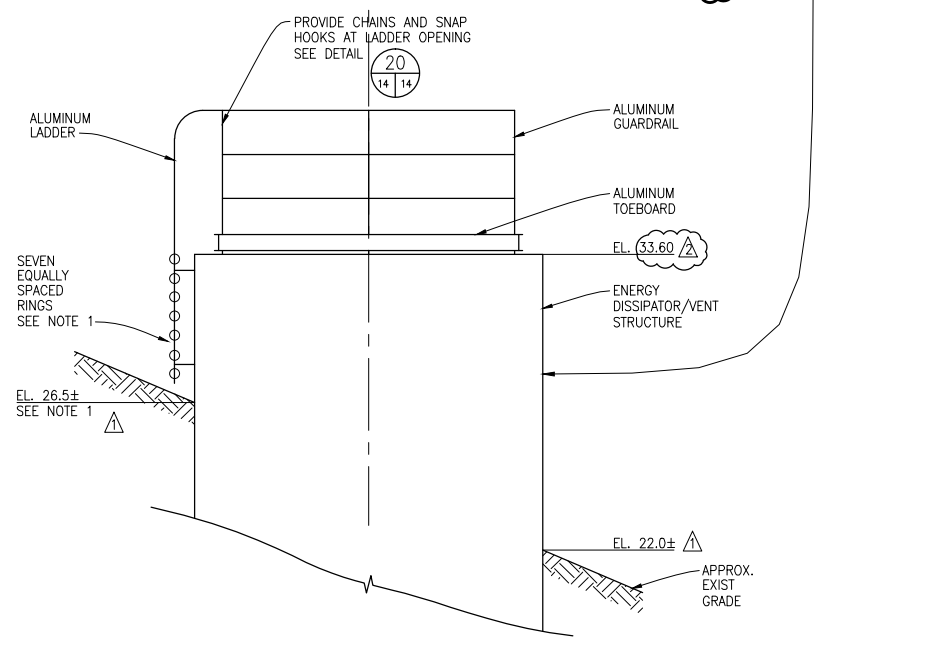
**LADDER SECTION 18**  
SCALE: 1" = 1'-0"



**LADDER ANCHOR PLATE TYPICAL DETAIL 19**  
SCALE: 1" = 1'-0"

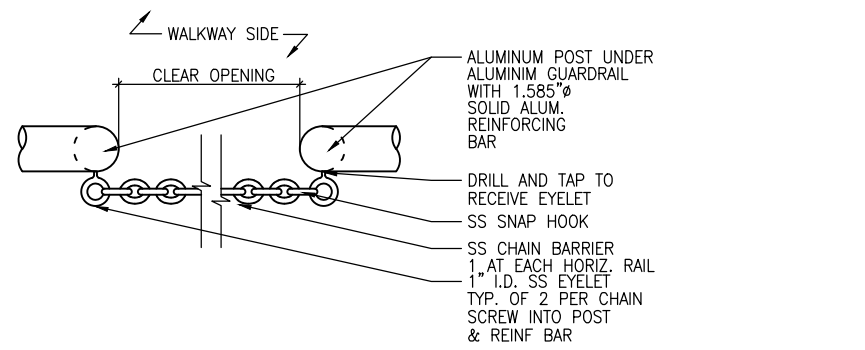


**TOP PLAN**



**ELEVATION ENERGY DISSIPATOR/VENT STRUCTURE**

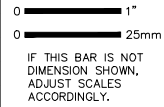
**GUARDRAIL/LADDER DETAIL 13**  
NO SCALE



**CHAIN & SNAP HOOK DETAIL 20**  
NO SCALE

NOTES:  
1. FIELD CONFIRM ELEVATION OF FINISH GRADE BEFORE DESIGNING LADDER RUNGS.

**SCALES**



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3	FIELD MODIFICATION	10/22/98	
4	ISSUED WITH RFQ NO. 3	3/20/98	

DESIGNED	SPS
DRAWN	PAL
CHECKED	JAF

**SAUSALITO-MARIN CITY SANITARY DISTRICT  
MARIN COUNTY, CALIFORNIA  
BEACH FORCE MAIN REPLACEMENT**

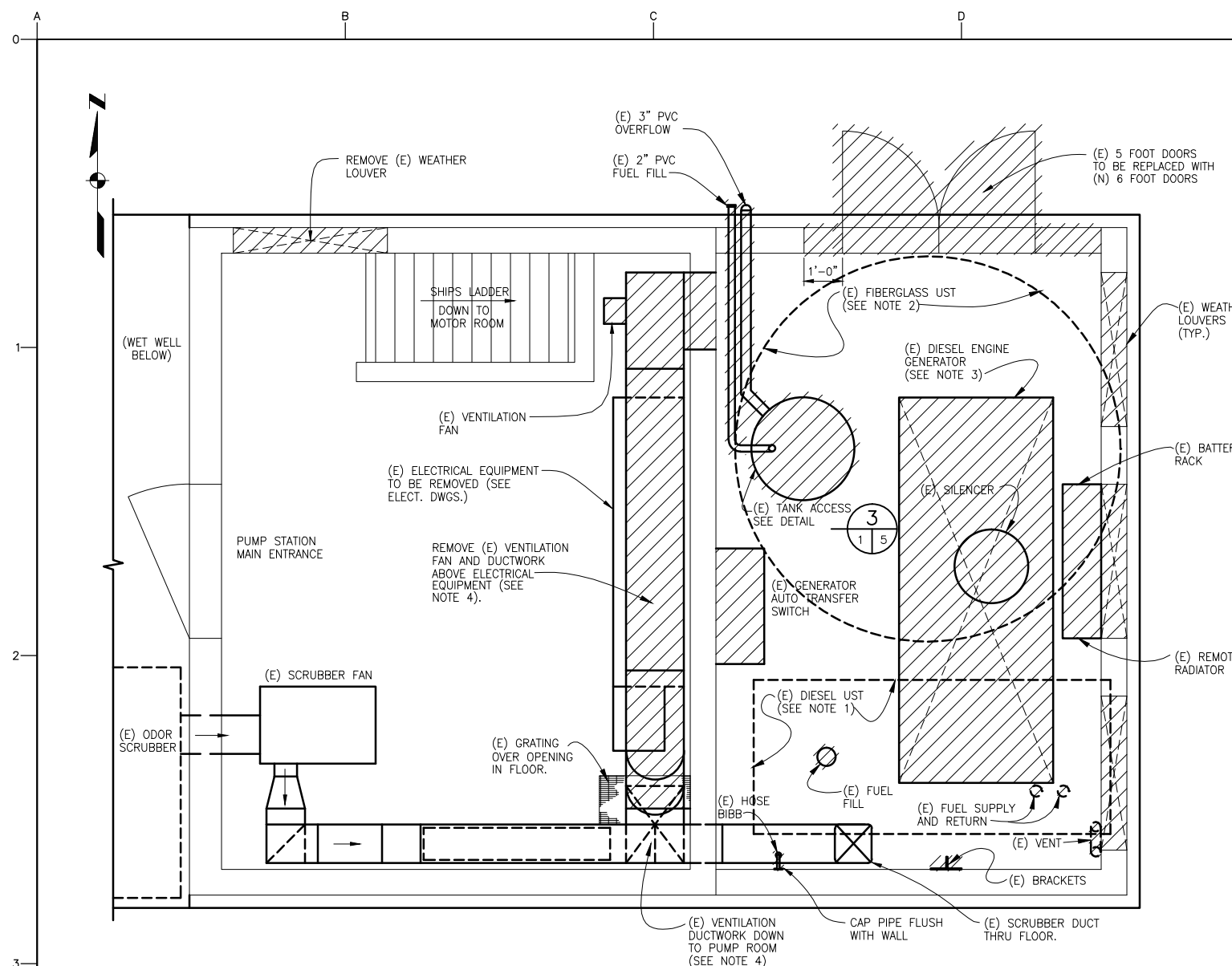
**Kennedy/Jenks Consultants**  
MARATHON PLAZA, 303 SECOND STREET, 10TH. FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

**RFQ NO. 3  
GUARDRAIL AND LADDER DETAILS**

FILE NAME	C-14
JOB NO.	960505.03
DATE	3/20/98
SHEET	OF
<b>C-14</b>	

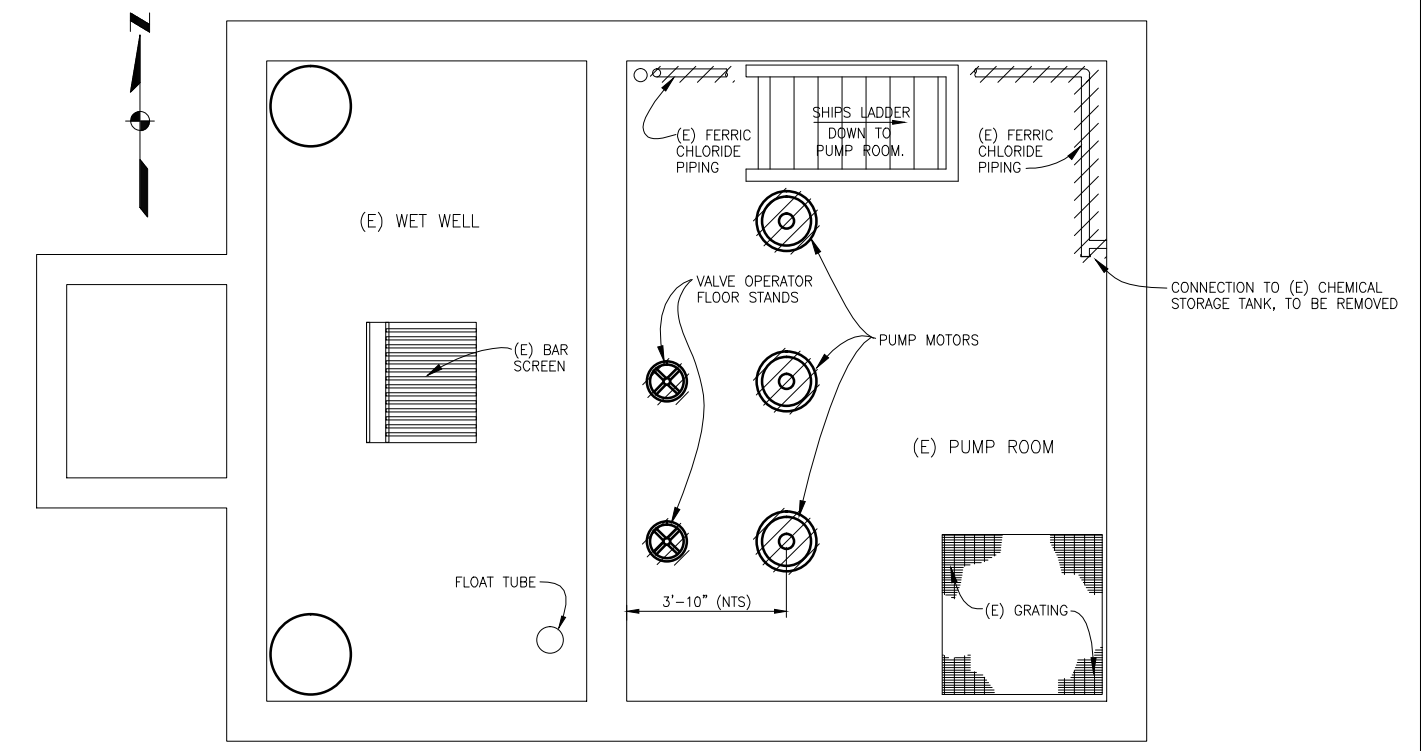
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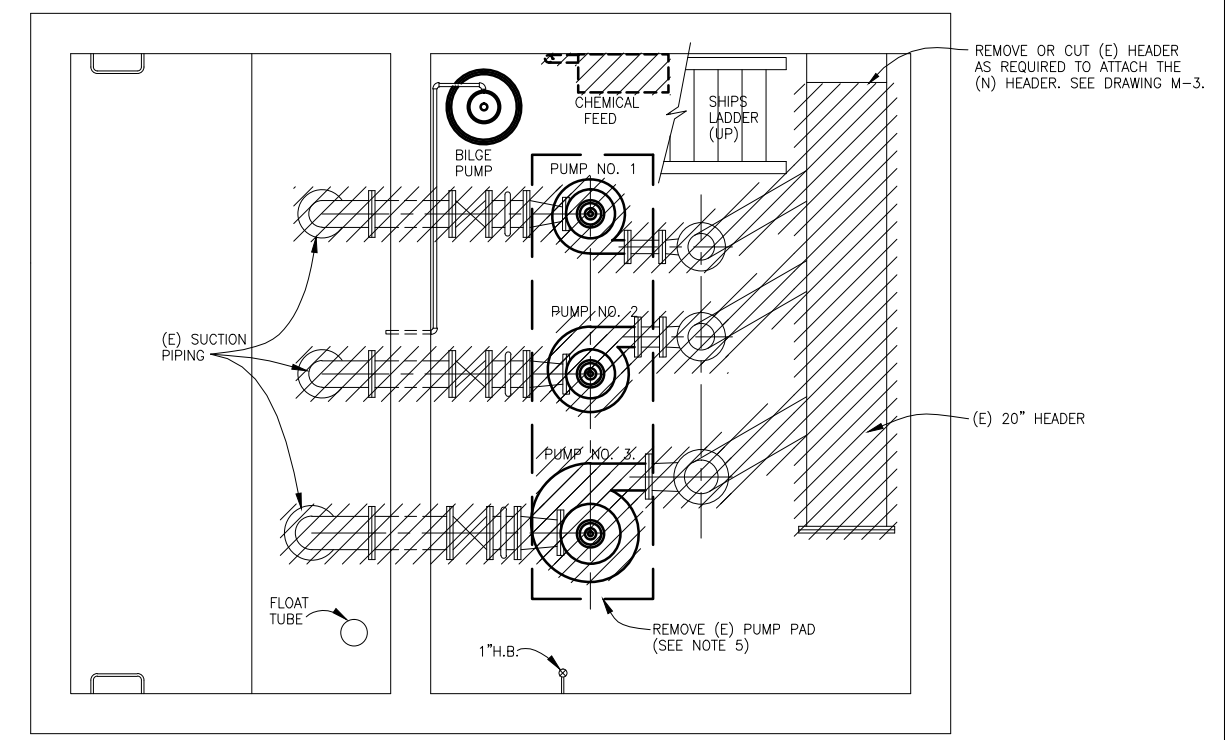


**ELECTRIC AND ENGINE GENERATOR ROOM FLOOR PLAN**  
SCALE: 3/8" = 1'-0"

- NOTES:**
1. DIESEL UNDERGROUND STORAGE TANK (UST) SHALL BE CLOSED IN PLACE IN ACCORDANCE WITH SPECIFICATION SECTION 02071.
  2. FIBERGLASS UST SHALL BE UPGRADED TO HOLD DIESEL FUEL IN ACCORDANCE WITH SPECIFICATION SECTION 13200 AND DRAWINGS.
  3. REMOVE ENGINE GENERATOR SYSTEM AND DELIVER TO THE DISTRICT OR DEMOLISH IN ACCORDANCE WITH SPECIFICATION SECTION 02050. ENGINE GENERATOR SYSTEM INCLUDES, BUT IS NOT LIMITED TO, THE ENGINE GENERATOR, REMOTE RADIATOR, SILENCER, BATTERY RACK, GENERATOR EXHAUST PIPE AND SUPPORTS, AND ASSOCIATED PIPING AND ACCESSORIES.
  4. REMOVE VENTILATION FAN AND DUCTWORK EXTENDING DOWN TO THE PUMP ROOM THROUGH THE GRATING TO ALLOW FOR REMOVAL OF PUMPS AND MOTORS FROM THE ROOMS BELOW. THE DUCTWORK SHALL BE REINSTALLED WITH NEW EQUIPMENT AS SHOWN ON DRAWING FOLLOWING INSTALLATION OF NEW PUMPS.
  5. (E) CONCRETE PUMP PAD SHALL BE DEMOLISHED. SEE DRAWING M-3 FOR NEW EQUIPMENT PAD.



**BAR SCREEN DECK & MOTOR ROOM FLOOR PLAN**  
SCALE: 3/8" = 1'-0"



**PUMP ROOM FLOOR PLAN**  
SCALE: 3/8" = 1'-0"



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NO.		REVISION		DATE		BY	

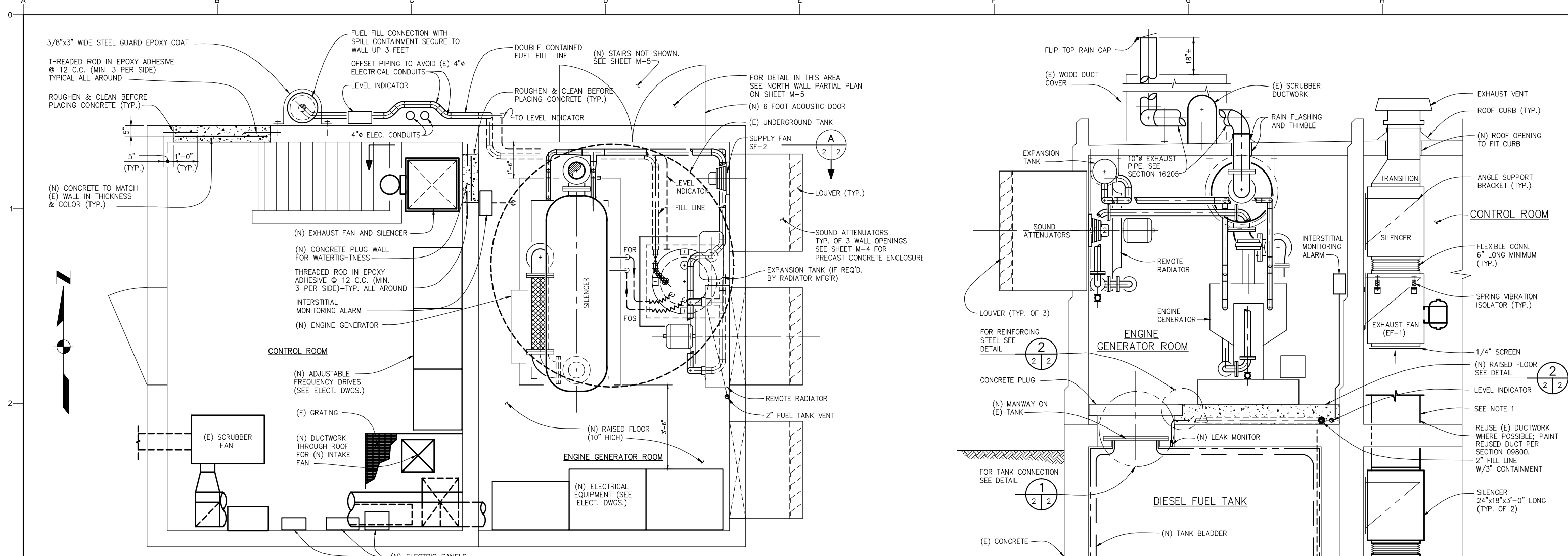
DESIGNED	JAF
DRAWN	JT
CHECKED	JAF

**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

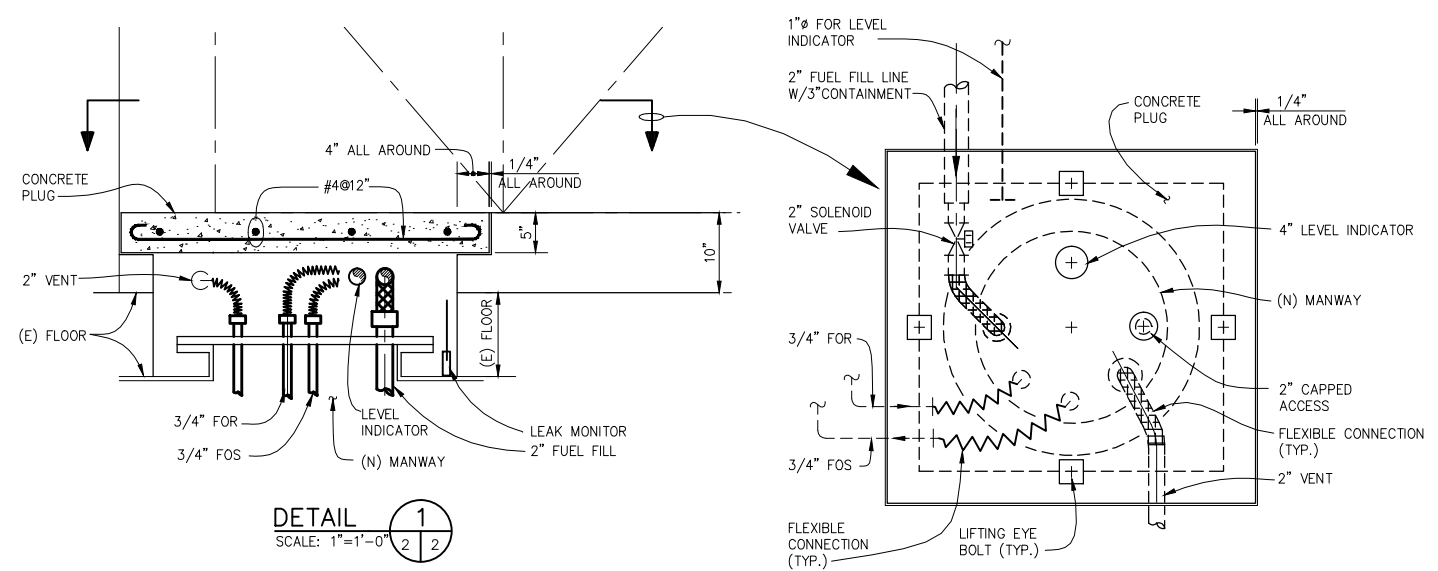
**MAIN STREET PUMP STATION**  
**DEMOLITION PLANS**

DWG. NO.	M-1
JOB NO.	960505.02
DATE	3-5-97
SHEET	OF
<b>M-1</b>	

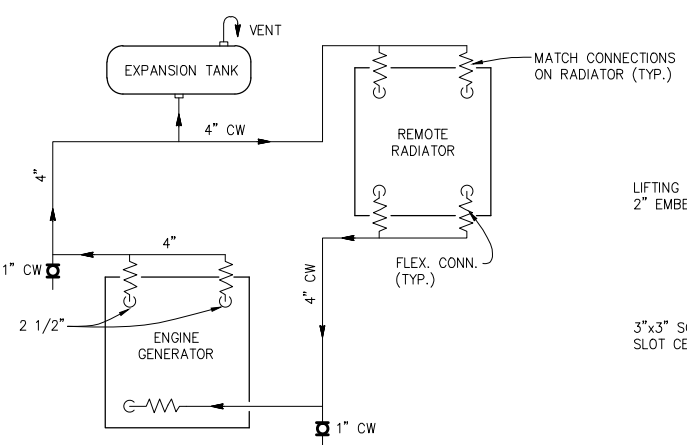
N:\96\960505.02\M-1



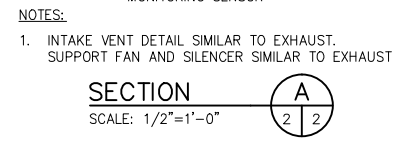
**MAIN STREET PUMP STATION-ENGINE GENERATOR AND CONTROL ROOM PLAN**  
SCALE: 1/2"=1'-0"



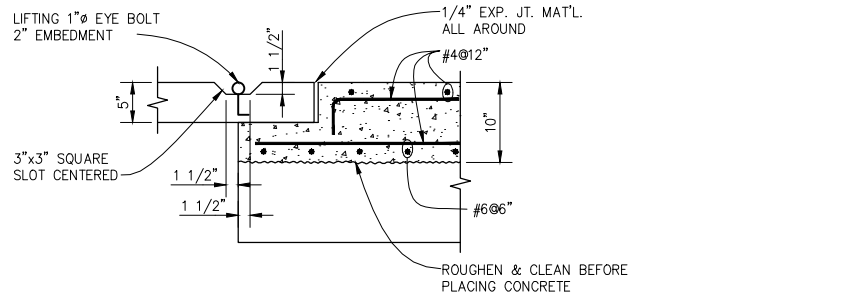
**DETAIL 1**  
SCALE: 1"=1'-0"



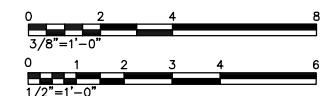
**RADIATOR COOLING SYSTEM**  
SCALE: NONE



**SECTION A**  
SCALE: 1/2"=1'-0"



**DETAIL 2**  
SCALE: NONE



**NOTES:**  
1. INTAKE VENT DETAIL SIMILAR TO EXHAUST. SUPPORT FAN AND SILENCER SIMILAR TO EXHAUST.

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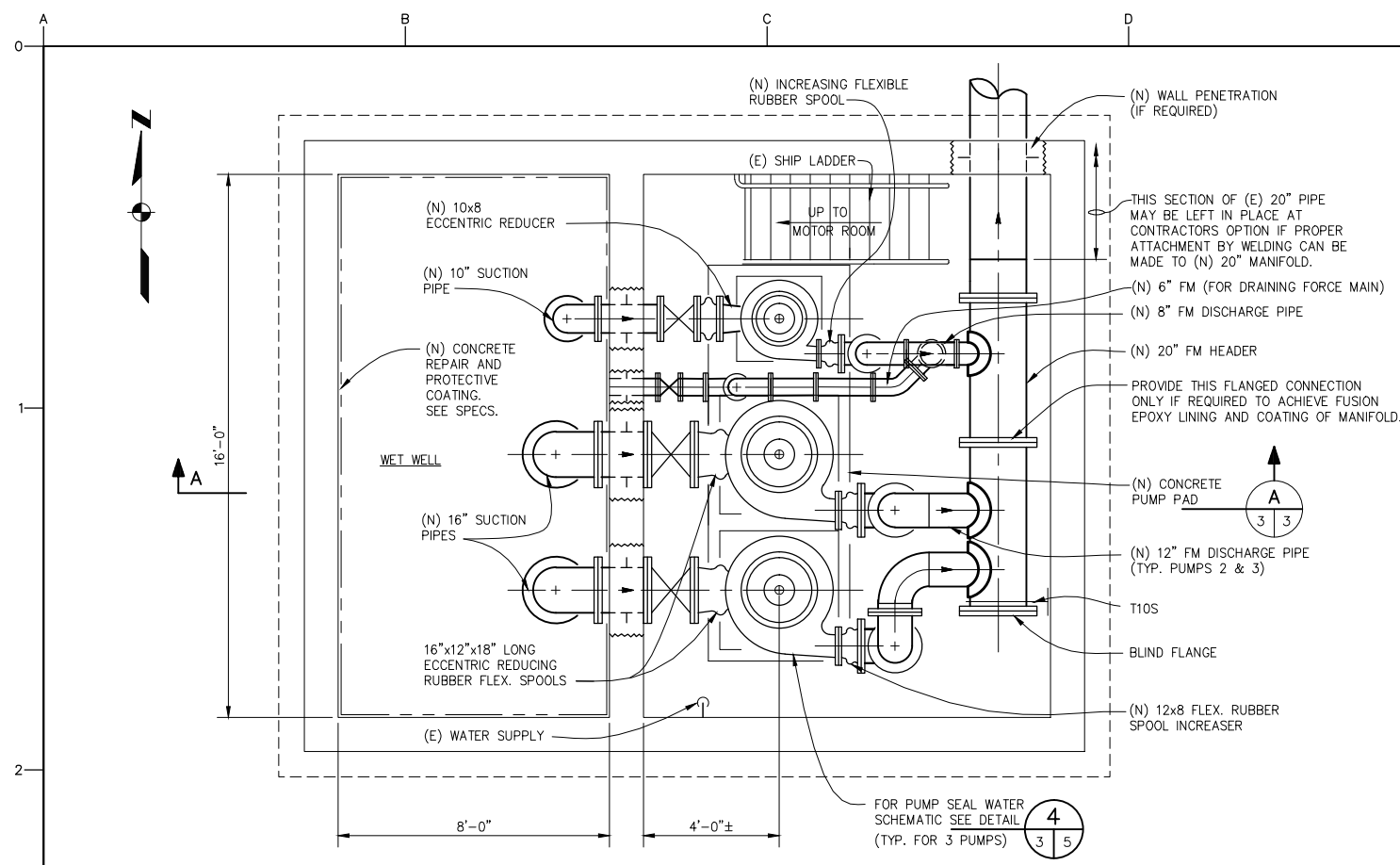
**DESIGNED** JAF  
**DRAWN** JT  
**CHECKED** JAF

**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
**MARIN COUNTY, CALIFORNIA**  
**BEACH FORCE MAIN REPLACEMENT**  
**Kennedy/Jenks Consultants**  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

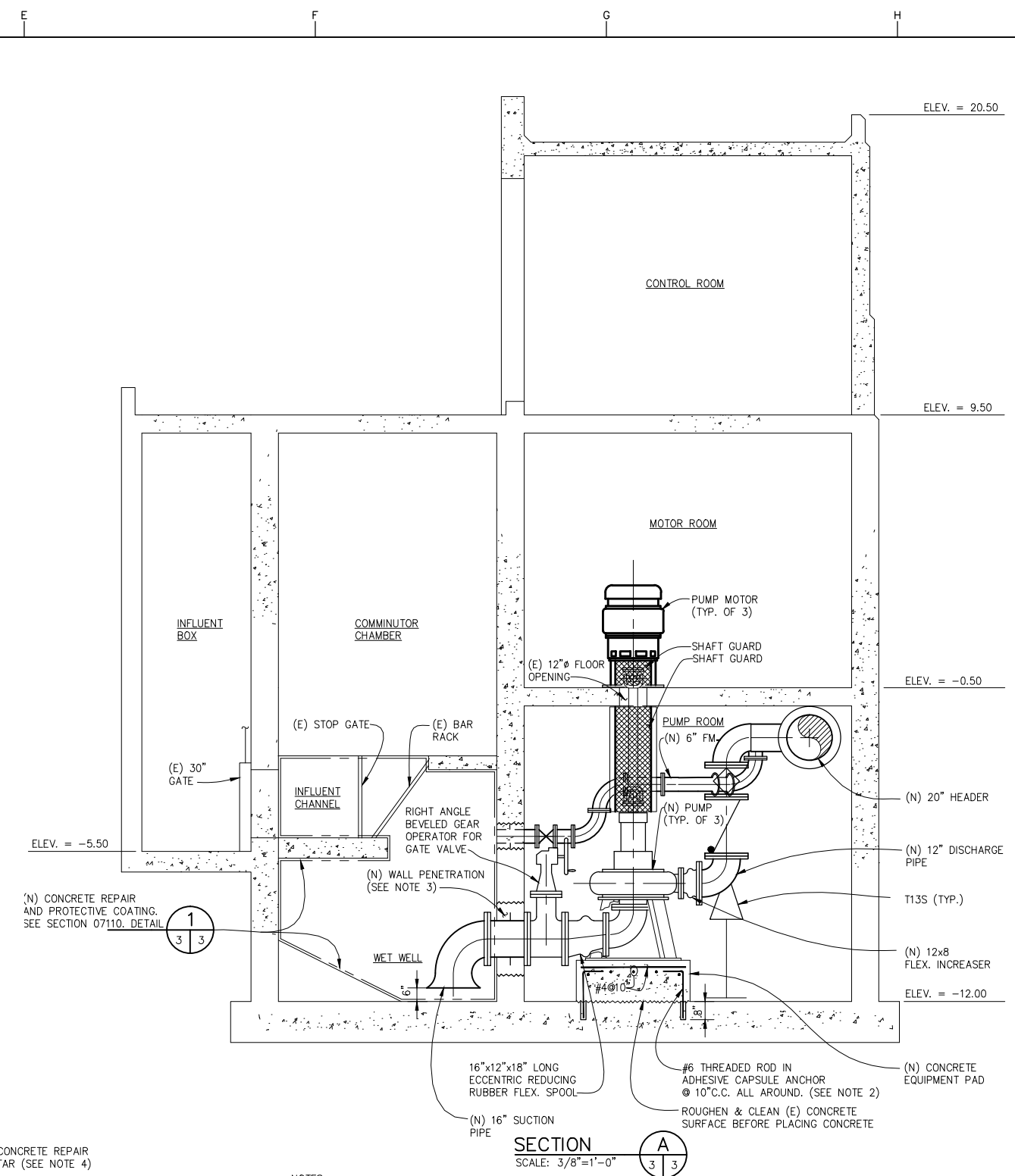
**MAIN STREET PUMP STATION MODIFICATIONS**  
**PLANS AND SECTIONS**

DWG. NO. M-2  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF  
**M-2**

N: 96.960505.02\M-2

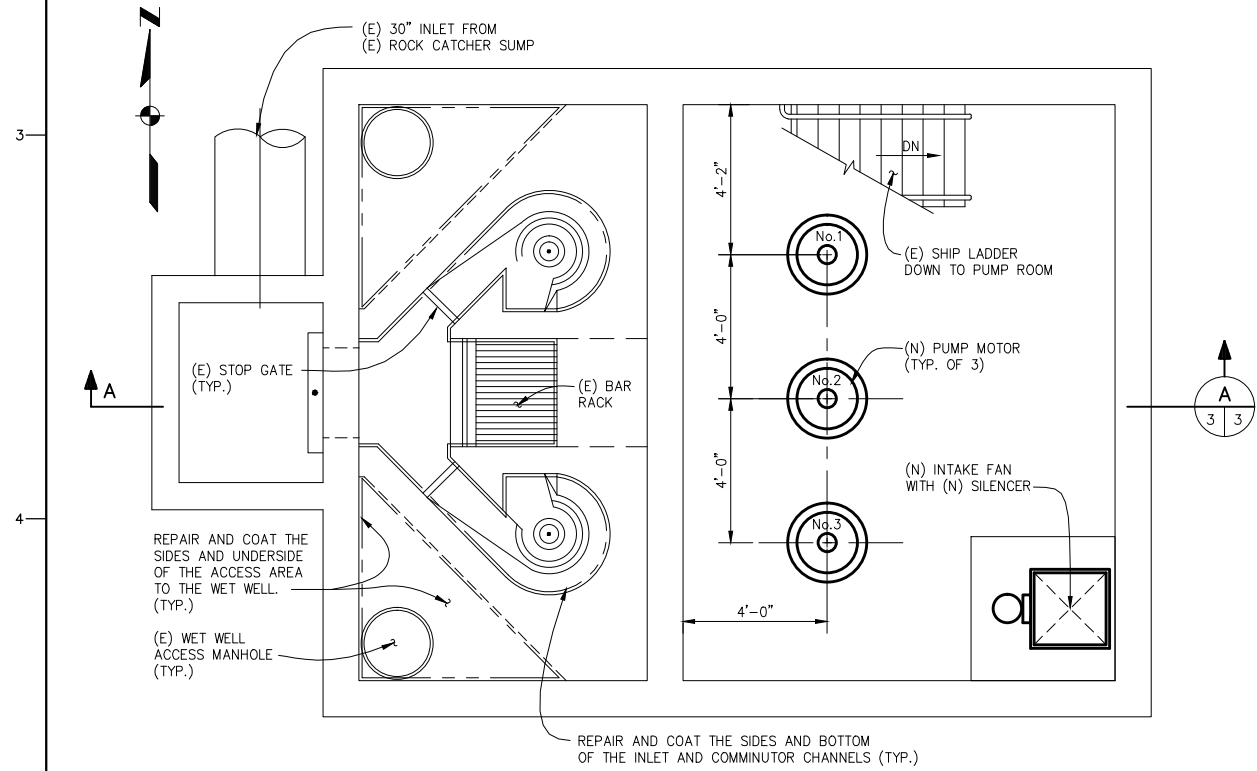


**MAIN STREET PUMP STATION-PUMP ROOM PLAN**  
SCALE: 3/8"=1'-0"



**SECTION A-A**  
SCALE: 3/8"=1'-0"

- NOTES:**
1. THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS SHOWING THAT THE PROPOSED EQUIPMENT, VALVES AND PIPING, FIT IN THE PUMP ROOM. PERFORM FIELD MEASUREMENTS OF EXISTING STRUCTURE, EQUIPMENT, OPENINGS, ETC. COORDINATE PROPOSED INSTALLATION ARRANGEMENT AND DIMENSIONS WITH MANUFACTURERS OF PUMPS, MOTORS, PIPING AND VALVES.
  2. REMOVE EXISTING EQUIPMENT PAD. EXPOSE DOWELS WITHIN THE NEW EQUIPMENT PADS TO REMAIN. OTHERWISE CUT DOWEL 1" INTO SLAB AND PATCH WITH GROUT.
  3. INSTALL (N) WALL PENETRATION WITH NON-SHRINK GROUT (TYP.)
  4. THE (N) CONCRETE REPAIR MORTAR SHALL BE TROWELLED TO A SMOOTH, FLAT SURFACE WITH A MINIMUM THICKNESS OF 1/4-INCH.
  5. CHIP AROUND ANY EXPOSED REINFORCEMENT TO SOUND CONCRETE AND THEN PATCH WITH THE CONCRETE REPAIR MORTAR, AS REQUIRED TO COVER REINFORCING FLUSH WITH EXISTING WALL SURFACE. THEN APPLY 1/4" MIN. OVERLAY PER NOTE 4.



**MAIN STREET PUMP STATION-MOTOR ROOM PLAN**  
SCALE: 3/8"=1'-0"



**CONCRETE REPAIR AND PROTECTIVE COATING DETAIL**  
SCALE: NONE



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NO.	REVISION	DATE	BY

**SCALES**  
0 1" = 1' = 25mm  
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

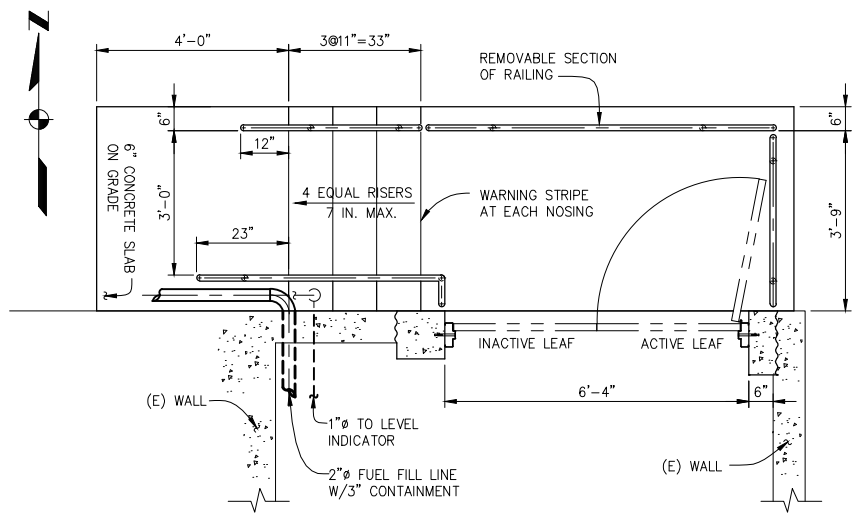
DESIGNED: JAF  
DRAWN: JT/NEB  
CHECKED: JAF

**SAUSALITO-MARIN CITY SANITARY DISTRICT**  
MARIN COUNTY, CALIFORNIA  
**BEACH FORCE MAIN REPLACEMENT**  
Kennedy/Jenks Consultants  
MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

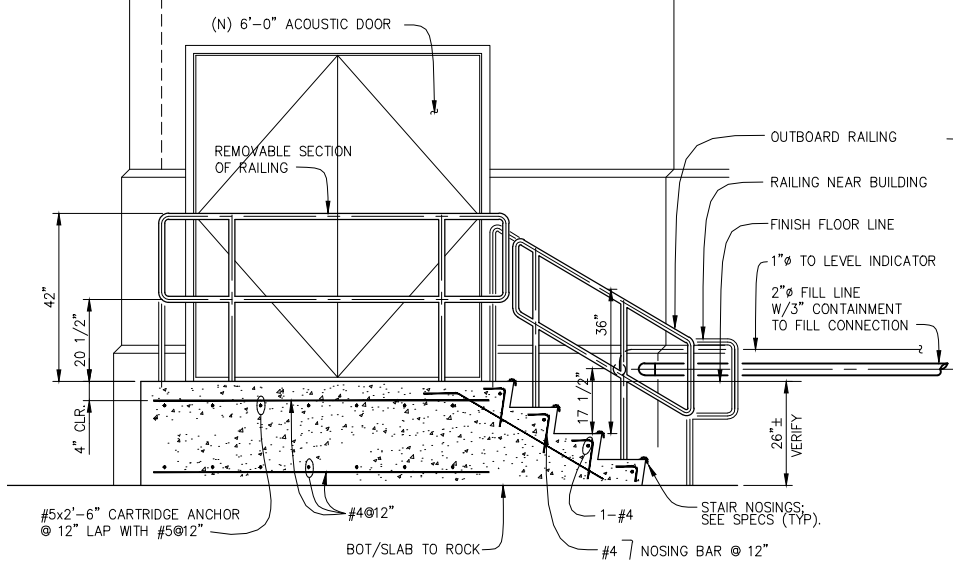
**MAIN STREET PUMP STATION MODIFICATIONS**  
**PLANS & SECTION**

DWG. NO. M-3  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF M-3



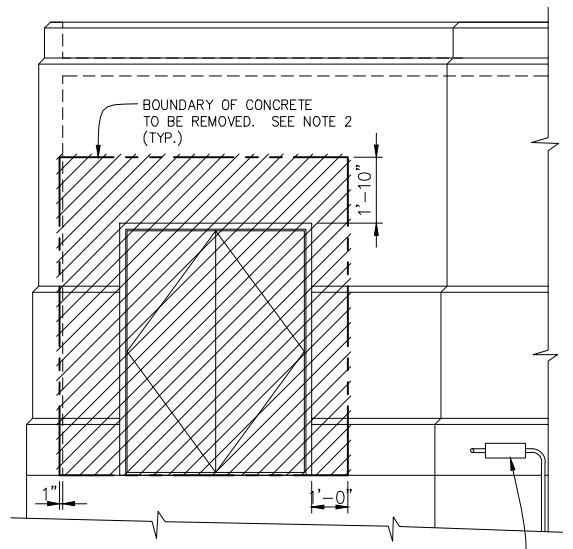


**NORTH WALL-PARTIAL PLAN**  
SCALE: 1/2"=1'-0"

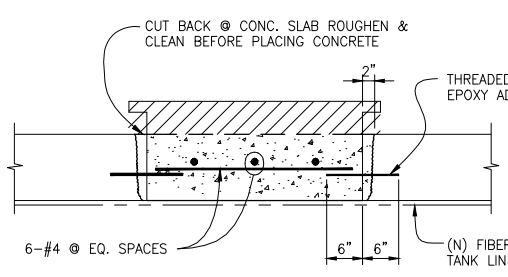


**NORTH WALL-ELEVATION**  
SCALE: 1/2"=1'-0"

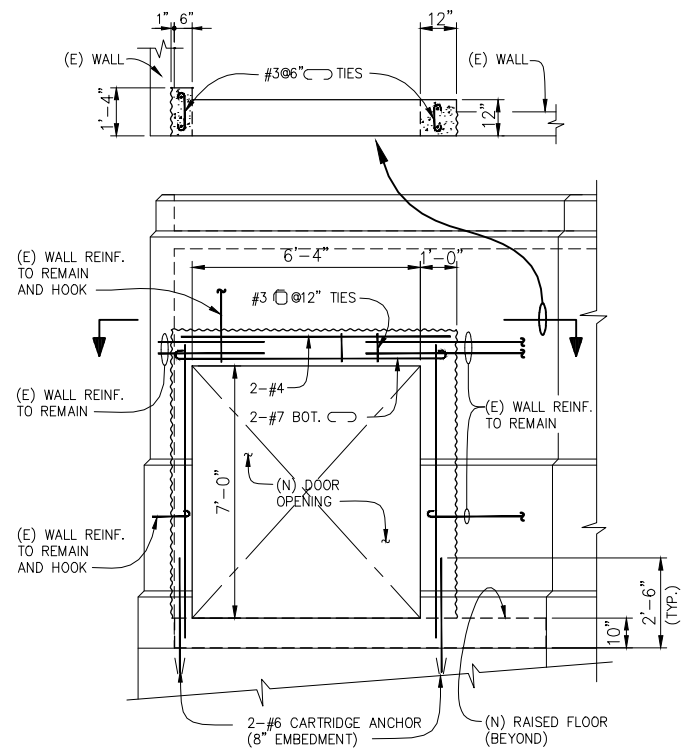
- NOTES:**
- ROUGHEN & CLEAN BEFORE PLACING NEW CONCRETE.
  - REMOVE (E) CONCRETE AND (E) DOOR ASSEMBLY AND CONSTRUCT (N) DOOR OPENING. CONCRETE FINISH TO MATCH (E) CONCRETE SURFACE.
  - RELOCATE (E) BACKFLOW PREVENTER TO THE OTHER SIDE OF THE ELECTRICAL SERVICE BOX AS NOT TO BLOCK OR INTERFERE WITH THE (N) STAIRS ACCESS.



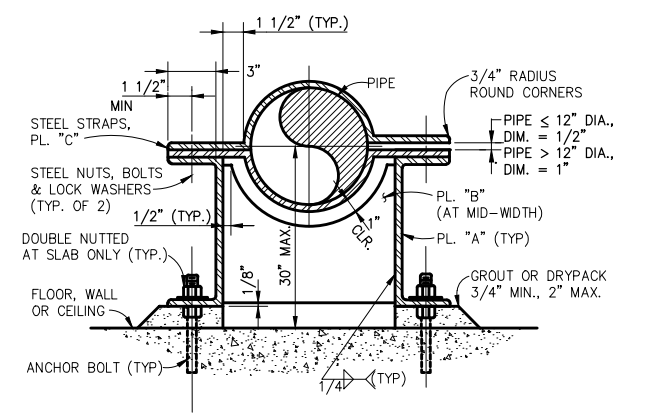
**NORTH WALL-DEMOLITION**  
SCALE: 3/8"=1'-0"



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

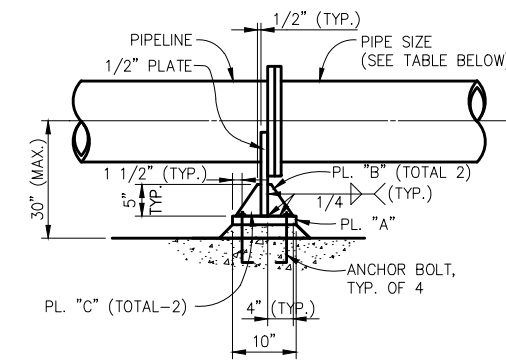


**NORTH WALL-MODIFICATION**  
SCALE: 3/8"=1'-0"

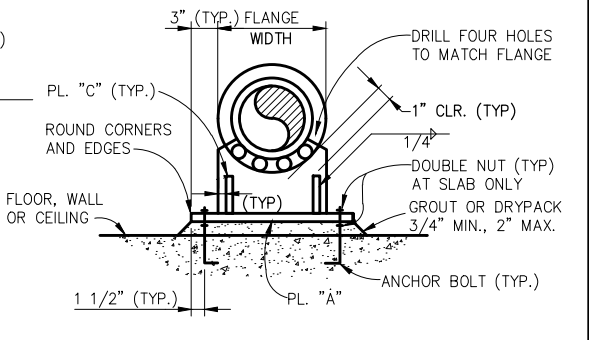


MEMBERS			PIPE SIZE	ANCHOR BOLTS NUMBER & SIZE	STRAP BOLTS
PL. "A"	PL. "B"	PL. "C"			
3/8" x 6"	1/4"	3/8" x 6"	<12"	2-5/8"	1"
3/8" x 12"	3/8"	3/8" x 12"	≥12"<20"	4-3/4"	1 3/8"
3/4" x 12"	1/2"	1/2" x 12"	≥20"≤30"	4-3/4" @ FLOOR 4-7/8" @ WALL & CEILING	1 5/8"

**TYPE 11 SUPPORT (T11S)**  
N.T.S. (SEISMIC RESTRAINT)



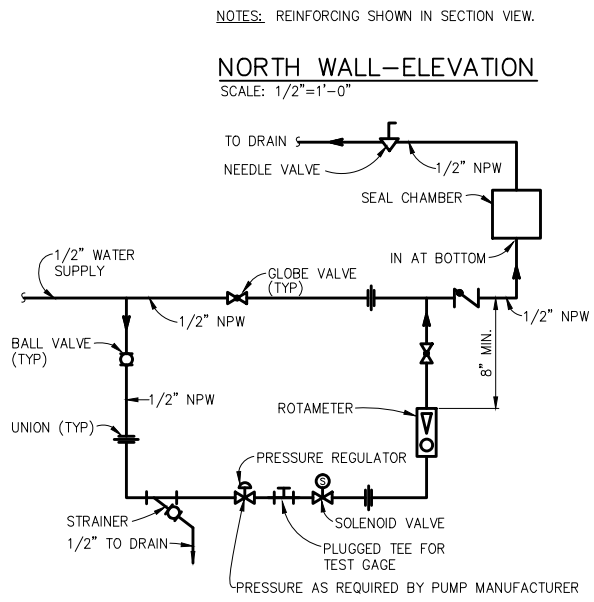
**SIDE VIEW**



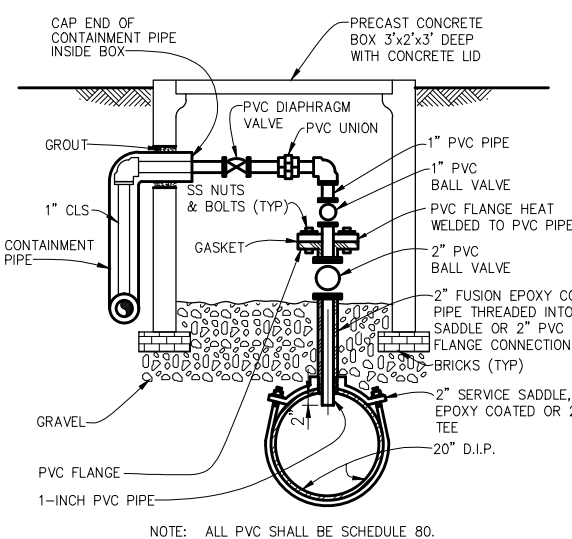
**END VIEW**

PIPE SIZE	MEMBERS			ANCHOR BOLT	REMARKS
	PL. "A"	PL. "B"	PL. "C"		
<12"	1/2"	-	-	3/4"	PL. "B" & "C" NOT REQ'D.
>12" ≤ 16"	1/2"	3/8"	-	3/4"	PL. "C" NOT REQ'D.
>16" ≤ 24"	3/4"	3/8"	3/8"	7/8"	-
>24" ≤ 30"	7/8"	3/8"	3/8"	7/8"	-

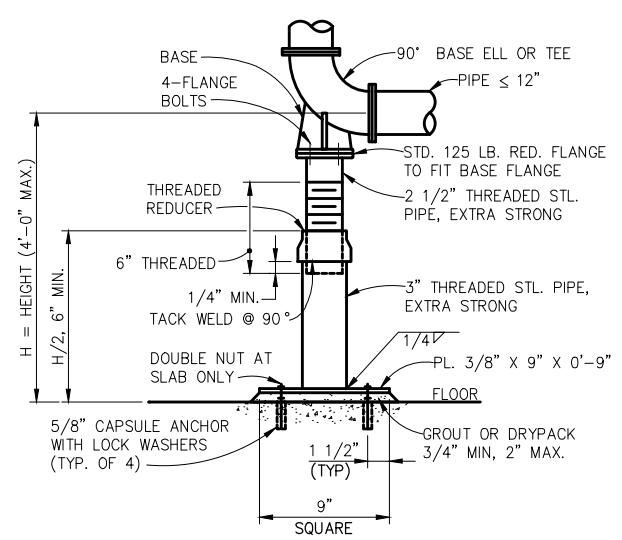
**TYPE 10 SUPPORT (T10S)**  
N.T.S. (SEISMIC RESTRAINT)



**PUMP SEAL WATER SCHEMATIC DETAIL 4**  
N.T.S.

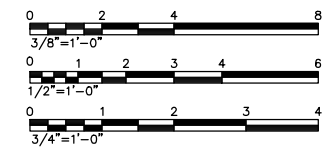


**HYPOCHLORITE NOZZLE DETAIL 2**  
NO SCALE



**TYPE 13 SUPPORT (T13S)**  
N.T.S. (SEISMIC RESTRAINT)

- NOTES:**
- AS AN ALTERNATE, IF ADJUSTMENT IS NOT NECESSARY, DELETE 2 1/2" STEEL PIPE AND SCREW 3" STEEL PIPE DIRECTLY TO REDUCING FLANGE.
  - DO NOT CUT OR WELD AFTER GALVANIZING.



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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	REVISION	DATE	BY					<p><b>SCALES</b></p> <p>0 1" = 1'</p> <p>0 25mm = 1'</p> <p>IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.</p>			
NO.	REVISION	DATE	BY									

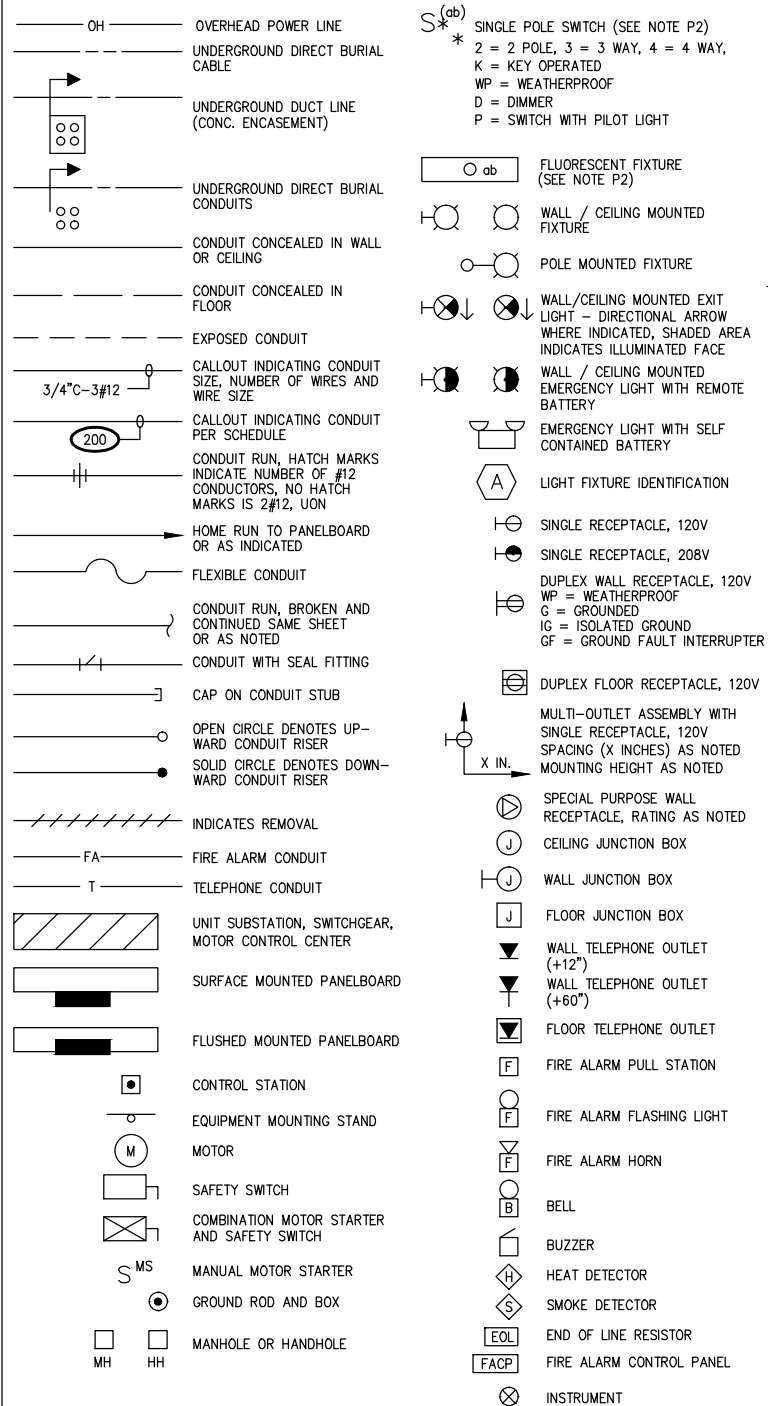


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### ABBREVIATIONS

o	CIRCUIT BREAKER AUX. CONTACT, CLOSED WHEN BREAKER IS CLOSED	FDR	FEEDER	PB	PULLBOX
A	AMMETER, AMPERES	FLEX	FLEXIBLE	PBSW	PUSHBUTTON SWITCH
AC	ALTERNATING CURRENT	FLUOR	FLUORESCENT	PEC	PHOTOELECTRIC CELL
A/D	ANALOG TO DIGITAL	FREQ	FREQUENCY	PF	POWER FACTOR
ADJ	ADJUSTABLE	FT	FEET, FOOT	pH	MEASURE OF ACIDITY OR ALKALINITY
AF	AMPERE FRAME	FU	FUSE	PH	PHASE
AFD	ADJUSTABLE FREQUENCY DRIVE	FUT, (F)	FUTURE	PIOP	PLC I/O PANEL
AIC	AMPERES INTERRUPTING CAPACITY	FVNR	FULL VOLTAGE, NON REVERSING	PLC	PROGRAMMABLE LOGIC CONTROLLER
AL	ALUMINUM	FWD	FORWARD	PNL	PANEL
ALT	ALTERNATOR	GA	GAUGE	PNLBD	PANELBOARD
AMP	AMPERES	GALV	GALVANIZED	POSN	POSITION
ANN	ANNUNCIATOR	GEN	GENERATOR	PR1	PRIMARY
APPROX	APPROXIMATE	GFI	GROUND FAULT INTERRUPTER	PS	PRESSURE SWITCH
AS	AMMETER SWITCH	GND	GROUND	PSI	POUNDS PER SQUARE INCH
AT	AMMETER TRIP	GRS	GALVANIZED RIGID STEEL	PVC	POLYVINYL CHLORIDE
ATS	AUTOMATIC TRANSFER SWITCH	H <sub>2</sub> O <sub>2</sub>	HYDROGEN PEROXIDE	PWR	POWER
AUTO	AUTOMATIC	HH	HANDHOLE	(R)	RELOCATED
AUX	AUXILIARY	HOA	HAND-OFF-AUTOMATIC	RCPT	RECEPTACLE
AWG	AMERICAN WIRE GAGE	HOR	HAND-OFF-REMOTE	RCT	REPEAT CYCLE TIMER
b	CIRCUIT BREAKER AUX. CONTACT, CLOSED WHEN BREAKER IS OPEN	HORIZ	HORIZONTAL	REQD	REQUIRED
BCG	BARE COPPER GROUND	HPS	HIGH PRESSURE SODIUM	RM	ROOM
BLDG	BUILDING	HTR	HEATER	RPM	REVOLUTIONS PER MINUTE
C	CONDUIT	HV	HIGH VOLTAGE	RT	RESET TIMER
CAB	CABINET	HZ	HERTZ (CYCLES PER SECOND)	SCR	SILICON CONTROLLED RECTIFIER
CAP	CAPACITOR	IND LT	INDICATING LIGHT	SD	SMOKE DETECTOR
CB	CIRCUIT BREAKER	INCAND	INCANDESCENT	SEC	SECONDS, SECONDARY
CC	CONTROL CABLE, CLOSING COIL	INSTR	INSTRUMENT, INSTRUMENTATION	SECT	SECTION
CHH	COMMUNICATION HANDHOLE	I/O	INPUT/OUTPUT	SF	SUPPLY FAN
CC	CLARIFIER CONSOLE	JB	JUNCTION BOX	SH	SHEET
CL	CHLORINE	KA	KILOAMPERES	SIG	SIGNAL
CKT	CIRCUIT	KCMIL	THOUSANDS OF CIRCULAR MILS	SN	SOLID NEUTRAL
CMH	COMMUNICATION MANHOLE	KV	KILOVOLTS	SPEC	SPECIFICATION
CO	CONDUIT ONLY	KVA	KILOVOLT AMPERES	SPDT	SINGLE POLE, DOUBLE THROW
COMM	COMMUNICATION	KVARH	KILOVOLT AMPERES REACTIVE HOURS	SS	STAINLESS STEEL
COND	CONDUCTOR	KW	KILOWATTS	SW	SWITCH
CONT	CONTINUED, CONTINUATION	KWH	KILOWATT HOURS	SWGB	SWITCHBOARD
CPT	CONTROL POWER TRANSFORMER	LTG	LIGHTING	SWGR	SWITCHGEAR
CP	CONTROL PANEL	LTS	LIGHTS	SYNC	SYNCHRONIZING
CR	CONTROL RELAY	LTP	LIGHTING PANEL	TC	TERMINAL BOX
CS	CONTROL SWITCH	(M)	MODIFIED	TB	TELEPHONE CABINET
CT	CURRENT TRANSFORMER	mA	MILLIAMPERES	TEL	TELEPHONE
DB	DIRECT BURIAL	MAX	MAXIMUM	TEMP	TEMPERATURE
DC	DIRECT CURRENT	MCC	MOTOR CONTROL CENTER	TERM	TERMINAL
DIA	DIAMETER	MCP	MOTOR CIRCUIT PROTECTION	TO	TIMED OPENING
DIAG	DIAGRAM	MFR	MANUFACTURER	TOA	TEST-OFF-AUTOMATIC
DISC	DISCONNECT	MH	MANHOLE	TSP	TWISTED SHIELDED PAIR TYPICAL
DISTR	DISTRIBUTION	MIN	MINIMUM	UGND	UNDERGROUND
DN	DOWN	MISC	MISCELLANEOUS	UH	UNIT HEATER
DP	DISTRIBUTION PANEL	MOV	MOTOR OPERATED VALVE	UON	UNLESS OTHERWISE NOTED
DPDT	DOUBLE POLE, DOUBLE THROW	MS	MOUNTED	V	VOLTS
DPST	DOUBLE POLE, SINGLE THROW	MTD	MOUNTING	VA	VOLT-AMPERES
DWG	DRAWING	MTS	MOUNTING	VAR	VOLT AMPERES REACTIVE
(E)	EXISTING	MTS	MANUAL TRANSFER SWITCH	VERT	VERTICAL
EA	EACH	(N)	NEW	VH	VAR-HOUR
EF	EXHAUST FAN	NC	NORMALLY CLOSED	VS	VOLTMETER SWITCH
EHH	ELECTRICAL HANDHOLE	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.	W	WIRE, WATTS
EL	ELEVATION	NEUT	NEUTRAL	WH	WATTHOUR METER
ELEC	ELECTRIC, ELECTRICAL	NIC	NOT IN CONTRACT	WHDM	WATTHOUR DEMAND METER
ELEM	ELEMENTARY	NO	NORMALLY OPEN, NUMBER	WP	WEATHERPROOF
EMERG	EMERGENCY	NTS	NOT TO SCALE	WR	WEATHER RESISTANT
ENCL	ENCLOSURE	OCP	OZONE CONTROL PANEL	WT	WATERTIGHT
ENCL	ENCLOSURE	OH	OVERHEAD	WWR	WASHWATER RECOVERY TRANSFORMER
EQ	EQUAL	OT	OVER TEMPERATURE	XFMR	TRANSFORMER
EQPT	EQUIPMENT	OVL	THERMAL OVERLOAD RELAY		
ETM	ELAPSED TIME METER				

### PLAN SYMBOLS



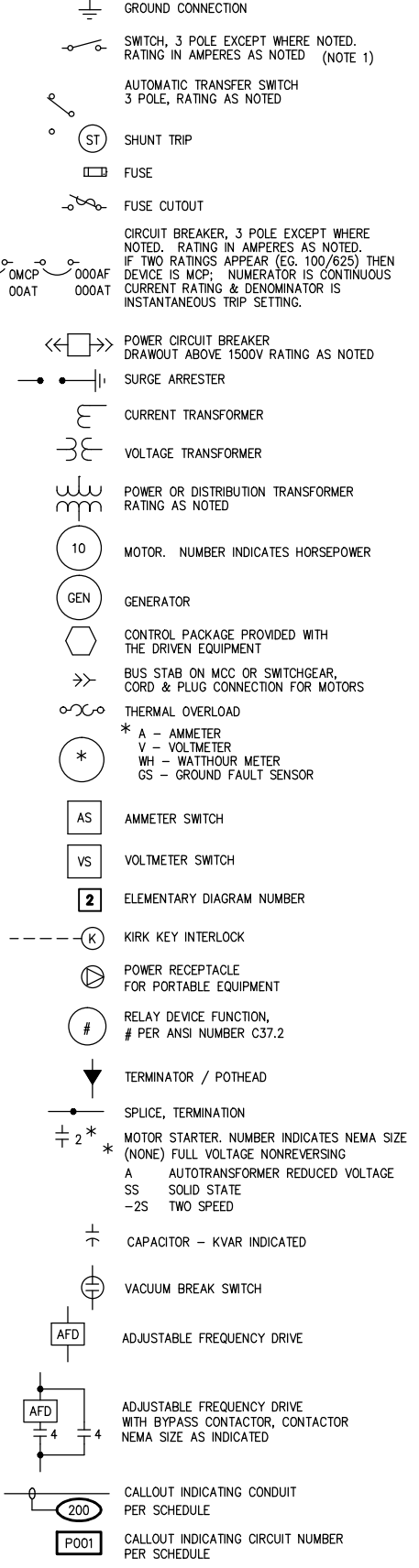
### PLANS

P1 CONDUIT SIZE AND FILL SHALL BE AS INDICATED. WHERE NO SIZE IS SHOWN, THE CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED BY THE AUTHORITY HAVING CODE ENFORCEMENT JURISDICTION. WHERE NO FILL IS INDICATED, THE FILL SHALL BE 2#12. PROVIDE 3/16 INCH NYLON PULL ROPE IN EACH EMPTY CONDUIT.

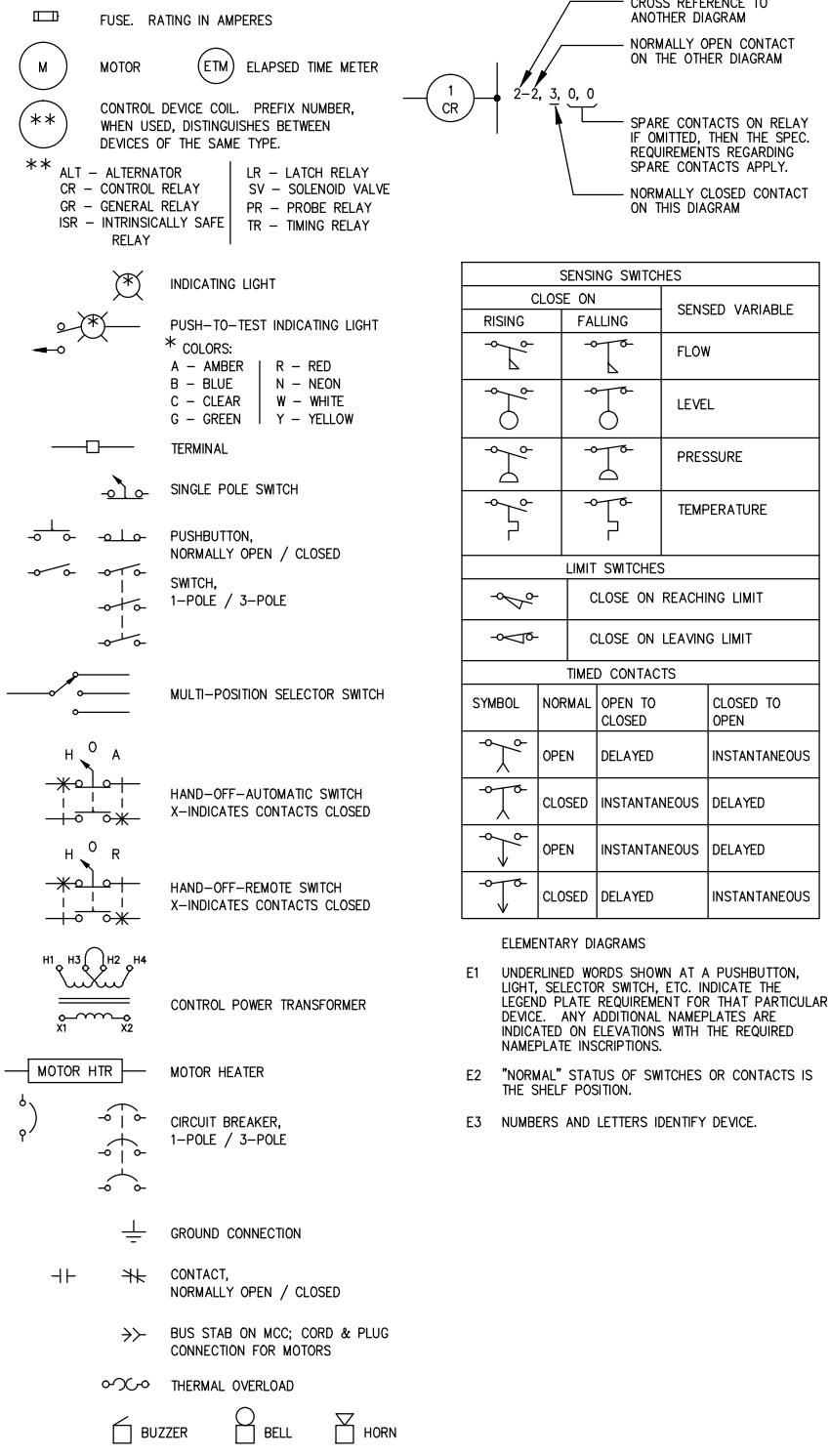
P2 LOWER CASE LETTERS ADJACENT TO A SWITCH OR LIGHT FIXTURE INDICATE A SWITCHED CIRCUIT. FOR FOUR LAMP FLUORESCENT FIXTURES WIRED IN PAIRS WITHIN EACH FIXTURE, THE "a" SWITCH CONTROLS THE OUTER LAMPS AND THE "b" SWITCH CONTROLS THE INNER LAMPS; WIRE 3 LAMP FIXTURES SIMILARLY.

P3 CONDUIT AND WIRE LAYOUT FOR LIGHTING AND RECEPTACLES NOT SHOWN. PROVIDE PER NEC.

### SINGLE LINE SYMBOLS



### ELEMENTARY DIAGRAM SYMBOLS



### GENERAL NOTES

G1 THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. THE INSTALLATION OF ALL EQUIPMENT SHOWN ON THESE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF ALL APPLICABLE CODES AND UTILITY COMPANY STANDARDS. CONTACT THE UTILITY COMPANY REPRESENTATIVES AND VERIFY THEIR REQUIREMENTS.

G2 THIS IS A GENERALIZED LEGEND SHEET. THIS CONTRACT MAY NOT USE ALL INFORMATION SHOWN.

G3 NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS IN EQUIPMENT LOCATIONS ARE DISCOVERED OR IF PROBLEMS ARISE DUE TO FIELD CONDITIONS, LACK OF INFORMATION OR ANY OTHER REASON. NO PAYMENT WILL BE MADE FOR CHANGES WHICH HAVE NOT BEEN FAVORABLY REVIEWED BY THE ENGINEER.

G4 INFORMATION SHOWN MAY NOT BE ALL INCLUSIVE. SEE ALSO ANSI C37.2, Y1.1, Y32.2, AND Y32.9.

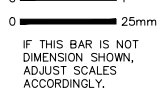
G5 VERIFY ALL COLOR REQUIREMENTS BEFORE ORDERING MATERIALS.

G6 REFER TO THE MECHANICAL DRAWINGS FOR CERTAIN CONTROL DIAGRAMS AND EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND FOR CERTAIN CONNECTIONS TO BE MADE TO ELECTRICAL CIRCUITS.

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### SCALES



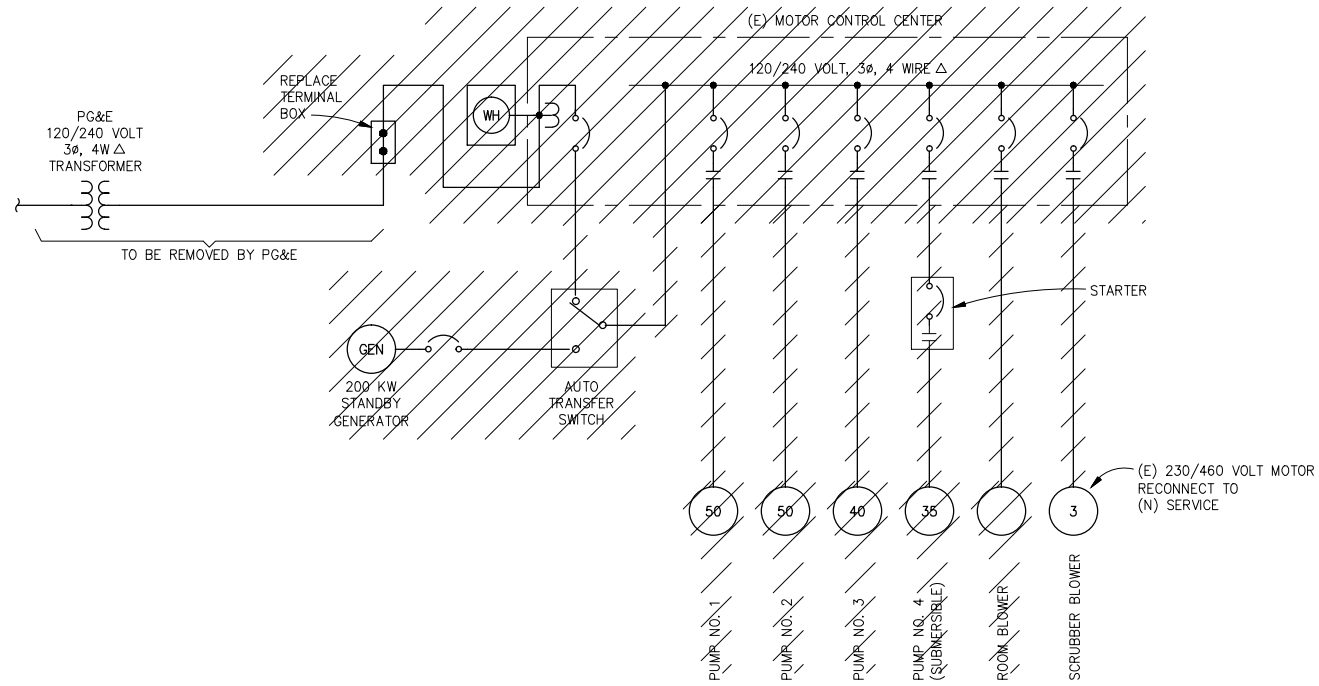
DESIGNED	JC
DRAWN	JC
CHECKED	JAF

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 MARIN COUNTY, CALIFORNIA  
 BEACH FORCE MAIN REPLACEMENT  
 Kennedy/Jenks Consultants  
 MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

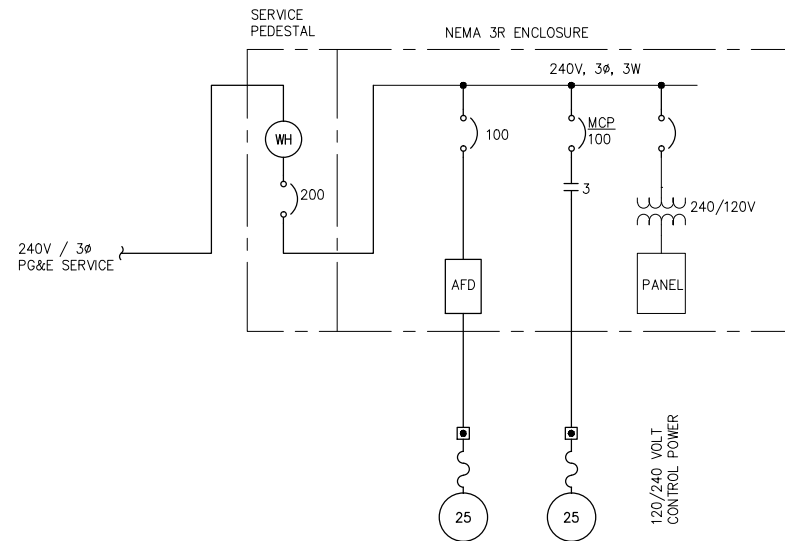
### ELECTRICAL LEGEND AND ABBREVIATIONS

DWG. NO.	E-1
JOB NO.	960505.02
DATE	3-5-97
SHEET	OF

E-1



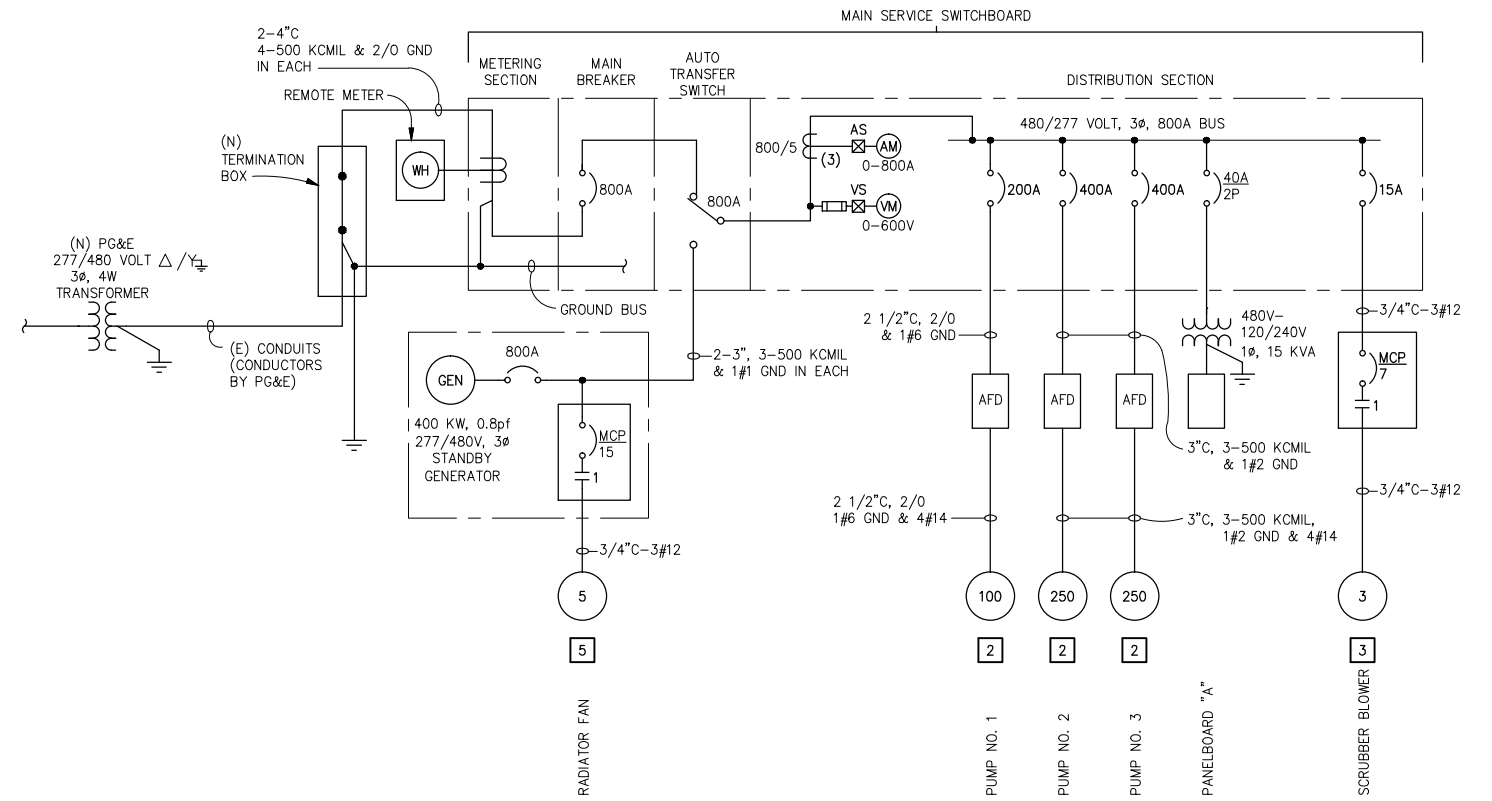
**EXISTING ELECTRICAL DISTRIBUTION REMOVAL**  
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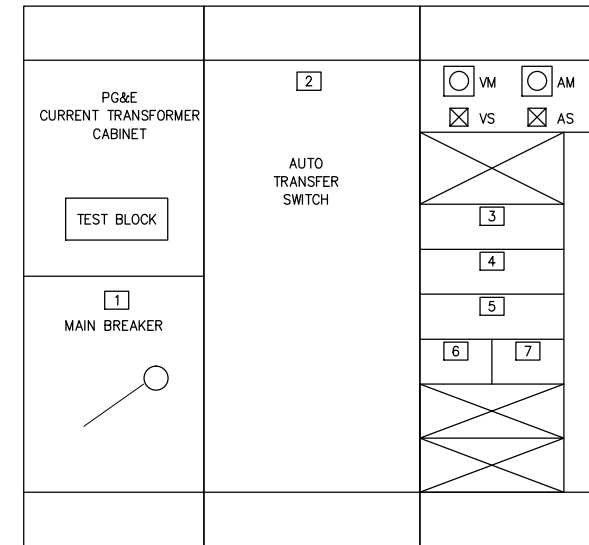
**TEMPORARY PUMPING SINGLE LINE DIAGRAM**  
NO SCALE

**NOTES:**

1. PROVIDE (N) TEMPORARY SERVICE TO PROVIDE POWER FOR TEMPORARY PUMPING SYSTEM AND CONSTRUCTION POWER. PROVIDE NEMA 3R SERVICE PEDESTAL WITH PG&E METER, MAIN CIRCUIT BREAKER AND PUMP CONTROL SYSTEM.
2. PUMP CONTROL SYSTEM SHALL CONSIST OF DUPLEX PUMPS, ONE PUMP WITH AN ADJUSTABLE FREQUENCY DRIVE AND A BACKUP FIXED SPEED PUMP. PROVIDE A CONTINUOUS LEVEL MEASUREMENT SUCH AS AN ULTRASONIC LEVEL, BUBBLER OR EQUAL TO PACE THE ADJUSTABLE SPEED PUMP IN PROPORTION TO WET WELL LEVEL. CONTROLS SHALL START/STOP PUMPS AND ALARM HIGH LEVEL CONDITIONS. THE BACKUP PUMP SHALL START IF THE LEVEL IN THE WET WELL CONTINUES TO RISE AND STOP AT A COMMON STOP SET POINT FOR BOTH PUMPS. PROVIDE TWO AUXILIARY CONTACTS, ONE FOR "BACKUP PUMP STARTED" AND ONE FOR "HIGH LEVEL" ALARM FOR CONNECTION TO (E) PUMP STATION TELEMETRY.
3. PROVIDE ALL REQUIRED CONDUIT/WIRES OR ANY TEMPORARY CABLES FOR FULLY OPERATIONAL SYSTEM. SIZE ALL WIRES/CABLES PER NEC.



**SINGLE LINE DIAGRAM**  
NO SCALE



**MAIN SWITCHBOARD ELEVATION**  
SCALE: 3/4"=1'-0"

NAMEPLATE SCHEDULE	
NO.	INSCRIPTION
1	NORMAL POWER MAIN CIRCUIT BREAKER
2	AUTO TRANSFER SWITCH
3	PUMP NO. 1 AFD
4	PUMP NO. 2 AFD
5	PUMP NO. 3 AFD
6	PANELBOARD "A" TRANSFORMER
7	SCRUBBER BLOWER

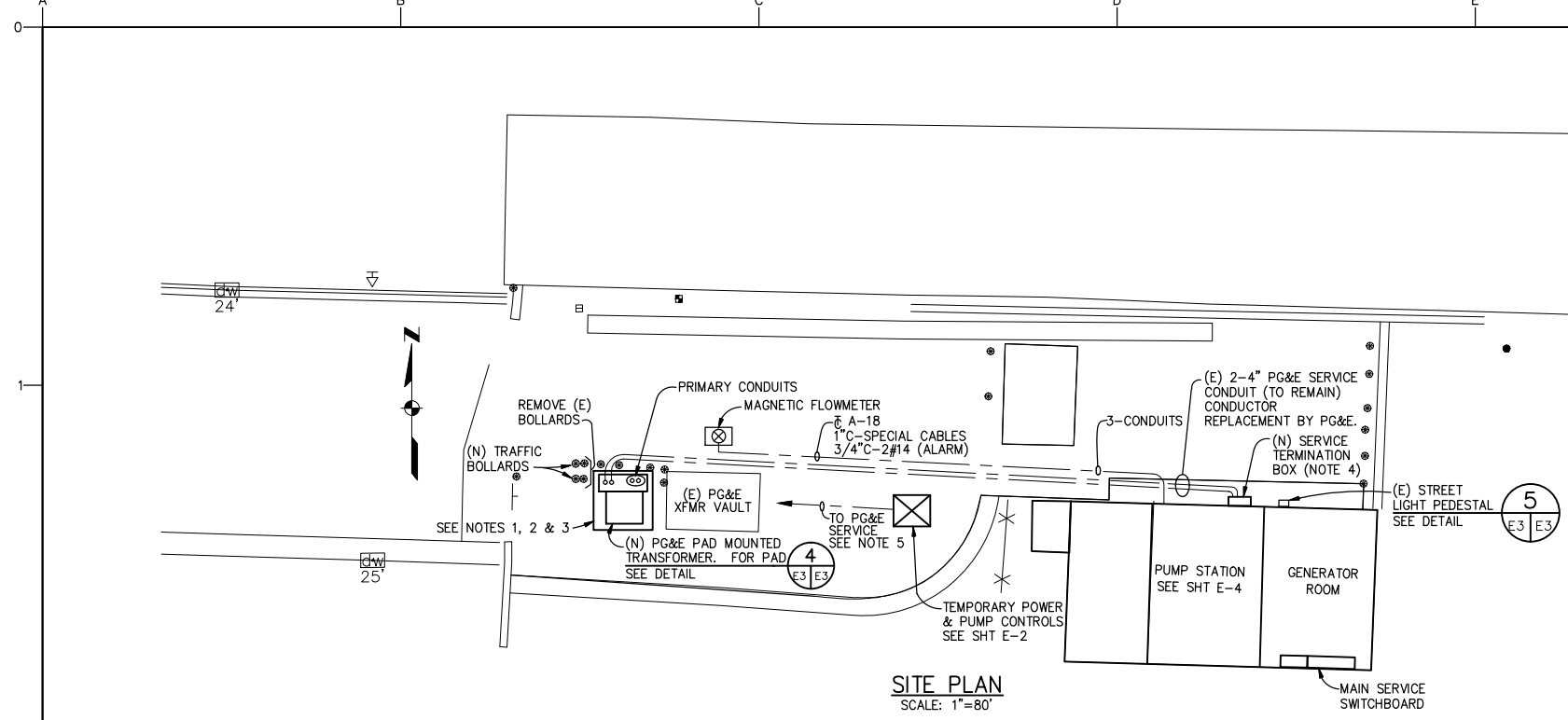


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		0 25mm	DRAWN JC		
		IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.	CHECKED JAF		
NO.	REVISION	DATE	BY		

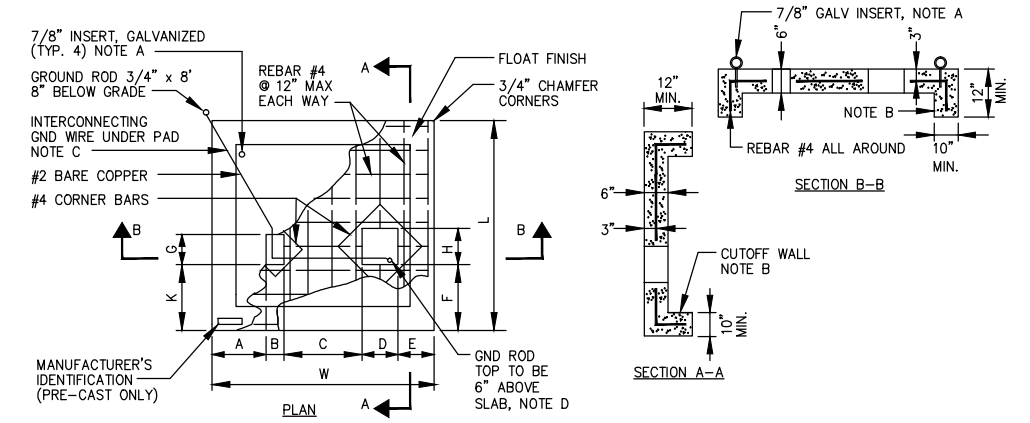
**SINGLE LINE DIAGRAMS AND ELEVATION**

DWG. NO.	E-2
JOB NO.	960505.02
DATE	3-5-97
SHEET	OF
<b>E-2</b>	



**SITE PLAN**  
SCALE: 1"=80'

- NOTES:**
- REMOVE AND REPLACE THE (E) PG&E TRANSFORMER PAD.
  - EXCAVATE AND REROUTE (E) PRIMARY AND SECONDARY SERVICE CONDUITS TO LINE UP WITH THE (N) DESIGNATED TERMINATIONS FOR (N) PG&E TRANSFORMER. COORDINATE WITH PG&E FOR REMOVAL AND REINSTALLATION OF (N) CONDUCTORS.
  - REMOVE (E) TRAFFIC BOLLARDS AS INDICATED. PROVIDE (N) TRAFFIC BOLLARDS.
  - REMOVE (E) PG&E TERMINATION BOX AND PROVIDE A (N) 800A NEMA 3R BOX FOR 277/480 VOLTS TO MEET THE REQUIREMENTS OF PG&E.
  - COORDINATE THE LOCATION OF PG&E SERVICE WITH THE UTILITY.

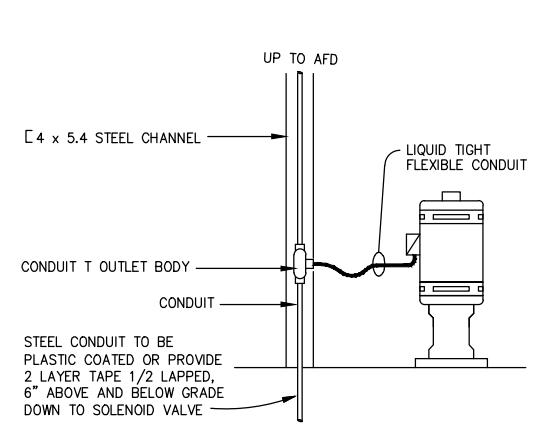


XFMR KVA SIZE	PAD DIMENSIONS (INCHES)											COMMENTS			
	A	B	C	D	E	F	G	H	K	L	W				
75															SEE NOTE E
112.5	19	8	9	16	12	12	16	16	12	64	64				
150															
225	21	8	14	16	13	15	16	16	15	72	72				
300														CAST IN PLACE ONLY	
500	29					23				100	96				
750	32	8	19	17	22	15	16	17	15	112	98				
1,000	36					26				117	106				
1,500															
2,000	31	8	23	17	26	15	16	17	15	120	105				
2,500															

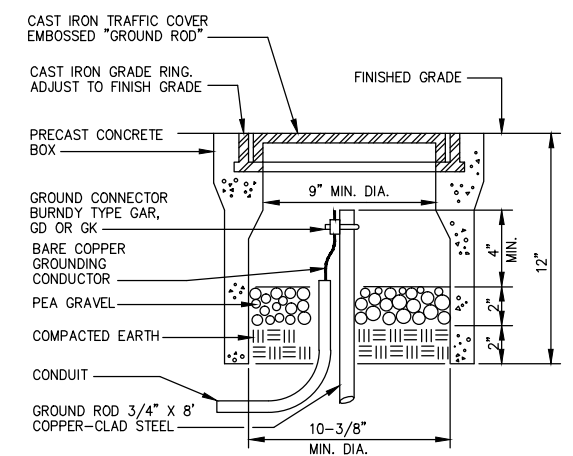
- NOTES:**
- EYEBOLTS 7/8" DIA. UNC THREAD, 2-1/4" SHANK LENGTH, STEEL GALV. SHALL BE USED FOR LIFTING THE PRECAST PAD.
  - OMIT CUTOFF WALLS ON PRECAST PAD.
  - A SIX FOOT MINIMUM SEPARATION SHALL BE MAINTAINED BETWEEN GROUND RODS.
  - CONNECT TO LOW VOLTAGE NEUTRAL AND HIGH VOLTAGE CABLE SHIELD.
  - PRECAST TRANSFORMER PAD IS ACCEPTABLE SUBJECT TO SOIL AND DRAINAGE CONDITIONS AS DIRECTED BY THE CONTRACTING OFFICER.
  - CONDUIT SHALL STUB UP 1" ABOVE TOP OF PAD. PROVIDE PLUGS. FILL OPENING WITH GROUT AFTER INSTALLATION.
  - FOR USE ON PG&E ONLY, OTHER UTILITIES MAY DIFFER.

**TYPICAL CONCRETE PAD FOR THREE PHASE PAD MOUNTED TRANSFORMER INSTALLATION**

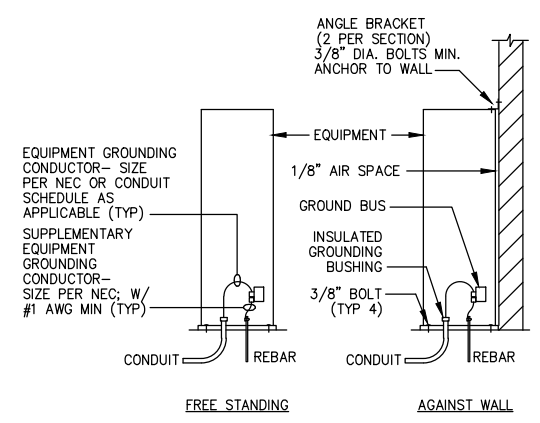
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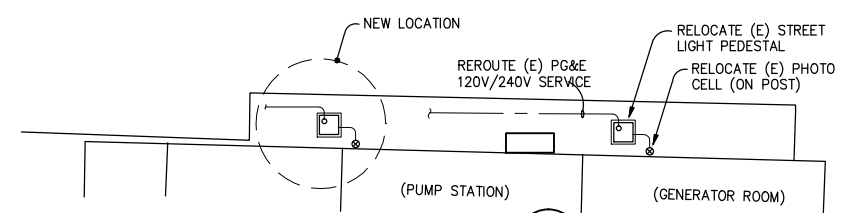
**TYPICAL MOTOR CONNECTIONS**  
SCALE: NONE



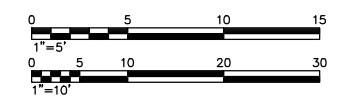
**GROUND ROD AND BOX INSTALLATION**  
SCALE: NONE



**MAJOR EQUIPMENT ANCHORING**  
SCALE: NONE

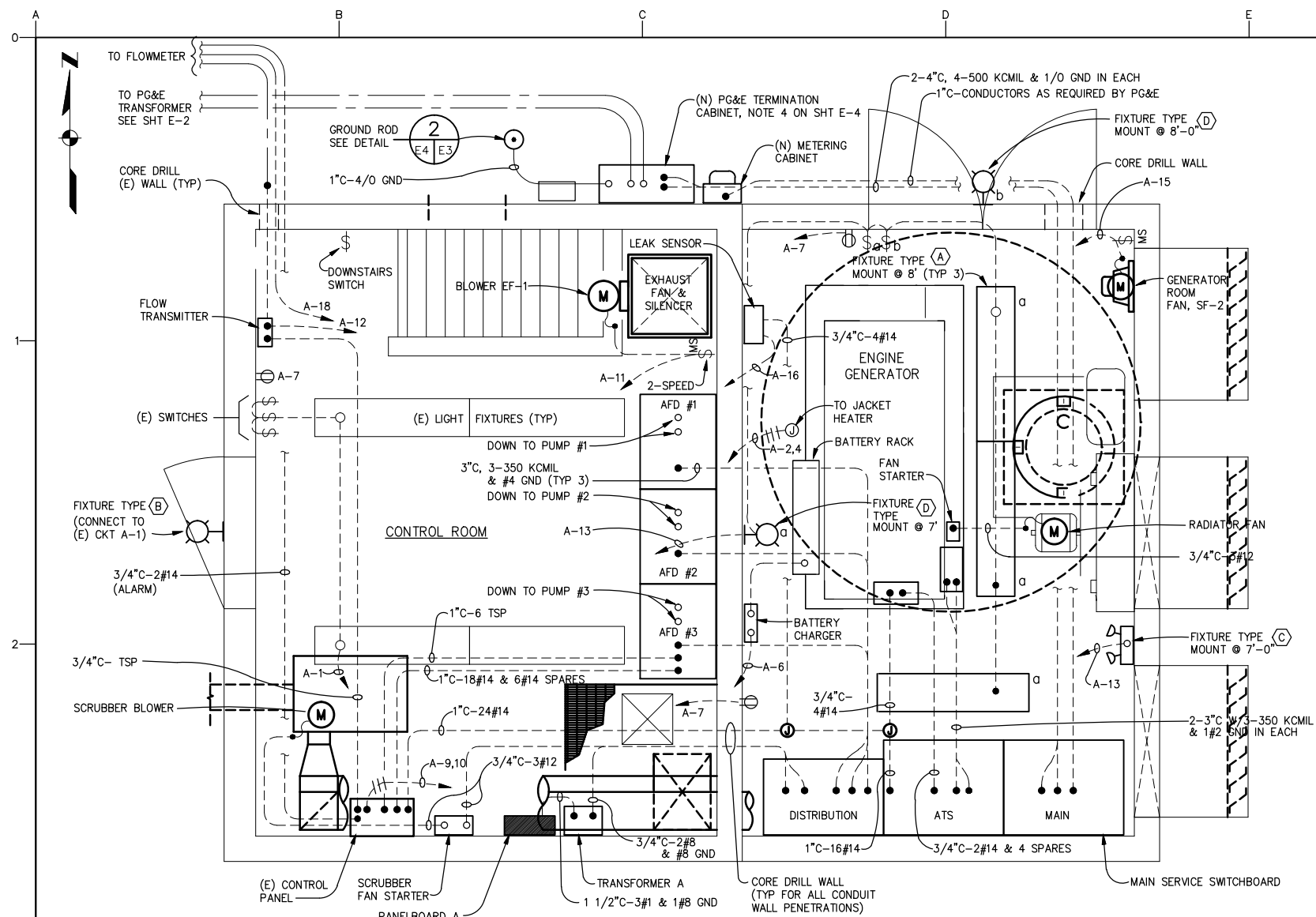


**DETAIL**  
SCALE: 1"=5'

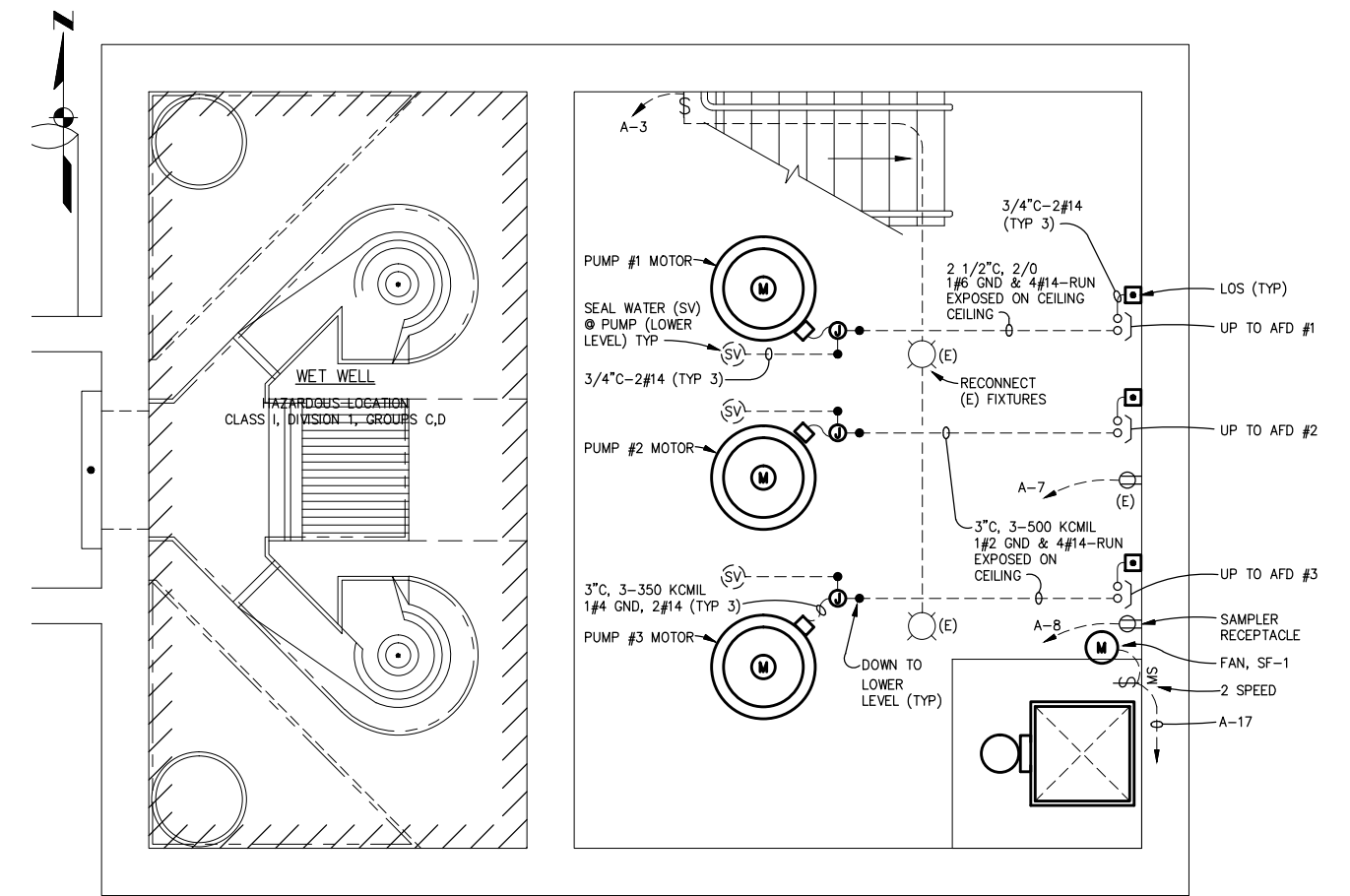


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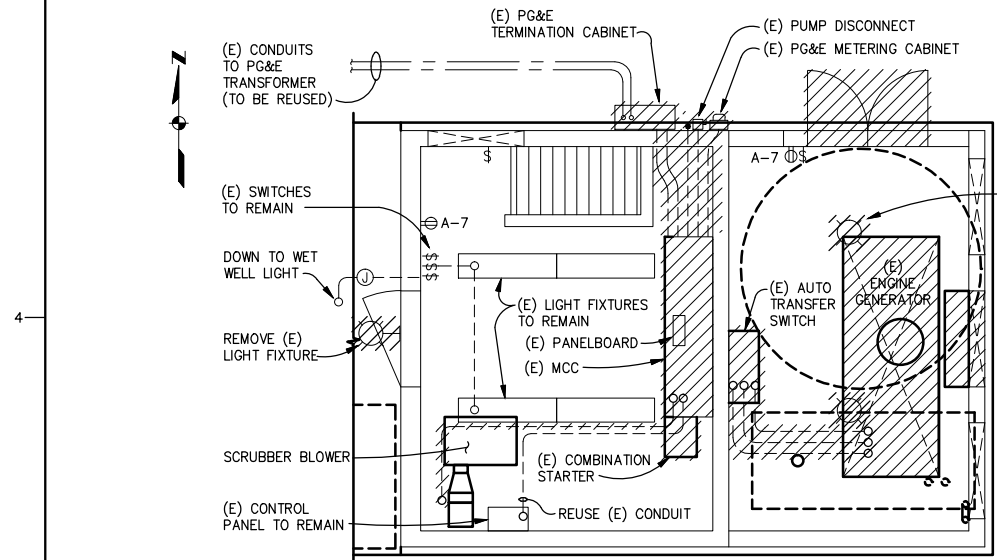
USE OF DOCUMENTS				SCALES		DESIGNED		DRAWN		CHECKED		SAUSALITO-MARIN CITY SANITARY DISTRICT MARIN COUNTY, CALIFORNIA BEACH FORCE MAIN REPLACEMENT Kennedy/Jenks Consultants		SITE PLAN AND DETAILS		DWG. NO. E-3	
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NO.	REVISION	DATE	BY	IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.										SHEET OF		<b>E-3</b>	



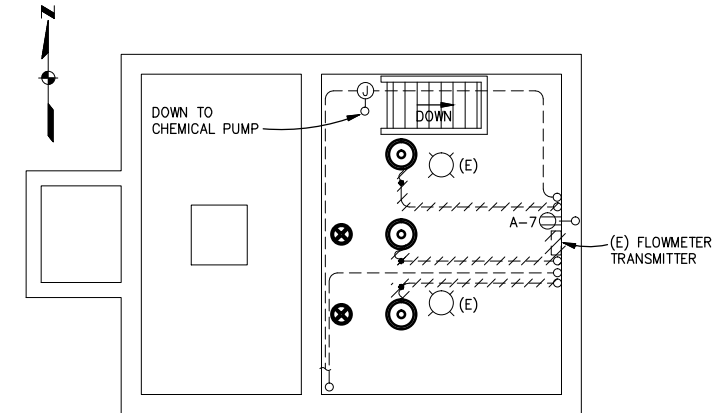
**NEW BUILDING PLAN - UPPER LEVEL**  
SCALE: 1/2"=1'-0"



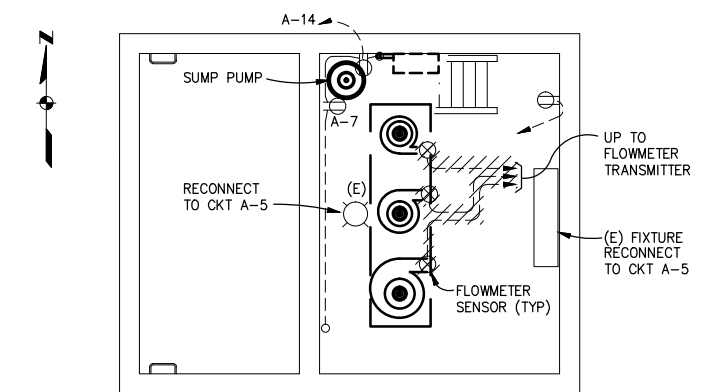
**NEW BUILDING PLAN - MOTOR ROOM**  
SCALE: 1/2"=1'-0"



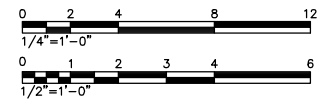
**EXISTING BUILDING - DEMOLITION PLAN**  
SCALE: 1/4"=1'-0"



**(E) MOTOR ROOM FLOOR PLAN**  
SCALE: 1/4"=1'-0"



**(E) PUMP ROOM FLOOR PLAN**  
SCALE: 1/4"=1'-0"



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					KENNEDY/JENKS CONSULTANTS						BEACH FORCE MAIN REPLACEMENT		3-5-97		OF	
					MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107								E-4			

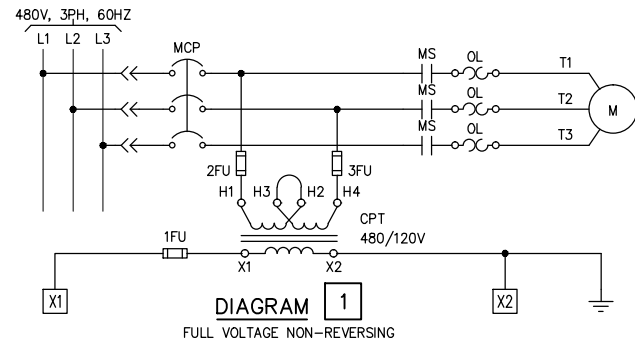


DIAGRAM 1  
FULL VOLTAGE NON-REVERSING

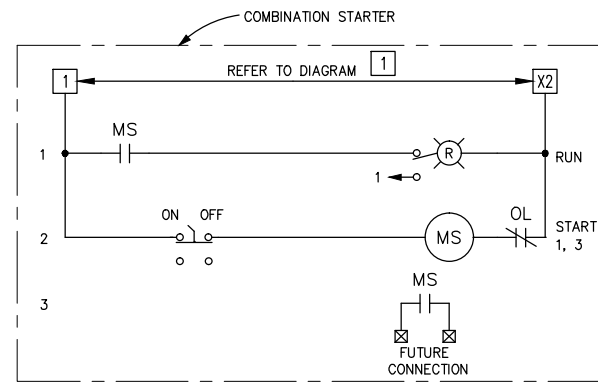


DIAGRAM 3  
SCRUBBER BLOWER

PANELBOARD "A" SCHEDULE							
120/240 VOLTS, SINGLE PHASE, 3 WIRE		100 AMP BUS		80 AMP MAIN		MOUNTING: SURFACE	
CKT. NO.	DESCRIPTION	VOLT-AMPS		CKT. NO.	DESCRIPTION	VOLT-AMPS	
		A	B			A	B
1	FIRST FLOOR LIGHTS	500		2	GENERATOR HEATER	750	20/1
3	MOTOR ROOM LIGHTS		400	4	GENERATOR HEATER		750
5	PUMP ROOM LIGHTS	200		6	BATTERY CHARGER	100	20/1
7	RECEPTACLES		200	8	SAMPLER		150
9	AIR COMPRESSORS	300		10	CONTROL PANEL	150	20/1
11	UPPER LEVEL BLOWER (EF-1)		350	12	FLOWMETER		100
13	GENERATOR ROOM LIGHTS	300		14	SUMP PUMP	500	20/1
15	GENERATOR ROOM FAN (SF-2)		350	16	LEAK SENSOR		100
17	MOTOR ROOM FAN (SF-1)	350		18	METER VAULT SUMP PUMP	500	20/1
19	SPARE			20	SPARE		20/1
21	SPARE			22	SPARE		20/1
23	SPARE			24	SPARE		20/1
SUBTOTALS		1650	1300			2000	1000
PHASE TOTALS						3650	2400
TOTAL VOLT-AMPS						6050	

FIXTURE SCHEDULE							
FIXTURE TYPE	NO.	LAMP TYPE	WATTS	1 Ø VOLTS	MOUNTING ARRGT	DESCRIPTION	CATALOG NUMBER
B	1	HPS	50	120	STANCHION (EXISTING)	PETROLUX II, ENCLOSED & GASKETED, HEAVY DUTY, COPPER-FREE, THERMOSET POLYESTER POWDER PAINT, PRISMATIC GLASS REFRACTOR, UL LISTED 844, 595	HOLOPHANE PETL-50HPS-12-545-ST OR EQUAL
C	2	TUNGSTEN HALOGEN	36	120	WALL	EMERGENCY LIGHT, HEAVY DUTY, GASKETED, CORROSION RESISTANT, UL LISTED FOR WET LOCATION, UL 924, OVERSIZED 6V BATTERIES, POLYCARBONATE LAMP HEADS.	HOLOPHANE EH-12-2A OR EQUAL
D	1	INC	150	120	WALL	WALLPACKETTE, COPPER FREE ALUMINUM ALLOY, THERMAL SHOCK RESISTANT PRISMATIC BOROSILICATE REFRACTOR, UL LISTED 1572.	HOLOPHANE WP-1-A-150IN-12-BZ OR EQUAL

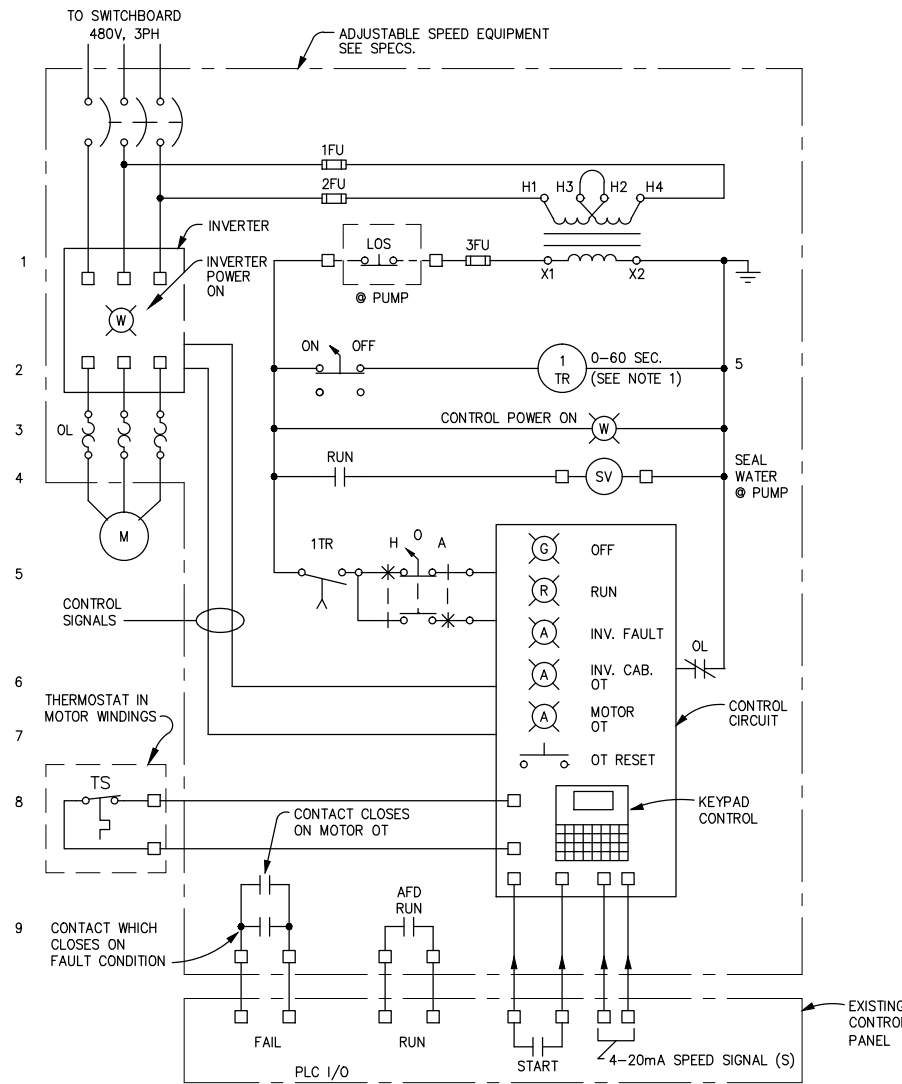


DIAGRAM 2  
(ADJUSTABLE FREQUENCY DRIVE CONTROL)  
PUMP NO. 1, PUMP NO. 2 AND PUMP NO. 3

NOTES:

1. SET AT 5 SECONDS FOR PUMP NO. 1, 10 SECONDS FOR PUMP NO. 2 AND 15 SECONDS FOR PUMP NO. 3.

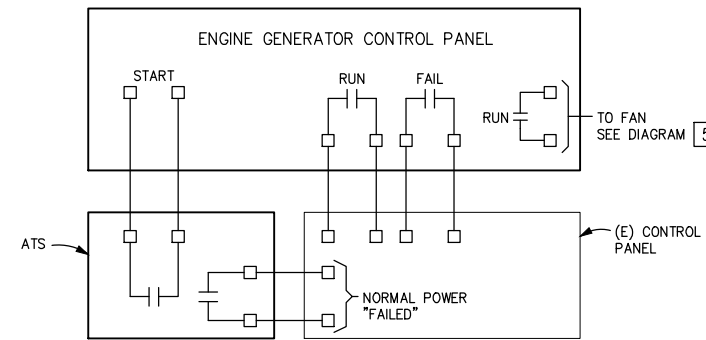


DIAGRAM 4  
GENERATOR CONTROLS

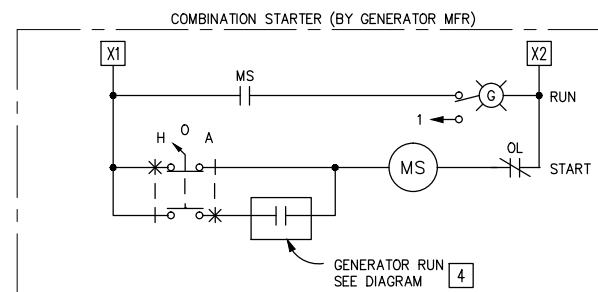


DIAGRAM 5  
RADIATOR FAN

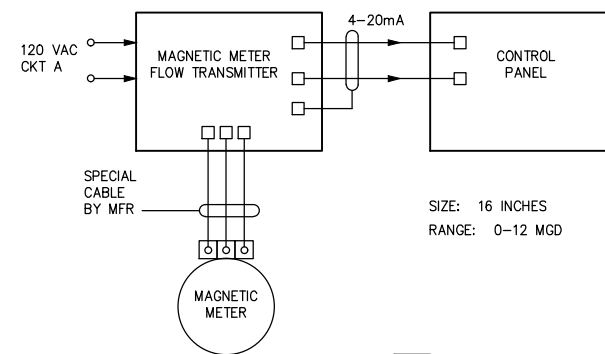


DIAGRAM 6  
FLOWMETER

USE OF DOCUMENTS

THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.

NO.	REVISION	DATE	BY

SCALES  
0" = 1"  
0" = 25mm  
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED TW  
DRAWN JC  
CHECKED JAF

SAUSALITO-MARIN CITY SANITARY DISTRICT  
MARIN COUNTY, CALIFORNIA  
BEACH FORCE MAIN REPLACEMENT  
Kennedy/Jenks Consultants

MARATHON PLAZA, 303 SECOND STREET, 10TH FLR NORTH, SAN FRANCISCO, CALIFORNIA 94107

ELEMENTARY DIAGRAMS AND SCHEDULES

DWG. NO. E-5  
JOB NO. 960505.02  
DATE 3-5-97  
SHEET OF E-5