

GENERAL STRUCTURAL NOTES

GENERAL

- 1.) THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- 2.) DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
- 3.) NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES.
- 4.) SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 -PIPE RUNS, SLEEVES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
 -ELECTRICAL CONDUIT RUNS, BOX OUTLET IN WALLS AND SLABS.
 -CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
- 5.) ASTM SPECIFICATIONS NOTED ON THE DRAWINGS SHALL BE THE LATEST REVISION.

FOUNDATIONS

- 1.) SLABS ON GRADE SHALL BE CONSTRUCTED ON SOIL COMPACTED IN ACCORDANCE WITH THE PLANS AND SPECS.
- 2.) FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL.

CONCRETE

- 1.) CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.
- 2.) MATERIALS:
 -PORTLAND CEMENT: ASTM C-150, TYPE I, OR II LOW ALKALI
 -AGGREGATE: ASTM C-33
 -AIR ENTRAINMENT: SEE SPECIFICATIONS
 -ADMIXTURES: SEE SPECIFICATIONS
- 3.) ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
- 4.) DESIGN FORMS TO PROVIDE THE SPECIFIED CHAMFERS SHOWN ON THE DRAWINGS. PROJECTING CORNERS SHALL BE FORMED WITH A 3/4 INCH CHAMFER UNLESS OTHERWISE NOTED ON DRAWINGS.
- 5.) MINIMUM CLEAR COVER OVER REINFORCEMENT SHALL BE SHOWN ON THE DRAWINGS.
- 6.) ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- 7.) PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.
- 8.) CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION UNTIL THE SECTION IS COMPLETE BETWEEN PREDETERMINED CONSTRUCTION JOINTS.

MASONRY BLOCK

- 1.) ALL MASONRY SHALL BE HOLLOW LOAD BEARING CONCRETE CONFORMING TO ASTM C90, GRADE N, TYPE 1 (F'M=1500 PSI).
- 2.) CONCRETE MASONRY UNITS SHALL BE 8"x8"x16" NOMINAL SIZE WITH 8"x2"x16" CAP (SEFULVEDA SLUMP STONE "LAPAZ" COLOR) UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- 3.) ALL MASONRY SHALL BE LAID IN RUNNING BOND PATTERN.
- 4.) MORTAR SHALL CONFORM TO ASTM C270 FOR UNIT MASONRY.
- 5.) MASONRY WALL SHALL BE GROUTED WITH COURSE GROUT IN ACCORDANCE WITH UBC TABLE 21-8 (f'c=2000 PSI). MAXIMUM GROUT LIFT IS 4 FEET. GROUT FULL ALL VERTICAL AND HORIZONTAL CELLS CONTAINING REINFORCING ONLY.

REINFORCING STEEL

- 1.) REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60.
- 2.) DETAIL, FABRICATE, LABEL, SUPPORT AND SPACE ALL CONCRETE REINFORCEMENT IN ACCORDANCE WITH ACI 315, ACI 318 AND THE UNIFORM BUILDING CODE.
- 3.) ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- 4.) REINFORCING SPLICES SHALL BE AS SHOWN ON THE DRAWINGS OR PER ACI REQUIREMENTS.

STRUCTURAL STEEL

- 1.) MATERIAL SHALL MEET THE REQUIREMENTS OF THE FOLLOWING SPECIFICATIONS UNLESS NOTED OTHERWISE:
 STRUCTURAL STEEL, ASTM A36
 INCLUDING BARS & PLATES
 PIPE, ASTM A53, TYPE E OR S, GRADE B
 SQUARE & RECTANGULAR HSS, ASTM A500, GRADE B, Fy=46 KSI
 ANCHOR BOLTS, ASTM A307, OR A36
- 2.) ALL CONNECTIONS SHALL BE MADE WITH BEARING TYPE HIGH STRENGTH BOLTS ASTM A-325N, UNLESS NOTED OTHERWISE.
- 3.) WELDING SHALL BE MADE WITH E70XX ELECTRODES BY QUALIFIED WELDERS.

SPECIAL INSPECTION

1. ALL CAST IN PLACE CONCRETE WHICH INCLUDES, BUT NOT LIMITED TO, CONCRETE FOUNDATION, AND CONCRETE SLAB ON GRADE.
2. BOLTS AND THREADED RODS INSTALLED IN CONCRETE.
3. PLACING OF REINFORCING STEEL FROM ITEM 1.
4. PERIODIC INSPECTION FOR STRUCTURAL WELDING:
 a. SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16" IN SIZE
5. PERIODIC INSPECTION IS REQUIRED FOR CONCRETE MASONRY WALLS.
6. EPOXY ANCHOR BOLTS.
7. INSTALLATION OF THREADED ROD USING ADHESIVE.
8. THE SOIL ENGINEER SHALL VERIFY THAT SUBGRADES HAVE BEEN PROPERLY PREPARED PRIOR TO FOUNDATIONS CONSTRUCTION.
9. WELDS IDENTIFIED AS REQUIRING CONTINUOUS OR PERIODIC SPECIAL INSPECTION NEED NOT HAVE SPECIAL INSPECTION WHEN THE WELDING IS DONE IN AN APPROVED FABRICATOR'S SHOP. WHEN WELDING IS DONE IN A SHOP WHICH IS NOT AN APPROVED FABRICATOR, SPECIAL INSPECTION IS REQUIRED AND AN APPLICATION TO PERFORM OFF-SITE FABRICATION MUST BE SUBMITTED TO AND APPROVED BY THE INSPECTION SERVICES DIVISION.

STRUCTURAL DESIGN CRITERIA

1.0 CODES

ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES: THE 1997 EDITION OF THE UNIFORM BUILDING CODE (UBC), AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK.

2.0 DESIGN LOADS

DEAD ----- ACTUAL DEAD WEIGHT
 COLLATERAL ----- MECHANICAL EQUIPMENT, PIPING, STEEL TANKS, ETC.
 LIVE ----- PIPING PRESSURE SURGE FORCES (INTERNAL PIPE TEST PRESSURE = 150 PSI)

3.0 WIND DESIGN

UBC: P = CeCqQsIw BASIC WIND SPEED 80 MPH
 EXPOSURE CONDITION C.

4.0 SEISMIC DESIGN

UBC: $V = \frac{2.5 C_a I_w}{1.4 R}$ EQUATION 30-5
 Z = 0.40 ----- ZONE 4 (FAULT < 2 KM FROM SITE, SEISMIC SOURCE TYPE A)
 I = 1.00 ----- NORMAL IMPORTANCE FACTOR
 Ca = 0.60
 Na = 1.5, Nv = 2.0
 SOIL TYPE Sc (TABLE 16-J)
 R = 2.2 TABLE 16-P

5.0 FOUNDATION SOIL LOADS

ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF

IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

DESIGNED BY: DHP
 DRAWN BY: MLJ
 CHECKED BY: DHD



MUSCOY OU REMEDIAL DESIGN
 19th STREET PLANT & ENCANTO PARK PUMPING PLANT
 NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

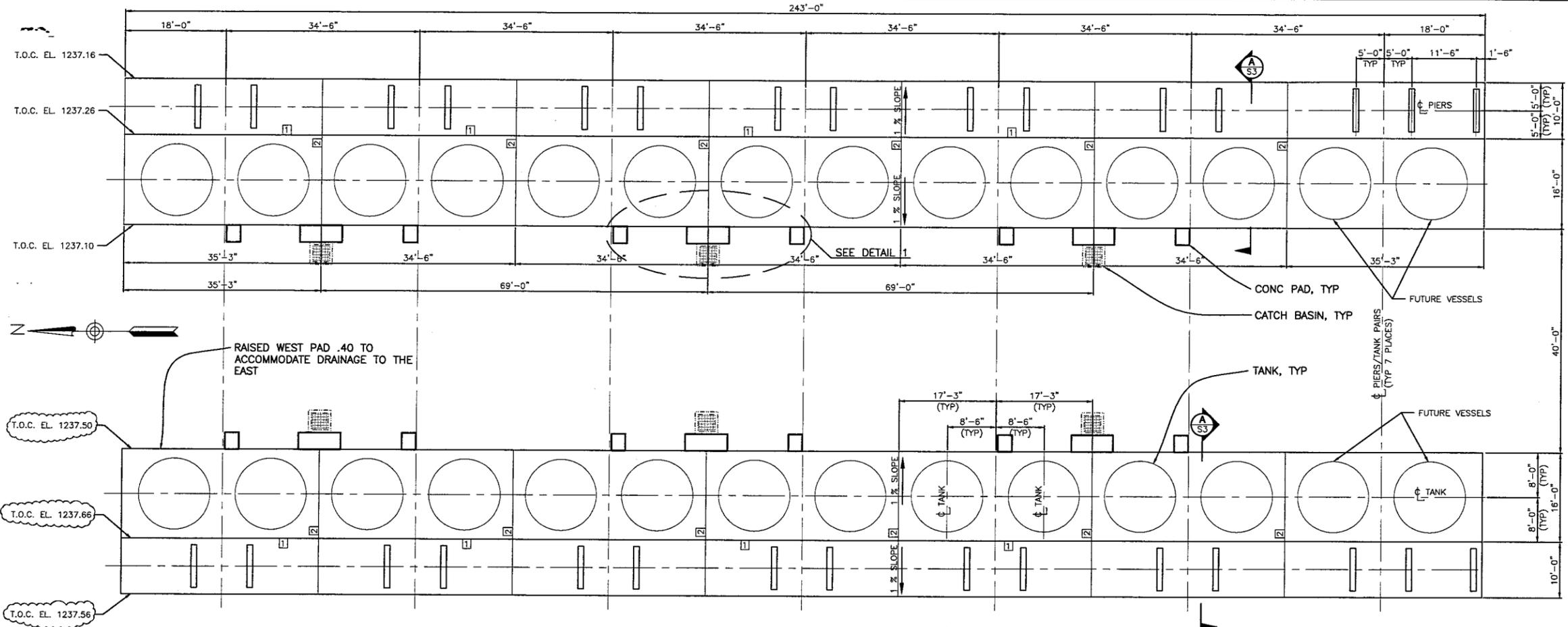
GENERAL STRUCTURAL NOTES

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			

SCALE	DATE	DWG FILE	SHEET NO.
AS SHOWN	8/14/03	S1.DWG	S1

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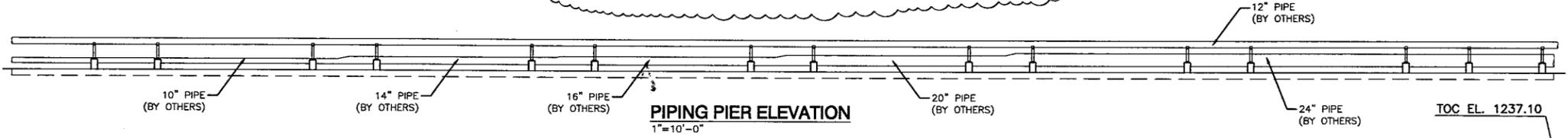
PIER AND VESSEL FOUNDATION PLAN
1"=10'-0"

- LEGEND**
- 1 TYPE 1 EXPANSION JOINT
 - 2 TYPE 2 CONSTRUCTION JOINT (FOR DETAILS SEE DRAWING S5)

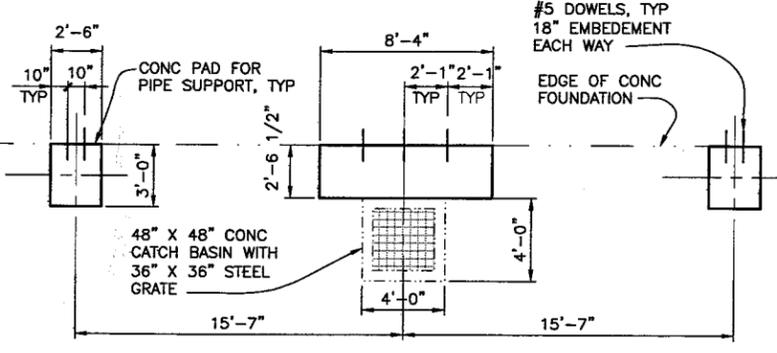
NOTE:

1. RAISE WEST PAD ELEVATIONS 0.40 FEET AS DEPICTED ABOVE. NO CHANGE TO EAST PAD ELEVATIONS.
2. ON SHEET S3, SECTION A, THE TOP OF PIER PIPE SUPPORT, EAST PAD SUPPORT T.O. CONC. REMAINS AT 1238.71. WEST PAD SUPPORT T.O. CONC. RAISES 0.40 FEET TO 1239.11.

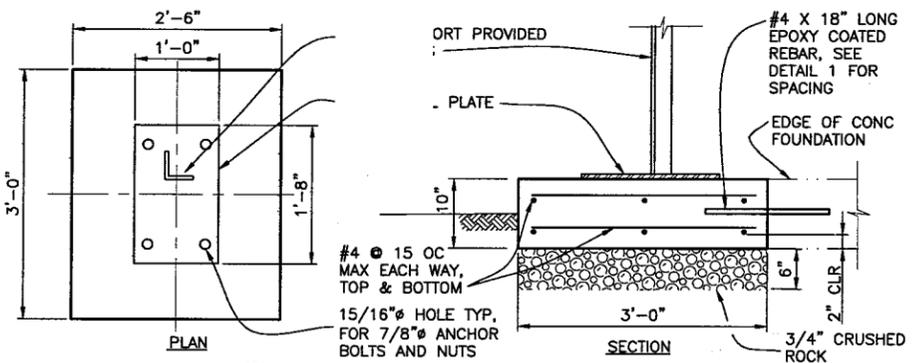
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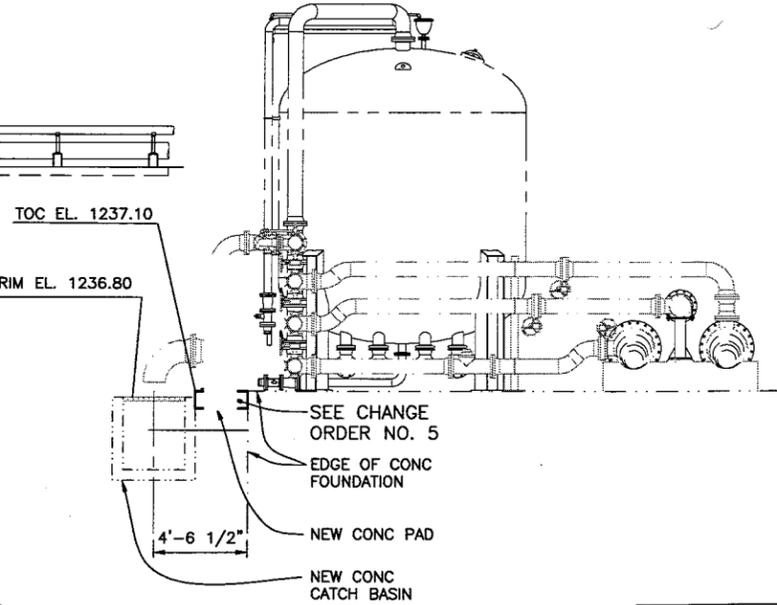
PIPING PIER ELEVATION
1"=10'-0"



1 CONCRETE PAD - TYP LAYOUT DETAIL
SCALE: 3" = 1'-0"



2 PIPE SUPPORT - CONCRETE PAD DETAILS
SCALE: 1:1



4 BACKWASH DRAIN DETAIL - EAST PAD
SCALE: 3" = 1'-0"

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RECORD DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	11/05	RECORD REVISION			
1	4/1	REVISE WEST PAD ELEV			

DESIGNED BY: DHP
DRAWN BY: MLJ
CHECKED BY: DHD

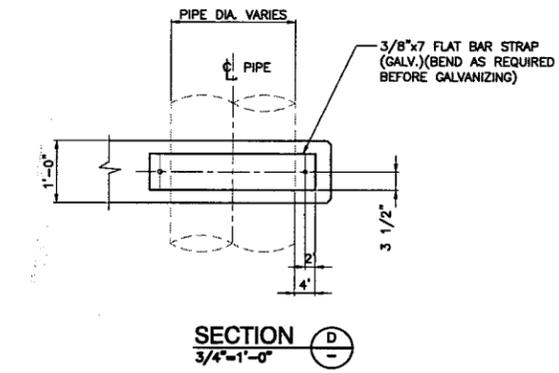
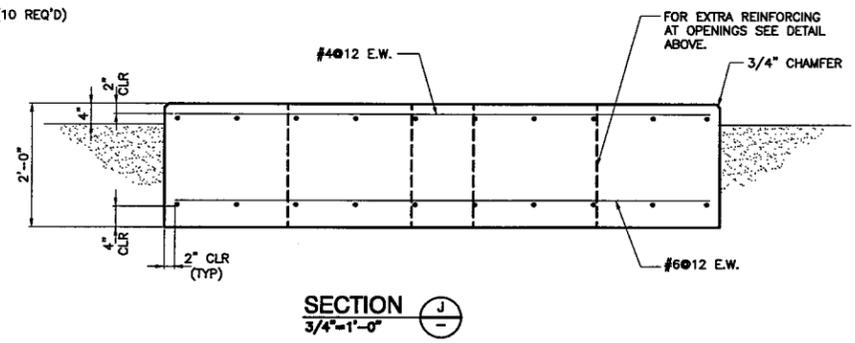
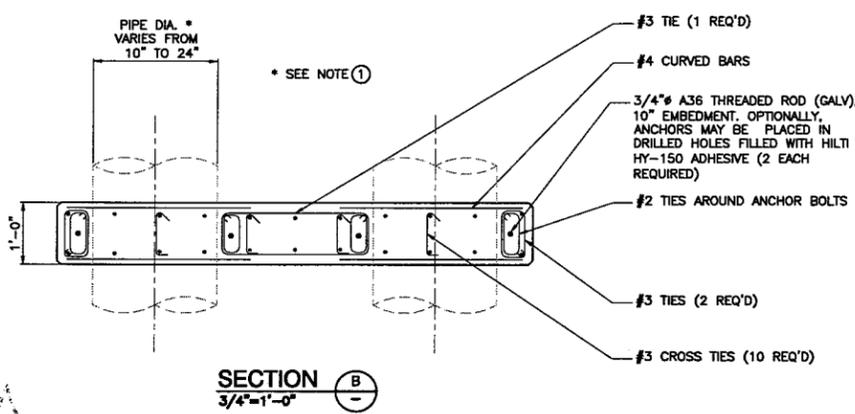
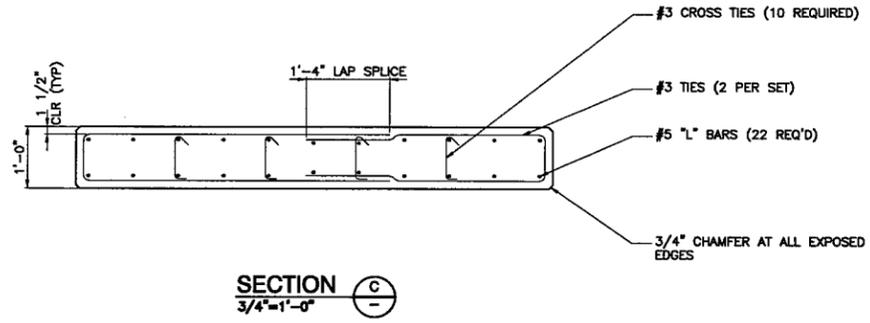
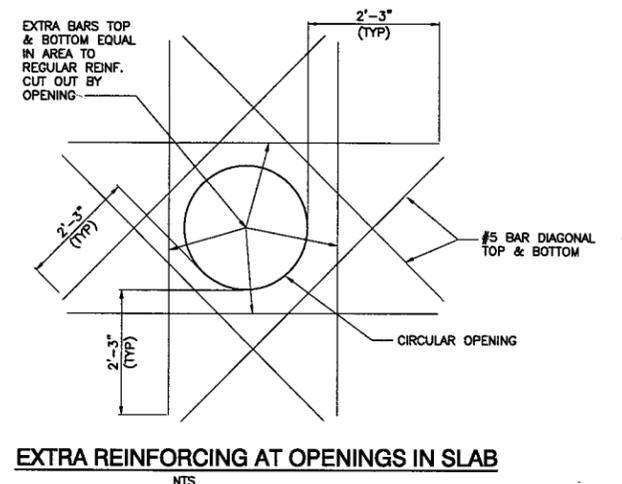
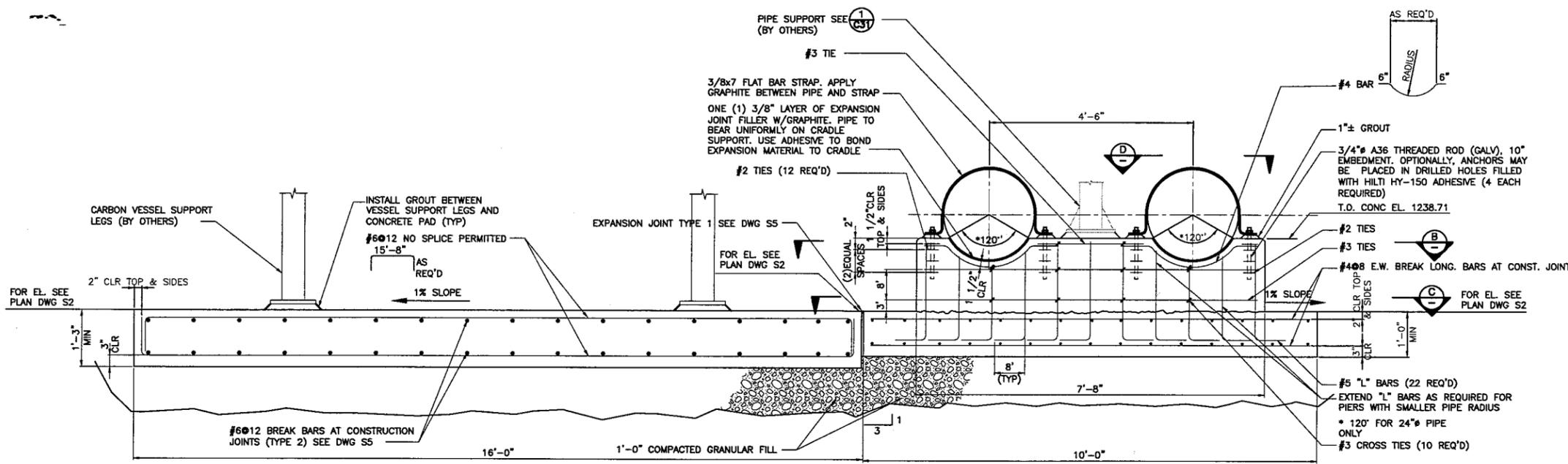


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT
FOUNDATION PLAN AND ELEVATION

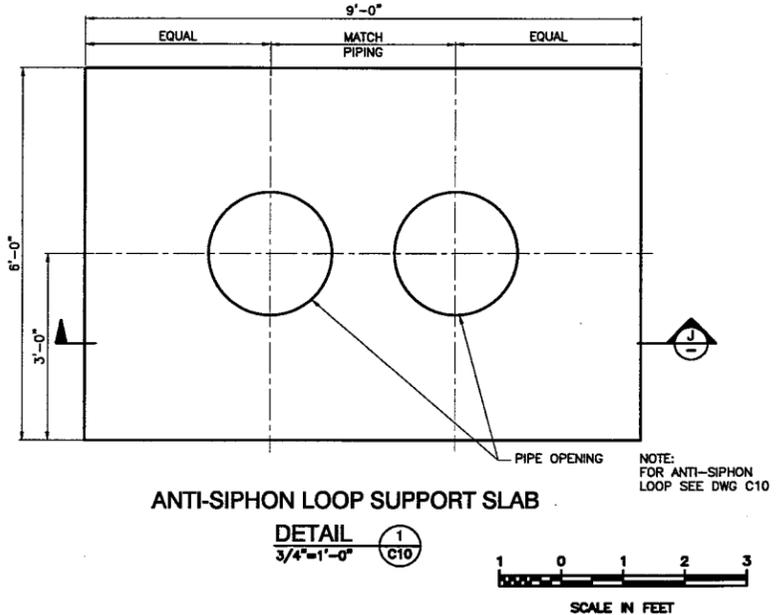
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DATE: 8/14/03
DWG FILE: S2.DWG

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NOTES

- CAST ALL INFLUENT AND EFFLUENT HEADER PIPE SUPPORTS TO ACCOMMODATE 24" PIPE. PROVIDE NEAT CEMENT GROUT KNOCK-OUT SADDLES FOR PIPES SMALLER THAN 24". ANCHOR PIPE STRAPS TO CONCRETE ONLY.

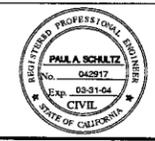


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RECORD DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			
REVISIONS					

DESIGNED BY: DHP
 DRAWN BY: MLJ
 CHECKED BY: DHD



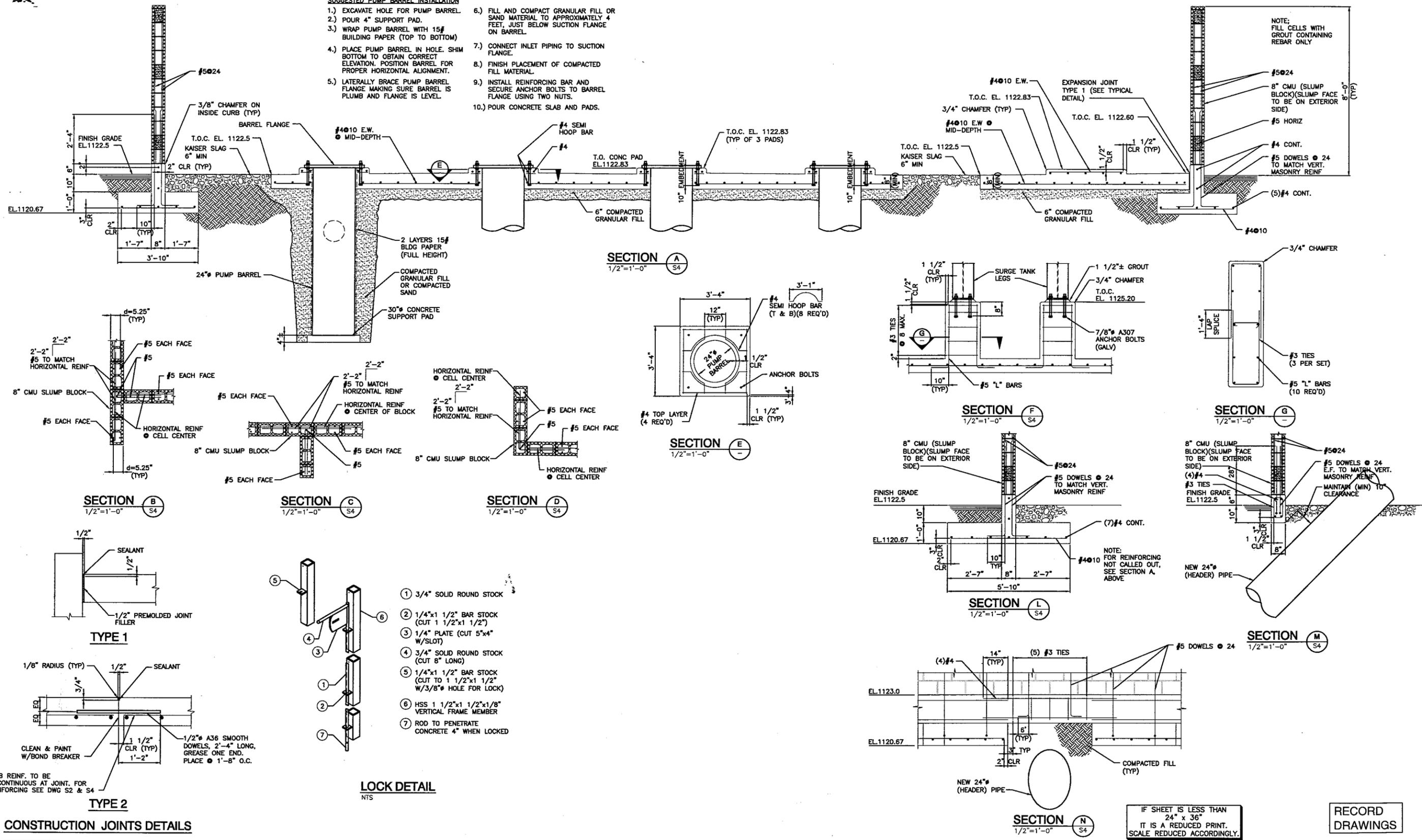
MUSCOY OU REMEDIAL DESIGN
 19th STREET PLANT & ENCANTO PARK PUMPING PLANT
 NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT
 SECTIONS AND DETAILS

SCALE: AS NOTED	DATE: 8/14/03	DWG FILE: S3.DWG	SHEET NO.: S3
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- SUGGESTED PUMP BARREL INSTALLATION**
- EXCAVATE HOLE FOR PUMP BARREL
 - POUR 4" SUPPORT PAD.
 - WRAP PUMP BARREL WITH 15# BUILDING PAPER (TOP TO BOTTOM)
 - PLACE PUMP BARREL IN HOLE. SHIM BOTTOM TO OBTAIN CORRECT ELEVATION. POSITION BARREL FOR PROPER HORIZONTAL ALIGNMENT.
 - LATERALLY BRACE PUMP BARREL FLANGE MAKING SURE BARREL IS PLUMB AND FLANGE IS LEVEL.
 - FILL AND COMPACT GRANULAR FILL OR SAND MATERIAL TO APPROXIMATELY 4 FEET, JUST BELOW SUCTION FLANGE ON BARREL.
 - CONNECT INLET PIPING TO SUCTION FLANGE.
 - FINISH PLACEMENT OF COMPACTED FILL MATERIAL.
 - INSTALL REINFORCING BAR AND SECURE ANCHOR BOLTS TO BARREL FLANGE USING TWO NUTS.
 - POUR CONCRETE SLAB AND PADS.



CONSTRUCTION JOINTS DETAILS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			

DESIGNED BY: DHP
 DRAWN BY: MLJ
 CHECKED BY: DHD



MUSCOY OU REMEDIAL DESIGN
 19th STREET PLANT & ENCANTO PARK PUMPING PLANT
 NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

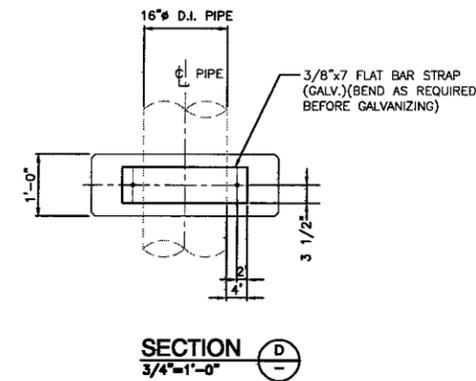
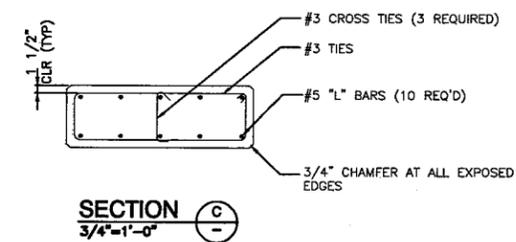
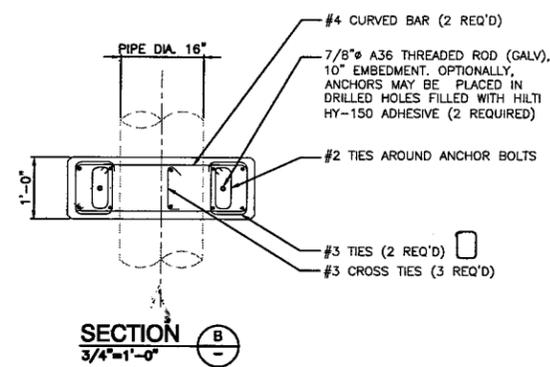
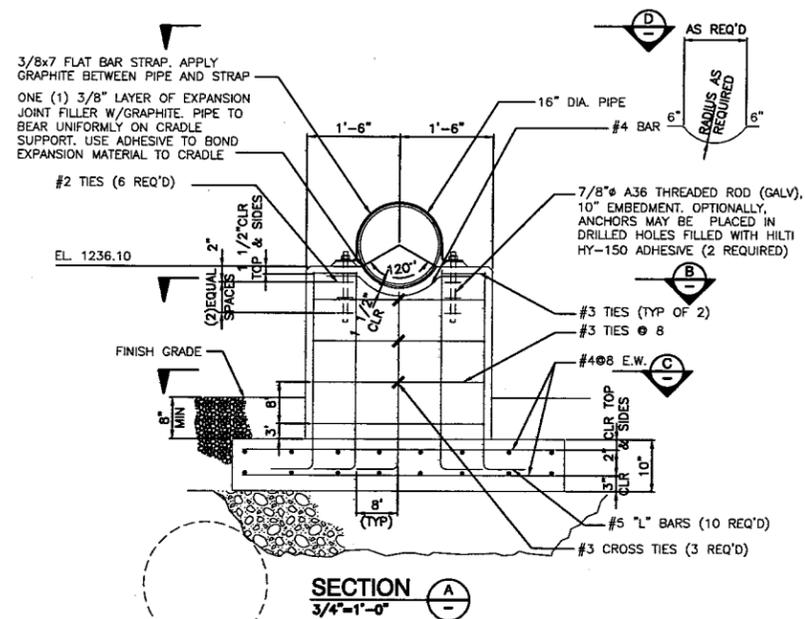
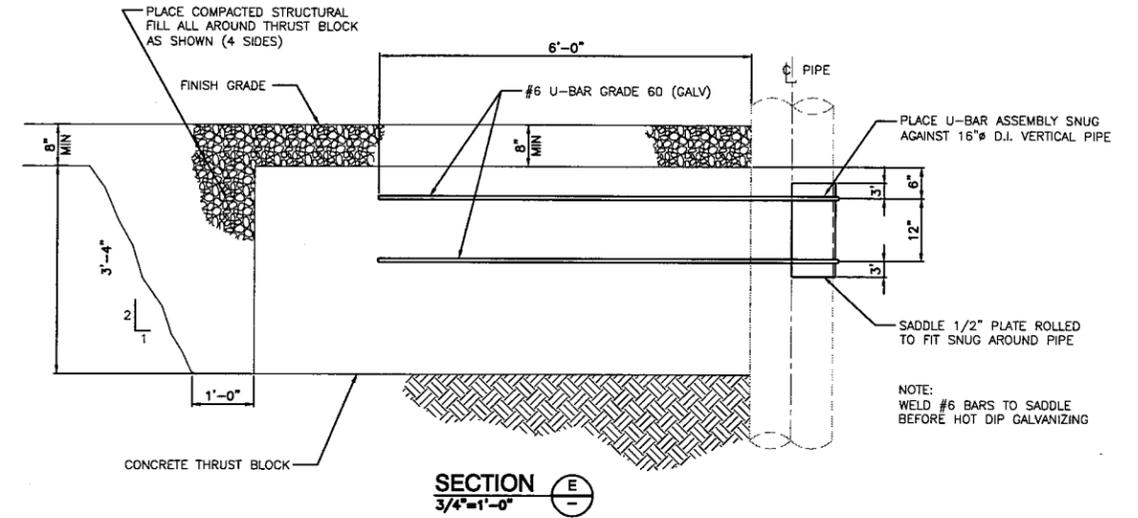
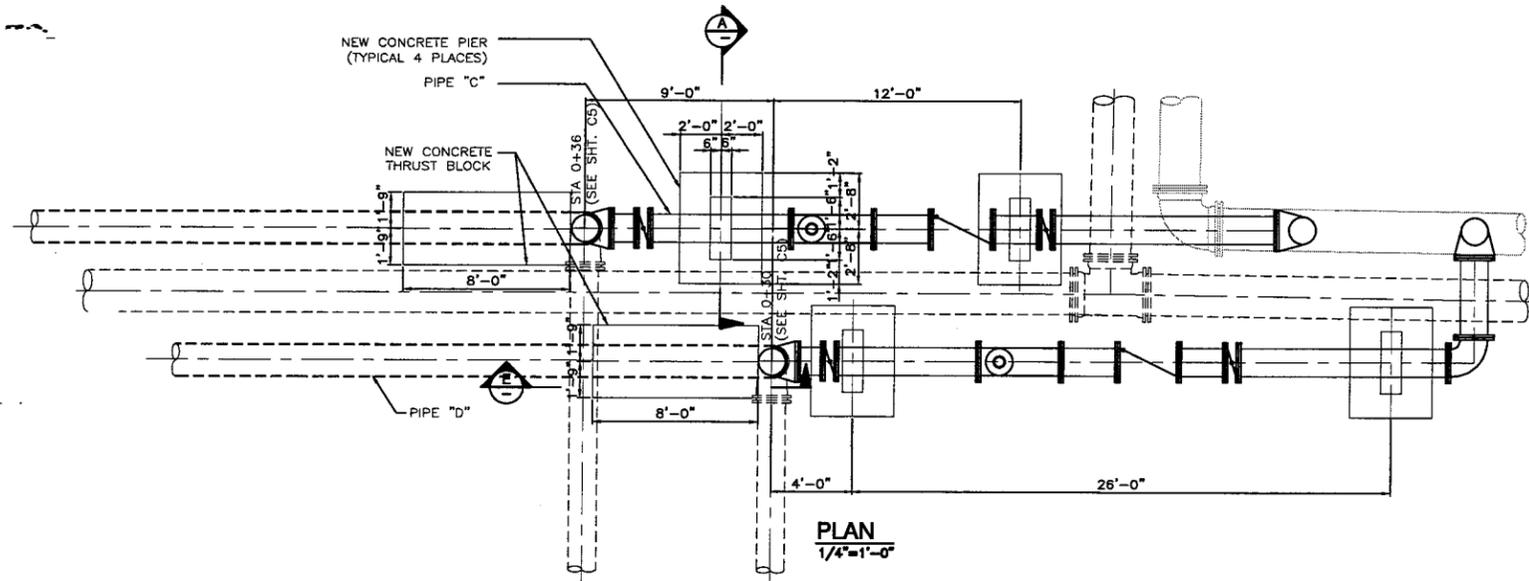
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RECORD DRAWINGS

ENCANTO PARK BOOSTER PUMP STATION SECTIONS AND DETAILS

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AS SHOWN	8/14/03	SS.DWG	S5

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RECORD
DRAWINGS

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1	11/05	RECORD REVISION			

DESIGNED BY: DHP
DRAWN BY: MLJ
CHECKED BY: DHD



MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19th STREET PLANT
PLAN, SECTIONS AND DETAILS

SCALE AS NOTED	DATE 8/14/03	DWG. FILE S6.DWG	SHEET NO. S6
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