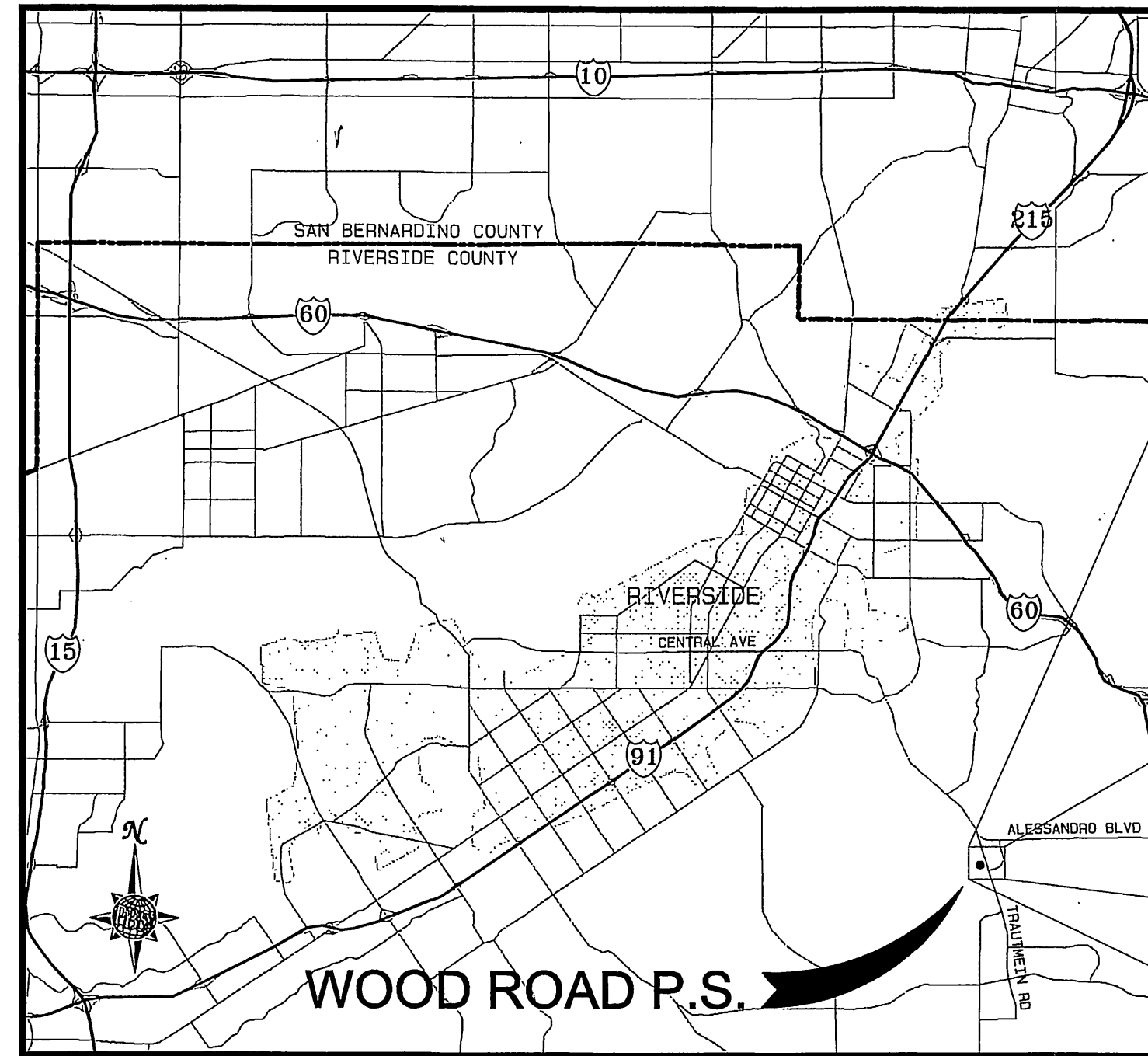
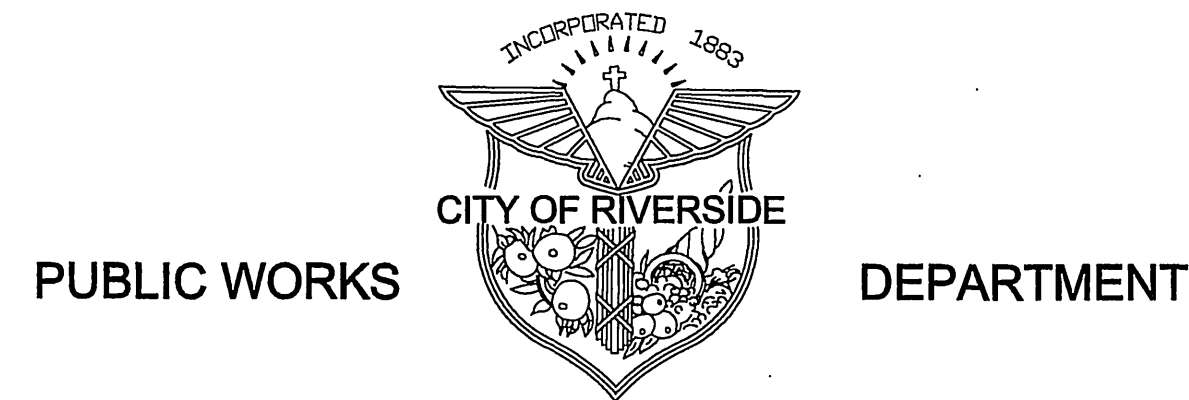
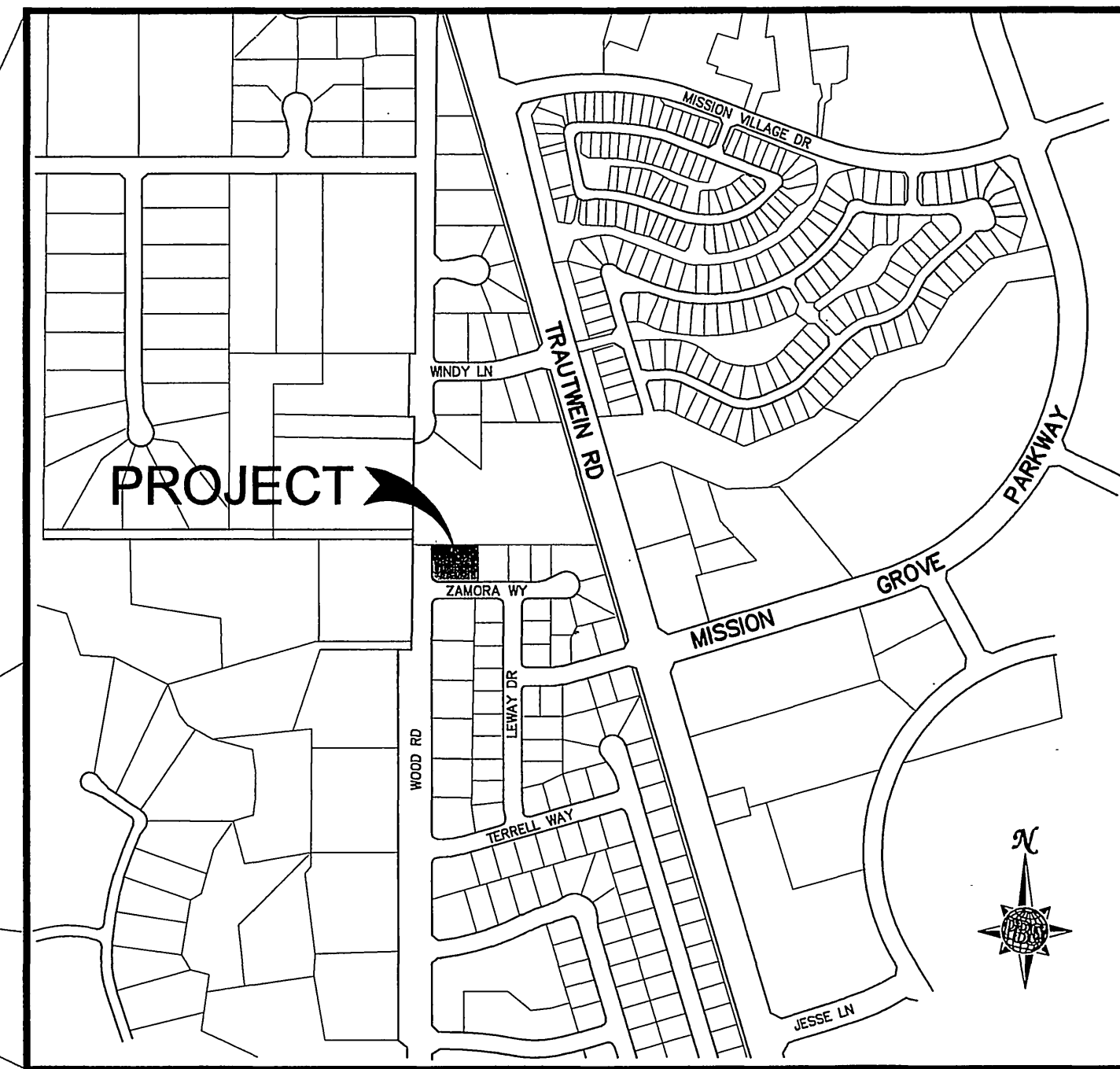


CITY OF RIVERSIDE

WOOD ROAD SEWAGE PUMP STATION UPGRADE



VICINITY MAP
NOT TO SCALE



SITE MAP
NOT TO SCALE

LIST OF DRAWINGS ▲

SHEET	DWG NO.	TITLE
GENERAL		
1	T-1	TITLE SHEET
2	G-1	GENERAL NOTES
CIVIL		
3	C-1	SITE IMPROVEMENT PLAN
4	C-2	YARD PIPING PLAN AND HORIZONTAL CONTROL
5	C-3	SECTIONS - 1
6	C-4	SECTIONS - 2
7	C-5	CIVIL DETAILS - 1
MECHANICAL		
8	M-1	PUMP STATION - MECHANICAL DEMOLITION PLAN
9	M-2	PUMP STATION - PLAN
10	M-3	PUMP STATION - SECTIONS
ELECTRICAL		
11	E-1	ELECTRICAL ABBREVIATIONS, SYMBOLS & GENERAL NOTES
12	E-2	SINGLE LINE DIAGRAM
13	E-3	MCC LAY-OUT & PANEL SCHEDULE
14	E-4	ELECTRICAL OVERALL PLAN & GENERAL NOTES
15	E-5	ELECTRICAL DEMOLITION PLAN
16	E-6	ELECTRICAL PLAN
17	E-7	ELECTRICAL SECTIONS & DETAILS & GENERAL NOTES
18	E-8	CONDUIT & CABLE SCHEDULE
19	E-9	TYPICAL PUMP SCHEMATIC
20	E-10	PLC I/O WIRING DIAGRAM
21	E-11	PLC I/O WIRING DIAGRAM
22	E-12	PLC I/O WIRING DIAGRAM

LIST OF DRAWINGS

SHEET	DWG NO.	TITLE
INSTRUMENTATION		
23	I-1	INSTRUMENTATION PLAN
STRUCTURAL		
24	S-1	TYPICAL STRUCTURAL NOTES
25	S-2	STRUCTURAL PLAN
26	S-3	STRUCTURAL DETAILS
AS-BUILT DRAWINGS		
27	AB-1	MECHANICAL PLAN - AS BUILT
28	AB-2	STRUCTURAL PLAN - AS BUILT

Y:\990093_Riverside Wood Road PS\DRAWINGS\990093\Sub\CD\CD\CS\580093_T-1.dwg Feb. 03, 2006 - 12:09pm



Engineering Planning Surveying Construction Services
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3610 Central Avenue Suite 500
Riverside, CA 92506
Tel: (909) 341-6380 Fax: (909) 341-6389

PLANS PREPARED UNDER SUPERVISION OF

Erik T. Howard
ERIK T. HOWARD DATE 12-FEB-07
R.P.E. No. C53318 Exp 6-30-07



MARK	REVISIONS	APPR.	DATE
	MISCELLANEOUS CHANGES TO SHTS	ETH	2/24/07

DESIGNED BY ETH DRAWN BY KO, CD CHECKED BY MLT

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY
Principal Engineer	<i>[Signature]</i>	2/24/07	City Engineer
INSPECTION SECTION SURVEYOR			

DATE 2/16/06

WOOD ROAD SEWAGE PUMP STATION

TITLE SHEET

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN FILE NO.

S-1944

ACCT. NO. XX

T-1
SHEET 1 OF 28

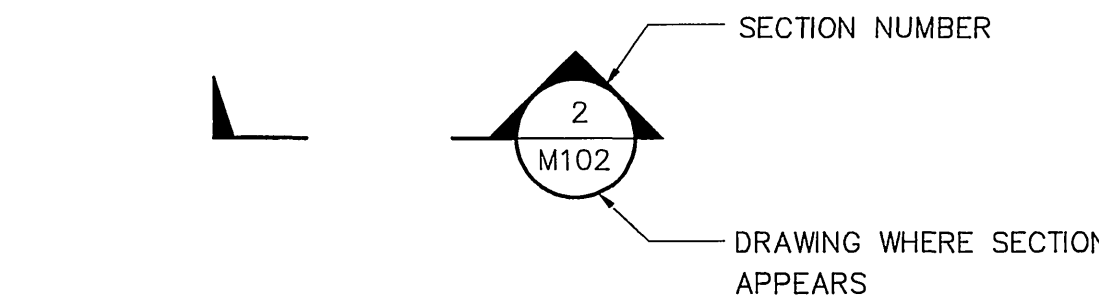
INDEXED 4-24-06 LFK

GENERAL NOTES

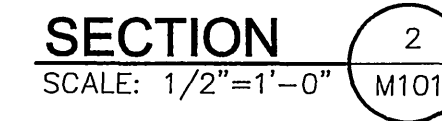
- EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE LICENSED AS AN A-1 GENERAL ENGINEERING CONTRACTOR AT THE TIME OF THE BID AWARD AND CONTRACT EXECUTION.
- CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING UTILITIES AND PIPING.
- ALL PIPE LENGTHS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
- ALL NEW MAIN LOOP AND LATERAL POSITIONING AND ROUTING SHOWN ON THESE PLANS ARE ESTIMATED BASED ON AVAILABLE DATA. ACTUAL POSITIONING AND ROUTING WILL BE DETERMINED BASED ON FIELD CONDITIONS AND CONFLICTS WITH EXISTING PIPING AND STRUCTURES.
- ALL CONNECTIONS OF NEW PIPING TO EXISTING PIPING ARE BASED ON AVAILABLE DATA AND WILL REQUIRE FIELD VERIFICATION.
- FITTING REQUIREMENTS FOR ALL LATERAL PIPING ARE AS NEEDED AT INSTALLATION.

DRAWING AND PROCESS AREA DESIGNATION SYSTEMS

- DRAWINGS ARE SUBDIVIDED BY DISCIPLINE AS FOLLOWS:
 G GENERAL
 C CIVIL
 S STRUCTURAL
 M MECHANICAL
 E/I ELECTRICAL / INSTRUMENTATION



(2) ON DWG M2 THIS SECTION IS IDENTIFIED AS:



(3) DETAILS ARE CROSS REFERENCED IN A SIMILAR MANNER, EXCEPT THAT DETAILS ARE IDENTIFIED BY LETTER RATHER THAN NUMBER

LEGEND

- NEW FACILITIES (SOLID)
- EXISTING (SCREENED)
- CENTERLINE
- WATER SURFACE
- EXISTING PIPE
- PROPOSED PIPING
- NATURAL GROUND OR GRADE
- GRANULAR MATERIAL SUCH AS CRUSHED ROCK OR GRAVEL
- AC PAVEMENT IN SECTION
- CONCRETE MASONRY UNITS (CMU) IN SECTION
- CONCRETE
- DEMOLISH
- POINT OF CONNECTION

ABBREVIATIONS

A AIR	DSTR DISTRIBUTION STRUCTURE	HR HANDRAIL/HOT RETURN/HOT WATER RETURN	OPNG OPENING	SS SANITARY SEWER
AB ANCHOR BOLT	DVG DIVERTER GATE	HS HOT SUPPLY/HOT WATER SUPPLY	P PRESSURE	SSC SECONDARY SCUM
ABAN ABANDONED	DWG DRAWING	HT HEIGHT	PE PRIMARY EFFLUENT PENETRATION	SST STAINLESS STEEL
AC ASPHALT CONCRETE	E EAST	HW HOT WATER	PIP PROTECT IN PLACE	SSPWC STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
ACA INSTRUMENT AIR COMPRESSOR	EA EACH	IA INSTRUMENT AIR	PI P	STA STATION
AIR AIR	EC ELECTRICAL CONDUIT	ID INSIDE DIAMETER	PI PRIMARY INFLUENT	STD STANDARD/STORM WATER
ALUM ALUMINUM	EES EMERGENCY EYEWASH/SHOWER	IE INVERT ELEVATION	PI POLYMER	STEAM STEAM
ANSI AMERICAN NATIONAL STANDARDS INSTITUTE	EF EACH FACE	IN INCH/INCHES	PLI PRIMARY INFLUENT	STR STRUCTURE
APPROX APPROXIMATE	EL ELEVATION, ELBOW	INSUL INSULATION	POL POLYMER	T ---
ARCH ARCHITECTURAL	ELECT ELECTRICAL DUCT	INV INVERT	PS PRIMARY SCUM	TD TANK DRAIN
ASSY ASSEMBLY	EO EFFLUENT OVERFLOW/EMERGENCY OUTFALL	IRG IRRIGATION	PS PRIMARY SLUDGE	TFE TRICKLING FILTER EFFLUENT
AWWA AMERICAN WATER WORKS ASSOCIATION	EQUIP EQUIPMENT	JBOX JUNCTION BOX	PS POLYMER SOLUTION	TFR ---
BF BLIND FLANGE	EQ EQUAL	JT JOINT	PSC PRIMARY SCUM	THS THICKENED SLUDGE
BLDG BUILDING	ES EFFLUENT SAMPLE LINE	JUNCT JUNCTION	PSL POLYMER SOLUTION	TO THICKENER OVERFLOW
BLR BLOWER	EW EACH WAY	LA LIQUID ALUM	PSTA PUMP STATION	TOC TOP OF CONCRETE OR CURB
BM BEAM/BENCH MARK	EXIST EXISTING	LF LINEAR FOOT	PT PRESSURE TREATED	TOG TOP OF GRADE
BP BY-PASS	EXP EXPOSED OR EXPANSION	LFG LAND FILL GAS	PW PUDDLE WELD/PLANT WATER/POTABLE WATER	TOS TOP OF SLAB
BW BACK WASH	EXT EXTERIOR	LLV LONG LEG VERTICAL	Q FLOW	TOW TOP OF WALL
C CENTERLINE	FA FOUL AIR	M MOTOR	RAD RADIUS	TS TOP OF STEEL
CD CHEMICAL DRAIN/VENT	FAB FABRICATE	MB MACHINE BOLT	RAS RETURN ACTIVATED SLUDGE	TYP TYPICAL
CE CHLORINATED EFFLUENT	FCV FLOW CONTROL VALVE	MAX MAXIMUM	RC ---	UNK UNKNOWN (CONTENT OR DIAMETER)
CEN CENTRATE	FD FLOOR DRAIN	MFR MANUFACTURER	RED REDUCER	UNO UNLESS NOTED OTHERWISE
CFM CUBIC FEET PER MINUTE	FE FLOW ELEMENT	MECH MECHANICAL	REINF REINFORCEMENT	V VENT
CG CHLORINE GAS	FF FINISHED FLOOR	MGD MILLION GALLONS PER DAY	REQ'D REQUIRED	VA VACUUM/AIR
C,G&S/W CURB, GUTTER AND SIDEWALK	FI FINAL INFLUENT	MIH MANHOLE	RS RAW SEWAGE	VAR VARIABLE
CKR CHECKER	FIN FINISH	MIN MINIMUM	RW RAW WATER/RAW WASTE	VCD VOLUME CONTROL DAMPER
CLF CHAIN LINK FENCE	FL FLOWLINE	MME MIXED LIQUOR	S SLOPE/SOUTH/SEWER/SAMPLE/SCUM	VFD VARIABLE FREQUENCY DRIVE
CLS CHLORINE SOLUTION	FLT FILTER	MME MISCELLANEOUS MECHANICAL EQUIPMENT	SC SCUM	W WEST/WATER
CMU CONCRETE MASONRY UNIT	FRP FIBERGLASS REINFORCED PLASTIC	MO MINIMUM OPENING/MODULAR OPENING	SCH SCHEDULE	W/ WITH
CON CONVEYOR	FS FINISHED SURFACE	MT MAKE-UP WATER	SCR SCREEN	WAS WASTE ACTIVATED SLUDGE
CONC CONCRETE	FT FOOT OR FEET	N NORTH	SD STORM WATER	WBW WASTE BACKWASH WATER
CS CHLORINE SOLUTION	FTG FOOTING	NG NATURAL GAS	SDR STORM WATER	WHR WASHER
CTF CENTRIFUGE	FW FILTERED WATER	NIC NOT IN CONTRACT	SE SECONDARY EFFLUENT	WM WATER METER
CW CITY WATER	G NATURAL GAS	NO NUMBER	SECT SECTION	WMWD WESTERN MUNICIPAL WATER DISTRICT
CWR COOLING WATER RETURN	GA GAUGE	O OVERFLOW	SEP SEPARATOR	WPJ WORK POINT JOINT
CWS COOLING WATER SUPPLY	GALV GALVANIZED	OC ON CENTER	SEWER SEWAGE	WW WASTE WATER
D DRAIN	GSP GRIT SLURRY	OD OUTSIDE DIAMETER	SIM SIMILAR	
DBOX DISTRIBUTION BOX	GALV GALVANIZED STEEL PIPE	OF OUTFALL	SLG SLIDE GATE	
DC DECAT	HDPE HIGH DENSITY POLYETHYLENE	OH OVER HEAD	SN SUPERNATANT	
DET DETAIL	HM HOLLOW METAL		SPECS SPECIFICATIONS	
DG DIGESTER GAS	HP HORSEPOWER		SQ SQUARE	
DIA DIAMETER				
DIP DUCTILE IRON PIPE				
DIST DISTRIBUTION				
DS DIGESTED SLUDGE				

S-1944

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PBSJ
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PLANS PREPARED UNDER SUPERVISION OF

 ERIC T. HOWARD DATE 6 FEB 06
 R.P.E. No. C53318 Exp 6-30-07

MARK	REVISIONS	DATE	APPR.	DATE	
DESIGNED BY	ETH	DRAWN BY	KO, CD	CHECKED BY	MLT

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY	BY	DATE
PRINCIPAL ENGINEER			CITY ENGINEER		
INSPECTION SECTION SURVEYOR					
DATE	2/6/06				

WOOD ROAD SEWAGE PUMP STATION
GENERAL NOTES
 HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

ACCT. NO. XX
G-1
 SHEET 2 OF 28
 FILE NO.

CONSTRUCTION NOTES

- 1C CONSTRUCT 285± LF 7' HIGH 8"x8"x16" BLOCK WALL (TAN, S/F-1S) PER APWA STANDARD PLAN 601-1 (TYP 2); LL=20 PSF. PROVIDE PRECISION CAP TO MATCH EXISTING.
- 2C CONSTRUCT 7'-8" HIGH 16" SQ. PILASTER (TAN, S/F) AT SHOWN LOCATIONS. FOOTING SHALL BE 36" SQ. X 12" TH WITH 4-#4 BARS SIMILAR TO TYPE 2 WALL "C" BARS.
- 3C CONSTRUCT 20' WIDE (2-10' SECTIONS) TUBULAR STEEL SWING GATE PER SPECIFICATIONS.
- 4C CONSTRUCT VARYING HEIGHT (5' MIN TO 7' MAX) 6"x8"x16" INTERLOCKING BLOCK WALL (TAN, S/F-1S) AND PRECISION CAP TO MATCH EXISTING. CONSTRUCT FOOTING AND REINFORCING PER APWA STANDARD PLAN 601-1 (TYP 1); LL=20 PSF. STEP 1 BLOCK (V) EVERY 4' (H).
- 5C FURNISH AND INSTALL 6" SHEAR GATE (WATERMAN INDUSTRIES C-16 OR EQUAL) INCLUDING 18" LIFT ROD, HANGING LATCH, AND DI WALL THIMBLE. BOLT CASE DIRECTLY TO INSIDE WALL FACE AND USE POLYURETHANE SEALANT.
- 6C CONSTRUCT 8" WIDE CROSS GUTTER PER CITY STANDARD DWG NO. 220.
- 7C GRADE AND RECONSTRUCT 2588SF± DRIVEWAY WITH 3" AC (¾" MAX-MED, AR-4000) OVER 6" CRUSHED AGGREGATE.
- 8C CONSTRUCT 29± LF 6" HIGH CLF W/ 3 STRANDS BARBED WIRE INCLUDING 42" WIDE PEDESTRIAN ACCESS GATE (LOCATION AS DIRECTED BY CITY).
- 9C REMOVE AND RECONSTRUCT AC PAVEMENT ASSOCIATED WITH WALL AND PILASTER CONSTRUCTION PER NOTE "7C" HEREON.

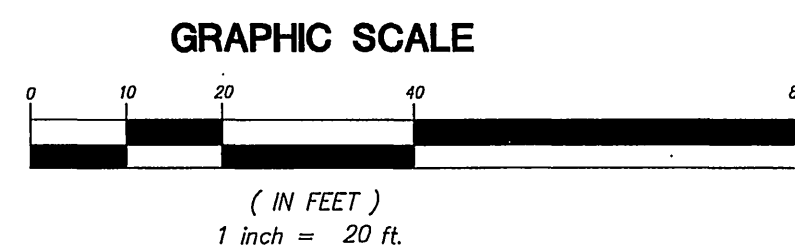
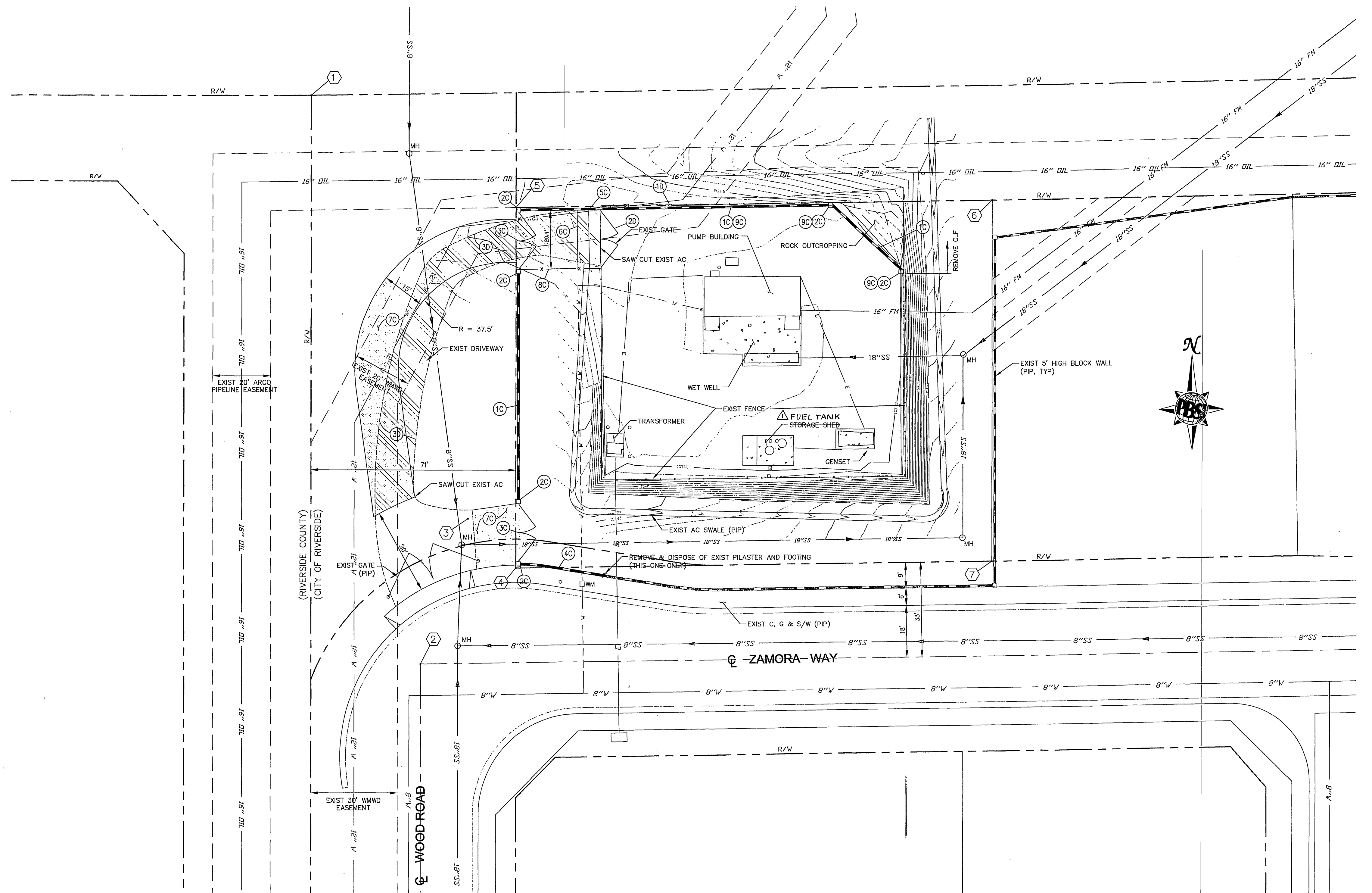
DEMOLITION NOTES

- 1D REMOVE AND DISPOSE OF 130± LF EXISTING CHAIN LINK FENCE (INCLUDING BARBED AND RAZOR WIRE).
- 2D REMOVE AND DISPOSE OF EXISTING 20' WIDE ACCESS GATE.
- 3D SAW CUT, REMOVE AND DISPOSE OF EXISTING AC DRIVEWAY. (3" AC OVER 6" CL II BASE).

COORDINATE DATA

POINT #	NORTHING	EASTING	DESCRIPTION
1	5259.4810	5139.2305	1 1/4" I.P. (S17 W¼ COR)
2	5061.9437	5177.0995	SPIKE & WASHER (CL WOOD RD/ZAMORA WAY)
3	5112.3683	5193.4564	SET NAIL
4	5095.4174	5210.1238	*SW PROP. CNR
5	5220.4314	5210.2144	*NW PROP. CNR
6	5222.7814	5375.2162	*NE PROP. CNR
7	5097.7674	5375.1255	*SE PROP. CNR

* PER RECORD



X:\590003 Riverside Wood Road PS\DRAWINGS\90Percent\Sub\CD0055_590003_C-1.dwg Feb 03, 2006 - 11:46am



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 Riverside, CA 92506
 Tel:(909) 341-6390
 Fax:(909) 341-6389

PLANS PREPARED UNDER SUPERVISION OF
 ERIC T. HOWARD
 R.P.E. No. C53318
 DATE
 Exp 6-30-07



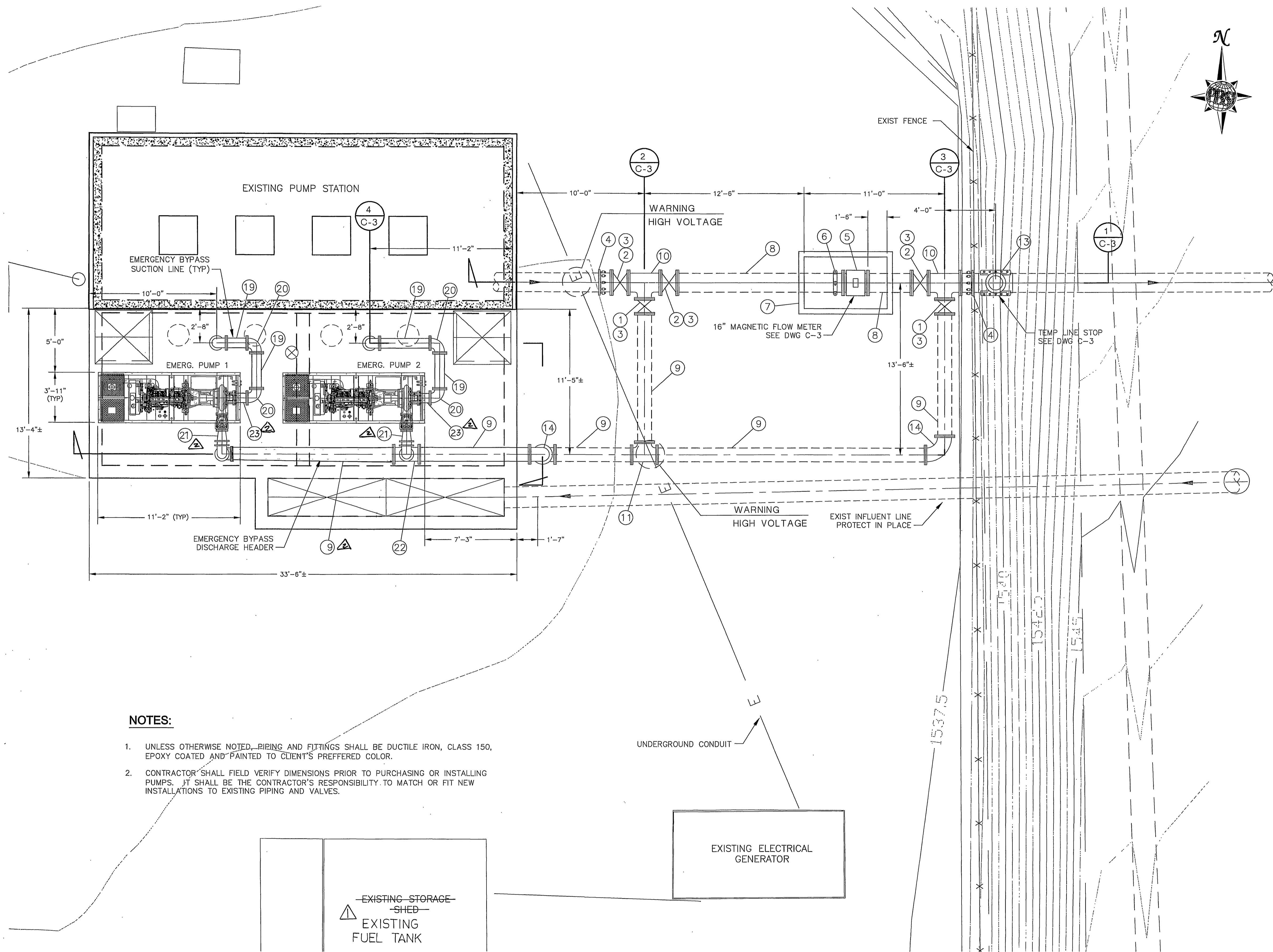
CHANGE EXISTING STRUCTURE LABEL ETH 3/21/04
 DESIGNED BY ETH DRAWN BY KO, CD CHECKED BY MLT

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 APPROVED BY: [Signature]
 BY DATE: [Signature]
 SURVEYOR: [Signature]
 DATE: 2/6/06

WOOD ROAD SEWAGE PUMP STATION
 SITE IMPROVEMENT PLAN
 HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
 ACCT. NO. XX
 C-1
 SHEET 3 OF 28
 FILE NO.

INDEXED 4-24-06 FH



- CONSTRUCTION NOTES:**
- ① 12" RESILIENT WEDGE GATE.
 - ② 16" RESILIENT WEDGE GATE.
 - ③ 24" SQ. X 24" DEEP UTILITY BOX W/ TRAFFIC RATED SOLID COVER. CUT ROUND OPENING (CENTERED OVER VALVE NUT) TO RECEIVE 8" VALVE CAP PER CITY STANDARD CWD-515.
 - ④ 16" FLANGED COUPLING ADAPTER WITH RESTRAINING LUGS; SMITH-BLAIR STYLE 913 OR EQUAL.
 - ⑤ 16" FLANGED MAGNETIC FLOW METER PER SPECIFICATIONS, SPARLING MODEL 655 OR EQUAL. INSTALL CONDUIT AND CONTROLS PER ELECTRICAL DRAWINGS.
 - ⑥ 16" FLANGED X VICTAULIC CUT-GROOVED SPOOL AND COUPLING (STYLE 31).
 - ⑦ 6.5' X 4' (MIN. SIZE) PRECAST CONCRETE TRAFFIC VAULT AND COVER (H-20 LOADING); JENSEN PRECAST OR CITY APPROVED EQUAL.
 - ⑧ 16" FLANGED DI CL-150 PIPING SPOOL.
 - ⑨ 12" FLANGED DI CL-150 PIPING SPOOL.
 - ⑩ 16" X 12" FLANGED DI TEE.
 - ⑪ 12" FLANGED DI TEE.
 - ⑬ LINE STOP AS REQUIRED TO PERFORM SPECIFIED WORK.
 - ⑭ 12" FLANGED 90° DI ELBOW.
 - ⑰ 8" FLANGED DI CL-150 PIPING SPOOL.
 - ⑱ 8" FLANGED DI 90° ELBOW.
 - ⑳ 12" X 8" FLANGED DI CONCENTRIC REDUCER
 - ㉑ 12" X 8" FLANGED DI TEE.
 - ㉒ 8" X 10" FLANGED DI CONCENTRIC REDUCER.

- NOTES:**
1. UNLESS OTHERWISE NOTED, PIPING AND FITTINGS SHALL BE DUCTILE IRON, CLASS 150, EPOXY COATED AND PAINTED TO CLIENT'S PREFERRED COLOR.
 2. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO PURCHASING OR INSTALLING PUMPS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MATCH OR FIT NEW INSTALLATIONS TO EXISTING PIPING AND VALVES.

EXISTING STORAGE SHED
EXISTING FUEL TANK

EXISTING ELECTRICAL GENERATOR

S-1944
ACCT. NO. XX
C-2
SHEET 4 OF 28
FILE NO.

X:\S90093 Riverside Wood Road FS\DRAWINGS\SP\PercentS&A\CDCS\S90093_C-2.dwg Feb 03, 2006 - 11:46am

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PLANS PREPARED UNDER SUPERVISION OF
Erik T. Howard
ERIK T. HOWARD DATE 6-FEB-07
R.P.E. No. C53318 Exp 6-30-07

CHANGE EXISTING STRUCTURE LABEL
REDESIGNED HEADER
ETH 3/21/06
ETH 3/23/06

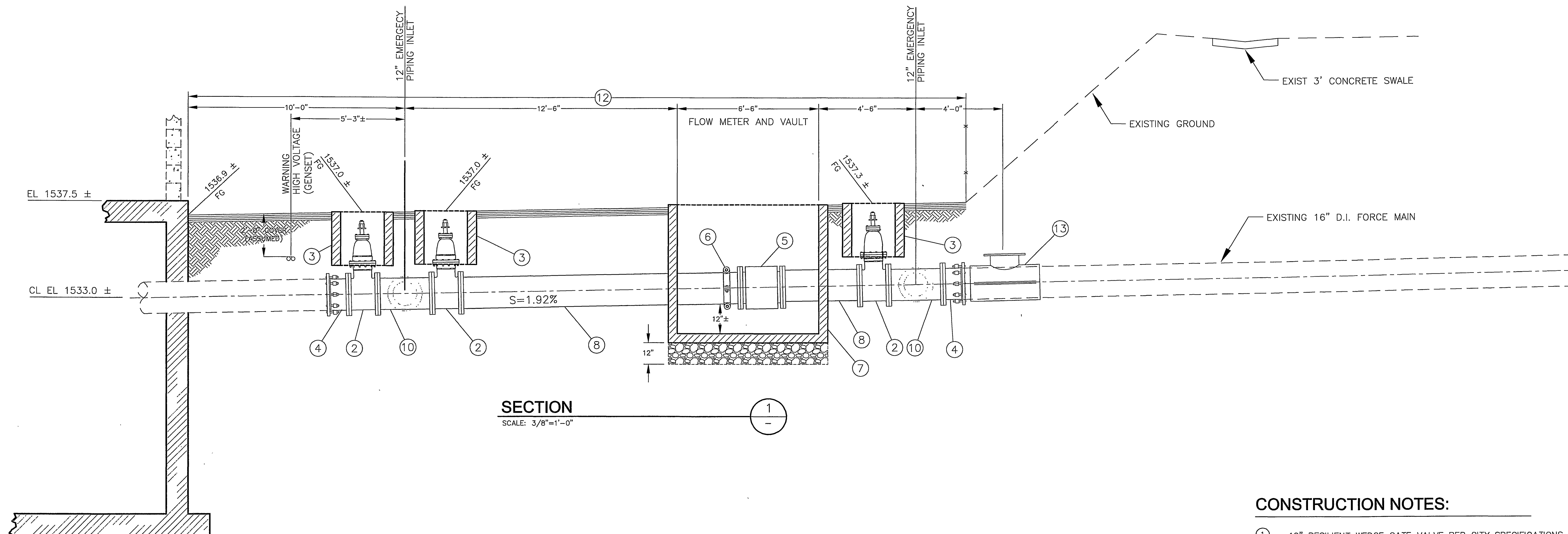
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PUBLIC WORKS DEPARTMENT

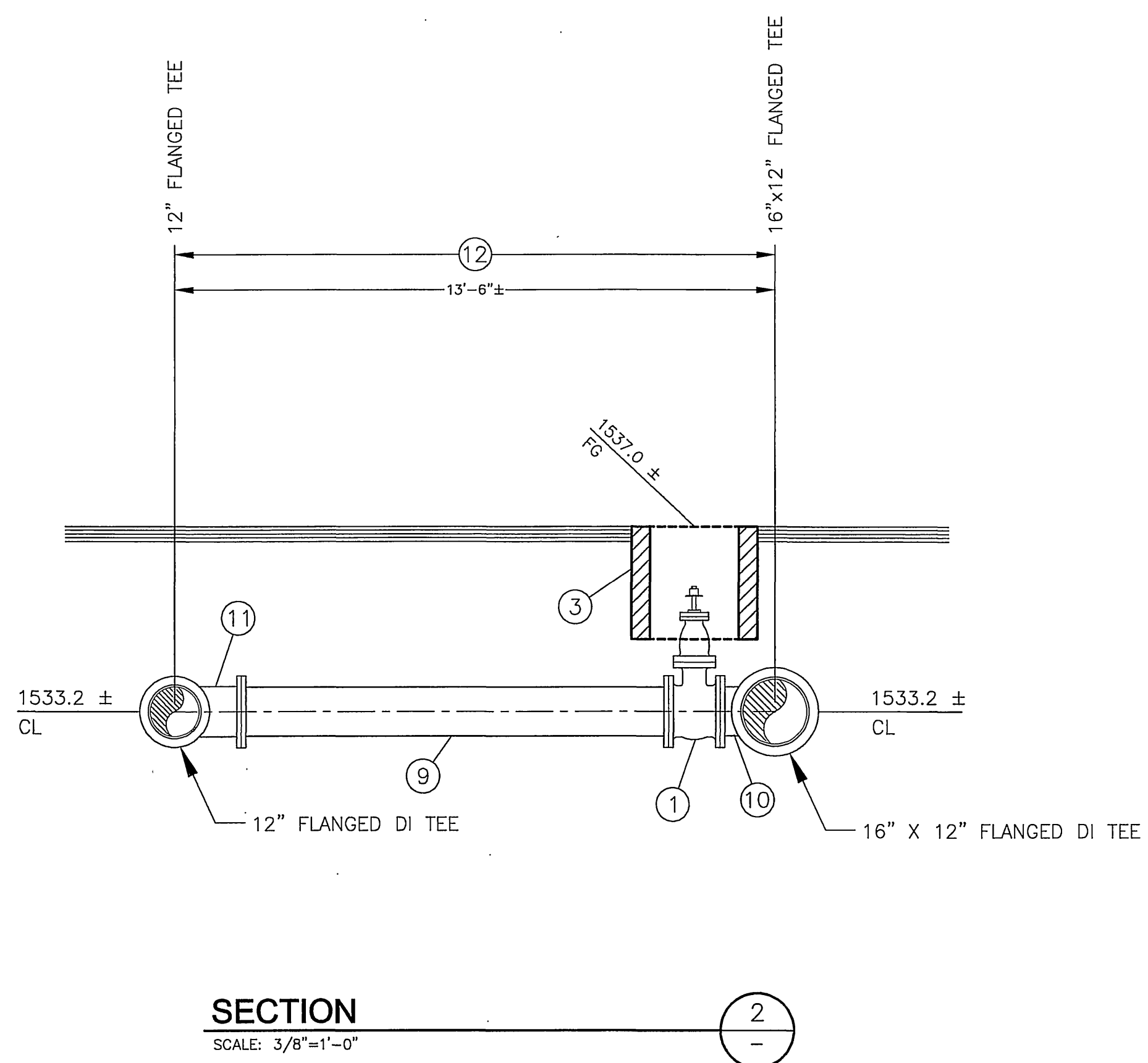
APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER	<i>[Signature]</i>		<i>[Signature]</i>
INSPECTION SECTION			CITY ENGINEER
SURVEYOR			DATE 2/6/06

WOOD ROAD SEWAGE PUMP STATION
YARD PIPING PLAN
AND HORIZONTAL CONTROL
HORIZ. SCALE: 1/4" = 1'
VERT. SCALE: AS SHOWN

INDEXED 4-24-06 LPH



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



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

CONSTRUCTION NOTES:

- ① 12" RESILIENT WEDGE GATE VALVE PER CITY SPECIFICATIONS.
- ② 16" RESILIENT WEDGE GATE VALVE PER CITY SPECIFICATIONS.
- ③ 24" SQ. X 24" DEEP UTILITY BOX W/ TRAFFIC RATED SOLID COVER. CUT ROUND OPENING (CENTERED OVER VALVE NUT) TO RECEIVE 8" VALVE CAP PER CITY STANDARD CWD-515.
- ④ 16" FLANGED COUPLING ADAPTER WITH RESTRAINING LUGS; SMITH-BLAIR STYLE 913 OR EQUAL.
- ⑤ 16" FLANGED MAGNETIC FLOW METER PER SPECIFICATIONS; SPARLING MODEL 655 OR EQUAL. INSTALL CONDUIT AND CONTROLS PER ELECTRICAL DRAWINGS.
- ⑥ 16" FLANGED X VICTAULIC CUT-GROOVED SPOOL AND COUPLING (STYLE 31).
- ⑦ 6.5' X 4' (MIN. SIZE) PRECAST CONCRETE TRAFFIC VAULT AND COVER (H-20 LOADING); JENSEN PRECAST OR CITY APPROVED EQUAL.
- ⑧ 16" FLANGED DI CL-150 PIPING SPOOL.
- ⑨ 12" FLANGED DI CL-150 PIPING SPOOL.
- ⑩ 16" X 12" FLANGED DI TEE.
- ⑪ 12" FLANGED DI TEE.
- ⑫ REMOVE AND RECONSTRUCT AC PAVEMENT PER PAVEMENT SECTION AS SHOWN BY NOTE "7C", SHEET C-1.
- ⑬ LINE STOP AS REQUIRED TO PERFORM SPECIFIED WORK.

S-1944



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PLANS PREPARED UNDER SUPERVISION OF

Erik T. Howard
ERIK T. HOWARD DATE 6-FEB-07
R.P.E. No. C53318 Exp 6-30-07



MARK	REVISIONS	APPR.	DATE

DESIGNED BY ETH DRAWN BY KO, CD CHECKED BY MLT

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature] DATE: 2/16/07
PRINCIPAL ENGINEER
INSPECTION SECTION SURVEYOR
CITY ENGINEER

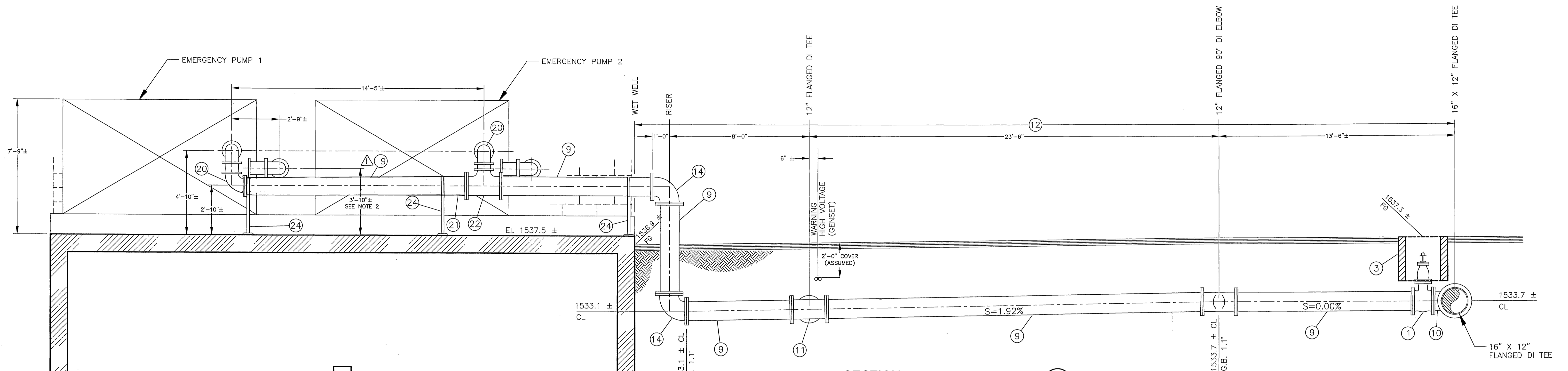
WOOD ROAD SEWAGE PUMP STATION

SECTIONS - 1

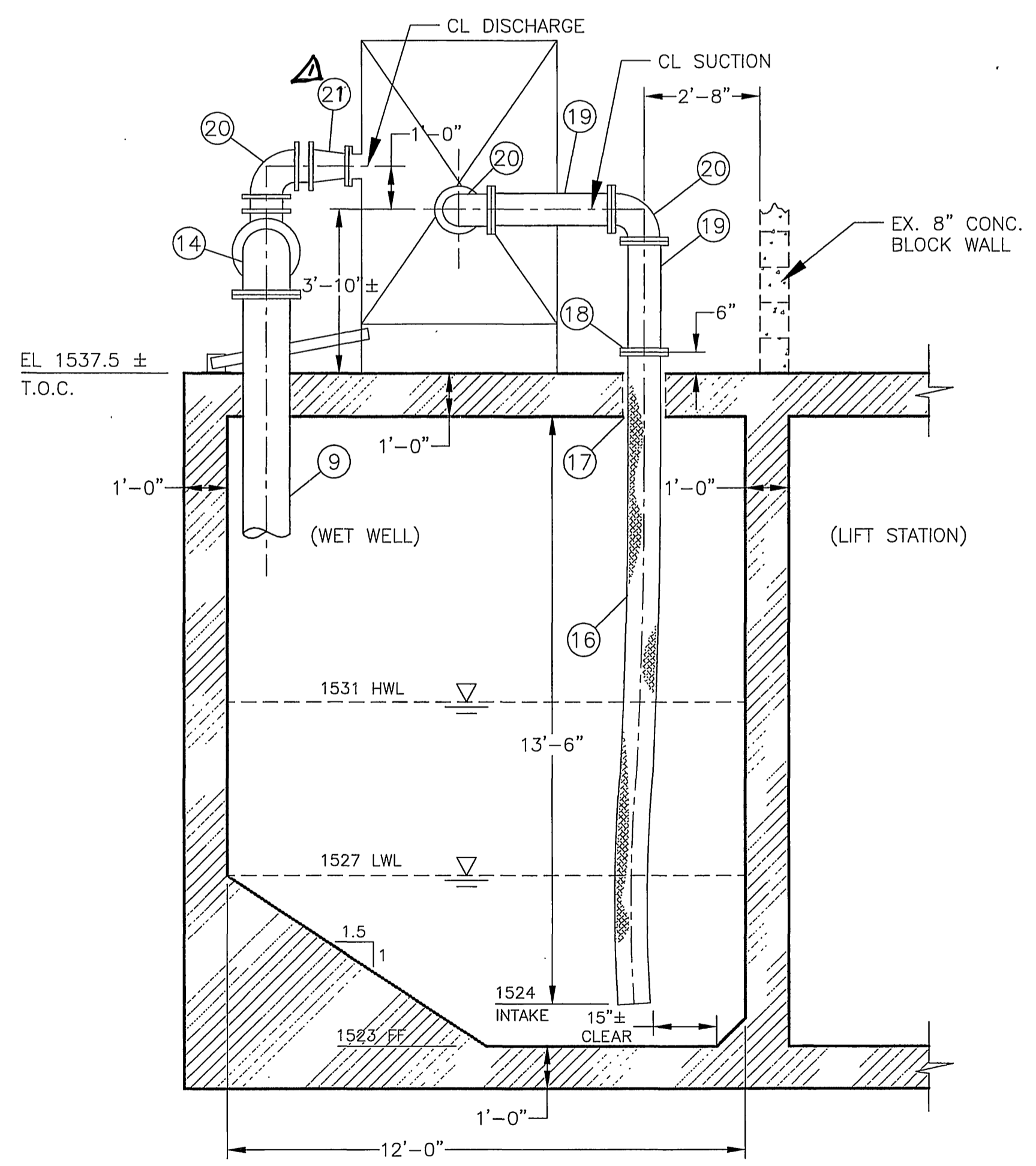
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

ACCT. NO. XX
C-3
SHEET 5 OF 28
FILE NO.

INDEXED 4-24-06 4H



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



SECTION 4 (TYP. OF 2)
SCALE: 3/8"=1'-0"

- CONSTRUCTION NOTES:**
- ① 12" RESILIENT WEDGE GATE VALVE PER CITY SPECIFICATIONS.
 - ③ 24" SQ. X 24" DEEP UTILITY BOX W/ TRAFFIC RATED SOLID COVER. CUT ROUND OPENING (CENTERED OVER VALVE NUT) TO RECEIVE 8" VALVE CAP PER CITY STANDARD CWD-515.
 - ⑨ 12" FLANGED DI CL-150 PIPING SPOOL.
 - ⑩ 16" X 12" FLANGED DI TEE.
 - ⑪ 12" FLANGED DI TEE.
 - ⑫ REMOVE AND RECONSTRUCT AC PAVEMENT PER PAVEMENT SECTION AS SHOWN BY NOTE "7C", SHEET C-1.
 - ⑭ 12" FLANGED 90° DI ELBOW.
 - ⑯ 8" FLEXIBLE RUBBER VACUUM HOSE; OTTER WATER SUCTION, TEX-AQUA HD SUCTION, OR EQUAL.
 - ⑰ CORE HOLE IN SLAB AND SECURE SUCTION HOSE WITH MODEL "S-316" LINK-SEAL (EPDM; LOW-DUROMETER). SIZE AS REQUIRED.
 - ⑱ 8" FLANGED X HOSE-BARB FITTING; SECURE WITH SS STRAPS.
 - ⑲ 8" FLANGED DI CL-150 PIPING SPOOL.
 - ⑳ 8" FLANGED DI 90° ELBOW.
 - ㉑ 12" X 8" FLANGED DI CONCENTRIC REDUCER
 - ㉒ 12" X 8" FLANGED DI TEE.
 - ㉓ 8" X 6" FLANGED DI CONCENTRIC REDUCER.
 - ㉔ ADJUSTABLE PIPE SUPPORT WITH U-BOLT, TOLCO FIGURE 313 OR EQUAL.

- NOTES:**
- 1. UNLESS OTHERWISE NOTED, PIPING AND FITTINGS SHALL BE DUCTILE IRON, CLASS 150, EPOXY COATED AND PAINTED TO CLIENT'S PREFERRED COLOR.
 - 2. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO PURCHASING OR INSTALLING PUMPS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MATCH OR FIT NEW INSTALLATIONS TO EXISTING PIPING AND VALVES.

X:\550003 Riverside Wood Road PS\DRAWINGS\90Percent\Sub\CD005\58003 C-4.dwg Feb 03, 2006 - 11:47am

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PLANS PREPARED UNDER SUPERVISION OF
Erik T. Howard
ERIK T. HOWARD DATE 6-FEB-06
R.P.E. No. C53318 Exp 6-30-07



REDESIGN HEADER PIPING		ETH 9/23/06
APPROVED BY	BY	DATE
PRINCIPAL ENGINEER	<i>[Signature]</i>	2/8/06
INSPECTION SECTION		
SURVEYOR		
MARK	REVISIONS	APPR. DATE
DESIGNED BY ETH	DRAWN BY KO, CD	CHECKED BY MLT

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

WOOD ROAD SEWAGE PUMP STATION
SECTIONS - 2
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
ACCT. NO. XX
C-4
SHEET 6 OF 28
FILE NO.

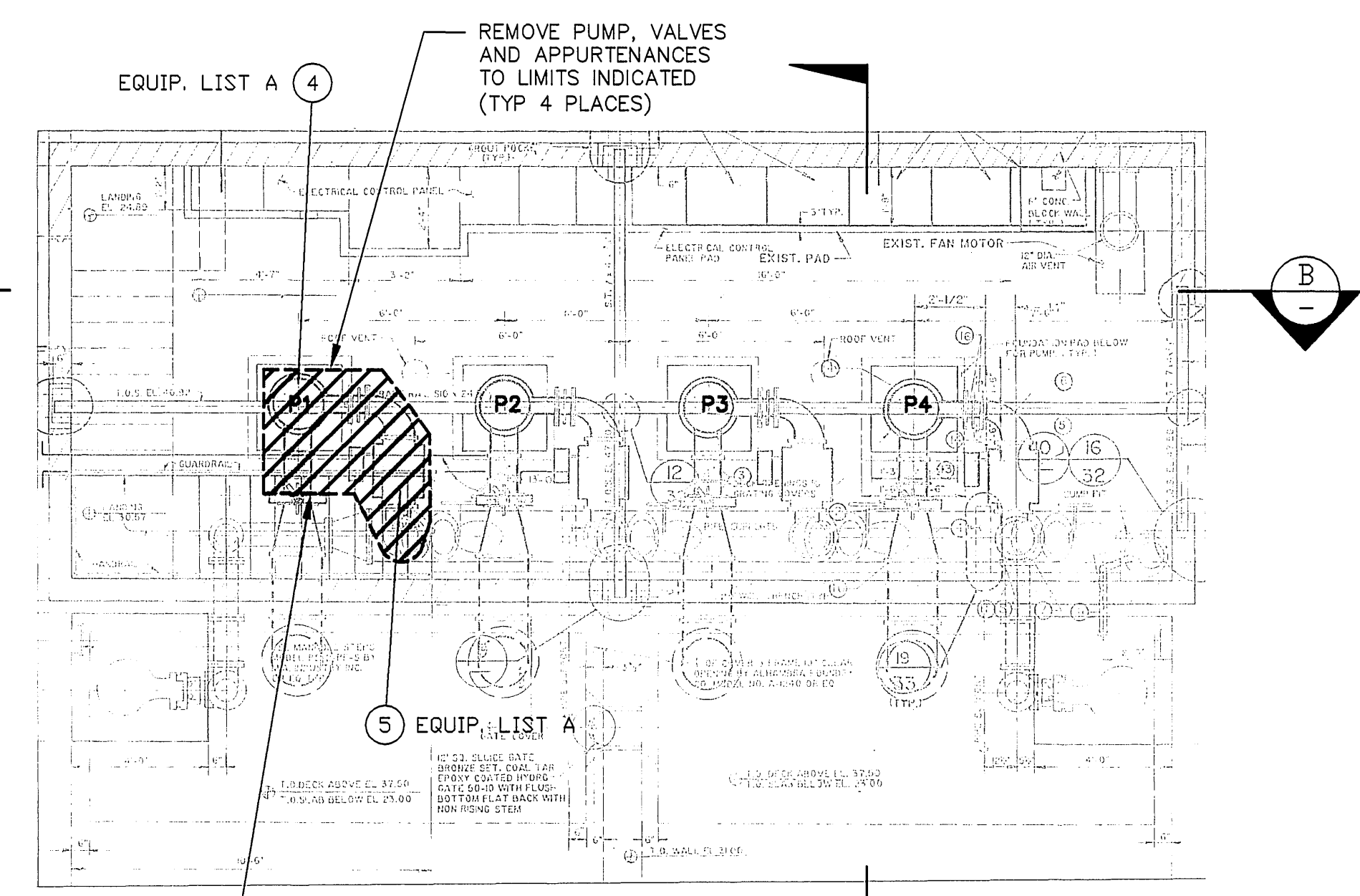
INDEXED 4-24-06 fH

EXISTING EQUIPMENT LIST A

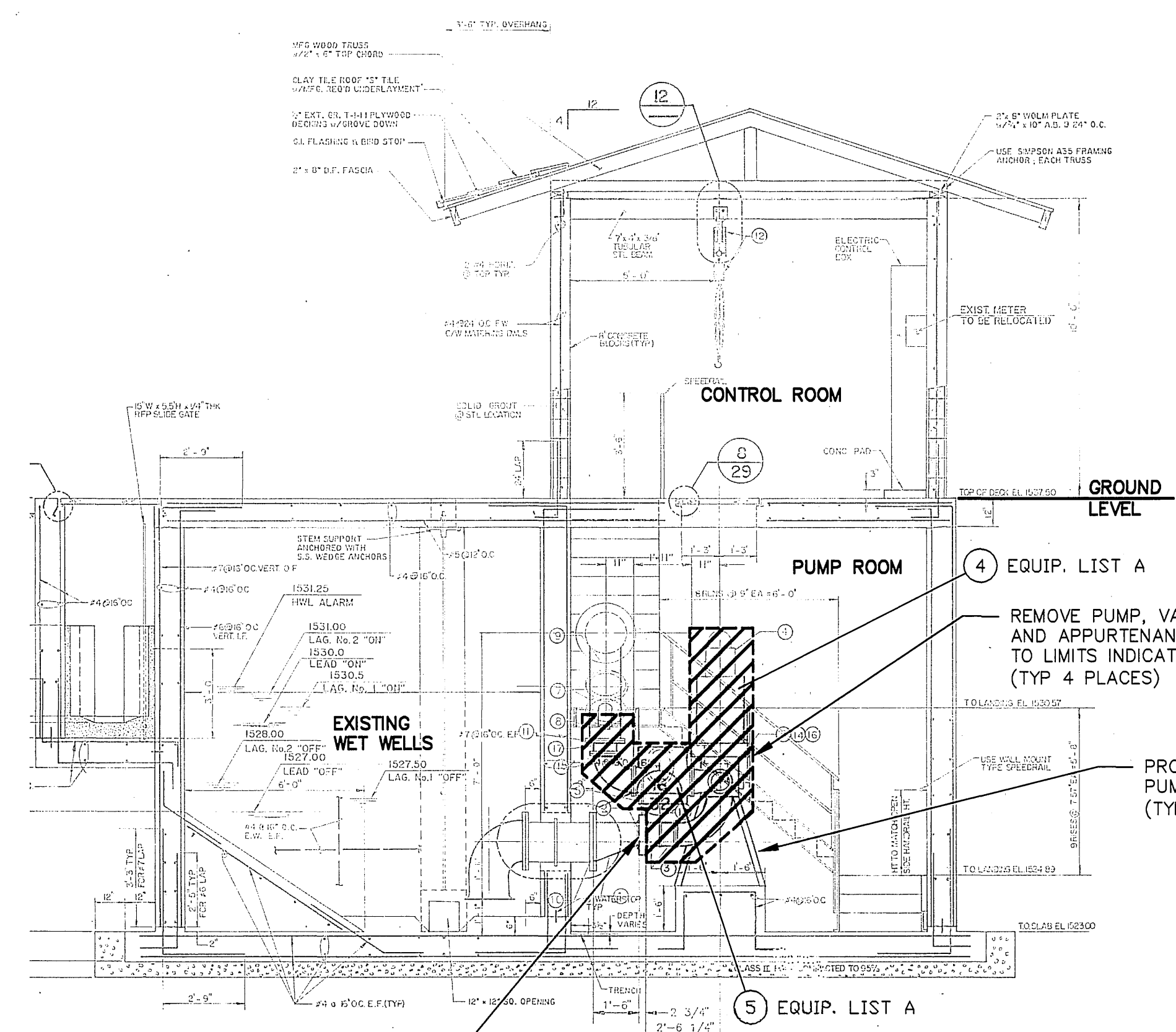
EXISTING EQUIPMENT LIST B

EQUIPMENT LIST FOR EXPANSION	
ITEM NO.	DESCRIPTION
1	16" X 10" D.I. ECCENTRIC REDUCER.
2	10" DIA. KNIFE GATE VALVE, RESILIENT SET WITH BEVEL GEAR ACTUATOR, "DEZURIK, FIG. 801 RS16".
3	10" DIA. D.I. FLANGED BY VICTAULIC GROOVED END NIPPLE. LENGTH TO BE FIELD FITTED.
4	SUBMERSIBLE PUMP MOTOR, 150 HP, VARIABLE SPEED, 1800 GPM.
5	10" DIA. OIL CUSHIONED SWING CHECK VALVE "APCO SERIES 6000".
6	6" X 8" D.I. 90° REDUCING ELL (FLGD)
7	12" DIA. FLO'D PLUG VALVE, ROTARY GEAR ACTUATOR "DEZURIK, FIG. 118 F-RS16, AGG#12, KEYSITE 740 (3 COATS TO 12 MIN. HOLIDAY TEST) UTIIZE EXIST. PLUG VALVES
8	10" DIA. OIL CS. ELL (FLGD) UTILIZE TWO EXISTING ELBOWS.
9	EXISTING 16" X 16" X 12" D.I. FLO'D WYE.
10	EXISTING 16" DIA. D.I.P. REMOVE EXIST. BLIND FLANGE.
11	14" X 12" THREADED FLANGE ADAPTOR D.I.
12	TROLLEY AND HAND HOIST APPARATUS.
13	12" DIA. COUPLING, VICTAULIC STYLE 77.
14	6" DIA. COUPLING, VICTAULIC STYLE 77.
15	10" DIA. D.I. 90° ELL (FLGD)
16	6" DIA. D.I.P. FLGD BY VICTAULIC GROOVED END NIPPLE
17	10" DIA. D.I.P. FLO'D X FLO'D

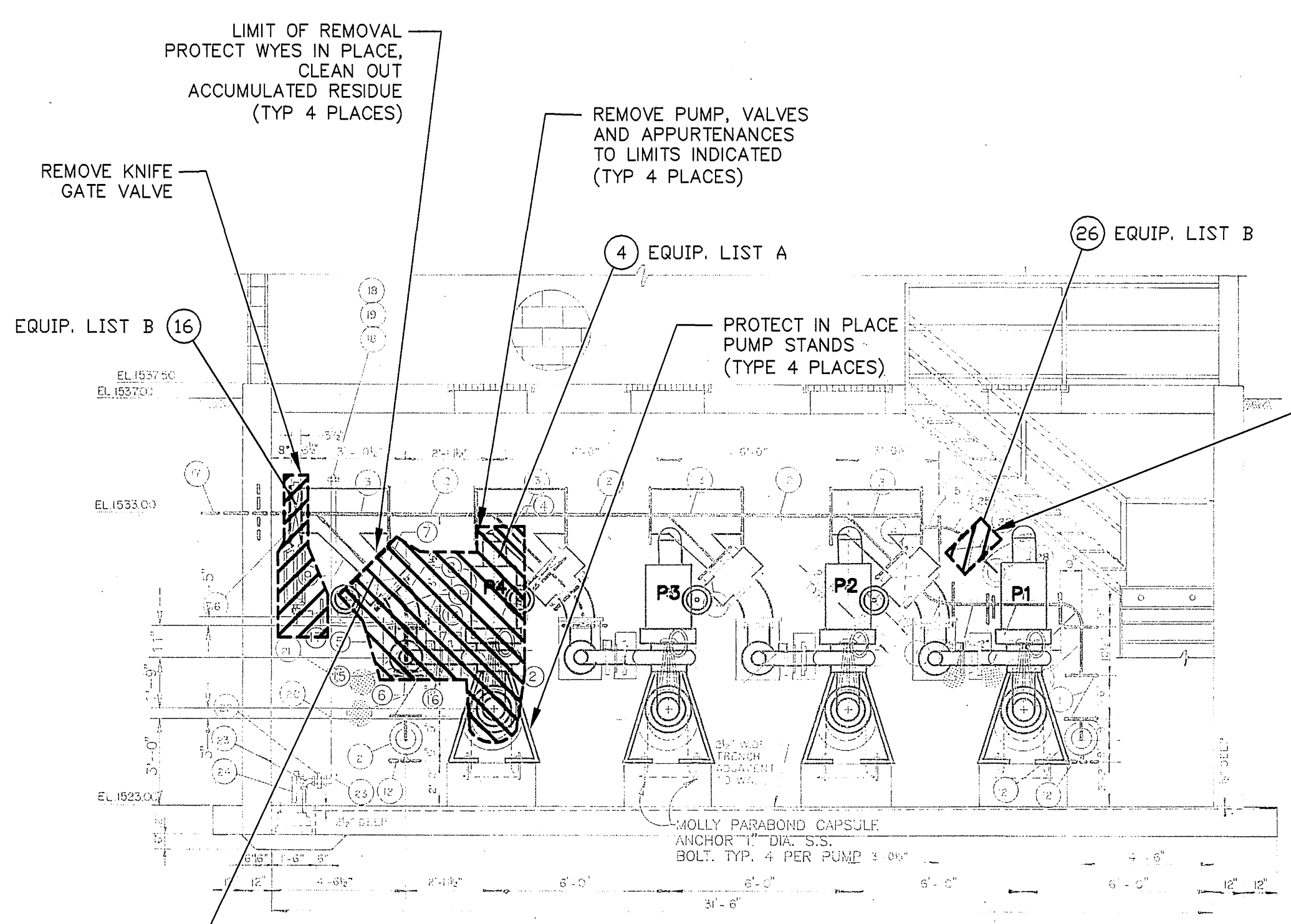
EQUIPMENT LIST	
ITEM No.	DESCRIPTION
1	SUBMERSIBLE PUMP AND MOTOR WITH S.S. SLIDE RAIL SYSTEM. "WEMCO 4x15" 800 GPM @ TDH = 105', 50 HP, 440 VOLT, 3Ø MOTOR.
2	16" DIA. D.I.P. FLANGED X FLANGED NIPPLE X 2'-11 1/2" LONG.
3	16"x16"x12" D.I. BLIND FLANGE.
4	12" DIA. 125# D. I. BLIND FLANGE.
5	16" X 6" D. I. FLO'D NIPPLE REDUCER
6	12" DIA. FLO'D PLUG VALVE ROTARY GEAR ACTUATOR "DEZURIK" FIG 118 F-6 RS17, AGG#12 KEYSITE 740 (3 COATS TO 12 MIN. HOLIDAY TEST)
7	8" DIA. VICTAULIC FLANGE (STYLE 341)
8	12" DIA. VICTAULIC FLANGE (STYLE 341)
9	12" DIA. D.I. 45° ELL
10	12"x8" DIA. D. I. VIC. X VIC. CONCENTRIC REDUCER (VIC. NO. 50-C)
11	8" DIA. OIL CUSHION SWING CHECK VALVES "APCO SERIES 6000".
12	8" DIA. D.I. 90° ELL.
13	12"x8" DIA. D.I. ECCENTRIC REDUCER.
14	8" DIA. D.I.P. FLANGED X VICTAULIC GROOVE X 1'-11" LONG.
15	8" DIA. D.I.P. FLANGED X FLANGED NIPPLE X 10 1/2" LONG.
16	16" DIA. KNIFE GATE VALVE RESILIENT SET WITH BEVEL GEAR OPERATOR "DEZURIK FIG 801 RS16"
17	16" DIA. D.I. WALL FLANGED X PLAIN END X 3'-0" LONG.
18	2" DIA. BRASS 90° ELL.
19	2" DIA. BRASS THREADED NIPPLE SCH. 80 X 2'-0" LONG.
20	2" DIA. PVC PIPE SCH. 80 X LENGTH AS REQUIRED.
21	2"x1/8" S.S. STRAP WALL FASTENER AND 1/4" DIA. S.S. WEDGE ANCHORS.
22	2" DIA. PVC UNION SCH. 80.
23	2" DIA. PVC 90° ELL.
24	SUMP PUMP 40 GPM @ TDH=20" "MYERS WHR5", V6HP, 110 VOLT, 1Ø MOTOR, WITH FLCA CONTROL.
25	6" DIA. D. I. 45° ELL
26	6" DIA. FLO'D PLUG VALVE ROTARY GEAR ACTUATOR "DEZURIK" FIG 118 F-6 RS16, AGG#12 KEYSITE 740 (3 COATS TO 12 MIN. HOLIDAY TEST)
27	6" DIA. D. I. 90° ELL.
28	6" DIA. D. I. WALL FLANGED X PLAIN END 24" LONG.



PLAN VIEW



SECTION B



SECTION A

LEGEND

Items to be demolished or rehabilitated.

S-1944

WOOD ROAD SEWAGE PUMP STATION

PUMP STATION - MECHANICAL DEMOLITION PLAN

ACCT. NO. XX

M-1 SHEET 8 OF 28

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN FILE NO.

INDEXED 4-24-06

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ERIK T. HOWARD
ERIK T. HOWARD DATE 10 FEB 06
R.P.E. No. C53318 Exp 6-30-07



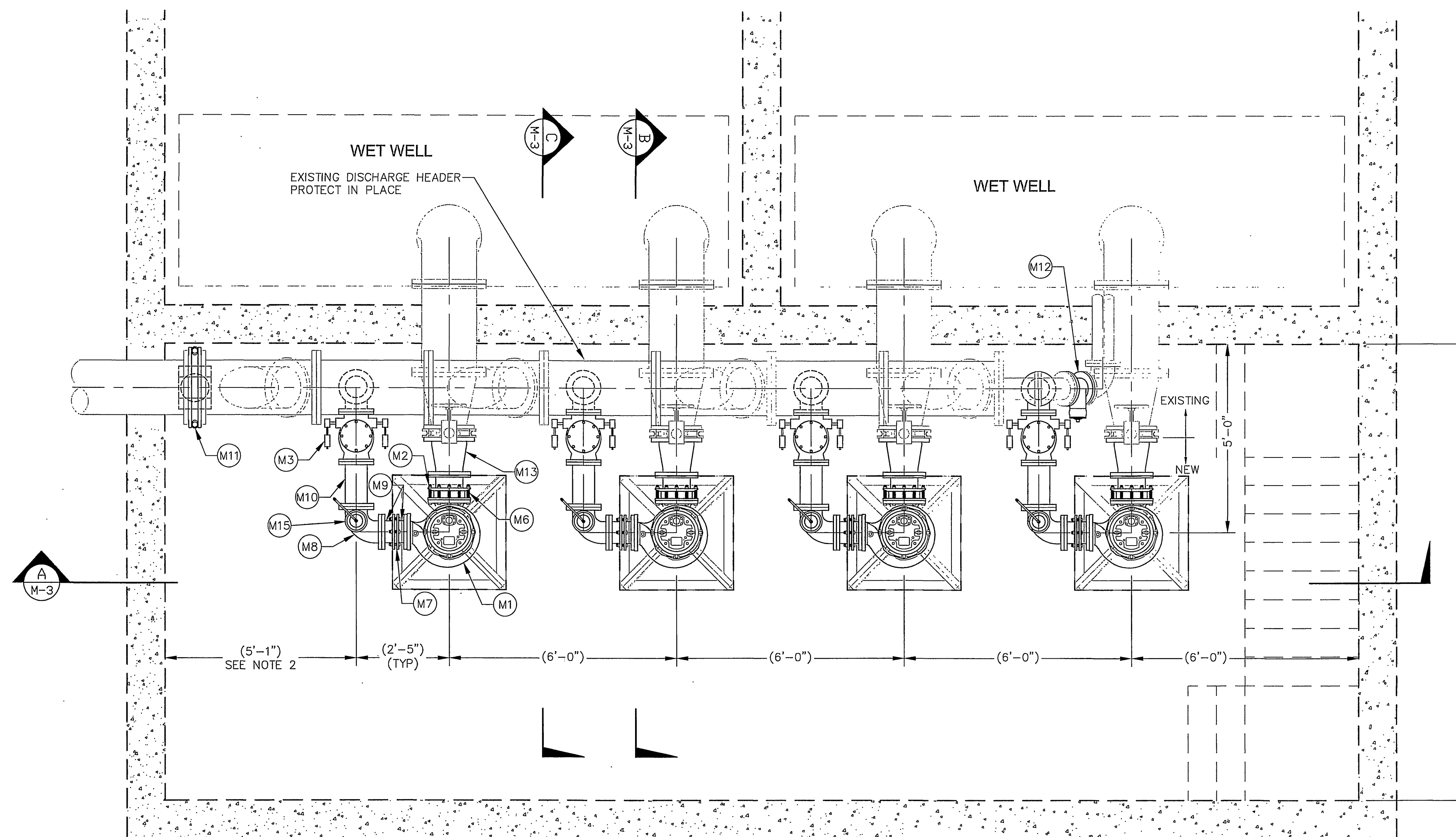
ADDED LEGEND + CHANGED CALLOUT ETH 3/2/06

DESIGNED BY	ETH	DRAWN BY	KO_CD	CHECKED BY	MLT
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CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER	<i>[Signature]</i>		<i>[Signature]</i>
INSPECTION SECTION SURVEYOR			CITY ENGINEER
			DATE 2/10/06

WOOD ROAD SEWAGE PUMP STATION
PUMP STATION - MECHANICAL DEMOLITION PLAN
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN FILE NO.



PLAN - BASEMENT

SCALE: 1" = 2'

CONSTRUCTION NOTES:

- △* (M1) DRY PIT, NON-CLOG, SUBMERSIBLE PUMP MOTOR - REFER TO THE SPECIFICATIONS.
- (M2) 8" DIA DI FLANGED BY VICTAULIC GROOVED END NIPPLE.
- (M3) 6" DIA OIL CUSHIONED SWING CHECK VALVE "APCO SERIES 6100" OR APPROVED EQUAL.
- (M6) 8" DIA COUPLING, VICTAULIC STYLE 77.
- (M7) 6" DIA COUPLING, VICTAULIC STYLE 77.
- (M8) 6" DIA D.I. 90° FLANGED ELBOW.
- (M9) 6" DIA DI FLANGED BY VICTAULIC GROOVED END NIPPLE.
- (M10) 6" DIA DI FLANGED SPOOL.
- (M11) 16" DIA KNIFE GATE VALVE RESILIENT SET WITH BEVEL GEAR OPERATOR "DEZURIK" FIG 801RS16.
- (M12) 6" DIA FLANGED BUTTERFLY VALVE.
- (M13) 10" x 8" DIA DI ECCENTRIC REDUCER.
- (M15) 1" SEWAGE AIR/VACUUM VALVE, "APCO SERIES 410" OR APPROVED EQUAL.

△* **PUMPING UNIT REQUIREMENTS**

- 190' TDH @ 0 GPM (SHUT-OFF) AND
115' TDH @ 2,100 GPM (OPERATING); 100 HP MIN.

NOTES:

1. UNLESS OTHERWISE NOTED, PIPING AND FITTINGS SHALL BE DUCTILE IRON, CLASS 150, EPOXY COATED AND PAINTED TO CLIENT'S PREFERRED COLOR.
2. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO PURCHASING OR INSTALLING PUMPS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MATCH OR FIT NEW INSTALLATIONS TO EXISTING PIPING AND VALVES.

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Fax: (909) 341-6389

PLANS PREPARED UNDER SUPERVISION OF

Erik T. Howard
ERIK T. HOWARD
R.P.E. No. C53318

DATE
6 Feb 06
Exp 6-30-07



△* **ADDED PUMPING UNIT REQUIREMENTS** ETH 2/23/06

MARK	REVISIONS	APPR.	DATE

**CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT**

APPROVED BY	BY	DATE	APPROVED BY	DATE
PRINCIPAL ENGINEER	<i>[Signature]</i>	2/23/06	CITY ENGINEER	<i>[Signature]</i>
INSPECTION SECTION SURVEYOR				

WOOD ROAD SEWAGE PUMP STATION

PUMP STATION - PLAN

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944

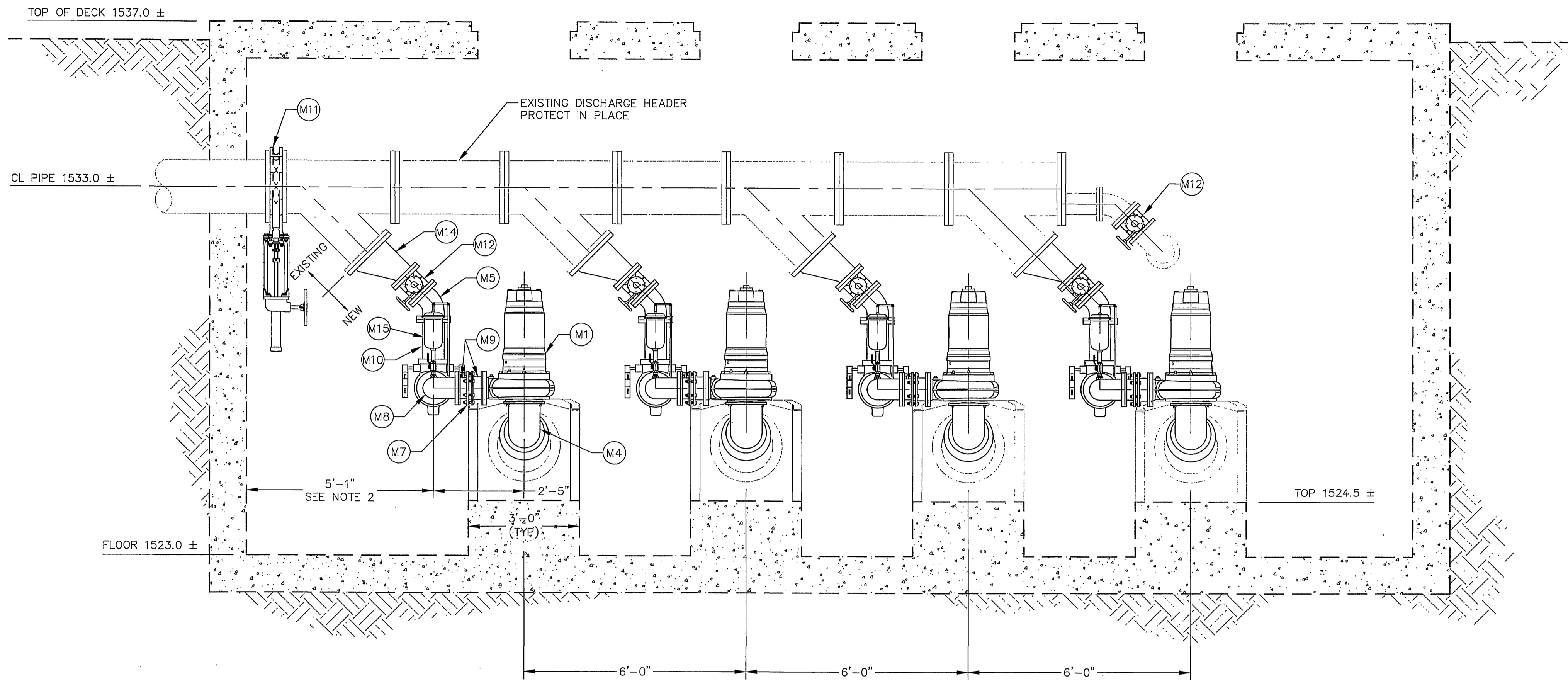
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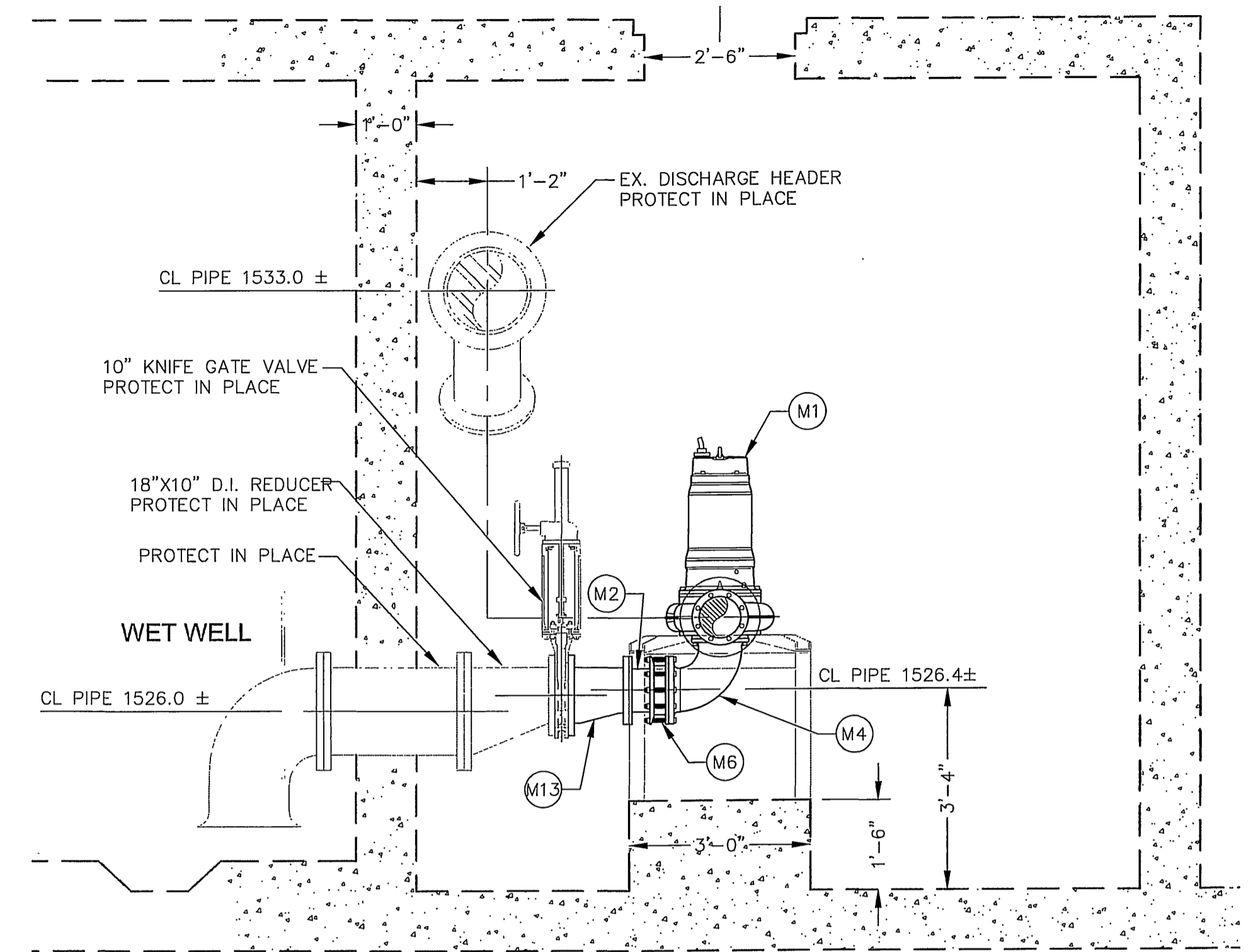
SHEET 9 OF 28

FILE NO.

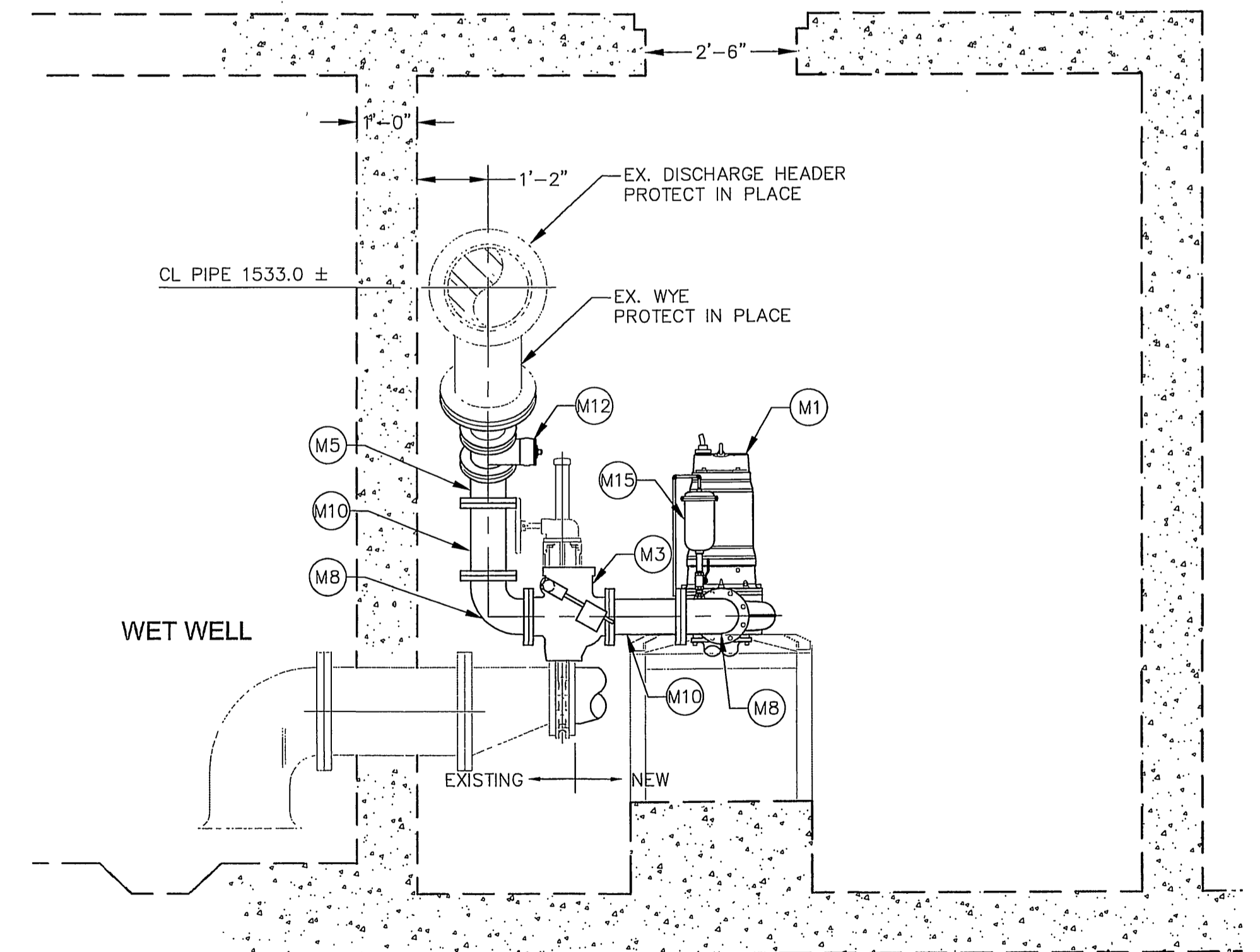
INDEXED 4-24-06 ftt



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



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



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

NOTES:

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- (M4) 8" DI 90° FLANGED ELBOW.
- (M5) 6" DIA DI 45° FLANGED ELBOW.
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- (M8) 6" DIA D.I. 90° FLANGED ELBOW.
- (M9) 6" DIA DI FLANGED BY VICTAULIC GROOVED END NIPPLE.
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- (M14) 12" x 6" DIA DI ECCENTRIC REDUCER.
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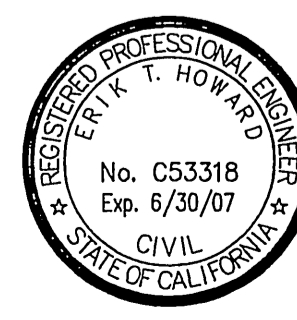
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PLANS PREPARED UNDER SUPERVISION OF

Erik T. Howard
ERIK T. HOWARD DATE 6 FEB 00
R.P.E. No. C53318 Exp 6-30-07



△ ADDED PUMPING UNIT REQUIREMENTS ETH 3/23/06

DESIGNED BY	ETH	DRAWN BY	KO, CD	CHECKED BY	MLT
APPROVED BY		BY		DATE	
PRINCIPAL ENGINEER					
INSPECTION SECTION					
SURVEYOR					

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PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	APPROVED BY	DATE
<i>[Signature]</i>	2/26/06	<i>[Signature]</i>	2/26/06

WOOD ROAD SEWAGE PUMP STATION

PUMP STATION - SECTIONS

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944

ACCT. NO. XX

M-3

SHEET 10 OF 28

FILE NO.

INDEXED 4-24-06 (H)

ELECTRICAL ABBREVIATIONS

ELECTRICAL SYMBOLS LIST

ELECTRICAL GENERAL NOTES

A	AMPERES	MTG	MOUNTING
AF	AMPERE FRAME	MH	MOUNTING HEIGHT
AT	AMPERE TRIP	NIC	NOT IN CONTACT
AMP	AMMONIUM METERING PUMP	NO	NUMBER DESIGNATION
AIC	AMPS INTERRUPTING CAPACITY	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	P	POLE
AFF	ABOVE FINISHED GRADE	PMR	POWER MONITOR RELAY
BFG	BELOW FINISHED GRADE	PNL	PANEL
CB	CIRCUIT BREAKER	PSH	PRESSURE SWITCH HIGH
BLDG	BUILDING	PT	PRESSURE TRANSMITTER
BRKR	BREAKER	RECP	RECEPTACLE
BC	BARE COPPER	REF	REFERENCE
CHEM	CHEMICAL	SEC	SECONDARY, SECOND
C-H	CROUSE-HINDS	SHT	SHEET
COND	CONDUCTOR	SOV	SOLENOID OPERATED VALVE
CKT	CIRCUIT	SPECS	SPECIFICATIONS
CMP	CHLORINE METERING PUMP	S/S	START/STOP
CS	CURRENT SENSOR	STD	STANDARD
C	CONDUIT, CENTIGRADE	SW	SWITCH
CO	CONDUIT ONLY	SWBD	SWITCHBOARD
CU	COPPER	TEL	TELEPHONE
DETL	DETAIL	TEMP	TEMPORARY
DISC	DISCONNECT	TSH	TEMPERATURE SWITCH HIGH
DWG	DRAWING	TYP	TYPICAL
ELEV	ELEVATION	UG	UNDERGROUND
EMERG	EMERGENCY	UON	UNLESS OTHERWISE NOTED
FA	FIRE ALARM	VFC	VARIABLE FREQUENCY CONTROLLER
FE	FLOW ELEMENT	V	VOLT
FLA	FULL LOAD AMPERES	VL	VERIFY LOCATION
FLEX	FLEXIBLE	W	WATTS, WIRE, WIDTH
FLUOR	FLUORESCENT	W/	WITH
FT	FLOW TRANSMITTER	WP	WEATHERPROOF
GEN	GENERATOR	XFMR	TRANSFORMER
GND	GROUND	ZS	LIMIT SWITCH
GFI	GROUND FAULT INTERRUPTER		
HOA	HAND-OFF-AUTOMATIC		
HZ	HERTZ		
HP	HORSE POWER		
HPS	HIGH PRESS SODIUM		
IS	INTRUSION SWITCH		
IT	CURRENT TRANSDUCER		
INCAND	INCANDESCENT		
JB	JUNCTION BOX		
KVA	KILOVOLT-AMPERES		
KV	KILOVOLT		
KW	KILOWATT		
KW	KILOWATT TRANSDUCER		
L	LENGTH		
LCL	LONG CONTINUOUS LOAD		
LTS	LIGHTING, LIGHT		
LOR	LOCAL-OFF REMOTE		
M	METER		
MCA	MINIMUM CIRCUIT AMPACITY		
MFS	MAXIMUM FUSE SIZE		
MS	MOTOR SAVER		

	CONDUIT DESIGNATION	CONDUIT DESIGNATIONS:	P = POWER	SP = SPARE
	CONDUIT NUMBER (REFER TO CONDUIT SCHEDULE FOR COMPLETE INFO ON CONDUIT)	C = CONTROL	CM = COMMUNICATIONS	I = INSTRUMENTATION
	SECTION VIEW			
	A = SECTION LETTER			
	B = REFERENCE DRAWING NUMBER			
	TRANSFORMER WITH RATINGS AS SPECIFIED			
	CIRCUIT BREAKER			
	SOLID STATE STARTER WITH BYPASS CONTACTOR			
	THERMAL OVERLOAD			
	SPLICE			
	GROUND			
	FUSE			
	40 HORSEPOWER MOTOR			
	UTILITY METER			
	SELECTOR SWITCH THREE POSITION HAND-OFF-AUTO			
	THERMOSTAT			
	CONTROL RELAY			
	SINGLE POLE TOGGLE SWITCH			
	EXPOSED CONDUIT			
	CONCEALED CONDUIT			
	CONDUIT TURNING UP			
	CONDUIT TURNING TOWARD VIEWER VIA "T" FITTING			
	JUNCTION BOX OR PULL BOX			
	FLUORESCENT LIGHTING FIXTURE			
	FLUORESCENT LIGHTING FIXTURE WITH EMERGENCY BATTERY			
	FLOODLIGHT FIXTURE			
	WALL MOUNTED LIGHT FIXTURE			
	DUPLEX RECEPTACLE, WALL MOUNTED +12" UON			
	GROUND FAULT INTERRUPTER RECEPTACLE, WALL MOUNTED +12" UON			
	DISCONNECT SWITCH			
	HAND-OFF-AUTOMATIC SELECTOR SWITCH			
	TOGGLE SWITCH MOUNTED +4'-0", 3 INDICATES 3WAY, 4 INDICATES 4 WAY LETTER INDICATES FIXTURES CONTROLLED			
	MAGNETIC DOOR SWITCH			
	GROUND WELL			

- ALL ELECTRICAL INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND LOCAL COUNTY AND CITY CODES.
- ALL MATERIALS AND DEVICES TO BE USED IN THIS PROJECT SHALL BE NEW AND APPROVED AND LISTED BY UNDERWRITERS LABORATORY (U.L.) FOR INTENDED USE.
- FINAL CONDUIT CONNECTION TO DEVICES, SUCH AS INSTRUMENTS OR MOTORS SHALL BE MADE WITH "SEALTITE", MINIMUM SIZE OF FLEXIBLE CONDUIT SHALL BE 3/4 INCH, MAXIMUM LENGTH SHALL NOT EXCEED 3 FEET.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE SEISMIC ANCHORAGE FOR ALL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH UBC 1630.2.
- UNLESS SPECIFICALLY NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL ALL ELECTRICAL EQUIPMENT, CONDUIT & WIRE FOR A COMPLETE & OPERATIONAL SYSTEM.
- ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12 AWG FOR POWER CONDUCTORS & #14 MINIMUM SIZE FOR CONTROL CONDUCTORS.
- ALL 600V RATED POWER & CONTROL WIRING SHALL BE TYPE "THWN" INSULATION.
- INSTRUMENT CONDUCTORS SHALL BE TWISTED PAIR #16 AWG WITH SHIELD, 300V, 60°C, WITH PVC JACKET.
- GROUND RODS SHALL BE COPPER CLAD, 3/4 INCH DIAMETER BY 10 FEET LONG. TOP OF GROUND ROD SHALL BE INSTALLED AT LEAST 12 INCHES BELOW FINISHED SURFACE.
- GROUNDING CONDUCTOR SHALL BE COPPER WITH GREEN INSULATION, CONDUCTOR SIZE SHALL BE AS SHOWN ON PLAN.
- IN THE EVENT OF A DISCREPANCY BETWEEN THE PLANS, SPECIFICATIONS AND CODE, THE REQUIREMENT THAT ESTABLISHES THE HIGHER STANDARD SHALL PREVAIL.
- ALL EQUIPMENT MOUNTED OUTDOOR SHALL BE WEATHERPROOF.
- ALL ELECTRICAL EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE U.L. LISTED.
- CONTRACTOR SHALL COORDINATE ELECTRICAL SERVICE EQUIPMENT INSTALLATION WITH SCE SERVICE PLANNER.
- MINIMUM COVER BETWEEN TOP OF CONDUIT DUCT BANK AND FINISHED SURFACE SHALL BE 2'-6".
- CONDUIT INSTALLED BELOW GRADE SHALL BE PVC SCHEDULE 40.
- TRANSITION FROM UNDERGROUND PVC CONDUIT TO ABOVEGROUND RIGID GALVANIZED CONDUIT SHALL BE 6" BELOW GRADE.
- ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH GENERAL CONTRACTOR AND OTHER CONTRACTORS WORKING AT THIS FACILITY.

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PLANS PREPARED UNDER SUPERVISION OF

 LONG PHAM DATE 2/3/06
 R.P.E. No. E 16621 Exp 6-30-06

MARK	REVISIONS	APPR. DATE
DESIGNED BY MA	DRAWN BY JJV	CHECKED BY MA

**CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT**

APPROVED BY	BY	DATE	APPROVED BY	DATE
PRINCIPAL ENGINEER		2/3/06	CITY ENGINEER	
INSPECTION SECTION				
SURVEYOR				

WOOD ROAD SEWAGE PUMP STATION

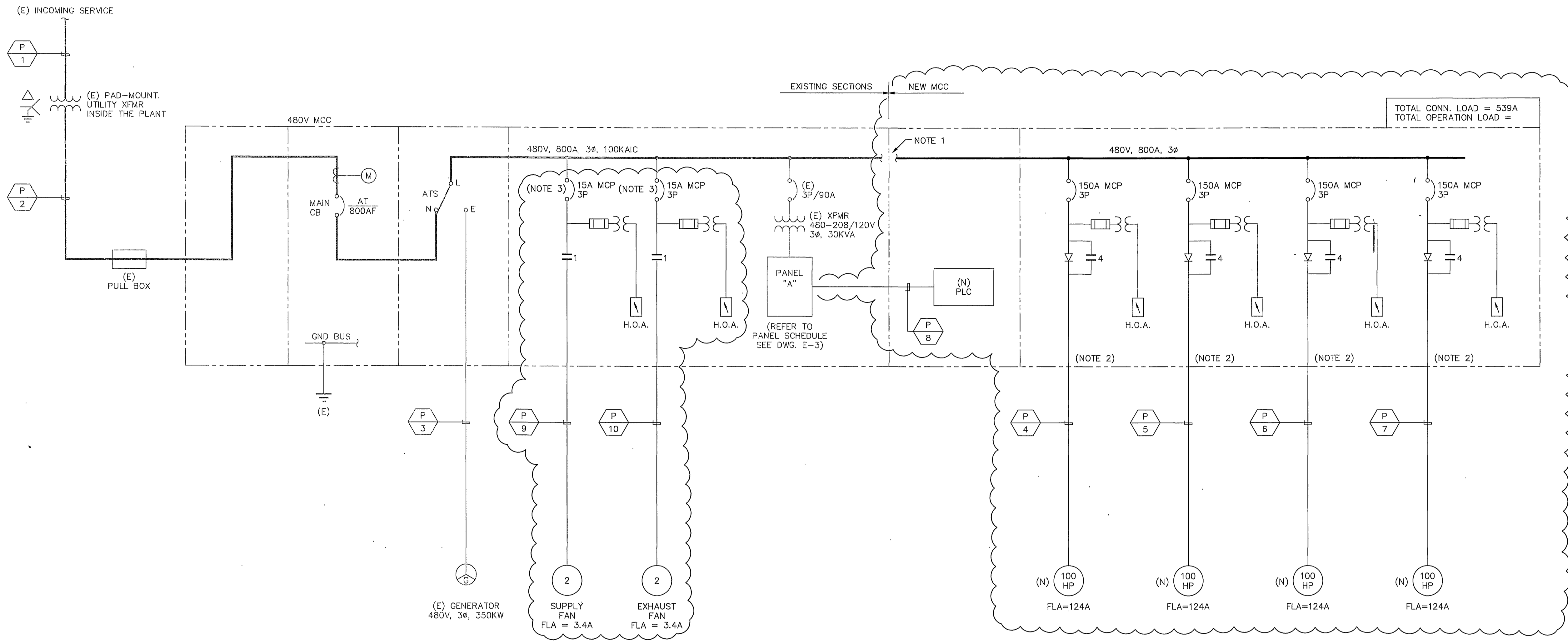
ELECTRICAL ABBREVIATIONS, SYMBOLS & GENERAL NOTES

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

ACCT. NO. XX
S-1944
E-1
 SHEET 11 OF 28
 FILE NO. 3382_E-1.DWG

ISSUED FOR BID
 FEBRUARY 3, 2006

INDEXED 4-24-06 gfh



TOTAL CONN. LOAD = 539A
TOTAL OPERATION LOAD =

480V SINGLE LINE DIAGRAM

LEGEND:

CLOUD INDICATES NEW WORK

NOTES:

1. CONNECTION OF NEW MCC'S BUS TO EXISTING BUS WILL BE PERFORMED BY CONTRACTOR.
2. EXISTING CABLES WILL BE DEMOLISHED.
3. CONTRACTOR SHALL REPLACE EXISTING BREAKER WITH A SIZE 1 COMBINATION STARTER AS SHOWN.

ISSUED FOR BID
FEBRUARY 3, 2006

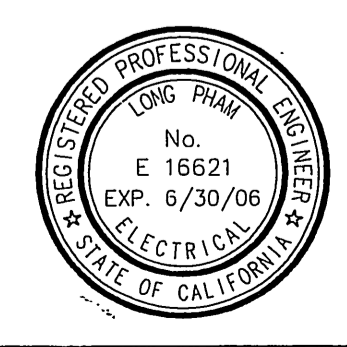
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hph
LONG PHAM DATE 2/3/06
R.P.E. No. E 16621 Exp 6-30-06



MARK	REVISIONS	DATE	APPR.	DATE

DESIGNED BY: MA DRAWN BY: JJV CHECKED BY: MA

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

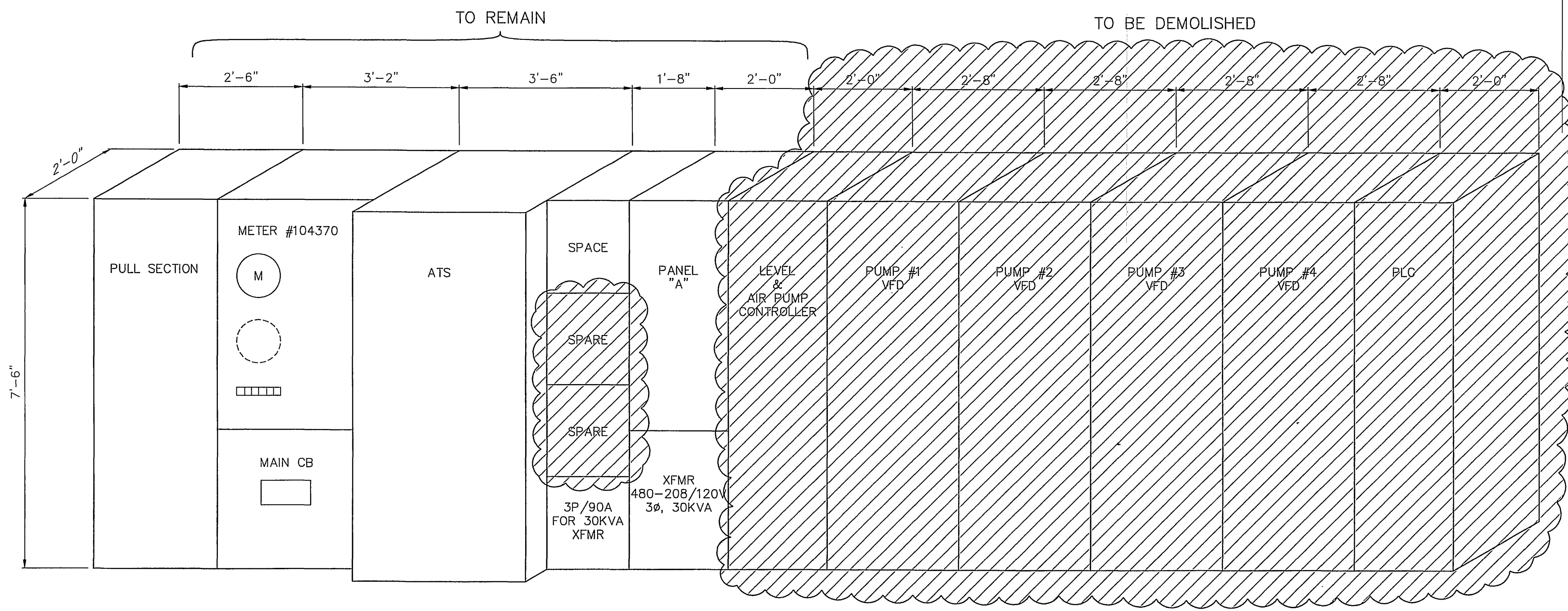
APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER	<i>hph</i>	2/3/06	<i>Jim Berg</i>
INSPECTION SECTION			CITY ENGINEER
SURVEYOR			DATE 2/16/06

WOOD ROAD SEWAGE PUMP STATION
SINGLE LINE DIAGRAM
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

ACCT. NO. XX
E-2
SHEET 12 OF 28
FILE NO. 3382_E-2.DWG

INDEXED 4-24-06

I:\560003 Riverside Wood Road PS\DRAWINGS\90Percent\Sub\CD\CS\3382_E-2_Bldg.dwg Feb 03, 2006 11:22pm



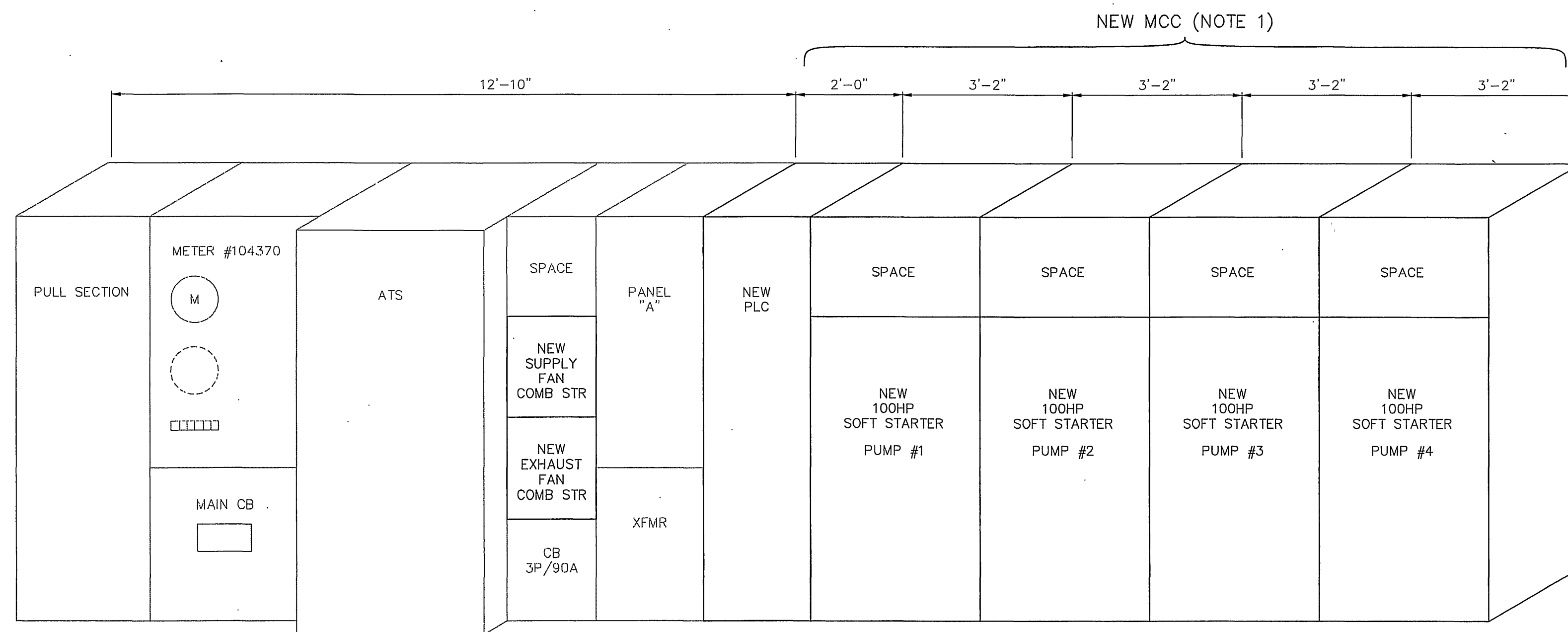
(E) 480V SWITCHBOARD & MCC ELEVATION - DEMOLITION

PANEL "A"

MOUNTING: SURFACE MAIN: 90A
 120/208 VOLTS 3 PHASE 4 WIRE BUS: 100A
 IC RATING: 10,000A
 MANUFACTURER: TYPE: NEMA 3 ENCLOSURE

LOAD DESCRIPTION	WATTAGE			BREAKER		CKT NO.	BUS CONNECTION	BREAKER			WATTAGE			LOAD DESCRIPTION	
	ØA	ØB	ØC	POLE	AMP			AMP	POLE	ØA	ØB	ØC			
INDOOR LIGHT	240			1	20	1		2	20	1	240			OUTDOOR LIGHT	
RECEPTACLE		180		1	20	3		4	30	1		2700			SUMP PUMP
PLC			1200	1	15	5		6	15	1		600			MILL TRONIC
BATTERY CHARGER	1200			1	15	7		8	15	1		600			INFLUENT FLOW SENSOR
GENERATOR HEATER		1800		1	20	9		10							SPACE
SPACE						11		12							SPACE
DRIVE #1 AC UNIT				2	15	13		14	15	2					DRIVE #2 AC UNIT
DRIVE #1 AC UNIT						15		16							DRIVE #2 AC UNIT
DRIVE #3 AC UNIT				2	15	17		18	15	2					DRIVE #4 AC UNIT
DRIVE #3 AC UNIT						19		20							DRIVE #4 AC UNIT
SPACE				1	20	21		22							SPACE
LEAK DETECTOR			600	1	20	23		24	20	1		1800			EXHAUST FAN
TOTAL WATTS/PHASE	1440	1980	1800	TOTAL WATTS = 11,160				TOTAL AMPS = 31			840	2700	2400	TOTAL WATTS/PHASE	

PANEL A - DEMOLITION



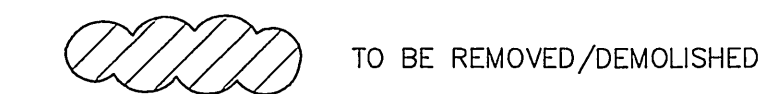
480V MCC ELEVATION - NEW WORK

PANEL "A"

MOUNTING: SURFACE MAIN: 90A
 120/208 VOLTS 3 PHASE 4 WIRE BUS: 100A
 IC RATING: 10,000A
 MANUFACTURER: TYPE: NEMA 3 ENCLOSURE

LOAD DESCRIPTION	WATTAGE			BREAKER		CKT NO.	BUS CONNECTION	BREAKER			WATTAGE			LOAD DESCRIPTION	
	ØA	ØB	ØC	POLE	AMP			AMP	POLE	ØA	ØB	ØC			
INDOOR LIGHTING	240			1	20	1		2	20	1	240			OUTDOOR LIGHTING	
RECEPTACLES		180		1	20	3		4	30	1		2700			SUMP PUMP
PLC PANEL			1200	1	15	5		6	15	1					SPACE
BATTERY CHARGER	1200			1	15	7		8	15	1		600			INFLUENT FLOW SENSOR
GENERATOR HEATER		1800		1	20	9		10							SPACE
SPACE						11		12							SPACE
SPACE						13		14							SPACE
SPACE						15		16							SPACE
SPACE						17		18							SPACE
SPACE						19		20							SPACE
SPACE				1	20	21		22							SPACE
LEAK DETECTOR			600	1	20	23		24	20	1					SPACE
TOTAL WATTS/PHASE	1440	1980	1800	TOTAL WATTS = 11,160				TOTAL AMPS = 31			840	2700	2400	TOTAL WATTS/PHASE	

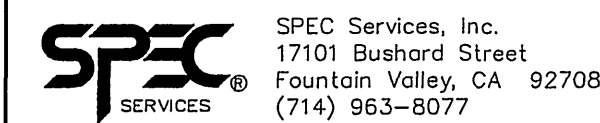
LEGEND:



NOTES:

- CONTRACTOR SHALL COORDINATE MCC SIZE & BUS CONFIGURATION WITH EXISTING MCC.

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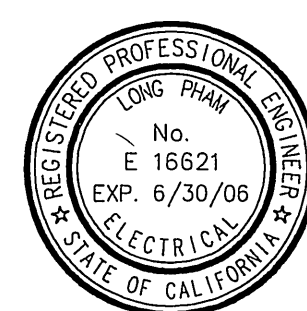


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PLANS PREPARED UNDER SUPERVISION OF

Long Pham
 LONG PHAM 2/3/06 DATE
 R.P.E. No. E 16621 Exp 6-30-06



DESIGNED BY: MA DRAWN BY: JJV CHECKED BY: MA

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY: *John B. Smith* DATE: 2/2/06
 PRINCIPAL ENGINEER CITY ENGINEER
 INSPECTOR SECTION
 SURVEYOR

WOOD ROAD SEWAGE PUMP STATION

MCC LAYOUT & PANEL SCHEDULE

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944

ACCT. NO. XX

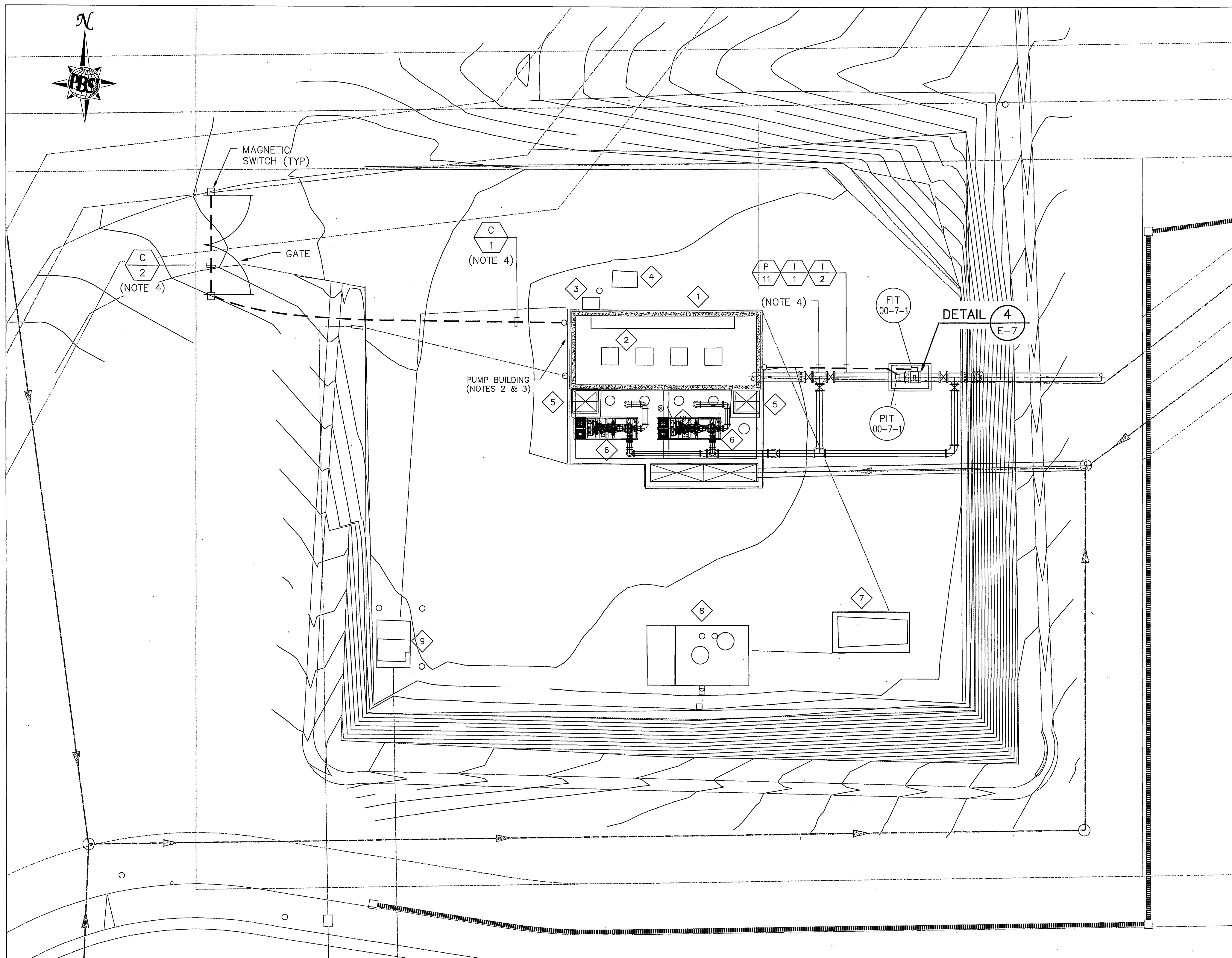
E-3

SHEET 13 OF 28

FILE NO. 3382_E-3.DWG

INDEXED 4-24-06 LHH

Y:\950093 Riverside Wood Road PS\DRAWINGS\90Percent\Sub\CD003\3382_E-3_Building Feb. 03, 2006 - 1:22pm



LEGEND:

(E): EXISTING
(N): NEW

KEY NOTES:

- 1 (E) PUMP STATION BUILDING
- 2 (E) PUMPS/MOTORS (TOTAL OF 4) IN BASEMENT
- 3 (E) PULLBOX
- 4 (E) MANHOLE
- 5 (N) DIESEL ENGINE DRIVEN PUMP
- 6 (N) LEVEL INDICATOR TRANSMITTER
- 7 (E) BACKUP GENERATOR
- 8 (E) UNDERGROUND FUEL TANK
- 9 (E) POWER XFMR (OWNED BY THE CITY OF RIVERSIDE)
- 10 (E) SWITCHBOARD & MCC ON GRADE LEVEL (TO BE MODIFIED)

NOTES:

- 1. FOR CONDUIT & CABLE SCHEDULE SEE DWG. E-8.
- 2. FOR PUMP BUILDING DEMOLITION PLAN SEE DWG. E-5.
- 3. FOR PUMP BUILDING ELECTRICAL PLAN SEE DWG. E-6.
- 4. FOR TYPICAL U/G CONDUIT SECTIN SEE SECTION B, DWG. E-4.

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1"=10'

S-1944

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LONG PHAM DATE 2/3/06
R.P.E. No. E 16621 Exp 6-30-06



MARK	REVISIONS	APPR.	DATE

DESIGNED BY MA DRAWN BY JUV CHECKED BY MA

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER			
INSPECTION SECTION SURVEYOR			CITY ENGINEER
			DATE 2/1/06

WOOD ROAD SEWAGE PUMP STATION

ELECTRICAL OVERALL PLAN & GENERAL NOTES

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

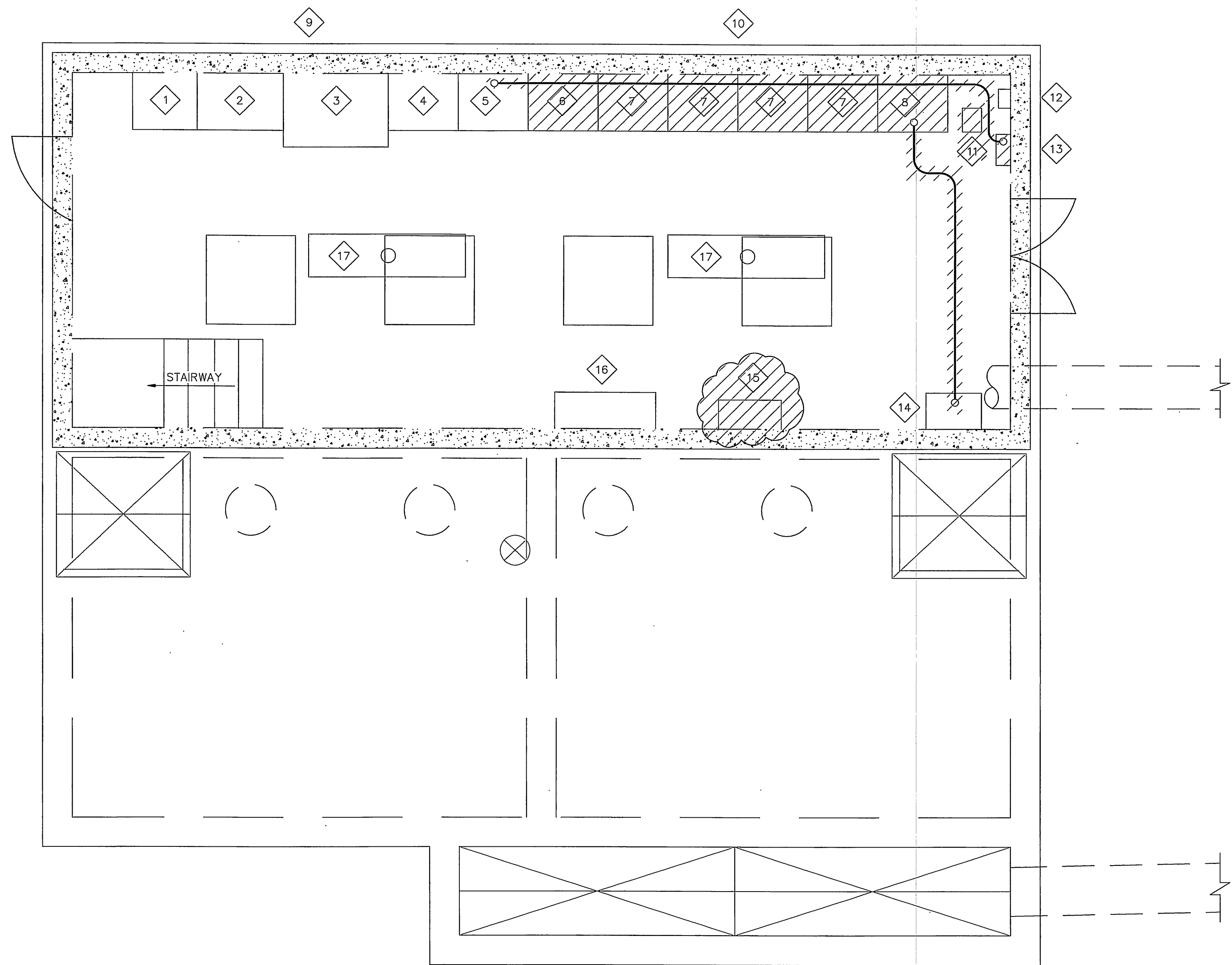
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E-4
SHEET 14 OF 28

FILE NO. 3382_E-4.DWG

INDEXED 4-24-06 Lff

X:\990053 Riverside Wood Road PS\DRAWINGS\90Percent\Sub\CD\05\3382_E-4_Bldg.dwg Feb 03, 2006 11:22am




ELECTRICAL DEMOLITION PLAN

KEY NOTES:

- 1 (E) PULL SECTION
- 2 (E) METERING SECTION
- 3 (E) ATS
- 4 (E) CIRCUIT BREAKERS SECTION
- 5 (E) PANEL "A" AND TRANSFORMER
- 6 (E) LEVEL INDICATOR AND AIR PUMP CONTROLLER TO BE DEMOLISHED
- 7 (E) VFD SECTIONS FOR PUMPS TO BE DEMOLISHED
- 8 (E) PLC TO BE DEMOLISHED
- 9 (E) SECTIONS TO REMAIN
- 10 (E) SECTIONS TO BE DEMOLISHED
- 11 (E) FAN & BLOWER TO BE REMOVED
- 12 (E) LEAK DETECTOR MONITOR
- 13 (E) RECORDER TO BE DEMOLISHED
- 14 (E) RTU
- 15 (E) EXHAUST FAN TO BE REMOVED
- 16 (E) DCS ALARM
- 17 (E) LIGHTS

LEGEND:

 TO BE REMOVED/DEMOLISHED

NOTES:

1. ALL THE EXISTING CONDUITS WHICH WILL REMAIN ARE NOT SHOWN ON THE DRAWING.
2. FOR CONDUIT & CABLE SCHEDULE SEE DWG. E-8.

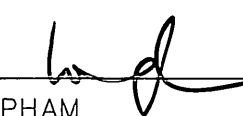
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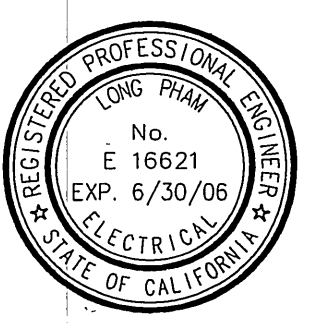
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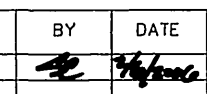
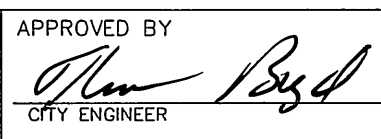
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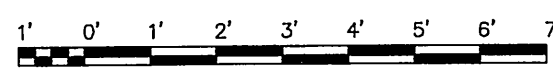
MARK	REVISIONS	APPR. DATE

DESIGNED BY MA DRAWN BY JJV CHECKED BY MA

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APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER		2/3/06	
INSPECTION SECTION SURVEYOR			CITY ENGINEER

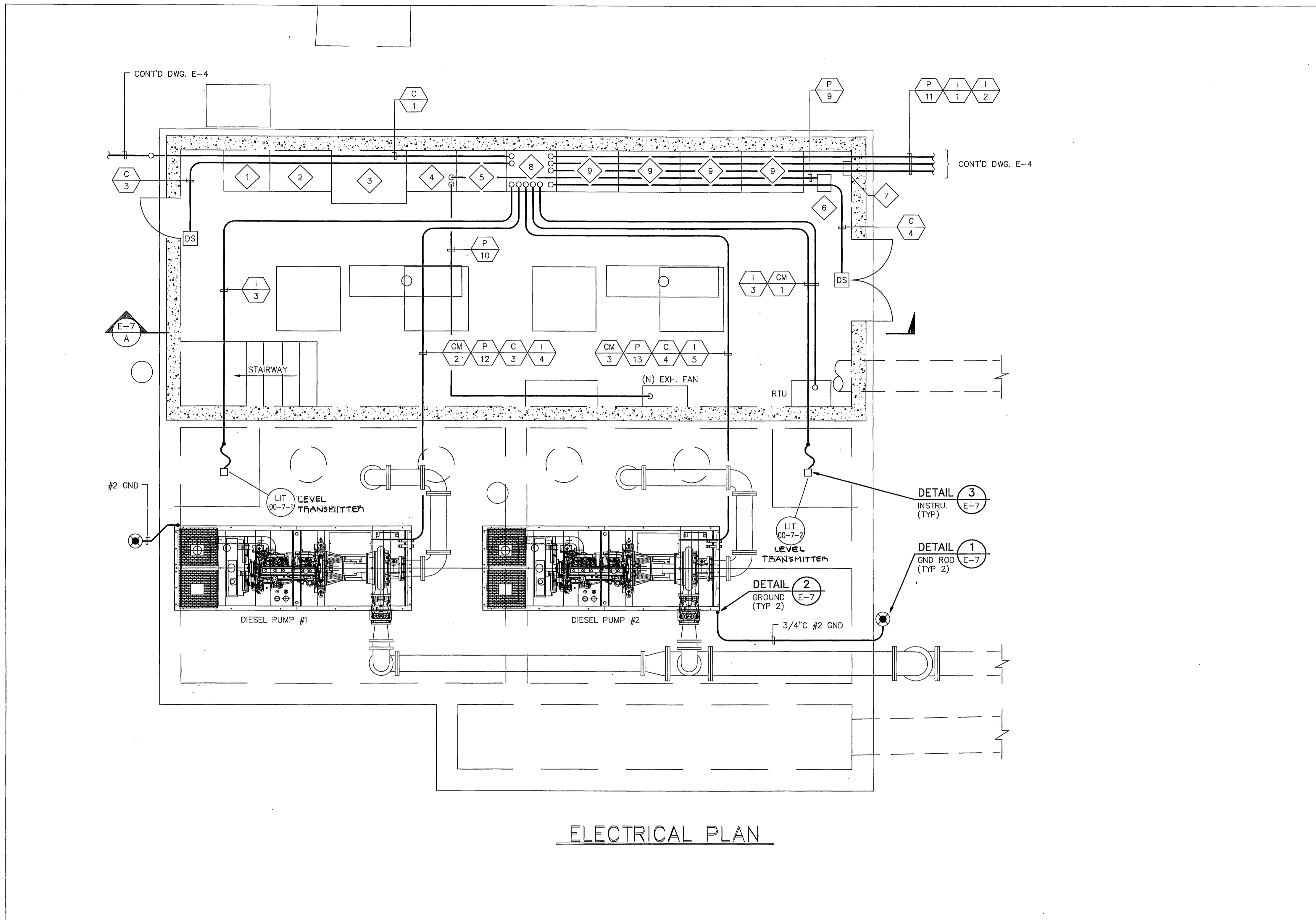
DATE 2/3/06

3/8"=1'-0" 

WOOD ROAD SEWAGE PUMP STATION
ELECTRICAL DEMOLITION PLAN
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
ACCT. NO. XX
E-5
SHEET 15 OF 28
FILE NO. 3382_E-7.DWG

INDEXED 4-24-06 JH



ELECTRICAL PLAN

KEY NOTES:

- 1 (E) PULL SECTION
- 2 (E) METERING SECTION
- 3 (E) ATS
- 4 (E) CIRCUIT BREAKERS SECTION
- 5 (E) PANEL "A" AND TRANSFORMER
- 6 (N) FAN & BLOWER
- 7 (E) LEAK DETECTOR MONITOR
- 8 (N) PLC SECTION
- 9 (N) STARTERS FOR PUMPS

NOTES:

1. ALL THE EXISTING CONDUITS WHICH WILL REMAIN ARE NOT SHOWN ON THE DRAWING.
2. FOR CONDUIT & CABLE SCHEDULE SEE DWG. E-8.

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APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER		2/16/06	
INSPECTION SECTION SUPERVISOR			CITY ENGINEER
			DATE 2/16

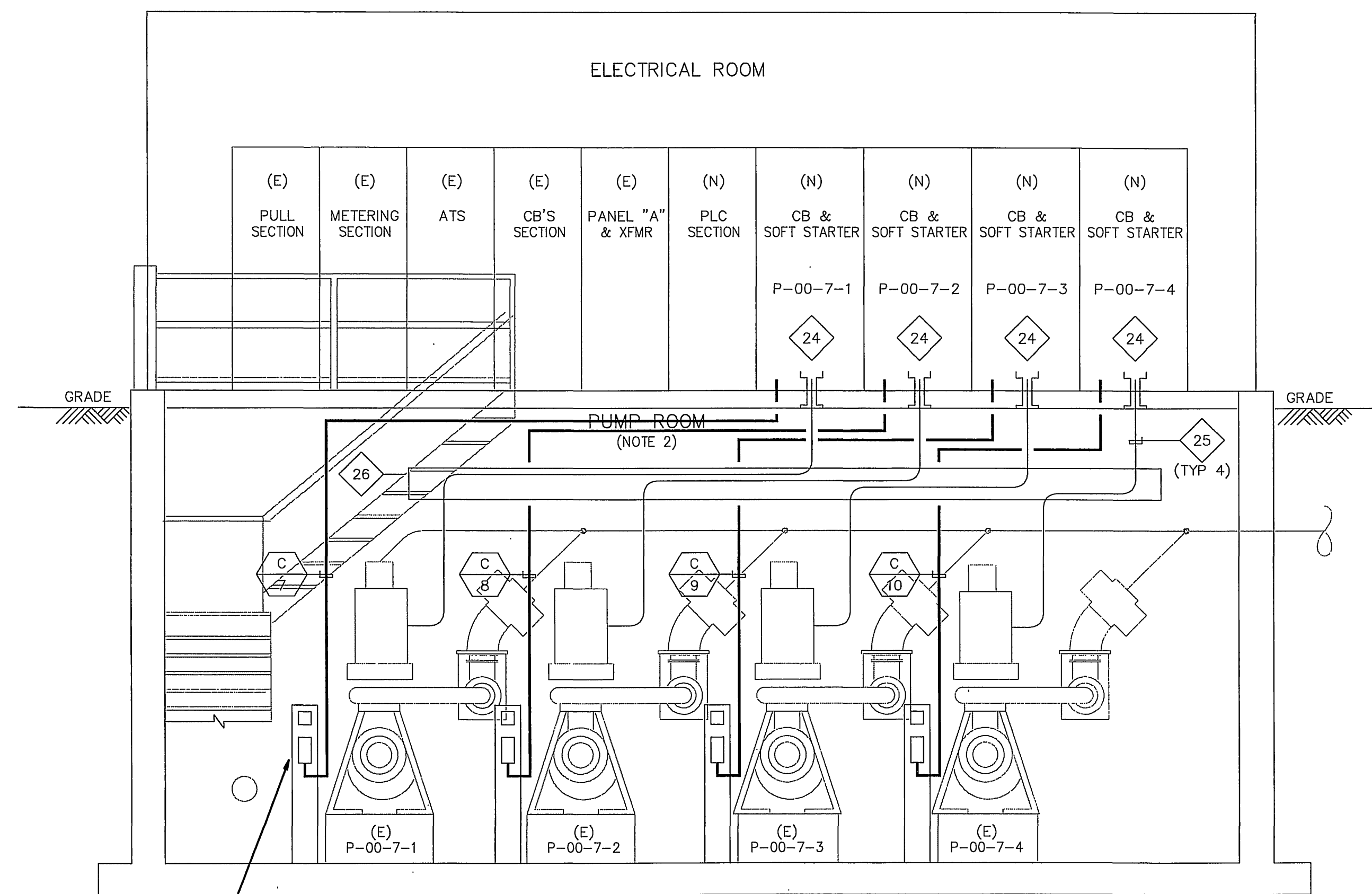
3/8"=1'-0"

WOOD ROAD SEWAGE PUMP STATION
ELECTRICAL PLAN
 HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
 ACCT. NO. XX
E-6
 SHEET 16 OF 28
 FILE NO. 3382_E-6.DWG

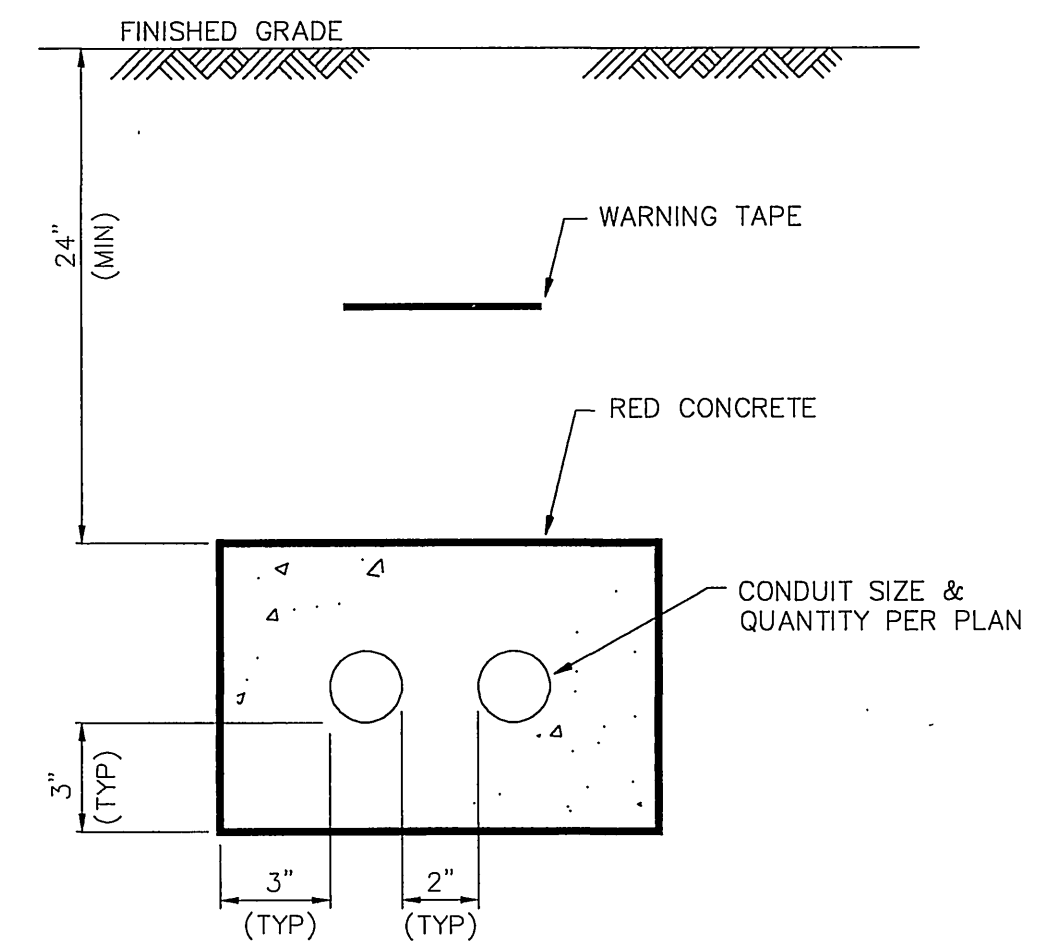
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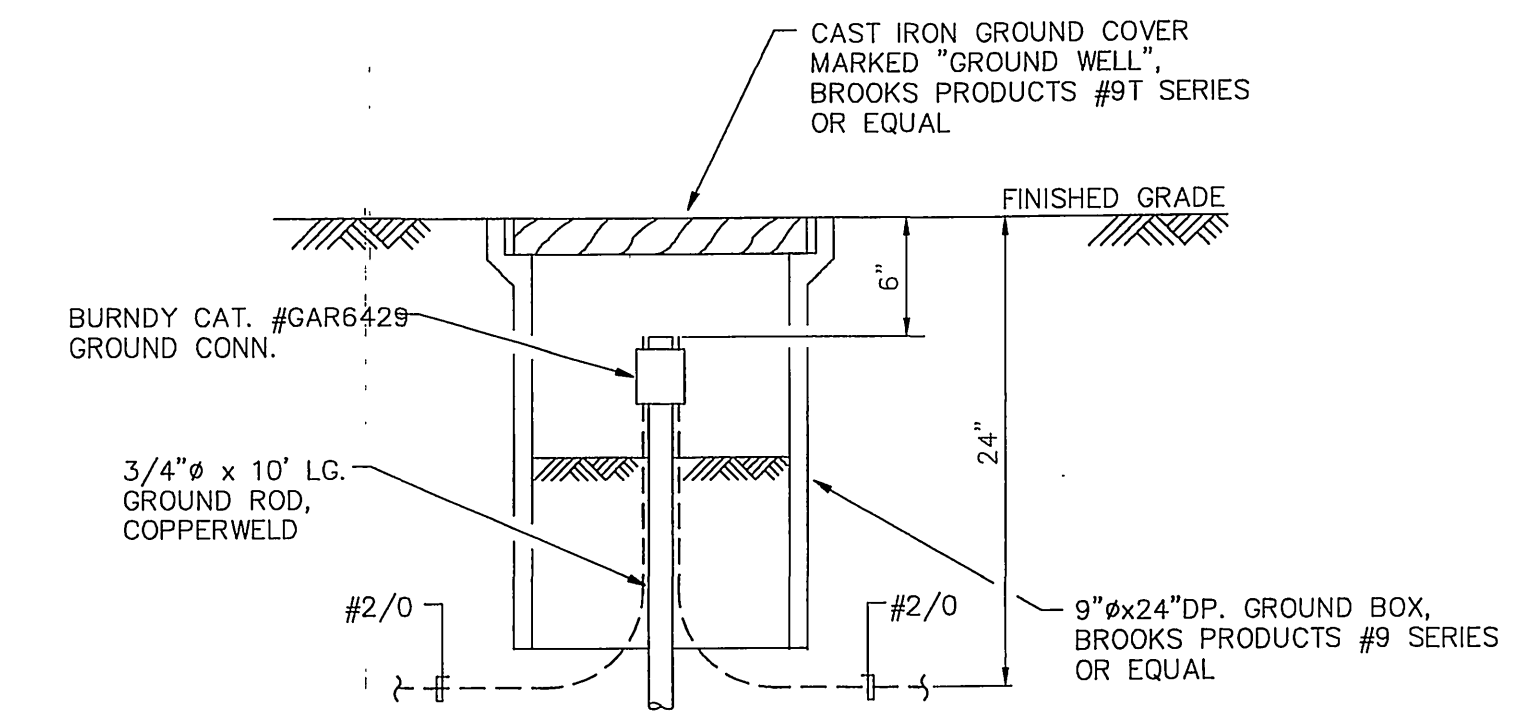


DETAIL 1
CONTROL STATION (TYP 4)
E-8

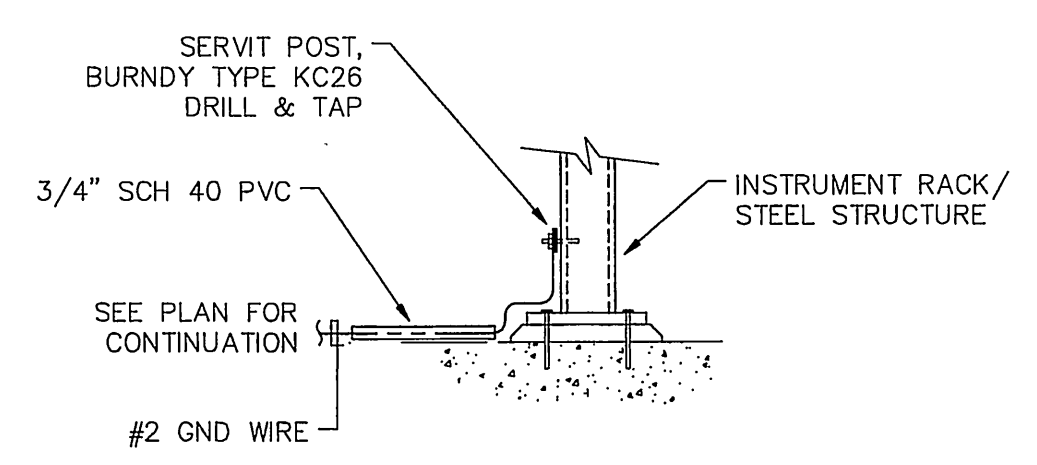
SECTION A
N.T.S. E-6



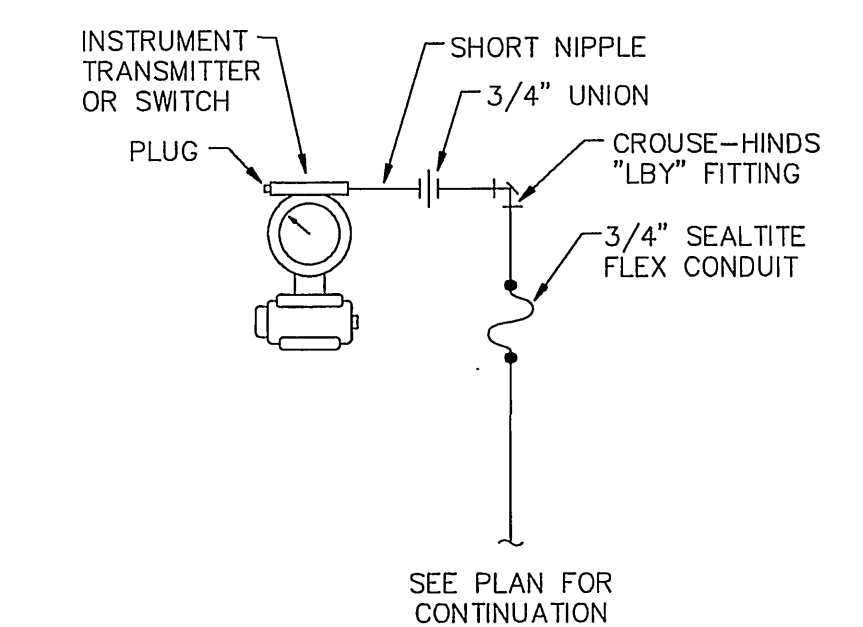
SECTION B
N.T.S. E-4



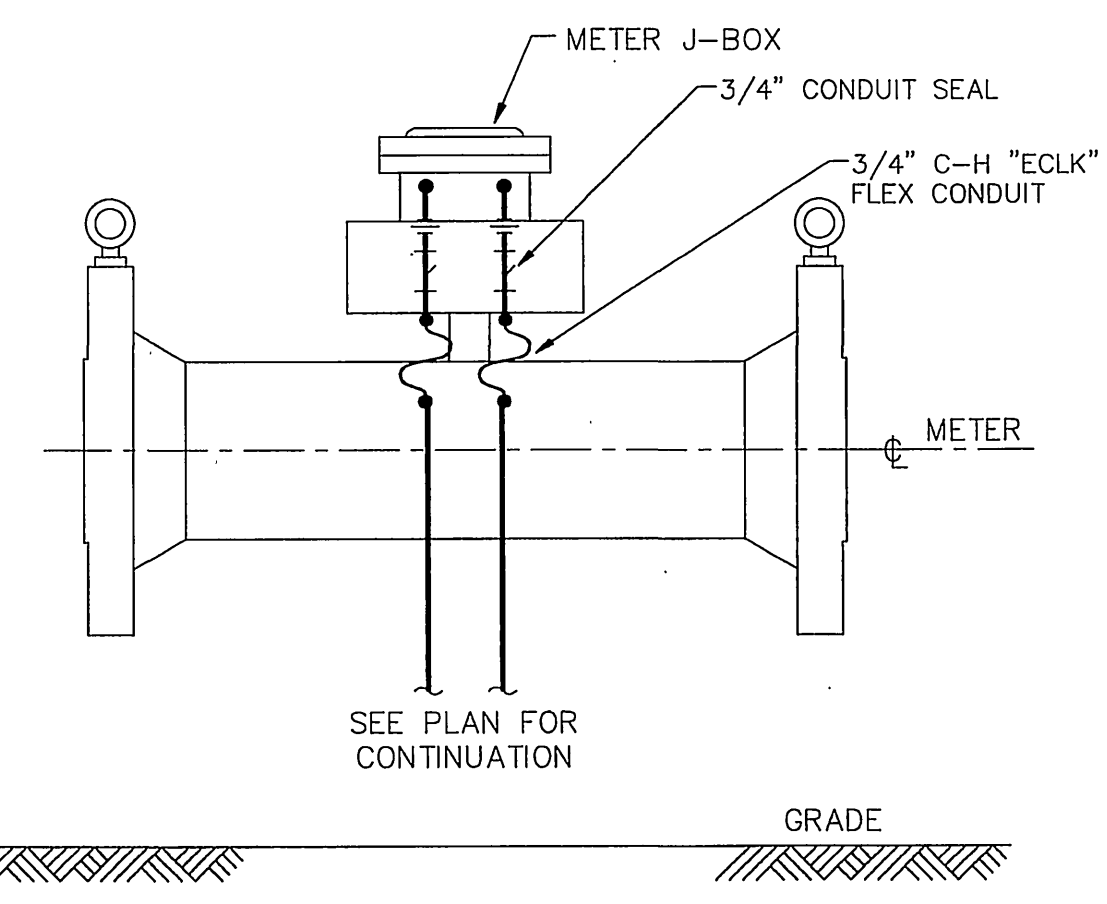
GROUND WELL
DETAIL 1
N.T.S. E-6



STRUCTURE GROUNDING
(SIMILAR FOR EQUIPMENT GROUNDS)
DETAIL 2
N.T.S. E-6



TYPICAL INSTRUMENT / SWITCH
DETAIL 3
N.T.S. E-6



DETAIL 1
TYPICAL METER E-4

KEY NOTES:

- 24 (E) CABLE SLEEVE TO BE REUSED
- 25 (N) CABLES 3/C-#2/0 & GND. APPROX. 50 FT. SUITABLE FOR CLASS 1, DIV. 2
- 26 (E) CABLE TRAY (LADDER TYPE)

NOTES:

1. ALL THE EXISTING CONDUITS WHICH WILL REMAIN ARE NOT SHOWN ON THE DRAWING.
2. ELECTRICAL INSTALLATION IN PUMP ROOM SHALL BE INSTALLED TO MEET NEC CLASS 1, DIV. 2 INSTALLATION REQUIREMENTS.
3. FOR CONDUIT & CABLE SCHEDULE SEE DWG. E-8

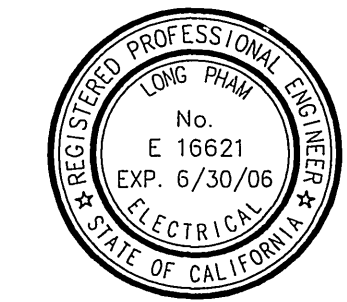
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Long Pham
LONG PHAM DATE 2/3/06
R.P.E. No. E 16621 Exp 6-30-06



MARK	REVISIONS	APPR.	DATE

DESIGNED BY: MA DRAWN BY: JJV CHECKED BY: MA

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature] DATE: 2/2/06
INSPECTOR SECTION: [Signature]
SURVEYOR: [Signature]

APPROVED BY: [Signature] DATE: 2/2/06
CITY ENGINEER

WOOD ROAD SEWAGE PUMP STATION
ELECTRICAL SECTIONS & DETAILS & GENERAL NOTES
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

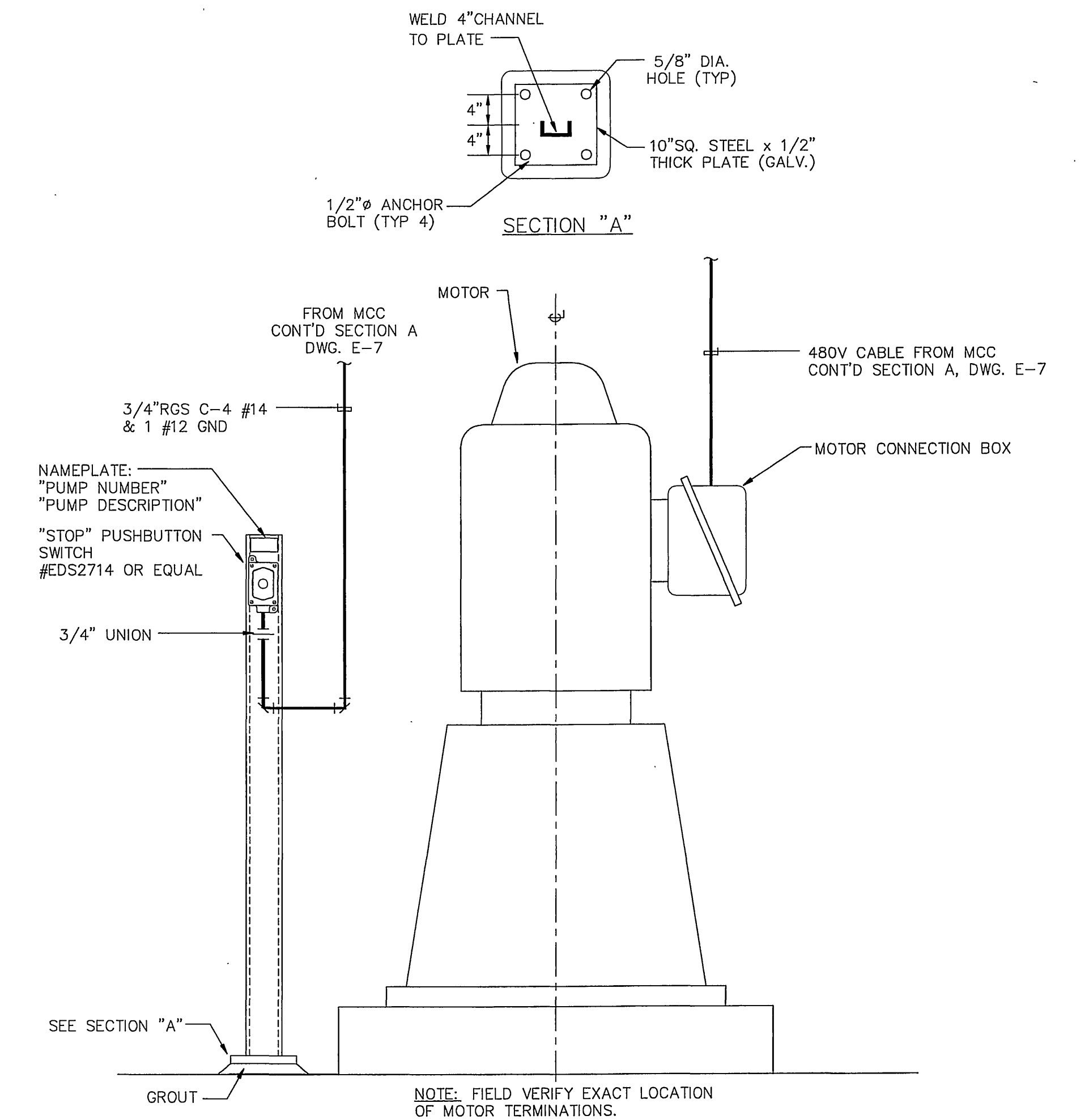
S-1944
ACCT. NO. XX
E-7
SHEET 17 OF 28
FILE NO. 3382_E-7.DWG

INDEXED 4-24-06

Y:\980923 Riverside Wood Road PS\DRAWINGS\90percent\Sub\DOCS\3382_E-7_Bldg.dwg Feb 03, 2006 1:22pm

CONDUIT & CABLE SCHEDULE

COND. OR CABLE	FROM	TO	CONDUIT SIZE	WIRE	GROUND WIRE	CABLE SIZE	NOTE
P1	UTILITY INCOMING SERVICE	UTILITY PAD-MOUNT XFMR					EXISTING TO REMAIN
P2	UTILITY PAD-MOUNT XFMR	PULL SECTION OF (E) SWITCHBOARD					EXISTING TO REMAIN
P3	(E) BACK-UP GENERATOR	ATS INSIDE (E) SWITCHBOARD					EXISTING TO REMAIN
P4	SOFT STARTER IN NEW MCC SECTION	(N) 100HP MOTOR/PUMP - P1				3/C-#2/0 & GND	NEW CABLE - APPROX. 50FT. SUITABLE FOR CLASS I, DIV. 2. (NOTE 2)
P5	SOFT STARTER IN NEW MCC SECTION	(N) 100HP MOTOR/PUMP - P2				3/C-#2/0 & GND	NEW CABLE - APPROX. 50FT. SUITABLE FOR CLASS I, DIV. 2. (NOTE 2)
P6	SOFT STARTER IN NEW MCC SECTION	(N) 100HP MOTOR/PUMP - P3				3/C-#2/0 & GND	NEW CABLE - APPROX. 50FT. SUITABLE FOR CLASS I, DIV. 2. (NOTE 2)
P7	SOFT STARTER IN NEW MCC SECTION	(N) 100HP MOTOR/PUMP - P4				3/C-#2/0 & GND	NEW CABLE - APPROX. 50FT. SUITABLE FOR CLASS I, DIV. 2. (NOTE 2)
P8	(E) PANEL "A"	(N) PLC IN NEW MCC SECTION		2 #12	#12	-	
P9	EXIST. MCC SECTION	(N) SUPPLY FAN		3 #12	#10	-	NOTE 3
P10	EXIST. MCC SECTION	(N) EXHAUST FAN		3 #12	#10	-	NOTE 3
P11	(N) PLC PANEL	(N) FLOW METER	3/4"C	2 #12	#12		
P12	(N) PLC PANEL	(N) DIESEL PUMP #1	1"C	2 #14	#12		24VDC CONTROL PANEL POWER
P13	(N) PLC PANEL	(N) DIESEL PUMP #2	1"C	2 #14	#12		24VDC CONTROL PANEL POWER
C1	(N) PLC PANEL	(N) GATE INTRUSION SWITCH #1	1"C		4 #14	#12	
C2	(N) GATE INTRUSION SWITCH #1	(N) GATE INTRUSION SWITCH #2	1"C		2 #14	#12	
C3	(N) PLC PANEL	(N) DIESEL PUMP #1	1"C		10 #13	#12	
C4	(N) PLC PANEL	(N) DIESEL PUMP #2	1"C		10 #14	#12	
C5	(N) PLC PANEL	(N) DOOR INTRUSION SWITCH	3/4"C		2 #14	#12	
C6	(N) PLC PANEL	(N) DOOR INTRUSION	3/4"C		2 #14	#12	
C7	MCC	P-00-7-1	3/4"C	4 #14	#12		
C8	MCC	P-00-7-2	3/4"C	4 #14	#12		
C9	MCC	P-00-7-3	3/4"C	4 #14	#12		
C10	MCC	P-00-7-4	3/4"C	4 #14	#12		
I1	(N) PLC PANEL	(N) FLOW METER	3/4"C		(2) 1 PR #18 SHLD		
I2	(N) PLC PANEL	(N) LIT-00-7-1	3/4"C		(2) 1 PR #18 SHLD		
I3	(N) PLC PANEL	(N) LIT-00-7-2	3/4"C		(2) 1 PR #18 SHLD		
I4	(N) PLC PANEL	(N) DIESEL PUMP #1	1"C		(5) 1 PR #18 SHLD		
I5	(N) PLC PANEL	(N) DIESEL PUMP #2	1"C		(5) 1 PR #18 SHLD		
CM1	(N) PLC PANEL	(E) RTU PANEL	1"C				PULL EXIST. COMM. CABLE VIA NEW 3/4"C
CM2	(N) PLC PANEL	(N) DIESEL PUMP #1	1"C		(2) 2 PR #28		BELDEN #8132
CM3	(N) PLC PANEL	(N) DIESEL PUMP #2	1"C		(2) 2 PR #28		BELDEN #8132



DETAIL 1
N.T.S. E-7

**ISSUED
FOR BID**
FEBRUARY 3, 2006

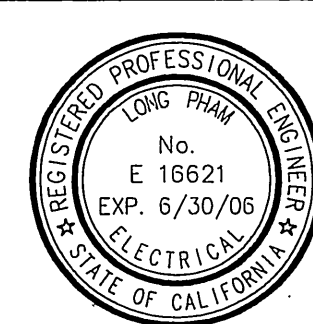
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[Signature]
LONG PHAM DATE 2/3/06
R.P.E. No. E 16621 Exp 6-30-06



DESIGNED BY MA DRAWN BY JUV CHECKED BY MA

**CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT**

APPROVED BY: *[Signature]* DATE: 2/7/06
INSPECTION SECTION SURVEYOR: *[Signature]*
CITY ENGINEER: *[Signature]*

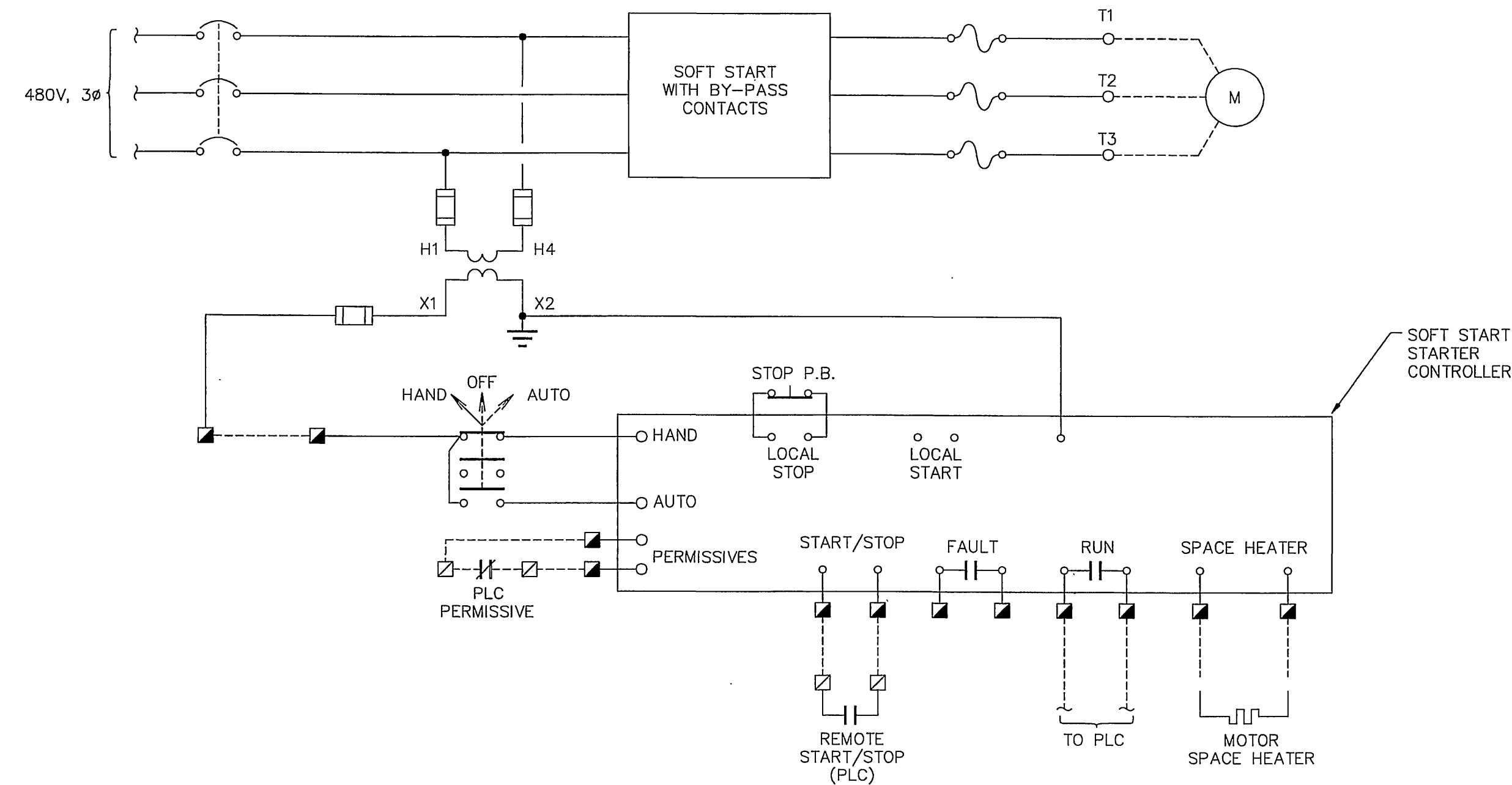
WOOD ROAD SEWAGE PUMP STATION
CONDUIT & CABLE SCHEDULE

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

ACCT. NO. XX
E-8
SHEET 18 OF 28
FILE NO. 3382_E-8.DWG

INDEXED 4-24-06 LPH

X:\980093 Riverside Wood Road PS\DRAWINGS\Supercent\Sub\CD\CS\3382_E-8_Bld.dwg Feb 03, 2006 - 1:22pm



TYPICAL SOFT START SCHEMATIC DIAGRAM

ISSUED FOR BID
FEBRUARY 3, 2006

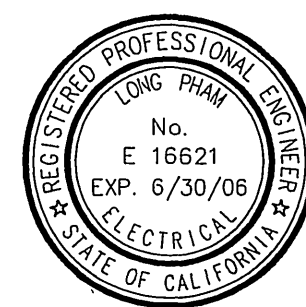
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Fax: (909) 341-6389

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LONG PHAM *[Signature]* DATE 2/3/06
R.P.E. No. E 16621 Exp 6-30-06



MARK	REVISIONS	APPR	DATE

DESIGNED BY MA DRAWN BY JJV CHECKED BY MA

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PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY	DATE
PRINCIPAL ENGINEER	<i>[Signature]</i>	2/3/06	CITY ENGINEER	<i>[Signature]</i>
INSPECTION SECTION SURVEYOR				

WOOD ROAD SEWAGE PUMP STATION

TYPICAL PUMP SCHEMATIC

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944

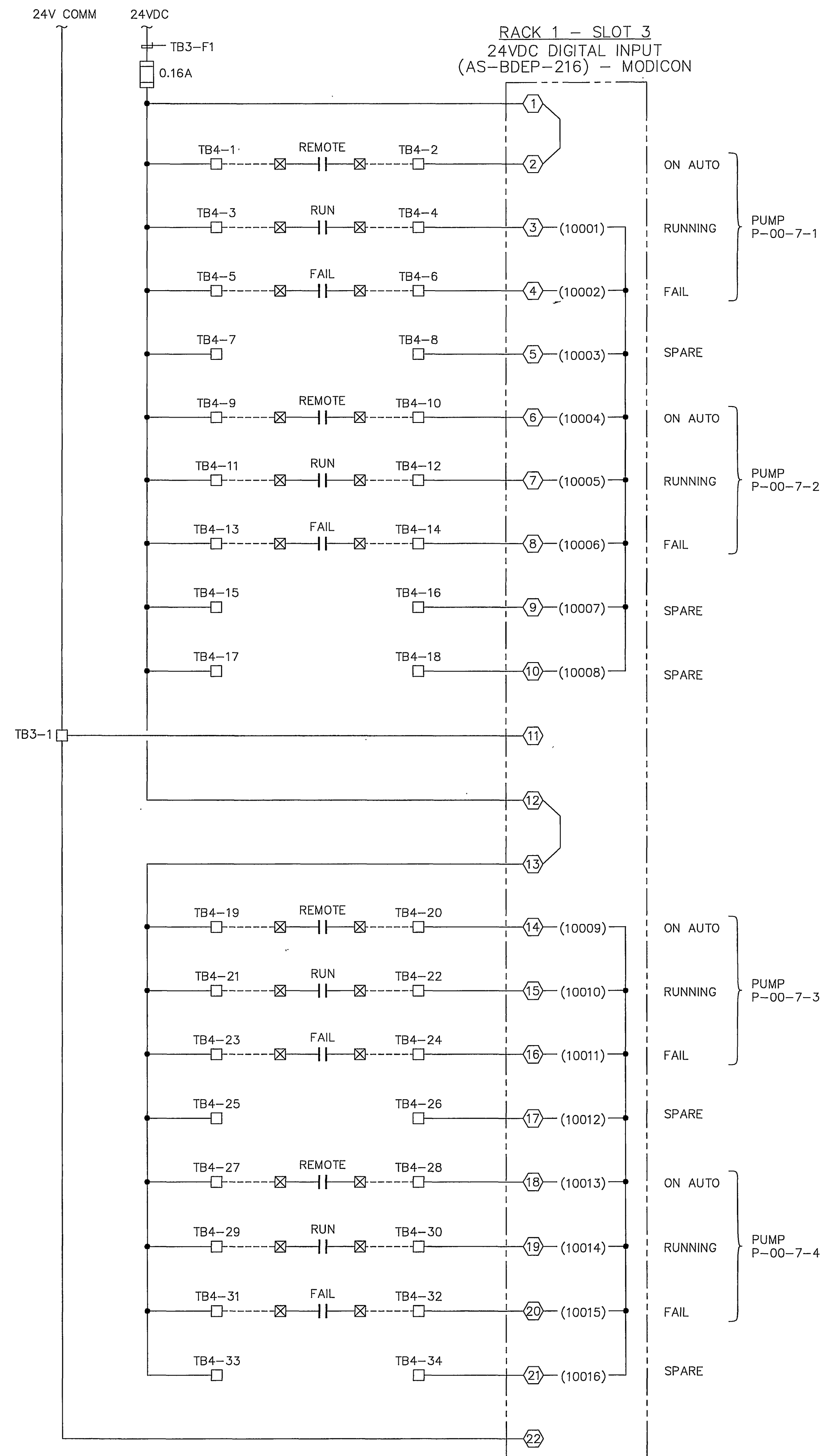
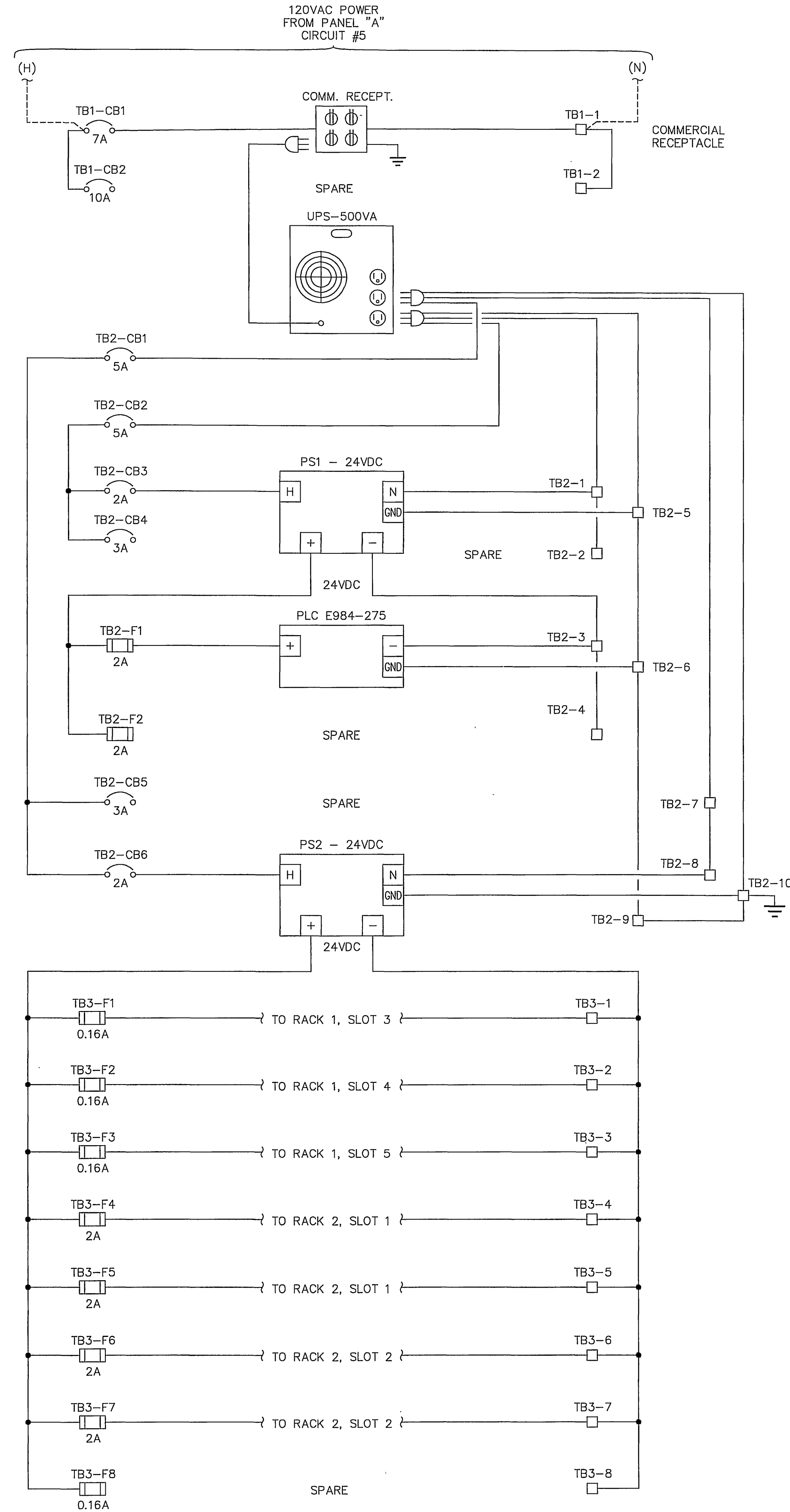
ACCT. NO. XX

E-9

SHEET 19 OF 28

FILE NO. 3382_E-9.DWG

INDEXED 4-24-06 *[Signature]*



- LEGEND:**
- TERMINAL ON PLC MODULE
 - FUSED TERMINAL IN PLC PANEL
 - TERMINAL IN PLC PANEL
 - ⊗ TERMINAL IN MCC
 - ⊗ CIRCUIT BREAKER IN PLC PANEL
 - - - FIELD WIRING
 - INTERNAL WIRING

NOTES:

1. ALL INSTRUMENT TAGS ARE UNDERSTOOD TO BE PREFIXED BY "03", UNLESS OTHERWISE INDICATED.

ISSUED FOR BID
FEBRUARY 3, 2006

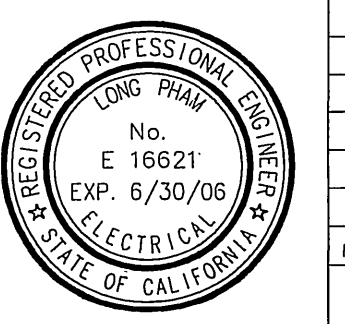
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R.P.E. No. E 16621
DATE: 2/3/06
Exp 6-30-06



MARK	REVISIONS	APPR.	DATE

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PUBLIC WORKS DEPARTMENT

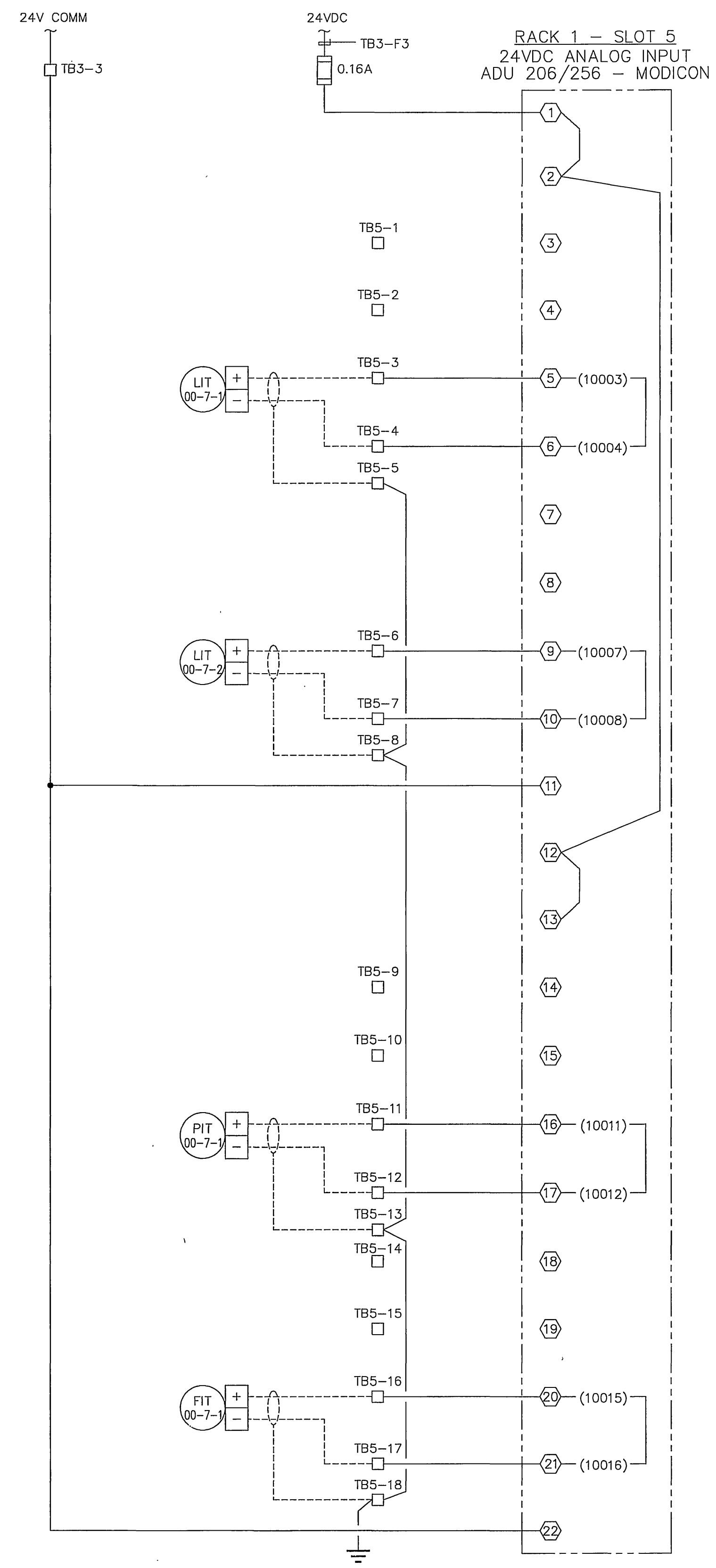
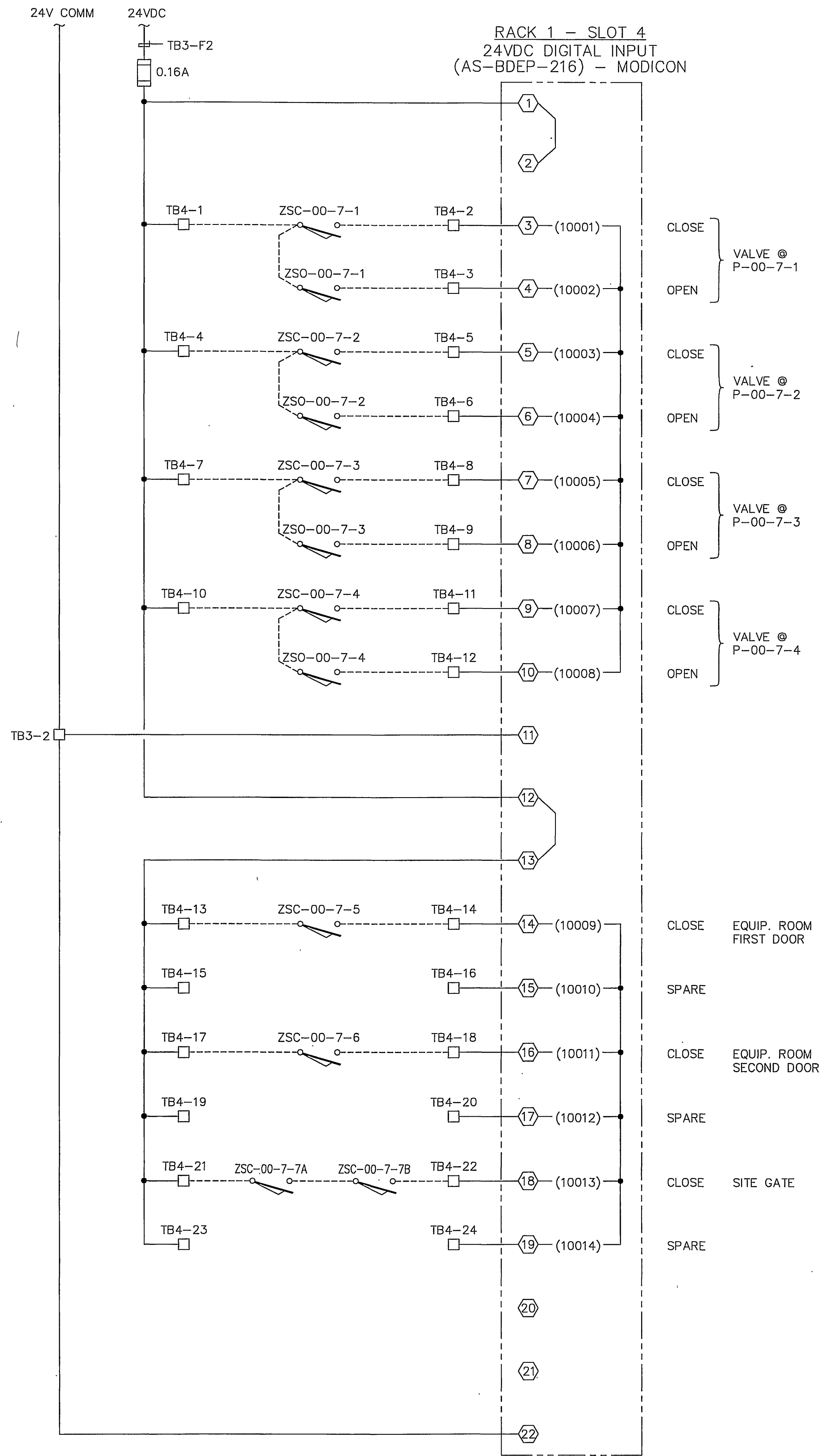
APPROVED BY: *[Signature]* DATE: *[Date]*
INSPECTION SECTION SURVEYOR

APPROVED BY: *[Signature]* DATE: *[Date]*
CITY ENGINEER

WOOD ROAD SEWAGE PUMP STATION
PLC I/O WIRING DIAGRAM
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
ACCT. NO. XX
E-10
SHEET 20 OF 28
FILE NO. 3382_E-10.DWG

INDEXED 4-24-06 ftk



- LEGEND:**
- TERMINAL ON PLC MODULE
 - FUSED TERMINAL IN PLC PANEL
 - TERMINAL IN PLC PANEL
 - ⊗ TERMINAL IN MCC
 - ⊞ CIRCUIT BREAKER IN PLC PANEL
 - - - FIELD WIRING
 - INTERNAL WIRING

NOTES:
 1. ALL INSTRUMENT TAGS ARE UNDERSTOOD TO BE PREFIXED BY "03", UNLESS OTHERWISE INDICATED.

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MARK	REVISIONS	DATE	APPR. DATE

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 PRINCIPAL ENGINEER
 INSPECTOR SECTION
 SURVEYOR

APPROVED BY: *[Signature]* DATE: *[Date]*
 CITY ENGINEER

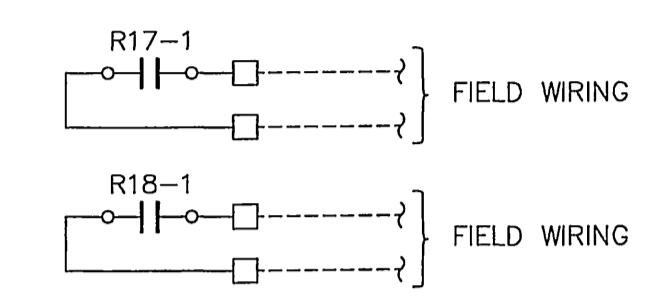
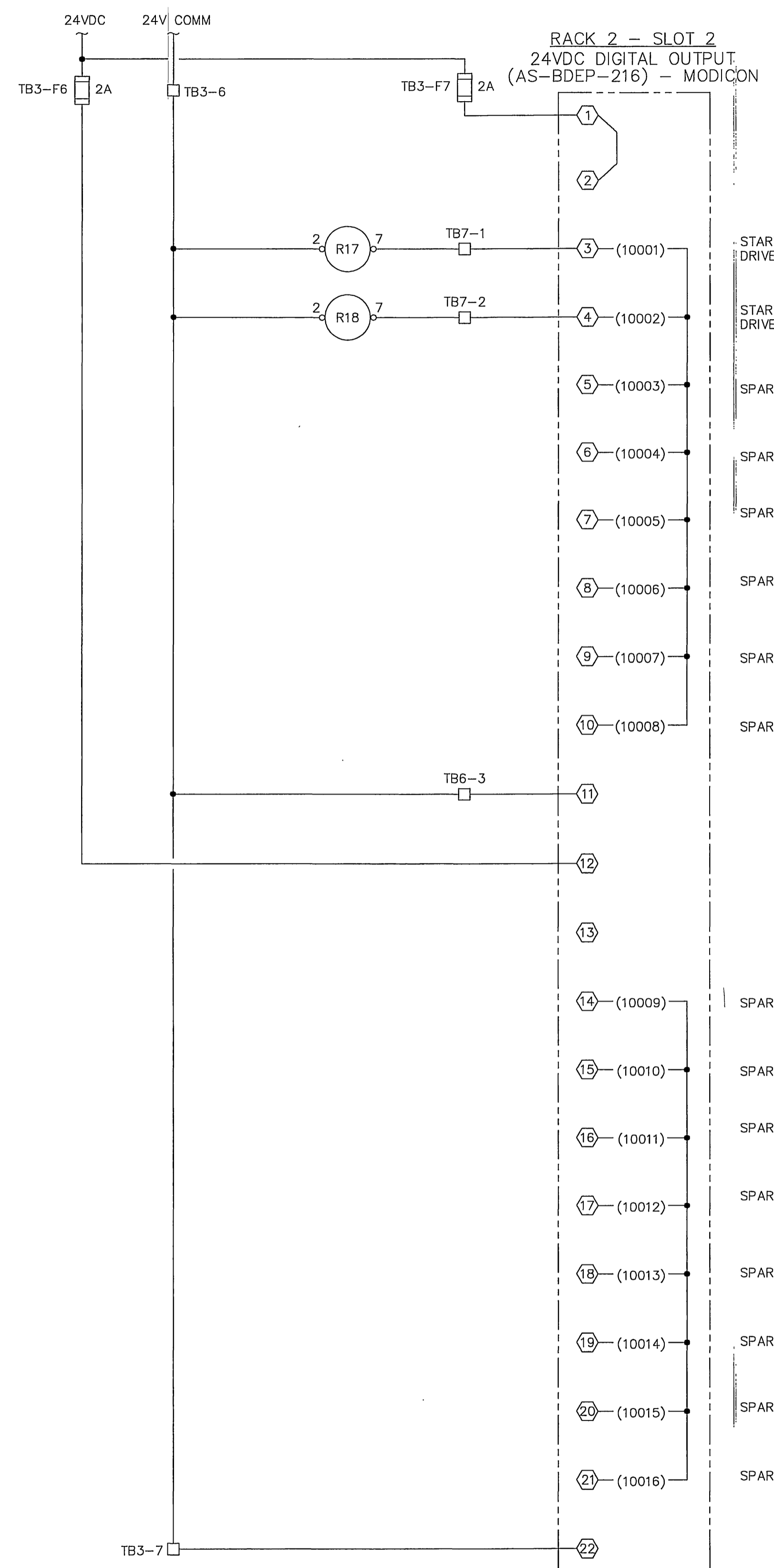
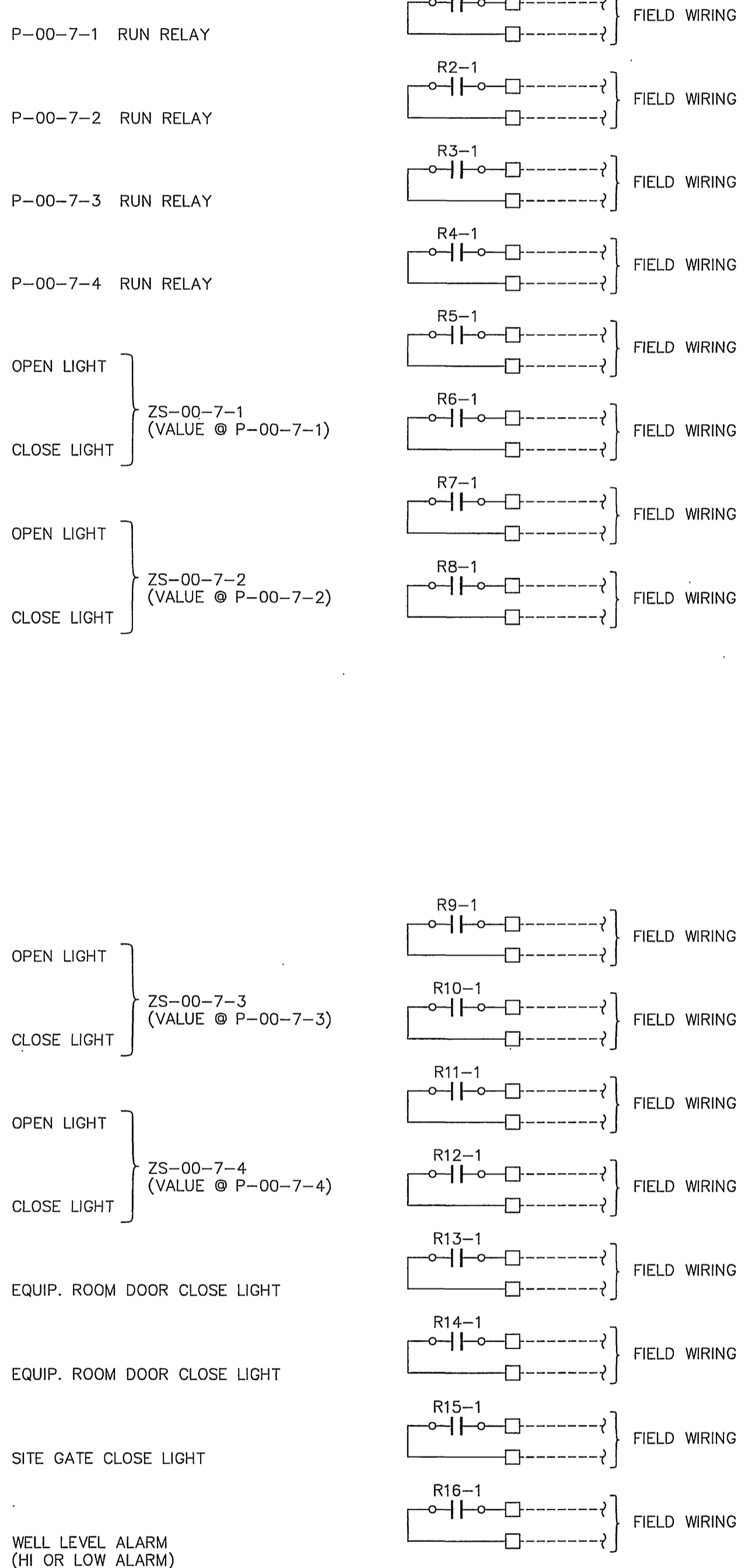
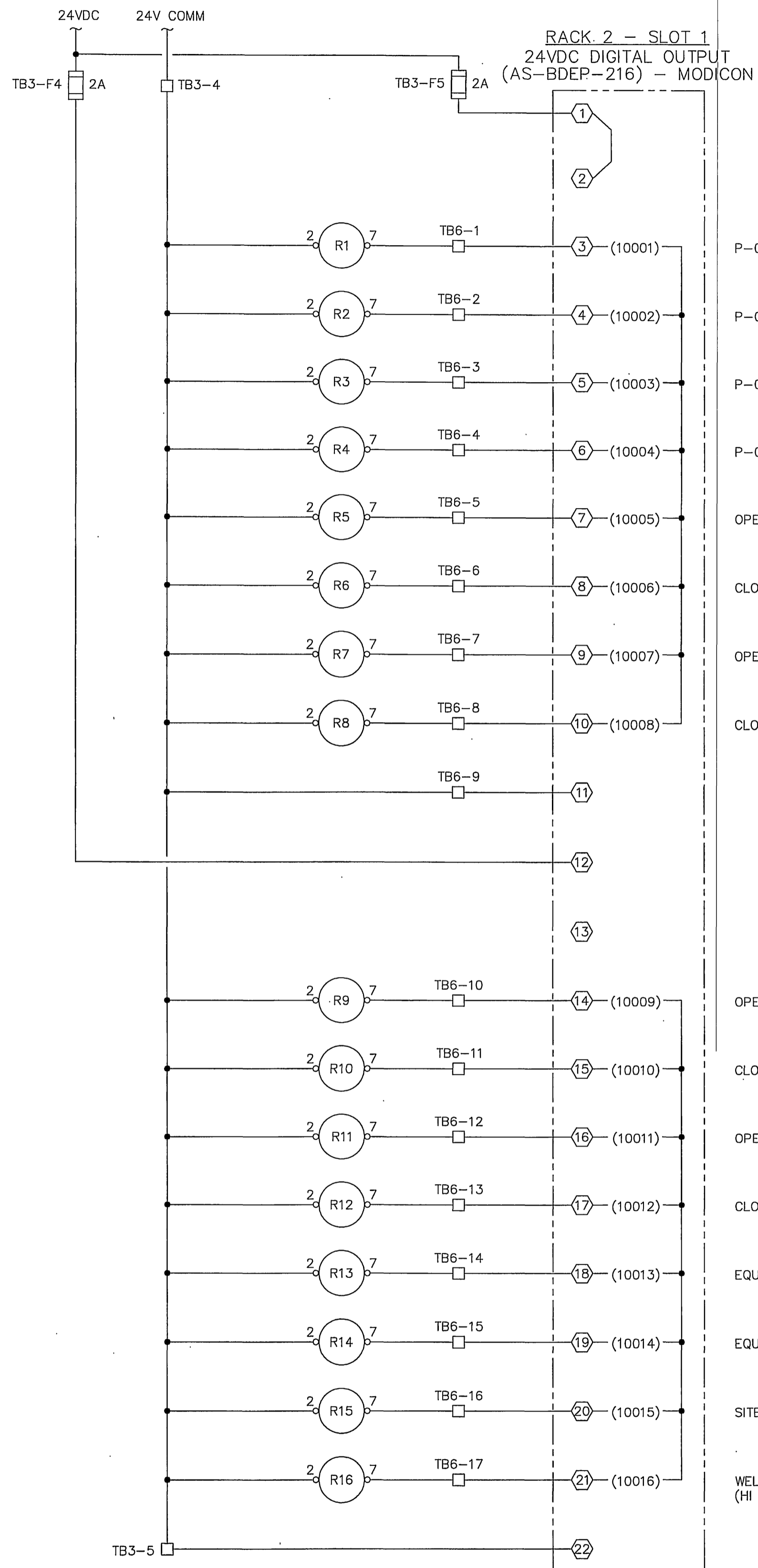
WOOD ROAD SEWAGE PUMP STATION
PLC I/O WIRING DIAGRAM

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
 ACCT. NO. XX
E-11
 SHEET 21 OF 28
 FILE NO. 3382_E-11.DWG

INDEXED 4-24-06 *[Signature]*

Y:\990093 Riverside Wood Road PS\DRAWINGS\90Percent\Sub\CD\CS\3382_E-11.dwg Feb 03, 2006 1:23pm



- LEGEND:**
- TERMINAL ON PLC MODULE
 - FUSED TERMINAL IN PLC PANEL
 - TERMINAL IN PLC PANEL
 - TERMINAL IN MCC
 - CIRCUIT BREAKER IN PLC PANEL
 - FIELD WIRING
 - INTERNAL WIRING
 - RELAY #1
 - AUX. CONTACT (N.O.) OF RELAY #1
 - 2, 7 ARE NUMBERS ON RELAY SOCKET

NOTES:
1. ALL INSTRUMENT TAGS ARE UNDERSTOOD TO BE PREFIXED BY "03", UNLESS OTHERWISE INDICATED.

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FEBRUARY 3, 2006

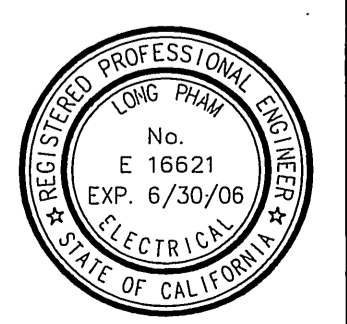
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R.P.E. No. E 16621 Exp 6-30-06



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INSPECTION SECTION SURVEYOR

APPROVED BY: *[Signature]* DATE: 2/6/06
CITY ENGINEER

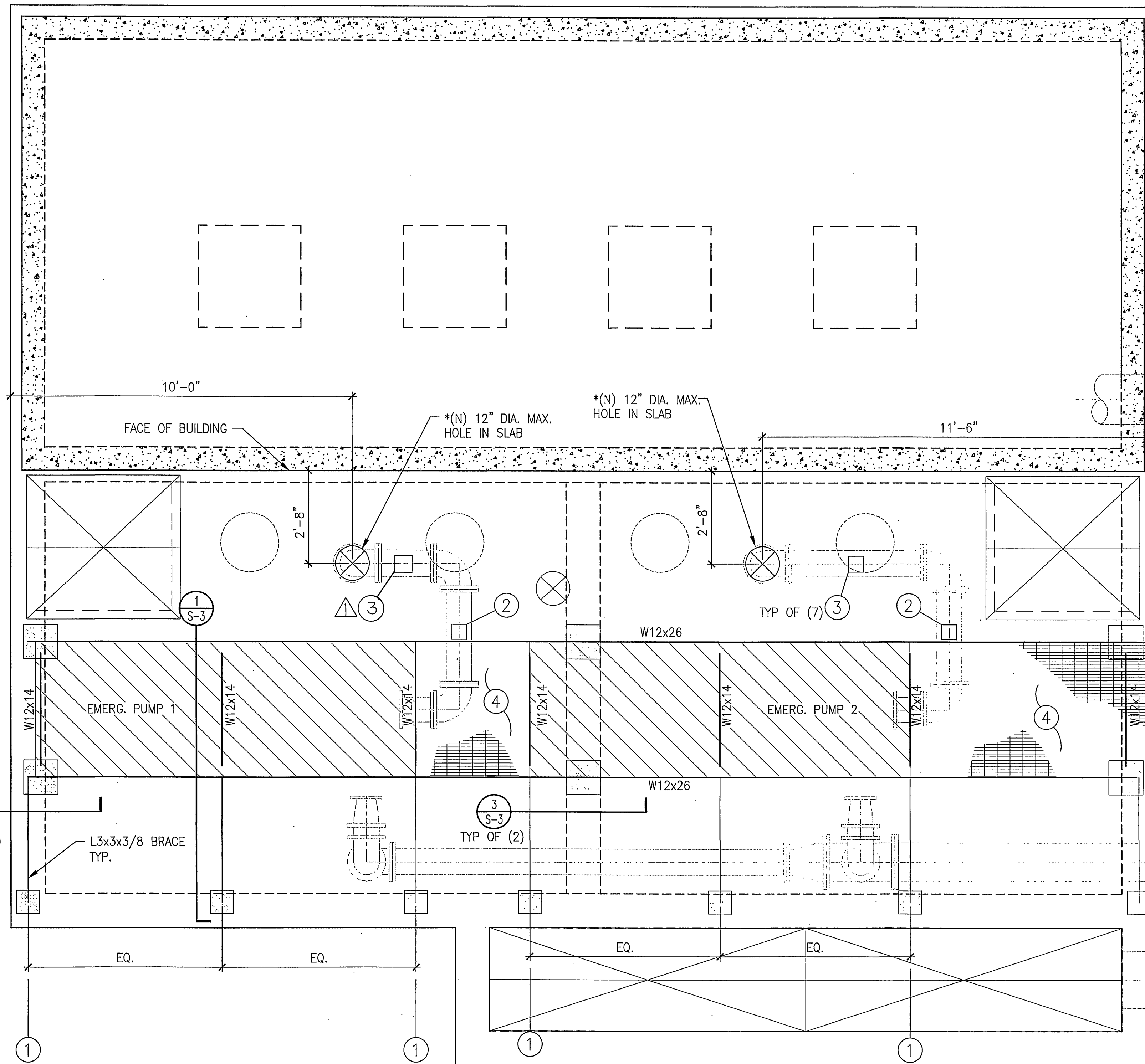
WOOD ROAD SEWAGE PUMP STATION

PLC I/O WIRING DIAGRAM

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
ACCT. NO. XX
E-12
SHEET 22 OF 28
FILE NO. 3382_E-12.DWG

INDEXED 4-24-06 *[Signature]*



NOTES:

1. END OF PUMPING UNIT ENCLOSURE, SEE SITE PLAN.
2. INTALL CRADLED PIPE SUPPORT; SECURE TO W12X26.
3. INSTALL CRADLED PIPE SUPPORT; SECURE TO SLAB.
4. GALVANIZED STEEL GRATING (2 PLACES), BEARING BAR SIZE - 1 1/4" X 1/8" SPACED @ 1 3/8" O.C.; CROSS BARS SPACED @ 4" O.C.

* VERIFY REQUIRED LINK-SEAL HOLE SIZE.

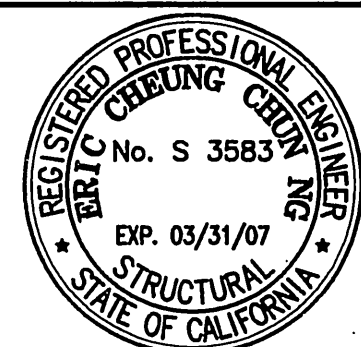
EMERGENCY BYPASS PUMPS PLAN
1/2"=1'-0"



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Fax. (658) 566-6844

PLANS PREPARED UNDER SUPERVISION OF
Eric Cheung 2-7-06
ERIC CHEUNG CHUN NG DATE
R.P.E. No. S 3583 Exp 3-31-07



ADD PIPE SUPPORT	ETH	3/21/06
DESIGNED BY	ETH	
DRAWN BY	KO, CD	
CHECKED BY	MLT	

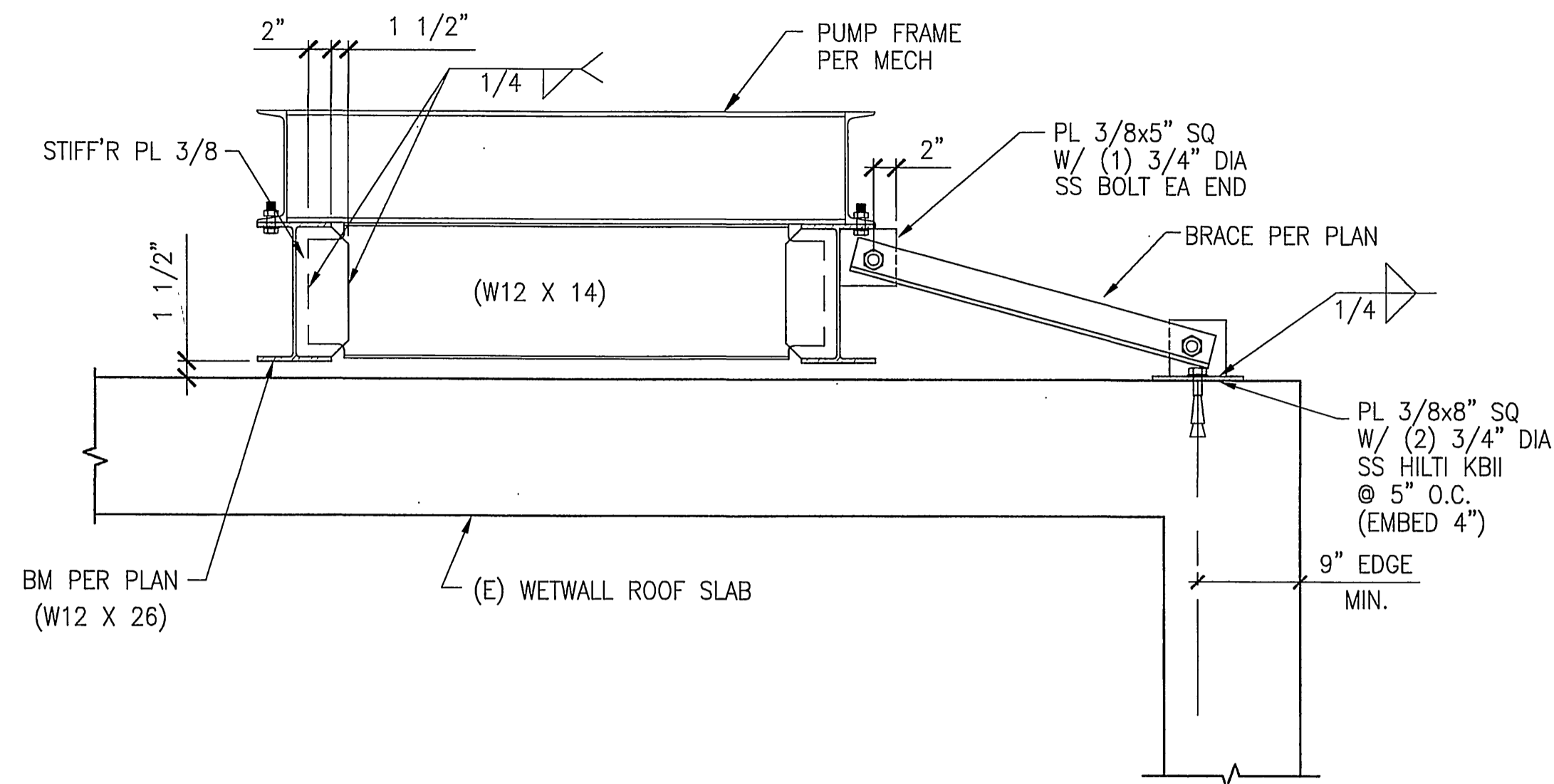
CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		
APPROVED BY	BY	DATE
PRINCIPAL ENGINEER	<i>[Signature]</i>	
INSPECTION SECTION SUPERVISOR		
APPROVED BY	BY	DATE
CITY ENGINEER	<i>[Signature]</i>	2/6/06

WOOD ROAD SEWAGE PUMP STATION
STRUCTURAL PLAN
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

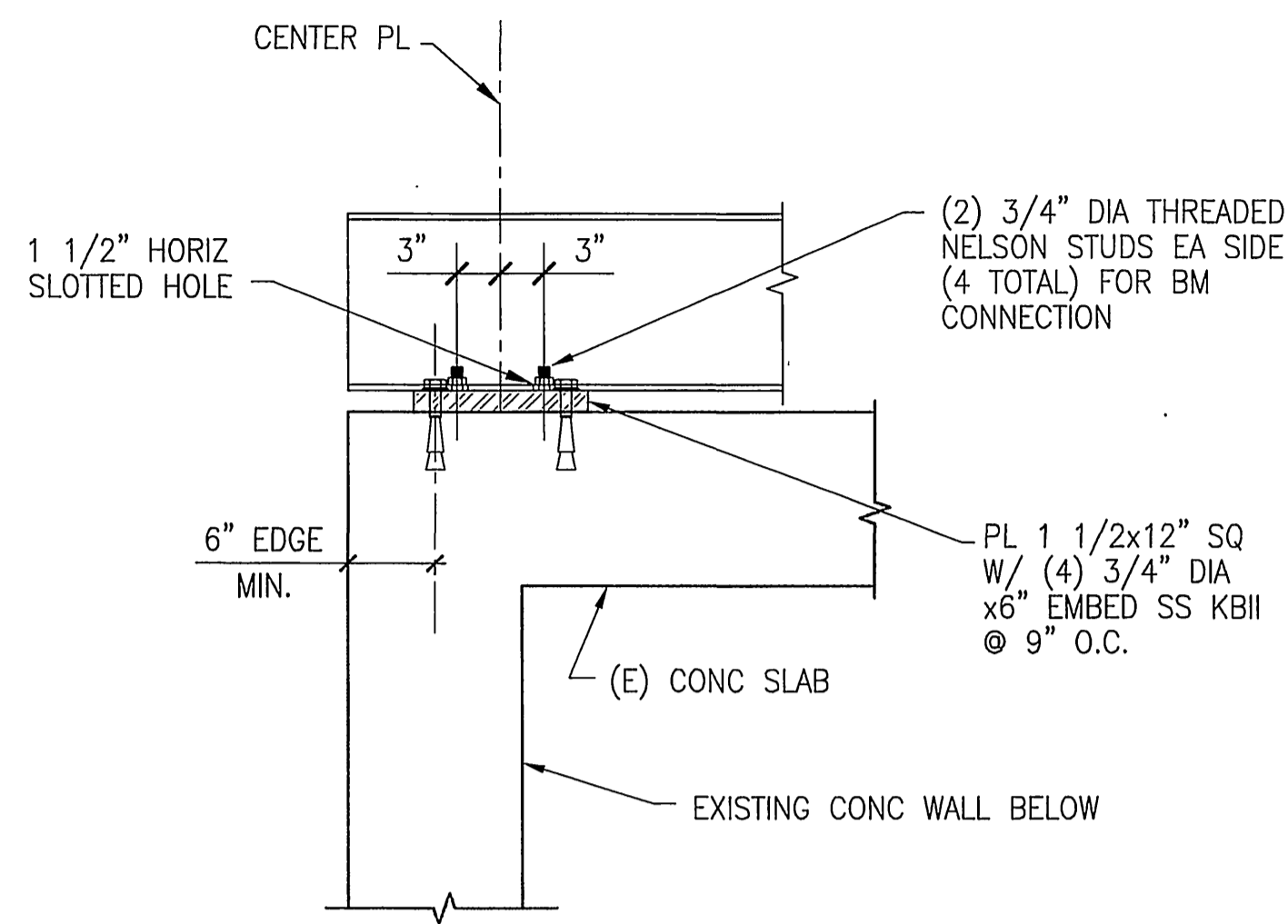
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ACCT. NO. XX
S-2
SHEET 25 OF 28
FILE NO.

INDEXED 4-24-06 Lff

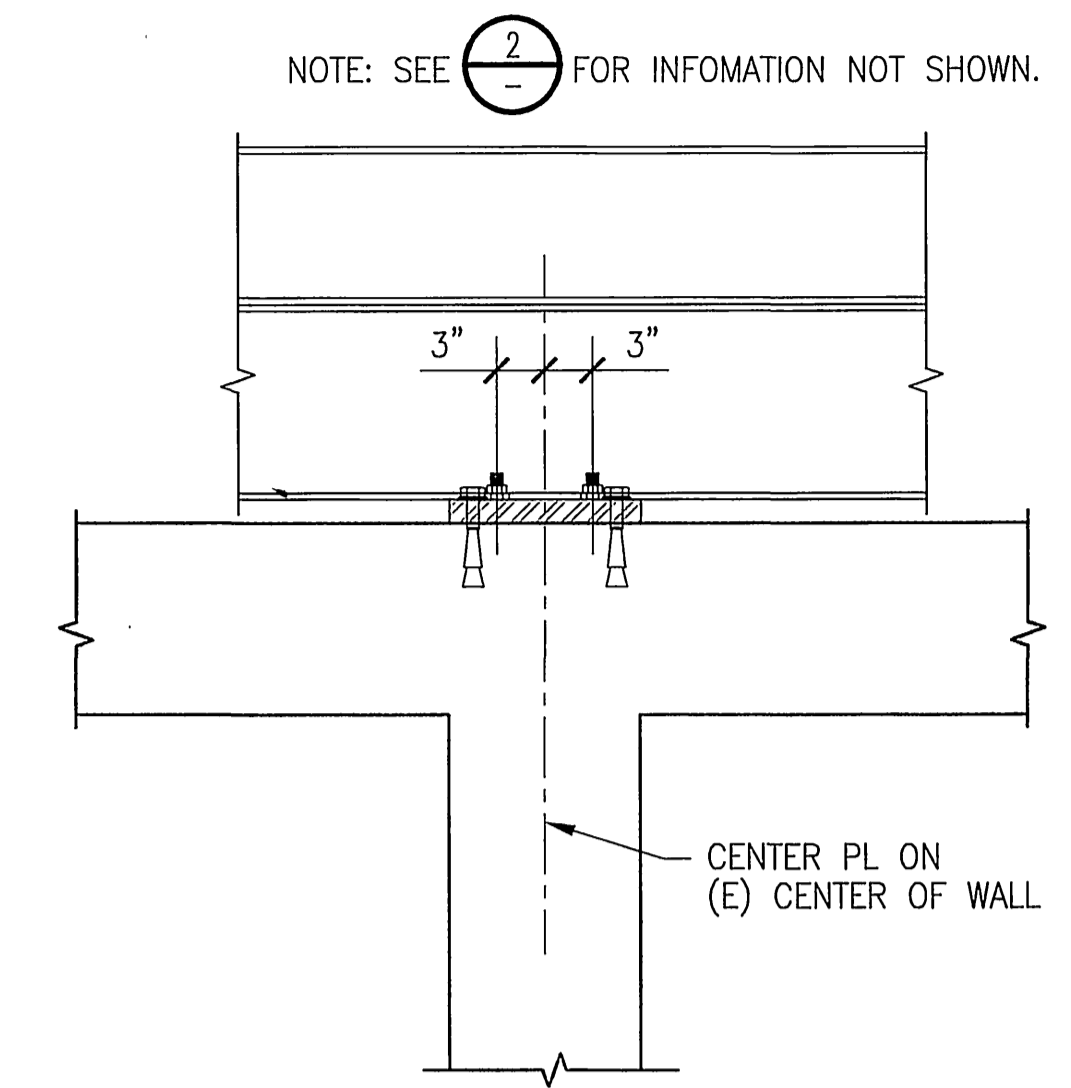
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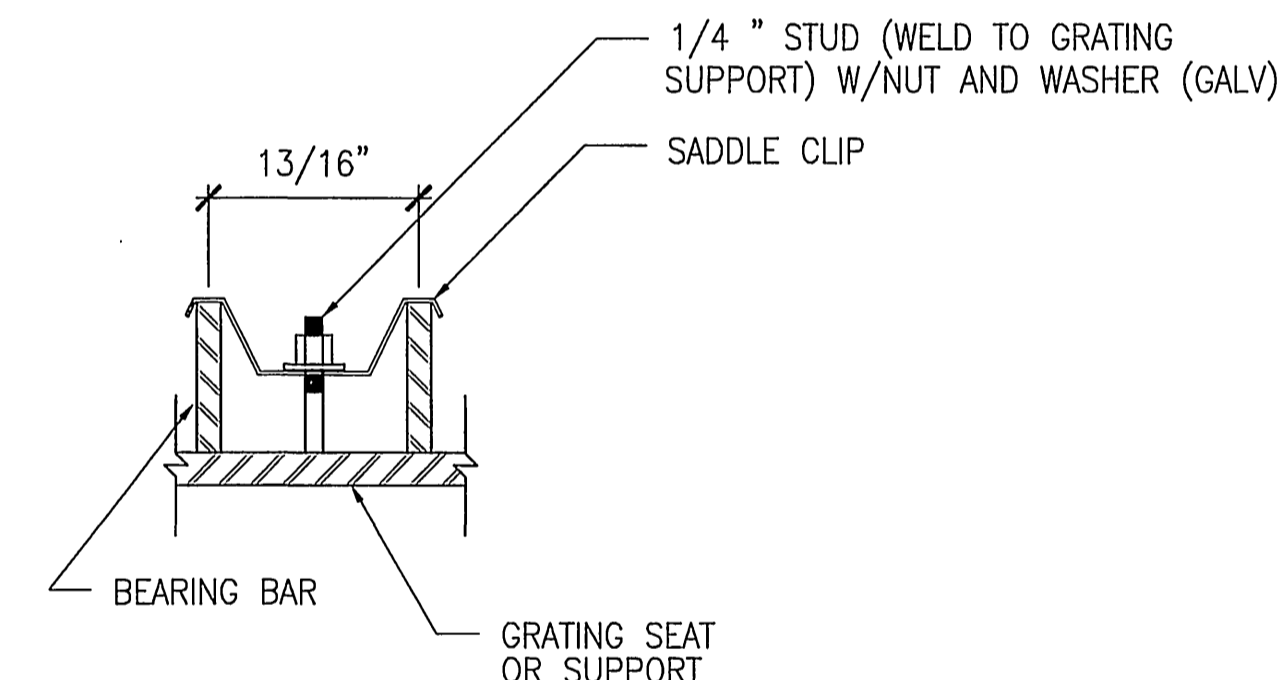
BEAM LATERAL BRACING DETAIL 1
1"=1'-0" S-2



BEAM SEAT DETAIL 2
1"=1'-0" S-2



BEAM SEAT DETAIL 3
1"=1'-0" S-2



- NOTES:
1. PROVIDE A MINIMUM OF 4 CLIPS PER GRATING PANEL. APPROX 4" FROM PANEL CORNERS. MAXIMUM CLIP SPACING AT 36" O.C.
 2. STUD, NUT, WASHER AND CLIP TO BE OF SAME MATERIAL AS GRATING SEAT OR SUPPORT.
 3. TOUCH UP GALV AFTER WELDING AND NUT HAS BEEN TIGHTENED

GRATING ANCHOR DETAIL 4
N.T.S.



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Eric Cheung 2-6-06
ERIC CHEUNG CHUN NG DATE
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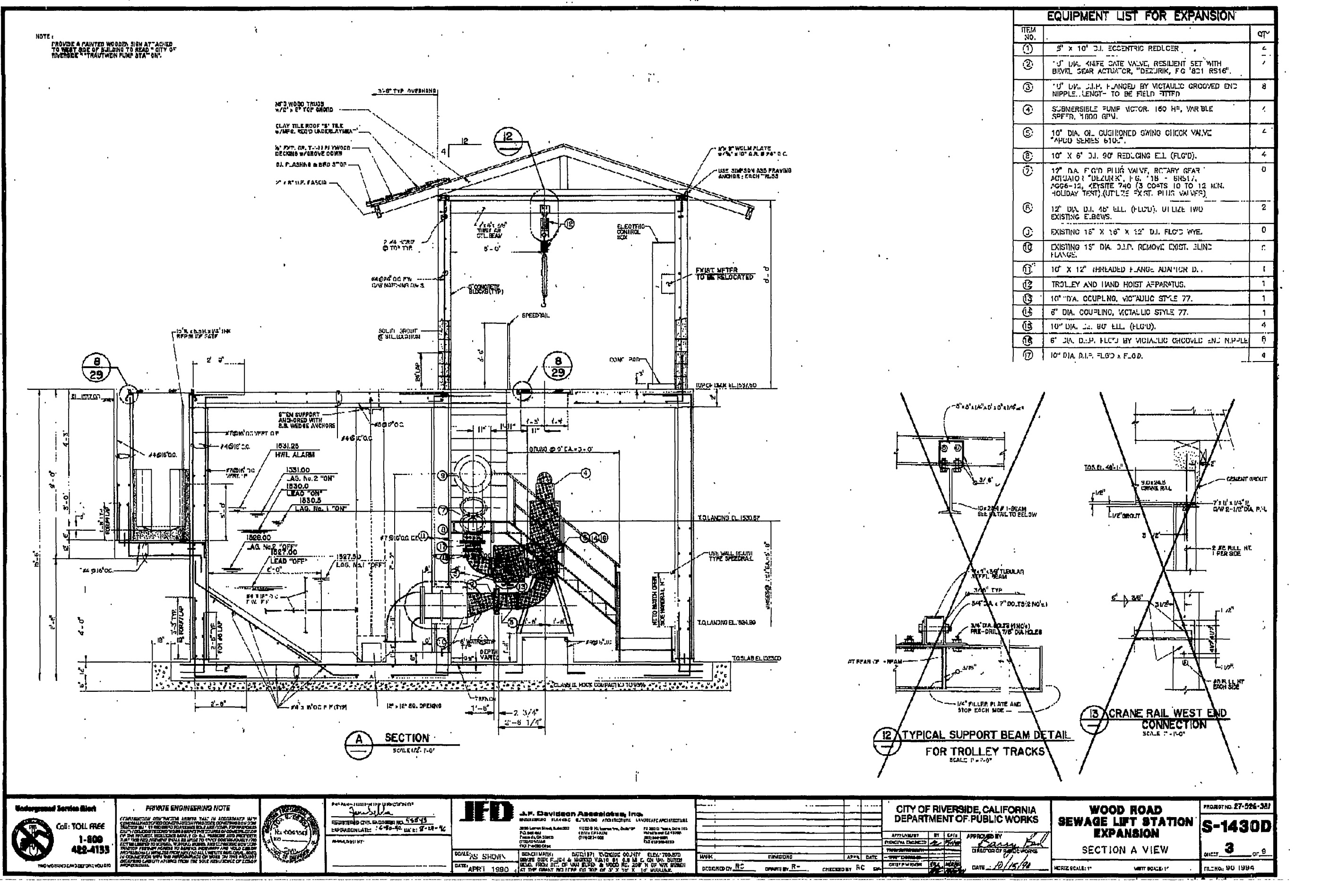
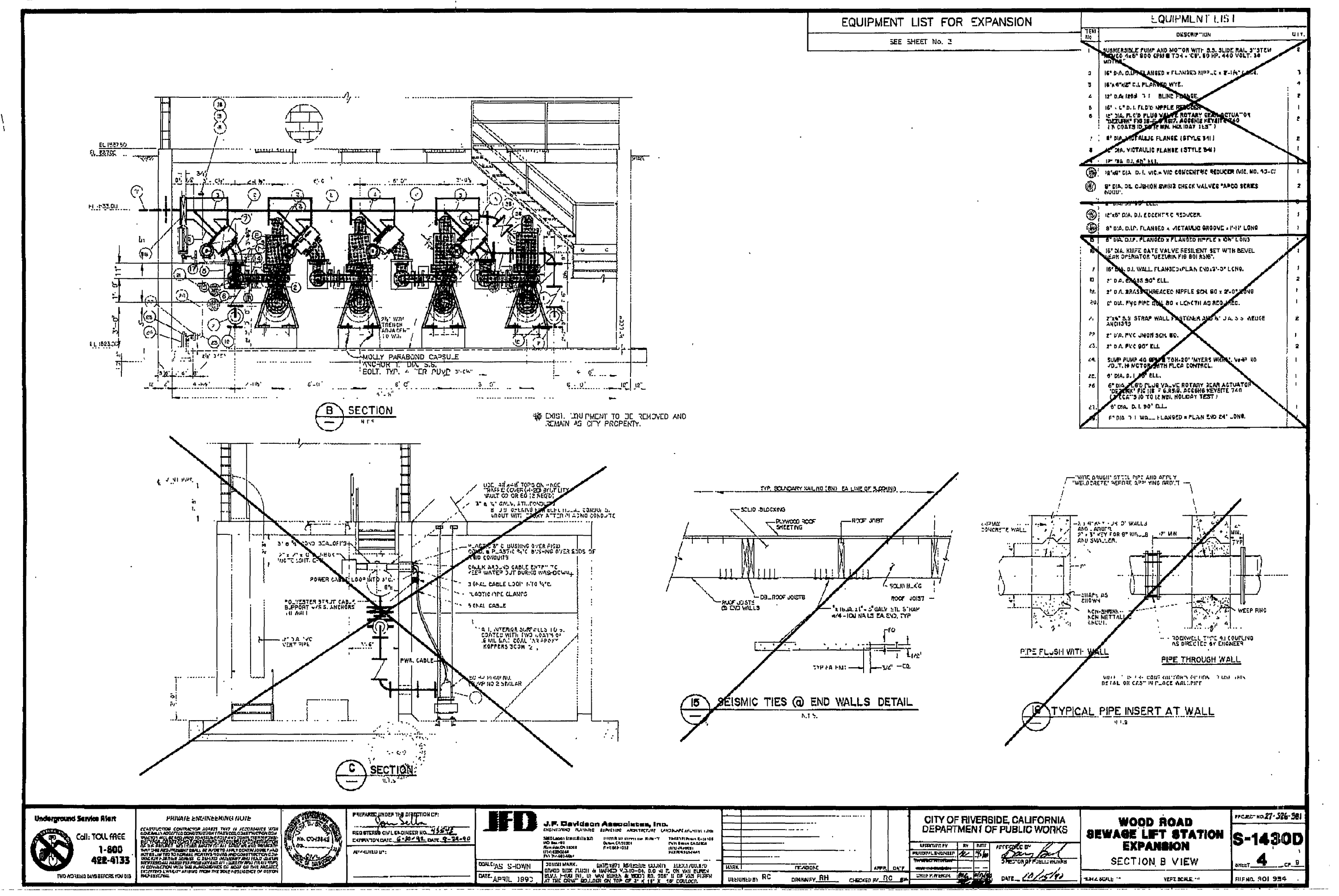
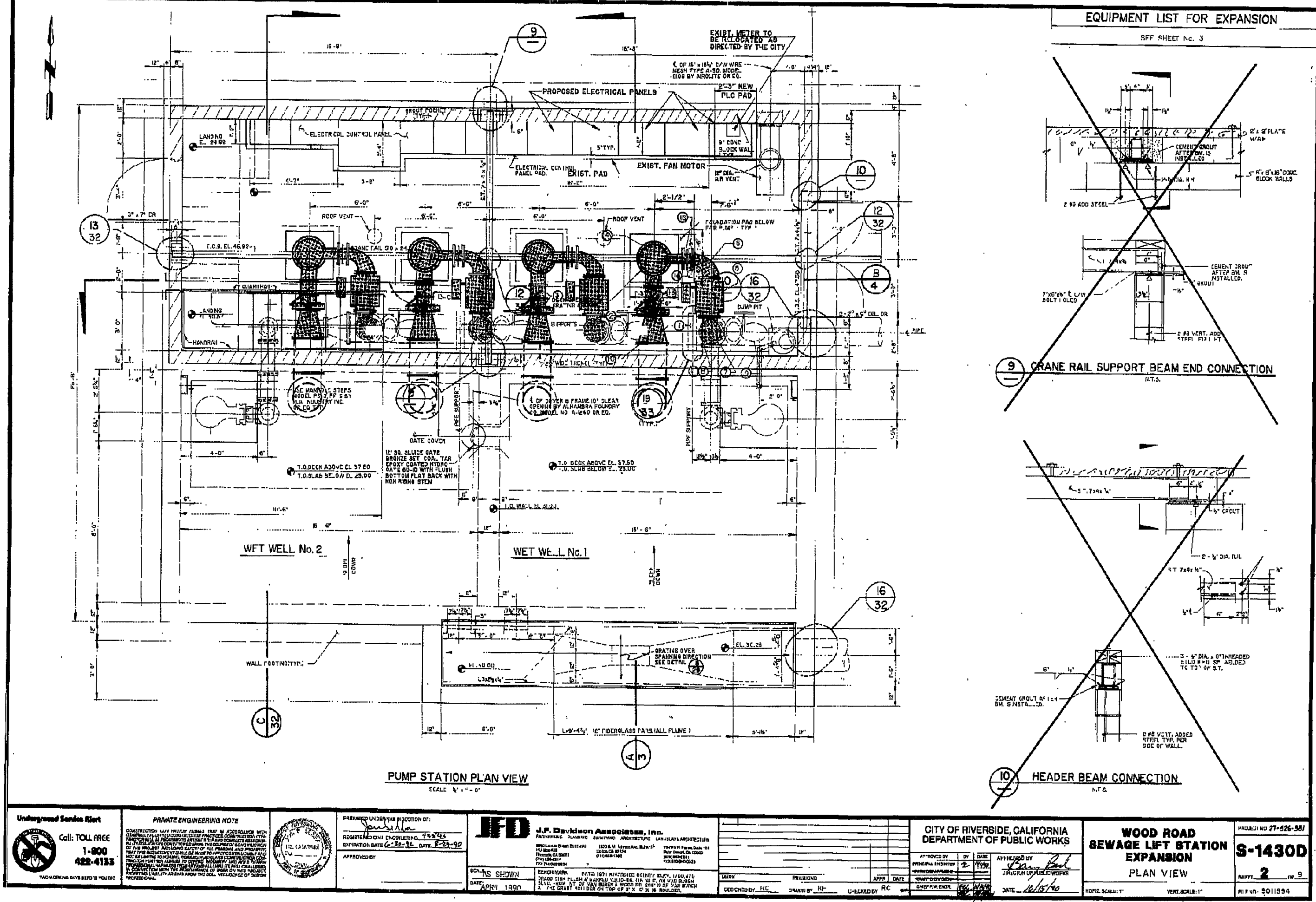
CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		
APPROVED BY	BY	DATE
PRINCIPAL ENGINEER	<i>[Signature]</i>	2/1/06
INSPECTION SECTION		
SURVEYOR		
CITY ENGINEER		

WOOD ROAD SEWAGE PUMP STATION
STRUCTURAL DETAILS
HORIZ. SCALE: AS SHOWN
VERT. SCALE: AS SHOWN

S-1944
ACCT. NO. XX
S-3
SHEET 26 OF 28
FILE NO.

INDEXED 4-24-06 Gfl

Y:\5800083 Riverside Wood Road PS\DRAWINGS\Sub\GDGCS\580083_S-3.dwg Feb 03, 2006 - 12:00pm



X:\S00023 Riverside Wood Road PS\DRAWINGS\00\Percent\04\CD\CS\050003 AB-1.dwg Feb 05, 2005 - 3:44pm

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PLANS PREPARED UNDER SUPERVISION OF
Eric T. Howard
ERIK T. HOWARD DATE 10 FEB 06
R.P.E. No. C53318 Exp 6-30-07

WOOD ROAD SEWAGE LIFT STATION EXPANSION SECTION A VIEW
S-14300
3

PROFESSIONAL ENGINEER
ERIC T. HOWARD
No. C53318
Exp. 6/30/07
CIVIL
STATE OF CALIFORNIA

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature]
PRINCIPAL ENGINEER
INSPECTION SECTION SUPERVISOR

APPROVED BY: [Signature]
CITY ENGINEER

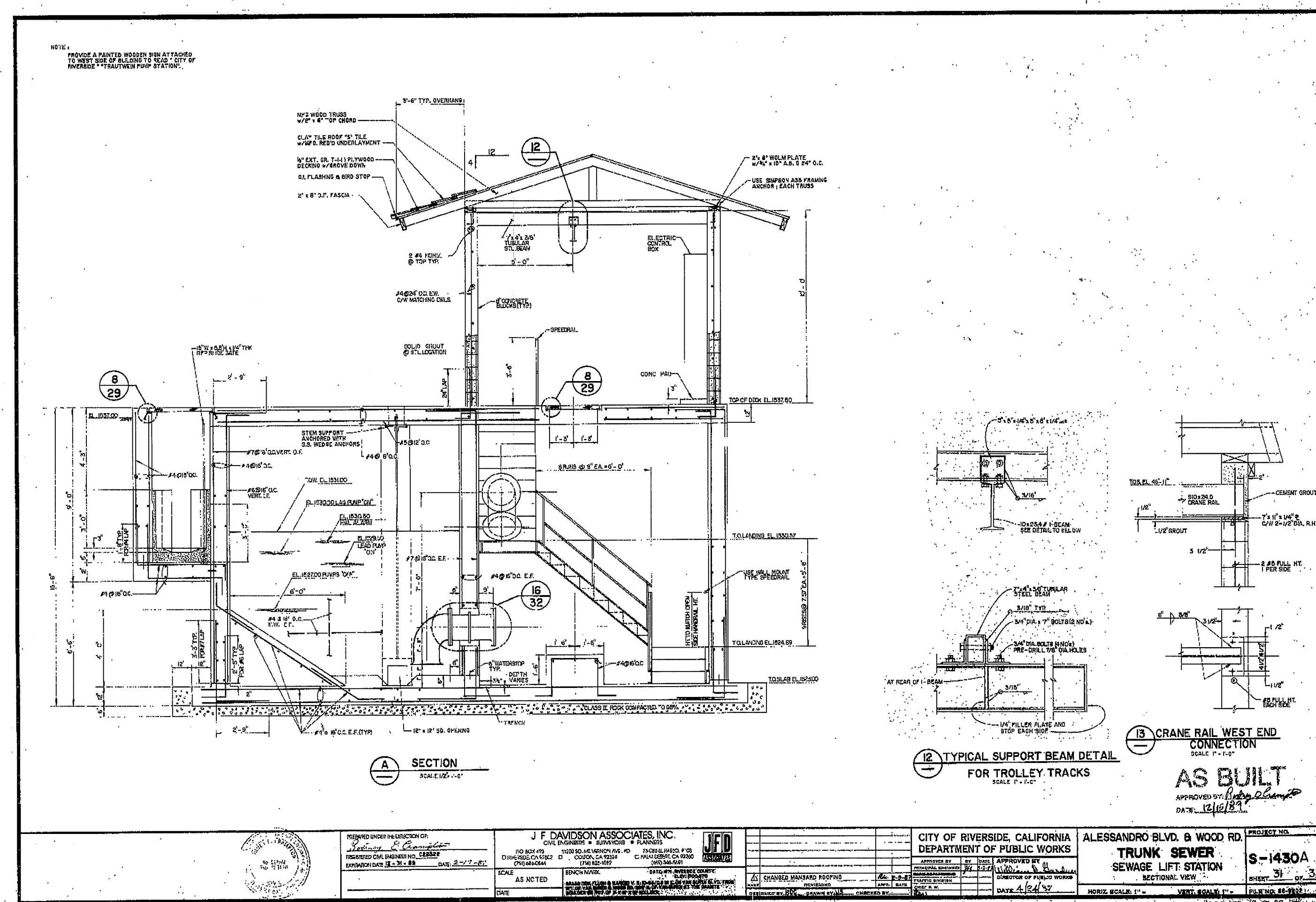
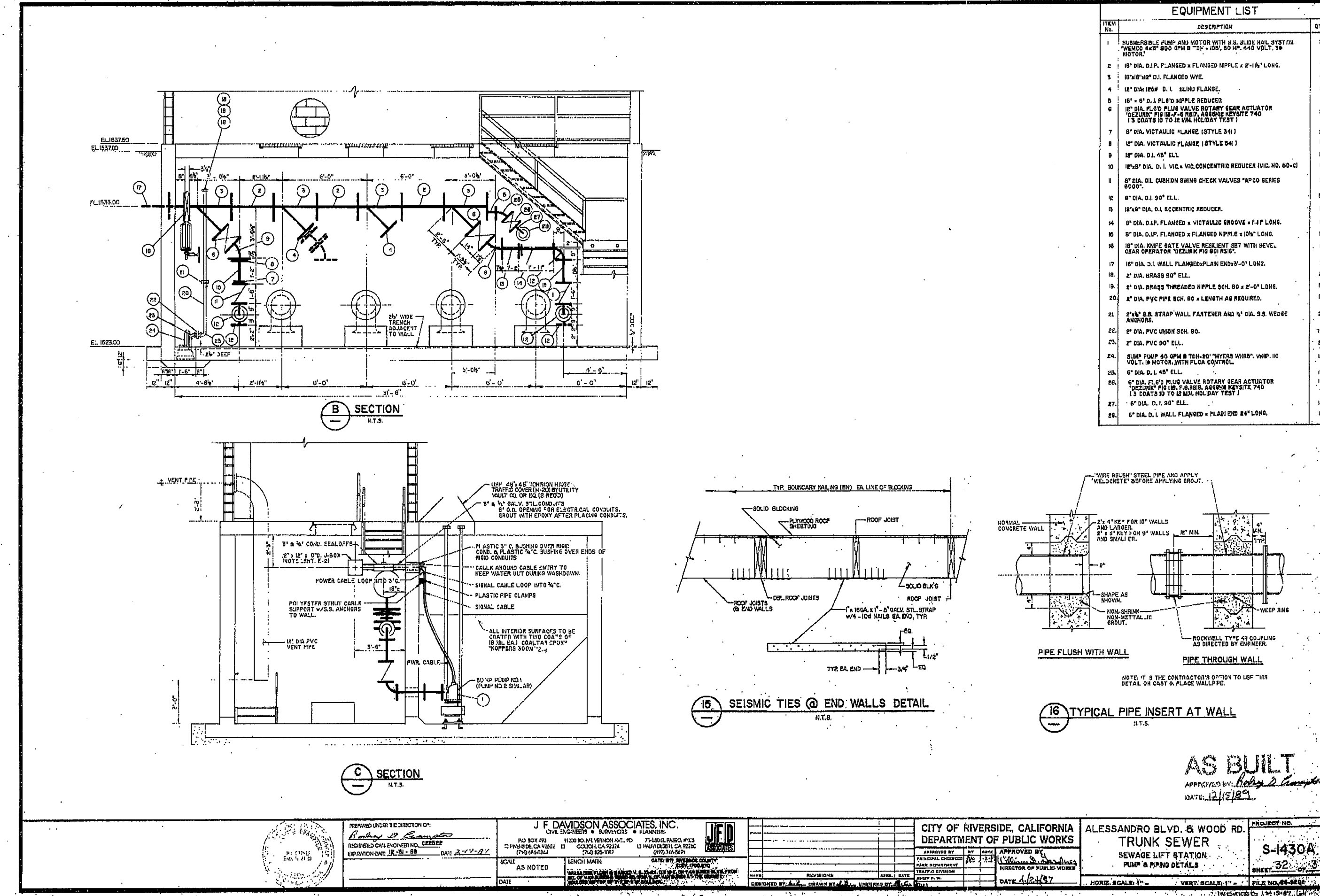
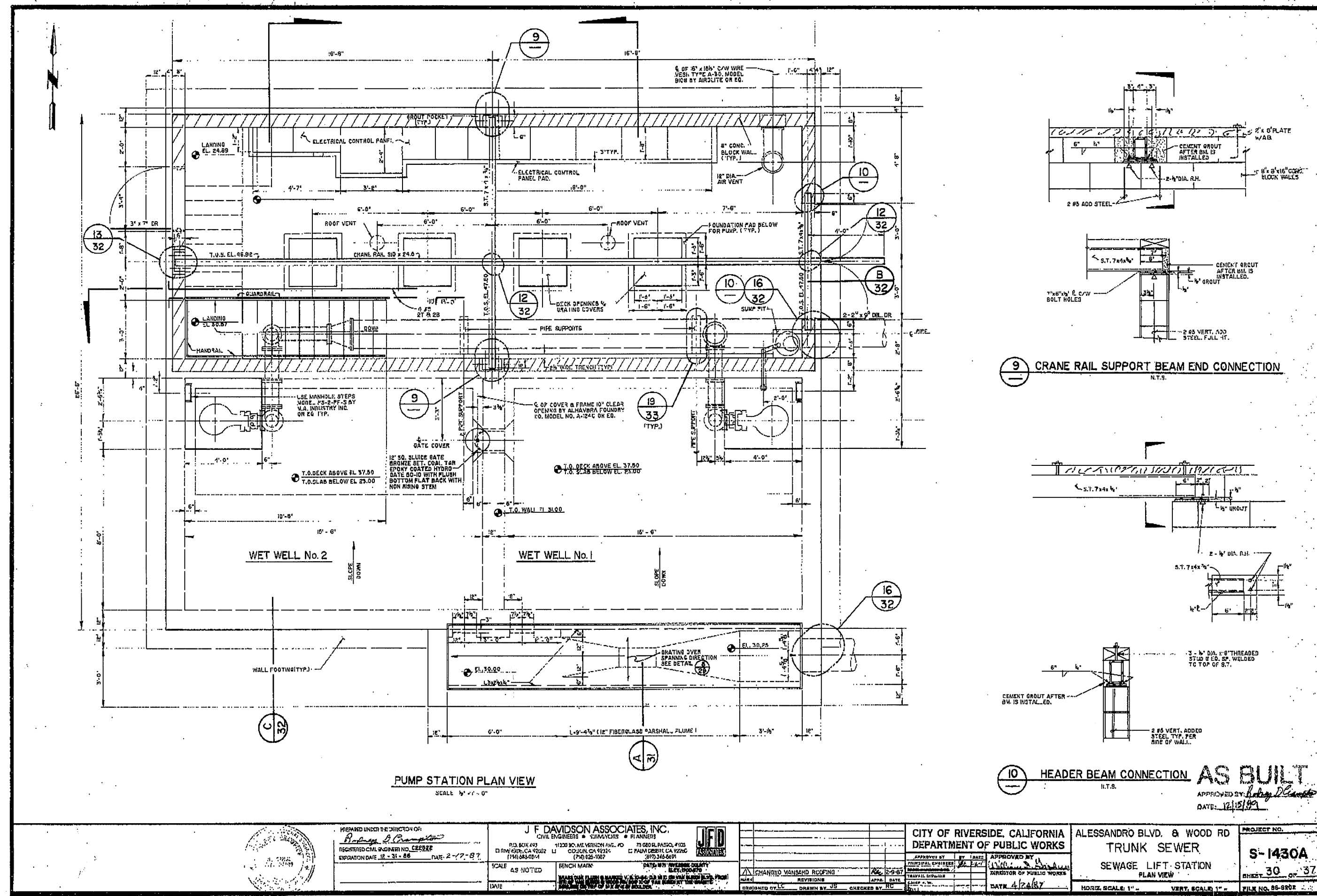
DATE: 2/7/06

WOOD ROAD SEWAGE PUMP STATION MECHANICAL PLAN - AS BUILT

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944
ACCT. NO. XX
AB-1
SHEET 27 OF 28
FILE NO.

INDEXED 4-24-06 [Signature]



Y:\S00093\ Riverside Wood Road PS\UP\MINOS\UP\PercentSub\CD\05\950093_AB-2.dwg 05, 2006 - 3:45pm



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Erik T. Howard
ERIK T. HOWARD
R.P.E. No. C53318
DATE: 6 Feb. 06
Exp 6-30-07



MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]*
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INSPECTION SECTION
SURVEYOR
DATE: 2/2/06

WOOD ROAD SEWAGE PUMP STATION

STRUCTURAL PLAN -
AS BUILT

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

S-1944

ACCT. NO. XX

AB-2

SHEET 28 OF 28

FILE NO.

INDEXED 4-24-06