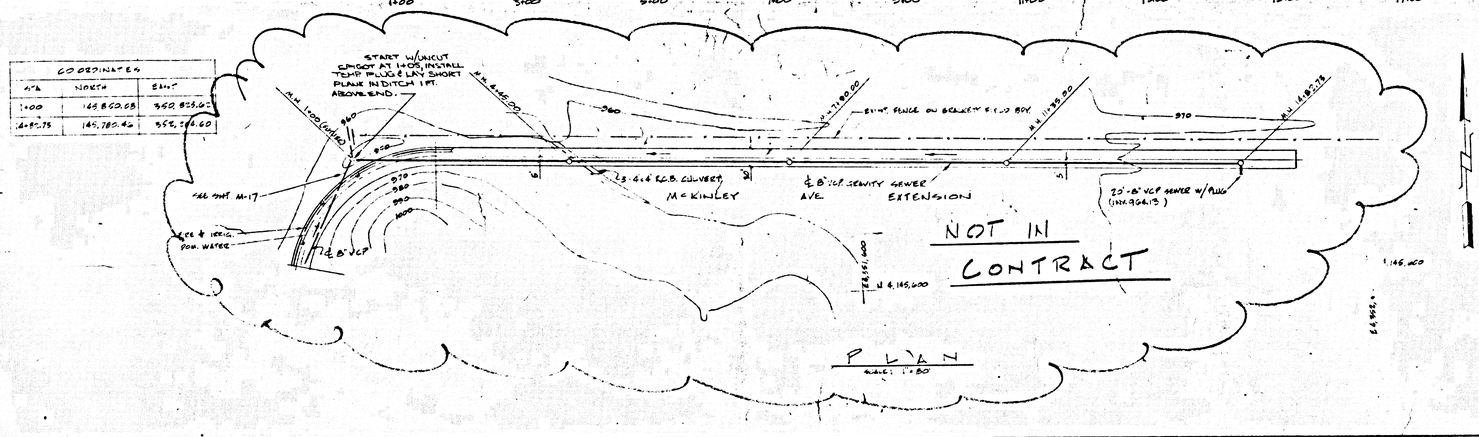
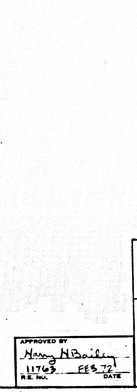






REF. C.C. 8688

J. D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED _____ DATE 2-7-72
CHIEF ENGINEER

HARVEY T. BRANDT
L.A. COUNTY ENGINEER
APPROVED _____ DATE 2-11-72
ASS'T. DIVISION ENGINEER
CHECKED BY _____

APPROVED BY
Harry N. Bailey
11763 FEB 72
R.E. No. DATE

44987

WILLIAMSON, MORRIS & PAIGE
275 e 25th st. long beach, calif. 90806
telephone 213-424-0614

M-14

POMEROY, JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA, CALIF.

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)
GRAVITY SEWER & PUMP STA. PHASE III

CAP. PROJ. NO. 68604
SURVEY NO. 3555

date
revised
sheet no. M-14
14 of shts.

REFERENCE CASH CONTRACT NO. 8688

GENERAL NOTES

WORK SHALL BE CONSTRUCTED ACCORDING TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1970 EDITION WITH 1971 SUPPLEMENT) AND COUNTY ENGINEER SPECIAL PROVISIONS FOR THE CONSTRUCTION OF SANITARY SEWERS DATED APRIL 7, 1970; AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.

NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER.

THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION DIVISION BY TELEPHONE (213) 629-4747, EXT. 81551 AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.

THE CONTRACTOR SHALL SECURE A ROAD PERMIT FROM THE LOS ANGELES COUNTY ROAD DEPARTMENT PRIOR TO EXCAVATING IN COUNTY STREETS AND COMPLY WITH ALL REQUIREMENTS THEREWITH.

ALL MANHOLES SHALL BE EITHER BRICK PER S-3 OR PRECAST CONCRETE PER S-36, EXCEPT AS NOTED.

USE LOCKING MANHOLE FRAMES AND COVERS PER S-35, EXCEPT AS NOTED.

ALL PIPE IS STANDARD DEPTH EXTRA STRENGTH VITRIFIED CLAY PIPE EXCEPT AS NOTED.

VITRIFIED CLAY PIPE JOINTS SHALL BE TYPE "D", "F", OR "C" PER SECTION 208-3 OF STANDARD SPECIFICATIONS FOR ALL VITRIFIED CLAY PIPE JOINTS.

ALL JOINTS BETWEEN CAST IRON PIPE AND VITRIFIED CLAY PIPE SHALL BE MADE WITH A RUBBER SLEEVE JOINT, TYPE "C" OR "D" (WITH BUSHING IF NECESSARY) PER SECTION 208-2 OF STANDARD SPECIFICATIONS.

REFER TO SECTION 7-10.4.1 OF STANDARD SPECIFICATIONS REGARDING SAFETY ORDERS.

FOR CONSTRUCTION OF LATERALS SEE SPECIFICATIONS.

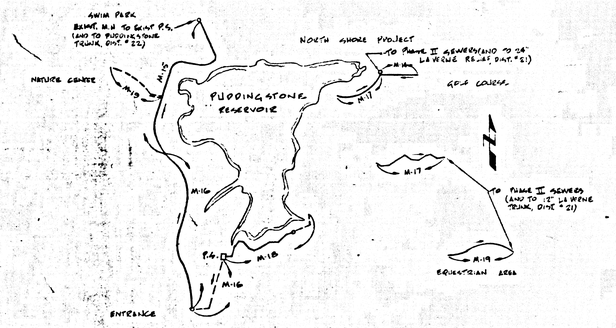
SEWERS TO BE TESTED FOR LEAKAGE PER SECTION 306-2.3.7 OF STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

THE FOLLOWING LATEST REVISED STANDARD PLANS ON FILE IN THE OFFICE OF COUNTY ENGINEER SHALL APPLY IN THE CONSTRUCTION OF THIS PROJECT.

LEGEND	S-1
MINIMUM PUBLIC SAFETY REQUIREMENTS	S-2
BRICK MANHOLE	S-3
MANHOLE STEP	S-17
BEDDING FOR SEWER PIPE	S-21
SPECIAL SUPPORT AND PROTECTION	S-22
CRADLING AND ENCASEMENT	S-23
STANDARD WYE OR TEE SUPPORT	S-26
ALLOWABLE TRENCH WIDTH	S-33
LOCKING MANHOLE FRAME AND COVER	S-35
NON-REINFORCED PRECAST CONCRETE MANHOLE	S-36

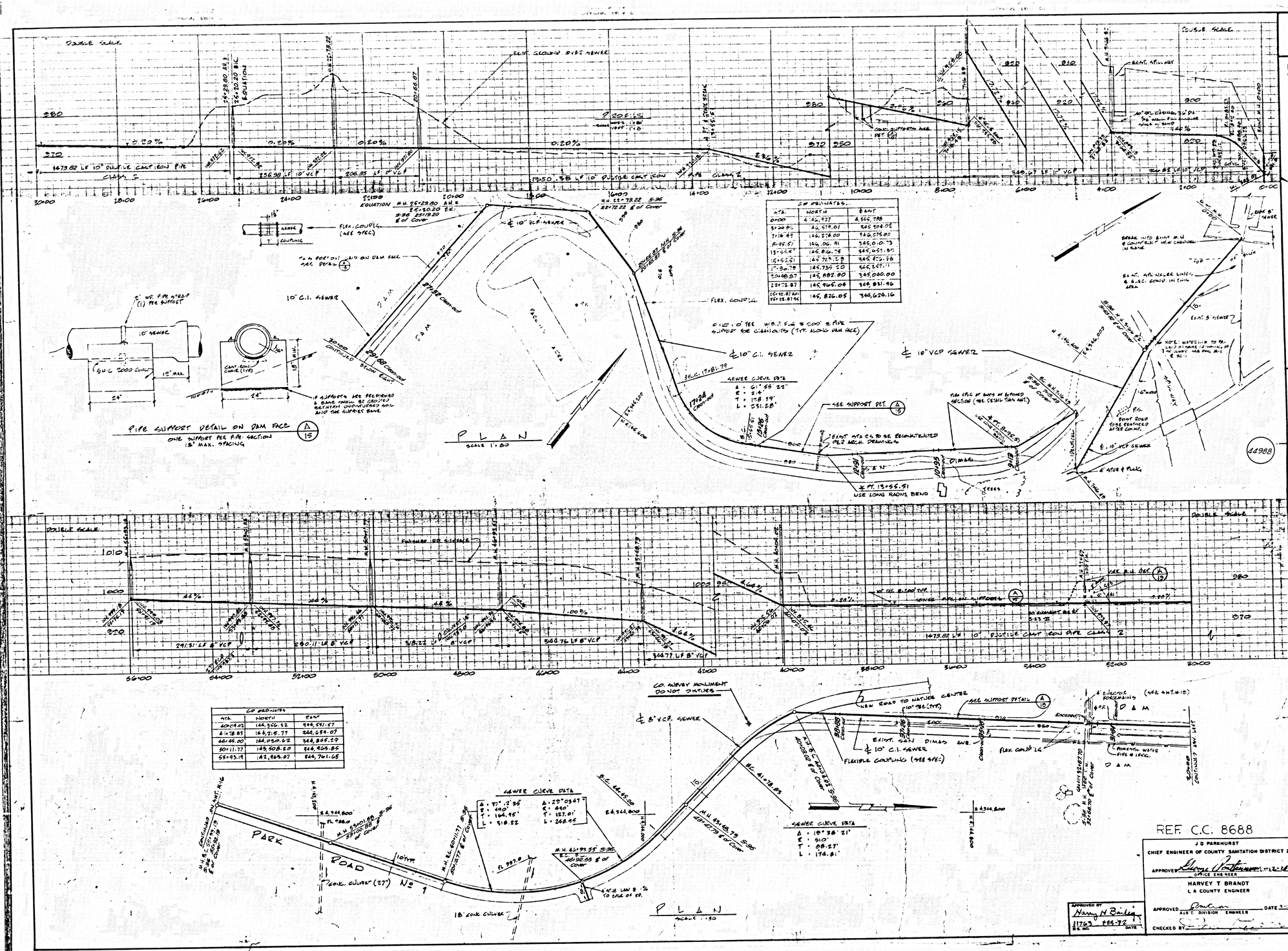
THE CONTRACTOR SHALL NOTIFY LOS ANGELES COUNTY FLOOD CONTROL DISTRICT, OPERATIONS AND MAINTENANCE DIVISION, BY TELEPHONE (MR. J. AVALOS, (213) 223-2111, Ext. 151) AT LEAST 48 HOURS PRIOR TO BLASTING IN ANY AREA AND 48 HOURS PRIOR TO ANY CONSTRUCTION WITHIN 500 FEET OF PUDDINGSTONE Dam.

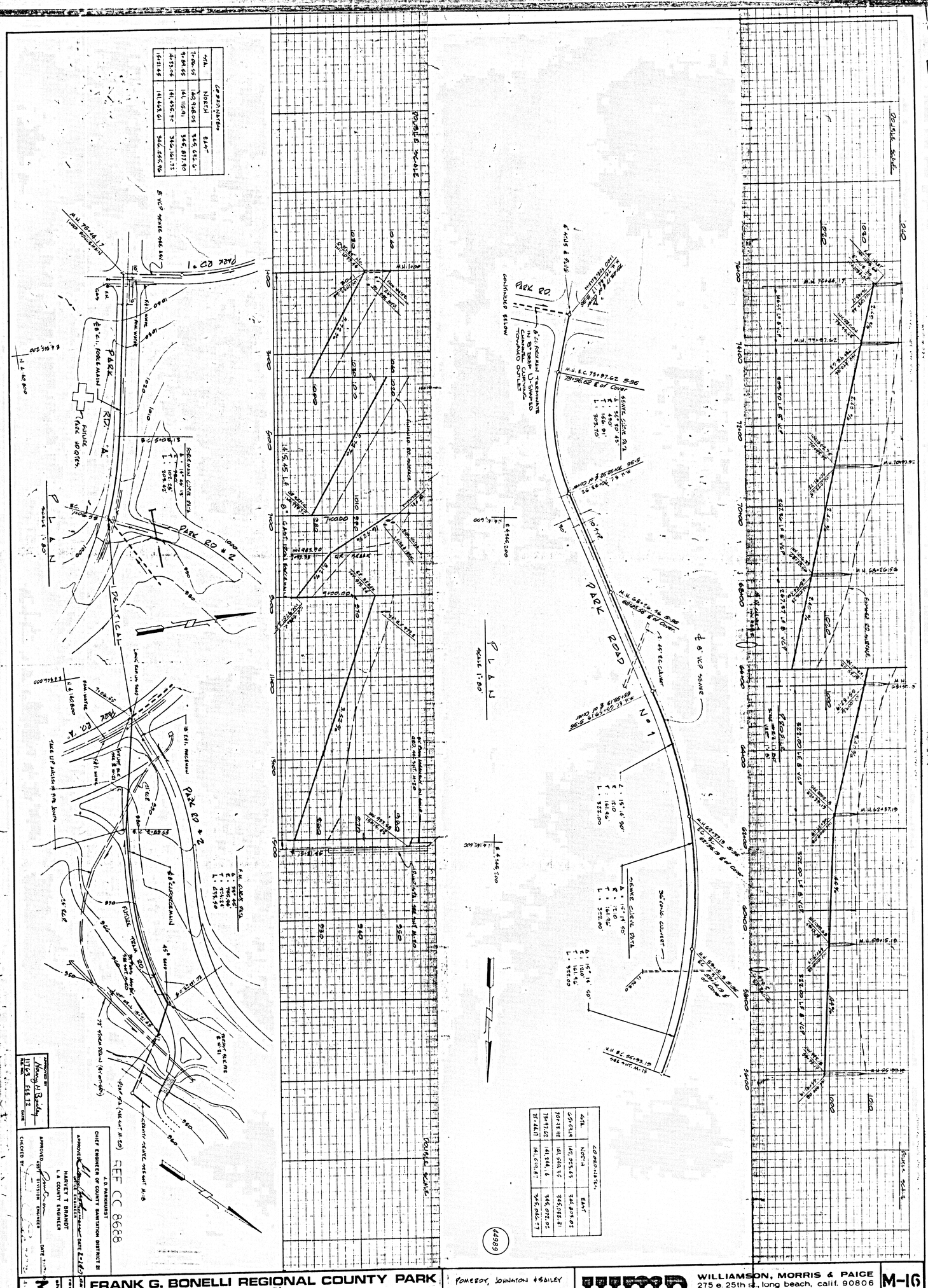
PRIOR TO TRENCH EXCAVATION, THE CONTRACTOR SHALL SUBMIT TO AND OBTAIN APPROVAL FROM THE COUNTY ENGINEER OF A DETAILED PLAN SHOWING THE DESIGN OF SHORING, BRACING, SLOPING OR OTHER PROVISIONS FOR WORKER PROTECTION FROM THE HAZARD OF CAVING GROUND. IF SUCH PLAN VARIES FROM THE SHORING SYSTEM STANDARDS ESTABLISHED BY THE CONSTRUCTION SAFETY ORDERS, IT SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER.



SHEET LOCATION PLAN
NO SCALE

NOTE: FOR TEST HOLE DATA SEE "SOILS AND GEOLOGIC INVESTIGATION" DATED DECEMBER 27, 1971 BY MAURSETH, HOWE, LOCKWOOD & ASSOC.


DOUBLE SCALE
ELEV. GROUND @ 82 SEWER
1473.82 LF 10" PUBLIC CMP IRON PIPE CLASS 2
256.90 LF 10" VCP
206.85 LF 10" VCP
1350.58 LF 10" PUBLIC CMP IRON PIPE CLASS 2
540.67 LF 10" VCP
PLAN
SCALE 1:80
PIPE SUPPORT DETAIL ON DAM FACE
ONE SUPPORT PER PIPE SECTION
15' MAX. SPACING
10" C.I. SEWER
10" VCP SEWER
FLEX. COUPLG.
(SEE SPEC)
CONTINUED
EXIST. GROUND
FILL
CUT
DAM
SEWER CURVE DATA
Δ: 61° 55' 22"
R: 214'
T: 138.59'
L: 231.58'
SEE SUPPORT DET
EXIST. MH & C.I. TO BE RECONSTRUCTED PER MECH. DRAWINGS
DIMBG.
SEE MH DETAIL
SEE PIPE SUPPORT DETAIL
USE LONG RADIUS BEND
EXIST. 8" SEWER
EXIST. MH INVERT LINED & S.B.C. COND. IN THIS AREA
NOTE: WATERLINE TO BE LAID IN SAME TRENCH AS SEWER & SHALL BE PER DWG. M-11 & SPEC.
4" ATUE & PLUG
P.C.
FRONT SOLID LOAD MATCHED BUTES CONC.
4" WATER
SEE M-11 FOR CONT.
SEE M-11 FOR CONT.
BREAK INTO EXIST. M.H. & CONNECT 8" NEW CHANNEL IN MANH
EXIST. 8" SEWER
10" GAS
10" ELEC.
10" TEL.
10" WATER
EXIST. 8" SEWER
EXIST. 10" VCP SEWER
EXIST. 8" SEWER
EXIST. 10" VCP SEWER
EXIST. 8" SEWER
EXIST. 10" VCP SEW


PARK ROAD No. 1
PARK ROAD No. 2
PARK RD. A
PLAN
PROFILE
FUTURE ROAD
EXISTING ROAD
PROPOSED SEWER
EXISTING SEWER
M.H. 75+44.7
M.H. 75+97.62
M.H. 68+56.56
M.H. 62+57.19
M.H. 60+15.10
M.H. 55+88.19
M.H. 52+70.10
M.H. 50+85.46
M.H. 49+55.46
M.H. 48+25.46
M.H. 47+00.46
M.H. 45+75.46
M.H. 44+50.46
M.H. 43+25.46
M.H. 42+00.46
M.H. 40+75.46
M.H. 39+50.46
M.H. 38+25.46
M.H. 37+00.46
M.H. 35+75.46
M.H. 34+50.46
M.H. 33+25.46
M.H. 32+00.46
M.H. 30+75.46
M.H. 29+50.46
M.H. 28+25.46
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M.H. 24+50.46
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M.H. 18+25.46
M.H. 17+00.46
M.H. 15+75.46
M.H. 14+50.46
M.H. 13+25.46
M.H. 12+00.46
M.H. 10+75.46
M.H. 9+50.46
M.H. 8+25.46
M.H. 7+00.46
M.H. 5+75.46
M.H. 4+50.46
M.H. 3+25.46
M.H. 2+00.46
M.H. 0+75.46
M.H. 0+00.00
PROPOSED 8" VCP SEWER
PROPOSED 10" VCP SEWER
PROPOSED 12" VCP SEWER
PROPOSED 15" VCP SEWER
PROPOSED 18" VCP SEWER
PROPOSED 21" VCP SEWER
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PROPOSED 4626" CONC. CULVERT
PROPOSED 4632"

DOUBLE SCALE

NOT IN CONTRACT

PROFILE
SCALE: HOR. 1"=100'
VERT. 1"=10'

GEOGRAPHIC		
STA	NORTH	EAST
1+00	166,198.43	553,519.91
3+00	165,166.78	552,035.71
5+00	164,965.06	551,878.10
8+16	164,693.95	551,655.58
10+77	164,546.77	551,587.63
12+37	164,486.77	551,648.87
13+97	164,529.71	551,618.56
16+65	165,760.85	551,705.77
17+85	164,698.31	551,135.40
20+85	164,089.25	550,819.46
24+95	163,916.05	550,539.82
26+60	163,982.92	550,378.13
27+80.79	164,052.90	550,280.96
28+69.12	164,104.46	550,232.12

FUT. CONDOR ST. H-7

8" VCP

SEWER CURVE DATA
Δ : 20° 30'
R : 200.17'
T : 21.50'
L : 120.79'

8" VCP & 18" C.M. DOM. WATER

N 4,144,000

PLAN
SCALE 1"=80'

NOTE: OFFSET N.H.'S 10+77 & 15+06 TO PROVIDE LONGER ELOIGS THRU INCHANNEL WITH MIN. WIDTH

NOT IN CONTRACT

SEE NOTE THIS SHT.

END PH III

PHASE II (FUT.)

STUB W/ LIGHT SF CUT AT 1'-0", TEMP. PLUG & SHORT PLANK BLKED 1'-6" BW

N 4,144,000

44990

DOUBLE SCALE

GEOGRAPHIC		
STA	NORTH	EAST
1+00	165,850.08	550,823.62
C+35.64	165,827.22	550,752.21
7+72.63	165,723.67	550,438.31
9+05.16	165,670.69	550,316.6
11+89.45	165,520.03	549,758.42

FUT. C.S. H-8

4" AFUS & PLUG

SEWER CURVE DATA
Δ : 28° 39' 08"
R : 585.75'
T : 149.69'
L : 292.91'

FUT. C.S. H-9

Δ : 28° 30' 12"
R : 586.33'
T : 148.78'
L : 291.39'

Δ : 25° 6' 08"
R : 510.46'
T : 113.37'
L : 222.59'

SEWER CURVE DATA
Δ : 25° 05' 42"
R : 510.46'
T : 158.4'
L : 268.50'

FUTURE M.H. 11+00.1
100 EAST OF

START W/ LIGHT SF CUT AT 10+05 W/ TEMP. PLUG AND SHORT PLANK BURIED 1' ABOVE

PHASE II (FUT.)

NOT IN CONTRACT
STA. 11+00 TO M.H. 5+50.00

REF. C.C. 8688

P L A N
SCALE 1"=80'

J. D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED [signature] OFFICE ENGINEER DATE 2-9-72

HARVEY T BRANDT
L.A. COUNTY ENGINEER
APPROVED [signature] ASST. DIVISION ENGINEER DATE 2-10-72
CHECKED BY

APPROVED BY [signature]
11763 R.E. NO. FEB 72 DATE

WILLIAMSON, MORRIS & PAIGE
275 e 25th st., long beach, calif. 90806
telephone 213-424-0614

M-17

FRANK G. BONELLI REGIONAL COUNTY PARK
(FORMERLY PUDDINGSTONE)

GRAVITY SEWERS
PHASE III

date	
revised	
sheet no.	M-17
sheets	10 of 10 shts.

DOUBLE SCALE

COORDINATES		
STA	NORTH	EAST
1+60.26	161,463.61	346,255.96
2+76.57	161,506.00	346,385.00
5+22.74	161,748.80	346,658.00
8+81.75	162,037.00	346,591.00
10+22.68	162,060.00	346,790.00
15+20.26	161,888.00	347,230.00
17+92.91	162,230.00	347,352.00

PARK ROAD "A"

SEWAGE PUMP STA. SEE SHT. M-20

8" C.I. FORCE MAIN SEE SHT. M-16

72" STORM DRAIN BY OTHERS SEE STORM DRAIN PLANS

8" VCP SEWER

EXIST. ROAD TO BE WIDENED (SEE SHT. C-7)

APPROX. SHORELINE

FUTURE FISHING PIER

FUTURE TEAM ROAD

10' REFERENCE EB

PUMP STA.

WET WELL

TEST HOLE "EB" (SEE SOIL REPT.)

PLAN
SCALE 1" = 80'

PUMP STATION SITE PLAN
SCALE 1" = 20'

COORDINATES		
STA	NORTH	EAST
17+92.91	162,230.00	347,352.00
22+08.66	162,014.00	347,767.00
28+69.36	162,206.00	348,340.00
32+29.76	163,548.00	348,597.00
34+86.81	163,972.62	348,817.28
37+61.84	162,818.11	348,820.75
39+50.78	162,972.58	348,711.81
40+76.03	163,057.11	348,624.53

EXIST. ROAD TO BE WIDENED

8" VCP 46 W&S2

SHALLOW M.H. SEE SHT. M-17

CONT. RIGHT

CONT. ADV. RIGHT

CONT. LEFT

BEGIN FORCE MAIN

PROFILE
HORIZ. 1"=80'
VERT. 1"=8'

PLAN
SCALE 1"=80'

FOREMAN G.I.C.P. DATA
Δ = 41°49.36"
R = 170.50
T = 65.04'
L = 124.55

FOREMAN G.I.C.P. DATA
Δ = 63°15.64"
R = 20
T = 13.00
L = 110.97

REF CC 8588

J.D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED _____ DATE 2-28-92
OFFICE ENGINEER

HARVEY T. BRANDT
L.A. COUNTY ENGINEER
APPROVED _____ DATE 2-28-92
ASST. DIVISION ENGINEER
CHECKED BY _____

APPROVED BY
Nancy A. Bailey
R.E. NO. 11765 EXP. 6-30-92 DATE

WILLIAMSON, MORRIS & PAIGE
215 e. 25th st. long beach, calif. 90806
telephone 213-424-0614

POMEROY, JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA, CALIF.

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)
GRAVITY SEWERS
PHASE III

CODE PROJ. NO. 8606
DIST. NO. 37-2

revised 2-28-92 WM
sheet no. M-18
13 of 64 shts.

M-11

11991

DOUBLE SCALE

EXIST. GEOLINK 8"VCP SEWER

1473.02 LF 10" DUCTILE CAST IRON PIPE CLASS 2

256.98 LF 10" VCP

206.35 LF 8" VCP

1350.58 LF 10" DUCTILE CAST IRON PIPE CLASS 2

340.67 LF 10" VCP

EQUATION M.H. 25+29.80 AH & 25+20.20 BK. 9.60 = 251.92 EQUATION

M.H. 25+73.22 S.96 22.72 C/L of Cover

EQUATION 25+19.20 BK. 25+73.22 AH

FLEX. COUPLG. (SEE SPEC.)

10" C.I. SEWER

10" VCP SEWER

PIPE SUPPORT DETAIL ON DAM FACE

ONE SUPPORT PER PIPE SECTION 15' MAX. SPACING

PLAN

SCALE 1:80

CO ORDINATES		
STA.	NORTH	EAST
0+00	4,146,927	4,346,788
3+56.82	146,579.01	346,704.05
7+16.47	146,228.00	346,624.07
8+92.51	146,052.81	346,610.73
13+52.47	145,826.75	346,663.80
15+52.51	145,729.18	346,872.58
17+86.79	145,735.20	346,267.11
20+48.87	145,882.90	345,080.00
22+72.87	145,946.08	344,831.46
25+92.87 AH; 25+88.81 BK	145,826.05	344,620.16

SEWER CURVE DATA

Δ = 61° 55' 22"
R = 210'
T = 198.59'
L = 231.28'

SEE SUPPORT DET. A/15

EXIST. STA CO TO BE RECONSTRUCTED PER MECH. DRAWINGS

FLEX. COUPLG.

DIMES

STA. 25+92.87 AH; 25+88.81 BK

N 4,146,000

E 346,000

BREAK INTO EXIST. M.H. & CONNECT NEW CHANNEL IN INVERT

84" RCP WATER LINES & 8" S.C. CONID IN THIS AREA

NOTE: WATERLINE TO BE ENCASED IN 6" CONC. CRADLE AT CROSSING OF SEWER (SEE DET. A/C)

EXIST. 8" SEWER

EXIST. 10" VCP SEWER

EXIST. ROAD TO BE REPAIRED AFTER CONST.

4" ASPH. & PLANT

N 4,146,000

E 346,000

WILLIAMSON, MORRIS & PAIGE
275 e 25th st. long beach, calif. 90806
telephone 213 424-0614

POMEROY, JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA CALIF.

44988

M-15

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)

GRAVITY SEWERS
PHASE III

cap proj. 1900-000
I.P. 73592

REF. C.C. 8688

J D PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED _____ DATE 2-28-72 date

HARVEY T BRANDT
L A COUNTY ENGINEER
APPROVED _____ DATE 3-7-72
ASS'T DIVISION ENGINEER
CHECKED BY _____
OFFICE ENGINEER

revised

sheet no. M-15

of shts.

APPROVED BY Nancy N Bailey
11763 R.E. NO. FEB-72 DATE

DOUBLE SCALE

EXIST. 8" VCP SEWER

29.51' LF 8" VCP

280.11 LF 8" VCP

548.76 LF 8" VCP

346.77 LF 8" VCP

1473.02 LF 10" DUCTILE CAST IRON PIPE CLASS 2

EQUIVALENT AS BY S-23-II

SEE P.H. DET. A/13

CO ORDINATES		
STA.	NORTH	EAST
40+09.62	144,536.32	346,661.67
41+78.85	144,218.77	346,654.07
46+55.00	144,050.62	346,855.29
50+11.72	143,908.20	346,965.85
55+95.19	143,969.07	346,761.65

SEWER CURVE DATA

Δ = 37° 12' 35"
R = 490'
T = 164.95'
L = 318.22'

Δ = 25° 03' 47"
R = 410'
T = 127.01'
L = 268.69'

SEWER CURVE DATA

Δ = 19° 38' 21"
R = 510'
T = 88.27'
L = 174.81'

CO. SURVEY MONUMENT DO NOT DISTURB

NEW ROAD TO NATURE CENTER (10" 786.5 FT.)

EXIST. SAN DIMAS AVE.

FLEXIBLE COUPLING (SEE SPEC.)

4 EJECTOR FORCEMAINS (4 PR. 4 MT. W.I.P.)

POMONA WATER FIRE & IRRIG.

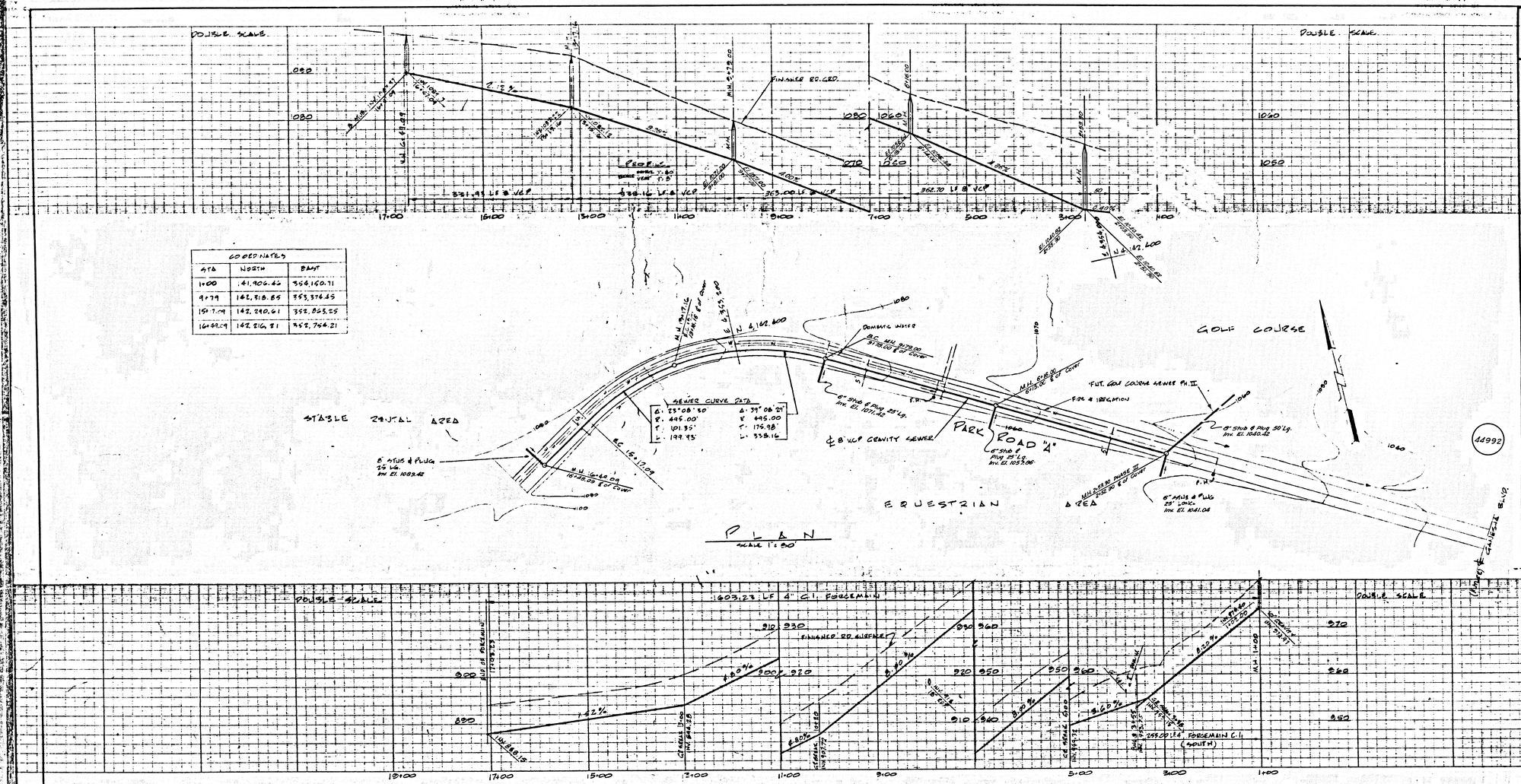
PARK ROAD

10 CONC. CULVERT (27") No 1

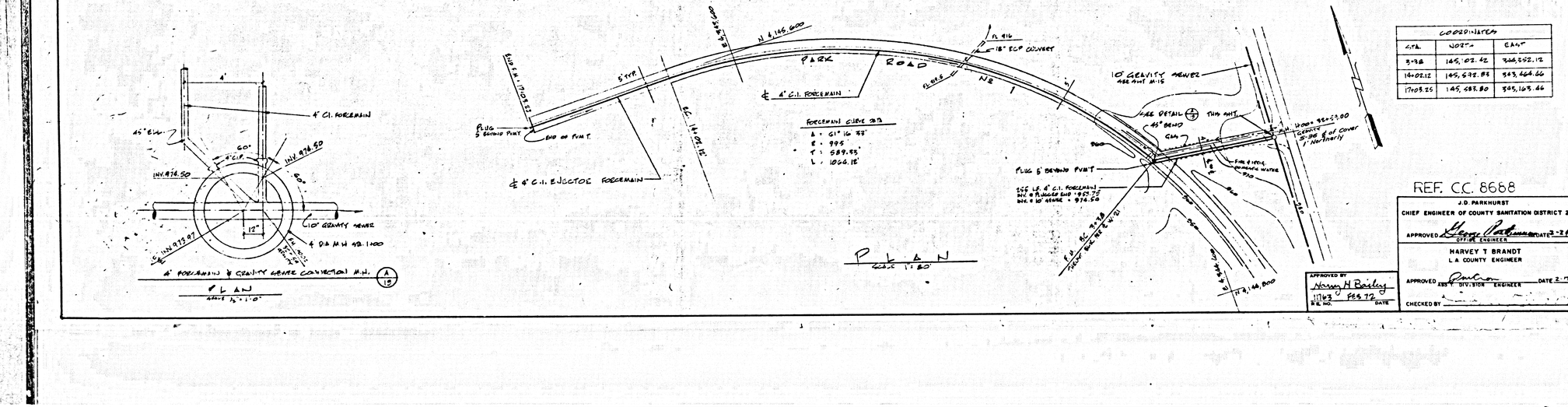
1B CONC CULVERT

P L A N

SCALE 1:80



COORDINATES		
STA	NORTH	EAST
1+00	141,906.62	356,160.71
4+79	142,218.85	355,376.25
15+71.09	142,290.61	352,863.25
16+87.09	142,216.81	352,766.21



COORDINATES		
STA	NORTH	EAST
3+38	145,102.42	346,552.12
14+02.12	145,592.84	345,464.66
17+03.25	145,683.80	345,163.66

REF. C.C. 8688

J.D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED George Parkhurst DATE 2-21-72
OFFICE ENGINEER

HARVEY T BRANDT
L.A. COUNTY ENGINEER
APPROVED [signature] DATE 2-17-72
ASST. DIVISION ENGINEER

APPROVED BY Harry H Bailey 11763 P.E. NO. P.E. 72 DATE

CHECKED BY

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)
GRAVITY SEWER & 4" FORCEMAIN
PHASE III

dep. proj. no. 3595
ppno. no. 3595

revised

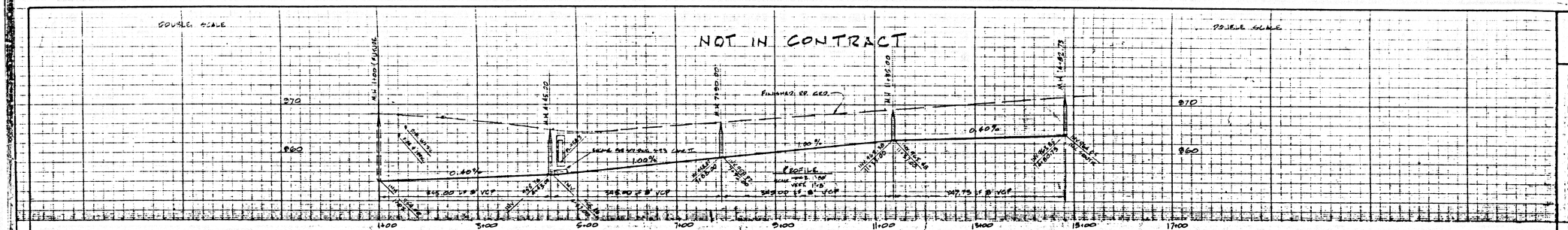
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14 of 0 shts.

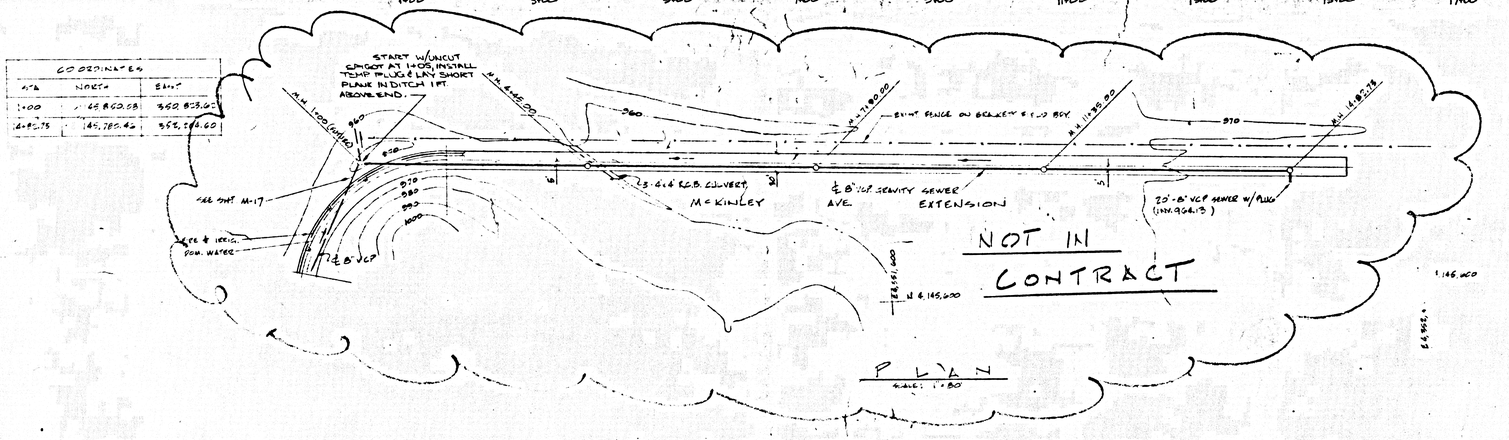
WILLIAMSON, MORRIS & PAIGE
275 e. 25th st., long beach, calif. 90806
telephone 213-424-0814

M-15

44992

POMEROY JOHNSTON & BAILEY
CIVIL & CHARTERED ENGINEERS
PASADENA, CALIF.





REF. C.C. 8688

J. D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED _____ DATE 2-7-72
OFFICE ENGINEER

HARVEY T. BRANDT
L.A. COUNTY ENGINEER
APPROVED _____ DATE 2-7-72
ASST. DIVISION ENGINEER
CHECKED BY _____

APPROVED BY Harry N. Bailey
11763 FEB 5 '72
R.E. NO. DATE

WILLIAMSON, MORRIS & PAICE
275 e 25th st. long beach, calif. 90806
telephone 213 . 424-0614

M-14

44987

REFERENCE CASH CONTRACT NO. 8688

GENERAL NOTES

WORK SHALL BE CONSTRUCTED ACCORDING TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1970 EDITION WITH 1971 SUPPLEMENT) AND COUNTY ENGINEER SPECIAL PROVISIONS FOR THE CONSTRUCTION OF SANITARY SEWERS DATED APRIL 7, 1970; AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.

NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER.

THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION DIVISION BY TELEPHONE (213) 629-4747, EXT. 81551 AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.

THE CONTRACTOR SHALL SECURE A ROAD PERMIT FROM THE LOS ANGELES COUNTY ROAD DEPARTMENT PRIOR TO EXCAVATING IN COUNTY STREETS AND COMPLY WITH ALL REQUIREMENTS THEREWITH.

ALL MANHOLES SHALL BE EITHER BRICK PER S-3 OR PRECAST CONCRETE PER S-36, EXCEPT AS NOTED.

USE LOCKING MANHOLE FRAMES AND COVERS PER S-35, EXCEPT AS NOTED.

ALL PIPE IS STANDARD DEPTH EXTRA STRENGTH VITRIFIED CLAY PIPE EXCEPT AS NOTED.

VITRIFIED CLAY PIPE JOINTS SHALL BE TYPE "O", "F", OR "C" PER SECTION 306-2 OF STANDARD SPECIFICATIONS FOR ALL VITRIFIED CLAY PIPE JOINTS.

ALL JOINTS BETWEEN CAST IRON PIPE AND VITRIFIED CLAY PIPE SHALL BE MADE WITH A RUBBER SLEEVE JOINT, TYPE "C" OR "D" (WITH BUSHING IF NECESSARY) PER SECTION 208-2 OF STANDARD SPECIFICATIONS.

REFER TO SECTION 7-10.4.1 OF STANDARD SPECIFICATIONS REGARDING SAFETY ORDERS.

FOR CONSTRUCTION OF LATERALS SEE SPECIFICATIONS.

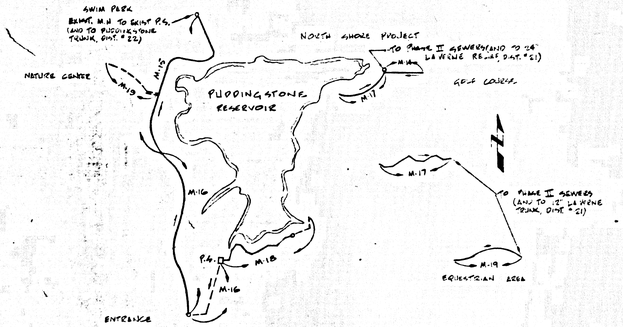
SEWERS TO BE TESTED FOR LEAKAGE PER SECTION 306-2.3.7 OF STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

THE FOLLOWING LATEST REVISED STANDARD PLANS ON FILE IN THE OFFICE OF COUNTY ENGINEER SHALL APPLY IN THE CONSTRUCTION OF THIS PROJECT.

LEGEND	S-1
MINIMUM PUBLIC SAFETY REQUIREMENTS	S-2
BRICK MANHOLE	S-3
MANHOLE STEP	S-17
BEDDING FOR SEWER PIPE	S-21
SPECIAL SUPPORT AND PROTECTION	S-22
CRADLING AND ENCASEMENT	S-23
STANDARD WYE OR TEE SUPPORT	S-26
ALLOWABLE TRENCH WIDTH	S-33
LOCKING MANHOLE FRAME AND COVER	S-35
NON-REINFORCED PRECAST CONCRETE MANHOLE	S-36

THE CONTRACTOR SHALL NOTIFY LOS ANGELES COUNTY FLOOD CONTROL DISTRICT, OPERATIONS AND MAINTENANCE DIVISION, BY TELEPHONE, (Mr. J. AVALOS, (213) 223-2111, Ext. 151) AT LEAST 48 HOURS PRIOR TO BLASTING IN ANY AREA AND 48 HOURS PRIOR TO ANY CONSTRUCTION WITHIN 500 FEET OF PUDDINGSTONE DAM.

PRIOR TO TRENCH EXCAVATION, THE CONTRACTOR SHALL SUBMIT TO AND OBTAIN APPROVAL FROM THE COUNTY ENGINEER OF A DETAILED PLAN SHOWING THE DESIGN OF SHORING, BRACING, SLOPING OR OTHER PROVISIONS FOR WORKER PROTECTION FROM THE HAZARD OF CAVING GROUND. IF SUCH PLAN VARIES FROM THE SHORING SYSTEM STANDARDS ESTABLISHED BY THE CONSTRUCTION SAFETY ORDERS, IT SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER.



SHEET LOCATION PLAN
NO SCALE

NOTE: FOR TEST HOLE DATA SEE "SOIL AND GEOLOGIC INVESTIGATION" DATED DECEMBER 27, 1971 BY MAURSETH, HOWE, LOCKWOOD & ASSOC.

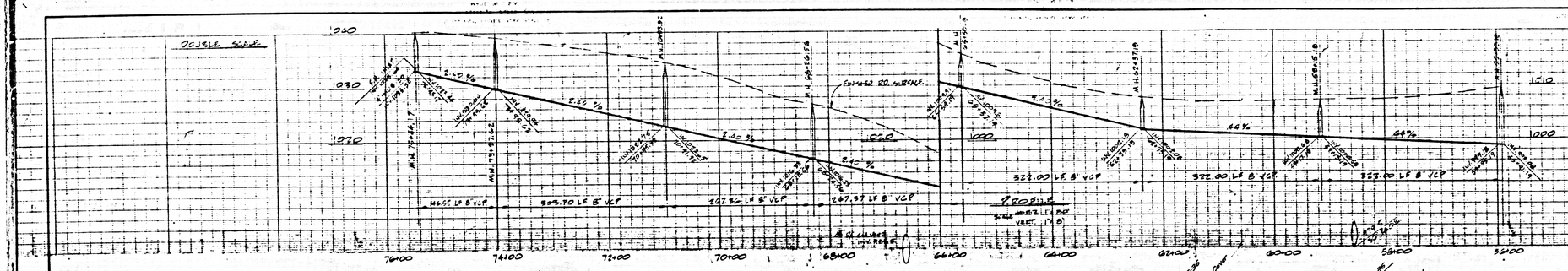
FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)

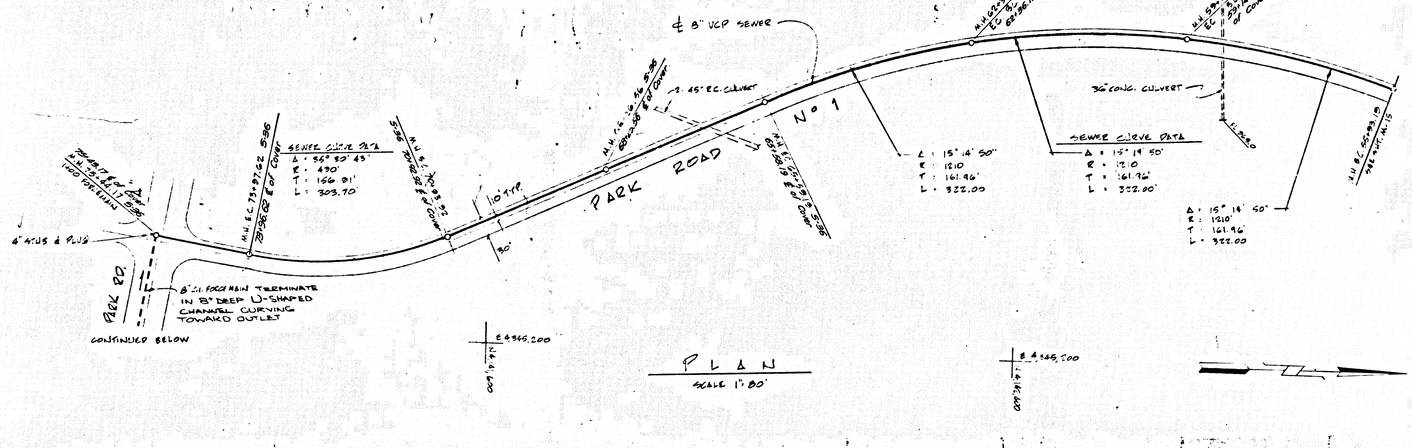
GRAVITY SEWER - PHASE III

CAP. PROJ. NO. C-0504
FED. AID PROJ. NO. FCS 14

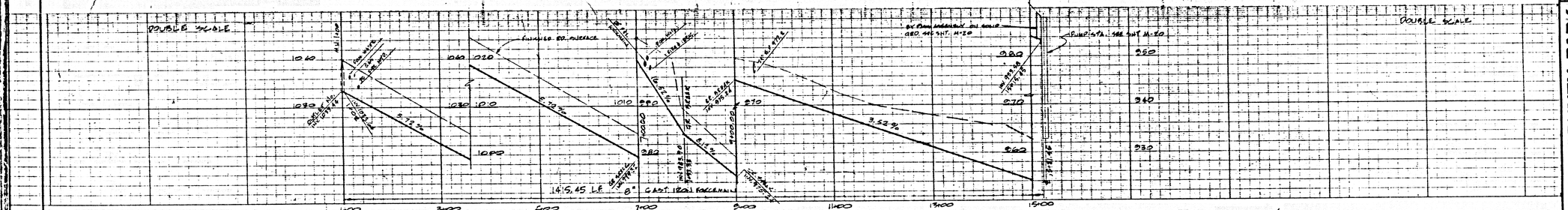
REMEDY, JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA, CALIF.

date
revised
sheet no. M-14
14 of 0hts.

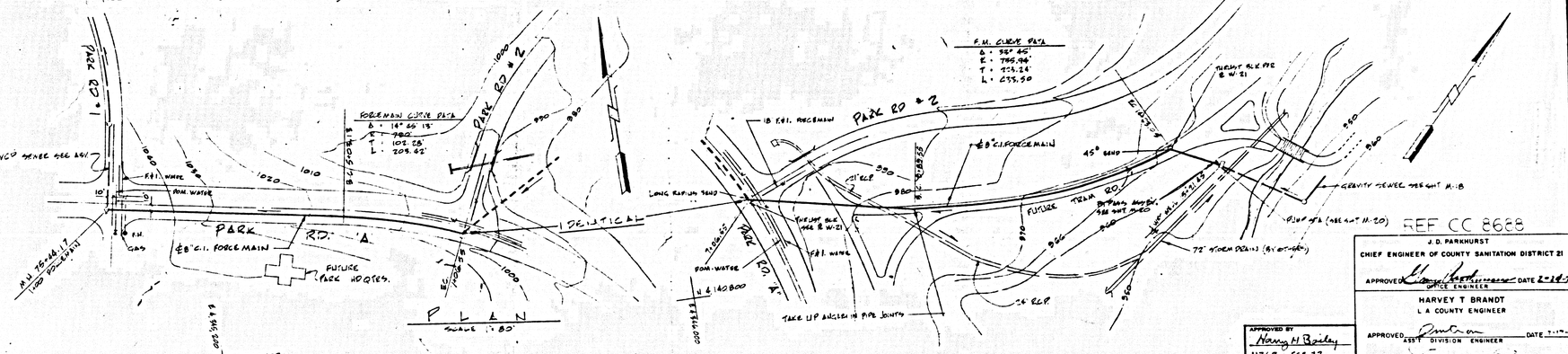




COORDINATES		
STA.	NORTH	EAST
65+69.19	142,023.63	346,809.02
70+35.76	141,580.95	346,082.31
73+97.62	141,246.16	345,072.05
75+46.17	141,019.87	345,062.77



COORDINATES		
STA.	NORTH	EAST
7+00.55	140,938.05	345,692.61
9+89.65	141,115.91	345,877.90
12+35.76	141,435.35	346,161.72
15+21.45	141,463.61	346,255.96



REF CC 8688

J. D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED _____ DATE 2-18-72
OFFICE ENGINEER

HARVEY T BRANDT
L A COUNTY ENGINEER
APPROVED _____ DATE _____
ASST. DIVISION ENGINEER
CHECKED BY _____

APPROVED BY
Nancy H Bailey
11763 FEB 72
R.E. NO. DATE

WILLIAMSON, MORRIS & PAICE
275 e. 25th st., long beach, calif. 90806
telephone 213-424-0614

POWERS, JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
POMONA, CALIF.

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)
GRAVITY SEWERS
PHASE III

CAP PROJ. NO. 8-8004
SCALE 1"=80'

date
revised
sheet no. M-16
of sheets

M-16

44989

CO ORDINATES		
STA	NORTH	EAST
1+00	144,198.47	362,819.91
5+80	44,156.78	362,035.71
9+50	43,925.04	361,876.10
8+10	44,013.39	361,265.54
10+77	144,246.77	361,087.43
12+37	44,186.77	36,648.87
13+37	144,029.71	36,618.56
15+29	43,765.85	361,768.77
17+85	144,678.31	361,195.40
20+85	44,877.33	360,815.46
24+85	43,916.05	360,439.82
29+50	43,982.96	360,278.13
27+80.79	144,052.96	360,280.96
28+69.12	144,04.46	360,336.12

CO ORDINATES		
STA	NORTH	EAST
1+00	145,860.68	360,823.02
C+15.66	145,977.22	360,752.21
7+72.43	45,523.67	360,458.31
9+01.6	145,670.69	360,356.6
4+89.65	145,920.19	359,798.42

REF C.C. 8688

J. D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED Harry Scott OFFICE ENGINEER DATE 2-24-72

HARVEY T BRANDT
L.A. COUNTY ENGINEER
APPROVED ASST. DIVISION ENGINEER DATE
CHECKED BY OFFICE ENGINEER

APPROVED BY Harry M Bailey
11763 FEB 72
R.E. NO. DATE

WILLIAMSON, MORRIS & PAIGE
275 e. 25th st. long beach, calif. 90806
telephone 213-424-0614

POMEROY, JOHNSTON & BAILEY
CIVIL & CHEMICAL ENGINEERS
LONG BEACH, CALIF.

FROM OFFICIAL RECORDS SPEC. NO. 7559

FRANK G. BONELLI REGIONAL COUNTY PARK (PUDDINGSTONE)

GRAVITY SEWERS PHASE III

sheet no. M-17

revised

12 of sht.

FITTING SCHEDULE	
ITEM	DESCRIPTION
1	6" ANNEX PUMP
2	6"x6"x6" WYE C.I.
3	6" FLEX COUPLING (SOLTED)
4	6"x6"-90° BND. ELL. C.I.
5	6" BLIND FLANGE
6	4"-45° ELL. C.I.
7	4" FLEX COUPLING (SOLTED)
8	4" PLUG VALVE
9	4" 90° BASE ELL. C.I.
10	4" CHECK VALVE W/ OUTSIDE LEVER & SPRING
11	4" AIR PUMP (CHANGE BALL NOT NEEDED)
12	3" PIPE SUPPORT
13	8" CI. WALL FITTING FLG.x MECH. JT.
14	0-60 PSI PRESSURE GAGE W/ CUT COCK
15	6"-90° BASE ELL. C.I.
16	4" WALL FITTING FLG. & SPOOL

WILLIAMSON, MORRIS & PAIGE
215 e 25th st. long beach, calif. 90806
telephone 213-424-0614

POMEROY, JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA, CALIF.

M-21

44993

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)

SEWAGE PUMP STATION

CSD PROJ. NO. 8604
SPEC. NO. 8604
DWG. NO. M-20

date
revised
sheet no.
M-20
21 of 41 shts.

APPROVED BY
Edwin W. Clark
12-17-71
R.E. NO. DATE

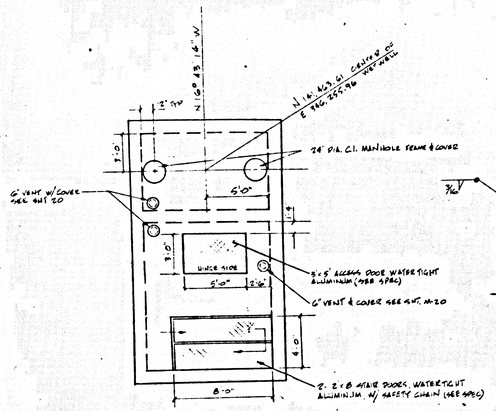
APPROVED BY
Harry N Bailey
11763 FEB 72
R.E. NO. DATE

W.D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED Gary Parkhurst DATE 2-14-72
CHIEF ENGINEER

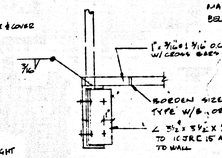
HARVEY T. BRANDT
L.A. COUNTY ENGINEER
APPROVED DATE 2-17-72
ASS'T. DIVISION ENGINEER

CHECKED BY

REF. CC. 8688



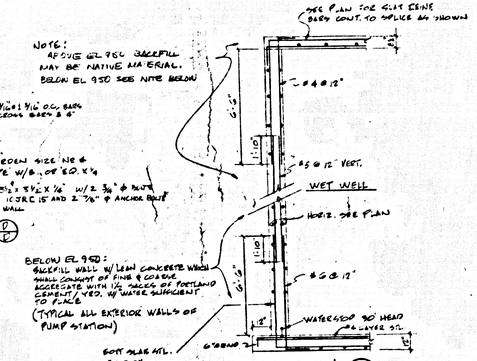
TOP SLAB PLAN
SCALE 1/4"=1'-0"



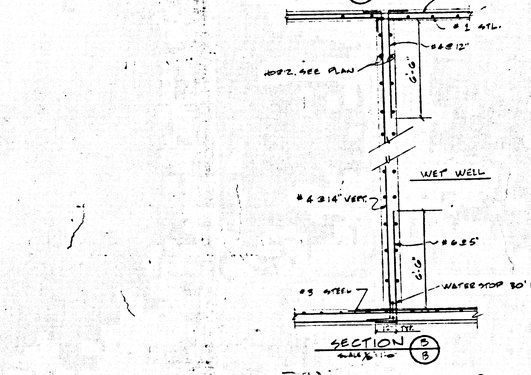
SECTION (D/D)
SCALE 1/2"=1'-0"

NOTE:
ABOVE EL 950 BACKFILL MAY BE NATIVE MATERIAL. BELOW EL 950 SEE NOTE BELOW

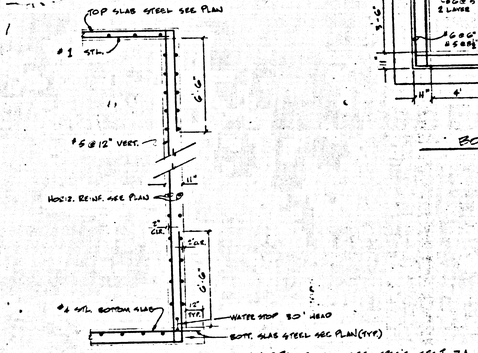
BELOW EL 950:
BACKFILL WALL W/ LEAN CONCRETE WHICH SHALL CONSIST OF FINE & COARSE AGGREGATE WITH 1½ SACKS OF PORTLAND CEMENT/YD. W/ WATER SUFFICIENT TO FLOW.
(TYPICAL ALL EXTERIOR WALLS OF PUMP STATION)



SECTION (C/C)
SCALE 1/2"=1'-0"

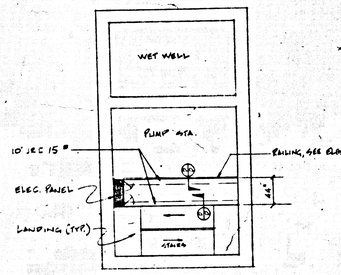


SECTION (B/B)
SCALE 1/2"=1'-0"

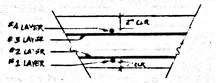


SECTION (A/A)
SCALE 1/2"=1'-0"

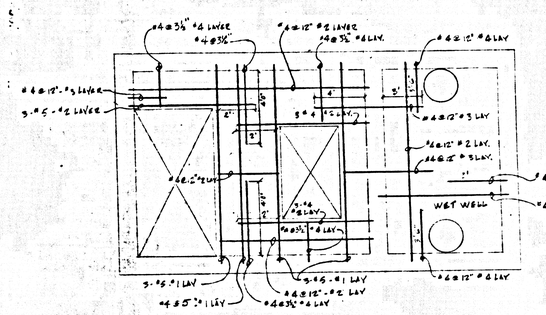
WATERPROOFING : SEE SPEC'S, SECT. 7A



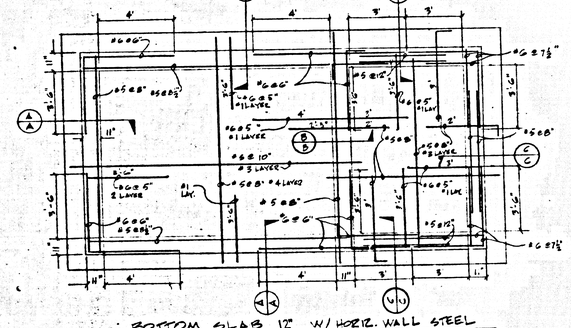
PLAN & ELEV. 945.75
SCALE 1/4"=1'-0"



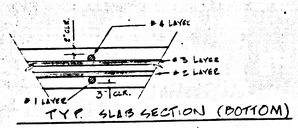
TYP. SLAB SECTION (TOP)
1½"=1'



TOP SLAB 8½"
SCALE 3/8"=1'-0"



BOTTOM SLAB 12" W/ HORIZ. WALL STEEL
SCALE 3/8"=1'-0"



TYP. SLAB SECTION (BOTTOM)

REF CC. 8608

APPROVED BY
C.E. 722 1 Mar 71
R.E. NO. DATE

44994

WILLIAMSON, MORRIS & PAIGE
275 e 25th st. long beach, calif. 90806
telephone 213-424-0614

M-24

POMEROY, JOHNSON & PAIGE
CIVIL & CHEMICAL ENGINEERS
PASADENA, CALIF.

FRANK G. BONELLI REGIONAL COUNTY PARK
(RUDDINGSTONE)

SEWAGE PUMP STATION STRUCTURAL
PHASE III

TOPO APPR. 2804
BOOK NO. 123

date	
revised	
sheet no.	M-24
	of sheets

DOUBLE SCALE

COORDINATES		
STA	NORTH	EAST
1+40.26	161,463.61	346,255.96
2+76.57	161,506.00	346,389.00
5+22.76	161,748.00	346,658.00
8+81.75	162,237.00	346,691.00
10+22.64	162,060.00	346,790.00
13+20.26	161,884.00	347,080.00
17+92.91	162,230.00	347,392.00

PLAN
SCALE 1"=80'

PUMP STATION SITE PLAN
SCALE 1"= 20'

DOUBLE SCALE

COORDINATES		
STA	NORTH	EAST
17+92.91	162,230.00	347,392.00
22+38.66	162,016.00	347,767.00
26+69.36	162,200.00	348,140.00
32+23.74	162,148.00	348,597.00
33+85.18	162,552.62	348,857.28
37+61.81	162,818.11	348,820.75
39+60.78	162,972.58	348,711.81
40+75.03	163,057.11	348,624.53

PLAN
SCALE 1"=80'

REF CC 8588

J. D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED _____ DATE 2-29-72
OFFICE ENGINEER

HARVEY T. BRANDT
L.A. COUNTY ENGINEER
APPROVED _____ DATE 2-29-72
ASST. DIVISION ENGINEER
CHECKED BY _____

APPROVED BY
Harvey M. Bailey
R.E. NO. 11765 DATE 2-29-72

WILLIAMSON, MORRIS & PAIGE
275 e 25th st. long beach, calif. 90806
telephone 213-424-0614

POMEROY, JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA, CALIF.

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)
GRAVITY SEWER
PUMP III

CSD. PROJ. NO. 1288-00
SPEC. NO. 5232

revised 2-29-72
sheet no. M-18
17 of sheets

M-18

11991

DOUBLE SCALE

DOUBLE SCALE

COORDINATES		
STA	NORTH	EAST
1+00	141,906.46	364,150.71
9+79	142,318.85	363,376.45
15+17.09	142,220.61	362,853.25
16+37.09	142,216.21	362,734.21

STABLE & EQUESTRIAN AREA

SEWER CURVE DATA
Δ: 23°08'50"
R: 495.00'
T: 101.35'
L: 199.93'

Δ: 39°08'20"
R: 495.00'
T: 175.98'
L: 338.16'

PARK ROAD "A"

& 8" VCP GRAVITY SEWER

GOLF COURSE

FUT. GOLF COURSE SEWER PH. II

P L A N
SCALE 1"=50'

POULSE SCALE

1203.23 LF 4" C.I. FORCEMAIN

FINISHED RD. GRADE

POULSE SCALE

COORDINATES		
STA	NORTH	EAST
2+38	145,102.42	364,552.12
14+02.12	145,592.83	363,464.66
17+03.25	145,683.80	365,103.46

4" C.I. FORCEMAIN

45° ELL

60°

INV 974.50

12"

10" GRAVITY SEWER

4' DIA MH 973.00

4' FORCEMAIN & GRAVITY SEWER CONNECTION M.H. (A/19)

P L A N
SCALE 1/2" = 1'-0"

PARK ROAD "A"

& 4" C.I. FORCEMAIN

FORCEMAIN CURVE DATA
Δ: 61°16'33"
R: 995'
T: 589.55'
L: 1064.12'

& 4" C.I. EJECTOR FORCEMAIN

PLUG 5' BEYOND P.I. & P.T.

10" GRAVITY SEWER

45° BEND

PLUG 5' BEYOND P.I.T.

SEE U.S. 4" C.I. FORCEMAIN
INV. @ PLUGGED END = 955.75
INV. @ 10" SEWER = 976.50

FIRE & DOMESTIC WATER

P L A N
SCALE 1"=50'

REF. CC 8668

J.D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED _____ DATE 2-28-77
OFFICE ENGINEER

HARVEY T BRANDT
L.A. COUNTY ENGINEER
APPROVED _____ DATE 2-28-77
ASST. DIVISION ENGINEER
CHECKED BY _____

APPROVED BY
Harry H Bailey
11763
R.E. NO. DATE

WILLIAMSON, MORRIS & PAIGE
275 e. 25th st. long beach, calif. 90806
telephone 213-424-0614

M-19

COUNTY ENGINEERING & PLANNING
CIVIL & STRUCTURAL ENGINEERS
PASADENA, CALIF.

44992

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)

COUNTY SEWER & 4" FORCEMAIN
PHASE III

cap. proj. no. 8804
spec. no. 3515

date	
revised	
sheet no.	M-19
of sheets	

FITTING SCHEDULE	
ITEM	DESCRIPTION
1	4 NIKKSO PUMP
2	6"FLG'D VLVE CI.
3	6" FLEX COUPLING (BOLTED)
4	6"x6"-90° RED. ELL. C.I.
5	6" BLIND FLANGE
6	4"-45° ELL. C.I.
7	4" FLEX COUPLING (BOLTED)
8	4" PLUG VALVE
9	4" 90° BASE ELL. C.I.
10	4" CHECK VALVE W/ LEVER ARM & WEIGHT
11	SUMP PUMP (DWING BELL MECHANISM)
12	3" PIPE SUPPORT
13	8" CI. WALL FITTING, FLG'D MECH. JT.
14	0 TO 60 PSI PRESSURE GAGE W/GOOSENECK
15	6"-90° BASE ELL. C.I.
16	4" WALL FITTING FLG. & SELL

APPROVED BY
R.E. NO. DATE

WILLIAMSON, MORRIS & PAIGE
2175 east 25th st. long beach, calif. 90806
telephone 213-424-0614

M-20

POMEROY, JOHNSTON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA, CALIF.

44993

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)

SEWAGE PUMP STATION

CERT. PROJ. NO. 8608
DRAWING NO. 3193

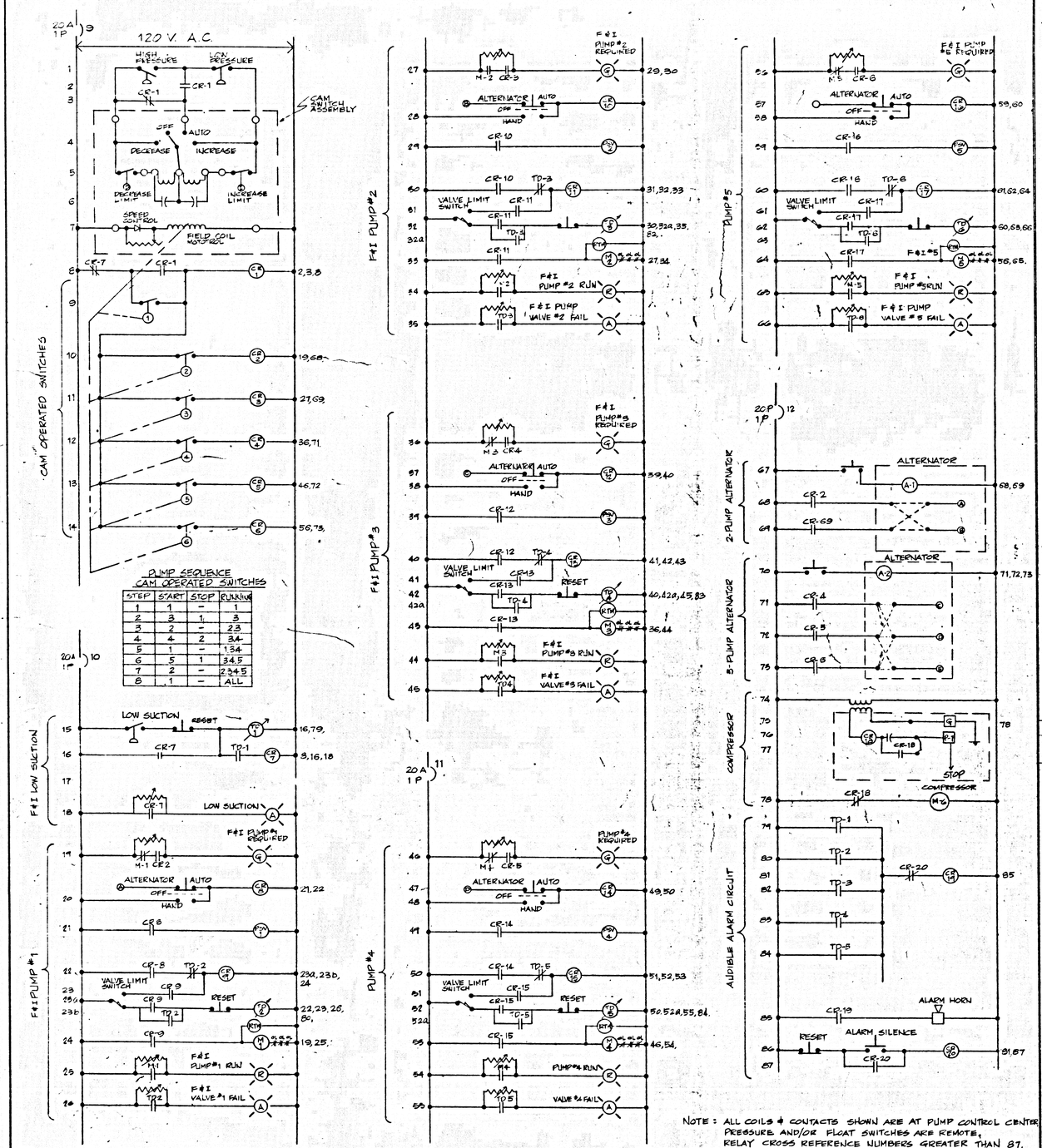
W.D. PARKHURST
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT 21
APPROVED [signature] DATE 2-24-71
OFFICE ENGINEER

HARVEY T. BRANDT
L.A. COUNTY ENGINEER
APPROVED [signature] DATE 2-17-71
ASST. DIVISION ENGINEER
CHECKED BY

date
revised
sheet no.
M-20
21 of shts.

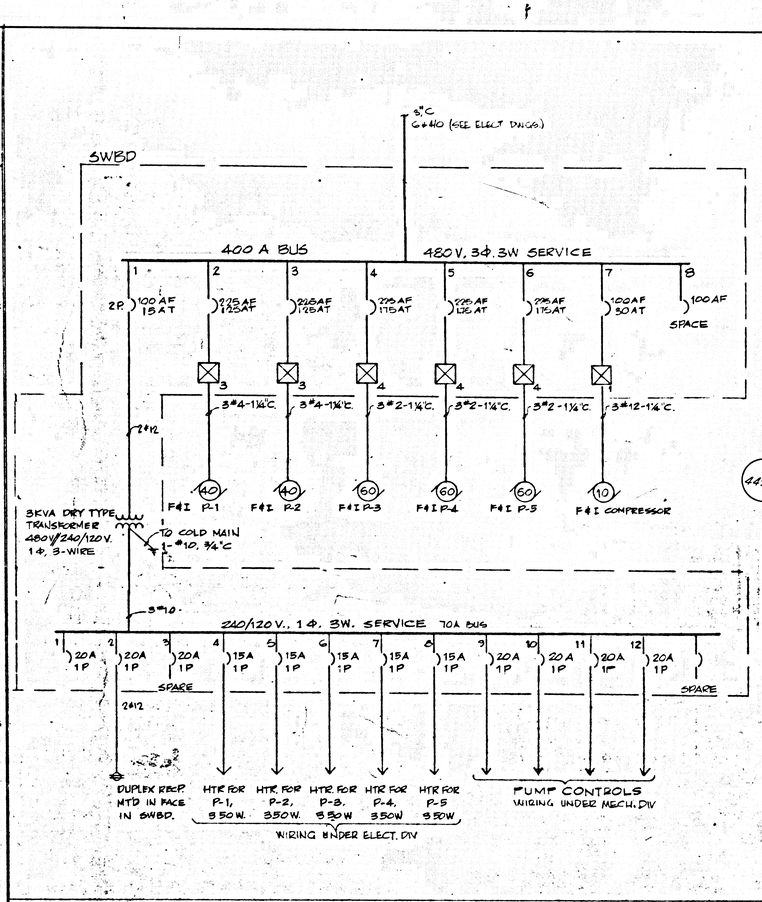
REF. C.C. 8608

24" DIA. CI. MANHOLE FRAME & COVER
6" VENT W/ COVER SEE DET. 20
5'-0"
3'-0"
WIDE SIDE
5'-0"
2'-6"
4'-0"
8'-0"
3'-0"
2'-0"
2'-0"
2'-6"
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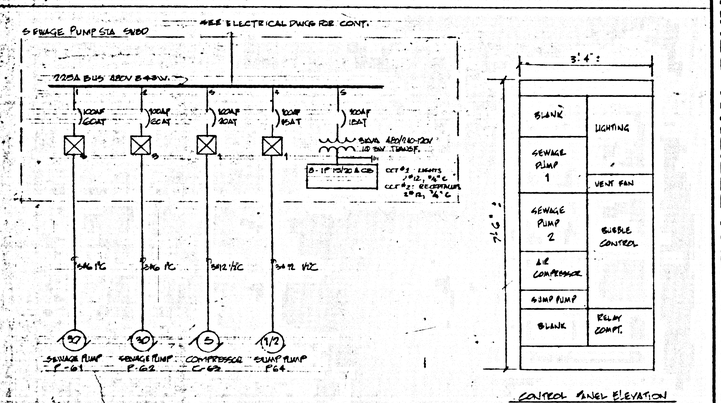


NOTE: ALL COILS & CONTACTS SHOWN ARE AT PUMP CONTROL CENTER PRESSURE AND/OR FLOAT SWITCHES ARE REMOTE, RELAY CROSS REFERENCE NUMBERS GREATER THAN 87, REFER TO CONTACTS SHOWN ON M-26.

FIRE & IRRIGATION PUMP CONTROLS DIAGRAM



SEWAGE PUMPS SINGLE LINE DIAGRAM (REF. CC 8688)



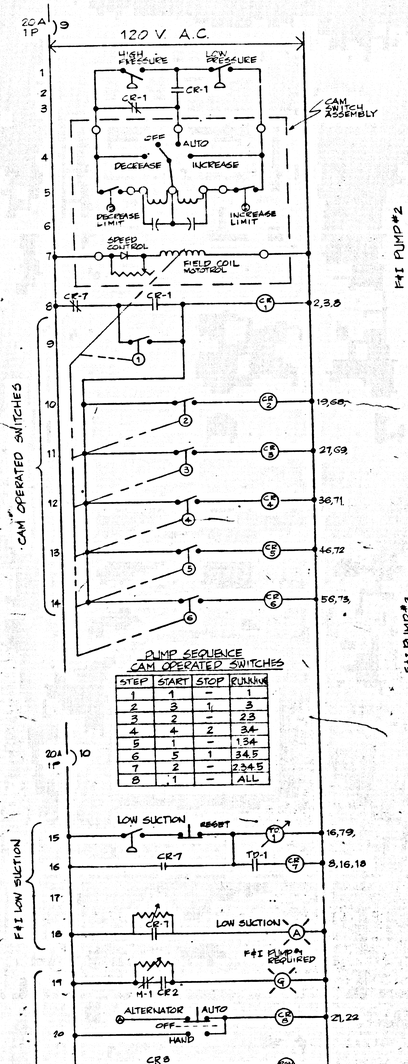
WILLIAMSON, MORRIS & PAIGE
275 e. 25th st. long beach, calif. 90806
telephone 213 · 424 · 0614

M-25

FRANK G. BONELLI REGIONAL COUNTY PARK
(PUDDINGSTONE)
ELECTRICAL CONTROLS
PUMP III

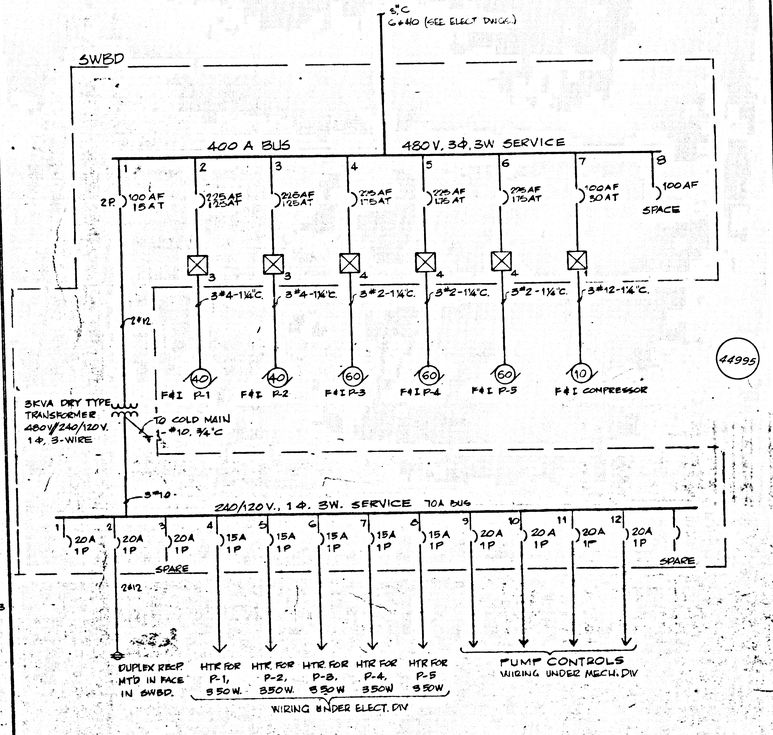
CONSULTANTS: JOHNSON & BAILEY
CIVIL & CHEMICAL ENGINEERS
PASADENA CALIF.

approved by	
EGOCA	R60711
R.E. NO.	DATE
date	
revised	
sheet no.	M-25
of	sheets

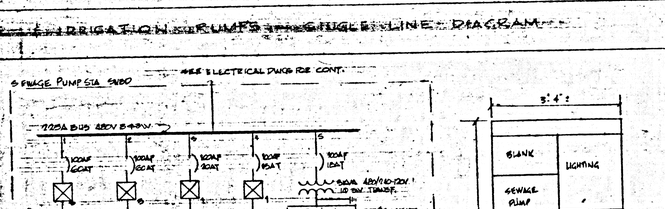


NOTE: ALL COILS & CONTACTS SHOWN ARE AT PUMP CONTROL CENTER PRESSURE AND/OR FLOAT SWITCHES ARE REMOTE. RELAY CROSS REFERENCE NUMBERS GREATER THAN 87, REFER TO CONTACTS SHOWN ON M-25.

FIRE & IRRIGATION PUMP CONTROLS DIAGRAM



SEWAGE PUMPS SINGLE LINE DIAGRAM (REF. CC 8688)



WILLIAMSON, MORRIS & PAIGE
275 e. 25th st. long beach, calif. 90806
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M-25

FRANK G. BONELLI REGIONAL COUNTY PARK (PUDDINGSTONE)
ELECTRICAL CONTROLS PHASE III

date	
revised	
sheet no.	M-25