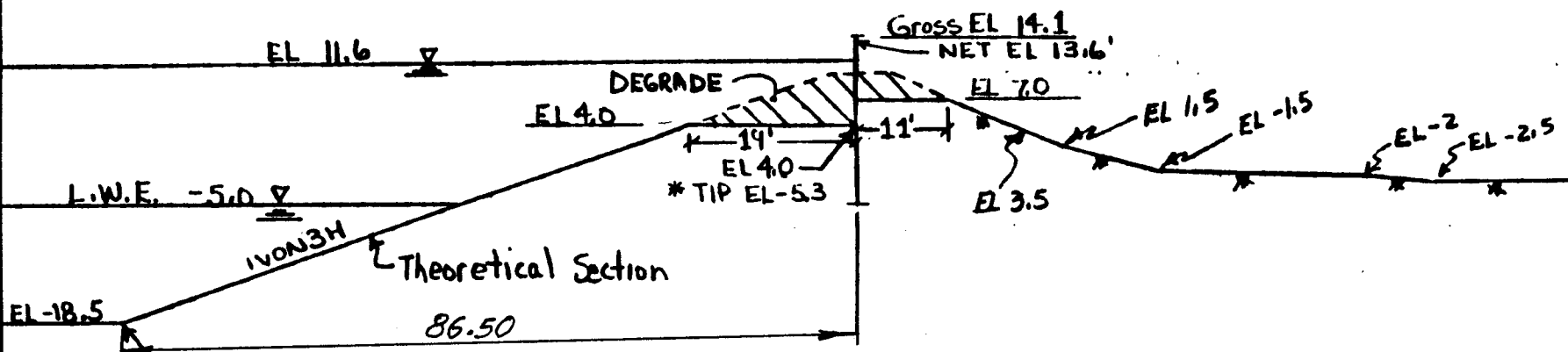


(Approved)

REVISED 4/28/88

STA 589+00 TO STA 614+00  
JEFFERSON SIDE



FLOODSIDE TOE SAME AS MODJESKI + MASTERS PLANS

SCALE: 1" = 20'  
Elevation in Feet N.G.V.D.

Q Files	F.S.	SWI	CASE
Q614JA	1.0	11.6	S
* Q614JB	1.5	11.6	S
Q614JD	1.0	13.6	Q

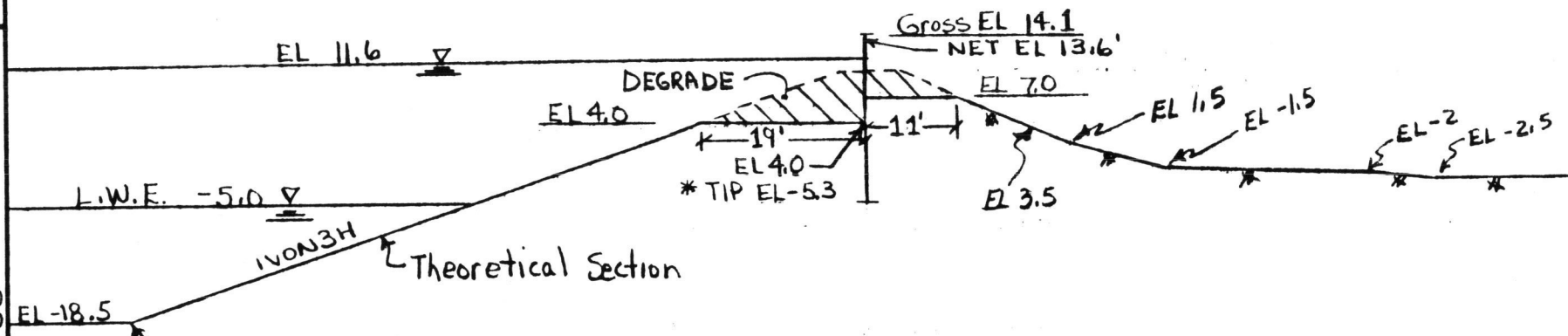
NOTE: TRANSITION BETWEEN STA 589+00 TO STA 590+00

PROJECT	174th St Outfall Canal	PAGE	OF	COMPILED BY	DATE
SUBJECT	STA 589+00 TO STA 614+00 JEFFERSON	CHECKED BY		DATE	4/24/87

REVISED 4/28/88

PROJECT 17th St Outfall Canal	COMPUTED BY FJV	DATE 4/24/87
SUBJECT STA 589+00 TO STA 614+00	CHECKED BY	DATE
PAGE OF		

STA 589+00 TO STA 614+00  
JEFFERSON SIDE



FLOODSIDE TOE SAME AS MODJESKI + MASTERS PLANS  
SCALE: 1" = 20'  
Elevation in Feet N.G.V.D.

Q Files	F.S.	SWI	CASE
Q614J0			
Q614J1	1.0	11.6	S
* Q614JB	1.5	11.6	S
Q614JD	1.0	13.6	Q

DRWZZ

NOTE: TRANSITION BETWEEN STA 589+00 TO STA 590+00

**ADVANCE COPY**  
SUBJECT TO CORRECTION

REVISED 4/28/88

LI Q614J1

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BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH STR.-Q614JA-SWL=11.6-S CASE-FS=1.0  
=1.

THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT  
INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS  
AS COUNTERCLOCKWISE.

THE MAXIMUM DEFLECTION IS 0.16 INCHES AND OCCURS AT MEMBER COORDINATE  
13.60 FT.

Z-22 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.  
THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

CALCULATED EXTERNAL LOADS

DISTANCE FROM REFERENCE (FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
-2.27	POINT LD	0.00 LBF
-2.27	COUPLE	-46.93 LBF-FT

$I_F \approx \frac{1}{3} I_{P222}$

$\Delta_F \approx 3 \Delta_{P222}$

$\Delta_F = 3 \times .16 =$

$\Delta_F \approx 0.48 < 1.5$

INPUTTED LOADS

DISTANCE FROM REFERENCE (FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
11.60	CONTN LD	0.00 LBF/SQ FT
10.60	CONTN LD	62.50 LBF/SQ FT
9.60	CONTN LD	125.00 LBF/SQ FT
8.60	CONTN LD	187.50 LBF/SQ FT
7.60	CONTN LD	250.00 LBF/SQ FT
7.00	CONTN LD	287.50 LBF/SQ FT
7.00	CONTN LD	287.50 LBF/SQ FT
6.00	CONTN LD	76.09 LBF/SQ FT
5.64	CONTN LD	0.00 LBF/SQ FT
5.00	CONTN LD	-135.33 LBF/SQ FT
4.00	CONTN LD	-346.74 LBF/SQ FT
4.00	CONTN LD	-346.74 LBF/SQ FT
3.50	CONTN LD	-439.86 LBF/SQ FT
3.50	CONTN LD	-439.86 LBF/SQ FT
2.50	CONTN LD	-594.72 LBF/SQ FT
1.90	CONTN LD	-688.23 LBF/SQ FT
0.14	CONTN LD	0.00 LBF/SQ FT
-2.27	CONTN LD	941.98 LBF/SQ FT
-2.27	CONTN LD	0.00 LBF/SQ FT

FRUD 13  
O.K.

58 Z-22 PROPERTIES ARE AS FOLLOWS.

59  
60

61 MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL

62 CROSS SECTIONAL AREA= 1.84 SQ IN.

63 ELASTIC MODULUS= 29000000. LBF/SQ IN.

64 DEFLECTION REFERENCE IS AT -13.200

65  
66

67 THE MAXIMUM BENDING MOMENT IS 3726.06 LBF-FT AND OCCURS AT 2.77

68 WHICH HAS THE SHEAR FORCE OF 13.69 LBF.

69

70					DEFLECTION
71					FROM TANG.
72					THRU DEFLE
73	DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	REFERENCE
74	(FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	(INCHES )
75	13.600	0.0	0.0	0.0	0.1617
76	13.599	0.0	0.0	0.0	0.1617
77	13.000	0.0	0.0	0.0	0.1523
78	12.000	0.0	0.0	0.0	0.1368
79	11.000	11.2	6.1	2.2	0.1212
80	10.000	80.0	43.5	42.7	0.1057
81	9.000	211.2	114.8	183.1	0.0902
82	8.000	405.0	220.1	486.0	0.0748
83	7.000	661.2	359.4	1013.9	0.0598
84	6.000	843.0	458.2	1783.7	0.0456
85	5.640	856.7	465.6	2090.4	0.0407
86	5.000	813.4	442.1	2629.5	0.0326
87	4.000	572.4	311.1	3340.1	0.0215
88	3.000	136.4	74.2	3708.7	0.0126
89	2.771	13.7	7.4	3726.1	0.0110
90	2.000	-458.3	-249.1	3560.7	0.0064
91	1.000	-988.6	-537.3	2806.0	0.0026
92	0.138	-1134.4	-616.5	1869.6	0.0009
93	0.136	-1134.4	-616.5	1867.3	0.0009
94	0.000	-1130.8	-614.5	1713.7	0.0008
95	-1.000	-881.8	-479.2	674.9	0.0001
96	-2.000	-241.8	-131.4	80.5	0.0000
97	-2.271	-0.9	-0.5	46.9	0.0000
98	-2.273	0.0	0.0	0.0	0.0000
99	-3.000	0.0	0.0	0.0	0.0000
100	-4.000	0.0	0.0	0.0	0.0000
101	-5.000	0.0	0.0	0.0	0.0000
102	-6.000	0.0	0.0	0.0	0.0000
103	-7.000	0.0	0.0	0.0	0.0000
104	-8.000	0.0	0.0	0.0	0.0000
105	-9.000	0.0	0.0	0.0	0.0000
106	-10.000	0.0	0.0	0.0	0.0000
107	-11.000	0.0	0.0	0.0	0.0000
108	-12.000	0.0	0.0	0.0	0.0000
109	-13.000	0.0	0.0	0.0	0.0000
110	-13.199	0.0	0.0	0.0	0.0000
111	-13.200	0.0	0.0	0.0	0.0000

112  
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114

115 \*RUN COMPLETED\*

LI Q614J2

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4

BEAMS (SHEAR, MOMENT, DEFLECTION)

5 17TH STR.-Q614JB-SWL=11.6-S CASE-FS=1.5  
6 =1.

7  
8 THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT  
9 INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS  
10 AS COUNTERCLOCKWISE.

11  
12  
13 THE MAXIMUM DEFLECTION IS 0.32 INCHES AND OCCURS AT MEMBER COORDINATE  
14 13.60 FT.

15  
16  
17  
18 Z-22 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

19  
20 THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

21  
22  
23 CALCULATED EXTERNAL LOADS

24	25	26	27
DISTANCE FROM	TYPE OF	MAGNITUDE OF	
REFERENCE(FT)	LOAD	LOAD	
28 -5.23	POINT LD	1.39 LBF	
29 -5.23	COUPLE	-52.95 LBF-FT	

30  
31  
32 INPUTTED LOADS

33	34	35	36
DISTANCE FROM	TYPE OF	MAGNITUDE OF	
REFERENCE(FT)	LOAD	LOAD	
37 11.60	CONTN LD	0.00 LBF/SQ FT	
38 10.60	CONTN LD	62.50 LBF/SQ FT	
39 9.60	CONTN LD	125.00 LBF/SQ FT	
40 8.60	CONTN LD	187.50 LBF/SQ FT	
41 7.60	CONTN LD	250.00 LBF/SQ FT	
42 7.00	CONTN LD	287.50 LBF/SQ FT	
43 7.00	CONTN LD	287.50 LBF/SQ FT	
44 6.00	CONTN LD	140.20 LBF/SQ FT	
45 5.05	CONTN LD	0.00 LBF/SQ FT	
46 5.00	CONTN LD	-7.10 LBF/SQ FT	
47 4.00	CONTN LD	-154.41 LBF/SQ FT	
48 4.00	CONTN LD	-154.41 LBF/SQ FT	
49 3.50	CONTN LD	-211.61 LBF/SQ FT	
50 3.50	CONTN LD	-211.61 LBF/SQ FT	
51 2.50	CONTN LD	-306.03 LBF/SQ FT	
52 1.50	CONTN LD	-400.44 LBF/SQ FT	
53 0.50	CONTN LD	-494.86 LBF/SQ FT	
54 0.00	CONTN LD	-542.07 LBF/SQ FT	
5 0.00	CONTN LD	-542.07 LBF/SQ FT	
56 -0.24	CONTN LD	-553.44 LBF/SQ FT	
57 -2.24	CONTN LD	0.00 LBF/SQ FT	

58 -5.23 CONTN LD 825.69 LBF/SQ FT  
 59 -5.23 CONTN LD 0.00 LBF/SQ FT

60  
 61  
 62 Z-22 PROPERTIES ARE AS FOLLOWS.

65 MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL  
 66 CROSS SECTIONAL AREA= 1.84 SQ IN.  
 67 ELASTIC MODULUS= 29000000. LBF/SQ IN.  
 68 DEFLECTION REFERENCE IS AT -13.200

70  
 71 THE MAXIMUM BENDING MOMENT IS 5056.95 LBF-FT AND OCCURS AT 1.14  
 72 WHICH HAS THE SHEAR FORCE OF 5.57 LBF.

74	DEFLECTION FROM TANG. THRU DEFLE				
75	REFERENCE				
76	DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	DEFLECTION
77	(FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	(INCHES )
79	13.600	0.0	0.0	0.0	0.3202
80	13.599	0.0	0.0	0.0	0.3202
81	13.000	0.0	0.0	0.0	0.3041
82	12.000	0.0	0.0	0.0	0.2773
83	11.000	11.2	6.1	2.2	0.2505
84	10.000	80.0	43.5	42.7	0.2237
85	9.000	211.2	114.8	183.1	0.1969
86	8.000	405.0	220.1	486.0	0.1703
87	7.000	661.2	359.4	1013.9	0.1440
88	6.000	875.1	475.6	1794.4	0.1185
89	5.048	941.8	511.9	2669.6	0.0954
90	5.000	941.6	511.8	2715.0	0.0943
91	4.000	860.9	467.9	3628.6	0.0720
92	3.000	651.8	354.2	4393.6	0.0522
93	2.000	345.7	187.9	4900.2	0.0355
94	1.137	5.6	3.0	5057.0	0.0239
95	1.000	-54.7	-29.7	5053.6	0.0223
96	0.000	-549.6	-298.7	4759.4	0.0125
97	-1.000	-1021.5	-555.2	3954.7	0.0061
98	-2.000	-1226.3	-666.5	2807.7	0.0024
99	-2.239	-1234.3	-670.8	2512.8	0.0018
100	-2.241	-1234.3	-670.8	2510.3	0.0018
101	-3.000	-1154.5	-627.5	1594.3	0.0007
102	-4.000	-806.2	-438.2	590.9	0.0001
103	-5.000	-181.5	-98.6	74.0	0.0000
104	-5.226	-2.2	-1.2	53.0	0.0000
105	-5.228	0.0	0.0	0.0	0.0000
106	-6.000	0.0	0.0	0.0	0.0000
107	-7.000	0.0	0.0	0.0	0.0000
108	-8.000	0.0	0.0	0.0	0.0000
109	-9.000	0.0	0.0	0.0	0.0000
110	-10.000	0.0	0.0	0.0	0.0000
111	-11.000	0.0	0.0	0.0	0.0000
112	-12.000	0.0	0.0	0.0	0.0000
1	-13.000	0.0	0.0	0.0	0.0000
114	-13.199	0.0	0.0	0.0	0.0000
115	-13.200	0.0	0.0	0.0	0.0000

116  
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118  
119 \*RUN COMPLETED\*

E...  
LI Q614J3

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2 BEAMS (SHEAR, MOMENT, DEFLECTION)

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5 17TH STR.-Q614JD-SWL=13.6-Q CASE-FS=1.0  
6 =1.  
7

8 THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT  
9 INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS  
10 AS COUNTERCLOCKWISE.

11  
12  
13 THE MAXIMUM DEFLECTION IS 0.14 INCHES AND OCCURS AT MEMBER COORDINATE  
14 13.60 FT.

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16  
17  
18 Z-22 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

19  
20 THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

21  
22  
23 CALCULATED EXTERNAL LOADS

24

25 DISTANCE FROM	26 TYPE OF	27 MAGNITUDE OF
REFERENCE(FT)	LOAD	LOAD
28 0.59	POINT LD	1.80 LBF
29 0.59	COUPLE	-71.10 LBF-FT

30  
31  
32 INPUTTED LOADS

33

34 DISTANCE FROM	35 TYPE OF	36 MAGNITUDE OF
REFERENCE(FT)	LOAD	LOAD
37 13.60	CONTN LD	0.00 LBF/SQ FT
38 12.60	CONTN LD	62.50 LBF/SQ FT
39 11.60	CONTN LD	125.00 LBF/SQ FT
40 10.60	CONTN LD	187.50 LBF/SQ FT
41 9.60	CONTN LD	250.00 LBF/SQ FT
42 8.60	CONTN LD	312.50 LBF/SQ FT
43 7.60	CONTN LD	375.00 LBF/SQ FT
44 7.00	CONTN LD	412.50 LBF/SQ FT
45 7.00	CONTN LD	0.00 LBF/SQ FT
46 7.00	CONTN LD	-587.50 LBF/SQ FT
47 6.00	CONTN LD	-645.00 LBF/SQ FT
4 5.00	CONTN LD	-702.50 LBF/SQ FT
49 4.00	CONTN LD	-760.00 LBF/SQ FT
50 4.00	CONTN LD	-760.00 LBF/SQ FT

51	3.50	CONTN LD	-788.75	LBF/SQ FT
52	3.50	CONTN LD	-788.75	LBF/SQ FT
53	3.04	CONTN LD	-807.30	LBF/SQ FT
54	2.33	CONTN LD	0.00	LBF/SQ FT
55	0.59	CONTN LD	1959.46	LBF/SQ FT
56	0.59	CONTN LD	0.00	LBF/SQ FT

57  
58  
59 Z-22                    PROPERTIES ARE AS FOLLOWS.

60  
61  
62 MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL  
63 CROSS SECTIONAL AREA= 1.84 SQ IN.  
64 ELASTIC MODULUS= 29000000. LBF/SQ IN.  
65 DEFLECTION REFERENCE IS AT -13.200

66  
67 THE MAXIMUM BENDING MOMENT IS 4469.18 LBF-FT AND OCCURS AT 4.90  
68 WHICH HAS THE SHEAR FORCE OF 2.53 LBF.

70					DEFLECTION
71					FROM TANG.
72					THRU DEFLE
73					REFERENCE
74	DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	
75	(FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	(INCHES )
76	13.600	0.0	0.0	0.0	0.1405
77	13.599	0.0	0.0	0.0	0.1405
78	13.000	11.2	6.1	2.2	0.1303
79	12.000	80.0	43.5	42.7	0.1133
80	11.000	211.2	114.8	183.1	0.0964
81	10.000	405.0	220.1	486.0	0.0796
82	9.000	661.2	359.4	1013.9	0.0632
83	8.000	980.0	532.6	1829.3	0.0475
84	7.000	1361.2	739.8	2994.7	0.0332
85	6.000	745.0	404.9	4052.7	0.0210
86	5.000	71.2	38.7	4465.6	0.0115
87	4.903	2.5	1.4	4469.2	0.0108
88	4.000	-660.0	-358.7	4176.0	0.0051
89	3.000	-1445.6	-785.7	3126.8	0.0016
90	2.328	-1701.3	-924.6	2041.2	0.0006
91	2.326	-1701.3	-924.6	2037.8	0.0006
92	2.000	-1640.8	-891.7	1489.5	0.0003
93	1.000	-706.4	-383.9	221.7	0.0000
94	0.594	-3.8	-2.0	71.1	0.0000
95	0.592	0.0	0.0	0.0	0.0000
96	0.000	0.0	0.0	0.0	0.0000
97	-1.000	0.0	0.0	0.0	0.0000
98	-2.000	0.0	0.0	0.0	0.0000
99	-3.000	0.0	0.0	0.0	0.0000
100	-4.000	0.0	0.0	0.0	0.0000
101	-5.000	0.0	0.0	0.0	0.0000
102	-6.000	0.0	0.0	0.0	0.0000
103	-7.000	0.0	0.0	0.0	0.0000
104	-8.000	0.0	0.0	0.0	0.0000
105	-9.000	0.0	0.0	0.0	0.0000
106	-10.000	0.0	0.0	0.0	0.0000
107	-11.000	0.0	0.0	0.0	0.0000
108	-12.000	0.0	0.0	0.0	0.0000



109	-13.000	0.0	0.0	0.0	0.0000
110	-13.199	0.0	0.0	0.0	0.0000
111	-13.200	0.0	0.0	0.0	0.0000

112

113

1

1. \*RUN COMPLETED\*

LI DRW22

1 100 1 13.6 -13.2 1 -13.2 0 -1

2 200 PZ-22

3 300 29000000 1.84 84.38

EOF..

EOT..

PROJECT 17th St Outfall Canal  
 SUBJECT: STA 589+00 TO STA 614+00

COMPUTED BY [Signature]  
 CHECKED BY [Signature]

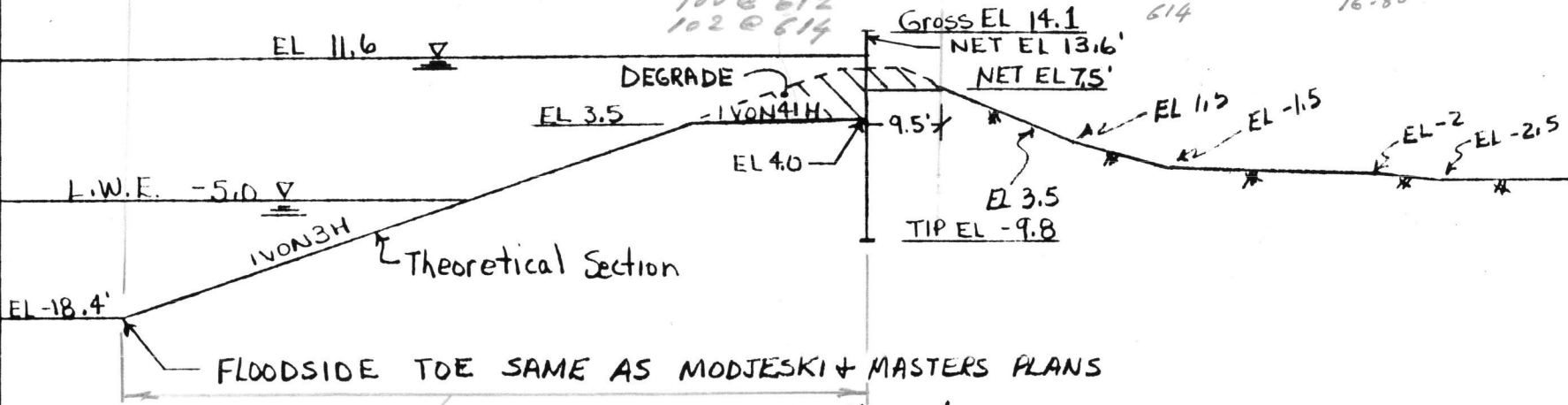
DATE 2/24/87  
 DATE

PAGE OF

STA 589+00 TO STA 614+00  
 JEFFERSON SIDE

STA.	off. set from B/L
589	8.30'
590~592	9.80
594~596	10.80
598	12.80
600	14.80
602	16.80
604~606	17.80
608	16.80
610	15.80
612	14.80
614	16.80

93.5 @ 589.  
 95' (590~592) 98' @ 598 103 @ 604~606  
 96' (594~596) 100 @ 600 102 @ 608  
 102 @ 602 101 @ 610  
 100 @ 612  
 102 @ 614



FLOODSIDE TOE SAME AS MODJESKI + MASTERS PLANS

86.20'

SCALE: 1" = 20'  
 Elevation in Feet N.G.V.D.

Q File: Q614IJ (F.S. = 1.5)  
 Q614IJA (F.S. = 1.0)

[Large Signature]

## LIST Q614IJA

1 10001 17TH ST CANAL HLP STA. 589+00 TO STA 614+00  
2 10002 I-WALL TOP EL. 14.1 BOT. EL. -9.8 F.S.=1.0  
3 10003 3 0.136000000E+02 0.000000000E+01  
4 10004 3 0.126000000E+02 0.625000000E+02  
10005 3 0.116000000E+02 0.125000000E+03  
6 10006 3 0.106000000E+02 0.187500000E+03  
7 10007 3 0.960000000E+01 0.250000000E+03  
8 10008 3 0.860000000E+01 0.312500000E+03  
9 10009 3 0.760000000E+01 0.375000000E+03  
10 10010 3 0.750000000E+01 0.381250000E+03  
11 10011 3 0.750000000E+01 0.381250000E+03  
12 10012 3 0.650000000E+01 0.16983524E+03  
13 10013 3 0.56966727E+01 0.000000000E+01  
14 10014 3 0.550000000E+01 -0.41579513E+02  
15 10015 3 0.450000000E+01 -0.25299427E+03  
16 10016 3 0.400000000E+01 -0.35870165E+03  
17 10017 3 0.400000000E+01 -0.35870165E+03  
18 10018 3 0.350000000E+01 -0.45201397E+03  
19 10019 3 0.350000000E+01 -0.45201397E+03  
20 10020 3 0.250000000E+01 -0.60728159E+03  
21 10021 3 0.150000000E+01 -0.76254921E+03  
22 10022 3 0.50686878E+00 -0.84562890E+03  
23 10023 3 -0.17824396E+01 0.000000000E+01  
  
24 10024 3 -0.50467615E+01 0.12057811E+04  
25 10025 4 -0.50467615E+01 0.000000000E+01  
26 10026 0 -0.50467615E+01 0.000000000E+01  
27 10027 -0.50467615E+01 -0.13459740E+02 -0.28392928E+02  
EOT..

LIST Q5614IJAO

1  
2  
3

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH ST CANAL HLP STA. 589+00 TO STA 614+00  
WAL

6  
7

8 THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT  
9 INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS  
10 AS COUNTERCLOCKWISE.

11  
12

13 THE MAXIMUM DEFLECTION IS 0.26 INCHES AND OCCURS AT MEMBER COORDINATE  
14 14.10 FT.

15  
16

17  
18 Z-27 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

19  
20

THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

21  
22

23 CALCULATED EXTERNAL LOADS

24

25	DISTANCE FROM	TYPE OF	MAGNITUDE OF
26	REFERENCE (FT)	LOAD	LOAD
27			
28	-5.05	POINT LD	13.46 LBF
29	-5.05	COUPLE	28.39 LBF-FT

30  
31

32 INPUTTED LOADS

33

34	DISTANCE FROM	TYPE OF	MAGNITUDE OF
35	REFERENCE (FT)	LOAD	LOAD
36			
37	13.60	CONTN LD	0.00 LBF/SQ FT
38	12.60	CONTN LD	62.50 LBF/SQ FT
39	11.60	CONTN LD	125.00 LBF/SQ FT
40	10.60	CONTN LD	187.50 LBF/SQ FT
41	9.60	CONTN LD	250.00 LBF/SQ FT
42	8.60	CONTN LD	312.50 LBF/SQ FT
43	7.60	CONTN LD	375.00 LBF/SQ FT
44	7.50	CONTN LD	381.25 LBF/SQ FT
45	7.50	CONTN LD	381.25 LBF/SQ FT
46	6.50	CONTN LD	169.84 LBF/SQ FT
47	5.70	CONTN LD	0.00 LBF/SQ FT
48	5.50	CONTN LD	-41.58 LBF/SQ FT
49	4.50	CONTN LD	-252.99 LBF/SQ FT
50	4.00	CONTN LD	-358.70 LBF/SQ FT
51	4.00	CONTN LD	-358.70 LBF/SQ FT
52	3.50	CONTN LD	-452.01 LBF/SQ FT
53	3.50	CONTN LD	-452.01 LBF/SQ FT
54	2.50	CONTN LD	-607.28 LBF/SQ FT
55	1.50	CONTN LD	-762.55 LBF/SQ FT
56	0.51	CONTN LD	-845.63 LBF/SQ FT
57	-1.78	CONTN LD	0.00 LBF/SQ FT

58 -5.05 CONTN LD 1205.78 LBF/SQ FT  
 59 -5.05 CONTN LD 0.00 LBF/SQ FT

60  
 61

62 Z-27 PROPERTIES ARE AS FOLLOWS.

63  
 64

65 MOMENT OF INERTIA= 184.20 IN. TO THE 4TH PER FOOT OF WALL

66 CROSS SECTIONAL AREA= 7.94 SQ IN.

67 ELASTIC MODULUS= 29000000. LBF/SQ IN.

68 DEFLECTION REFERENCE IS AT -9.800

69

70

71 THE MAXIMUM BENDING MOMENT IS 8730.03 LBF-FT AND OCCURS AT 1.81  
 72 WHICH HAS THE SHEAR FORCE OF 10.44 LBF.

73

74

75

76

77 DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	DEFLECTION
(FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	FROM TANG. THRU DEFLE REFERENCE
				(INCHES )

79 14.100	0.0	0.0	0.0	0.2625
80 14.099	0.0	0.0	0.0	0.2625
81 14.000	0.0	0.0	0.0	0.2603
82 13.000	11.2	1.4	2.2	0.2379
83 12.000	80.0	10.1	42.7	0.2154
84 11.000	211.2	26.6	183.1	0.1930
85 10.000	405.0	51.0	486.0	0.1707
86 9.000	661.2	83.3	1013.9	0.1485
87 8.000	980.0	123.4	1829.3	0.1267
88 7.000	1327.0	167.1	2989.0	0.1055
89 6.000	1496.8	188.5	4418.6	0.0852
90 5.697	1506.6	189.7	4874.6	0.0794
91 5.000	1455.3	183.3	5912.3	0.0664
92 4.000	1202.3	151.4	7258.7	0.0495

93 3.000	754.2	95.0	8251.1	0.0350
94 2.000	146.9	18.5	8714.6	0.0230
95 1.805	10.4	1.3	8730.0	0.0210
96 1.000	-606.7	-76.4	8494.6	0.0139
97 0.000	-1394.7	-175.7	7481.7	0.0074
98 -1.000	-1868.4	-235.3	5819.3	0.0034
99 -1.781	-1981.5	-249.6	4300.4	0.0016
100 -1.783	-1981.5	-249.6	4296.4	0.0016
101 -2.000	-1972.7	-248.5	3867.9	0.0012
102 -3.000	-1707.7	-215.1	1996.9	0.0003
103 -4.000	-1073.3	-135.2	575.7	0.0000
104 -5.000	-69.4	-8.7	-26.4	0.0000
105 -5.046	-14.7	-1.8	-28.4	0.0000
106 -5.048	0.0	0.0	0.0	0.0000
107 -6.000	0.0	0.0	0.0	0.0000
108 -7.000	0.0	0.0	0.0	0.0000
109 -8.000	0.0	0.0	0.0	0.0000
110 -9.000	0.0	0.0	0.0	0.0000
111 -9.799	0.0	0.0	0.0	0.0000
112 -9.800	0.0	0.0	0.0	0.0000

113				
114				
115				

116 \*RUN COMPLETED\*

117

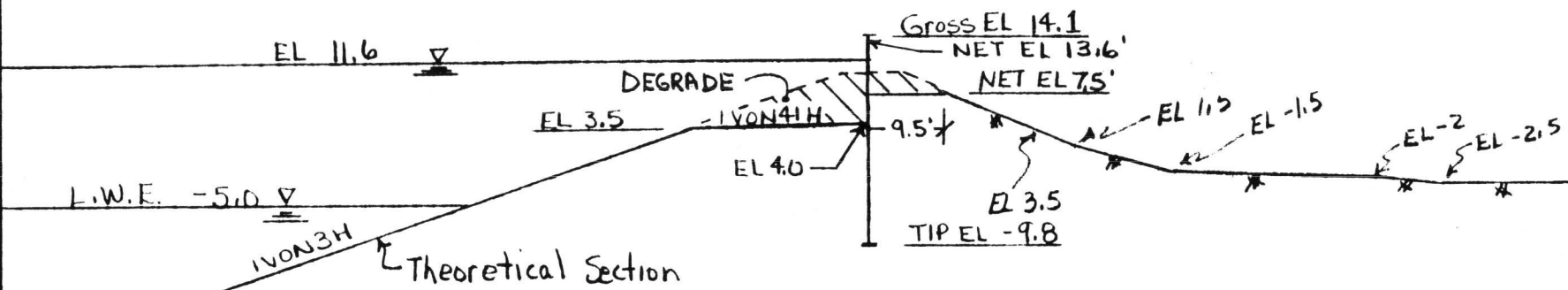
EOT..

PROJECT 17th St Outfall Canal  
 SUBJECT: STA 589+00 TO STA 614+00

COMPUTED BY  
 CHECKED BY

DATE 2/24/87  
 DATE

STA 589+00 TO STA 614+00  
 JEFFERSON SIDE



SCALE: 1" = 20'  
 Elevation in Feet N.G.V.D.  
 Q File: Q614IJ (F.S. = 1.5)  
 Q614IJA (F.S. = 1.0)

Q6174IJ

1 10001 17TH ST CANAL HLP STA 589+00 TO STA 614+00

2 10002 I-WALL TOP EL. 14.1 BOTT. EL. -9.8 F.S.=1.5

3 10003	3	0.13600000E+02	0.00000000E+01
▲ 10004	3	0.12600000E+02	0.62500000E+02
10005	3	0.11600000E+02	0.12500000E+03
6 10006	3	0.10600000E+02	0.18750000E+03
7 10007	3	0.96000000E+01	0.25000000E+03
8 10008	3	0.86000000E+01	0.31250000E+03
9 10009	3	0.76000000E+01	0.37500000E+03
10 10010	3	0.75000000E+01	0.38125000E+03
11 10011	3	0.75000000E+01	0.38125000E+03
12 10012	3	0.65000000E+01	0.23394798E+03
13 10013	3	0.55000000E+01	0.86645954E+02
14 10014	3	0.49117803E+01	0.00000000E+01
15 10015	3	0.45000000E+01	-0.60656069E+02
16 10016	3	0.40000000E+01	-0.13430708E+03
17 10017	3	0.40000000E+01	-0.13430708E+03
18 10018	3	0.35000000E+01	-0.19181185E+03
19 10019	3	0.35000000E+01	-0.19181185E+03
20 10020	3	0.25000000E+01	-0.28682289E+03
21 10021	3	0.15000000E+01	-0.38183393E+03
22 10022	3	0.50000000E+00	-0.47684498E+03
23 10023	3	0.00000000E+01	-0.50188736E+03
24 10024	3	0.00000000E+01	-0.50188736E+03
25 10025	3	-0.10000000E+01	-0.47888001E+03
26 10026	3	-0.20000000E+01	-0.45587266E+03
27 10027	3	-0.30000000E+01	-0.43286531E+03
28 10028	3	-0.40000000E+01	-0.40985795E+03
∩ 10029	3	-0.48407819E+01	-0.39051379E+03
∩ 10030	3	-0.60761150E+01	0.00000000E+01
31 10031	3	-0.97517189E+01	0.11619328E+04
32 10032	4	-0.97517189E+01	0.00000000E+01
33 10033	0	-0.97517189E+01	0.00000000E+01
34 10034	-0.97517189E+01	0.14901161E-07	0.91243036E+01

EOT..



LIST Q6f4IJO

1  
2  
3

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH ST CANAL HLP STA 589+00 TO STA 614+00  
WAL

6  
7

8 THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT  
9 INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS  
10 AS COUNTERCLOCKWISE.

11  
12

13 THE MAXIMUM DEFLECTION IS 0.59 INCHES AND OCCURS AT MEMBER COORDINATE  
14 14.10 FT.

15  
16

17  
18 Z-27 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

19

20 THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

21

22

23

CALCULATED EXTERNAL LOADS

24

25	DISTANCE FROM	TYPE OF	MAGNITUDE OF
26	REFERENCE (FT)	LOAD	LOAD
27			
28	-9.75	POINT LD	0.00 LBF
29	-9.75	COUPLE	-9.13 LBF-FT

30

31

32

INPUTTED LOADS

33

34	DISTANCE FROM	TYPE OF	MAGNITUDE OF
35	REFERENCE (FT)	LOAD	LOAD
36			
37	13.60	CONTN LD	0.00 LBF/SQ FT
38	12.60	CONTN LD	62.50 LBF/SQ FT
39	11.60	CONTN LD	125.00 LBF/SQ FT
40	10.60	CONTN LD	187.50 LBF/SQ FT
41	9.60	CONTN LD	250.00 LBF/SQ FT
42	8.60	CONTN LD	312.50 LBF/SQ FT
43	7.60	CONTN LD	375.00 LBF/SQ FT
44	7.50	CONTN LD	381.25 LBF/SQ FT
45	7.50	CONTN LD	381.25 LBF/SQ FT
46	6.50	CONTN LD	233.95 LBF/SQ FT
47	5.50	CONTN LD	86.65 LBF/SQ FT
48	4.91	CONTN LD	0.00 LBF/SQ FT
49	4.50	CONTN LD	-60.66 LBF/SQ FT
50	4.00	CONTN LD	-134.31 LBF/SQ FT
51	4.00	CONTN LD	-134.31 LBF/SQ FT
52	3.50	CONTN LD	-191.81 LBF/SQ FT
53	3.50	CONTN LD	-191.81 LBF/SQ FT
54	2.50	CONTN LD	-286.82 LBF/SQ FT
55	1.50	CONTN LD	-381.83 LBF/SQ FT
56	0.50	CONTN LD	-476.84 LBF/SQ FT
57	0.00	CONTN LD	-501.89 LBF/SQ FT

58	0.00	CONTN LD	-501.89	LBF/SQ FT
59	-1.00	CONTN LD	-478.88	LBF/SQ FT
60	-2.00	CONTN LD	-455.87	LBF/SQ FT
61	-3.00	CONTN LD	-432.87	LBF/SQ FT
62	-4.00	CONTN LD	-409.86	LBF/SQ FT
63	-4.84	CONTN LD	-390.51	LBF/SQ FT
64	-6.08	CONTN LD	0.00	LBF/SQ FT
65	-9.75	CONTN LD	1161.93	LBF/SQ FT
66	-9.75	CONTN LD	0.00	LBF/SQ FT

67  
68

69 Z-27                    PROPERTIES ARE AS FOLLOWS.

70  
71

72 MOMENT OF INERTIA= 184.20 IN. TO THE 4TH PER FOOT OF WALL  
73 CROSS SECTIONAL AREA= 7.94 SQ IN.  
74 ELASTIC MODULUS= 29000000. LBF/SQ IN.  
75 DEFLECTION REFERENCE IS AT -9.800

76  
77

78 THE MAXIMUM BENDING MOMENT IS 12010.19 LBF-FT AND OCCURS AT -0.54  
79 WHICH HAS THE SHEAR FORCE OF -2.86 LBF.

80  
81

82					DEFLECTION
83					FROM TANG.
84	DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	THRU DEFLE
85	(FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	REFERENCE
86					(INCHES )
86	14.100	0.0	0.0	0.0	0.5926
87	14.099	0.0	0.0	0.0	0.5926
88	14.000	0.0	0.0	0.0	0.5884
89	13.000	11.2	1.4	2.2	0.5467
90	12.000	80.0	10.1	42.7	0.5049
91	11.000	211.2	26.6	183.1	0.4631
92	10.000	405.0	51.0	486.0	0.4214
93	9.000	661.2	83.3	1013.9	0.3799
94	8.000	980.0	123.4	1829.3	0.3387
95	7.000	1335.0	168.1	2990.4	0.2982
96	6.000	1569.0	197.6	4454.7	0.2586
97	5.000	1655.6	208.5	6079.2	0.2205
98	4.912	1656.2	208.6	6225.3	0.2172
99	4.000	1595.0	200.9	7716.8	0.1843
100	3.000	1405.7	177.0	9225.8	0.1506
101	2.000	1118.8	140.9	10496.0	0.1199
102	1.000	737.0	92.8	11431.8	0.0926
103	0.000	265.8	33.5	11939.3	0.0689
104	-0.542	-2.9	-0.4	12010.2	0.0577
105	-1.000	-224.6	-28.3	11957.9	0.0491
106	-2.000	-692.0	-87.2	11497.7	0.0331
107	-3.000	-1136.4	-143.1	10581.6	0.0209
108	-4.000	-1557.7	-196.2	9232.6	0.0120
109	-5.000	-1952.4	-245.9	7474.0	0.0061
110	-6.000	-2134.5	-268.8	5404.2	0.0026
111	-6.075	-2135.4	-268.9	5243.9	0.0024
112	-6.077	-2135.4	-268.9	5239.6	0.0024
113	-7.000	-2000.5	-252.0	3310.4	0.0008
114	-8.000	-1550.4	-195.3	1508.6	0.0002
115	-9.000	-784.1	-98.8	315.0	0.0000

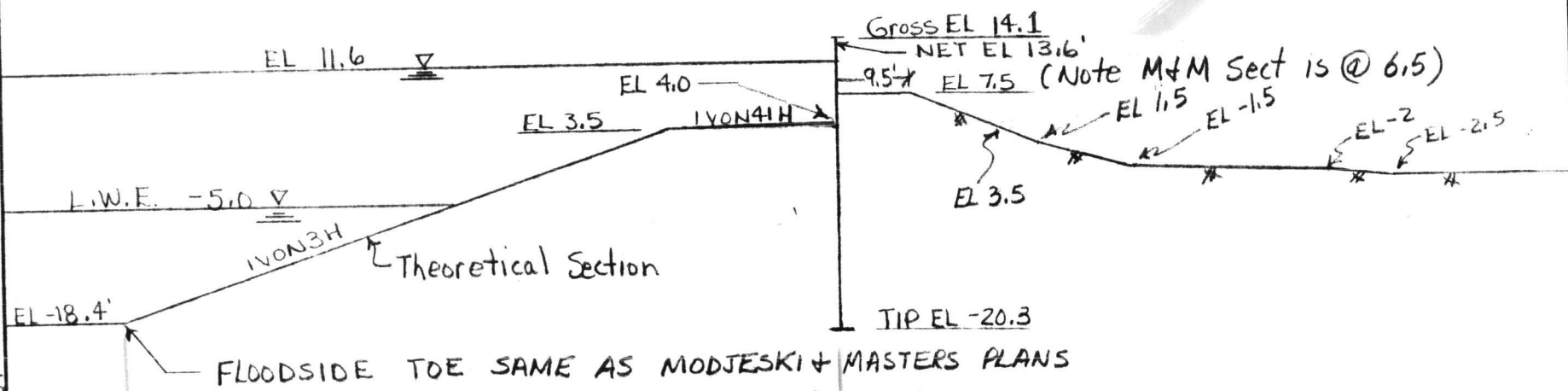
116	-9.751	-1.2	-0.1	9.1	0.0000
117	-9.753	0.0	0.0	0.0	0.0000
118	-9.799	0.0	0.0	0.0	0.0000
119	-9.800	0.0	0.0	0.0	0.0000

120  
121  
122  
123 \*RUN COMPLETED\*  
124  
EOT..

PROJECT 17th St Outfall Canal	PAGE OF	COMPUTED BY FJV	DATE
SUBJECT STA 589+00 TO STA 614+00		CHECKED BY	DATE

STA 589+00 TO STA 614+00  
JEFFERSON SIDE

~~VOID~~



Gross EL 14.1  
 NET EL 13.6'  
 9.5' EL 7.5 (Note M+M Sect is @ 6.5)  
 EL 3.5  
 EL 11.5  
 EL -1.5  
 EL -2  
 EL -2.5  
 TIP EL -20.3

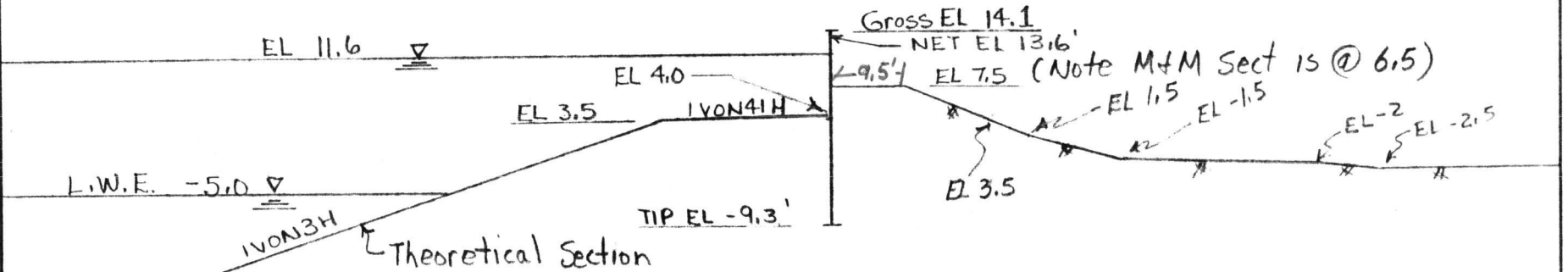
SCALE: 1" = 20'  
 Elevation in Feet N.G.V.D.  
 TOP OF SAND EL -30.0  
 Q File: Q614IJ (F.S.=1.5)  
 Q614IJA (F.S.=1.0)

*[Handwritten signature]*

Revised  
4/16/87

PROJECT 17th St Outfall Canal	PAGE OF	COMPUTED BY FSA	DATE
SUBJECT STA 589+00 TO STA 614+00		CHECKED BY	DATE

STA 589+00 TO STA 614+00  
JEFFERSON SIDE



FLOODSIDE TOE SAME AS MODJESKI + MASTERS PLANS

SCALE: 1" = 20'  
Elevation in Feet N.G.V.D.  
TOP OF SAND EL -30.0  
Q File: Q614IJ (F.S. = 1.5)

PZ-27

**VOLD**  
*see dated report*

LIST QI614IJA

1	10001	17TH ST CANAL HLP STA 589+00 TO STA 614+00		
2	10002	I-WALL TOP EL. 14.1 BOTT EL. -20.3 F.S. =1.00		
3	10003		3	0.136000000E+02 0.000000000E+01
4	10004		3	0.126000000E+02 0.625000000E+02
	10005		3	0.116000000E+02 0.125000000E+03
6	10006		3	0.106000000E+02 0.187500000E+03
7	10007		3	0.960000000E+01 0.250000000E+03
8	10008		3	0.860000000E+01 0.312500000E+03
9	10009		3	0.760000000E+01 0.375000000E+03
10	10010		3	0.750000000E+01 0.381250000E+03
11	10011		3	0.750000000E+01 0.381250000E+03
12	10012		3	0.650000000E+01 0.23072497E+03
13	10013		3	0.550000000E+01 0.80199944E+02
14	10014		3	0.49671986E+01 0.000000000E+01
15	10015		3	0.450000000E+01 -0.70325084E+02
16	10016		3	0.400000000E+01 -0.14558760E+03
17	10017		3	0.400000000E+01 -0.14558760E+03
18	10018		3	0.350000000E+01 -0.20845505E+03
19	10019		3	0.350000000E+01 -0.20845505E+03
20	10020		3	0.250000000E+01 -0.30283294E+03
21	10021		3	0.150000000E+01 -0.39721084E+03
22	10022		3	0.500000000E+00 -0.49158873E+03
23	10023		3	0.000000000E+01 -0.53877767E+03
24	10024		3	0.000000000E+01 -0.53877767E+03
25	10025		3	-0.100000000E+01 -0.55299163E+03
26	10026		3	-0.200000000E+01 -0.56720559E+03
27	10027		3	-0.300000000E+01 -0.58141954E+03
28	10028		3	-0.39645990E+01 -0.59513031E+03
29	10029		3	-0.51998795E+01 0.000000000E+01
30	10030		3	-0.83800785E+01 0.15321481E+04
31	10031		4	-0.83800785E+01 0.000000000E+01
32	10032		0	-0.83800785E+01 0.000000000E+01
33	10033	-0.83800785E+01 -0.44703484E-07		0.17494579E+02

← Q-File received on 4/21/87

EOT..

QLIST Q614IJAO

1  
2  
3  
4

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH ST CANAL HLP STA 589+00 TO STA 614+00  
WAL

6  
7

8 THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT  
9 INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS  
10 AS COUNTERCLOCKWISE.

11  
12

13 THE MAXIMUM DEFLECTION IS 0.52 INCHES AND OCCURS AT MEMBER COORDINATE  
14 14.10 FT.

15  
16  
17

18 Z-27 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

19

20 THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

21  
22

23 CALCULATED EXTERNAL LOADS

24

25 DISTANCE FROM	26 TYPE OF	26 MAGNITUDE OF
26 REFERENCE(FT)	26 LOAD	26 LOAD
28 -8.38	28 POINT LD	28 0.00 LBF
29 -8.38	29 COUPLE	29 -17.50 LBF-FT

30  
31

32 INPUTTED LOADS

33

34 DISTANCE FROM	35 TYPE OF	35 MAGNITUDE OF
35 REFERENCE(FT)	35 LOAD	35 LOAD
37 13.60	37 CONTN LD	37 0.00 LBF/SQ FT
38 12.60	38 CONTN LD	38 62.50 LBF/SQ FT
39 11.60	39 CONTN LD	39 125.00 LBF/SQ FT
40 10.60	40 CONTN LD	40 187.50 LBF/SQ FT
41 9.60	41 CONTN LD	41 250.00 LBF/SQ FT
42 8.60	42 CONTN LD	42 312.50 LBF/SQ FT
43 7.60	43 CONTN LD	43 375.00 LBF/SQ FT
44 7.50	44 CONTN LD	44 381.25 LBF/SQ FT
45 7.50	45 CONTN LD	45 381.25 LBF/SQ FT
46 6.50	46 CONTN LD	46 230.72 LBF/SQ FT
47 5.50	47 CONTN LD	47 80.20 LBF/SQ FT
48 4.97	48 CONTN LD	48 0.00 LBF/SQ FT
49 4.50	49 CONTN LD	49 -70.33 LBF/SQ FT
50 4.00	50 CONTN LD	50 -145.59 LBF/SQ FT
51 4.00	51 CONTN LD	51 -145.59 LBF/SQ FT
52 3.50	52 CONTN LD	52 -200.46 LBF/SQ FT
53 3.50	53 CONTN LD	53 -200.46 LBF/SQ FT
54 2.50	54 CONTN LD	54 -302.83 LBF/SQ FT
55 1.50	55 CONTN LD	55 -397.21 LBF/SQ FT
56 0.50	56 CONTN LD	56 -491.59 LBF/SQ FT
57 0.00	57 CONTN LD	57 -538.70 LBF/SQ FT

55  
56  
57

58	0.00	CONTN LD	-538.78	LBF/SQ FT
59	-1.00	CONTN LD	-552.99	LBF/SQ FT
60	-2.00	CONTN LD	-567.21	LBF/SQ FT
61	-3.00	CONTN LD	-581.42	LBF/SQ FT
62	-3.96	CONTN LD	-595.13	LBF/SQ FT
63	-5.20	CONTN LD	0.00	LBF/SQ FT
64	-8.38	CONTN LD	1532.15	LBF/SQ FT
65	-8.38	CONTN LD	0.00	LBF/SQ FT

66  
67  
68  
69

Z-27 PROPERTIES ARE AS FOLLOWS.

70  
71 MOMENT OF INERTIA= 184.20 IN. TO THE 4TH PER FOOT OF WALL  
72 CROSS SECTIONAL AREA= 7.94 SQ IN.  
73 ELASTIC MODULUS= 29000000. LBF/SQ IN.  
74 DEFLECTION REFERENCE IS AT -20.340

75  
76

77 THE MAXIMUM BENDING MOMENT IS 11742.51 LBF-FT AND OCCURS AT -0.33  
78 WHICH HAS THE SHEAR FORCE OF 1.57 LBF.

79

80	DEFLECTION FROM TANG. THRU DEFLE REFERENCE				
81	DISTANCE (FEET)	SHEAR FOR (LBF)	SHEAR STR (LBF/SQIN)	BENDING MOM (LBF-FT)	(INCHES )
82					
83					
84					
85	14.100	0.0	0.0	0.0	0.5227
86	14.099	0.0	0.0	0.0	0.5227
87	14.000	0.0	0.0	0.0	0.5190
88	13.000	11.2	1.4	2.2	0.4888
89	12.000	80.0	10.1	42.7	0.4426
90	11.000	211.2	26.6	183.1	0.4045
91	10.000	405.0	51.0	486.0	0.3664
92	9.000	661.2	83.3	1013.9	0.3285
93	8.000	980.0	123.4	1829.3	0.2910
94	7.000	1334.6	168.1	2990.3	0.2540
95	6.000	1565.3	197.1	4452.8	0.2180
96	5.000	1645.5	207.2	6070.8	0.1835
97	4.967	1645.6	207.3	6124.8	0.1824
98	4.000	1575.2	198.4	7693.8	0.1510
99	3.000	1370.7	172.6	9175.9	0.1209
100	2.000	1067.9	134.5	10403.0	0.0938
101	1.000	670.6	84.5	11280.1	0.0700
102	0.000	179.1	22.6	11712.8	0.0499
103	-0.328	1.6	0.2	11742.5	0.0441
104	-1.000	-366.8	-46.2	11620.1	0.0335
105	-2.000	-926.9	-116.7	10974.4	0.0208
106	-3.000	-1501.2	-189.1	9761.5	0.0117
107	-4.000	-2089.5	-263.2	7967.2	0.0057
108	-5.000	-2426.6	-305.6	5669.0	0.0023
109	-5.199	-2436.3	-306.0	5185.1	0.0018
110	-5.201	-2436.3	-306.0	5180.3	0.0018
111	-6.000	-2282.1	-287.4	3274.5	0.0006
112	-7.000	-1655.7	-200.5	1265.5	0.0001
113	-8.000	-547.5	-69.0	123.8	0.0000
114	-8.379	-1.5	-0.2	17.5	0.0000
115	-8.381	0.0	0.0	0.0	0.0000



116	-9.000	0.0	0.0	0.0	0.0000
117	-10.000	0.0	0.0	0.0	0.0000
118	-11.000	0.0	0.0	0.0	0.0000
119	-12.000	0.0	0.0	0.0	0.0000
120	-13.000	0.0	0.0	0.0	0.0000
121	-14.000	0.0	0.0	0.0	0.0000
122	-15.000	0.0	0.0	0.0	0.0000
123	-16.000	0.0	0.0	0.0	0.0000
124	-17.000	0.0	0.0	0.0	0.0000
125	-18.000	0.0	0.0	0.0	0.0000
126	-19.000	0.0	0.0	0.0	0.0000
127	-20.000	0.0	0.0	0.0	0.0000
128	-20.339	0.0	0.0	0.0	0.0000
129	-20.340	0.0	0.0	0.0	0.0000

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133 \*RUN COMPLETED\*

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EOT..

## LIST Q6141J

1	10001	17TH ST CANAL HLP STA 589+00 TO STA 614+00		
2	10002	I-WALL TOP EL. 14.1 BOTT EL. -20.3 F.S.=1.5		
3	10003		3	0.13600000E+02 0.00000000E+01
4	10004		3	0.12600000E+02 0.62500000E+02
	10005		3	0.11600000E+02 0.12500000E+03
6	10006		3	0.10600000E+02 0.18750000E+03
7	10007		3	0.96000000E+01 0.25000000E+03
8	10008		3	0.86000000E+01 0.31250000E+03
9	10009		3	0.76000000E+01 0.37500000E+03
10	10010		3	0.75000000E+01 0.38125000E+03
11	10011		3	0.75000000E+01 0.38125000E+03
12	10012		3	0.65000000E+01 0.27592929E+03
13	10013		3	0.55000000E+01 0.17060859E+03
14	10014		3	0.45000000E+01 0.65287885E+02
15	10015		3	0.40000000E+01 0.12627532E+02
16	10016		3	0.40000000E+01 0.12627532E+02
17	10017		3	0.38270878E+01 0.00000000E+01
18	10018		3	0.35000000E+01 -0.23086580E+02
19	10019		3	0.35000000E+01 -0.23086580E+02
20	10020		3	0.25000000E+01 -0.76916303E+02
21	10021		3	0.15000000E+01 -0.12994603E+03
22	10022		3	0.50000000E+00 -0.18297575E+03
23	10023		3	0.00000000E+01 -0.20949061E+03
24	10024		3	0.00000000E+01 -0.20949061E+03
25	10025		3	-0.10000000E+01 -0.21574045E+03
26	10026		3	-0.20000000E+01 -0.22200620E+03
27	10027		3	-0.30000000E+01 -0.22826412E+03
28	10028		3	-0.40000000E+01 -0.23452195E+03
29	10029		3	-0.50000000E+01 -0.24077979E+03
30	10030		3	-0.60000000E+01 -0.24703763E+03
31	10031		3	-0.70000000E+01 -0.25329546E+03
32	10032		3	-0.80000000E+01 -0.25955330E+03
33	10033		3	-0.90000000E+01 -0.26581113E+03
34	10034		3	-0.10000000E+02 -0.27170701E+03
35	10035		3	-0.11000000E+02 -0.23644523E+03
36	10036		3	-0.12000000E+02 -0.21713869E+03
37	10037		3	-0.13000000E+02 -0.20308179E+03
38	10038		3	-0.14000000E+02 -0.18902488E+03
39	10039		3	-0.15000000E+02 -0.17496798E+03
40	10040		3	-0.16000000E+02 -0.16091108E+03
41	10041		3	-0.17000000E+02 -0.14685418E+03
42	10042		3	-0.17159368E+02 -0.14810156E+03
43	10043		3	-0.17422375E+02 0.00000000E+01
44	10044		3	-0.20343964E+02 0.16451736E+04
45	10045		4	-0.20343964E+02 0.00000000E+01
46	10046		0	-0.20343964E+02 0.00000000E+01
47	10047	-0.20343964E+02	0.26881279E+01	0.91398897E+01

EOT..

## BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH ST CANAL HLP STA 589+00 TO STA 614+00  
WAL

THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT  
INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS  
AS COUNTERCLOCKWISE.

THE MAXIMUM DEFLECTION IS 2.22 INCHES AND OCCURS AT MEMBER COORDINATE  
14.10 FT.

Z-27 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

## CALCULATED EXTERNAL LOADS

DISTANCE FROM REFERENCE (FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
-20.34	POINT LD	69.10 LBF
-20.34	COUPLE	-7.57 LBF-FT

## INPUTTED LOADS

DISTANCE FROM REFERENCE (FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
13.60	CONTN LD	0.00 LBF/SQ FT
12.60	CONTN LD	62.50 LBF/SQ FT
11.60	CONTN LD	125.00 LBF/SQ FT
10.60	CONTN LD	187.50 LBF/SQ FT
9.60	CONTN LD	250.00 LBF/SQ FT
8.60	CONTN LD	312.50 LBF/SQ FT
7.60	CONTN LD	375.00 LBF/SQ FT
7.50	CONTN LD	381.25 LBF/SQ FT
7.50	CONTN LD	381.25 LBF/SQ FT
6.50	CONTN LD	275.93 LBF/SQ FT
5.50	CONTN LD	170.61 LBF/SQ FT
4.50	CONTN LD	65.29 LBF/SQ FT
4.00	CONTN LD	12.63 LBF/SQ FT
4.00	CONTN LD	12.63 LBF/SQ FT
3.83	CONTN LD	0.00 LBF/SQ FT
3.50	CONTN LD	-23.89 LBF/SQ FT
3.50	CONTN LD	-23.89 LBF/SQ FT
2.50	CONTN LD	-76.92 LBF/SQ FT
1.50	CONTN LD	-129.95 LBF/SQ FT
0.50	CONTN LD	-182.98 LBF/SQ FT
0.00	CONTN LD	-209.49 LBF/SQ FT
0.00	CONTN LD	-209.49 LBF/SQ FT
-1.00	CONTN LD	-215.75 LBF/SQ FT
-2.00	CONTN LD	-222.01 LBF/SQ FT
-3.00	CONTN LD	-228.26 LBF/SQ FT

62	-4.00	CONTN LD	-234.52	LBF/SQ FT
63	-5.00	CONTN LD	-240.78	LBF/SQ FT
64	-6.00	CONTN LD	-247.04	LBF/SQ FT
65	-7.00	CONTN LD	-253.30	LBF/SQ FT
66	-8.00	CONTN LD	-259.55	LBF/SQ FT
67	-9.00	CONTN LD	-265.81	LBF/SQ FT
68	-10.00	CONTN LD	-271.71	LBF/SQ FT
69	-11.00	CONTN LD	-236.45	LBF/SQ FT
70	-12.00	CONTN LD	-217.14	LBF/SQ FT
71	-13.00	CONTN LD	-203.00	LBF/SQ FT
72	-14.00	CONTN LD	-189.02	LBF/SQ FT
73	-15.00	CONTN LD	-174.97	LBF/SQ FT
74	-16.00	CONTN LD	-160.91	LBF/SQ FT
75	-17.00	CONTN LD	-146.85	LBF/SQ FT
76	-17.16	CONTN LD	-148.10	LBF/SQ FT
77	-17.42	CONTN LD	0.00	LBF/SQ FT
78	-20.34	CONTN LD	1645.17	LBF/SQ FT
79	-20.34	CONTN LD	0.00	LBF/SQ FT

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Z-27 PROPERTIES ARE AS FOLLOWS.

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85 MOMENT OF INERTIA= 184.20 IN. TO THE 4TH PER FOOT OF WALL  
 86 CROSS SECTIONAL AREA= 7.94 SQ IN.  
 87 ELASTIC MODULUS= 29000000. LBF/SQ IN.  
 88 DEFLECTION REFERENCE IS AT -20.300

*Max. Allow = 44,167 lbs-ft.*

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91 THE MAXIMUM BENDING MOMENT IS 19549.52 LBF-FT AND OCCURS AT -6.28  
 92 WHICH HAS THE SHEAR FORCE OF 0.64 LBF.

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97	DISTANCE (FEET)	SHEAR FOR (LBF)	SHEAR STR (LBF/SQIN)	BENDING MOM (LBF-FT)	DEFLECTION FROM TANG. THRU DEFLE REFERENCE (INCHES)			
99	14.100	0.0	0.0	0.0	2.2242			
100	14.099	0.0	0.0	0.0	2.2242			
101	14.000	0.0	0.0	0.0	2.2131			
102	13.000	11.2	1.4	2.2	2.1012			
103	12.000	80.0	10.1	42.7	1.9893			
104	11.000	211.2	26.6	183.1	1.8774			
105	10.000	485.0	51.0	486.0	1.7656			
106	9.000	661.2	83.3	1013.9	1.6539			
107	8.000	980.0	123.4	1829.3	1.5138	-19.000	-1699.8	-214
4319								
109	6.000	1616.2	203.6	4478.3	1.3222			
110	5.000	1786.8	225.0	6188.6	1.2140			
111	4.000	1852.1	233.3	8016.8	1.1077			
112	3.827	1853.2	233.4	8337.2	1.0896			
113	3.000	1838.7	230.6	9863.4	1.0041			
114	2.000	1753.8	220.9	11660.1	0.9036			
115	1.000	1623.8	204.5	13353.4	0.8070			
116	0.000	1440.9	181.5	14890.1	0.7146			
117	-1.000	1228.3	154.7	16225.2	0.6270			
118	-2.000	1009.4	127.1	17344.6	0.5447			
119	-3.000	784.2	98.8	18241.9	0.4679			
120	-4.000	552.8	69.6	18911.0	0.3971			
121	-5.000	315.2	39.7	19345.5	0.3324			
122	-6.000	71.3	9.0	19539.3	0.2739			
123	-6.285	0.6	0.1	19549.5	0.2583			
124	-7.000	-178.9	-22.5	19486.0	0.2217			

125	0.000	-435.3	-54.8	19179.4	0.1758
126	-9.000	-698.0	-87.9	18613.3	0.1361
127	-10.000	-966.7	-121.8	17781.4	0.024
128	-11.000	-1220.8	-153.8	16684.7	0.0744
129	-12.000	-1447.6	-182.3	15348.9	0.0518
130	-13.000	-1657.7	-208.8	13795.0	0.0342
131	-14.000	-1853.8	-233.5	12038.1	0.0210
132	-15.000	-2035.8	-256.4	10092.2	0.0117
133	-16.000	-2203.7	-277.5	7971.3	0.0057
134	-17.000	-2357.6	-296.9	5689.4	0.0023
135	-17.421	-2400.6	-302.3	4684.6	0.0014
136	-17.423	-2400.6	-302.3	4679.8	0.0014
137	-18.000	-2306.6	-298.5	3313.6	0.0006
138	-19.000	-1699.8	-214.1	1263.5	0.0001

139	-20.000	-529.9	-66.7	101.7	0.0000
140	-20.299	-70.7	-8.9	10.7	0.0000
141	-20.300	-69.1	-8.7	10.6	0.0000

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145 \*RUN COMPLETED\*

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EOT..