

ORLEANS SIDE

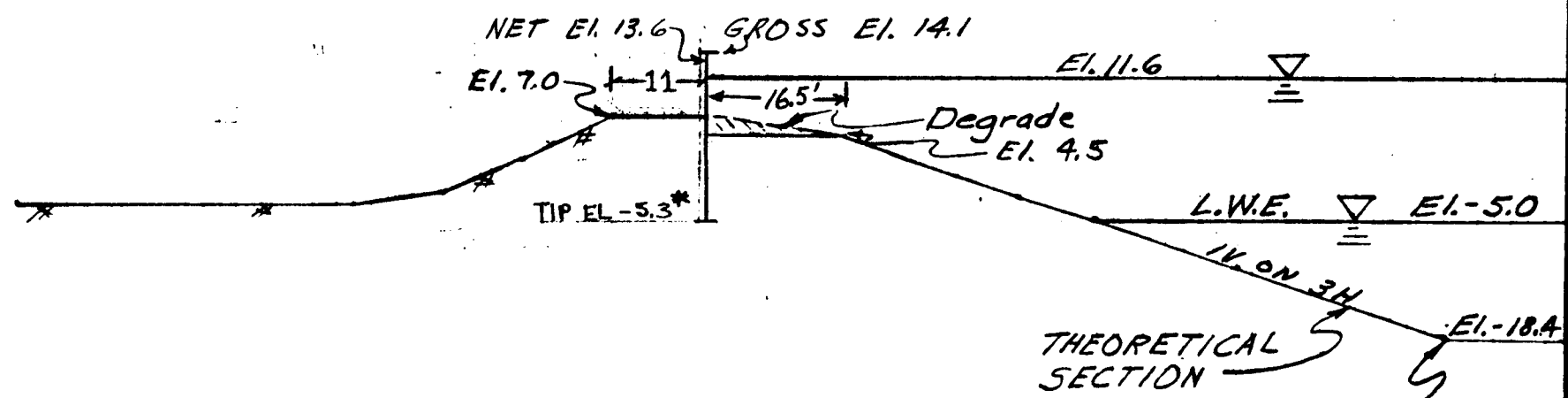
STA. 614+00

TO

STA 625+00

PROJECT	17TH ST. Outfall Canal	PAGE	OF	COMPUTED BY	EJV	DATE	27 Apr 88
SUBJECT	STA 614+00 TO STA 625+00	ORLEANS BR.		CHECKED BY		DATE	29 March 88

STA. 614+00 TO STA. 625+00
ORLEANS SIDE



FLOODSIDE TOE SAME AS MODIESKI & MASTERS PLAN
SCALE: 1" = 20'

ELEVATION IN FEET N.G.V.D.

Q FILES	F.S.	SWL	CASE
Q6250A	1.0	11.6	S
* Q6250B	1.5	11.6	S
Q6250D	1.0	13.6	Q

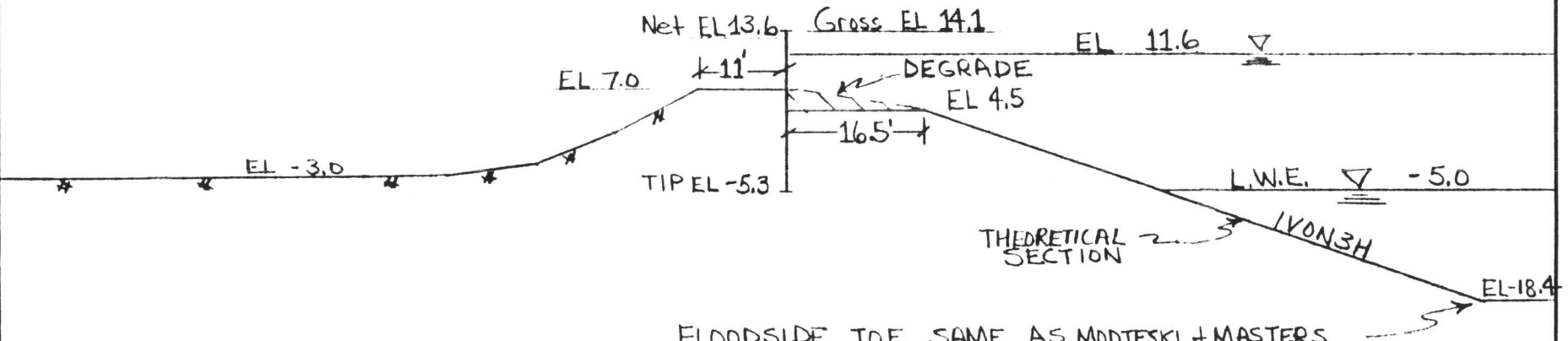
PROD. PLAN

MW
5/88

REVISED 3/88

PROJECT	17th St Outfall Canal	PAGE	OF	COMPUTED BY	FJV	DATE	4/27/87
SUBJECT	STA 614+00 TO 625+00 ORLEANS			CHECKED BY		DATE	3/28/88

STA 614+00 TO 625+00
ORLEANS SIDE



FLOODSIDE TOE SAME AS MODJESKI + MASTERS

SCALE 1" = 20'

ELEVATION IN FEET NGVD

Q FILES	F.S.	SWL	CASE	
Q62501	Q6250A	1.0	11.6	S
Q62502	Q6250B	1.5	11.6	S
Q62503	Q6250D	1.0	13.6	Q

QUAL #
 312BEC

ADVANCE SUPPLY
 SUBJECT TO CORRECTIONS

(REVISED 3/88)

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH STR. -Q6250A-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

$$I_f \approx \frac{1}{3} I_{P22}$$

$$\Delta_f \approx \Delta_{P22}$$

$$\Delta_f \approx 3 \times .16 < 1.5' \checkmark$$

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
-2.21	POINT LD	0.00 LBF
-2.21	COUPLE	-45.61 LBF-FT

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
4.50	CONTN LD	-241.04 LBF/SQ FT
4.50	CONTN LD	-241.04 LBF/SQ FT
3.50	CONTN LD	-427.26 LBF/SQ FT
3.50	CONTN LD	-427.26 LBF/SQ FT
2.50	CONTN LD	-582.13 LBF/SQ FT
1.75	CONTN LD	-698.90 LBF/SQ FT
0.12	CONTN LD	0.00 LBF/SQ FT
-2.21	CONTN LD	1003.22 LBF/SQ FT
-2.21	CONTN LD	0.00 LBF/SQ FT

58 Z-22

PROPERTIES ARE AS FOLLOWS.

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

62 CROSS SECTIONAL AREA= ~~6.47~~ SQ IN. *1.84* ²/_{FT}

63 ELASTIC MODULUS= 29000000. LBF/SQ IN.

6 DEFLECTION REFERENCE IS AT -13.200

65

66

67 THE MAXIMUM BENDING MOMENT IS 3740.73 LBF-FT AND OCCURS AT 2.74

68 WHICH HAS THE SHEAR FORCE OF 14.95 LBF.

69

70

71

72

73 DISTANCE SHEAR FOR SHEAR STR BENDING MOM DEFLECTION
74 (FEET) (LBF) (LBF/SQIN) (LBF-FT) (INCHES)

75 13.600 0.0 0.0 0.0 0.1622

76 13.599 0.0 0.0 0.0 0.1622

77 13.000 0.0 0.0 0.0 0.1528

78 12.000 0.0 0.0 0.0 0.1372

79 11.000 11.2 1.7 2.2 0.1216

80 10.000 80.0 12.4 42.7 0.1060

81 9.000 211.2 32.7 183.1 0.0905

82 8.000 405.0 62.6 486.0 0.0751

83 7.000 661.2 102.2 1013.9 0.0600

84 6.000 843.0 130.3 1783.7 0.0457

85 5.640 856.7 132.4 2090.4 0.0409

86 5.000 813.4 125.7 2629.5 0.0327

87 4.000 575.5 89.0 3340.6 0.0215

88 3.000 152.2 23.5 3718.6 0.0127

89 2.739 15.0 2.3 3740.7 0.0108

90 2.000 -429.9 -66.5 3592.7 0.0064

91 1.000 -1004.2 -155.2 2847.6 0.0026

92 0.121 -1170.6 -180.9 1867.8 0.0009

93 0.119 -1170.6 -180.9 1865.5 0.0009

94 0.000 -1167.4 -180.4 1726.0 0.0007

95 -1.000 -900.8 -139.2 656.0 0.0001

96 -2.000 -204.2 -31.6 67.7 0.0000

97 -2.212 -1.0 -0.2 45.6 0.0000

98 -2.214 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

1

114

115 *RUN COMPLETED*

11,7 ksi

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH STR. -Q6250B-SWL=11.6-S CASE-FS=1.5
=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 0.33 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
-5.29	POINT LD	6.01 LBF
-5.29	COUPLE	-30.37 LBF-FT

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	140.20 LBF/SQ FT
5.05	CONTN LD	0.00 LBF/SQ FT
5.00	CONTN LD	-7.10 LBF/SQ FT
4.50	CONTN LD	-80.76 LBF/SQ FT
4.50	CONTN LD	-80.76 LBF/SQ FT
3.50	CONTN LD	-195.17 LBF/SQ FT
3.50	CONTN LD	-195.17 LBF/SQ FT
2.50	CONTN LD	-289.58 LBF/SQ FT
1.50	CONTN LD	-384.00 LBF/SQ FT
0.50	CONTN LD	-478.42 LBF/SQ FT
0.00	CONTN LD	-525.62 LBF/SQ FT
0.00	CONTN LD	-525.62 LBF/SQ FT
-0.56	CONTN LD	-552.11 LBF/SQ FT
-2.38	CONTN LD	0.00 LBF/SQ FT

52 3.50 CONTN LD -788.75 LBF/SQ FT
 53 3.02 CONTN LD -808.25 LBF/SQ FT
 54 2.32 CONTN LD 0.00 LBF/SQ FT
 55 0.59 CONTN LD 1988.02 LBF/SQ FT
 56 0.59 CONTN LD 0.00 LBF/SQ FT

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59 Z-22 PROPERTIES ARE AS FOLLOWS.

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62 MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL
 63 CROSS SECTIONAL AREA= ~~6.47~~ SQ IN. *1.84*
 64 ELASTIC MODULUS= 29000000. LBF/SQ IN.
 65 DEFLECTION REFERENCE IS AT -13.200

66
 67

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

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 71
 72
 73

74	DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	DEFLECTION
75	(FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	FROM TANG.
76					THRU DEFLE
77					REFERENCE
78					(INCHES)
76	13.600	0.0	0.0	0.0	0.1402
77	13.599	0.0	0.0	0.0	0.1402
78	13.000	11.2	1.7	2.2	0.1301
79	12.000	80.0	12.4	42.7	0.1131
80	11.000	211.2	32.7	183.1	0.0962
81	10.000	405.0	62.6	486.0	0.0794
82	9.000	661.2	102.2	1013.9	0.0630
83	8.000	980.0	151.5	1829.3	0.0474
84	7.000	1361.2	210.4	2994.7	0.0331
85	6.000	745.0	115.1	4052.7	0.0209
86	5.000	71.2	11.0	4465.6	0.0114
87	4.903	2.5	0.4	4469.2	0.0107
88	4.000	-660.0	-102.0	4176.0	0.0051
89	3.000	-1446.4	-223.6	3126.8	0.0016
90	2.319	-1714.8	-265.0	2019.8	0.0005
91	2.317	-1714.8	-265.0	2016.4	0.0005
92	2.000	-1656.5	-256.0	1479.2	0.0003
93	1.000	-713.0	-110.2	198.3	0.0000
94	0.595	-3.6	-0.6	47.0	0.0000
95	0.593	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
1	-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

11.7 ksi

58 -5.29 CONTN LD 878.88 LBF/SQ FT
 59 -5.29 CONTN LD 0.00 LBF/SQ FT

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 61
 62 Z-22 PROPERTIES ARE AS FOLLOWS.

63
 64
 65 MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL
 66 CROSS SECTIONAL AREA= ~~6.47~~ SQ IN. 1.84
 67 ELASTIC MODULUS= 29000000. LBF/SQ IN.
 68 DEFLECTION REFERENCE IS AT -13.200
 69

70
 71 THE MAXIMUM BENDING MOMENT IS 5140.64 LBF-FT AND OCCURS AT 1.00
 72 WHICH HAS THE SHEAR FORCE OF -1.25 LBF.

73						DEFLECTION
74						FROM TANG.
75						THRU DEFLE
76						REFERENCE
77	DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	REFERENCE	
78	(FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	(INCHES)	
79	13.600	0.0	0.0	0.0	0.3296	
80	13.599	0.0	0.0	0.0	0.3296	
81	13.000	0.0	0.0	0.0	0.3132	
82	12.000	0.0	0.0	0.0	0.2857	
83	11.000	11.2	1.7	2.2	0.2583	
84	10.000	80.0	12.4	42.7	0.2308	
85	9.000	211.2	32.7	183.1	0.2034	
86	8.000	405.0	62.6	486.0	0.1761	
87	7.000	661.2	102.2	1013.9	0.1493	
88	6.000	875.1	135.3	1794.4	0.1231	
89	5.048	941.8	145.6	2669.6	0.0994	
90	5.000	941.6	145.5	2715.0	0.0983	
91	4.000	865.0	133.7	3629.2	0.0753	
92	3.000	672.3	103.9	4406.6	0.0549	
93	2.000	382.7	59.2	4942.0	0.0376	
94	1.000	-1.3	-0.2	5140.6	0.0237	
95	0.000	-479.7	-74.1	4908.0	0.0135	
96	-1.000	-994.6	-153.7	4162.7	0.0066	
97	-2.000	-1261.2	-194.9	3009.6	0.0026	
98	-2.381	-1283.2	-198.3	2523.9	0.0017	
99	-2.383	-1283.2	-198.3	2521.4	0.0017	
100	-3.000	-1225.4	-189.4	1741.1	0.0007	
101	-4.000	-887.3	-137.1	659.6	0.0001	
102	-5.000	-246.7	-38.1	67.4	0.0000	
103	-5.287	-6.9	-1.1	30.4	0.0000	
104	-5.289	0.0	0.0	0.0	0.0000	
105	-6.000	0.0	0.0	0.0	0.0000	
106	-7.000	0.0	0.0	0.0	0.0000	
107	-8.000	0.0	0.0	0.0	0.0000	
108	-9.000	0.0	0.0	0.0	0.0000	
109	-10.000	0.0	0.0	0.0	0.0000	
110	-11.000	0.0	0.0	0.0	0.0000	
111	-12.000	0.0	0.0	0.0	0.0000	
112	-13.000	0.0	0.0	0.0	0.0000	
1	-13.199	0.0	0.0	0.0	0.0000	
114	-13.200	0.0	0.0	0.0	0.0000	

115

11.7 ksi

110	-13.199	0.0	0.0	0.0	0.0000
111	-13.200	0.0	0.0	0.0	0.0000
112					
113					
114					
115	*RUN COMPLETED*				

116
117
118 *RUN COMPLETED*
119

EPT..
L T Q62503

1
2 BEAMS (SHEAR, MOMENT, DEFLECTION)

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4
5 17TH STR.-Q6250D-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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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 DISTANCE FROM TYPE OF MAGNITUDE OF
27 REFERENCE(FT) LOAD LOAD
28 0.59 POINT LD 1.62 LBF
29 0.59 COUPLE -46.98 LBF-FT
30

31
32 INPUTTED LOADS

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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 7.00 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
48 5.00 CONTN LD -702.50 LBF/SQ FT
49 4.50 CONTN LD -731.25 LBF/SQ FT
50 4.50 CONTN LD -731.25 LBF/SQ FT
51 3.50 CONTN LD -788.75 LBF/SQ FT