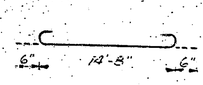
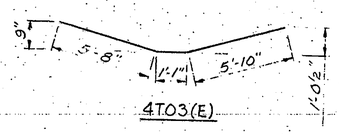
BAR BENDING DIAGRAMS

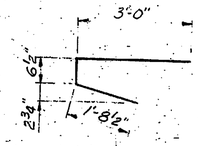
NOTE: Number preceding letter denotes bar size.
All dimensions are out to out.
All bar bending diagrams shall be in accordance with A.C.I. standards.



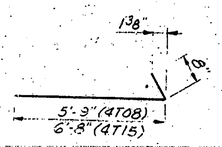
4T02



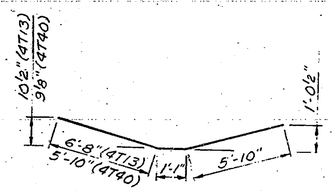
4T03(E)



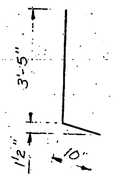
4T05(E)



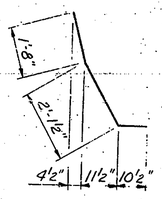
4T08(E), 4T15(E)



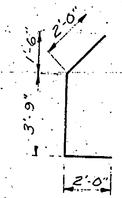
4T13(E), 4T40(E)



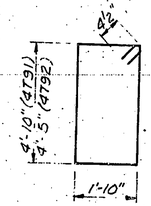
5T06(E)



5T07(E)

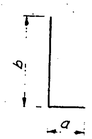


4T90



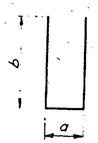
4T91, 4T92

Bar	a	b
4T06	8"	2'-8"
4T14(E)	3'-6"	5'-1"
4T37(E)	3'-1"	7'-10"
5T08(E)	10"	3'-5"
5T09(E)	5'-4"	5'-3"
5T12(E)	4'-10"	5'-6"
5T40	10"	2'-8"
6T01(E)	5'-6"	5'-8"
6T04(E)	6'-1"	5'-6"



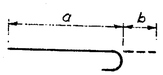
4T06, 4T14(E), 4T37(E), 5T08(E), 5T09(E), 5T12(E), 5T40, 6T01(E), 6T04(E)

Bar	a	b
4T07	6"	3'-9"
4T12(E)	6⅛"	3'-0"
4T38	1'-1½"	7'-4"
4T39(E)	1'-1½"	3'-5"
5T01	1'-1½"	7'-4"
5T03(E)	1'-1½"	3'-5"
9T01	1'-10"	7'-4"
9T02(E)	1'-10"	3'-7"
6T15	1'-10"	1'-0"

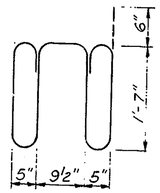


4T07, 4T12(E), 4T38, 4T39(E), 5T01, 5T03(E), 9T01, 9T02(E), 6T15

Bar	a	b
4T22	8'-10"	6"
4T23	10'-0"	6"
4T24	10'-8"	6"
4T51	7'-3"	6"
5T15	5'-0"	7"



4T22, 4T23, 4T24, 4T51, 5T15



4T93

NOTES: All reinforcing shall conform to the requirements of ASTM Grade 60.

Minimum compressive strength of Superstructure Conc. shall be 3,500 p.s.i.

ESTIMATED QUANTITIES

Item	Unit	Total
Superstructure Concrete	Cu. Yd.	1949.90
Reinforcing Steel	Lb.	92286.27
Reinforcing Steel (Epoxy Coated)	Lb.	14,993.18

BILL OF MATERIAL

UNIT I

Bar	No.	Length	Bent	Str.
4T01	146	16'-10"		•
4T02	146	15'-8"	•	
4T03(E)	192	12'-8"	•	
4T04(E)	181	28'-2"		•
4T05(E)	362	5'-3"	•	
4T06	282	3'-4"	•	
4T07	80	8'-0"	•	
4T08(E)	340	6'-5"	•	
4T09(E)	90	10'-8"		•
4L01(E)	28	12'-6"		•
4L04	48	60'-0"		•
4L04(E)	116	60'-0"		•
4L05	48	39'-8"		•
4L06	48	53'-4"		•
4L08	14	19'-2"		•
4L09	14	16'-7"		•
4L10	28	32'-2"		•
4L11	14	30'-6"		•
4L12(E)	58	36'-1"		•
5T01	318	15'-10"	•	
5T03(E)	318	8'-0"	•	
5T04(E)	91	10'-8"		•
5T05(E)	362	8'-0"		•
5T06(E)	362	4'-3"	•	
5T07(E)	362	4'-8"	•	

UNIT II

Bar	No.	Length	Bent	Str.
4T01	207	16'-10"		•
4T02	207	15'-8"	•	
4T03(E)	386	12'-8"	•	
4T04(E)	254	28'-2"		•
4T05(E)	508	5'-3"	•	
4T06	404	3'-4"	•	
4T07	96	8'-0"	•	
4T08(E)	244	6'-5"	•	
4T09(E)	127	10'-8"		•
4L01(E)	28	12'-6"		•
4L04	110	60'-0"		•
4L04(E)	174	60'-0"		•
4L15	48	41'-9"		•
4L16	48	54'-0"		•
4L18	14	17'-6"		•
4L19	14	21'-5"		•
4L20	14	26'-4"		•
4L21	14	22'-5"		•
4L22	14	42'-5"		•
4L23(E)	58	40'-0"		•
5T01	456	15'-10"	•	
5T03(E)	456	8'-0"	•	
5T04(E)	127	10'-5"		•
5T05(E)	508	8'-0"		•
5T06(E)	508	4'-3"	•	
5T07(E)	508	4'-8"	•	

UNIT III

Bar	No.	Length	Bent	Str.
4T01	63	16'-10"		•
4T02	63	15'-8"	•	
4T06	354	3'-4"	•	
4T07	78	8'-0"	•	
4T08(E)	106	6'-5"	•	
4T12(E)	462	6'-7"	•	
4T13(E)	356	13'-7"	•	
4T14(E)	290	8'-7"	•	
4T15(E)	106	7'-4"	•	
4T16	42	18'-7"		•
4T17	44	16'-3"		•
4T18	33	17'-4"		•
4T19	84	5'-5"		•
4T20	88	6'-0"		•
4T21	66	6'-4"		•
4T22	84	9'-4"	•	
4T23	86	10'-6"	•	
4T24	66	11'-2"	•	
4T25(E)	56	11'-6"		•
4T26(E)	56	13'-6"		•
4T27(E)	56	15'-6"		•
4T28(E)	168	7'-6"		•
4T31(E)	126	16'-0"		•
4T32(E)	112	16'-11"		•
4T33(E)	112	17'-10"		•
4T34(E)	112	18'-10"		•
4L01(E)	36	12'-6"		•
4L04	106	60'-0"		•
4L04(E)	222	60'-0"		•
4L26	53	25'-11"		•
4L27	53	50'-11"		•
4L29	19	16'-4"		•
4L30	19	18'-7"		•
4L31	19	23'-7"		•
4L32	19	20'-6"		•
4L33	19	30'-9"		•
4L34(E)	74	20'-11"		•
5T01	418	15'-10"	•	
5T03(E)	418	8'-0"	•	
5T05(E)	126	8'-0"		•
5T07(E)	462	4'-8"	•	
5T08(E)	462	4'-3"	•	
5T09(E)	146	10'-7"	•	
6T01(E)	144	11'-2"	•	

UNIT IV

Bar	No.	Length	Bent	Str.
3T05(E)	77	7'-0"		•
4T06	154	3'-4"	•	
4T07	96	8'-0"	•	
4T08(E)	168	6'-5"	•	
4T12(E)	472	6'-7"	•	
4T13(E)	388	13'-7"	•	
4T14(E)	112	8'-7"	•	
4T15(E)	84	7'-4"	•	
4T17(E)	308	10'-11"	•	
4T31(E)	161	15'-10"	•	
4T33(E)	49	8'-0"	•	
4T40(E)	35	12'-9"	•	
4T43	55	19'-2"		•
4T44	55	20'-6"		•
4T45	45	22'-0"		•
4T46	31	27'-1"		•
4T47	55	7'-0"		•
4T48	55	7'-6"		•
4T49	45	8'-0"		•
4T50	62	4'-7"		•
4T51	184	8'-3"	•	
4T52	55	15'-4"		•
4T53	55	17'-2"		•
4T54	45	19'-3"		•
4T56(E)	53	17'-3"		•
4T57(E)	53	19'-0"		•
4T58(E)	53	20'-9"		•
4T59(E)	106	19'-9"		•
4T60(E)	106	20'-8"		•
4T61(E)	106	21'-6"		•
4T62(E)	76	22'-0"		•
4T63(E)	76	22'-8"		•
4T90	3	7'-9"	•	
4T91	3	14'-1"	•	
4T92	4	13'-3"	•	
4T93	12	10'-0"	•	
4L01(E)	45	12'-6"		•
4L04	152	60'-0"		•
4L04(E)	276	60'-0"		•
4L38	62	30'-6"		•
4L39	76	51'-2"		•
4L40	28	4'-6"		•
4L41	28	17'-0"		•
4L42	28	20'-8"		•
4L43	28	26'-9"		•
4L44	28	17'-7"		•
4L45	28	35'-1"		•
4L46(E)	92	25'-9"		•
4L47	14	14'-1"		•
5T01	310	15'-10"	•	
5T07(E)	472	4'-8"	•	
5T08(E)	472	4'-3"	•	
5T12(E)	112	10'-4"	•	
5T15	612	5'-7"	•	
5T16(E)	159	8'-0"		•
5T19(E)	154	8'-7"		•
5T40	612	3'-6"	•	
6T04(E)	310	11'-7"	•	
6T15	12	3'-10"	•	
9T01	6	16'-6"	•	
9T02(E)	6	3'-8"	•	

DESIGNED M.M. C'K'D M.M.
DRAWN R.E.T. C'K'D M.M.
TRACED R.E.T. C'K'D M.M.

10-20-81 Revision Estimate of Quantities

APPROVED FOR CONSTRUCTION

W. B. ABBOTT
Assistant Engineer of Bridge Design 9-17-81

Figg and Muller Engineers Inc.
Consulting Engineers
Tallahassee, Florida 32301

BAR BENDING DIAGRAMS & BILL OF MATERIAL - UNITS I thru IV

INDIANA STATE HIGHWAY COMMISSION

LAKE COUNTY - RAMP:- A SECTION:-
SCALE:- N.T.S. DATE:- June 29, 1981
SUBMITTED FOR APPROVAL Eugene C. Figg, Jr.
DRAWING:- OF SHEET:- 116 OF
PROJECT:- MM 220-1 (8)
CONTRACT NO. B-12752
BRIDGE FILE:- 912 45-2546 RWX