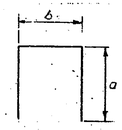
PIERS 201 & 202 DIAPHRAGM

BAR BENDING DIAGRAMS

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

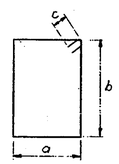
PIER DIAPHRAGM REINFORCEMENT

Bar	J	b
4D30(E)	3'-2"	3'-5½"
4D31	7'-4"	3'-2½"
4D32(E)	3'-2"	4'-8½"
4D33	7'-4"	4'-9½"
4D45	5'-3"	2'-4"
4D46	8'-0"	2'-4"
4D47	4'-10"	2'-4"
4D48(E)	3'-2"	5'-6"
4D49	7'-4"	5'-6"
4D51(E)	3'-2"	1'-6"
4D52	7'-4"	1'-6"
11D32	4'-0"	2'-3"

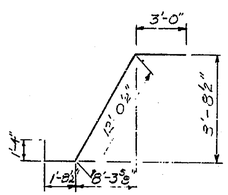


4D30(E), 4D31, 4D32(E), 4D33, 4D45 thru 4D47, 4D48(E), 4D49, 4D51(E), 4D52, 11D32

Bar	a	b	c
4D34(E)	2'-3"	5'-10½"	4½"
4D35(E)	2'-3"	4'-10"	4½"
4D36(E)	2'-3"	3'-9"	4½"
4D37(E)	2'-3"	2'-8½"	4½"
4D38(E)	2'-3"	1'-8"	4½"
4D39	8'-4"	4'-10"	4½"
4D40	7'-5"	4'-10"	4½"
4D41	6'-5½"	4'-10"	4½"
4D42	5'-8"	4'-10"	4½"
4D43	4'-6½"	4'-10"	4½"
4D44	3'-7"	4'-10"	4½"
4D50	5'-6½"	4'-10"	4½"
5D30	3'-2"	4'-10"	5½"



4D34(E) thru 4D38(E), 4D39 thru 4D44
4D50, 5D30



8S40

BILL OF MATERIAL

Bar	No.	Length	Bent	Str.
4D30(E)	8	9'-8"	●	
4D31	3	17'-11"	●	
4D32(E)	2	11'-3"	●	
4D33	2	19'-5"	●	
4D34(E)	2	16'-2"	●	
4D35(E)	2	14'-11"	●	
4D36(E)	2	12'-3"	●	
4D37(E)	2	10'-8"	●	
4D38(E)	2	9'-1"	●	
4D39	2	22'-7"	●	
4D40	2	21'-8"	●	
4D41	2	20'-4"	●	
4D42	2	21'-5"	●	
4D43	2	19'-3"	●	
4D44	2	17'-2"	●	
4D45	4	15'-3"	●	
4D46	4	16'-0"	●	
4D47	4	12'-0"	●	
4D48(E)	4	11'-9"	●	
4D49	4	20'-1"	●	
4D50	1	20'-6"	●	
4D51(E)	4	7'-10"	●	
4D52	4	18'-2"	●	
4D53	106	5'-6"		●
4D54	14	34'-10"		●
4D55	14	7'-4"		●
5D30	14	17'-1"	●	
8S40	8	18'-1"	●	
11D32	1	10'-3"	●	

ESTIMATED QUANTITIES

Item	Unit	Total
Superstructure Concrete	Cu.Yd.	**
Reinforcing Steel	Lb.	2094.97
Reinforcing Steel (Epoxy Coated)	Lb.	205.30

Note: All reinforcement bars shall conform to the requirements of A.S.T.M. Grade 60. Minimum compressive strength of Superstructure Conc. shall be 5,500 p.s.i.

** Concrete quantities included in Bill of Materials Sheet No. 116 & 117.
Bill of Material is for one Pier Diaphram only

DESIGNED	M.M.	CK'D.	M.M.
DRAWN	T.S.	CK'D.	G.R.
TRACED	T.S.	CK'D.	G.R.

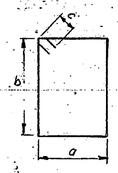
10-20-81 Revision: Estimate of Quantities

PIERS 205 & 206 DIAPHRAGM

BAR BENDING DIAGRAMS

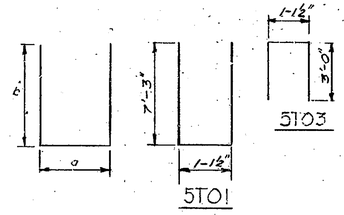
PIER DIAPHRAGM REINFORCEMENT

Bar	a	b	c
4D01	3'-3"	2'-4"	4½"
4D02	4'-0¼"	2'-4"	4½"
4D03	4'-10"	2'-4"	4½"
4D04	5'-7¾"	2'-4"	4½"
4D05	6'-5½"	2'-4"	4½"
4D06	7'-2½"	2'-4"	4½"
4D07(E)	[illegible]	[illegible]	4½"
4D08(E)	[illegible]	1'-5"	4½"
4D10(E)	[illegible]	4'-5"	4½"
5D10	[illegible]	[illegible]	[illegible]

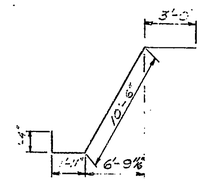


4D01 thru 4D06, 4D09(E), 4D10(E), 5D10

Bar	a	b
4D07(E)	4'-8½"	3'-0"
4D08(E)	2'-3"	3'-0"
4D11	[illegible]	[illegible]
4D12	[illegible]	[illegible]
4D13	[illegible]	[illegible]
4D14	[illegible]	5'-[illegible]
4D18	4'-3"	[illegible]
4D19	[illegible]	[illegible]
4D20	[illegible]	[illegible]
11D10	[illegible]	4'-10"



4D07(E), 4D08(E), 4D11 thru 4D14, 4D18, 4D19, 4D20(E), 11D10



8D10

BILL OF MATERIAL

Bar	No.	Length	Bent	Str.
4D01	4	11'-11"	●	
4D02	2	13'-6"	●	
4D03	2	15'-1"	●	
4D04	2	16'-9"	●	
4D05	2	18'-4"	●	
4D06	2	20'-0"	●	
4D07(E)	6	10'-9"	●	
4D08(E)	8	8'-3"	●	
4D09(E)	2	10'-0"	●	
4D10(E)	1	8'-3"	●	
4D11	2	6'-9"	●	
4D12	2	9'-3"	●	
4D13	2	11'-7"	●	
4D14	2	14'-1"	●	
4D16	7	16'-10"		●
4D17	62	5'-6"		●
4D18	10	19'-3"	●	
4D19	4	17'-8"	●	
4D20(E)	4	9'-2"	●	
5D10	14	17'-1"	●	
5T01	14	15'-8"	●	
5T03	14	7'-2"	●	
8D10	8	16'-9"	●	
11D10	2	11'-11"	●	
11D11(E)	4	24'-0"		●
11D12	4	15'-0"		●

ESTIMATED QUANTITIES

Item	Unit	Total
Superstructure Concrete	Cu.Yd.	**
Reinforcing Steel	Lb.	1855.09
Reinforcing Steel (Epoxy Coated)	Lb.	640.59

Bill of Material is for one Pier Diaphram only.

APPROVED FOR CONSTRUCTION
W. B. ABBOTT
Assistant Engineer of Bridge Design — 9-17-81

Figg and Muller Engineers Inc.
424 North Calhoun St.
Tallahassee, Florida 32301

PIER DIAPHRAGM BAR LIST - UNITS I, II, V & VI

INDIANA STATE HIGHWAY COMMISSION

LAKE COUNTY - RAMP:- A SECTION:-
SCALE:- N.T.S. DATE:- June 29, 1981
SUBMITTED FOR APPROVAL Eugene C. Figg
DRAWING:- OF SHEET:- 130 OF
PROJECT:- MM 220-1 (8)
CONTRACT NO. B-12752
BRIDGE FILE:- 912-45-2546 RWX

EUGENE C. FIGG, JR. REGISTERED No. 11515 STATE OF INDIANA PROFESSIONAL ENGINEER