

STRUCTURES STANDARDS



JANUARY 1987

This document was promulgated at an annual cost of \$2.81 per copy to provide Standards and criteria for the design, construction and maintenance of highway transportation facilities by governmental agencies, consultants, contractors and the citizens of the State of Florida.

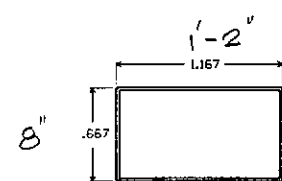
T A B L E O F C O N T E N T S

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12037 CADD	COMPOSITE NEOPRENE BEARING PADS
	HANDRAIL
14101 CADD (1 of 2)	CONCRETE HANDRAIL (BARRIER)
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14102 CADD	CONCRETE HANDRAIL (PARAPET TYPE - ALUMINUM)
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14081	CANTILEVER RETAINING WALLS (SHEETS 1 THRU 23)

NOTE : Numbers in parentheses in block with Index Number,
When Shown, indicates revision number.

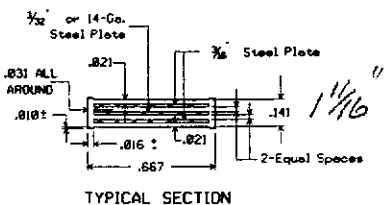
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

BRIDGE DESIGN STANDARDS

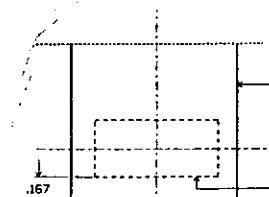


PLAN

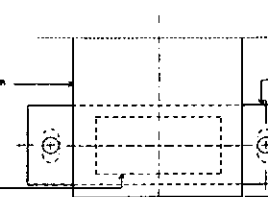
COMPOSITE PAD
FOR TYPE II BEAMS



TYPICAL SECTION



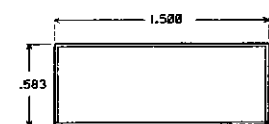
STRAIGHT BRIDGE



STRAIGHT BRIDGE

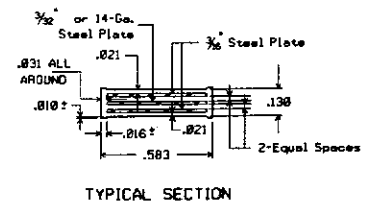
GENERAL NOTES

Neoprene in all Bearing Pads shall have a Grade 50 durometer hardness.
 Steel Plates in composite pads shall conform to A.S.T.M. A-36 or A-245 Grade C or D, or A-578 Grade C or SAE 1018, SAE 1020.
 Variations in pad dimensions will be allowed provided revised pads will meet the current specifications and are approved by the Engineer.
 Bearing seat shall be finished parallel to the bottom of Beam.
 Steel Bearing Plates, Anchor Bolts, Nuts and Washers shall be hot dip galvanized in accordance with A.S.T.M. specification A-123. Payment for steel bearing plate assemblies shall be included in the Contract Unit Price for Prestressed Beams or Structural Steel. For location and details of Bearing Plates see Beam sheets.
 All dimensions are in decimals of a foot, except dimensions of steel plates.

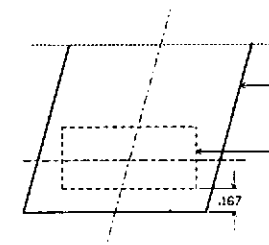


PLAN

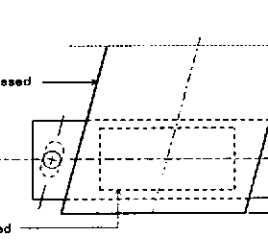
COMPOSITE PAD
FOR TYPE III BEAMS



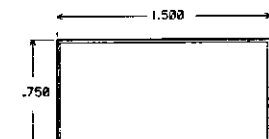
TYPICAL SECTION



SKewed BRIDGE

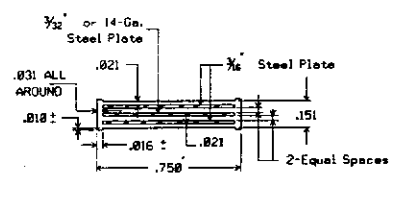


SKewed BRIDGE

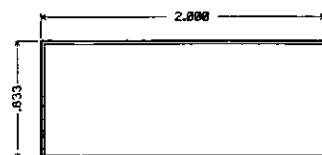


PLAN

COMPOSITE PAD
FOR TYPE IV BEAMS

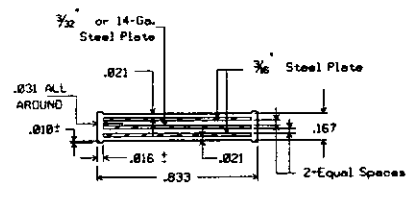


TYPICAL SECTION

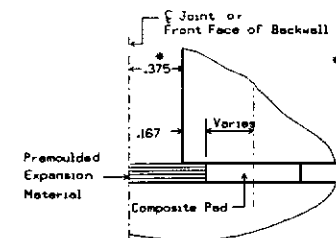


PLAN

COMPOSITE PAD
FOR TYPE V & VI BEAMS

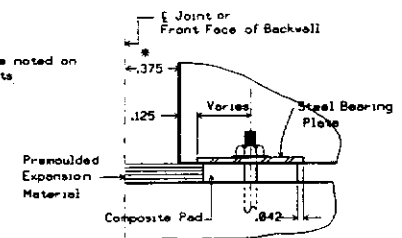


TYPICAL SECTION



TYPICAL PAD DETAIL
INTERIOR BEAM

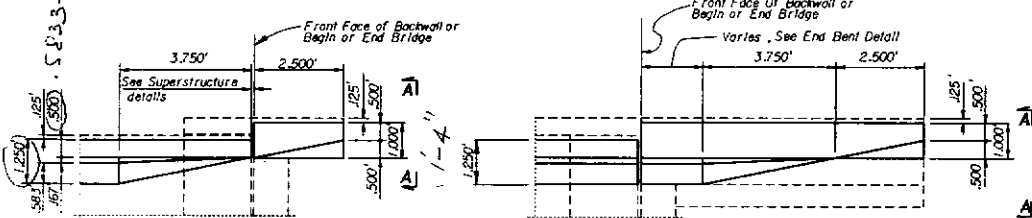
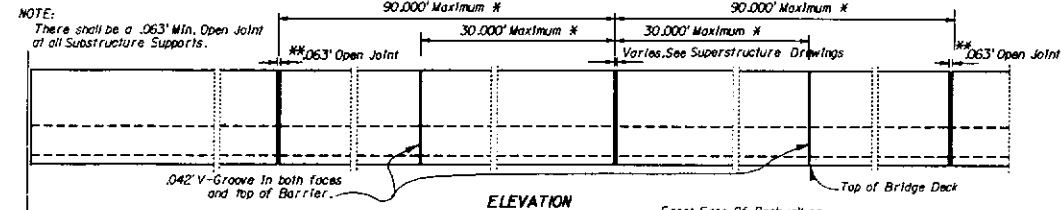
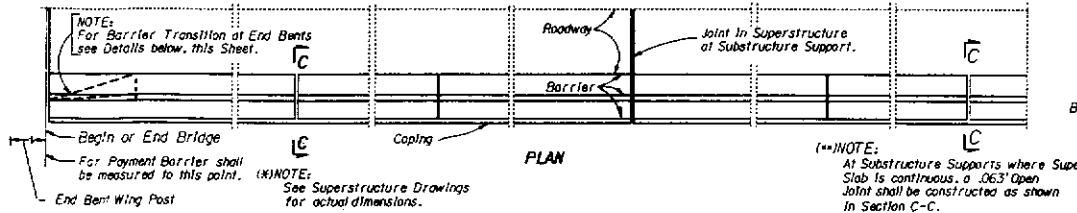
* Unless otherwise noted on Beam Sheets



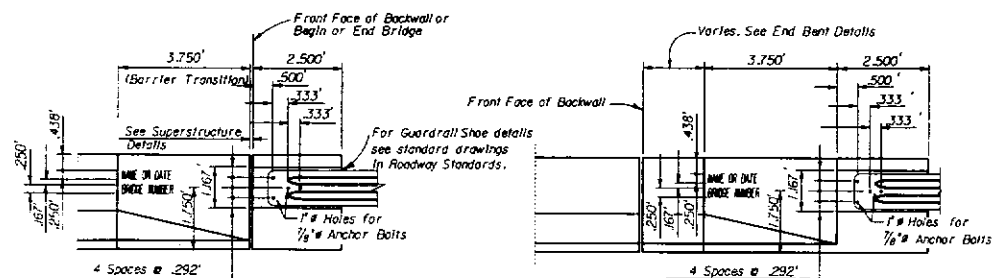
TYPICAL PAD DETAIL
EXTERIOR BEAM

REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Date	Description	COMPOSITE NEOPRENE BEARING PADS	
11-85	Revised using DSD and details of a Form. Added 25% cover to all walls of steel reinforcement.	FIG. NO.	PROJECT NO.
Drawn by	HR.F.	11-85	 R.D.S. 1 of 1 12037 CADD
Checked by	R.D.S.	1-86	
Reviewed by			
Approved by	A.G.N.		

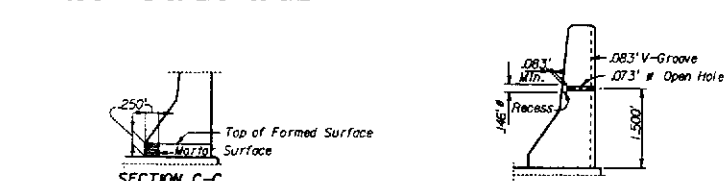
NOTE: End Bent Wing Post shall be paid for at the Contract Unit Price for Concrete (Substructure) and Reinforcing Steel (Superstructure).



PLAN OF WING POST FOR SLAB AND GIRDER TYPE SUPERSTRUCTURE



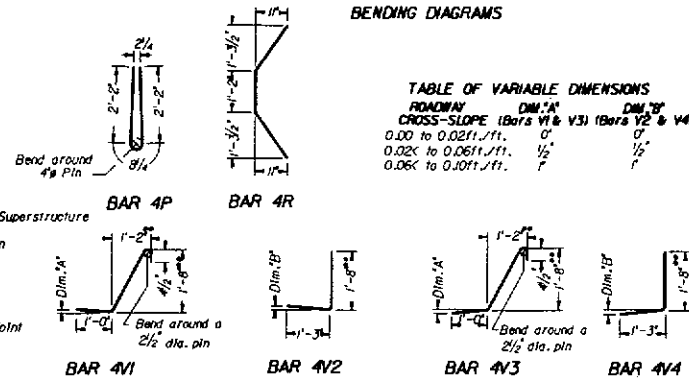
ELEVATION OF WING POST FOR SLAB AND GIRDER TYPE SUPERSTRUCTURE



Holes for Incidental Signing

NOTE: Holes and grooves shall be placed on barrier type handrails of divided and undivided bridges as shown in the plans for designated Type C Single Column, Informational, Guide, Regulatory and Warning Sign locations (see Signing Plans) and at approximately 500' intervals along the right handrails of bridges between designated locations for future signs as directed by the Engineer. The cost of the extra holes and grooves shall be included in the contract unit price for Concrete Handrail (Barrier). If Signing Plans are not available the Project Engineer should secure necessary information from the District Maintenance or Traffic Operations Office.

BENDING DIAGRAMS



BAR BENDING NOTES

NOTE: Bars 4V1 & 4V2 are for low side gutter. Bars 4V3 & 4V4 are for high side gutter. Adjust or field bend Bars 4V in barrier transition on slab type Superstructure as required for minimum cover.

NOTE: Adjust length of Bars 4V as required for slab thickness. Dimensions shown are based on a .583' slab, see Superstructure Drawings. For thicker slabs adjust the 1'-8" vertical and the 1'-2" horizontal dimensions as follows: Add the amount that the slab depth exceeds 7" to the 1'-8" vertical dimension and add .45 of this excess to the 1'-2" horizontal dimension.

EXAMPLE: 1'-0" Slab. Excess = 12" - 7" = 5"

Vertical Dimension = (1'-8") + (5") = 2'-1"

Horizontal Dimension = (1'-2") + (5" x .45) = 1'-4 1/4"

TYPICAL BARRIER QUANTITIES

NOTE: Quantities are based on .583' slab and .021' foot roadway cross-slope.

CLASS II CONCRETE: 0.059 cu. yd. per linear foot of Barrier

REINFORCING STEEL: 15.26 lbs. per linear foot of Barrier on Slab

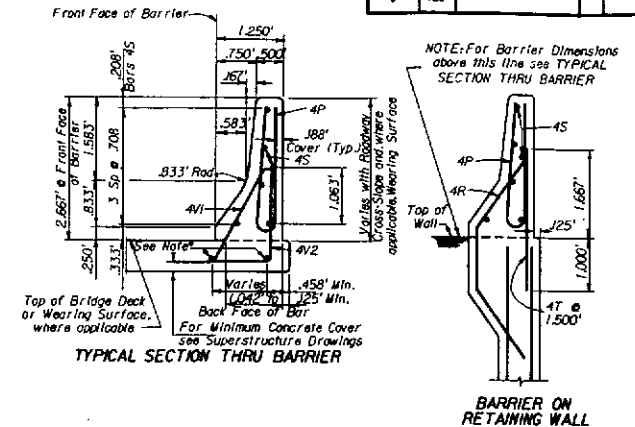
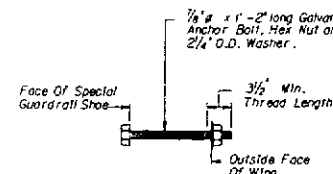
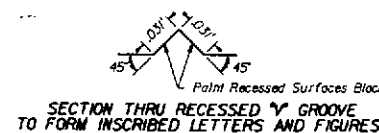
14.55 lbs. per linear foot of Barrier on Wall

NOTE: All bar dimensions are out-to-out.

NOTES

The Name and Bridge Number to be placed on the Barrier shall be seen on the drivers' right when approaching bridge. The Date is to be placed on the drivers' left when approaching bridge. The Date shall be the Year the Bridge is constructed.

Black Plastic Letters and Figures 250' in height, as approved by the Engineer, may be used in lieu of Letters and Figures formed by .031" V Grooves. V Grooves shall be formed by Prefabricated Letters and Figures.



REINFORCING STEEL NOTES:

Place normal bottom slab longitudinal reinforcing steel at each position as shown above to facilitate tying anchor bars in Concrete Handrail Barrier. Do not add reinforcing steel for the purposes. For Precast Slab Units place Bars 4V on top of the prestressed strands and tie. For cast-in-place slabs without girders place Bars 4V on top of longitudinal reinforcing and tie.

All reinforcing steel in Barrier shall be No. 4's. Bars 4P, 4R & 4V shall be spaced at .667' c.c.. At all open joints all reinforcing steel shall have .457' minimum cover. At all construction joints Bars 4S may be continuous or spliced. All splices in Bars 4S shall be 1.333' minimum.

GENERAL NOTES

CONCRETE: Class II Concrete shall be used in Barrier.

REINFORCING STEEL: Reinforcing Steel shall be Grade 60.

PAYMENT: Barrier shall be paid for per linear foot, which shall include all Concrete and Reinforcing Steel. Barrier shall be measured along the centerline of the top surface of the Barrier.

CYLINDER STRENGTH: The Cylinder Strength of the Concrete shall be 3,400 p.s.i. minimum at 28 days.

MARKERS: Markers recording the Elevation shall be placed on top of the Barrier at End Bents. On bridges longer than 100 ft., one marker shall be placed at each end of bridge. On bridges less than 100 ft., one marker shall be placed at one end of the bridge only. Markers are to be furnished by the Florida Department of Transportation and Installed by the Contractor. The cost of installing the Markers shall be included in the Contract Unit Price for Concrete Barrier.

SUP FORMING: At the option of the Contractor, Barrier Walls may be constructed by slip-forming subject to the following: the width shall be increased .457' and the front face of the base of each barrier shall intrude on the clear roadway width no more than .042'. Additional materials required are at the expense of the Contractor. The shape of the Barrier on the Roadway side shall not be altered.

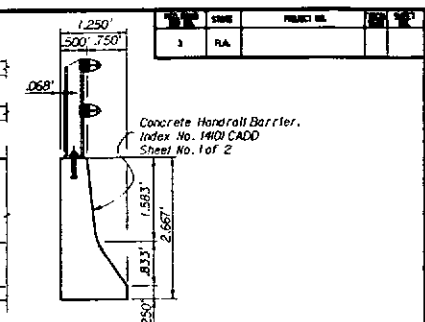
SUPERELEVATED BRIDGES: At the option of the Contractor, Handrail Barriers and End Bent Wingwalls on super-elevated bridges, may be constructed perpendicular to the roadway surface. The cost of modifications shall be at the Contractor's expense.

ANCHOR BOLTS: Anchor Bolts, Nuts, and Washers shall be hot dip galvanized in accordance with A.S.T.M. A-123.

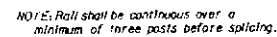
REINFORCING COVER: Reinforcing in barrier shall have .457' min. cover. Cover detail includes tolerances for fabrication and placing bars.

BARRIER

REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
NO.	DESCRIPTION	DATE	BY
1	ISSUED	12-85	1-86
CONCRETE HANDRAIL		CONCRETE HANDRAIL	
Drawn by: L.F.C. 12-85 Checked by: R.D.S. 1-86 Supervised by: A.G.M.		Project No.: Sheet No.: 1 of 2 H.M. CADD	

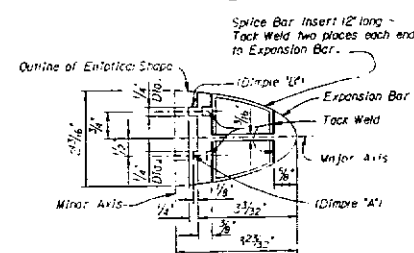


TYPICAL SECTION
THRU BARRIER



Technical drawing of a propeller assembly. The left side shows a side view with dimensions: $\frac{1}{16}'' R$, $\frac{1}{2}''$, $\frac{1}{8}'' R$, $\frac{1}{16}'' R$, $\frac{1}{4}''$, and $\frac{1}{16}''$. The right side shows an end view with dimensions: $\frac{3}{16}''$, $\frac{1}{4}''$, and $4''$. A note at the top right says "Provide for drive fit into roll." and a label "Wing Axle" points to the central shaft.

SECTION B-B

[illegible]

RAIL COMPONENTS

POST: Fabricated wrought aluminum A.S.T.M. B221, alloy 6061-T6 or alloy 6351-T5 with welding using filler wire 4043.

RAIL: 303 Stainless Steel A.S.T.M. A-307, alloy 304-T6 or alloy 304L-T5.

RAIL: 1020 CARB. STEEL A.S.T.M. A-36, alloy 1045-T6 or alloy 1045-T5.

ANCHOR BOLTS: Anchor Bolts shall be in accordance with A.S.T.M. A-36 or A-307.

Anchor Bolts, nuts and washers shall be not-dip galvanized in accordance with A.S.T.M. Designation A-153.

RAIL END CAP: A.S.T.M. B-26 sand cast aluminum alloy, SG 70A-F (Aluminum Association alloy designation A-356-F).

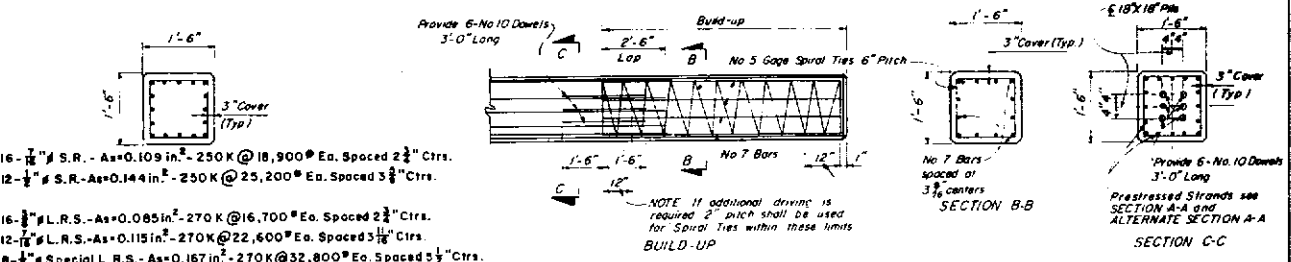
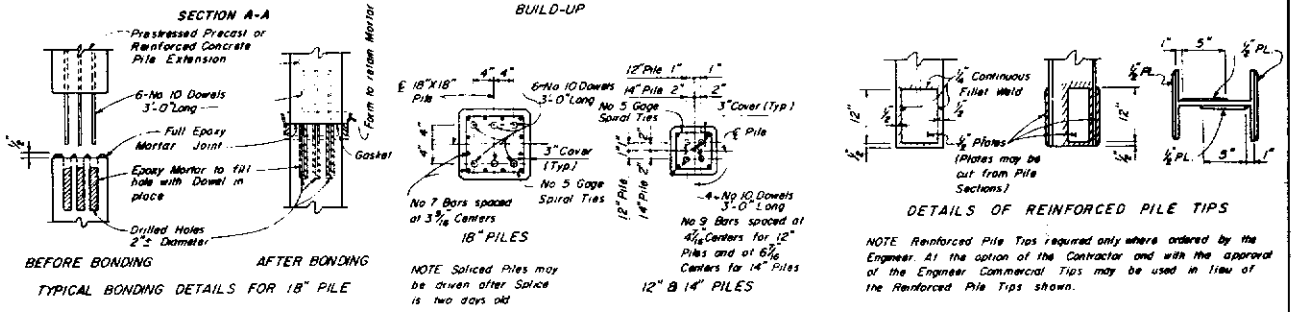
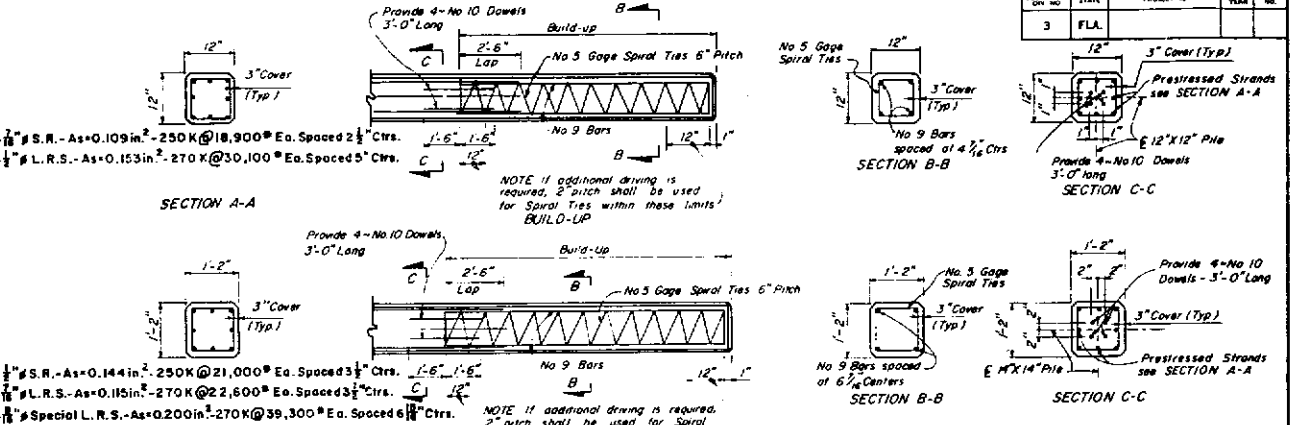
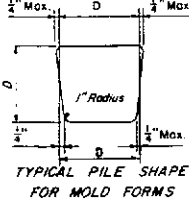
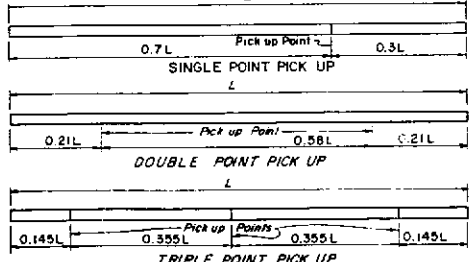
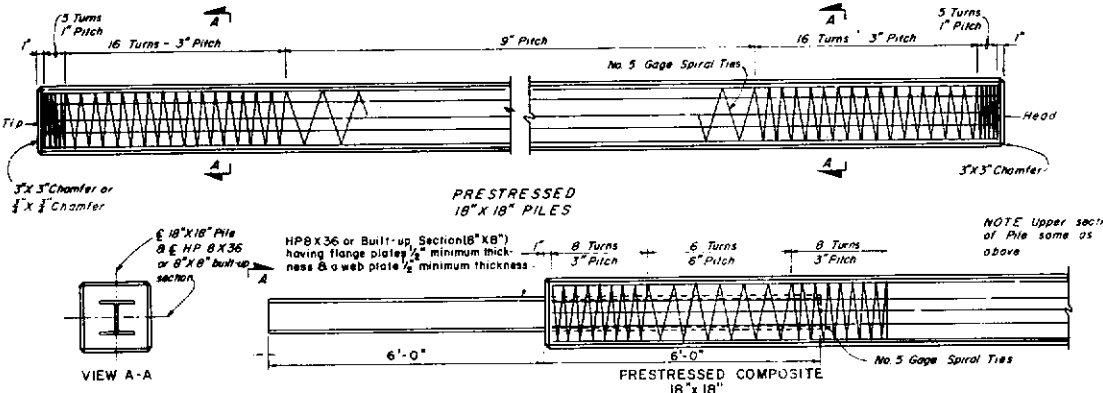
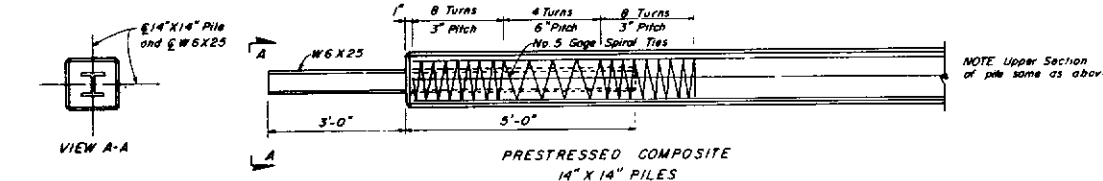
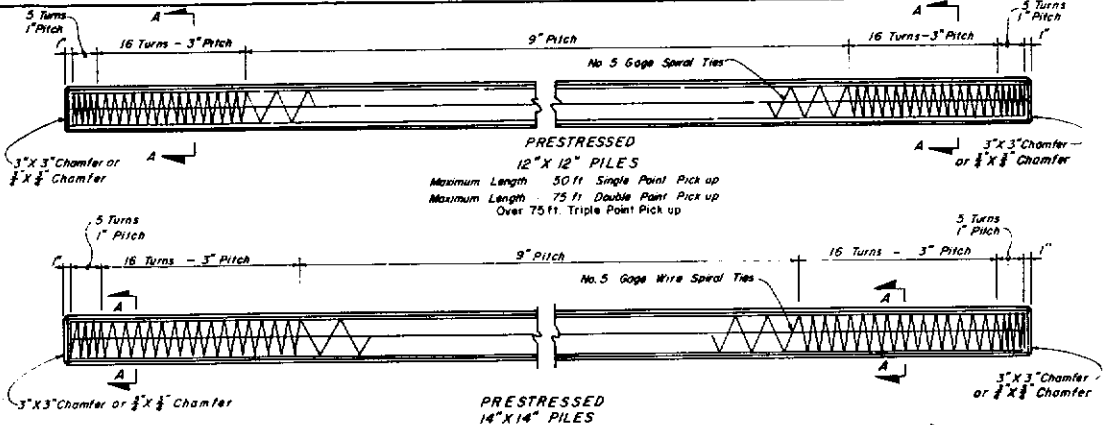
RAIL INSTALLATION: Rail Post shall be normal to Profile Grade. Posts shall be seated on 1/8" thick resilient pads in accordance with Article 932-2.1. The dimension shall be the same as the post base.

Rail expansion joints shall occur in the panel between posts on either side of bridge expansion joints. Rail expansion joints shall be similar to rail splices with provision for movement equal to 1.5 times the bridge joint opening.

SHOP DRAWINGS: Complete details and description of materials of the proposed bridge rail shall be submitted by the contractor for the Engineers approval prior to fabrication.

SIDEWALK BARRIER TYPE AND
BICYCLE BARRIER TYPE

REVISIONS Date _____ Description _____		EXPOSED SURFACE 1772 STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
		CONCRETE HANDRAIL	
		ROAD NO. _____	COUNTY _____
		PROJECT NO. _____	
		Date _____	Date _____
Drawn by _____		L.F.C. 12-85	
Checked by _____		R.D.S. 1-86	
Supervised by _____		E. J. BUREAU OF STRUCTURES	
Checked by _____		Drawing No. _____	
Supervised by _____		2 of 2	
		A.G.M.	14101 CADD



GENERAL NOTES

SPIRAL TIES Each wrap of spiral shall be tied to at least two corner strands.

MATERIAL FOR SPIRAL TIES Spirals may be manufactured from stock meeting requirements of any grade of reinforcing steel or hard drawn steel.

PILE CUTOFFS In cutting off Concrete Piles an abrasive saw shall be used to score the concrete at cut off elevation to the approximate depth of Reinforcing Steel.

CONCRETE STRENGTH For Class III Concrete the Cylinder Strength shall be 5,000 psi minimum at 28 days and 4,000 psi minimum at transfer of the Prestressing Force.

WEBS Webs of Wide Flange sections shall be in a vertical position when Composite Pile is cast.

NOTE All Reinforcing Steel shall be Grade 40 or 60.

APPROVAL Prior Approval in Writing by the Engineer is Required for Reinforced Concrete Build-Up in Excess of 2'-0" This will not be approved for piles in a coastal environment.

DUNNAGE Place Dunnage under pick up points shown for double pick up Where Pile Length exceeds that requiring double point pick up, place dunnage at pick up points called for in Triple Point Pick up.

OCTAGONAL PILES: Prestressed Octagonal Piles of equivalent strength may be substituted for square piles. Details of Pile shall be submitted to the Engineer for approval.

SPIRAL SPLICES: One turn required for spiral splices.

TYPICAL DETAIL SHOWING COVER DIMENSION

NOMENCLATURE
S.R. = Stress Relieved Strand
L.R.S. = Low Relaxation Strand

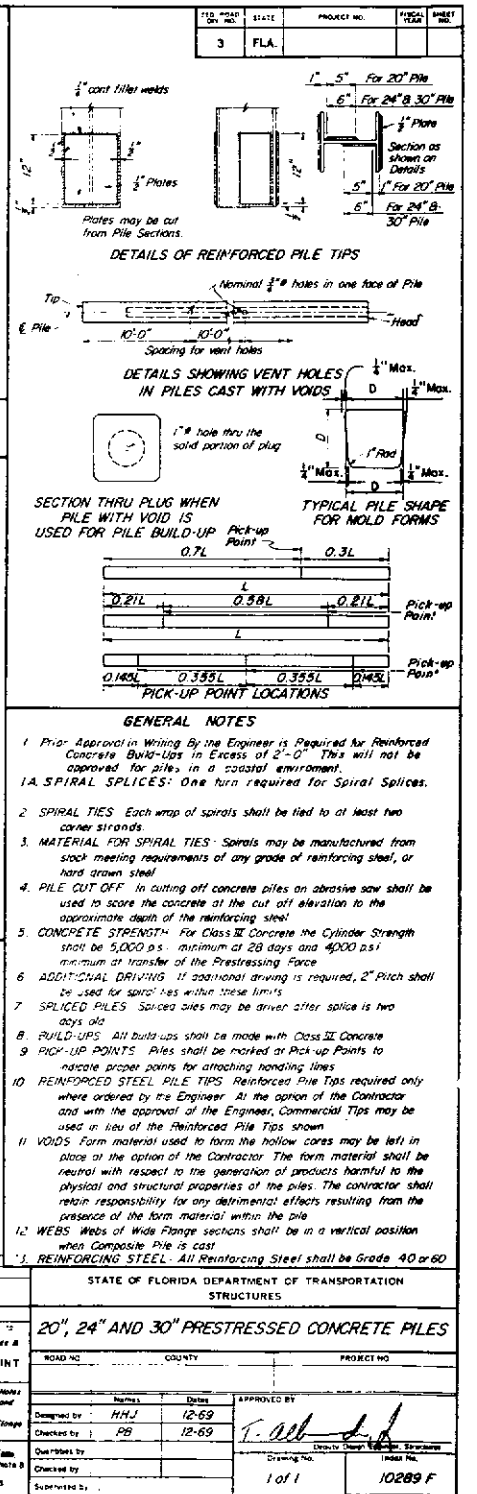
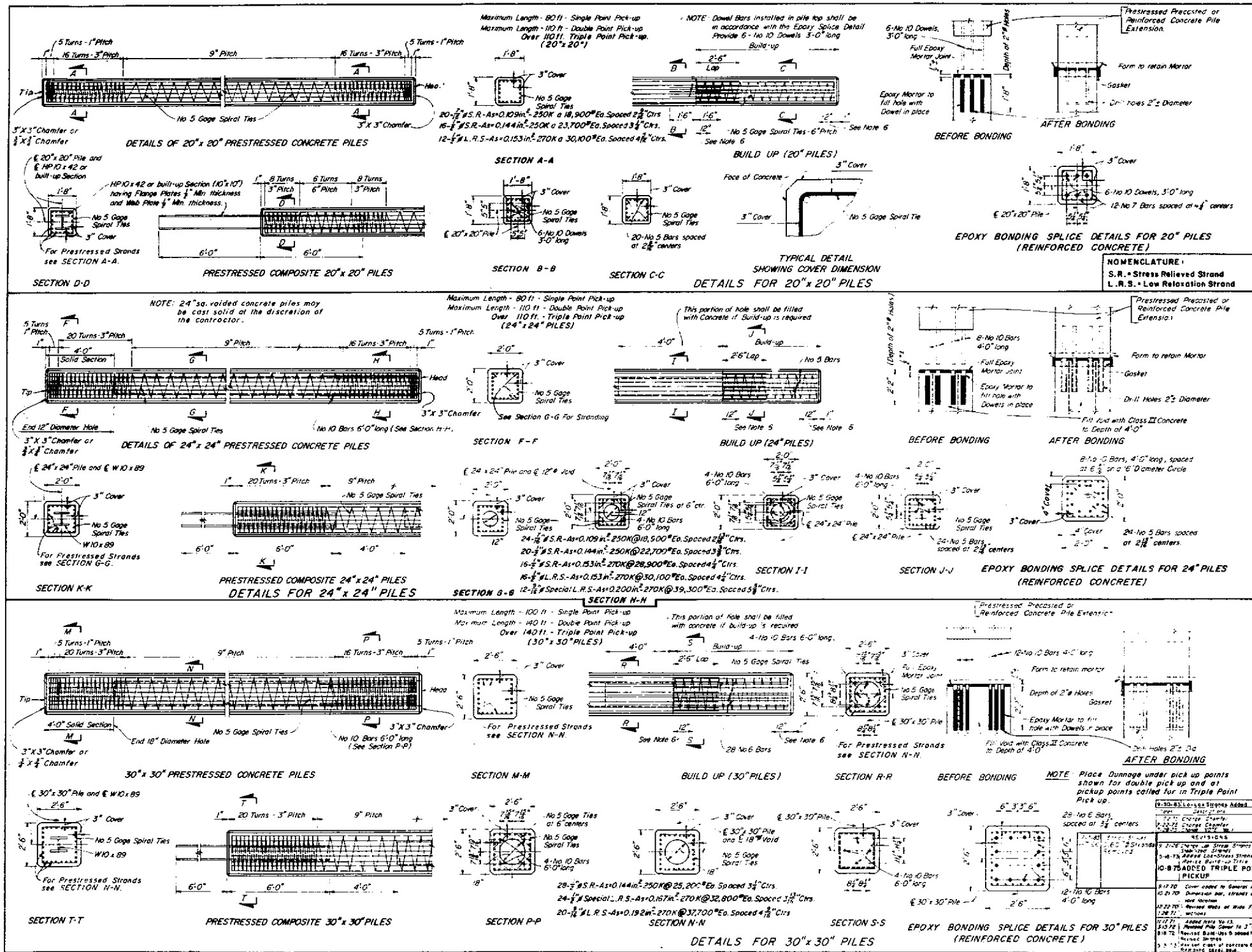
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

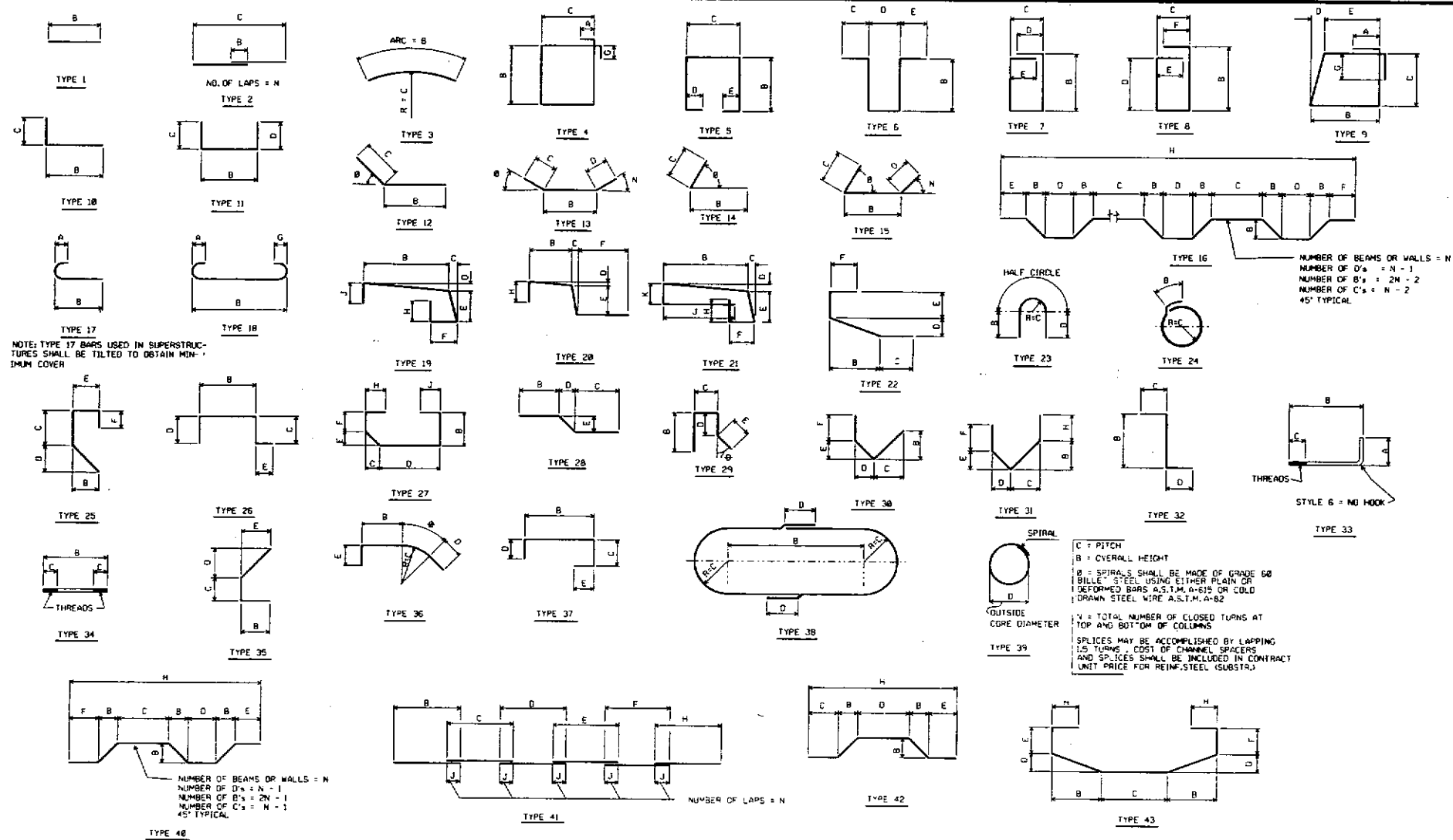
12", 14" AND 18" PRESTRESSED CONCRETE PILES

REVISIONS

DATE	DESCRIPTION
5-2-75	Revised
5-2-75	Change Chamfer
5-2-75	ADD TRIPLE POINT PICK UP
5-2-75	Change Low Relaxation Strand
5-2-75	Change Spiral
5-2-75	Change Head B to 12" X 14" Pile
5-2-75	Change Head B to 14" X 14" Pile
5-2-75	Change Head B to 18" X 18" Pile
5-2-75	Change Head B to 12" X 14" Pile
5-2-75	Change Head B to 14" X 14" Pile
5-2-75	Change Head B to 18" X 18" Pile

DESIGNED BY S.A.B. 5-75
CHECKED BY L.A.L. 5-75
APPROVED BY [Signature]
DRAWING NO. 1 of 1
INDEX NO. 3400





DATE	REVISED	PROJECT NO.
3	NA	

HOOK DETAILS

DETAILING DIM. HOOK A OR G

4d OR 2 1/2" (min.)

180°

DETAILING DIM.

4d OR 2 1/2" (min.)

90°

RECOMMENDED END HOOKS

ALL GRADES
 D = 6d FOR #3 THRU #8
 D = 8d FOR #9, #10, AND #11
 D = 10d FOR #14 AND #18

BAR SIZE	180° HOOKS		90° HOOKS	
	A OR G	J	A OR G	
#3	5	3	6	
#4	6	4	8	
#5	7	5	10	
#6	8	6	1-8	
#7	10	7	1-2	
#8	11	8	1-4	
#9	1-3	11 3/4	1-7	
#10	1-5	1-1 1/4	1-10	
#11	1-7	1-2 3/4	2-8	
#14	2-3	1-9 3/4	2-7	
#18	3-8	2-4 1/2	3-5	
STYLE	1		3	

DETAILING DIM. HOOK

4d OR 2 1/2" (min.)

90°

CL BEAM

DETAILING DIM. HOOK

4d OR 2 1/2" (min.)

135°

CL BEAM

STIRRUPS (TIES SIMILAR)

RECOMMENDED STIRRUP & TIE HOOK DIMENSIONS

BAR SIZE (IN.)	D	90° HOOK		135° HOOK	
		H O O K	A O R G	H O O K	A O R G
#3	1 1/2	4		4	2 1/2
#4	2	4 1/2		4 1/2	3
#5	2 1/2	6		5 1/2	3 3/4
#6	4 1/2	1-8		7 3/4	4 1/2
#7	5 1/4	1-2		9	5 1/4
#8	6	1-4		10 1/4	6
STYLE		4		5	

STYLE 6 = NO HOOK

HOOK STYLES DETAILED ON THIS SHEET ARE FOR ILLUSTRATION ONLY. ACTUAL HOOK STYLE FOR ANY PARTICULAR BAR WILL BE SHOWN UNDER A OR G HEADING ON REINFORCING BAR LIST SHEET. ALL BAR DIMENSIONS ARE OUT-TO-OUT.

REVISIONS

DATE	DESCRIPTION
4-81	GENERAL REVIEW
6-10-82	REVISED (HAND WELDING)
4-19-84	REV. BAR TYPE 36

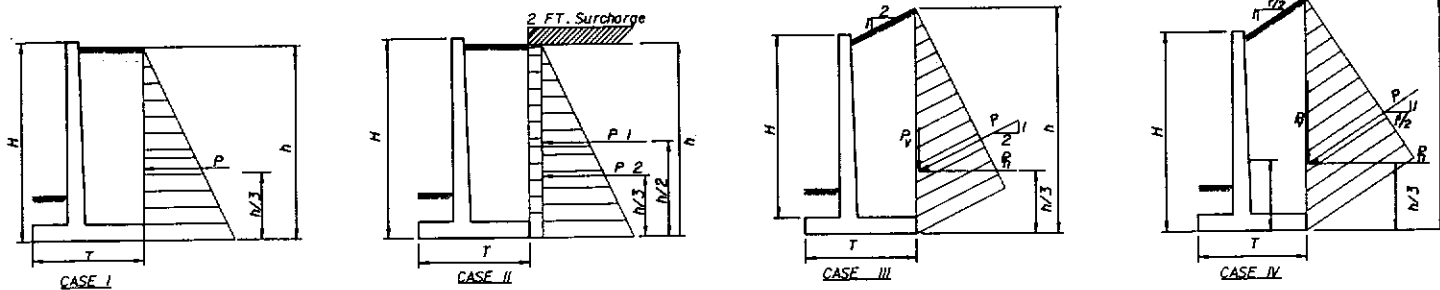
**STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES**

STANDARD BAR BENDING DETAILS

DATE	BY	CHKD BY	DATE
4-81	R.D.H.	1-86	
6-10-82	R.D.S.	1-86	
4-19-84			

1 OF 1

NOTE: FOR BAR DIMENSIONS SEE REINFORCING BAR LIST SHEET.



GENERAL NOTES

GENERAL SPECIFICATIONS: Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Current Edition with Approved Supplements thereto.

DESIGN SPECIFICATIONS: American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, Current Edition with Approved Revisions thereto.

MATERIAL STRESSES: All allowable stresses are in accordance with current AASHTO Standard Specifications for all the materials shown in the plans.

MAXIMUM CONCRETE STRESSES: (f_c = Maximum Working Stress, f'_c = Minimum 28 Day Compressive Strength)
Class II Concrete (Retaining Wall) f_c = 1360 psi (f'_c = 3400 psi)
Class IV Concrete (Retaining Wall) f_c = 1360 psi (f'_c = 3400 psi)

CLASS OF CONCRETE: Retaining walls in a non-corrosive (slightly aggressive) environment shall use Class II Concrete reinforced with uncoated (black) reinforcing steel. Retaining walls in a non-corrosive (moderately aggressive) environment shall use Class IV Concrete reinforced with uncoated (black) reinforcing steel. Retaining walls in a corrosive (extremely aggressive) environment shall use Class IV concrete reinforced with epoxy coated reinforcing steel.

REINFORCING STEEL: All reinforcing steel shall be grade 60 (f_s = 24000 psi). Retaining walls located in a corrosive (extremely aggressive) environment shall use epoxy coated reinforcing bars.

ENVIRONMENT: These plans apply to cast-in-place retaining walls located in all environments.

SURFACE FINISH: A Class 5 Applied Finish Coating shall be applied to the exposed face and top of the walls above the ground line.

RUSTICATION: Alternate Architectural treatments may be substituted for the Striated Pattern as Approved by the Engineer.

DIMENSIONS: All Dimensions are in decimals of a foot, except for bar bending diagrams.

PAYMENT: Retaining walls in a non-corrosive (slightly aggressive) environment shall be paid for at the Contract Unit Price for Class II Concrete (Retaining Walls) (Cu Yd) Item No. 400-2-II and Reinforcing Steel (Retaining Wall) (lbs) Item No. 415-I-3.

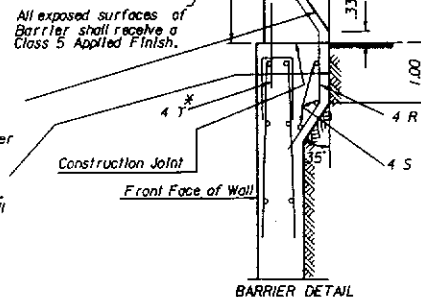
Retaining walls in a non-corrosive (moderately aggressive) environment shall be paid for at the Contract Unit Price for Class IV Concrete (Retaining Walls) (Cu Yd) Item No. 400-4-II and Reinforcing Steel (Retaining Wall) (lbs) Item No. 415-I-3.

Retaining walls in a corrosive (extremely aggressive) environment shall be paid for at the Contract Unit Price for Class IV Concrete (Retaining Walls) (Cu Yd) Item No. 400-4-II and Reinforcing Steel (Retaining Wall) (lbs) Item No. 9415-I-3.

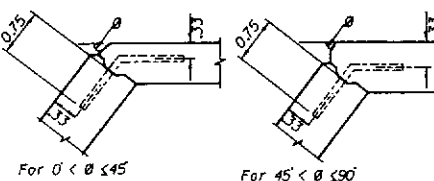
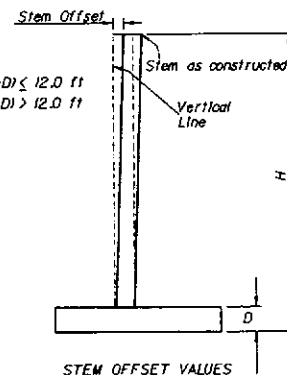
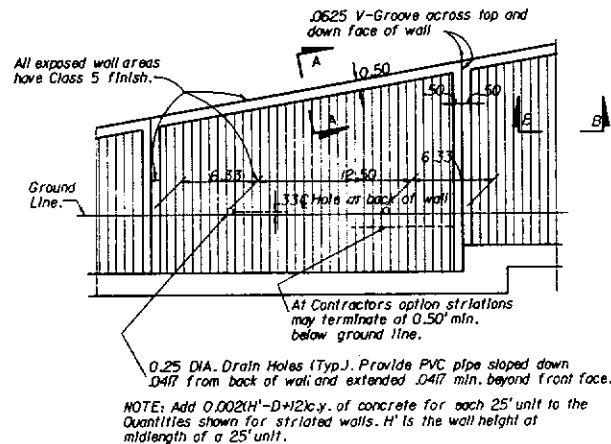
QUANTITIES: Concrete and Reinforcing Steel Quantities shall be based upon the average height (H) of each 25 ft Unit. Interpolating between the "PER 25' UNIT" quantities shown on the appropriate case sheet. Quantities for units less than 25' in length shall be based upon the length of the partial unit times the "PER LIN. FT." quantity for the partial unit, interpolating between the quantities shown as applicable.

For Barrier Details see Sheet 1 of Index 13857 (Bridge Plans). When Barrier is used, Concrete and Reinforcing Steel for Barrier shall be included in the bid item Quantities for Retaining Wall.

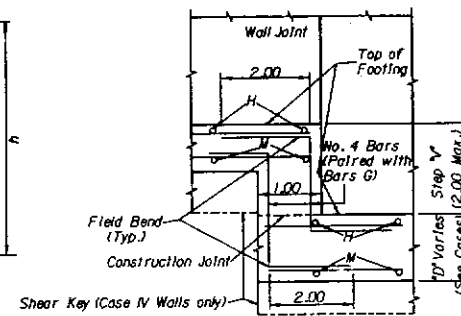
Lug at top of Wall requires an additional 0.037 and 0.026 c.y. of Concrete per Lin. Ft. of Wall for 0.75 and 0.92 top of wall widths, respectively, and an additional 2.00 lbs. per Lin. Ft. of Wall for the 3 - 45 Bars shown.



* NOTE: See Sheet 1 of Index 13857 for Bars 4 R and 4 T



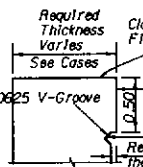
TYPICAL JOINT DETAILS AT CORNERS
NOTE: See "Construction Joint Detail" For Notes and Details not shown



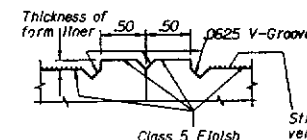
FOOTING STEP DETAIL

NOTE: Quantities for Footing Step are not included in wall quantities.
Concrete = 0.037 V T C.Y.
Steel = $(13.36) (T+1) (V+4.5) \text{ LBS.}$

2 Layers of 55 lb. Smooth Roofing Paper.
Mop all contacting surfaces of concrete and Roofing paper with cut-back asphalt.



SECTION A-A



SECTION B-B

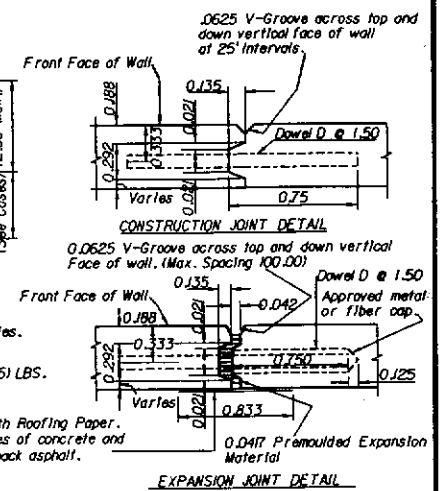
Backfill layers to be sloped to drain during backfilling. Backfill to be placed around footing and sloped away as the forms are stripped.

Two cubic feet of clean, broken stone or gravel so graded and placed as to allow free drainage, but at the same time prevent the fill from washing out.

PVC Drain Pipe Slope .0417

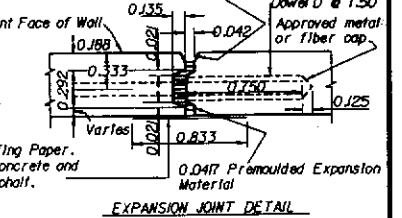
TYPICAL BACKFILL DETAIL

NOTE: The base of the Wall Footings and Front Face of Footing shall be poured against undisturbed material.



CONSTRUCTION JOINT DETAIL

NOTE: Quantities for Construction Joint are not included in wall quantities.
Concrete = 0.037 V T C.Y.
Steel = $(13.36) (T+1) (V+4.5) \text{ LBS.}$



EXPANSION JOINT DETAIL

NOTE: Key to stop 0.50 from top of wall. Joint across top of wall to be a straight line. Extend V-Groove down back of wall to 0.50 min. below ground.

NOTE: Number of 1.50 Dowels D (No. 6 Bars) required per unit for each wall height as follows:
6' & 7' 4" 8' 5" 9' & 10' 6" 11' & 12' 7" 13' & 14' 8" 15' & 16' 9" 17' & 18' 10" 19' 11" 20' & 21' 12" 22' & 23' 13" 24' 14" 25' 15".
Weight of Dowels for each 25.00 unit included in Quantities.

Striated Surface shall consist of uniform vertical grooves of .0104 to .0208 depth & spacing

NOTE: Where Concrete Gutter is Required, Gutter shall be constructed according to Roadway Standards Index 280 sheet 2 of 3. Payments shall be made under Item No. 524-I-1 Concrete Ditch Pavement (3" thick) per Sq.Yd. For limits of Concrete Gutter see Roadway Plans.

Inside ends of weep holes shall be covered with one square foot of galvanized mesh with .0417 openings.

Ground line

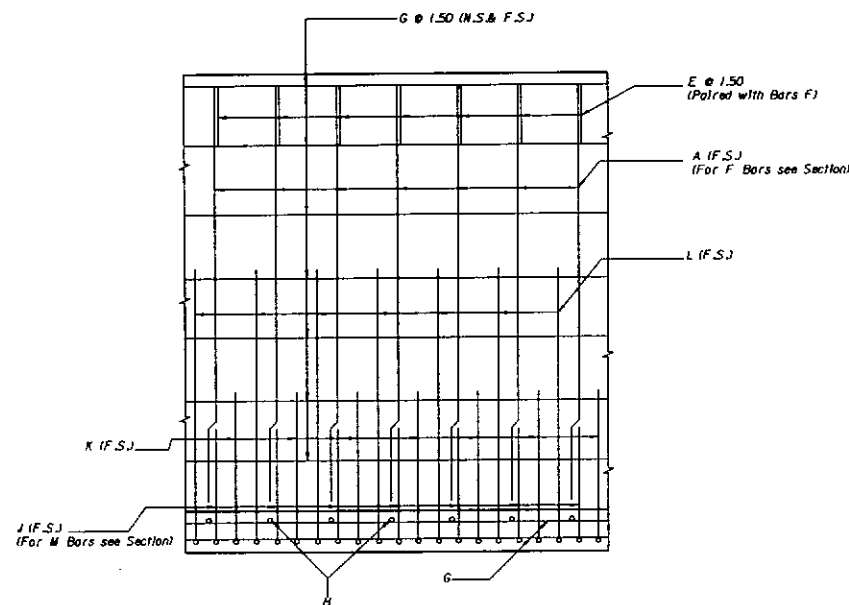
Maximum Toe Pressure (See Tables)

CANTILEVER RETAINING WALLS

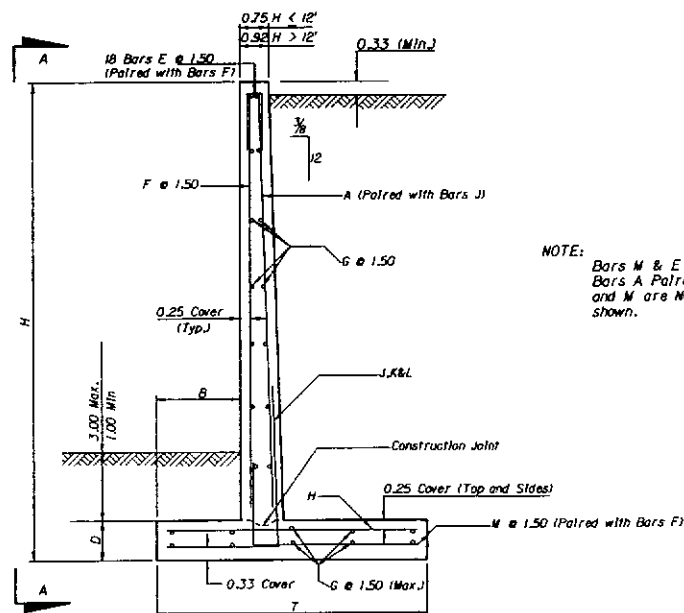
REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Date	Description	RETAINING WALLS DETAILS 6 FT. TO 30 FT. HEIGHT	
5/86	Size Change in Vertical Grooves.	REV. NO.	COUNTY
3/87	Changed to decimals.	PROJECT NO.	
3/87	Redraw on the CADD.	Drawn by	M.J.
3/87	Added to General Notes.	Checked by	M.P.
		Reviewed by	W.E.H.
		Checked by	T.D.H.
		Approved by	A.G.M.
		Scale	1 OF 23
		14.051 CADD	

RETAINING WALL DATA

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																												QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.FT.							
H	B	D	T	BARS J				BARS F				BARS G				BARS H				BARS M				BARS A				BARS K				BARS L					CONCRETE / 25' UNIT C.Y.	STEEL / 25' UNIT LBS.	CONCRETE PER L IN.FT. C.Y.	STEEL PER L IN.FT. LBS.			
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING						a	b	LENGTH
6	0.67	0.92	3.05	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.55	4	18	1.96	4.04													6.46	524	0.26	21	1.34			
7	0.83	0.92	3.50	4	26	1.00	6.58	1.27	7.86	4	18	6.00	4	16	24.50	4	18	1.42	3.00	4	18	2.25	4.33												7.73	599	0.31	24	1.52				
8	1.00	0.92	3.96	4	26	1.00	7.58	1.47	9.06	4	18	7.00	4	18	24.50	4	18	1.42	3.46	4	18	2.54	4.62												9.01	673	0.36	27	1.69				
9	1.17	0.92	4.50	4	27	0.96	8.58	1.67	10.26	4	18	8.00	4	20	24.50	4	19	1.33	4.00	4	18	2.91	4.99												10.38	759	0.42	30	1.82				
10	1.25	0.92	5.12	4	28	0.92	9.58	1.78	11.36	4	18	9.00	4	22	24.50	4	28	0.92	4.62	4	18	3.45	5.53												11.85	874	0.47	35	1.95				
11	1.50	0.92	5.86	4	31	0.83	10.58	2.06	12.65	4	18	10.00	4	24	24.50	4	40	0.63	5.36	4	18	3.94	6.02												13.45	1031	0.54	41	1.97				
12	1.75	1.00	6.75	4	38	0.67	11.58	2.33	13.93	4	18	10.91	4	26	24.50	4	39	0.67	6.25	4	18	4.58	6.66												15.64	1198	0.63	48	1.97				
13	2.00	1.00	7.61	4	38	0.67	12.58	2.77	15.37	4	18	11.91	4	28	24.50	4	46	0.54	7.11	4	18	5.19	7.27												19.32	1340	0.77	54	1.99				
14	2.25	1.00	8.64	4	51	0.50	13.58	3.05	16.66	4	18	12.91	4	30	24.50	4	56	0.46	8.14	4	18	5.97	8.05												21.47	1657	0.86	66	1.98				
15	2.50	1.00	9.57	5	19	1.33	2.83	3.33	6.19	4	18	13.91	4	34	24.50	5	50	0.50	9.07	4	18	6.65	8.73	5	19	13.91	5	18	1.33	10.75	3.33	14.11			23.58	2007	0.94	80	2.00				
16	2.83	1.00	10.63	5	17	1.50	2.83	3.69	6.55	4	18	14.91	4	38	24.50	6	44	0.58	10.13	4	18	7.38	9.46	5	17	14.91	5	16	1.50	4.75	3.69	8.47	5	16	1.50	14.75	3.69	18.47	25.83	2457	1.03	98	1.97
17	3.08	1.17	11.86	5	19	1.38	3.00	4.00	7.00	4	18	15.75	4	40	24.50	6	39	0.63	11.36	4	18	8.36	10.44	5	19	15.75	5	18	1.38	4.92	4.00	8.92	5	18	1.38	13.92	4.00	17.92	29.88	2576	1.20	103	1.99
18	3.50	1.17	12.71	6	17	1.50	3.42	4.42	7.87	4	18	16.75	4	42	24.50	6	50	0.50	12.21	4	18	8.79	10.87	5	17	16.25	6	16	1.50	5.92	4.42	10.37	6	16	1.50	14.92	4.42	19.37	32.12	3182	1.28	127	1.98
19	3.83	1.17	13.95	6	19	1.38	3.42	4.78	8.23	4	18	17.75	4	44	24.50	6	55	0.46	13.45	4	18	9.70	11.78	5	19	17.75	6	18	1.38	6.33	4.78	11.14	6	18	1.38	15.33	4.78	20.11	34.80	3660	1.39	146	1.97
20	4.17	1.17	14.98	7	17	1.50	4.83	5.15	10.01	4	18	18.75	4	46	24.50	7	41	0.63	14.48	4	18	10.39	12.47	6	17	18.75	6	16	1.50	6.33	5.15	11.51	6	16	1.50	16.33	5.15	21.48	37.30	4003	1.49	160	1.98



VIEW A-A

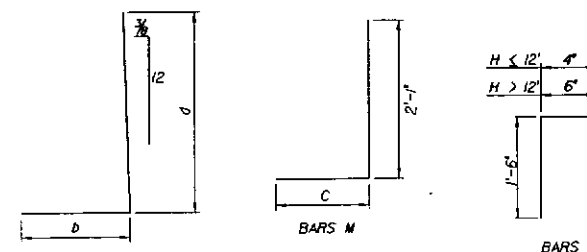


TYPICAL SECTION

NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO.4 Bars. Bars J are as shown.

NOTE: To accommodate the Variable Height of a wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.

BENDING DIAGRAM



NOTE: All bar dimensions are out to out.

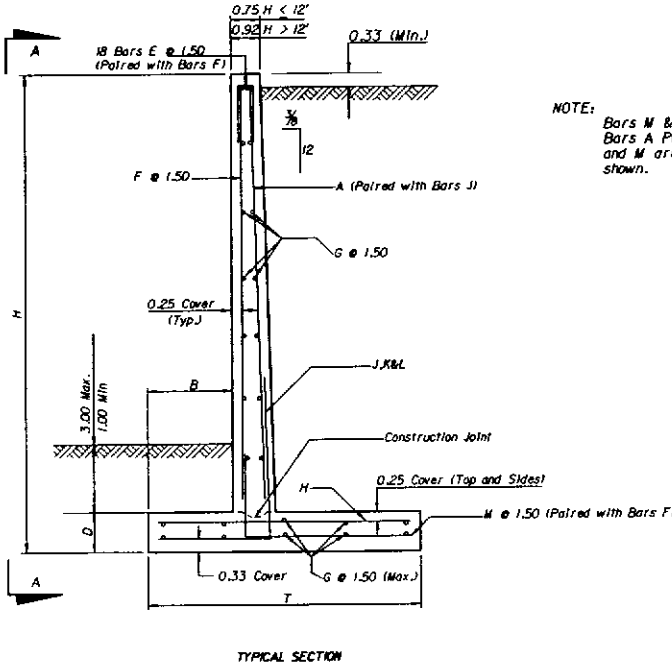
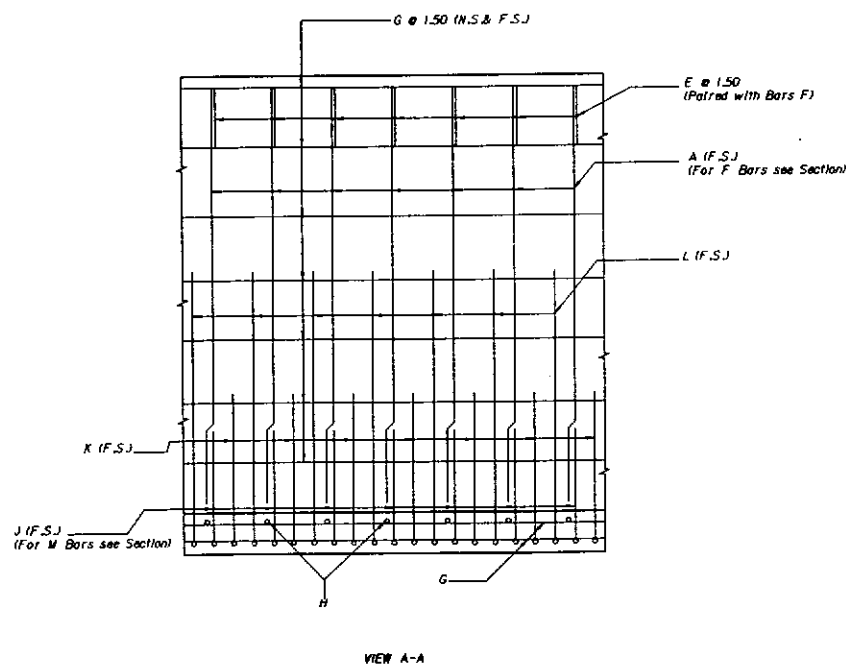
CANTILEVER RETAINING WALLS

DESIGNER		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Checked by: M.J. 3/87		CASE 112.0 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT	
Designed by: M.P. 3/87		PROJECT NO.	
Reviewed by: C.W. 6/85		COUNTY	
Supervised by: R.N. 6/85		DATE	
A.G.M.		2 OF 23	

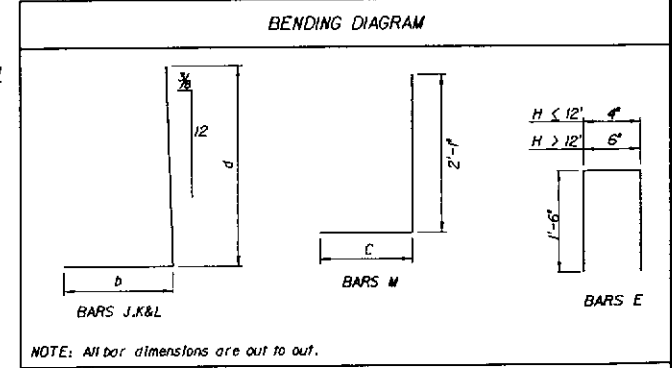
RETAINING WALL DATA

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																																QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.FT.	H									
				BARS J				BARS F			BARS G			BARS H				BARS M			BARS A			BARS K				BARS L						CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.													
H	B	D	T	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.	LBS.	C.Y.	LBS.								
6	0.67	0.92	3.05	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.55	4	18	1.96	4.04																6.46	524	0.26	21	1.34	6						
7	0.83	0.92	3.50	4	26	1.00	6.58	1.28	7.86	4	18	6.00	4	16	24.50	4	18	1.42	3.00	4	18	2.25	4.33															7.73	599	0.31	24	1.52	7							
8	1.00	0.92	3.96	4	26	1.00	7.58	1.48	9.06	4	18	7.00	4	18	24.50	4	18	1.42	3.46	4	18	2.54	4.62														9.01	673	0.36	27	1.69	8								
9	1.17	0.92	4.50	4	27	0.96	8.58	1.68	10.26	4	18	8.00	4	20	24.50	4	19	1.33	4.00	4	18	2.91	4.99														10.38	759	0.42	30	1.82	9								
10	1.25	0.92	4.93	4	28	0.92	9.58	1.79	11.37	4	18	9.00	4	22	24.50	4	27	0.96	4.43	4	18	3.26	5.34														11.69	862	0.47	35	2.04	10								
11	1.33	0.92	5.50	4	31	0.83	10.58	1.90	12.48	4	18	10.00	4	24	24.50	4	40	0.63	5.00	4	18	3.75	5.83														13.14	1015	0.53	41	2.20	11								
12	1.50	1.00	5.93	4	38	0.67	11.58	2.10	13.68	4	18	10.92	4	26	24.50	4	39	0.67	5.43	4	18	4.01	6.09														14.88	1161	0.60	46	2.39	12								
13	1.58	1.00	6.28	4	38	0.67	12.58	2.38	14.96	4	18	11.92	4	28	24.50	4	46	0.54	5.78	4	18	4.28	6.36														16.08	1277	0.72	51	2.67	13								
14	1.75	1.00	6.80	4	51	0.50	13.58	2.58	16.16	4	18	12.92	4	28	24.50	4	56	0.46	6.30	4	18	4.63	6.71														19.78	1522	0.79	61	2.80	14								
15	1.83	1.00	7.36	5	19	1.33	2.83	2.69	5.52	4	18	13.92	4	32	24.50	5	50	0.50	6.86	4	18	5.11	7.19	5	19	13.92	5	18	1.33	10.75	2.69	13.44	5	16	1.50	4.75	2.89	7.64	5	16	1.50	14.75	2.89	17.64	23.11	2075	0.92	83	3.18	15
16	2.00	1.00	7.69	5	17	1.50	2.83	2.89	5.72	4	18	14.92	4	34	24.50	6	39	0.63	7.19	4	18	5.28	7.36	5	17	14.92	5	16	1.50	4.75	2.89	7.64	5	18	1.38	4.92	2.91	7.83	5	18	1.38	13.92	2.91	16.83	25.88	2223	1.04	89	3.45	17
17	2.00	1.17	8.16	5	19	1.38	3.00	2.91	5.91	4	18	15.75	4	34	24.50	6	39	0.63	7.66	4	18	5.74	7.83	5	19	15.75	5	18	1.38	4.92	2.91	7.83	5	18	1.38	13.92	2.91	16.83	25.88	2223	1.04	89	3.45	17						
18	2.25	1.17	8.78	6	17	1.50	4.33	3.20	7.53	4	18	16.75	4	38	24.50	6	50	0.50	8.28	4	18	6.11	8.20	5	17	16.75	6	16	1.50	5.92	3.20	9.12	6	16	1.50	14.92	3.20	18.12	27.87	2730	1.11	109	3.49	18						
19	2.33	1.17	9.15	6	19	1.38	3.42	3.31	6.73	4	18	17.75	4	40	24.50	7	39	0.63	8.65	4	18	6.40	8.49	5	19	17.75	6	18	1.38	6.33	3.31	9.64	6	18	1.38	15.33	3.31	18.64	29.62	3010	1.18	120	3.74	19						
20	2.50	1.17	9.68	7	17	1.50	3.42	3.51	6.93	4	18	18.75	4	42	24.50	7	39	0.63	9.18	4	18	6.76	8.84	6	17	18.75	7	16	1.50	6.33	3.51	9.84	7	16	1.50	16.33	3.51	19.84	31.57	3483	1.26	139	3.87	20						
21	2.67	1.42	10.32	7	17	1.50	5.17	3.70	8.87	4	18	19.50	4	44	24.50	7	43	0.58	9.82	4	18	7.23	9.31	6	17	19.50	7	16	1.50	7.17	3.70	10.87	7	16	1.50	11.17	3.70	14.87	35.70	3620	1.43	145	3.98	21						
22	2.92	1.42	11.03	8	17	1.50	4.58	3.98	8.56	4	18	20.50	4	46	24.50	7	50	0.50	10.53	4	18	7.69	9.77	6	17	20.50	8	16	1.50	8.17	3.98	12.15	8	16	1.50	12.17	3.98	16.15	38.06	4356	1.52	174	3.98	22						
23	3.08	1.42	11.86	8	17	1.50	5.83	4.18	10.01	4	18	21.50	4	50	24.50	8	46	0.54	11.36	4	18	8.36	10.44	6	17	21.50	8	16	1.50	8.83	4.18	13.01	8	16	1.50	13.17	4.18	17.35	40.62	4940	1.62	198	3.99	23						
24	3.42	1.42	12.55	8	19	1.38	5.83	4.54	10.37	4	18	22.50	4	50	24.50	8	50	0.50	12.05	4	18	8.71	10.79	6	19	22.50	8	16	1.38	9.83	4.54	14.37	8	18	1.38	14.17	4.54	18.71	43.01	5627	1.72	225	3.98	24						
25	3.58	1.42	13.52	9	17	1.50	6.92	4.74	11.66	4	18	23.50	4	52	24.50	9	46	0.54	13.02	4	18	9.52	11.60	6	17	23.50	9	16	1.50	10.50	4.74	15.24	9	16	1.50	17.50	4.74	22.24	45.80	6665	1.83	267	3.96	25						
26	4.00	1.67	14.12	9	19	1.38	7.42	5.18	12.60	4	18	24.25	4	54	24.50	9	39	0.63	13.62	4	18	9.70	11.78	6	19	24.25	9	18	1.38	11.34	5.18	16.52	9	18	1.38	18.25	5.18	23.43	51.02	7116	2.04	285	3.98	26						
27	4.25	1.67	14.99	10	17	1.50	7.92	5.46	13.38	4	18	25.25	4	56	24.50	9	46	0.54	14.49	4	18	10.32	12.40	6	17	25.25	10	16	1.50	11.75	5.46	17.21	10	16	1.50	18.75	5.46	24.21	53.91	8153	2.16	326	3.97	27						
28	4.58	1.67	15.72	10	19	1.38	8.42	5.83	14.25	4	18	26.25	4	60	24.50	9	50	0.50	15.22	4	18	10.72	12.80	7	19	26.25	10	18	1.38	12.25	5.83	18.08	10	18	1.38	19.75	5.83	25.58	56.64	9958	2.27	398	3.97	28						
29	4.92	1.67	16.44	11	17	1.50	8.92	6.20	15.12	4	18	27.25	4	62	24.50	9	54	0.46	15.94	4	18	11.10	13.18	8	17	27.25	11	16	1.50	12.75	6.20	18.95	11	16	1.50	20.75	6.20	26.95	59.38	10974	2.38	439	3.98	29						
30	5.33	1.67	17.13	11	19	1.38	9.42	6.64	16.06	4	18	28.25	4	64	24.50	10	50	0.50	16.63	4	18	11.38	13.46	8	19	28.25	11	18	1.38	13.00	6.64	19.64	11	18	1.38	21.75	6.64	28.39	62.10	12817	2.48	513	3.96	30						

NOTE: To accommodate the Variable Height of a wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.



NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO. 4 Bars. Bars J are as shown.



REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
NO.	DESCRIPTION	CASE 114.D KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT	
1	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
2	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
3	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
4	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
5	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
6	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
7	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
8	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
9	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
10	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
11	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
12	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
13	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
14	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
15	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
16	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
17	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
18	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
19	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
20	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
21	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
22	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
23	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
24	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
25	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
26	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
27	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
28	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
29	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.
30	Change wall to 6 ft. to 30 ft. height.	DATE	PROJECT NO.

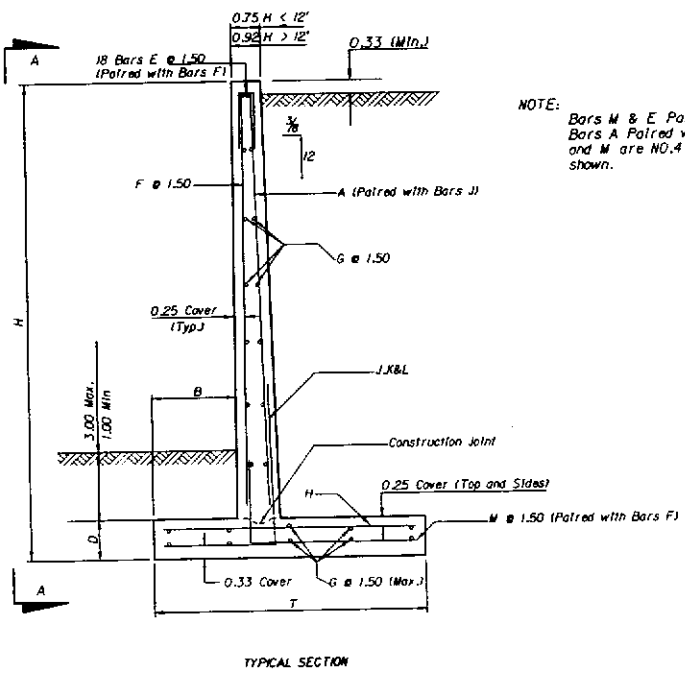
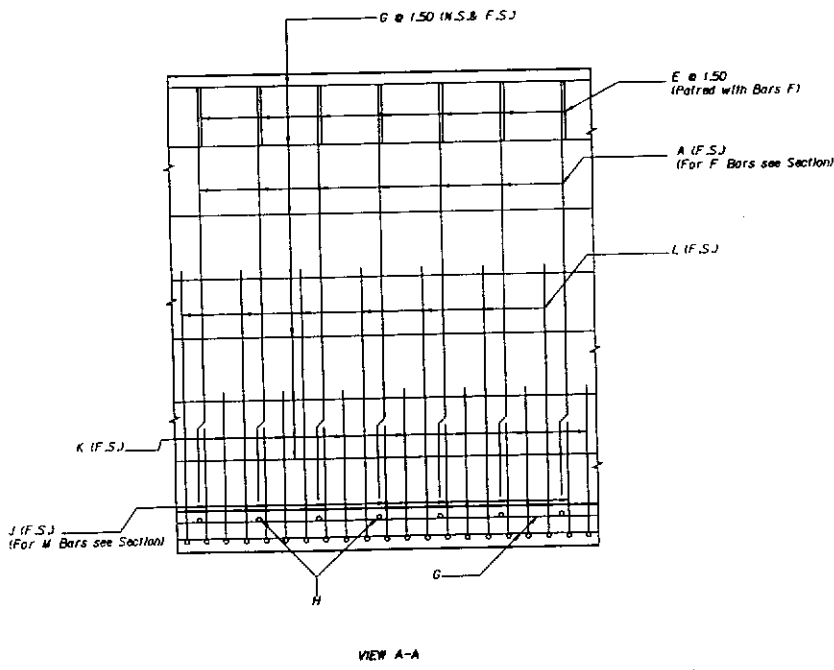
TYPICAL SECTION

RETAINING WALL DATA

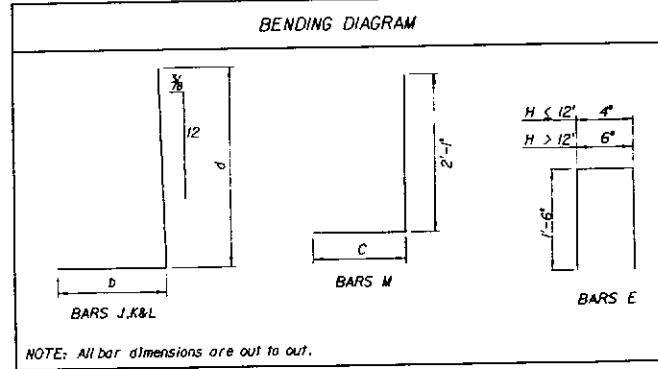
REINFORCING STEEL SCHEDULE

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																																CONCRETE / 25' UNIT		STEEL / 25' UNIT		CONCRETE PER LIN.FT.		STEEL PER LIN.FT.		MAXIMUM BEARING PRESSURE	
H	B	D	T	BARS J						BARS F			BARS G			BARS H				BARS M				BARS A			BARS K						BARS L						C.Y.	LBS.	C.Y.	LBS.	KIPS/SQ.FT.	H	
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH							
6	0.67	0.92	3.05	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.55	4	18	1.97	4.05														6.46	524	0.26	21	1.34	6			
7	0.83	0.92	3.50	4	26	1.00	6.58	1.28	7.86	4	18	6.00	4	16	24.50	4	18	1.42	3.00	4	18	2.25	4.33													7.73	599	0.31	24	1.52	7				
8	1.00	0.92	3.96	4	26	1.00	7.58	1.48	9.06	4	18	7.00	4	18	24.50	4	18	1.42	3.46	4	18	2.54	4.62												9.01	673	0.36	27	1.69	8					
9	1.17	0.92	4.50	4	27	0.96	8.58	1.68	10.26	4	18	8.00	4	20	24.50	4	19	1.33	4.00	4	18	2.92	5.00												10.38	759	0.42	30	1.82	9					
10	1.25	0.92	4.93	4	28	0.92	9.58	1.79	11.37	4	18	9.00	4	22	24.50	4	26	0.96	4.43	4	18	3.26	5.35												11.69	862	0.47	35	2.04	10					
11	1.33	0.92	5.50	4	31	0.83	10.58	1.90	12.48	4	18	10.00	4	24	24.50	4	40	0.63	5.00	4	18	3.75	5.83												13.14	1015	0.53	41	2.20	11					
12	1.50	1.00	5.93	4	38	0.67	11.58	2.10	13.68	4	18	10.92	4	26	24.50	4	39	0.67	5.43	4	18	4.01	6.10												14.88	1159	0.60	46	2.39	12					
13	1.58	1.00	6.28	4	38	0.67	12.58	2.38	14.96	4	18	11.92	4	28	24.50	4	46	0.54	5.78	4	18	4.28	6.36												18.08	1277	0.72	51	2.67	13					
14	1.75	1.00	6.80	4	51	0.50	13.58	2.58	16.16	4	18	12.92	4	28	24.50	4	56	0.46	6.30	4	18	4.64	6.72												19.78	1523	0.79	61	2.80	14					
15	1.83	1.00	7.36	5	19	1.33	2.83	2.69	5.52	4	18	13.92	4	32	24.50	5	50	0.50	6.86	4	18	5.11	7.19	5	19	13.92	5	18	1.33	10.75	2.69	13.44				21.53	1823	0.86	73	2.96	15				
16	2.00	1.00	7.69	5	17	1.50	2.83	2.89	5.72	4	18	14.92	4	34	24.50	6	39	0.63	7.19	4	18	5.28	7.36	5	17	14.92	5	16	1.50	4.75	2.89	7.64	5	16	1.50	14.75	2.89	17.64	23.11	2075	0.92	83	3.18	16	
17	2.00	1.17	8.16	5	19	1.38	3.00	2.91	5.91	4	18	15.75	4	34	24.50	6	39	0.63	7.66	4	18	5.74	7.83	5	19	15.75	5	18	1.38	4.92	2.91	7.83	5	18	1.38	13.92	2.91	16.83	25.88	2223	1.04	89	3.45	17	
18	2.25	1.17	8.78	6	17	1.50	4.33	3.20	7.53	4	18	16.75	4	38	24.50	6	50	0.50	8.28	4	18	6.11	8.20	5	17	16.75	6	16	1.50	5.92	3.20	9.12	6	16	1.50	14.92	3.20	18.12	27.87	2730	1.11	109	3.49	18	
19	2.33	1.17	9.15	6	19	1.38	3.42	3.31	6.73	4	18	17.75	4	40	24.50	7	39	0.63	8.65	4	18	6.40	8.49	5	19	17.75	6	18	1.38	6.33	3.31	9.64	6	18	1.38	15.33	3.31	18.64	29.62	3010	1.18	120	3.74	19	
20	2.50	1.17	9.68	7	17	1.50	3.42	3.51	6.93	4	18	18.75	4	42	24.50	7	39	0.63	9.18	4	18	6.76	8.84	6	17	18.75	7	16	1.50	6.33	3.51	9.84	7	16	1.50	16.33	3.51	19.84	31.57	3483	1.26	139	3.87	20	
21	2.58	1.42	10.04	7	17	1.50	5.17	3.62	8.79	4	18	19.50	4	44	24.50	7	43	0.58	9.54	4	18	7.04	9.12	6	17	19.50	7	16	1.50	7.17	3.62	10.79	7	16	1.50	11.17	3.62	14.79	35.34	3585	1.41	143	4.16	21	
22	2.83	1.42	10.56	8	17	1.50	4.58	3.90	8.48	4	18	20.50	4	46	24.50	7	50	0.50	10.06	4	18	7.31	9.40	6	17	20.50	8	16	1.50	8.17	3.90	12.07	8	16	1.50	12.17	3.90	16.07	37.46	4293	1.50	172	4.24	22	
23	2.83	1.42	11.02	8	17	1.50	5.83	3.93	9.76	4	18	21.50	4	48	24.50	8	46	0.54	10.52	4	18	7.77	9.86	6	17	21.50	8	16	1.50	8.83	3.93	12.76	8	16	1.50	13.17	3.93	17.10	39.52	4764	1.58	191	4.49	23	
24	3.08	1.42	11.46	8	19	1.38	5.83	4.21	10.04	4	18	22.50	4	50	24.50	8	50	0.50	10.96	4	18	7.96	10.04	6	19	22.50	8	16	1.38	9.83	4.21	14.04	8	18	1.38	14.17	4.21	18.38	41.58	5424	1.66	217	4.62	24	
25	3.08	1.42	12.02	9	17	1.50	6.92	4.24	11.16	4	18	23.50	4	52	24.50	9	50	0.50	11.52	4	18	8.52	10.61	6	17	23.50	9	16	1.50	10.50	4.24	14.74	9	16	1.50	17.50	4.24	21.74	43.83	6491	1.75	260	4.82	25	
26	3.42	1.67	12.45	9	19	1.38	7.42	4.60	12.02	4	18	24.25	4	54	24.50	9	39	0.63	11.95	4	18	8.62	10.70	6	19	24.25	9	18	1.38	11.34	4.60	15.94	9	18	1.38	18.25	4.60	22.85	48.44	6776	1.94	271	4.94	26	
27	3.58	1.67	12.89	10	17	1.50	7.92	4.80	12.72	4	18	25.25	4	56	24.50	9	46	0.54	12.39	4	18	8.89	10.97	6	17	25.25	10	16	1.50	11.75	4.80	16.55	10	16	1.50	18.75	4.80	23.55	50.68	7668	2.03	307	5.11	27	
28	3.83	1.67	13.42	10	19	1.38	8.42	5.08	13.50	4	18	26.25	4	60	24.50	9	50	0.50	12.92	4	18	9.17	11.25	7	19	26.25	10	18	1.38	12.25	5.08	17.33	11	18	1.38	20.25	5.08	25.83	53.09	9607	2.12	384	5.19	28	
29	4.08	1.67	13.77	11	17	1.50	8.92	5.36	14.28	4	18	27.25	4	62	24.50	10	46	0.54	13.27	4	18	9.27	11.35	8	17	27.25	11	16	1.50	12.75	5.36	18.11	11	16	1.50	20.75	5.36	26.11	55.27	10433	2.21	417	5.36	29	
30	4.42	1.67	14.48	11	19	1.38	9.42	5.72	15.14	4	18	28.25	4	64	24.50	10	50	0.50	13.98	4	18	9.65	11.73	8	19	28.25	11	18	1.38	13.00	5.72	18.72	11	18	1.38	21.75	5.72	27.47	58.01	11957	2.32	478	5.31	30	

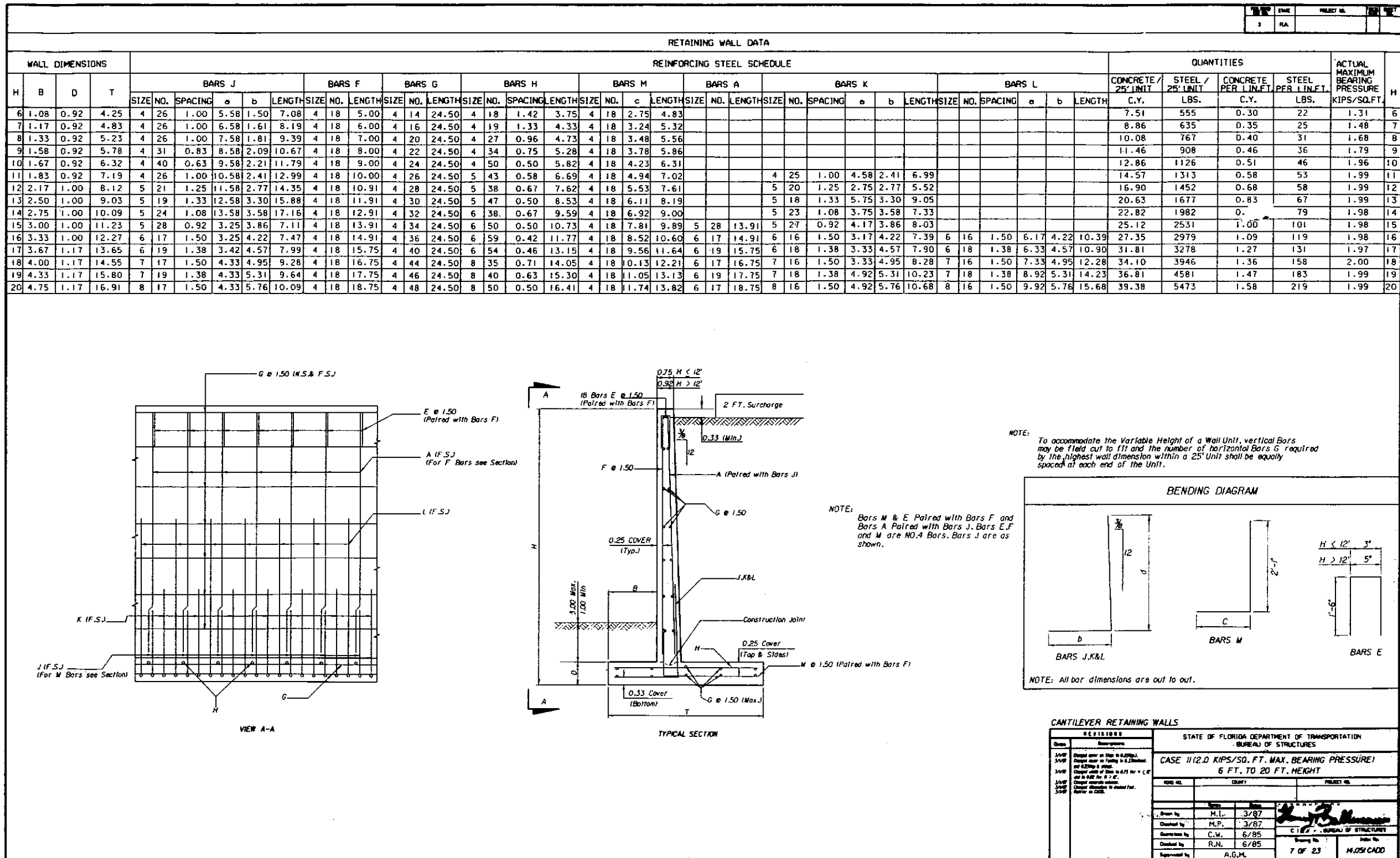
NOTE: To accommodate the Variable Height of a wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.



NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO. 4 Bars. Bars J are as shown.

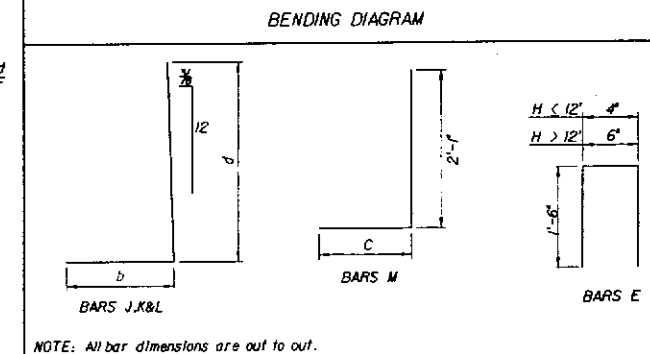
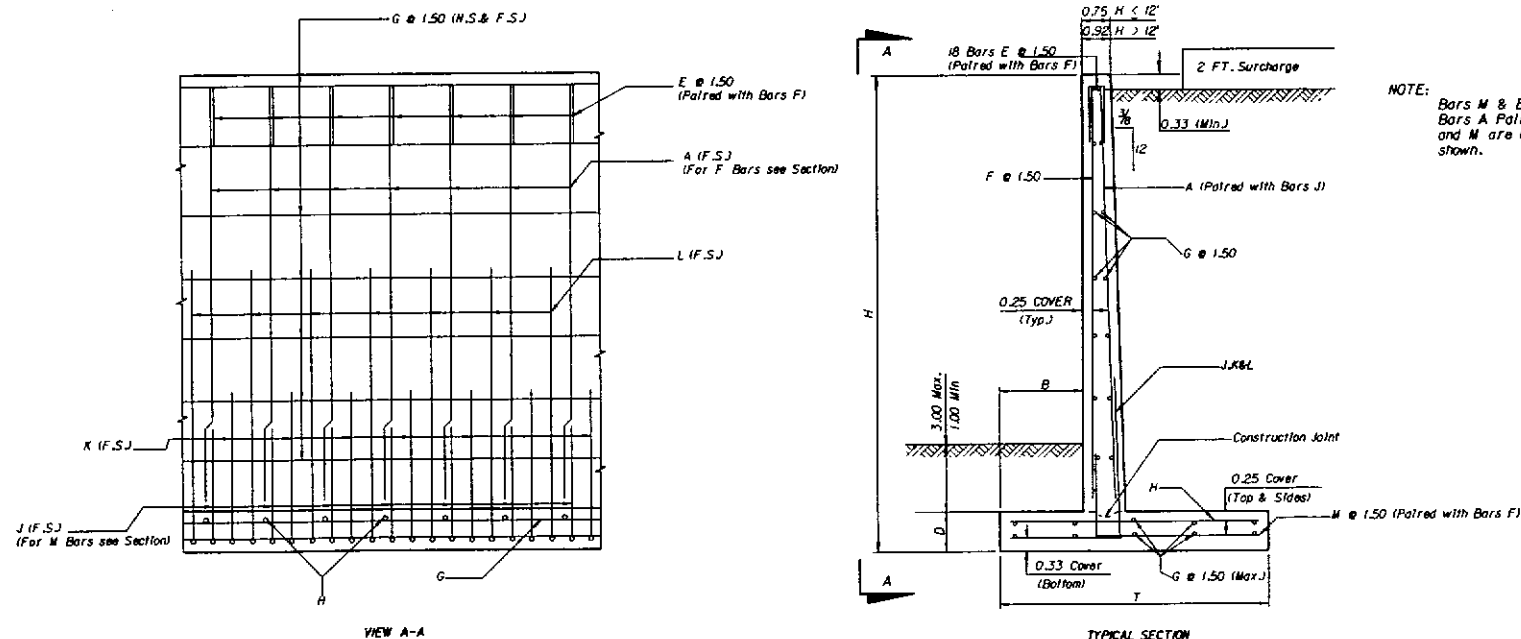


REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
DATE	DESCRIPTION	PROJECT NO.	
3/87	Changed notes on Steel to A-2000-1.		
3/87	Changed notes on Forming to 0.25 inch.		
3/87	Changed notes on Steel to 0.75 inch for H < 10' and 0.83 inch for H > 10'.		
3/87	Changed material notes.		
3/87	Changed dimensions to match Plan.		
3/87	Refer to C&G.		
CASE 116.0 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT		APPROVED CHIEF, BUREAU OF STRUCTURES 6 OF 23 H.D.M. CAD	
Drawn by	M.J.	3/87	
Checked by	M.P.	3/87	
Submitted by	R.N.	6/85	
Checked by	C.W.	6/85	
Supervised by	A.G.M.		

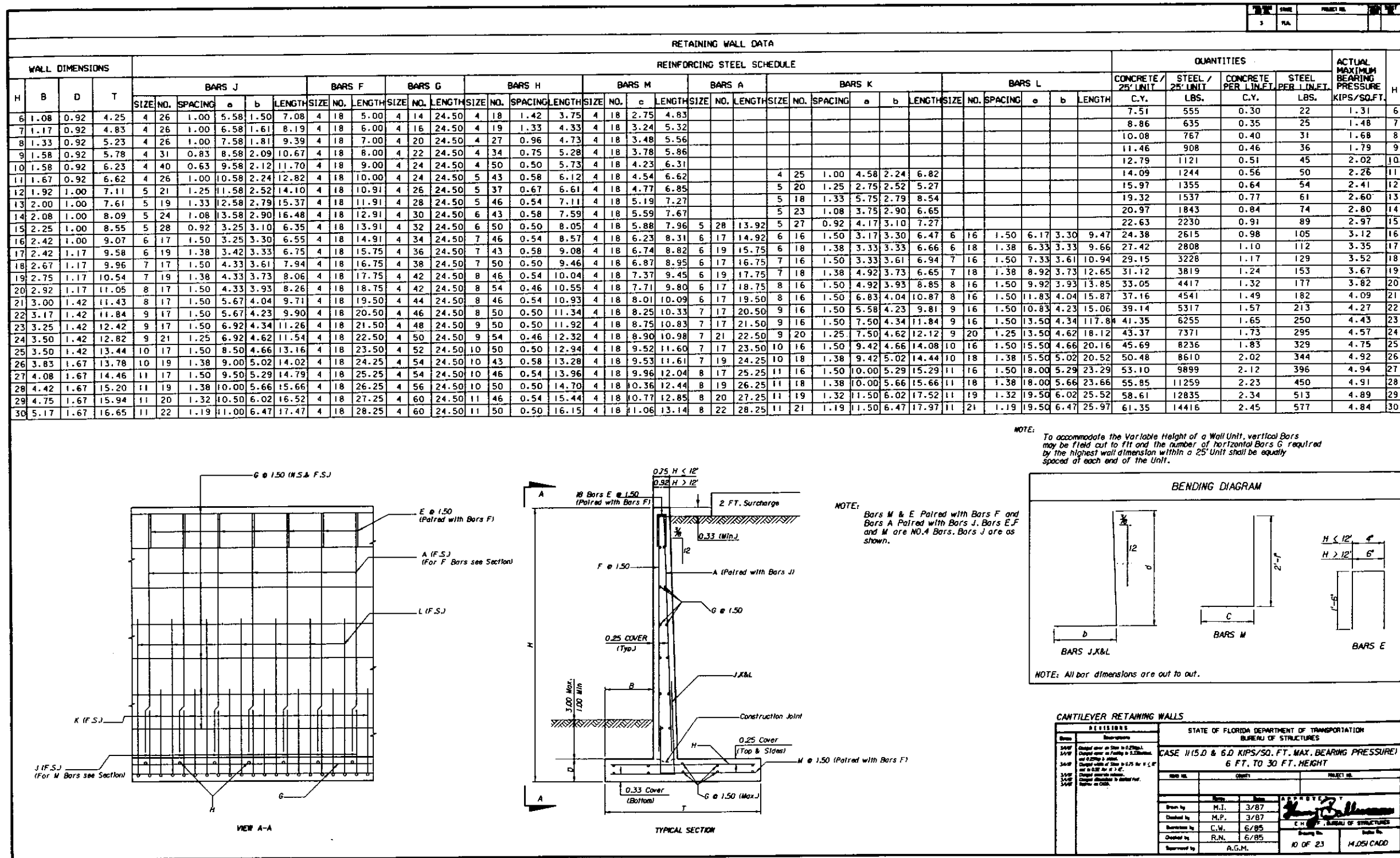


RETAINING WALL DATA																														DATE		PROJECT NO.												
WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																								QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE	H											
H	B	D	T	BARS J						BARS F			BARS G			BARS H				BARS M				BARS A			BARS K						BARS L						CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.	KIPS/SQ.FT.	
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.	LBS.	C.Y.	LBS.		
6	1.08	0.92	4.25	4	26	1.00	5.58	1.50	7.08	4	18	5.00	4	14	24.50	4	18	1.42	3.75	4	18	2.75	4.83															7.51	555	0.30	22	1.31	6	
7	1.17	0.92	4.83	4	26	1.00	6.58	1.61	8.19	4	18	6.00	4	18	24.50	4	19	1.33	4.33	4	18	3.25	5.33														8.86	635	0.35	25	1.48	7		
8	1.33	0.92	5.23	4	26	1.00	7.58	1.81	9.39	4	18	7.00	4	20	24.50	4	26	0.96	4.73	4	18	3.48	5.56														10.08	767	0.40	31	1.68	8		
9	1.58	0.92	5.78	4	31	0.83	8.58	2.09	10.67	4	18	8.00	4	22	24.50	4	33	0.75	5.28	4	18	3.78	5.86														11.46	908	0.46	36	1.79	9		
10	1.58	0.92	6.23	4	40	0.63	9.58	2.12	11.70	4	18	9.00	4	24	24.50	4	50	0.50	5.73	4	18	4.23	6.31														12.79	1121	0.51	45	2.02	10		
11	1.67	0.92	6.62	4	26	1.00	10.58	2.24	12.82	4	18	10.00	4	24	24.50	5	43	0.58	6.12	4	18	4.53	6.61														14.09	1244	0.56	50	2.26	11		
12	1.92	1.00	7.11	5	21	1.25	11.58	2.51	14.09	4	18	10.91	4	26	24.50	5	37	0.67	6.61	4	18	4.77	6.85														15.97	1355	0.64	54	2.41	12		
13	2.00	1.00	7.61	5	19	1.33	12.58	2.79	15.37	4	18	11.91	4	30	24.50	5	46	0.54	7.11	4	18	5.19	7.27														19.32	1570	0.77	63	2.60	13		
14	2.08	1.00	8.09	5	24	1.08	13.58	2.91	16.49	4	18	12.91	4	30	24.50	6	43	0.58	7.59	4	18	5.59	7.67														20.97	1843	0.84	74	2.80	14		
15	2.25	1.00	8.55	5	28	0.92	3.25	3.11	8.36	4	18	13.91	4	32	24.50	6	50	0.50	8.05	4	18	5.88	7.96	5	28	13.91	5	27	0.92	4.17	3.11	7.28					22.63	2270	0.91	89	2.97	15		
16	2.50	1.00	9.34	6	17	1.50	3.25	3.39	6.64	4	18	14.92	4	34	24.50	7	46	0.54	8.84	4	18	6.42	8.50	6	17	14.92	6	16	1.50	3.17	3.39	6.56	6	16	1.50	6.17	3.39	9.56	24.63	2649	0.99	106	2.97	16
17	2.67	1.17	10.24	6	19	1.38	3.42	3.58	7.00	4	18	15.75	4	36	24.50	7	43	0.58	9.74	4	18	7.15	9.23	6	19	15.75	6	18	1.38	3.33	3.58	6.91	6	18	1.38	6.33	3.58	9.91	28.12	2892	1.12	116	3.00	17
18	3.00	1.17	11.06	7	17	1.50	4.33	3.95	8.28	4	18	16.75	4	40	24.50	7	50	0.50	10.56	4	18	7.64	9.72	6	17	16.75	7	16	1.50	3.33	3.95	7.28	7	16	1.50	7.33	3.95	11.28	30.34	3417	1.21	137	2.97	18
19	3.25	1.17	12.01	7	19	1.38	4.33	4.23	8.56	4	18	17.75	4	44	24.50	8	46	0.54	11.51	4	18	8.34	10.42	6	19	17.75	7	18	1.38	4.92	4.23	9.15	7	18	1.38	8.92	4.23	13.15	32.71	4174	1.31	167	2.96	19
20	3.50	1.17	12.78	8	17	1.00	4.33	4.51	8.84	4	18	18.75	4	44	24.50	8	54	0.46	12.28	4	18	8.86	10.94	6	17	18.75	8	16	1.50	4.92	4.51	9.43	8	16	1.50	9.92	4.51	14.43	34.93	4789	1.40	192	3.00	20
21	3.75	1.42	13.92	8	17	1.50	5.67	4.78	10.45	4	18	19.50	4	48	24.50	8	46	0.54	13.42	4	18	9.75	11.83	6	17	19.50	8	16	1.50	6.83	4.78	11.61	8	16	1.50	11.83	4.78	16.61	40.43	5030	1.62	201	2.99	21
22	4.08	1.42	14.84	9	17	1.50	5.67	5.15	10.82	4	18	20.50	4	48	24.50	8	50	0.50	14.34	4	18	10.34	12.42	7	17	20.50	9	16	1.50	5.58	5.15	10.73	9	16	1.50	10.83	5.15	15.98	43.07	5904	1.72	236	2.98	22
23	4.33	1.42	15.86	9	17	1.50	6.92	5.43	12.35	4	18	21.50	4	52	24.50	9	46	0.54	15.36	4	18	11.11	13.19	7	17	21.50	9	16	1.50	7.50	5.43	12.93	9	16	1.50	13.50	5.43	18.93	45.86	6906	1.83	276	2.99	23
24	4.67	1.42	16.84	9	21	1.25	6.92	5.76	12.68	4	18	22.50	4	56	24.50	9	54	0.46	16.34	4	18	11.75	13.83	7	21	22.50	9	20	1.25	7.58	5.76	13.26	9	20	1.25	13.50	5.76	19.26	48.63	8478	1.95	339	2.98	24
25	4.92	1.42	18.04	10	17	1.50	8.50	6.07	14.57	4	18	23.50	4	58	24.50	10	50	0.50	17.54	4	18	12.70	14.78	7	17	23.50	10	16	1.50	9.42	6.07	15.49	10	16	1.50	15.50	6.07	21.57	51.72	9659	2.07	386	2.97	25
26	5.42	1.67	18.81	10	19	1.38	9.00	6.60	15.60	4	18	24.25	4	60	24.50	10	40	0.63	18.31	4	18	12.97	15.05	7	19	24.25	10	18	1.38	9.42	6.60	16.02	10	18	1.38	17.50	6.60	26.10	58.24	9818	2.33	393	2.98	26
27	5.75	1.67	19.70	11	17	1.50	9.50	6.96	16.46	4	18	25.25	4	62	24.50	10	46	0.54	19.20	4	18	13.53	15.61	8	17	25.25	11	16	1.50	10.00	6.96	19.96	11	16	1.50	18.00	6.96	24.96	61.19	11545	2.45	462	2.99	27
28	6.17	1.67	20.57	11	19	1.38	10.00	7.41	17.41	4	18	26.25	4	64	24.50	10	50	0.50	20.07	4	18	13.98	16.06	8	19	26.25	11	18	1.38	10.00	7.41	17.41	11	18	1.38	18.00	7.41	25.41	64.13	13100	2.57	524	2.99	28
29	6.58	1.67	21.44	11	20	1.32	10.50	7.86	18.36	4	18	27.25	4	68	24.50	10	54	0.46	20.94	4	18	14.44	16.52	8	21	27.25	11	19	1.32	11.50	7.86	19.36	11	19	1.32	19.50	7.86	27.36	67.10	14699	2.68	587	2.98	29
30	7.08	1.67	22.03	11	22	1.19	11.00	8.39	19.39	4	18	28.25	4	70	24.50	11	50	0.50	21.53	4	18	14.53	16.61	8	22	28.25	11	21	1.19	11.50	8.39	19.89	11	21	1.19	19.50	8.39	28.39	69.66	16759	2.79	670	2.98	30

NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced of each end of the Unit.

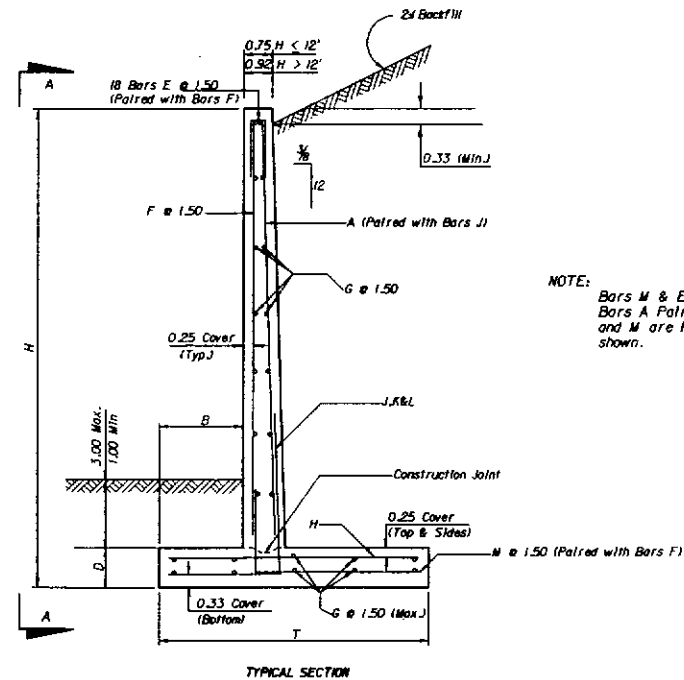
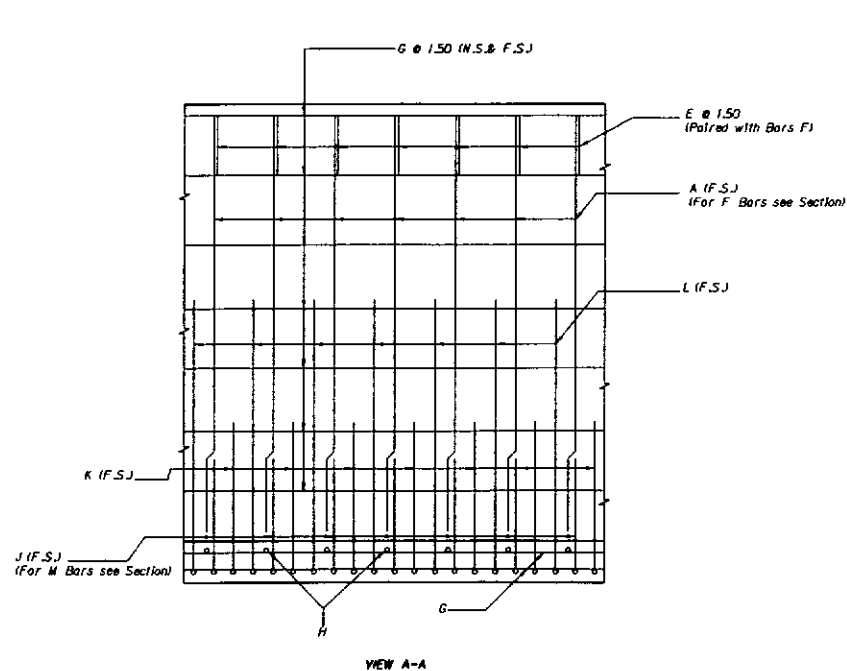


DEFINITIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Date:	Description:	CASE #13.D KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT	
S&P	Changed cover on Slab to 8.25%.	APPROX. VOL.	COUNTY
S&P	Changed cover on Flying in C.C. Slabs.		
S&P	Set 1.25% as usual		
S&P	Changed width of Slab to 0.75 ft. or n.f. or 0.82 ft. or n.f.		
S&P	Changed concrete mixtures.		
S&P	Changed dimensions as detailed first.		
S&P	Nothing on CAD.		
		Drawn by	M.J. 3/87
		Checked by	M.P. 3/87
		Reviewed by	R.N. 6/85
		Checked by	C.M. 6/85
		Approved by	A.G.N.
			J. P. WILLIAMS
		Bearing St.	8 OF 23
		Index St.	14.051 CAD



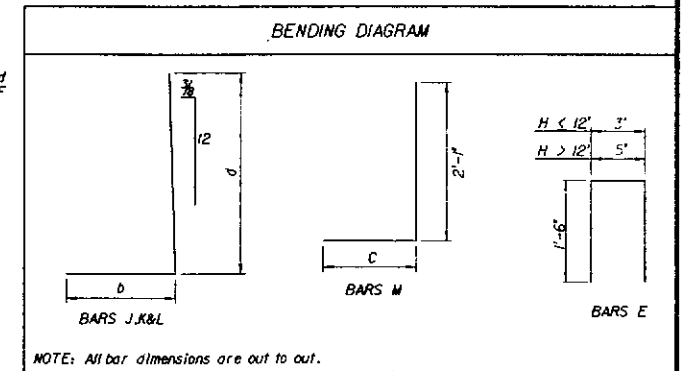
RETAINING WALL DATA

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																																QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.F.T.	
H	B	D	T	BARS J					BARS F			BARS G			BARS H				BARS M				BARS A			BARS K					BARS L					CONCRETE / 25' UNIT C.Y.	STEEL / 25' UNIT LBS.	CONCRETE PER LIN.F.T. C.Y.	STEEL PER LIN.F.T. LBS.		
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	a	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING						a
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.78	3.86													6.33	521	0.25	21	1.77	6
7	0.83	0.92	3.50	4	26	1.00	6.58	1.28	7.86	4	18	6.00	4	16	24.50	4	18	1.42	3.00	4	18	2.25	4.33													7.73	599	0.31	24	1.91	7
8	1.08	0.92	4.23	4	26	1.00	7.58	1.56	9.14	4	18	7.00	4	18	24.50	4	18	1.42	3.73	4	18	2.73	4.81													9.23	680	0.37	27	1.95	8
9	1.33	0.92	5.01	4	28	0.92	8.58	1.84	10.42	4	18	8.00	4	20	24.50	4	18	1.42	4.51	4	18	3.26	5.34													10.81	774	0.43	31	1.99	9
10	1.58	0.92	6.04	4	31	0.83	9.58	2.12	11.70	4	18	9.00	4	22	24.50	4	22	1.17	5.54	4	18	4.04	6.12													12.63	906	0.51	36	1.98	10
11	1.83	0.92	7.19	5	26	1.00	10.58	2.40	12.98	4	18	10.00	4	24	24.50	4	28	0.92	6.69	4	18	4.94	7.02													14.57	1115	0.58	45	1.97	11
12	2.25	1.00	8.20	5	32	0.79	11.58	2.85	14.43	4	18	10.92	4	28	24.50	4	26	1.00	7.70	4	18	5.53	7.62													16.98	1336	0.68	53	1.94	12
13	2.50	1.00	9.21	5	32	0.79	12.58	3.29	15.87	4	18	11.92	4	30	24.50	4	28	0.92	8.71	4	18	6.29	8.38													20.80	1470	0.83	59	1.98	13
14	2.83	1.00	10.36	5	40	0.63	13.58	3.58	17.16	4	18	12.92	4	32	24.50	4	29	0.88	9.86	4	18	7.11	9.19													23.07	1739	0.92	70	1.99	14
15	3.17	1.00	11.59	5	51	0.50	14.58	4.02	18.60	4	18	13.92	4	36	24.50	4	34	0.75	11.09	4	18	8.01	10.09													25.45	2160	1.02	86	2.00	15



NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO.4 Bars. Bars J are as shown.

NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.



CANTILEVER RETAINING WALLS

REVISED

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

Drawn	Checked
1/4/59	1/4/59
Original notes on Plans to A-221(a), and A-221(b) is attached.	
Original notes on Plans to A-225 for H & C and to A-226 for H & T. Checkmate is attached.	
Original notes on checked foot. Notes on C&H.	
1/4/59	1/4/59
1/4/59	1/4/59
1/4/59	1/4/59

CASE III (2.0 KIPS/SQ. FT., MAX. BEARING PRESSURE)
6 FT. TO 15 FT. HEIGHT

ROAD NO.

COUNT

PROJECT NO.

Drawn by

M.J.

Date

3/8/59

Checked by

M.F.

Date

3/8/59

Reviewed by

R.H.

Date

6/8/55

Checked by

C.W.

Date

6/8/55

Supervised by

A.G.N.

C. W. P. BUREAU OF STRUCTURES

Drawing No.

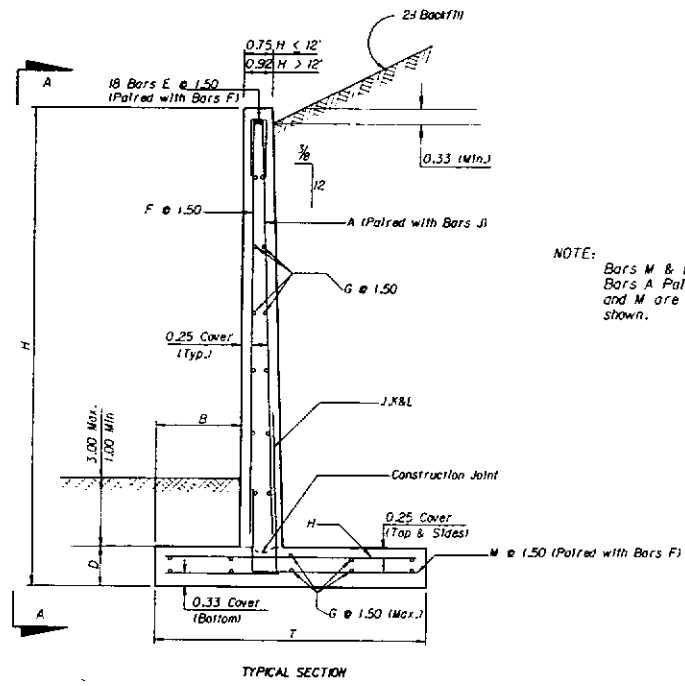
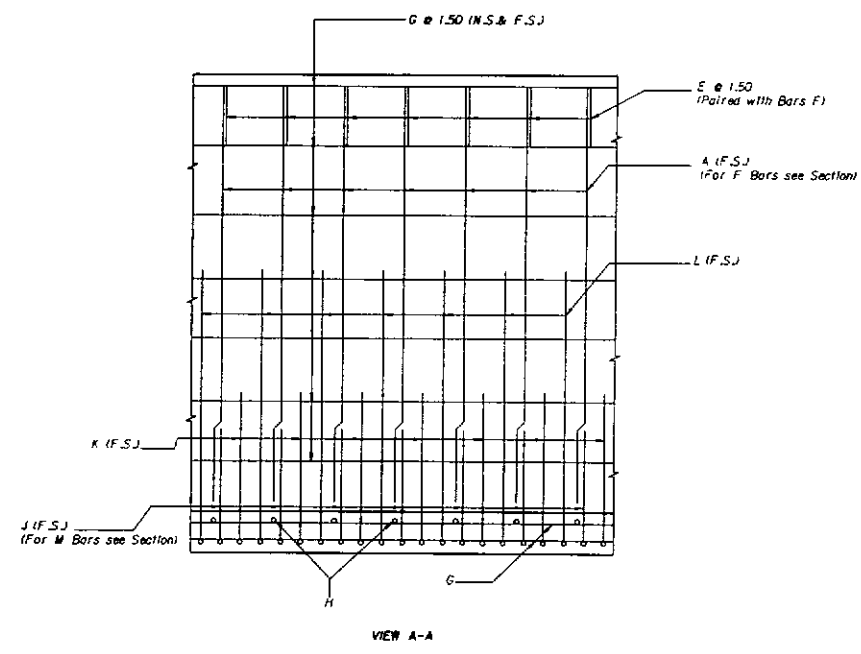
11 OF 23

Index File

14.05H C&H

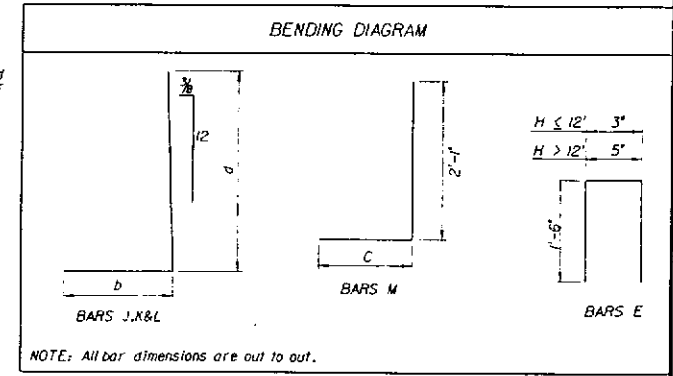
RETAINING WALL DATA

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																																QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.FT.	H			
H	B	D	T	BARS J					BARS F			BARS G			BARS H				BARS M				BARS A				BARS K					BARS L					CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.			STEEL PER LIN.FT.		
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.			LBS.	C.Y.	LBS.
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.67	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.77	3.85														6.33	520	0.25	21	1.77	6		
7	0.75	0.92	3.41	4	26	1.00	6.58	1.20	7.78	4	18	6.00	4	16	24.50	4	18	1.42	2.91	4	18	2.24	4.32													7.66	596	0.31	24	2.02	7			
8	0.92	0.92	3.87	4	26	1.00	7.58	1.39	8.97	4	18	7.00	4	18	24.50	4	18	1.42	3.37	4	18	2.54	4.62												8.93	671	0.36	27	2.26	8				
9	1.17	0.92	4.33	4	28	0.92	8.58	1.68	10.26	4	18	8.00	4	20	24.50	4	18	1.42	3.83	4	18	2.75	4.83												10.23	760	0.41	30	2.43	9				
10	1.33	0.92	5.21	4	31	0.83	9.58	1.87	11.45	4	18	9.00	4	22	24.50	4	26	1.00	4.71	4	18	3.46	5.54												11.92	894	0.48	36	2.45	10				
11	1.58	0.92	6.14	5	26	1.00	10.58	2.15	12.73	4	18	10.00	4	22	24.50	4	32	0.79	5.64	4	18	4.14	6.22												13.69	1061	0.55	42	2.42	11				
12	1.83	1.00	7.02	5	32	0.79	11.58	2.43	14.01	4	18	10.92	4	26	24.50	4	31	0.83	6.52	4	18	4.77	6.85												15.89	1283	0.64	51	2.46	12				
13	2.08	1.00	7.88	5	32	0.79	12.58	2.88	15.46	4	18	11.92	4	28	24.50	4	34	0.75	7.38	4	18	5.38	7.46												19.56	1417	0.78	57	2.48	13				
14	2.33	1.00	8.91	5	40	0.63	13.58	3.16	16.74	4	18	12.92	4	30	24.50	4	31	0.83	8.41	4	18	6.17	8.25												21.73	1660	0.87	66	2.50	14				
15	2.67	1.00	9.93	5	26	1.00	14.58	3.52	18.10	4	18	13.92	4	32	24.50	5	32	0.79	9.43	4	18	6.84	8.92												23.91	1887	0.96	75	2.48	15				
16	3.00	1.00	10.98	5	21	1.25	2.83	3.89	6.72	4	18	14.92	4	34	24.50	5	36	0.71	10.48	4	18	7.56	9.64	5	21	14.92	5	20	1.25	4.75	3.89	8.64	5	20	1.25	10.75	3.89	14.64	26.16	2280	1.05	91	2.48	16
17	3.42	1.17	12.16	6	17	1.50	3.42	4.33	7.75	4	18	15.75	4	38	24.50	5	31	0.83	11.66	4	18	8.32	10.40	6	17	15.75	6	16	1.50	5.33	4.33	9.66	6	16	1.50	8.33	4.33	12.66	30.20	2433	1.21	100	2.45	17
18	3.67	1.17	13.63	6	21	1.25	3.42	4.61	8.03	4	18	16.75	4	42	24.50	5	34	0.75	13.13	4	18	9.55	11.63	6	21	16.75	6	20	1.25	5.33	4.61	9.94	6	20	1.25	8.33	4.61	12.94	33.11	3005	1.32	120	2.45	18
19	4.17	1.67	14.57	7	17	1.50	4.83	5.13	9.96	4	18	17.25	4	44	24.50	5	31	0.83	14.07	4	18	9.99	12.07	6	17	17.25	6	16	1.50	6.42	5.13	11.55	7	16	1.50	10.42	4.83	15.25	41.55	3233	1.66	129	2.48	19
20	4.67	1.67	15.24	7	19	1.38	4.83	5.66	10.49	4	18	18.25	4	48	24.50	5	31	0.83	14.74	4	18	10.16	12.24	6	19	18.25	7	18	1.38	7.42	5.66	13.08	7	18	1.38	11.42	4.83	16.25	43.95	3678	1.76	147	2.48	20



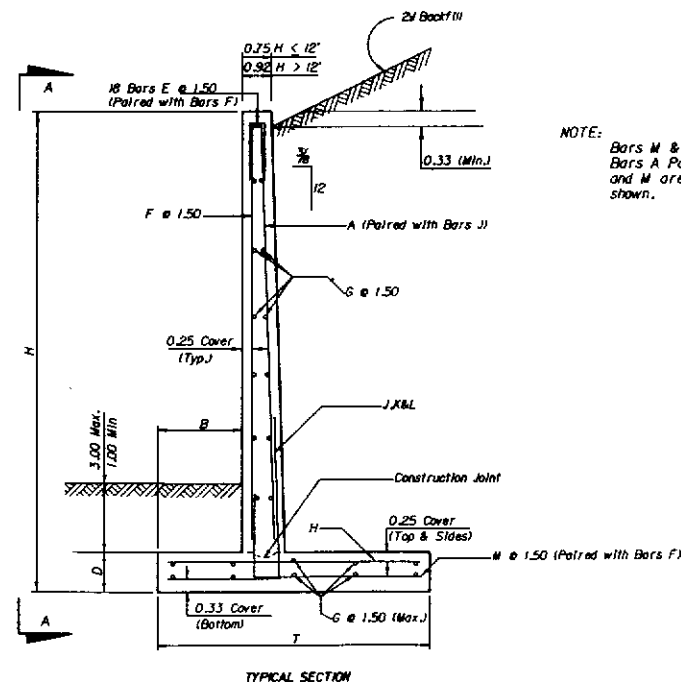
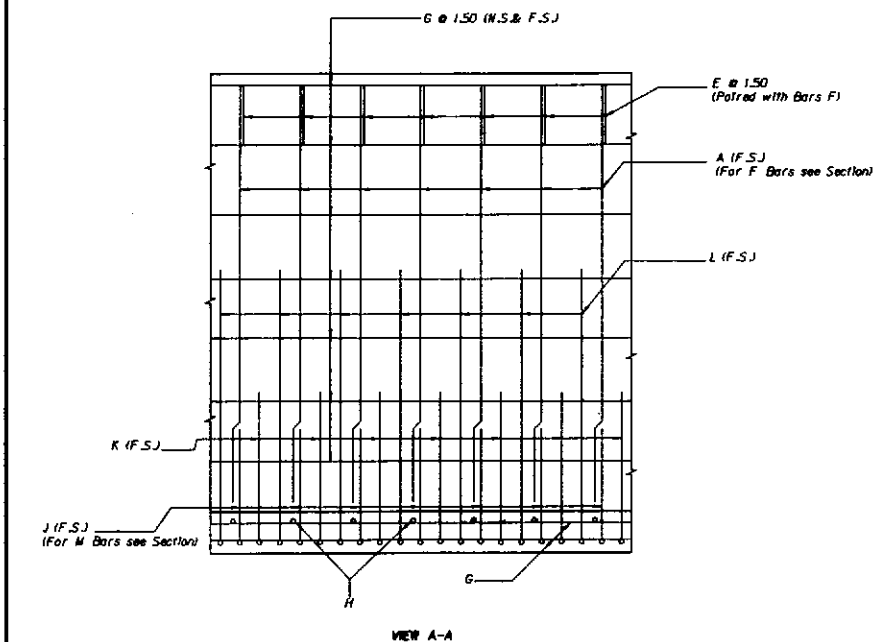
NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO.4 Bars. Bars J are as shown.

NOTE: To accommodate the vertical height of a wall unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.



REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Date	Description	CASE III (2.5 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 20 FT. HEIGHT	
5/1/85	Change cover on Slab to 6.00 in.	DESIGNED BY	PROJECT NO.
5/1/85	Change cover on Footing to 0.20 in.	CHECKED BY	
5/1/85	Change width of Slab to 8.75 ft. for a 1.0' and to 10.0' for a 1.5'.	QUANTITY BY	
5/1/85	Change rebar sizes.	DESIGNED BY	
5/1/85	Change dimensions to match Rev. Approved as CAD.	SUPERVISOR BY	
		Drawn by	6/85
		Checked by	6/85
		Quantity by	6/85
		Designed by	6/85
		Supervised by	A.G.M.
		12 OF 23 14,051 CAD0	

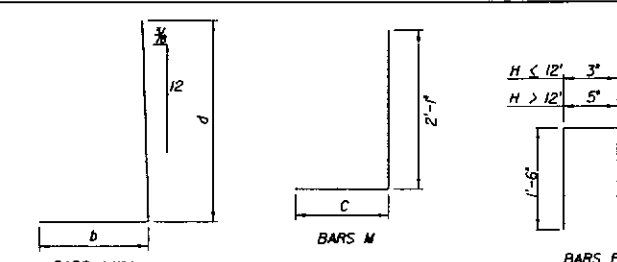
RETAINING WALL DATA																																	DATE	PROJECT NO.	SHEET									
WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																												QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE								
H	B	D	T	BARS J					BARS F			BARS G			BARS H				BARS M		BARS A		BARS K					BARS L					CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.	KIPS/SQ.FT.	H						
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	a	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b		LENGTH	C.Y.	LBS.	C.Y.	LBS.	
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.77	3.86														6.33	520	0.25	21	1.77	6		
7	0.75	0.92	3.41	4	26	1.00	6.58	1.20	7.78	4	18	6.00	4	16	24.50	4	18	1.42	2.91	4	18	2.25	4.33													7.66	596	0.31	24	2.02	7			
8	0.92	0.92	3.87	4	26	1.00	7.58	1.39	8.97	4	18	7.00	4	18	24.50	4	18	1.42	3.37	4	18	2.54	4.63												8.93	671	0.36	27	2.26	8				
9	1.17	0.92	4.33	4	28	0.92	8.58	1.68	10.26	4	18	8.00	4	20	24.50	4	18	1.42	3.83	4	18	2.74	4.82												10.23	759	0.41	30	2.43	9				
10	1.17	0.92	4.85	4	31	0.83	9.58	1.71	11.29	4	18	9.00	4	22	24.50	4	26	1.00	4.35	4	18	3.26	5.34												11.61	882	0.46	35	2.77	10				
11	1.33	0.92	5.50	5	26	1.00	10.58	1.90	12.48	4	18	10.00	4	22	24.50	4	36	0.71	5.00	4	18	3.75	5.83												13.14	1049	0.53	42	2.89	11				
12	1.58	1.00	6.20	5	32	0.79	11.58	2.18	13.76	4	18	10.92	4	26	24.50	4	32	0.79	5.70	4	18	4.20	6.28												15.13	1253	0.61	50	2.96	12				
13	1.83	1.00	6.89	5	32	0.79	12.58	2.63	15.21	4	18	11.92	4	28	24.50	4	38	0.67	6.39	4	18	4.64	6.72												18.65	1393	0.75	56	2.99	13				
14	2.08	1.00	7.90	5	40	0.63	13.58	2.91	16.49	4	18	12.92	4	28	24.50	4	34	0.75	7.40	4	18	5.40	7.48												20.79	1602	0.83	64	2.94	14				
15	2.33	1.00	8.82	5	26	1.00	14.58	3.19	17.77	4	18	13.92	4	32	24.50	5	36	0.71	8.32	4	18	6.07	8.15			5	25	1.00	5.75	3.19	8.94						22.89	1859	0.92	74	2.95	15		
16	2.58	1.00	9.80	5	21	1.25	2.83	3.47	6.30	4	18	14.92	4	34	24.50	5	43	0.58	9.30	4	18	6.80	8.88	5	21	14.92	5	20	1.25	4.75	3.47	8.22	5	20	1.25	10.75	3.47	14.22	25.06	2235	1.00	89	2.96	16
17	2.92	1.17	10.73	6	17	1.50	3.42	3.83	7.25	4	18	15.75	4	36	24.50	5	38	0.67	10.23	4	18	7.40	9.48	6	17	15.92	6	16	1.50	5.33	3.83	9.16	6	16	1.50	8.33	3.83	12.16	28.66	2444	1.15	98	2.98	17
18	3.17	1.17	11.93	6	21	1.25	3.42	4.11	7.53	4	18	16.75	4	38	24.50	5	46	0.54	11.43	4	18	8.35	10.43	6	21	16.92	6	20	1.25	5.33	4.61	9.44	6	20	1.25	8.33	4.11	12.44	31.27	2968	1.25	119	2.97	18
19	3.67	1.67	12.81	7	17	1.50	4.83	4.63	9.46	4	18	17.25	4	40	24.50	5	31	0.83	12.31	4	18	8.73	10.81	6	17	17.25	7	16	1.50	6.42	4.63	11.05	7	16	1.50	10.42	4.63	15.05	38.83	3055	1.55	122	2.97	19
20	4.08	1.67	13.49	7	19	1.38	4.83	5.08	9.91	4	18	18.25	4	44	24.50	5	34	0.75	12.99	4	18	8.99	11.07	6	19	18.25	7	18	1.38	7.42	5.08	12.50	7	18	1.38	11.42	5.08	16.50	41.25	3548	1.65	142	2.99	20
21	4.50	1.67	14.38	8	17	1.50	5.92	5.52	11.44	4	18	19.25	4	46	24.50	5	36	0.71	13.88	4	18	9.46	11.54	6	17	19.25	8	16	1.50	9.08	5.52	14.60	8	16	1.50	13.08	5.52	18.60	44.01	4115	1.76	165	2.98	21
22	4.92	1.67	15.13	8	19	1.38	6.08	5.97	12.05	4	18	20.25	4	48	24.50	5	40	0.63	14.63	4	18	9.80	11.88	6	19	20.25	8	18	1.38	9.08	5.97	15.05	8	18	1.38	14.08	5.97	20.05	46.59	4700	1.86	188	3.00	22
23	5.50	2.17	16.20	8	21	1.25	6.58	6.57	13.15	4	18	20.75	4	52	24.50	5	43	0.58	15.70	4	18	10.28	12.36	6	21	20.75	8	20	1.25	9.58	6.57	16.15	8	20	1.25	14.58	6.57	21.15	56.45	4898	2.26	196	2.97	23
24	5.92	2.17	16.98	9	19	1.38	7.67	7.02	14.69	4	18	21.75	4	52	24.50	5	43	0.58	16.48	4	18	10.65	12.73	6	19	21.75	9	18	1.38	10.25	7.02	17.27	9	18	1.38	16.25	7.02	23.27	59.49	6098	2.38	244	2.99	24
25	6.33	2.17	17.91	9	21	1.25	7.67	7.47	15.14	4	18	22.75	4	56	24.50	5	43	0.58	17.41	4	18	11.16	13.24	6	21	22.75	9	20	1.25	11.25	7.47	18.72	9	20	1.25	17.25	7.47	24.72	62.86	6925	2.51	277	2.99	25



NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced of each end of the Unit.

NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO.4 Bars. Bars J are as shown.

BENDING DIAGRAM



NOTE: All bar dimensions are out to out.

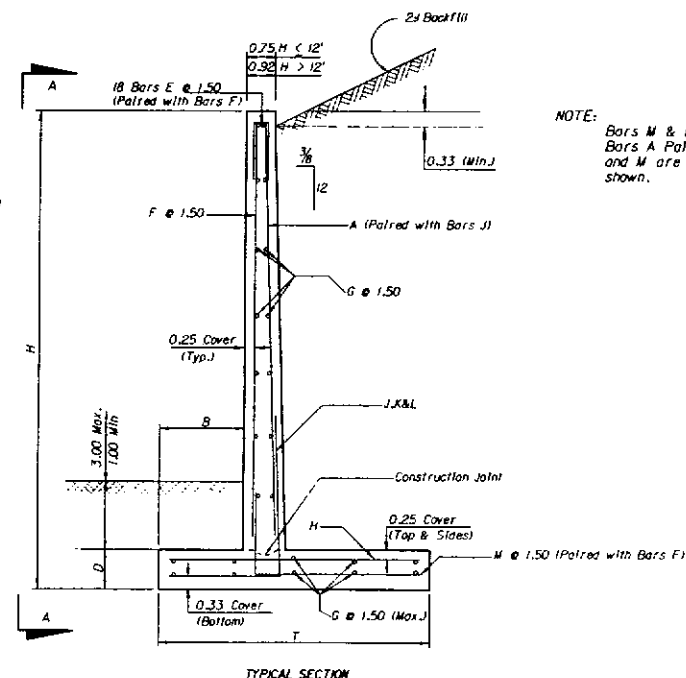
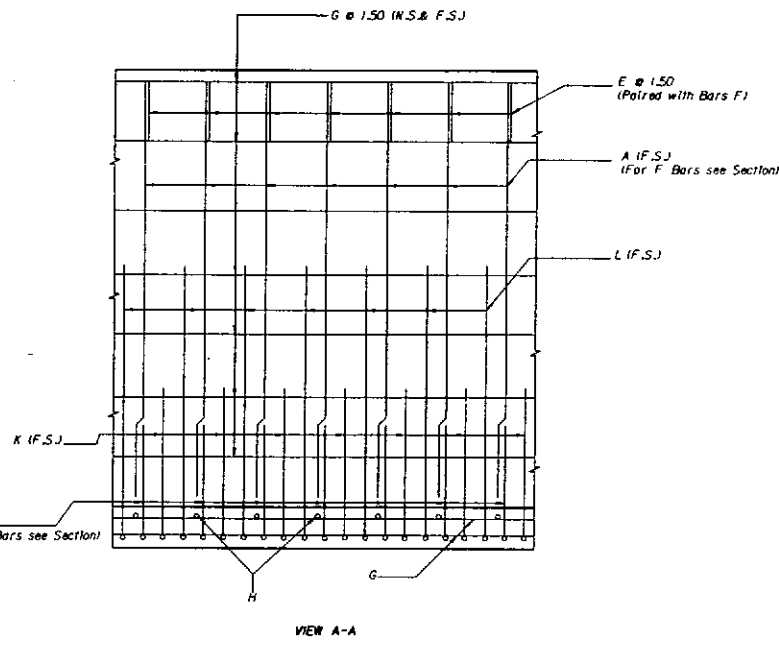
CANTILEVER RETAINING WALLS

REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Date	Description	CASE III (3.0 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 25 FT. HEIGHT	
3/4/87	Checked over as per 6.2(1)(a).	NO. 10	PROJECT NO.
3/4/87	Checked over as per 6.2(1)(b).		
3/4/87	Checked over as per 6.2(1)(c).		
3/4/87	Checked over as per 6.2(1)(d).		
3/4/87	Checked over as per 6.2(1)(e).		
3/4/87	Checked over as per 6.2(1)(f).		
3/4/87	Checked over as per 6.2(1)(g).		
3/4/87	Checked over as per 6.2(1)(h).		
3/4/87	Checked over as per 6.2(1)(i).		
3/4/87	Checked over as per 6.2(1)(j).		
3/4/87	Checked over as per 6.2(1)(k).		
3/4/87	Checked over as per 6.2(1)(l).		
3/4/87	Checked over as per 6.2(1)(m).		
3/4/87	Checked over as per 6.2(1)(n).		
3/4/87	Checked over as per 6.2(1)(o).		
3/4/87	Checked over as per 6.2(1)(p).		
3/4/87	Checked over as per 6.2(1)(q).		
3/4/87	Checked over as per 6.2(1)(r).		
3/4/87	Checked over as per 6.2(1)(s).		
3/4/87	Checked over as per 6.2(1)(t).		
3/4/87	Checked over as per 6.2(1)(u).		
3/4/87	Checked over as per 6.2(1)(v).		
3/4/87	Checked over as per 6.2(1)(w).		
3/4/87	Checked over as per 6.2(1)(x).		
3/4/87	Checked over as per 6.2(1)(y).		
3/4/87	Checked over as per 6.2(1)(z).		
3/4/87	Checked over as per 6.2(1)(aa).		
3/4/87	Checked over as per 6.2(1)(ab).		
3/4/87	Checked over as per 6.2(1)(ac).		
3/4/87	Checked over as per 6.2(1)(ad).		
3/4/87	Checked over as per 6.2(1)(ae).		
3/4/87	Checked over as per 6.2(1)(af).		
3/4/87	Checked over as per 6.2(1)(ag).		
3/4/87	Checked over as per 6.2(1)(ah).		
3/4/87	Checked over as per 6.2(1)(ai).		
3/4/87	Checked over as per 6.2(1)(aj).		
3/4/87	Checked over as per 6.2(1)(ak).		
3/4/87	Checked over as per 6.2(1)(al).		
3/4/87	Checked over as per 6.2(1)(am).		
3/4/87	Checked over as per 6.2(1)(an).		
3/4/87	Checked over as per 6.2(1)(ao).		
3/4/87	Checked over as per 6.2(1)(ap).		
3/4/87	Checked over as per 6.2(1)(aq).		
3/4/87	Checked over as per 6.2(1)(ar).		
3/4/87	Checked over as per 6.2(1)(as).		
3/4/87	Checked over as per 6.2(1)(at).		
3/4/87	Checked over as per 6.2(1)(au).		
3/4/87	Checked over as per 6.2(1)(av).		
3/4/87	Checked over as per 6.2(1)(aw).		
3/4/87	Checked over as per 6.2(1)(ax).		
3/4/87	Checked over as per 6.2(1)(ay).		
3/4/87	Checked over as per 6.2(1)(az).		
3/4/87	Checked over as per 6.2(1)(ba).		
3/4/87	Checked over as per 6.2(1)(bb).		
3/4/87	Checked over as per 6.2(1)(bc).		
3/4/87	Checked over as per 6.2(1)(bd).		
3/4/87	Checked over as per 6.2(1)(be).		
3/4/87	Checked over as per 6.2(1)(bf).		
3/4/87	Checked over as per 6.2(1)(bg).		
3/4/87	Checked over as per 6.2(1)(bh).		
3/4/87	Checked over as per 6.2(1)(bi).		
3/4/87	Checked over as per 6.2(1)(bj).		
3/4/87	Checked over as per 6.2(1)(bk).		
3/4/87	Checked over as per 6.2(1)(bl).		
3/4/87	Checked over as per 6.2(1)(bm).		
3/4/87	Checked over as per 6.2(1)(bn).		
3/4/87	Checked over as per 6.2(1)(bo).		
3/4/87	Checked over as per 6.2(1)(bp).		
3/4/87	Checked over as per 6.2(1)(bq).		
3/4/87	Checked over as per 6.2(1)(br).		
3/4/87	Checked over as per 6.2(1)(bs).		
3/4/87	Checked over as per 6.2(1)(bt).		
3/4/87	Checked over as per 6.2(1)(bu).		
3/4/87	Checked over as per 6.2(1)(bv).		
3/4/87	Checked over as per 6.2(		

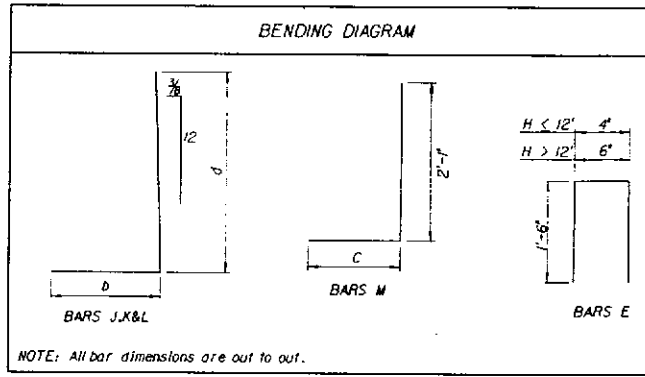
RETAINING WALL DATA

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																																QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.FT.	H			
H	B	D	T	BARS J					BARS F			BARS G			BARS H				BARS M				BARS A			BARS K					BARS L					CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.					
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.	LBS.	C.Y.	LBS.		
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.77	3.85																6.33	520	0.25	21	1.77	6
7	0.75	0.92	3.41	4	26	1.00	6.58	1.19	7.77	4	18	6.00	4	16	24.50	4	18	1.42	2.91	4	18	2.24	4.32															7.66	596	0.31	24	2.02	7	
8	0.92	0.92	3.87	4	26	1.00	7.58	1.39	8.97	4	18	7.00	4	18	24.50	4	18	1.42	3.37	4	18	2.53	4.61														8.93	671	0.36	27	2.26	8		
9	1.17	0.92	4.33	4	28	0.92	8.58	1.67	10.25	4	18	8.00	4	20	24.50	4	18	1.42	3.83	4	18	2.74	4.82														10.23	759	0.41	30	2.43	9		
10	1.17	0.92	4.85	4	31	0.83	9.58	1.71	11.29	4	18	9.00	4	22	24.50	4	26	0.92	4.35	4	18	3.26	5.34														11.61	882	0.46	36	2.77	10		
11	1.33	0.92	5.50	5	26	1.00	10.58	1.90	12.48	4	18	10.00	4	24	24.50	4	36	0.71	4.80	4	18	3.55	5.63													12.97	1107	0.52	44	3.01	11			
12	1.50	1.00	5.74	5	32	0.79	11.58	2.09	13.67	4	18	10.91	4	26	24.50	4	34	0.75	5.24	4	18	3.82	5.90														14.71	1245	0.59	50	3.28	12		
13	1.67	1.00	6.36	5	32	0.79	12.58	2.46	15.04	4	18	11.91	4	28	24.50	4	40	0.63	5.86	4	18	4.27	6.35														18.16	1378	0.73	55	3.38	13		
14	1.83	1.00	7.08	5	40	0.63	13.58	2.66	16.24	4	18	12.91	4	30	24.50	4	50	0.50	6.58	4	18	4.83	6.91														20.03	1669	0.80	67	3.48	14		
15	2.08	1.00	7.99	5	26	1.00	14.58	2.93	17.51	4	18	13.91	4	32	24.50	5	40	0.63	7.49	4	18	5.49	7.59					5	25	1.00	5.75	2.93	8.68				22.12	1838	0.88	74	3.43	15		
16	2.33	1.00	8.79	5	21	1.25	2.83	3.22	6.05	4	18	14.91	4	36	24.50	5	50	0.50	8.29	4	18	6.04	8.12	5	21	14.91	5	20	1.25	4.75	3.22	7.97	5	20	1.25	10.75	3.22	13.97	24.13	2257	0.97	90	3.45	16
17	2.58	1.17	9.66	6	17	1.50	3.42	3.50	6.92	4	18	15.75	4	36	24.50	5	46	0.54	9.16	4	18	6.66	8.74	6	17	15.75	6	16	1.50	5.33	3.50	8.83	6	16	1.50	8.33	3.50	11.91	27.50	2442	1.10	98	3.49	17
18	2.83	1.17	10.80	6	21	1.25	3.42	3.78	7.20	4	18	16.75	4	38	24.50	5	54	0.46	10.30	4	18	7.55	9.63	6	21	16.75	6	20	1.25	5.33	3.78	9.11	6	20	1.25	8.33	3.78	12.11	30.05	2955	1.20	118	3.44	18
19	3.25	1.67	11.49	7	17	1.50	4.83	4.21	9.04	4	18	17.25	4	40	24.50	5	35	0.71	10.99	4	18	7.82	9.90	6	17	17.25	7	16	1.50	6.42	4.21	10.63	7	16	1.50	10.42	4.21	14.63	36.79	3005	1.47	120	3.50	19
20	3.67	1.67	12.24	7	19	1.38	4.83	4.65	9.48	4	18	18.25	4	42	24.50	5	37	0.67	11.74	4	18	8.15	10.23	6	19	18.25	7	18	1.38	7.42	4.65	12.07	7	18	1.38	11.42	4.65	16.07	39.32	3449	1.57	138	3.48	20
21	4.08	1.67	13.02	8	17	1.50	5.92	5.10	11.02	4	18	19.25	4	46	24.50	5	43	0.58	12.52	4	18	8.52	10.60	6	17	19.25	8	16	1.50	9.08	5.10	14.18	8	16	1.50	13.08	5.10	18.18	41.92	4089	1.68	164	3.46	21
22	4.50	1.67	13.82	8	19	1.38	6.01	5.58	11.63	4	18	20.25	4	46	24.50	5	50	0.50	13.32	4	18	8.90	10.98	6	19	20.25	8	18	1.38	9.08	5.58	14.63	8	18	1.38	14.08	5.58	19.63	44.57	4679	1.78	187	3.45	22
23	4.92	2.17	14.76	8	21	1.25	6.58	5.98	12.56	4	18	20.75	4	50	24.50	5	43	0.58	14.26	4	18	9.42	11.50	6	21	20.75	8	20	1.25	9.58	5.98	15.56	8	20	1.25	14.58	5.98	20.56	53.58	5175	2.14	207	3.49	23
24	5.33	2.17	15.58	9	19	1.38	7.67	6.43	14.10	4	18	21.75	4	52	24.50	5	43	0.58	15.08	4	18	9.83	11.91	6	19	21.75	9	18	1.38	10.25	6.43	16.68	9	18	1.38	16.25	6.43	22.68	56.68	5915	2.27	237	3.48	24
25	5.75	2.17	16.40	9	21	1.25	7.67	6.88	14.55	4	18	22.75	4	56	24.50	5	46	0.54	15.90	4	18	10.23	12.31	6	21	22.75	9	20	1.25	11.25	6.88	18.13	9	20	1.25	17.25	6.88	24.13	59.83	6773	2.39	271	3.48	25
26	6.17	2.17	17.27	9	21	1.25	8.17	7.49	15.66	4	18	23.75	4	58	24.50	5	46	0.54	16.77	4	18	10.68	12.76	7	21	23.75	9	20	1.25	12.25	7.49	20.24	9	20	1.25	18.25	7.49	25.74	63.10	7499	2.52	300	3.46	26
27	6.67	2.67	18.31	9	21	1.25	8.67	8.01	16.68	4	18	24.25	4	60	24.50	5	54	0.46	17.81	4	18	11.22	13.30	7	21	24.25	9	20	1.25	12.75	8.01	20.76	9	20	1.25	18.75	8.01	26.76	74.42	7945	2.98	318	3.47	27
28	7.08	2.67	19.15	10	19	1.38	9.17	8.46	17.63	4	18	25.25	4	64	24.50	5	54	0.46	18.65	4	18	11.65	13.73	8	19	25.25	10	18	1.38	13.75	8.46	21.21	10	18	1.38	19.75	8.46	28.21	78.06	9090	3.12	364	3.48	28
29	7.50	2.67	19.99	10	21	1.25	9.67	8.91	18.58	4	18	26.25	4	64	24.50	5	43	0.46	19.49	4	18	12.07	14.15	8	21	26.25	10	20	1.25	14.75	8.91	23.66	10	20	1.25	20.75	8.91	29.66	81.74	10412	3.27	416	3.50	29
30	8.08	3.17	21.22	11	17	1.50	10.17	9.51	19.68	4	18	26.75	4	68	24.50	6	46	0.54	20.72	4	18	12.72	14.80	8	17	26.75	11	16	1.50	15.25	9.51	24.26	11	16	1.50	21.25	9.51	30.76	95.41	10755	3.82	430	3.47	30

NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.

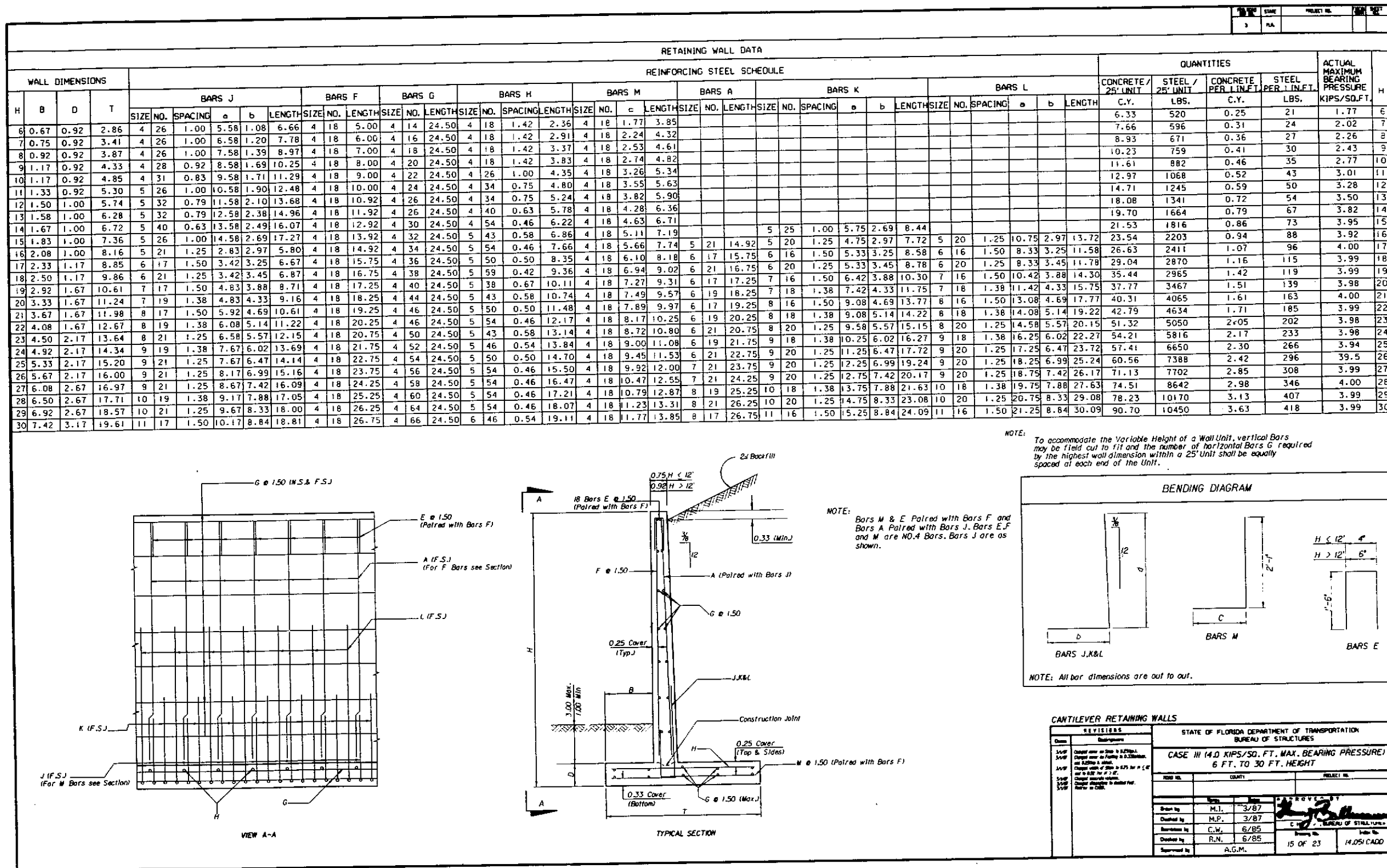


NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO. 4 Bars. Bars J are as shown.



NOTE: All bar dimensions are out to out.

REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Date	Description	CASE III (3.5 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT	
3/8/87	Checked steel as per 0.25 inch L	Drawn by	M.L. 3/87
3/8/87	Checked steel as per 0.25 inch L	Checked by	M.P. 3/87
3/8/87	Checked steel as per 0.25 inch L	Reviewed by	C.W. 6/85
3/8/87	Checked steel as per 0.25 inch L	Reviewed by	R.N. 6/85
3/8/87	Checked steel as per 0.25 inch L	Reviewed by	A.G.M.
		Drawn by	M.L. 3/87
		Checked by	M.P. 3/87
		Reviewed by	C.W. 6/85
		Reviewed by	R.N. 6/85
		Reviewed by	A.G.M.
		Drawn by	M.L. 3/87
		Checked by	M.P. 3/87
		Reviewed by	C.W. 6/85
		Reviewed by	R.N. 6/85
		Reviewed by	A.G.M.



RETAINING WALL DATA																																															
WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																								QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE															
H	B	D	T	BARS J				BARS F				BARS G				BARS H				BARS M				BARS A				BARS K				BARS L				CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.	KIPS/SQ.FT.	H						
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.	LBS.	C.Y.	LBS.					
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.77	3.85																		6.33	520	0.25	21	1.77	6	
7	0.75	0.92	3.41	4	26	1.00	6.58	1.19	7.77	4	18	6.00	4	16	24.50	4	18	1.42	2.91	4	18	2.24	4.32																		7.66	596	0.31	24	2.02	7	
8	0.92	0.92	3.87	4	26	1.00	7.58	1.39	8.97	4	18	7.00	4	18	24.50	4	18	1.42	3.37	4	18	2.53	4.61																		8.93	671	0.36	27	2.26	8	
9	1.17	0.92	4.33	4	28	0.92	8.58	1.67	10.25	4	18	8.00	4	18	24.50	4	18	1.42	3.83	4	18	2.74	4.82																		10.23	727	0.41	29	2.43	9	
10	1.17	0.92	4.85	4	31	0.83	9.58	1.71	11.29	4	18	9.00	4	22	24.50	4	26	0.96	4.35	4	18	3.26	5.34																		11.61	882	0.46	35	2.77	10	
11	1.33	0.92	5.30	5	26	1.00	10.58	1.90	12.48	4	18	10.00	4	24	24.50	4	34	0.75	4.80	4	18	3.55	5.63																		12.97	1068	0.52	43	3.01	11	
12	1.50	1.00	5.74	5	32	0.79	11.58	2.09	13.67	4	18	10.92	4	26	24.50	4	34	0.75	5.24	4	18	3.82	5.90																		14.71	1243	0.59	50	3.28	12	
13	1.58	1.00	6.28	5	32	0.79	12.58	2.38	14.96	4	18	11.92	4	28	24.50	4	40	0.63	5.78	4	18	4.28	6.36																		18.08	1374	0.72	55	3.50	13	
14	1.67	1.00	6.72	5	40	0.63	13.58	2.49	16.07	4	18	12.92	4	28	24.50	4	54	0.46	6.22	4	18	4.63	6.71																		19.70	1631	0.79	65	3.82	14	
15	1.83	1.00	7.16	5	26	1.00	14.58	2.69	17.27	4	18	13.92	4	32	24.50	5	43	0.58	6.66	4	18	4.91	6.99			5	25	1.00	5.75	2.69	8.44											21.35	1804	0.85	72	4.06	15
16	1.92	1.00	7.61	5	21	1.25	2.83	2.80	5.63	4	18	14.92	4	34	24.50	5	54	0.42	7.11	4	18	5.27	7.35	5	21	14.92	5	20	1.25	4.75	2.80	7.55	5	20	1.25	10.75	2.80	13.55	23.03	2157	0.92	86	4.38	16			
17	2.17	1.17	8.31	6	17	1.50	3.42	3.08	6.50	4	18	15.75	4	36	24.50	5	50	0.50	7.81	4	18	5.72	7.80	6	17	15.75	6	16	1.50	5.33	3.08	8.41	6	16	1.50	8.33	3.08	11.41	26.05	2445	1.04	98	4.41	17			
18	2.33	1.17	9.10	6	21	1.25	3.42	3.28	6.70	4	18	16.75	4	38	24.50	5	59	0.42	8.60	4	18	6.35	8.43	6	21	16.75	6	20	1.25	5.33	3.28	8.61	6	20	1.25	8.33	3.28	11.61	28.21	2843	1.13	114	4.47	18			
19	2.75	1.67	9.91	7	17	1.50	4.83	3.71	8.54	4	18	17.25	4	40	24.50	5	40	0.63	9.41	4	18	6.74	8.82	6	17	17.25	7	16	1.50	6.42	3.71	10.13	7	16	1.50	10.42	3.71	14.13	34.35	2933	1.37	117	4.40	19			
20	3.08	1.67	10.59	7	19	1.38	4.83	4.07	8.90	4	18	18.25	4	42	24.50	5	46	0.54	9.99	4	18	6.99	9.07	6	19	18.25	7	18	1.38	7.42	4.07	11.49	7	18	1.38	11.42	4.07	15.49	36.62	3396	1.46	136	4.45	20			
21	3.42	1.67	11.11	8	17	1.50	5.92	4.44	10.36	4	18	19.25	4	44	24.50	5	50	0.50	10.61	4	18	7.27	9.35	6	17	19.25	8	16	1.50	9.08	4.44	13.52	8	16	1.50	13.08	4.44	17.52	38.96	3947	1.56	158	4.49	21			
22	3.75	1.67	11.89	8	19	1.38	6.08	4.80	10.88	4	18	20.25	4	46	24.50	5	54	0.46	11.39	4	18	7.72	9.80	6	19	20.25	8	18	1.38	9.08	4.80	13.88	8	18	1.38	14.08	4.80	18.88	41.59	4502	1.66	180	4.47	22			
23	4.17	2.17	12.74	8	21	1.25	6.58	5.24	11.82	4	18	20.75	4	48	24.50	5	46	0.54	12.24	4	18	8.15	10.23	6	21	20.75	8	20	1.25	9.58	5.24	14.82	8	20	1.25	14.58	5.24	19.82	49.52	4954	1.98	198	4.46	23			
24	4.58	2.17	13.47	9	19	1.38	7.67	5.69	13.36	4	18	21.75	4	50	24.50	5	50	0.50	12.97	4	18	8.47	10.55	6	19	21.75	9	18	1.38	10.25	5.69	15.94	9	18	1.38	16.25	5.69	21.94	52.44	5727	2.10	229	4.43	24			
25	4.92	2.17	14.12	9	21	1.25	7.67	6.05	13.72	4	18	22.75	4	52	24.50	5	54	0.46	13.62	4	18	8.78	10.86	6	21	22.75	9	20	1.25	11.25	6.05	17.30	9	20	1.25	17.25	6.05	23.30	55.25	6522	2.21	261	4.49	25			
26	5.25	2.17	14.95	9	21	1.25	8.17	6.58	14.75	4	18	23.75	4	54	24.50	5	54	0.46	14.45	4	18	9.28	11.36	7	21	23.75	9	20	1.25	12.25	6.58	18.83	9	20	1.25	18.25	6.58	24.83	58.43	7203	2.34	288	4.45	26			
27	5.67	2.67	15.81	9	21	1.25	8.67	7.01	15.68	4	18	24.25	4	56	24.50	5	54	0.46	15.31	4	18	9.72	11.80	7	21	24.25	9	20	1.25	12.75	7.01	19.76	9	20	1.25	18.75	7.01	25.76	68.25	7510	2.73	300	4.49	27			
28	6.08	2.67	16.68	10	19	1.38	9.17	7.46	16.63	4	18	25.25	4	60	24.50	5	54	0.46	16.18	4	18	10.18	12.26	8	19	25.25	10	18	1.38	13.75	7.46	21.21	10	18	1.38	19.75	7.46	27.21	71.97	8777	2.88	351	4.45	28			
29	6.42	2.67	17.47	10	21	1.25	9.67	7.83	17.50	4	18	26.25	4	62	24.50	5	59	0.42	16.97	4	18	10.63	12.71	8	21	26.25	10	20	1.25	14.75	7.83	22.58	10	20	1.25	20.75	7.83	28.58	75.51	10026	3.02	401	4.48	29			
30	6.92	3.17	18.41	11	17	1.50	10.17	8.34	18.51	4	18	26.75	4	64	24.50	6	46	0.54	17.91	4	18	11.07	13.15	8	17	26.75	11	16	1.50	15.25	8.34	23.59	11	16	1.50	21.25	8.34	29.59	87.16	10213	3.49	409	4.47	30			

NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' unit shall be equally spaced of each end of the Unit.

NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO. 4 Bars. Bars J are as shown.

NOTE: All bar dimensions are out to out.

BENDING DIAGRAM

CANTILEVER RETAINING WALLS

REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
Drawn by	Checked by	CASE III (4.5 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT	
Designed by	Reviewed by		
Drawn by	Checked by		
Designed by	Reviewed by		
Drawn by	Checked by		
Designed by	Reviewed by		

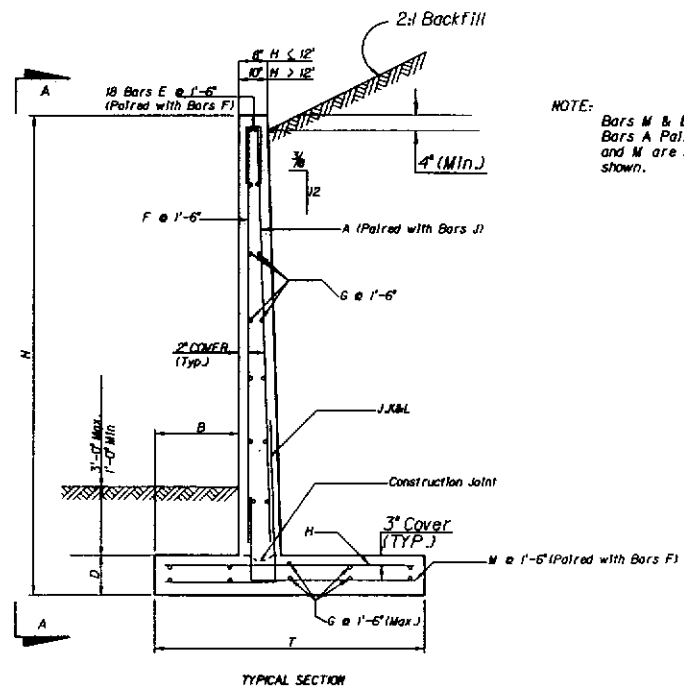
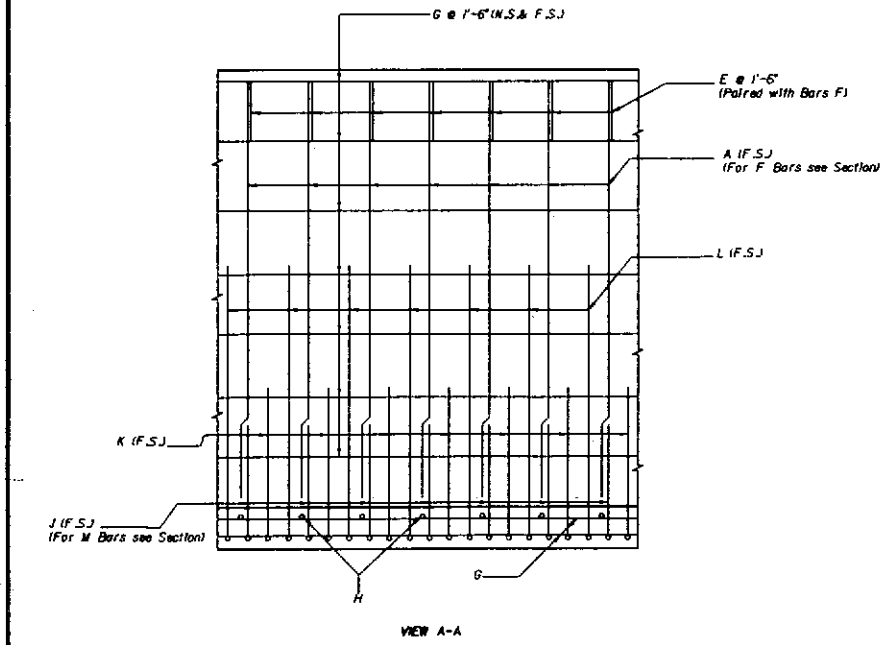
VIEW A-A

TYPICAL SECTION

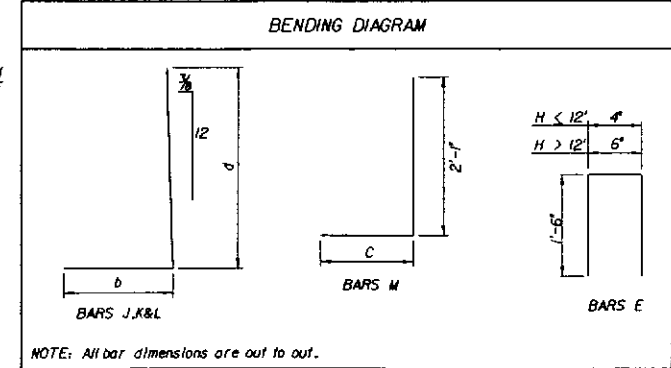
RETAINING WALL DATA

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																																QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.FT.	H			
H	B	D	T	BARS J					BARS F			BARS G			BARS H				BARS M				BARS A				BARS K				BARS L				CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.						
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.	LBS.	C.Y.	LBS.		
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.77	3.85																6.33	520	0.25	21	1.77	6
7	0.75	0.92	3.41	4	26	1.00	6.58	1.19	7.77	4	18	6.00	4	16	24.50	4	18	1.42	2.91	4	18	2.24	4.32																7.66	596	0.31	24	2.02	7
8	0.92	0.92	3.87	4	26	1.00	7.58	1.39	8.97	4	18	7.00	4	18	24.50	4	18	1.42	3.37	4	18	2.53	4.61															8.93	671	0.36	27	2.26	8	
9	1.17	0.92	4.33	4	28	0.92	8.58	1.68	10.26	4	18	8.00	4	20	24.50	4	18	1.42	3.83	4	18	2.74	4.82															10.23	759	0.41	30	2.43	9	
10	1.17	0.92	4.85	4	31	0.83	9.58	1.71	11.29	4	18	9.00	4	22	24.50	4	27	0.96	4.35	4	18	3.26	5.34															11.61	885	0.46	35	2.77	10	
11	1.33	0.92	5.30	5	26	1.00	10.58	1.90	12.48	4	18	10.00	4	22	24.50	4	36	0.71	4.80	4	18	3.55	5.63															12.97	1037	0.52	42	3.01	11	
12	1.50	1.00	5.74	5	32	0.79	11.58	2.09	13.67	4	18	10.92	4	26	24.50	4	34	0.75	5.24	4	18	3.82	5.90															14.71	1245	0.59	50	3.28	12	
13	1.58	1.00	6.28	5	32	0.79	12.58	2.38	14.96	4	18	11.92	4	28	24.50	4	40	0.63	5.78	4	18	4.28	6.36															18.08	1374	0.72	55	3.50	13	
14	1.67	1.00	6.72	5	40	0.63	13.58	2.49	16.07	4	18	12.92	4	28	24.50	4	55	0.46	6.22	4	18	4.63	6.71															19.70	1631	0.79	65	3.82	14	
15	1.83	1.00	7.16	5	26	1.00	14.58	2.69	17.26	4	18	13.92	4	32	24.50	5	43	0.58	6.66	4	18	4.91	6.99				5	25	1.00	5.75	2.69	8.44						21.35	1804	0.85	72	4.06	15	
16	1.92	1.00	7.61	5	21	1.25	2.83	2.81	5.63	4	18	14.92	4	34	24.50	5	55	0.46	7.11	4	18	5.27	7.35	5	21	14.91	5	20	1.25	4.75	2.81	7.56	5	20	1.25	10.75	2.83	13.56	23.03	2164	0.92	87	4.38	16
17	2.17	1.17	8.13	6	17	1.50	3.42	3.08	6.50	4	18	15.75	4	36	24.50	5	50	0.50	7.63	4	18	5.54	7.62	6	17	15.75	6	16	1.50	5.33	3.08	8.41	6	16	1.50	8.33	3.08	11.41	25.85	2355	1.03	94	4.53	17
18	2.17	1.17	8.73	6	21	1.25	3.42	3.11	6.53	4	18	16.75	4	38	24.50	6	47	0.54	8.23	4	18	6.14	8.22	6	21	16.75	6	20	1.25	5.33	3.11	8.44	6	20	1.25	8.33	3.11	11.44	27.82	2877	1.11	115	4.82	18
19	2.50	1.67	9.29	7	17	1.50	4.83	3.46	8.29	4	18	17.25	4	40	24.50	6	31	0.83	8.79	4	18	6.37	8.45	6	17	17.25	7	16	1.50	6.42	3.46	9.88	7	16	1.50	10.42	3.46	13.88	33.40	2921	1.34	117	4.91	19
20	2.83	1.67	9.91	7	19	1.38	4.83	3.83	8.66	4	18	18.25	4	44	24.50	6	34	0.75	9.41	4	18	6.66	8.74	6	19	18.25	7	18	1.38	7.42	3.83	11.25	7	18	1.38	11.42	3.83	15.25	35.72	3431	1.43	137	4.92	20
21	3.17	1.67	10.54	8	17	1.50	5.92	4.19	10.11	4	18	19.25	4	44	24.50	6	38	0.67	10.04	4	18	6.95	9.03	6	17	19.25	8	16	1.50	9.08	4.19	13.27	8	16	1.50	13.08	4.19	17.27	38.09	3930	1.52	157	4.93	21
22	3.50	1.67	11.19	8	19	1.38	6.08	4.56	10.64	4	18	20.25	4	46	24.50	6	43	0.58	10.69	4	18	7.27	9.35	6	19	20.25	8	18	1.38	9.08	4.56	13.64	8	18	1.38	14.08	4.56	18.64	40.51	4510	1.62	180	4.95	22
23	3.92	2.17	11.92	8	21	1.25	6.58	4.99	11.57	4	18	20.75	4	48	24.50	6	32	0.79	11.42	4	18	7.58	9.66	6	21	20.75	8	20	1.25	9.58	4.99	14.57	8	20	1.25	14.58	4.99	19.57	47.88	4869	1.92	195	4.95	23
24	4.25	2.17	12.59	9	19	1.38	7.67	5.35	13.02	4	18	21.75	4	50	24.50	6	36	0.71	12.09	4	18	7.92	10.00	6	19	21.75	9	18	1.38	10.25	5.35	15.60	9	18	1.38	16.25	5.35	21.60	50.68	5634	2.03	225	4.97	24
25	4.58	2.17	13.26	9	21	1.25	7.67	5.72	13.39	4	18	22.75	4	50	24.50	6	40	0.63	12.76	4	18	8.26	10.34	6	21	22.75	9	20	1.25	11.25	5.72	16.97	9	20	1.25	17.25	5.72	22.97	53.52	6414	2.14	257	5.00	25
26	4.92	2.17	14.10	9	21	1.25	8.17	6.25	14.42	4	18	23.75	4	54	24.50	6	43	0.58	13.60	4	18	8.76	10.84	7	21	23.75	9	20	1.25	12.25	6.25	18.50	9	20	1.25	18.25	6.25	24.50	56.74	7193	2.27	288	4.93	26
27	5.33	2.67	14.97	9	21	1.25	8.67	6.68	15.35	4	18	24.25	4	56	24.50	6	38	0.67	14.47	4	18	9.22	11.30	7	21	24.25	9	20	1.25	12.75	6.68	19.43	9	20	1.25	18.75	6.68	25.43	66.19	7399	2.65	296	4.93	27
28	5.67	2.67	15.65	10	19	1.38	9.17	7.05	16.22	4	18	25.25	4	58	24.50	6	40	0.63	15.15	4	18	9.56	11.64	8	19	25.25	10	18	1.38	13.75	7.05	20.80	10	18	1.38	19.75	7.05	26.80	69.43	8639	2.78	346	4.98	28
29	6.00	2.67	16.45	10	21	1.25	9.67	7.41	17.08	4	18	26.25	4	62	24.50	6	43	0.58	15.95	4	18	10.03	12.11	8	21	26.25	10	20	1.25	14.75	7.42	22.16	10	20	1.25	20.75	7.42	28.16	73.01	9894	2.92	396	4.98	29
30	6.50	3.17	17.40	11	17	1.50	10.17	7.93	18.09	4	18	26.75	4	62	24.50	6	47	0.54	16.90	4	18	10.48	12.56	8	17	26.75	11	16	1.50	15.25	7.97	23.22	11	16	1.50	21.25	7.97	29.22	84.21	10028	3.37	401	4.94	30

NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' unit shall be equally spaced at each end of the unit.



NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO.4 Bars. Bars J are as shown.



NOTE: All bar dimensions are out to out.

REVISIONS		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES	
By: J.M.P. 3/85		CASE III (5.0 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT	
Drawn by: J.M.P.	3/85	Checked by: R.H.	6/85
Reviewed by: C.H.	6/85	Approved by: A.G.M.	17 OF 23

RETAINING WALL DATA																																													
WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																												QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.FT.	H								
H	B	D	T	BARS J					BARS F			BARS G			BARS H				BARS M				BARS A				BARS K				BARS L				CONCRETE / 25' UNIT			STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.					
				SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	LENGTH	SIZE	NO.	a	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.	LBS.	C.Y.	LBS.			
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.78	3.86																	6.33	521	0.25	21	1.77	6
7	0.75	0.92	3.41	4	26	1.00	6.58	1.20	7.78	4	18	6.00	4	16	24.50	4	18	1.42	2.91	4	18	2.25	4.33																	7.66	596	0.31	24	2.02	7
8	0.92	0.92	3.87	4	26	1.00	7.58	1.39	8.97	4	18	7.00	4	18	24.50	4	18	1.42	3.37	4	18	2.54	4.62																	8.93	671	0.36	27	2.26	8
9	1.17	0.92	4.33	4	28	0.92	8.58	1.68	10.26	4	18	8.00	4	20	24.50	4	18	1.42	3.83	4	18	2.74	4.82																	10.23	759	0.41	30	2.43	9
10	1.17	0.92	4.85	4	31	0.83	9.58	1.71	11.29	4	18	9.00	4	22	24.50	4	27	0.96	4.35	4	18	3.26	5.34																	11.61	906	0.46	36	2.77	10
11	1.33	0.92	5.30	5	26	1.00	10.58	1.90	12.48	4	18	10.00	4	24	24.50	4	34	0.71	4.80	4	18	3.55	5.63																	12.97	1068	0.52	43	3.01	11
12	1.50	1.00	5.74	5	32	0.79	11.58	2.10	13.68	4	18	10.92	4	26	24.50	4	34	0.75	5.24	4	18	3.82	5.90																	14.71	1245	0.59	50	3.28	12
13	1.58	1.00	6.28	5	32	0.79	12.58	2.38	14.96	4	18	11.92	4	26	24.50	4	40	0.63	5.78	4	18	4.28	6.36																	18.08	1341	0.72	54	3.50	13
14	1.67	1.00	6.72	5	40	0.63	13.58	2.49	16.07	4	18	12.92	4	28	24.50	4	54	0.46	6.22	4	18	4.64	6.72																	19.70	1631	0.79	65	3.82	14
15	1.83	1.00	7.16	5	26	1.00	14.58	2.69	17.27	4	18	13.92	4	32	24.50	5	43	0.58	6.66	4	18	4.91	6.99				5	25	1.00	5.75	2.69	8.44								21.35	1804	0.85	72	4.06	15
16	1.92	1.00	7.61	5	21	1.25	2.83	2.81	5.64	4	18	14.92	4	34	24.50	5	54	0.46	7.11	4	18	5.28	7.36	5	21	14.92	5	20	1.25	4.75	2.81	7.56	5	20	1.25	10.75	2.81	13.56	23.03	2158	0.92	86	4.38	16	
17	2.17	1.17	8.13	6	17	1.50	3.42	3.08	6.50	4	18	15.75	4	36	24.50	5	50	0.50	7.63	4	18	5.54	7.62	6	17	15.75	6	16	1.50	5.33	3.08	8.41	6	16	1.50	8.33	3.08	11.41	25.85	2355	1.03	94	4.53	17	
18	2.17	1.17	8.73	6	21	1.25	3.42	3.11	6.53	4	18	16.75	4	38	24.50	6	46	0.54	8.23	4	18	6.15	8.23	6	21	16.75	6	20	1.25	5.33	3.11	8.44	6	20	1.25	8.33	3.11	11.44	27.82	2865	1.11	115	4.82	18	
19	2.42	1.67	9.03	7	17	1.50	4.83	3.38	8.21	4	18	17.25	4	40	24.50	5	43	0.58	8.53	4	18	6.20	8.28	6	17	17.25	7	16	1.50	6.42	3.38	9.80	7	16	1.50	10.42	3.38	13.80	33.00	3052	1.32	122	5.14	19	
20	2.75	1.67	9.49	7	19	1.38	4.83	3.74	8.57	4	18	18.25	4	44	24.50	5	50	0.50	8.99	4	18	6.33	8.41	6	19	18.25	7	18	1.38	7.42	3.74	11.16	7	18	1.38	11.42	3.74	15.16	35.07	3374	1.40	135	5.24	20	
21	3.00	1.67	9.91	8	17	1.50	5.92	4.02	9.94	4	18	19.25	4	44	24.50	5	54	0.46	9.41	4	18	6.49	8.57	6	17	19.25	8	16	1.50	9.08	4.02	13.10	8	16	1.50	13.08	4.02	17.10	37.11	3860	1.48	154	5.43	21	
22	3.33	1.67	10.58	8	19	1.38	6.08	4.39	10.47	4	18	20.25	4	46	24.50	6	43	0.58	10.08	4	18	6.83	8.91	6	19	20.25	8	18	1.38	9.08	4.39	13.47	8	18	1.38	14.08	4.39	18.47	39.57	4441	1.58	177	5.40	22	
23	3.67	2.17	11.25	8	21	1.25	6.58	4.74	11.32	4	18	20.75	4	50	24.50	5	50	0.50	10.75	4	18	7.16	9.24	6	21	20.75	8	20	1.25	9.58	4.74	14.32	8	20	1.25	14.58	4.74	19.32	46.52	4867	1.86	195	5.46	23	
24	4.00	2.17	11.93	9	19	1.38	7.67	5.10	12.77	4	18	21.75	4	52	24.50	5	54	0.46	11.43	4	18	7.51	9.59	6	19	21.75	9	18	1.38	10.25	5.10	15.35	9	18	1.38	16.25	5.10	21.35	49.36	5606	1.97	224	5.45	24	
25	4.33	2.17	12.61	9	21	1.25	7.67	5.47	13.14	4	18	22.75	4	50	24.50	6	43	0.58	12.11	4	18	7.86	9.94	6	21	22.75	9	20	1.25	11.25	5.47	16.72	9	20	1.25	17.25	5.47	22.72	52.23	6374	2.09	255	5.45	25	
26	4.58	2.17	13.38	9	21	1.25	8.17	5.74	13.91	4	18	23.75	4	54	24.50	6	46	0.54	12.88	4	18	8.38	10.46	7	21	23.75	9	20	1.25	12.25	5.74	17.99	9	20	1.25	18.25	5.74	23.99	55.30	7094	2.21	284	5.45	26	
27	5.00	2.67	14.14	9	21	1.25	8.67	6.18	14.85	4	18	24.25	4	58	24.50	6	38	0.67	13.64	4	18	8.72	10.80	7	21	24.25	9	20	1.25	12.75	6.18	18.93	9	20	1.25	18.75	6.18	24.93	64.13	7275	2.57	291	5.45	27	
28	5.33	2.67	14.83	10	19	1.38	9.17	6.54	15.71	4	18	25.25	4	60	24.50	6	43	0.58	14.33	4	18	9.08	11.16	8	19	25.25	10	18	1.38	13.75	6.54	20.29	10	18	1.38	19.75	6.54	26.29	67.40	8561	2.70	342	5.48	28	
29	5.67	2.67	15.64	10	21	1.25	9.67	6.91	16.58	4	18	26.25	4	62	24.50	6	46	0.54	15.14	4	18	9.56	11.64	8	21	26.25	10	20	1.25	14.75	6.91	21.66	10	20	1.25	20.75	6.91	27.66	71.00	9773	2.84	391	5.46	29	
30	6.08	3.17	16.40	11	17	1.50	10.17	7.34	17.51	4	18	26.75	4	64	24.50	6	46	0.54	15.90	4	18	9.90	11.98	8	17	26.75	11	16	1.50	15.25	7.34	22.59	11	16	1.50	21.25	7.34	28.59	81.27	9800	3.25	392	5.50	30	

NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.

NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO. 4 Bars. Bars J are as shown.

BENDING DIAGRAM

NOTE: All bar dimensions are out to out.

CANTILEVER RETAINING WALLS

REVISIONS	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BUREAU OF STRUCTURES																				
3/87 3/87 3/87 3/87 3/87	CASE III (5.5 KIPS/SQ. FT. MAX. BEARING PRESSURE) 6 FT. TO 30 FT. HEIGHT <table><tr><td>Drawn by</td><td>M.J.</td><td>Date</td><td>3/87</td></tr><tr><td>Checked by</td><td>M.P.</td><td>Date</td><td>5/87</td></tr><tr><td>Submitted by</td><td>R.B.</td><td>Date</td><td>6/85</td></tr><tr><td>Checked by</td><td>C.W.</td><td>Date</td><td>6/85</td></tr><tr><td>Approved by</td><td>A.G.B.</td><td>Date</td><td>10/85</td></tr></table> 18 OF 23	Drawn by	M.J.	Date	3/87	Checked by	M.P.	Date	5/87	Submitted by	R.B.	Date	6/85	Checked by	C.W.	Date	6/85	Approved by	A.G.B.	Date	10/85
Drawn by	M.J.	Date	3/87																		
Checked by	M.P.	Date	5/87																		
Submitted by	R.B.	Date	6/85																		
Checked by	C.W.	Date	6/85																		
Approved by	A.G.B.	Date	10/85																		

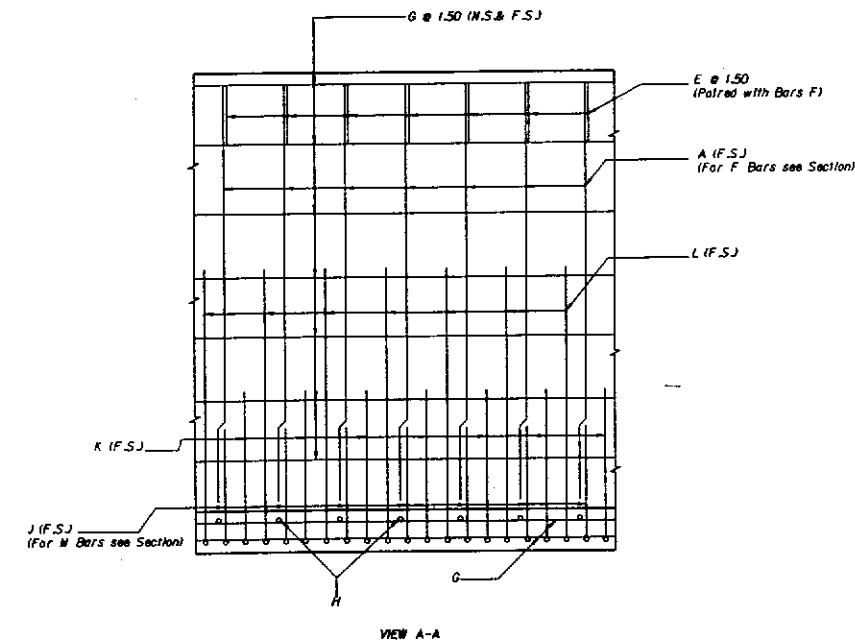
VIEW A-A

TYPICAL SECTION

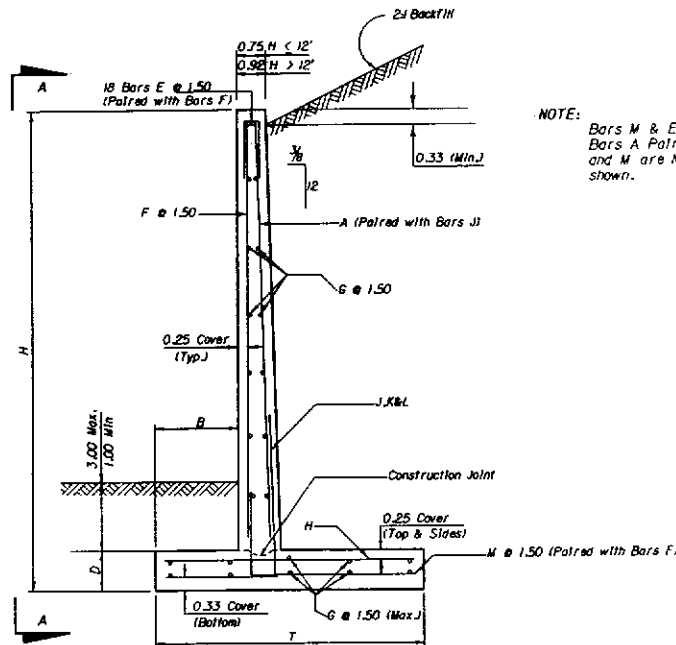
RETAINING WALL DATA

WALL DIMENSIONS				REINFORCING STEEL SCHEDULE																																QUANTITIES				ACTUAL MAXIMUM BEARING PRESSURE KIPS/SQ.F.T.	H			
				BARS J				BARS F				BARS G				BARS H				BARS M				BARS A				BARS K				BARS L				CONCRETE / 25' UNIT	STEEL / 25' UNIT	CONCRETE PER LIN.FT.	STEEL PER LIN.FT.					
H	B	D	T	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	c	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	SIZE	NO.	SPACING	a	b	LENGTH	C.Y.	LBS.	C.Y.	LBS.	KIPS/SQ.F.T.	H				
6	0.67	0.92	2.86	4	26	1.00	5.58	1.08	6.66	4	18	5.00	4	14	24.50	4	18	1.42	2.36	4	18	1.77	3.85												6.33	520	0.25	21	1.77	6				
7	0.75	0.92	3.41	4	26	1.00	6.58	1.19	7.77	4	18	6.00	4	16	24.50	4	18	1.42	2.91	4	18	2.24	4.32												7.66	596	0.31	24	2.02	7				
8	0.92	0.92	3.87	4	26	1.00	7.58	1.39	8.97	4	18	7.00	4	18	24.50	4	18	1.42	3.37	4	18	2.53	4.61												8.93	671	0.36	27	2.26	8				
9	1.17	0.92	4.33	4	28	0.92	8.58	1.68	10.26	4	18	8.00	4	20	24.50	4	18	1.42	3.83	4	18	2.74	4.82												10.23	759	0.41	30	2.43	9				
10	1.17	0.92	4.85	4	31	0.83	9.58	1.70	11.28	4	18	9.00	4	22	24.50	4	27	0.96	4.35	4	18	3.26	5.34												11.61	885	0.46	35	2.77	10				
11	1.33	0.92	5.30	5	26	1.00	10.58	1.89	12.47	4	18	10.00	4	22	24.50	4	34	0.75	4.80	4	18	3.55	5.63												12.97	1036	0.52	41	3.01	11				
12	1.50	1.00	5.74	5	32	0.79	11.58	2.08	13.66	4	18	10.91	4	26	24.50	4	34	0.75	5.24	4	18	3.82	5.90												14.71	1243	0.59	50	3.28	12				
13	1.58	1.00	6.28	5	32	0.79	12.58	2.35	14.93	4	18	11.91	4	28	24.50	4	40	0.63	5.78	4	18	4.28	6.36												18.08	1373	0.72	55	3.50	13				
14	1.67	1.00	6.72	5	40	0.63	13.58	2.47	16.05	4	18	12.91	4	28	24.50	4	54	0.46	6.22	4	18	4.63	6.71												19.70	1639	0.79	66	3.82	14				
15	1.83	1.00	7.16	5	26	1.00	14.58	2.66	17.24	4	18	13.91	4	32	24.50	5	44	0.58	6.66	4	18	4.91	6.99												21.35	1810	0.85	72	4.06	15				
16	1.92	1.00	7.61	5	21	1.25	2.83	2.78	5.61	4	18	14.91	4	34	24.50	5	55	0.46	7.11	4	18	5.27	7.35	5	21	14.92	5	20	1.25	4.75	2.78	7.53	5	20	1.25	10.75	2.78	13.53	23.03	2162	0.92	86	4.38	16
17	2.17	1.17	8.13	6	17	1.50	3.42	3.06	6.48	4	18	15.75	4	36	24.50	5	51	0.50	7.63	4	18	5.54	7.62	6	16	15.75	6	16	1.50	5.33	3.06	8.39	6	16	1.50	8.33	3.06	11.39	25.85	2361	1.03	94	4.53	17
18	2.17	1.17	8.73	6	21	1.25	3.42	3.09	6.51	4	18	16.75	4	38	24.50	6	47	0.54	8.23	4	18	6.14	8.22	6	21	16.75	6	20	1.25	5.33	3.09	8.42	6	20	1.25	8.33	3.09	11.42	27.82	2874	1.11	115	4.82	18
19	2.42	1.67	9.03	7	17	1.50	4.83	3.35	8.18	4	18	17.25	4	40	24.50	5	44	0.58	8.53	4	18	6.19	8.27	6	17	17.25	7	16	1.50	6.42	3.35	9.77	7	16	1.50	10.42	3.35	13.77	33.00	2890	1.32	116	5.14	19
20	2.75	1.67	9.49	7	19	1.38	4.83	3.71	8.54	4	18	18.25	4	44	24.50	6	34	0.75	8.99	4	18	6.83	8.90	6	19	18.25	7	18	1.38	7.42	3.71	11.13	7	18	1.38	11.42	3.71	15.13	35.07	3660	1.40	135	5.24	20
21	3.00	1.67	9.91	8	17	1.50	5.92	3.99	9.91	4	18	19.25	4	44	24.50	6	38	0.67	9.41	4	18	6.49	8.57	6	17	19.25	8	16	1.50	9.08	3.99	13.07	8	16	1.50	13.08	3.99	17.07	37.11	3863	1.48	155	5.43	21
22	3.25	1.67	10.35	8	19	1.38	6.58	4.27	10.85	4	18	20.25	4	46	24.50	6	44	0.58	9.85	4	18	6.18	8.26	6	19	20.25	8	18	1.38	9.08	4.27	13.35	8	18	1.38	14.08	4.27	18.35	39.21	4441	1.57	178	5.61	22
23	3.50	2.17	10.80	8	21	1.25	6.58	4.53	11.11	4	18	20.75	4	48	24.50	6	34	0.75	10.30	4	18	6.88	8.96	6	21	20.75	8	20	1.25	9.58	4.53	14.11	8	20	1.25	14.58	4.53	19.11	46.52	4762	1.82	190	5.86	23
24	3.75	2.17	11.41	9	19	1.38	7.67	4.82	12.49	4	18	21.75	4	50	24.50	5	55	0.46	10.91	4	18	7.24	9.32	6	19	21.75	9	18	1.38	10.25	4.82	15.07	9	18	1.38	16.25	4.82	21.07	48.31	5499	1.93	220	5.94	24
25	4.08	2.17	11.97	9	21	1.25	7.67	5.18	12.85	4	18	22.75	4	50	24.50	5	60	0.42	11.47	4	18	7.47	9.55	6	21	22.75	9	20	1.25	11.25	5.18	16.43	9	20	1.25	17.25	5.18	22.43	50.93	6244	2.04	250	5.98	25
26	4.33	2.17	12.75	9	21	1.25	8.17	5.45	13.62	4	18	23.75	4	54	24.50	7	34	0.75	12.25	4	18	8.00	10.08	7	21	23.75	9	20	1.25	12.25	5.45	17.70	9	20	1.25	18.25	5.45	23.70	54.02	6991	2.16	280	5.93	26
27	4.75	2.67	13.51	9	21	1.25	8.67	5.89	14.56	4	18	24.25	4	56	24.50	6	38	0.67	13.01	4	18	8.34	10.42	7	21	24.25	9	20	1.25	12.75	5.89	18.64	9	20	1.25	18.75	5.89	24.64	62.59	7142	2.50	286	5.91	27
28	5.08	2.67	14.21	10	19	1.38	9.17	6.25	15.42	4	18	25.25	4	58	24.50	7	31	0.83	13.71	4	18	8.71	10.79	8	19	25.25	10	18	1.38	13.75	6.25	20.00	10	18	1.38	19.75	6.25	26.00	65.88	8398	2.64	336	5.91	28
29	5.42	2.67	14.91	10	21	1.25	9.67	6.62	16.29	4	18	26.25	4	62	24.50	6	47	0.54	14.41	4	18	9.07	11.15	8	21	26.25	10	20	1.25	14.75	6.62	21.37	10	20	1.25	20.75	6.62	27.37	69.20	9662	2.77	386	5.91	29
30	5.75	3.17	15.71	11	17	1.50	10.17	6.97	17.14	4	18	26.75	4	62	24.50	6	47	0.54	15.21	4	18	9.54	11.62	8	17	26.75	11	16	1.50	15.25	6.97	22.22	11	16	1.50	21.25	6.97	28.22	79.26	9642	3.17	386	5.96	30

NOTE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced of each end of the Unit.

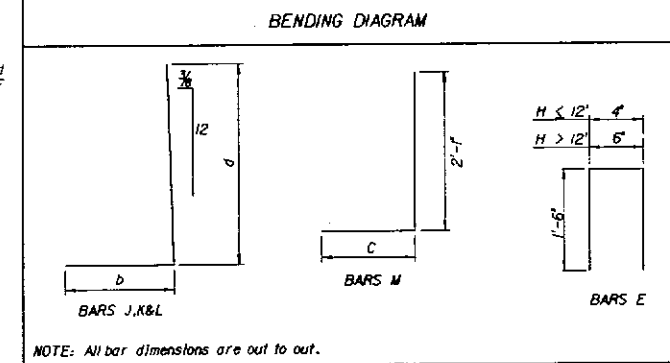


VIEW A-A



TYPICAL SECTION

NOTE: Bars M & E Paired with Bars F and Bars A Paired with Bars J. Bars E, F and M are NO.4 Bars. Bars J are as shown.



NOTE: All bar dimensions are out to out.

[illegible]

RETAINING WALL DATA

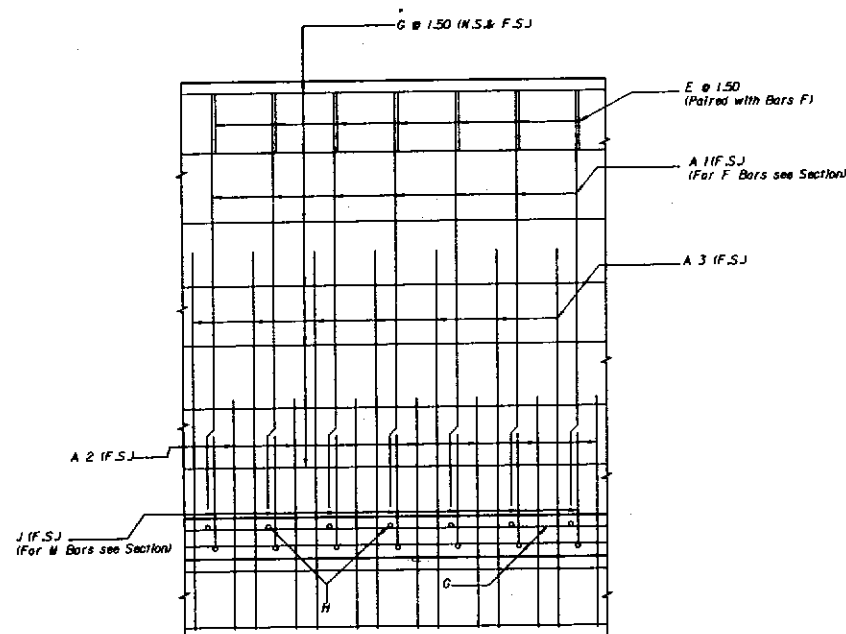
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NOTE:

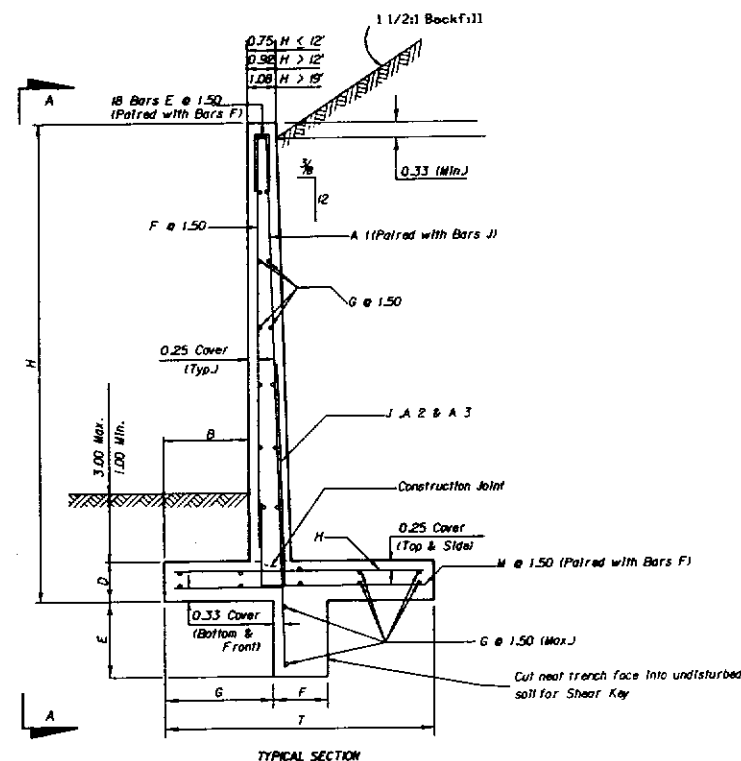
Bars M & E Paired with Bars F and
Bars A I Paired with Bars J. Bars E, F
and M are NO. 4 Bars. Bars J are as
shown.

NOTE:

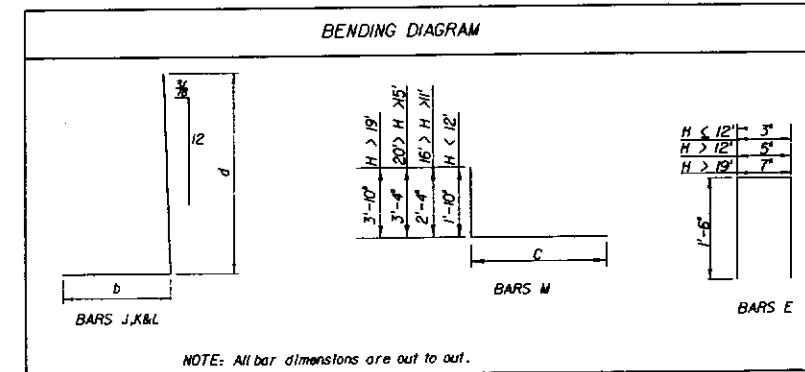
FE: To accommodate the Variable Height of a Wall Unit, vertical Bars may be field cut to fit and the number of horizontal Bars G required by the highest wall dimension within a 25' Unit shall be equally spaced at each end of the Unit.



VIEW A-A



TYPICAL SECTION



NOTE: All bar dimensions are out to out.

CANTILEVER RETAINING WALLS

CANTILEVER RETAINING WALL

REVISIONS

Date	Description
5/4/67	Change width of Slab to 0.25 ft.
5/4/67	Change width of Footing to 0.25 ft.
5/4/67	Change width of Slab to 0.75 ft. & 0.25 ft. to 0.50 ft. & 0.25 ft.
5/4/67	Change description to 4' dia. 16" bar.
5/4/67	Revised per C&E.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

CASE N 13.0 KIPS/50. FT. MAX. BEARING PRESSURE
6 FT. TO 15 FT. HEIGHT

ROAD NO.	COUNTY	PROJECT OR

Drawn by	Checked by	DESIGNED BY	CHECKED BY
M.J.	5/87	<i>Henry Ballentine</i>	
M.P.	5/87		
R.H.	6/85		
C.W.	6/85		

Drawn by	Checked by	Drawn by	Checked by

Drawn by	Checked by	Drawn by	Checked by

Drawn by	Checked by	Drawn by	Checked by

Drawn by	Checked by	Drawn by	Checked by

Drawn by	Checked by	Drawn by	Checked by

Drawn by	Checked by	Drawn by	Checked by

Drawing No.

20 OF 23

Scale 1/8" = 1'-0"

H.051 CAD

[illegible]

