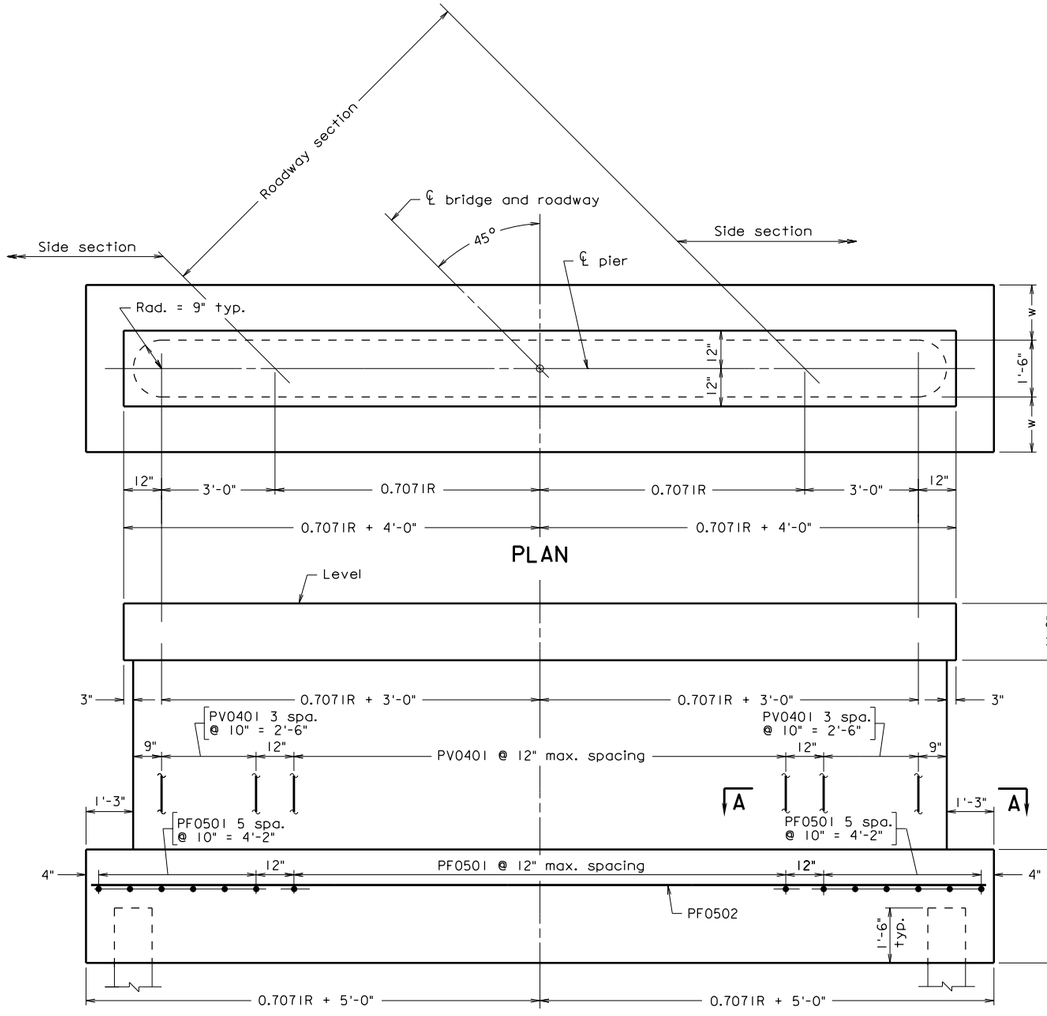
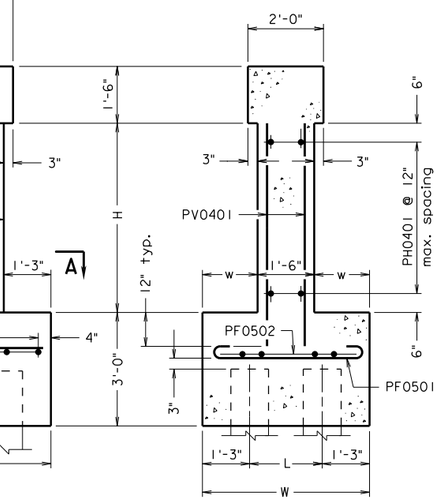
STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—				

Note:

¾" ø x 1'-6" plain steel dowels (max. spacing 2'-0" c-c) shall be placed at Fixed Bearing in each span.



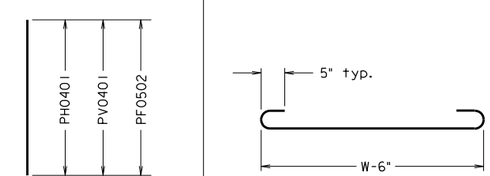
ELEVATION



SECTION ON ℄

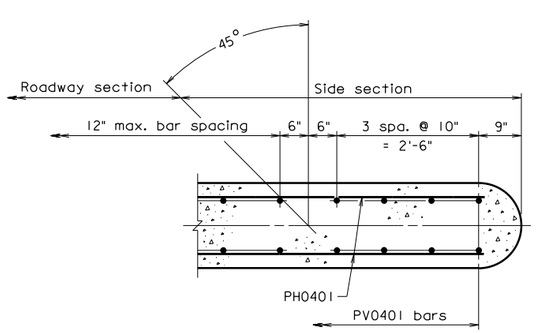
DIMENSION DATA
H =
L =
R =
W =
w =
S =

REINFORCING STEEL SCHEDULE

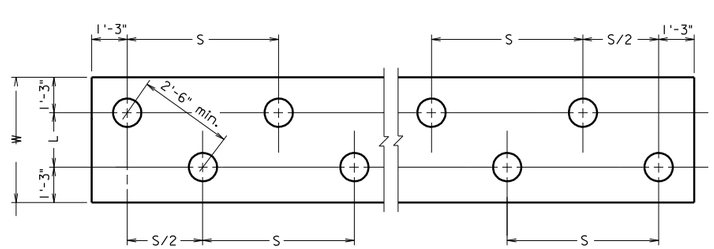


PH0401, PV0401 and PF0502 | PF0501

Mark	No.	Size	Pin ø	Length	Location
PH0401	·	#4	·	·	·
PV0401	·	#4	·	·	·
PF0501	·	#5	3¾"	·	·
PF0502	·	#5	·	·	·
·	·	·	·	·	·
·	·	·	·	·	·



SECTION A-A



PILE PLAN

Not to scale

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cspp45.dgn

06-14-2010

CS-PP-45

Sealed and Signed by:
Julius F.J. Volgyi Jr.
Lic. No. 010487
On the date of
June 14, 2010

A copy of the original sealed and signed standard drawing is on file in the Central Office.

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

PIERS

Designed: .....
Drawn: .....
Checked: .....

Date	Plan No.	Sheet No.
	CS-PP-45	

CAST-IN-PLACE CONCRETE SLAB SPANS

PIERS ON PILES
45° SKEW

NOTES TO DESIGNER:

Standard to be used when piers are on piles.

Standard is for: 45° skew

TABLE OF DIMENSIONS AND QUANTITIES

H	w	W	L	S**(Max. Pile Spa.)	Roadway Section			
					PV0401		PH0401	
					No. *	Length	No.	Length
4'-0"	1'-5"	4'-4"	1'-10"	5'-6"	2.83R+2	5'-0"	8	1.41R+6'-0"
5'-0"	1'-5 1/2"	4'-5"	1'-11"	5'-4"	2.83R+2	6'-0"	10	1.41R+6'-0"
6'-0"	1'-6"	4'-6"	2'-0"	5'-3"	2.83R+2	7'-0"	12	1.41R+6'-0"
7'-0"	1'-6 1/2"	4'-7"	2'-1"	5'-1"	2.83R+2	8'-0"	14	1.41R+6'-0"
8'-0"	1'-7"	4'-8"	2'-2"	4'-11"	2.83R+2	9'-0"	16	1.41R+6'-0"
9'-0"	1'-7 1/2"	4'-9"	2'-3"	4'-10"	2.83R+2	10'-0"	18	1.41R+6'-0"
10'-0"	1'-8"	4'-10"	2'-4"	4'-9"	2.83R+2	11'-0"	20	1.41R+6'-0"
11'-0"	1'-8 1/2"	4'-11"	2'-5"	4'-7"	2.83R+2	12'-0"	22	1.41R+6'-0"
12'-0"	1'-9"	5'-0"	2'-6"	4'-6"	2.83R+2	13'-0"	24	1.41R+6'-0"
13'-0"	1'-9 1/2"	5'-1"	2'-7"	4'-4"	2.83R+2	14'-0"	26	1.41R+6'-0"
14'-0"	1'-10"	5'-2"	2'-8"	4'-3"	2.83R+2	15'-0"	28	1.41R+6'-0"

H	Roadway Section							
	PF0501		PF0502		Neat		Footing	
	No. *	Length	No.	Length	CY	LB	CY	LB
4'-0"	1.41R+1	5'-0"	4	1.41R+9'-6"	0.471R	17.0R+39	0.680R	13.2R+45
5'-0"	1.41R+1	5'-1"	4	1.41R+9'-6"	0.550R	20.8R+48	0.694R	13.4R+45
6'-0"	1.41R+1	5'-2"	4	1.41R+9'-6"	0.628R	24.5R+58	0.707R	13.5R+45
7'-0"	1.41R+1	5'-3"	4	1.41R+9'-6"	0.707R	28.3R+67	0.720R	13.6R+45
8'-0"	1.41R+1	5'-4"	4	1.41R+9'-6"	0.786R	32.1R+76	0.734R	13.7R+45
9'-0"	1.41R+1	5'-5"	4	1.41R+9'-6"	0.864R	35.9R+86	0.747R	13.9R+45
10'-0"	1.41R+1	5'-6"	4	1.41R+9'-6"	0.943R	39.6R+95	0.759R	14.0R+45
11'-0"	1.41R+1	5'-7"	4	1.41R+9'-6"	1.021R	43.4R+104	0.772R	14.1R+45
12'-0"	1.41R+1	5'-8"	4	1.41R+9'-6"	1.100R	47.1R+114	0.786R	14.2R+45
13'-0"	1.41R+1	5'-9"	4	1.41R+9'-6"	1.178R	51.0R+123	0.799R	14.3R+45
14'-0"	1.41R+1	5'-10"	4	1.41R+9'-6"	1.257R	54.7R+132	0.812R	14.5R+45

* Round number of bars to next highest whole number.
** For CS-27-45 or CS-27V-45, use 0.875xS to nearest inch.
** For CS-32-45 or CS-32V-45, use 0.815xS to nearest inch.

Footing quantities do not include deductions to piles.

CAST-IN-PLACE CONCRETE SLAB SPANS

PIERS ON PILES
45° SKEW

NOTES TO DESIGNER(cont'd):

TABLE OF DIMENSIONS AND QUANTITIES (Cont'd)								
H	2-SIDE SECTIONS							
	PV0401		PF0501		Neat		Footing	
	No.	Length	No.	Length	CY	LB	CY	LB
4'-0"	16	5'-0"	12	5'-0"	2.5	50	4.8	60
5'-0"	16	6'-0"	12	5'-1"	2.9	60	4.9	60
6'-0"	16	7'-0"	12	5'-2"	3.3	70	5.0	60
7'-0"	16	8'-0"	12	5'-3"	3.7	90	5.1	70
8'-0"	16	9'-0"	12	5'-4"	4.1	100	5.2	70
9'-0"	16	10'-0"	12	5'-5"	4.5	110	5.3	70
10'-0"	16	11'-0"	12	5'-6"	4.9	120	5.4	70
11'-0"	16	12'-0"	12	5'-7"	5.3	130	5.5	70
12'-0"	16	13'-0"	12	5'-8"	5.7	150	5.6	70
13'-0"	16	14'-0"	12	5'-9"	6.1	150	5.6	70
14'-0"	16	15'-0"	12	5'-10"	6.5	160	5.7	70

ADD THE FOLLOWING NOTES, DIMENSIONS, DETAILS, ETC. TO STANDARD:

PROJECT/TITLE BLOCKS:

Project block and title block shall be completed in accordance with Manual of the Structure and Bridge Division, Volume V – Part 2, Chapter 4.

DIMENSION DATA:

Enter H, L, R, W, s and w dimensions in the DIMENSION DATA table.

REINFORCING STEEL SCHEDULE:

Enter No. and Length of PH0401, PV0401, PF0501 and PF0502 bars into the table.

PILE PLAN:

Based on skew angle = 45° and H = 4'-0" to 14'-0", replace the pile plan cell with the appropriate pile plan cell if needed.