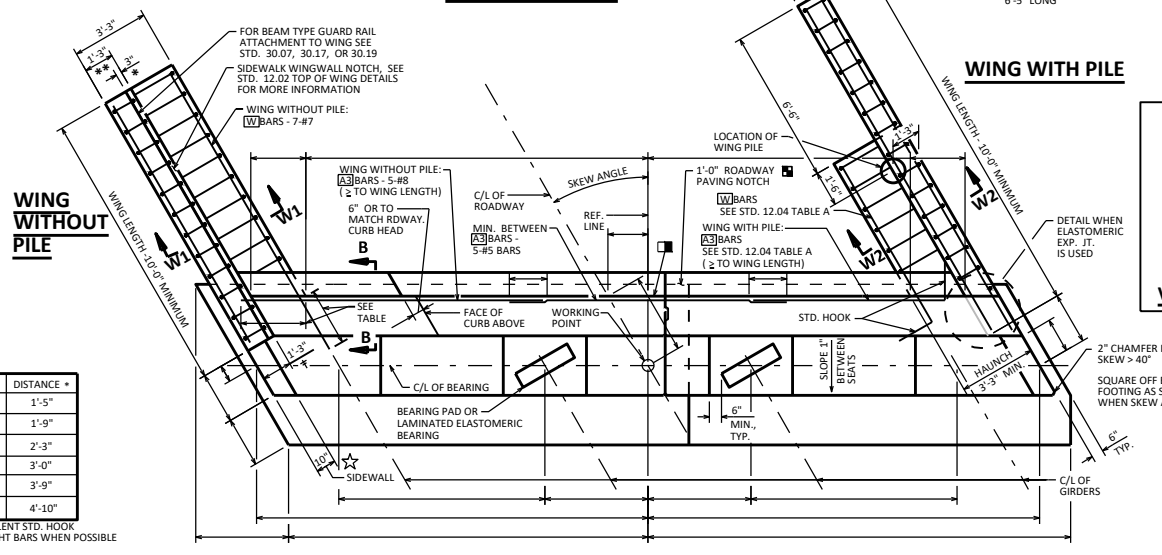


FRONT ELEVATION



PLAN

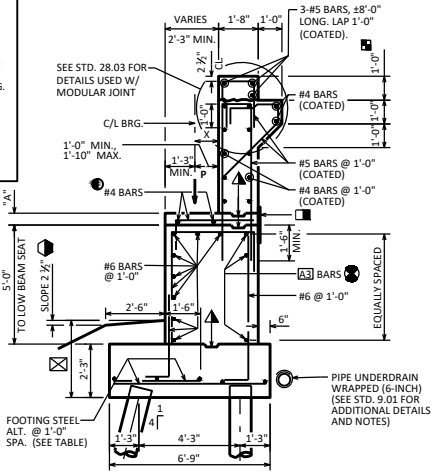
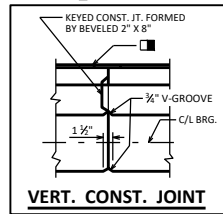
DESIGNER NOTES

- LAP LENGTHS FOR HORIZONTAL BARS SHALL BE BASED ON A "CLASS C" TOP TENSION LAP SPLICE.
- BARS IN WINGS, ABUTMENT BACKWALL, AND PAVING BLOCK SHALL BE EPOXY COATED.
- PILING SPACING IN ABUTMENT FOOTING SHALL BE 8'-0" MAXIMUM.
- PILE REACTION EQUATIONS ARE FOR PRELIMINARY PILE LAYOUT PURPOSES ONLY.
- TOTAL LENGTH OF #3 BARS SHALL BE ≥ TO WING LENGTH.
- WHEN BODY SECTION IS MORE THAN 50'-0" LONG, PROVIDE VERTICAL CONSTRUCTION JOINT, RUN BAR STEEL THRU JOINT, SEAL JOINT WITH 1/8" RUBBERIZED MEMBRANE WATERPROOFING. SEE STD. 12.09 FOR ALTERNATE CONSTRUCTION JOINT.
- IN "FRONT ELEVATION" VIEW, GIVE ELEVATION OF ALL BEARING AREAS AND ELEVATION AT BOTTOM OF PARAPETS AT EACH END OF WINGS. ALL ELEVATIONS ARE TAKEN AT FRONT FACE OF BACKWALL.
- PARAPET NOT SHOWN IN PLAN VIEW FOR CLARITY.
- ABUTMENT DETAILED WITHOUT STRUCTURAL APPROACH SLAB. SEE STD. 12.10 THRU 12.13 FOR STRUCTURAL APPROACH DETAILS.
- SEE STANDARDS 12.01 AND 13.01 FOR SLOPED BEAM SEAT CRITERIA AND DETAILS.

LEGEND

- ▣ 1/8" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.
- ▲ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".
- #4 AT 9" BEAM SEAT. SPACE AT 1'-0" BETWEEN SEATS. THIS STEEL IS REQUIRED ONLY IF DIMENSION "A" EXCEEDS 4".
- † 1'-5" WHEN VERTICAL FACE PARAPET TYPE "TX" IS USED.
- * 4" WHEN VERTICAL FACE PARAPET TYPE "TX" IS USED.
- ** WINGWALL WIDTH SHALL BE 1'-6" WHEN TYPE "TM" RAILING, VERTICAL FACE PARAPET "TX", OR SINGLE SLOPE PARAPET "565S" IS USED. "565S" SHOULD NOT BE USED ON A SIDEWALK. WINGWALL WIDTH SHALL BE 1'-4" WHEN PARAPET "A" ON A RAISED SIDEWALK IS USED. WINGWALL WIDTH SHALL BE 1'-9" WHEN TYPE "NY3" OR "NY4" RAILING IS USED. (USE 2'-0" WIDTH WHEN NY4 IS USED ON A SIDEWALK)
- ☒ 3'-3" (SLOPE PAVING), 4'-6" (HEAVY RIPRAP)
- ☑ PAVING NOTCH IS 1'-0" WIDE BY 1'-4" DEEP IF STRUCTURAL APPROACH SLAB (STD. 12.10) IS USED. SHOW NO. 9 STAINLESS STEEL BAR (STD 12.12) FOR STRUCTURAL APPROACH SLAB ON THE ABUTMENT SHEET.
- ☆ SIDEWALK IS 1'-3" WIDE IF STRUCTURAL APPROACH SLAB (STD. 12.10) IS USED.
- SHOW ALL BARS FOR CLARITY.
- NO SLOPE FOR HEAVY RIPRAP. SEE STANDARD 12.08 FOR DETAILS.

WING WITH PILE



SECTION THRU BODY

TABLE

BAR SIZE	DISTANCE +
#5	1'-5"
#6	1'-9"
#7	2'-3"
#8	3'-0"
#9	3'-9"
#10	4'-10"

+ OR EQUIVALENT STD. HOOK USE STRAIGHT BARS WHEN POSSIBLE

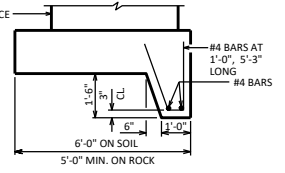
PILE REACTIONS PER FOOT IN KIPS

FRONT ROW = $P[(0.22 \times X/4.25)] + [(h+2.25)/310] + 4.6$
BACK ROW = $P[(0.78 \times X/4.25)] - [(h+2.25)/705] + 16.8$

NOTES:
 h = WING HEIGHT (FT.)
 $P = \frac{1}{2} D_c (P_{dc}) + \frac{1}{2} D_w (P_{dw}) + \frac{1}{2} L L (K/FT.)$
 FRONT ROW PILE DESIGN IS BASED ON AN EQUIVALENT FLUID UNIT WEIGHT OF SOIL OF 40 P.C.F. WITH $\phi_c E_H = 1.50$, AND SUPERSTRUCTURE REACTIONS "P". BACK ROW PILE DESIGN IS BASED ON AN EQUIVALENT FLUID UNIT WEIGHT OF SOIL OF 40 P.C.F. WITH $\phi_c E_H \text{ MIN.} = 0.50$, AND "P".

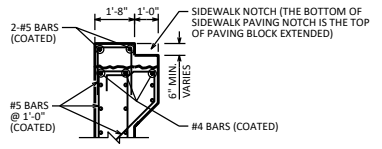
P K/FT.	FOOTING STEEL SIZE
20	#6
40	#7
62	#8
75	#9

PILES MUST ALSO BE DESIGNED TO ACCOUNT FOR LATERAL LOADS



KEY DETAIL

FOR SILL ABUTMENT WITHOUT PILING PLACED ON SOIL



SECTION B-B

ABUTMENT TYPE A3

APPROVED: *Laura Shadewald* DATE: 7-23