

PIERS 1 & 4

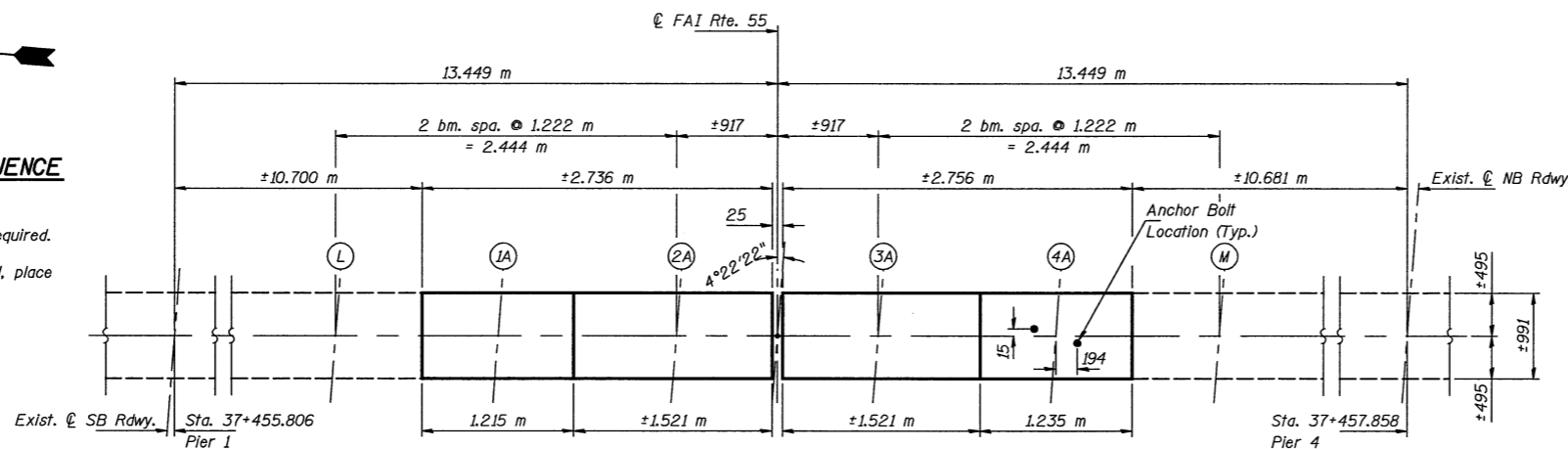
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{11}(E)$	32	#15	2.52	—
$h_{12}(E)$	60	#15	1.00	—
$h_{13}(E)$	28	#15	2.81	—
$n_{11}(E)$	36	#20	1.53	—
$p_{11}(E)$	8	#15	0.98	—
$p_{12}(E)$	10	#15	2.65	—
$s_{11}(E)$	10	#15	3.96	—
$s_{12}(E)$	10	#15	3.97	—
$t_{11}(E)$	14	#20	2.05	—
$u_{11}(E)$	4	#20	2.34	—
$u_{12}(E)$	30	#15	2.03	—
$v_{11}(E)$	16	#15	5.24	—
$v_{12}(E)$	2	#15	4.56	—
$v_{13}(E)$	16	#15	4.75	—
$v_{14}(E)$	2	#15	4.06	—
$v_{15}(E)$	4	#15	1.67	—
$v_{16}(E)$	4	#15	2.17	—
$w_{11}(E)$	14	#25	2.50	—
$w_{12}(E)$	28	#15	0.98	—
Structure Excavation			m ³	24
Reinforcement Bars, Epoxy Coated			kg	1380
Concrete Structures			m ³	36.4
Furnishing Metal Pile Shells 305 mm x 4.55 mm			m	48
Driving Piles			m	48

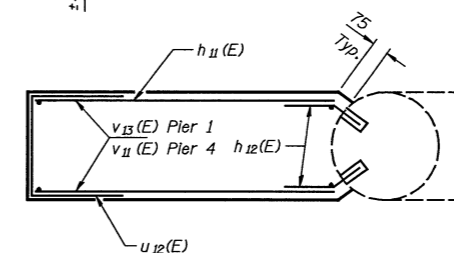
PIER FOOTING CONSTRUCTION SEQUENCE

1. Install sheet piling as shown on Sheet 6 of 32.
2. Excavate to elevation of lower pier footing as required.
3. Install lower pier footing.
4. After formwork for lower pier has been removed, place and compact fill to elevation of higher footing.
5. Install higher pier footing.

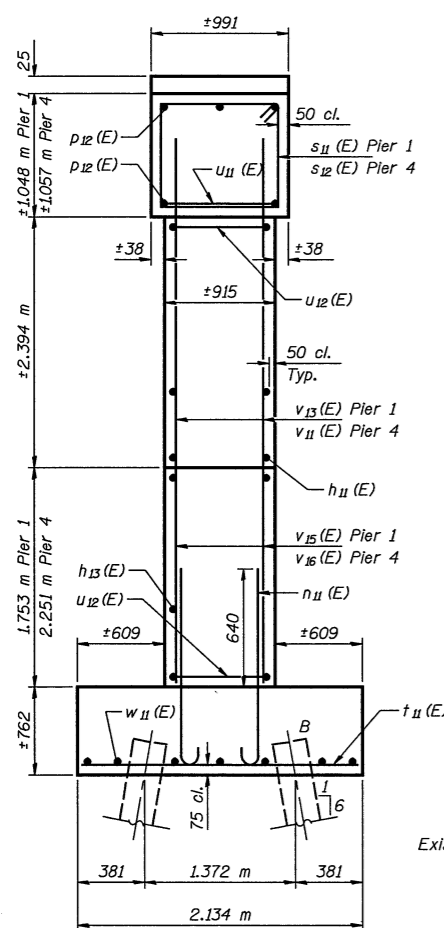
* Epoxy grout $p_{11}(E)$, $h_{12}(E)$ and $w_{12}(E)$ bars into 22 mm ϕ x 230 mm drilled holes. The center of the hole shall be drilled a min. of 100 mm from the face of the existing structure. See Section 584 of the Standard Specifications.



PLAN



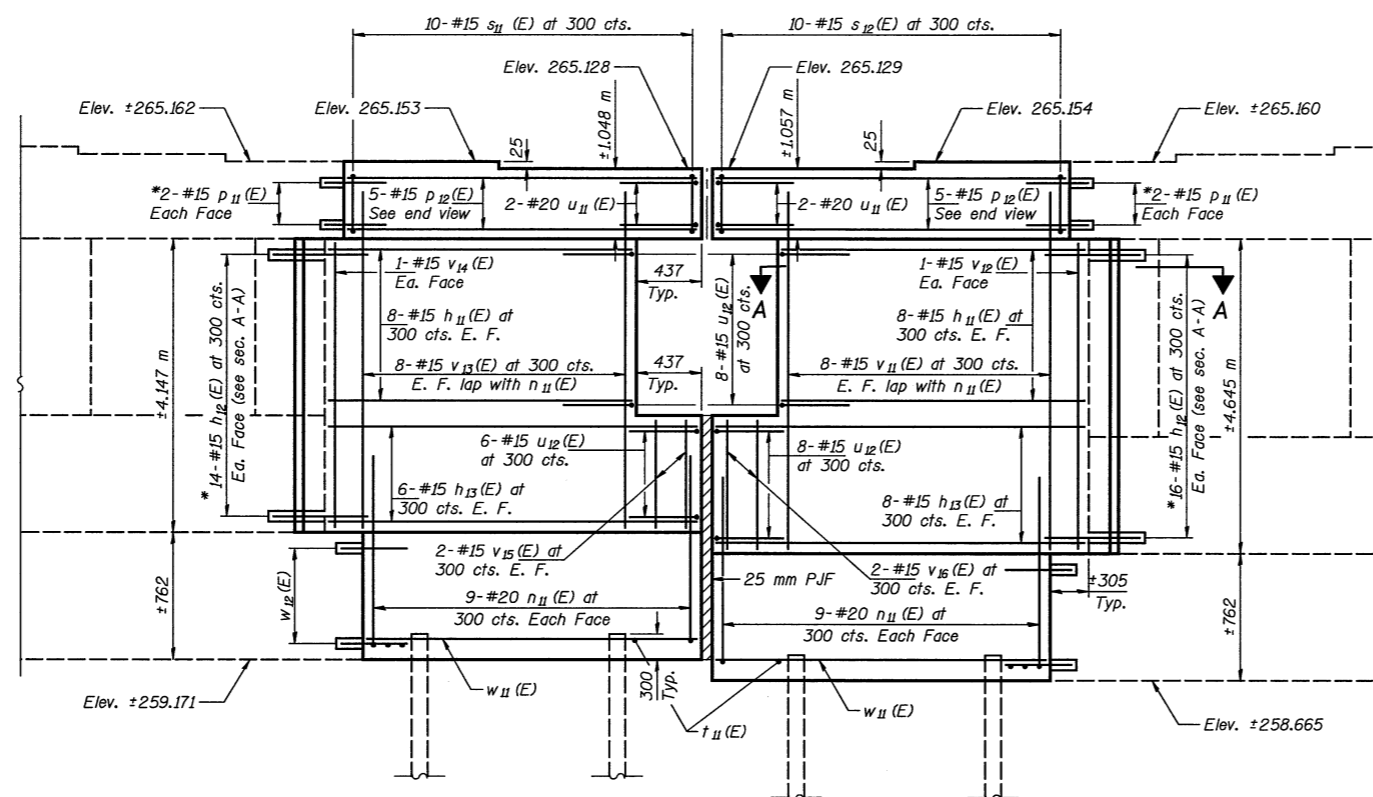
SECTION A-A



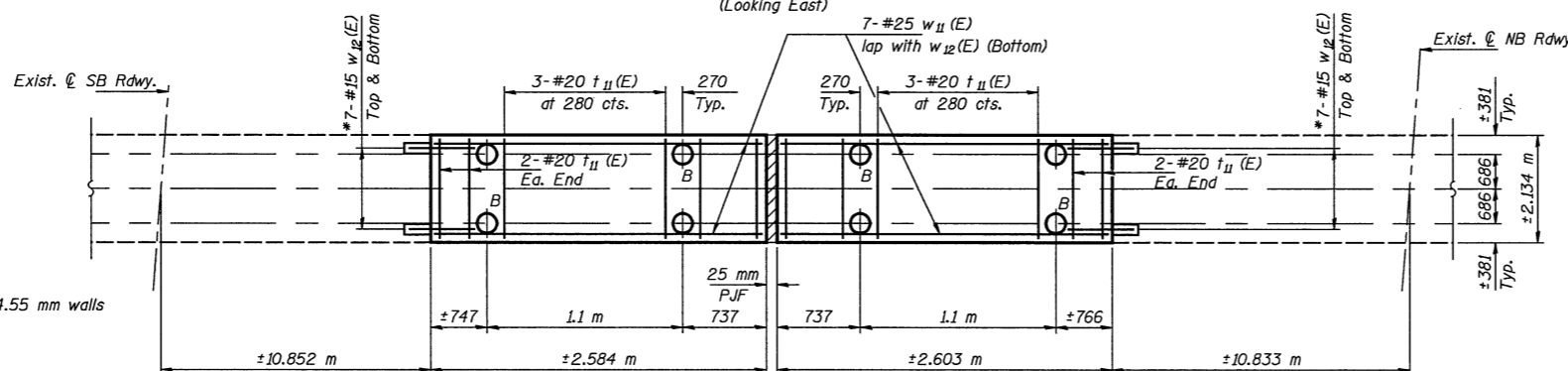
END VIEW

PILE DATA

Type & Size : Metal pile Shell 305 mm x 4.55 mm walls
 Nominal Required Bearing: 780 kN
 Allowable Resistance Available: 260 kN
 Est. Length : 6 m
 No. Required : 8

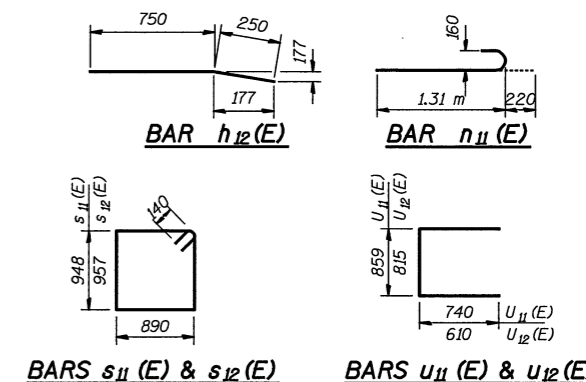


ELEVATION
(Looking East)



FOOTING PLAN

Note: B denotes battered pile location



Notes: Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 All construction joints between new concrete and existing concrete shall be Bonded Construction Joints.
 Cast of 25 mm PJF is Included with Concrete Structures.
 All edges shall have 20 mm chamfers except as noted.
 All dimensions are in millimeters (mm) except as noted.
 See Sheet 24 to 24 for Pile Details.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE PIER 1 & PIER 4	
PROJECT F.A.I. 55 OVER BUSINESS U.S. 51 SECTION 57-4HBR-4 STATION 37+474.206 McLEAN COUNTY STRUCTURE NO. 057-0024 (N.B.) & STRUCTURE NO. 057-0025 (S.B.)	PROJECT NO. 08049-5 SCALE DATE 07/15/2009 DRAWN BY TFG/CFC CHECKED BY CME/MCB DRAWING NO.
COMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	
21 OF 24 SHTS	