

GENERAL CONSTRUCTION NOTES (BRIDGE)

ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION ENGLISH VERSION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

THE BRIDGE SITE WILL BE OPEN TO ALL PUBLIC TRAFFIC DURING CONSTRUCTION, ACCESS WILL BE OPEN TO LOCAL TRAFFIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TRAFFIC CONTROL. ALL SIGNS, BARRICADES, LIGHTS, AND OTHER TRAFFIC CONTROL DEVICES AND MEASURES, ETC. SHALL BE PROVIDED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION AS REVISED, AS SHOWN ON THE TCS STANDARDS AND ON DETAIL SHEETS. ALL CONSTRUCTION SIGNS WITH (10) SQUARE FEET OR MORE WILL BE DOUBLE POSTED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR SIGNING THE DETOUR.

ABUTMENT PILING CAPACITY:

THE MAXIMUM FACTORED PILE LOAD FOR EACH HP 12X53 PILE IS 86.5 TONS. ALL PILE SHALL BE AASHTO M270 GRADE 50.

THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES:

$$\text{AXIAL LOAD RESISTANCE} = \phi [(0.875 \sqrt{E} \text{ LOG}_{10}(10N)) - 50] \text{ (TONS)}$$

WHERE:

$\phi$  = RESISTANCE FACTOR OF 0.4

E = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALVE IS BASED ON THE ACTUAL RAM STROKE OBSERVED IN THE FIELD AND MEASURED IN FEET MULTIPLIED BY THE RAM WEIGHT IN POUNDS.

N = AVERAGE NUMBER OF HAMMER BLOWS PER INCH OF PILE PENETRATION FOR THE LAST 10 TO 20 BLOWS DELIVERED TO THE PILE HEAD.

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN:

- THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY & SINGLE ACTING HAMMERS ONLY).
- THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED OR OTHERWISE DAMAGED.
- THE PENETRATION IS QUICK AND UNIFORM.
- THERE IS NO APPRECIABLE REBOUND OF THE HAMMER, AND
- A FOLLOWER IS NOT USED.

THE NUMBER OF BLOWS PER INCH OF PILE PENETRATION MAY BE MEASURED EITHER DURING INITIAL DRIVING OR BY RE-DRIVING WITH A WARM HAMMER OPERATED AT FULL ENERGY AFTER A PILE SET PERIOD, AS DETERMINED BY THE ENGINEER.

IF WATER JETS ARE USED IN CONNECTION WITH THE DRIVING, DETERMINE THE AXIAL LOAD RESISTANCE BY THE FORMULA SHOWN ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

PAY ITEM NOTES

(F-50) INCLUDES COST OF 4 TYPE 1 CODE 3 DELINEATORS (AMBER COLOR).

- (1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY. SEE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, "PLAN QUANTITIES" SECTION 109.01(B).
- (2) SHALL INCLUDE ALL TRAFFIC CONTROL DEVICES NECESSARY TO REGULATE TRAFFIC DURING CONSTRUCTION. THIS ITEM SHALL BE PAID FOR AS LUMP SUM DUE TO THE MINOR EXTENT OF CONSTRUCTION FOR THIS PROJECT. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TCS STANDARDS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
- (3) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVAL AND DISPOSAL OF 5-42' PAN GIRDER SPANS X 29' WIDE AT APPROXIMATE STA. 106+75. THE PAY ITEM ALSO INCLUDES THE REMOVAL OF THE CONCRETE SLOPE WALL AROUND THE EXISTING ABUTMENTS. THE REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 619.04(B)2 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. THE STRUCTURE AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. INCLUDES THE COST TO REMOVE THE METAL APPROACH RAIL AND STACK ON R/W TO BECOME PROPERTY OF THE COUNTY.
- (4) CLSM BACKFILL SHALL REPLACE GRANULAR BACKFILL ON STANDARD CB26..32-C-SK30-ABUT-MISC-01E. QUANTITY INCLUDES 10 C.Y. TO BRING THE BACKFILL 6" BELOW THE FINISH GRADE.
- (5) PRICE BID TO INCLUDE THE COST OF BENT PILE ENCASEMENT AS SHOWN ON STD. HP1-2 AND SHALL EXTEND 4'-0" BELOW GROUND LINE AND EXTEND 10" ABOVE GROUND LINE. INCLUDES THE COST OF EXCAVATION, FORMS, CLASS A CONCRETE, AND WELDED WIRE FABRIC REINFORCING STEEL. SLOP TOP OF ENCASEMENT TO DRAIN.
- (6) PRICE BID TO INCLUDE THE COST OF PAINTING ALL EXPOSED STEEL OF THE PILE BENTS WITH A IZ-E-U PAINT SYSTEM IN ACCORDANCE WITH SECTION 512 OF THE STANDARD SPECIFICATIONS. ALL STEEL SHALL BE PAINTED PRIOR TO PLACEMENT OF CONCRETE FOR PILE ENCASEMENT AND PIER CAPS.

PAY QUANTITIES

200 BRIDGE PCB 80'-80'-80' SPAN TYPE III, CONVENTIONAL ABUTMENTS, 30° SKEW, 26'-0" CL. RDY, TR3 RAILS				
ITEM		DESCRIPTION	UNIT	QUANTITY
501(B)	1307	SUBSTRUCTURE EXCAVATION COMMON	(1) C.Y.	200.00
501(G)	6309	CLSM BACKFILL	(1)(4) C.Y.	98.00
503(A)	1312	PRESTRESSED CONCRETE BEAMS (TYPE III)	(1) L.F.	717.00
504(B)	1305	SAW-CUT GROOVING	(1) S.Y.	591.20
504(C)	6250	SEALED EXPANSION JOINT	(1) L.F.	66.12
504(D)	6239	CONCRETE RAIL (TR3)	(1) L.F.	553.40
506(A)	1322	STRUCTURAL STEEL	(1)(6) LB.	3,820.00
507(A)	6172	WEATHERING STEEL FIXED BEARING ASSEMBLY	(1) EA.	9.00
507(B)	6176	WEATHERING STEEL EXP. BEARING ASSEMBLY	(1) EA.	9.00
509(A)	1326	CLASS AA CONCRETE	(1) C.Y.	187.20
509(B)	1328	CLASS A CONCRETE	(1) C.Y.	125.60
511(A)	1332	REINFORCING STEEL	(1) LB.	66,130.00
514(A)	6010	PILES, FURNISHED (HP10X42)	L.F.	224.00
514(A)	6011	PILES, FURNISHED (HP12X53)	L.F.	530.00
514(A)	6016	PILES, FURNISHED (HP14X89)	L.F.	816.00
514(B)	6292	PILES, DRIVEN (HP10X42)	L.F.	224.00
514(B)	6294	PILES, DRIVEN (HP12X53)	L.F.	530.00
514(B)	6297	PILES, DRIVEN (HP14X89)	(5) L.F.	816.00
514(L)	6220	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.	1.00
601(B)	1353	TYPE I-A PLAIN RIPRAP	TON	887.00
601(C)	1355	TYPE I-A FILTER BLANKET	TON	296.00
613(H)	6204	6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.	60.00
613(I)	6207	6" NON-PERFORATED PIPE UNDERDRAIN ROUND	L.F.	30.00
619(D)	1397	REMOVAL OF EXISTING BRIDGE STRUCTURE	(3) L. SUM	1.00
623(F)	5686	GUARDRAIL ANCHOR UNIT (TYPE D-BF)	EA.	4.00
623(F)	6029	GUARDRAIL ANCHOR UNIT (TYPE A)	(F-50) EA.	4.00
880(J)	8905	CONSTRUCTION TRAFFIC CONTROL	(2) L. SUM	1.00

GUARDRAIL SCHEDULE

SHEET	STATION TO STATION	ANCHOR UNITS		TOTAL LENGTH OF RAIL
		TYPE A	TYPE D-BF	L.F.
		EA.	EA.	
5	104+27.96 TO 105+27.96 RT.	1.00	1.00	100.00
5	104+42.49 TO 105+42.49 LT.	1.00	1.00	100.00
5	108+02.51 TO 109+02.51 RT.	1.00	1.00	100.00
5	108+17.04 TO 109+17.04 LT.	1.00	1.00	100.00
SHEET TOTALS		4.00	4.00	400.00

TEXAS COUNTY SAND CREEK

SUMMARY OF PAY QUANTITIES & GENERAL NOTES (BRIDGE)