

REVISIONS		
REV. NO.	DESCRIPTION	DATE

GENERAL NOTES

SPECIFICATIONS -
 COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

PILE DRIVING -
 USE A PILE DRIVING HAMMER OF THE SIZE AND TYPE CAPABLE OF CONSISTENTLY DELIVERING THE EFFECTIVE DYNAMIC ENERGY TO DRIVE THE PILES TO THE REQUIRED TIP ELEVATION AND TO ACHIEVE AN AXIAL LOAD RESISTANCE EQUAL TO OR GREATER THAN THE FACTORED PILE REACTION WITHOUT EXCEEDING THE LIMITATIONS SET ON THE ALLOWABLE DRIVING STRESSES IN ACCORDANCE WITH SUBSECTION 514.03.A.(2) OF THE SPECIFICATIONS.

PILE CAPACITY -
 THE REQUIRED PILE SIZE AND THE FACTORED PILE REACTION ARE SHOWN IN THE PLANS WITH THE FOUNDATION DATA. THE FOLLOWING FORMULA (GATES EQUATION) WILL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES:

AXIAL LOAD RESISTANCE = $\Phi * [SQRT (E) * 0.875 * LG (10 * N) - 50]$ (TONS)
 WHERE: Φ = RESISTANCE FACTOR OF 0.4
 E = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALUE 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.
 SQRT = SQUARE ROOT
 LG = LOGARITHM TO THE BASE 10

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN CERTAIN CONDITIONS APPLY: 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IN CONNECTION WITH THE DRIVING, DETERMINE THE AXIAL LOAD RESISTANCE BY THE FORMULA SHOWN ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

CONCRETE -
 PROVIDE ALL EXPOSED CONCRETE EDGES WITH A 1/2" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. USE SIZED LUMBER FOR ALL CHAMFER STRIPS.

STAY-IN-PLACE DECK FORMS -
 STAY-IN-PLACE STEEL DECK FORMS OR ANY OTHER TYPE OF STAY-IN-PLACE FORMS WILL NOT BE ALLOWED.

RETAINING WALLS -
 SUBSTITUTION OF MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS FOR CAST-IN-PLACE (CIP) RETAINING WALLS WILL NOT BE ALLOWED.

CUSTOM END SECTION -
 DETAILS SHOWN ON STANDARD END SECTION AND CURTAIN WALL SHEETS APPLY TO EAST END SECTION. STD. RCB-E2-H9-30-2-01E APPLIES TO WEST END SECTION. DO NOT INSTALL AL1 AND WD1 BARS SHOWN ON THE AFOREMENTIONED STANDARD AT THE WEST END SECTION. USE CUSTOM CL3 AND CL4 BARS IN LIEU OF CL1 AND CL2 BARS IN HEADWALL.

J.P. NO. 28774(04) 0200 BRIDGE		PAY QUANTITIES		
S.H. 44 OVER DRY ELK CREEK 2 - 14' x 9' x 99' R.C.B. @ STA. 601+50.00, 30° SKEW RT. FWD.				
ITEM NO.	ITEM	UNIT	TOTAL	
202(A) 1301	UNCLASSIFIED EXCAVATION (BR-1)	C.Y.	1,810	
501(A) 1306	STRUCTURAL EXCAVATION UNCLASSIFIED (BR-1, 2)	C.Y.	230	
504(F) 6006	HANDRAILING (BR-1)	L.F.	185.5	
509(A) 1326	CLASS AA CONCRETE (BR-1, 3)	C.Y.	518.1	
510(A) 6334	RETAINING WALL (BR-1, 6)	S.Y.	207.0	
511(A) 1332	REINFORCING STEEL (BR-1, 3)	LB.	87,870	
514(A) 6010	PILES, FURNISHED (HP 10x42) (BR-4)	L.F.	1,650	
514(B) 6292	PILES, DRIVEN (HP 10x42)	L.F.	1,650	
514(L) 6220	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.	1	
619(D) 1397	REMOVAL OF EXISTING BRIDGE STRUCTURE (BR-5)	L.SUM	1	

PAY ITEM NOTES

- (BR-1) PAYMENT TO THE CONTRACTOR WILL BE BASED ON PLAN QUANTITIES.
- (BR-2) SEE STD. SBI-4 FOR EXCAVATION DETAILS.
- (BR-3) QUANTITIES SHOWN ON STANDARD END SECTION DETAILS DO NOT APPLY ON WEST END.
- (BR-4) PAYMENT TO THE CONTRACTOR WILL BE BASED ON PLAN QUANTITIES UNLESS ADDITIONAL PILING LENGTH IS REQUIRED. ADDITIONAL PILES, FURNISHED, AS AUTHORIZED BY THE ENGINEER, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE.
- (BR-5) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVING AND DISPOSING OF THE SUPERSTRUCTURE AND SUBSTRUCTURE OF THE EXISTING BRIDGE IN ACCORDANCE WITH SUBSECTION 619.04.B OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. EXISTING STEEL I-BEAMS SHALL BECOME PROPERTY OF WASHITA COUNTY. ALL OTHER REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. STOCKPILE EXISTING STEEL I-BEAMS WITHIN RIGHT-OF-WAY TO BE PICKED UP BY WASHITA COUNTY. THE EXISTING BRIDGE IS DESCRIBED AS 3 - 30' I BEAM SPANS WITH 28' CLEAR ROADWAY.
- (BR-6) THE RETAINING WALLS CONTAIN AN ESTIMATED TOTAL OF 283.4 C.Y. OF CLASS A CONCRETE AND 23,290 LB. OF REINFORCING STEEL. INCLUDE THE COST OF CLASS A CONCRETE, REINFORCING STEEL, SUBSTRUCTURE EXCAVATION COMMON, 6" PERFORATED PIPE UNDERDRAIN AND 6" NON-PERFORATED PIPE UNDERDRAIN IN THE CONTRACT UNIT PRICE OF "RETAINING WALL."



S.H. 44 OVER DRY ELK CREEK		WASHITA COUNTY	
Design	AFW	Detail	DRB
Check	AFW	WHITE ENGINEERING ASSOCIATES	
STATE OF OKLAHOMA		DEPARTMENT OF TRANSPORTATION	
JOB PIECE NO. 28774(04)		SHEET NO. 4	