0200 – BRIDGE	BRIDGE "A" PAY QUANTITIES			
	85' x 26' CLEAR ROADWAY INTEGRAL TYPE III PCB SPAN SKEWED ZERO DEGREES			
ITEM	DESCRIPTION		UNITS	QUANTITY
501(B) 1307	SUBSTRUCTURE EXCAVATION COMMON	(R-1)	CY	100.00
501(F) 6352	GRANULAR BACKFILL	(R-1)	CY	56.00
503(A) 1312	PRESTRESSED CONCRETE BEAMS (TYPE III)	(R-1)	LF	254.00
504(D) 6239	CONCRETE RAIL (TR3)	(R-1)	LF	226.60
506(A) 1322	STRUCTURAL STEEL	(R-1)	LB	320.00
507(A) 6172	WEATHERING STEEL FIXED BEARING ASSEMBLY		EA	6.00
509(A) 1326	CLASS AA CONCRETE	(R-1)(1)	CY	85.50
509(B) 1328	CLASS A CONCRETE	(R-1)	CY	39.20
511(A) 1332	REINFORCING STEEL	(R-1)	LB	21,470.00
514(A) 6010	PILES, FURNISHED (HP 10X42)		LF	516.00
514(B) 6292	PILES, DRIVEN (HP 10X42)		LF	516.00
514(L) 6220	PILE SPLICE, H-PILE (NON-BIDDABLE)		EA	1.00
601(B) 1353	TYPE I-A PLAIN RIPRAP	(2)	TON	1,337.00
601(C) 1355	TYPE I-A FILTER BLANKET	(3)	TON	273.00
613(H) 6204	6" PERFORATED PIPE UNDERDRAIN ROUND		LF	52.00
613(I) 6207	6" NON-PERF.PIPE UNDERDRAIN RND.		LF	50.00
623(F) 5686	GUARDRAIL ANCHOR UNIT (TYPE D-BF)		EA	4.00
623(F) 6029	GUARDRAIL ANCHOR UNIT (TYPE A)	(4)	EA	4.00

0300 – TRAFFIC CONTROL	TRAFFIC CONTROL PAY QUANTITIES			
880(J) 8905	CONSTRUCTION TRAFFIC CONTROL	(5)	LSUM	1.00

0640 – CONSTRUCTION	CONSTRUCTION PAY QUANTITIES			
220 2800	SWPPP DOCUMENTATION AND MANAGEMENT		LSUM	1.00
641 1399	MOBILIZATION		LSUM	1.00

0600 – STAKING	STAKING PAY QUANTITIES			
642(B) 0096	CONSTRUCTION STAKING LEVEL II	(6)	LSUM	1.00

0100 – ROADWAY	ROADWAY PAY QUANTITIES			
ITEM	DESCRIPTION		UNITS	QUANTITY
201(A) 0102	CLEARING AND GRUBBING		LSUM	1.00
202(H) 0185	EARTHWORK	(7)(8)	LSUM	1.00
221(C) 2801	TEMPORARY SILT FENCE	(9)	LF	1,000.00
221(F) 0100	TEMPORARY SILT DIKE	(9)	LF	300.00
230(A) 2806	SOLID SLAB SODDING	(R-7)(R-8)	SY	12,224.00
233(A) 2817	VEGETATIVE MULCHING	(R-11)	AC	6.30
402(E) 0225	TRAFFIC BOUND SURFACE COURSE TYPE E	(10)(12)	TON	939.00
408 5774	PRIME COAT	(R-28)	GAL	1,084.00
509(D) 0325	CLASS C CONCRETE	(R-41)	CY	10.00
619(A) 0920	REMOVAL OF STRUCTURES & OBSTRUCTIONS	(R-48)(R-49)(13)	LSUM	1.00
624(C) 4458	FENCE-STYLE SWF (4 BARBED WIRE)	(R-52)(R-53)(11)	LF	1,290.00
624(C) 7181	FENCE-STYLE SWF (6 BARBED WIRE)	(R-52)(R-53)(11)	LF	1,314.00

SUMMARY OF GUARDRAILS

STATION TO STATION	LT.	RT.	TYPE D-BF (EACH)	TYPE A (EACH)	LENGTH INCLUDING ANCHOR UNITS (FEET)
120+12.42 TO 121+12.42	X		1	1	100.00
120+12.42 TO 121+12.42		X	1	1	100.00
122+23.58 TO 123+23.58	X		1	1	100.00
122+23.58 TO 123+23.58		X	1	1	100.00
	TOTALS		4	4	400.00

SUMMARY OF FENCING

SHT. NO.	ALIGNMENT	LT.	RT.	PERM. OR TEMP.	STATION TO STATION	FENCE STYLE SWF (4 BARBED WIRE) 624(C) (LF)	FENCE STYLE SWF (6 BARBED WIRE) 624(C) (LF)	STYLE
R003	CL SRVY	X		PERM.	113+29 TO 125+81	1,264.00		SWF
R003	CL SRVY		X	PERM.	113+56 TO 126+23		1,288.00	SWF
					TOTALS	1,264.00	1,288.00	SWF

PAY QUANTITY NOTES

(R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.

(R-7) FOR 230(A) PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 LBS. PER 1,000 SQUARE YARDS.

(R-8) FOR 230(A) PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 80 GALLONS PER SQUARE YARD.

(R-11) THE QUANTITY ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 3.15 ACRES.

(R-28) PRIME COAT SHALL BE APPLIED AT AN ESTIMATED RATE OF 0.35 GAL. PER SQ. YD. WHEN APPLIED TO SUBGRADE, AND 0.25 GAL. PER SQ. YD. WHEN APPLIED TO AGGREGATE BASE. THE ACTUAL CUTBACK PRIME COAT REQUIRED FOR PLACEMENT OPERATIONS WILL BE DETERMINED BY THE CONTRACTOR, AND SHALL CONSIDER THE RESIDUE FROM DISTILLATION PERCENTAGE SHOWN IN SECTION 708.03 OF THE STANDARD SPECIFICATIONS.

(R-41) QUANTITY INCLUDES AN ESTIMATED 10 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.

(R-48) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES AND OTHER STRUCTURES WITHIN THE RIGHT-OF-WAY.

(R-49) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.

(R-52) INCLUDES 2% FOR GROUND MEASUREMENT.

(R-53) ALL GATES AND GATE END POSTS FOR STRANDED WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

(1) COST OF FINISHING BRIDGE DECK IN ACCORDANCE WITH SPECIAL PROVISION 504.01 THROUGH 504.04 SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

(2) ESTIMATED AT 110 LBS./CU. FT.

(3) ESTIMATED AT 105 LBS./CU. FT.

(4) PRICE BID TO INCLUDE THE COST OF 4 TYPE 1 CODE 3 DELINEATORS (AMBER COLOR).

(5) CONSTRUCTION TRAFFIC CONTROL SHALL INCLUDE ALL BARRICADES AND SIGNS REQUIRED ON EACH END OF THE CONSTRUCTION AREA AND OTHER AREAS DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNS, BARRICADES, LIGHTS, ETC., ACCORDING TO THE STANDARDS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND AS SHOWN ON THE STANDARD DRAWINGS. COST OF ALL NECESSARY CONSTRUCTION SIGNING WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "CONSTRUCTION TRAFFIC CONTROL."

(6) IN ADDITION TO THE RESPONSIBILITIES SHOWN IN THE SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND/OR REESTABLISHING THE SURVEY CONTROL POINTS SHOWN ON THE PLANS, STAKING THE CENTERLINE OF CONSTRUCTION AND REESTABLISHING RIGHT-OF-WAY STAKES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING BENCH MARKS SHOWN ON THE PLANS AND FOR ESTABLISHING NEW BENCH MARKS AS NEEDED TO CONSTRUCT THE PROJECT.

(7) SEE SUMMARY OF GRADING QUANTITIES, SHEET NO. R003.

(8) INCLUDES COST OF SALVAGING AND PLACING TOPSOIL APPROXIMATELY 25 FEET WIDE BY 5 INCHES DEEP FROM STA. 114+50 TO 125+80 AND 18-46-0 FERTILIZER (ESTIMATED AT 150 LBS PER ACRE). SEE TOPSOIL NOTE, SHEET NO. R002.

(9) PRICE BID TO INCLUDE COST OF TEMPORARY SEDIMENT REMOVAL.

(10) INCLUDES 102 TONS FOR GUARD RAIL WIDENING.

(11) ALL CORNER AND STRETCH POSTS SHALL BE STEEL PIPE.

(12) ESTIMATED AT 140 LBS./CU. FEET.

(13) ITEM "REMOVAL OF STRUCTURES AND OBSTRUCTIONS" INCLUDES REMOVAL OF THREE EXISTING 96' X 40' CGMP'S. CONTRACTOR SHALL REMOVE PIPES WITHOUT DAMAGE. IF PIPES ARE DAMAGED DURING REMOVAL, CONTRACTOR SHALL REPLACE THEM. PIPES TO BECOME PROPERTY OF THE COUNTY. COST OF REMOVAL SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "REMOVAL OF STRUCTURES AND OBSTRUCTIONS."

ENVIRONMENTAL MITIGATION NOTES:

MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. MANY BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR MOST BIRD SPECIES EXTENDS FROM APRIL 1 TO AUGUST 31. THE PROJECT WAS SURVEYED FOR MIGRATORY BIRD NESTS IN 2016. ALTHOUGH NO NESTS WERE OBSERVED, THE SURVEY IS ONLY VALID UNTIL THE 2017 NESTING SEASON. THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST AT 405-521-2515 IF ANY BIRD USE OF THE EXISTING STRUCTURES IS OBSERVED. IF BIRDS ARE OBSERVED THEN PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGE/STRUCTURES SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND MARCH 31, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED.

LOCATIONS OUTSIDE THE PROJECT AREA IN THE FOLLOWING AREA MUST NOT BE UTILIZED FOR BORROW, EQUIPMENT STAGING, HAUL ROADS, SPOIL DUMPS OR ANY OFF-SITE PROJECT-RELATED ACTIVITY.

T3S R9W:
SECTION 31: SE1/4 SE1/4 SW1/4

T4S R9W
SECTION 5: SE1/2 SW1/4 SW1/4

GENERAL NOTES

SPECIFICATIONS: COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION JANUARY 4, 2010, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

AIR VENTS: 2" PVC PIPE SHALL BE PLACED VERTICALLY THROUGH THE DECK BETWEEN THE BEAMS AS SHOWN IN THE DETAIL SHOWN ON THE GENERAL PLAN AND ELEVATION.

ALL TREES, BRUSH AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER SHALL BE CLEANED OUT TO THE RIGHT-OF-WAY LINE, AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

CREEK AND RIVER BANKS SHALL BE KEPT IN THEIR NATURAL STATE AS MUCH AS POSSIBLE. THE CONTRACTOR SHALL NOT UNDULY STRIP EXISTING PROTECTIVE VEGETATION IN THE VICINITY OF THE STREAM BANKS AND SHALL SO CONDUCT HIS OPERATIONS AS NOT TO DAMAGE THE BANKS WITH HIS EQUIPMENT. NO BANK UPSTREAM OR DOWNSTREAM SHALL BE EXCAVATED EXCEPT AS APPROVED FOR AND AS SHOWN ON THE PLANS. NO WORK ROADS SHALL BE CONSTRUCTED UPSTREAM WHERE IT IS NECESSARY TO CUT THE STREAM OR RIVER BANKS EXCEPT BY THE APPROVAL OF THE ENGINEER. BANK CUTS FOR WORK ROADS SHALL BE LOCATED DOWNSTREAM AND REPLACED BY THE CONTRACTOR TO THEIR ORIGINAL SHAPE AND DENSITY. UNNECESSARY STRIPPING OF VEGETATION GROWTH ALONG BANKS IN THE CONSTRUCTION AREA IS NOT PERMITTED.

THE FOLLOWING ITEMS WILL BE THE RESPONSIBILITY OF THE COUNTY AND NOT A PART OF THIS CONTRACT: (1) ACQUISITION AND STAKING OF RIGHT-OF-WAY; (2) UTILITY RELOCATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION AND DETOUR SIGNING.

ROADWAY SHALL BE CLOSED TO THROUGH TRAFFIC DURING THE CONSTRUCTION PERIOD. CONTRACTOR SHALL PROVIDE ACCESS TO ADJACENT LAND OWNERS AND TENANTS.

(CAUTION) THE LOCATION AND DEPTH OF ALL UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC. PRIOR TO DIGGING NEAR UTILITIES. IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE1" 1-800-522-6543 OR 811.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY RIGHT-OF-WAY FENCE AS REQUIRED. WHEN THE PORTION OF THE PROJECT THAT REQUIRED THIS FENCE IS COMPLETED, THE TEMPORARY FENCE SHALL BE REMOVED AND PERMANENT RIGHT-OF-WAY FENCE SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST OF TEMPORARY FENCING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL NOTIFY THE COTTON COUNTY BOARD OF COMMISSIONERS, CED 6 AND ODOT DIVISION VII OFFICE IN DUNCAN, IN WRITING, FOURTEEN CALENDAR DAYS PRIOR TO BEGINNING CONSTRUCTION.

PILE DRIVING AND CAPACITY –

THE FACTORED REACTION FOR EACH HP 10X42 PILE AT THE ABUTMENT IS 73.5 TONS ON BRIDGE "A".

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

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

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.

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN:
- THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY AND 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 ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.