CRAIG FREDRICK – COUNTY COMMISSIONER
DISTRICT NO. 2

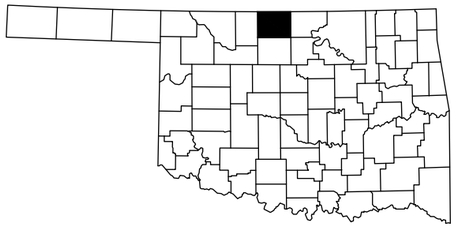
TYLER D. SCHRODER, P.E. 25837
CIRCUIT ENGINEERING DISTRICT 8
2901 N. VAN BUREN
ENID, OK. 73703

MELISSA DAVIS
LOCAL GOVERNMENT COORDINATION DIVISION
OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	XXX	1	18

DESIGN DATA

ADT 2022=220
ADT 2042=327
DESIGN SPEED=55 M.P.H.
TERRAIN– FLAT



SURVEY DATA

1. HORIZONTAL CONTROL
   A. HORIZONTAL CONTROL FOR THIS SURVEY IS THE ESTABLISHED SECTION CORNERS ALONG THE CONSTRUCTION REFERENCE LINE & SECTION LINE
2. VERTICAL CONTROL
   A. LEVEL DATUM IS MEAN SEA LEVEL (U.S.C. & G.S.)

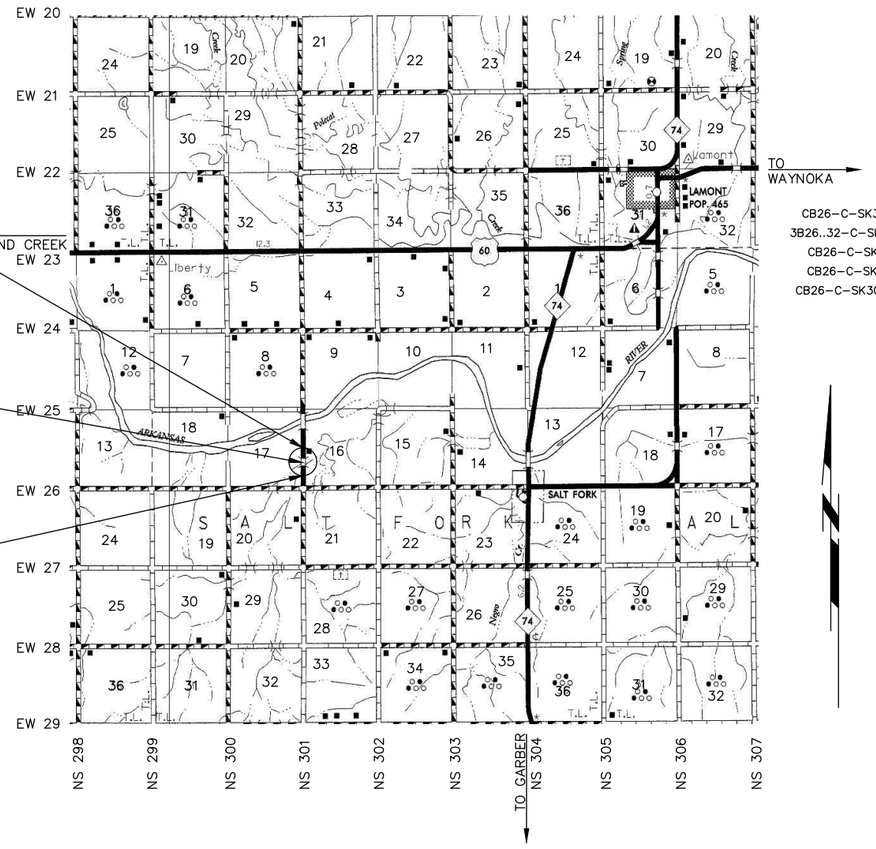
STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED

COUNTY BRIDGE

FEDERAL AID PROJECT NO. XXXXXX
BRIDGE AND APPROACH PLANS
GRANT COUNTY
UNNAMED CREEK
STATE JOB NO. 32852(04)
(OLD NBI NO. 13474)(NEW NBI NO. XXXX)
LOCATION NO. 27N3010E0250008
LAT. 36° 38' 23" N LONG. 97° 38' 31" W

INDEX OF SHEETS



STA. 117+50.00 END CONSTRUCTION
F.A. PROJ. NO.

END BRIDGE STA. 110+38.69
BRIDGE LENGTH 107'–7 5/16"
BEGIN BRIDGE STA. 111+46.30

STA. 104+00.00 BEGIN CONSTRUCTION
F.A. PROJ. NO.

THE FOLLOWING STANDARDS SHALL BE USED:

2019 ROADWAY	2009 TRAFFIC		2009 MAINTENANCE
SSS–1–1	DU1–1–00	TCS6–1–02	GRAU1–1–00
TSD–2–0	TCS1–1–01	TCS7–1–02	GRH1–1–00
TSC2–3–2	TCS2–1–00	TCS8–1–00	GRH2–1–00
	TCS4–1–01	TCS9–1–01	GRH3–1–00
	TCS5–1–00		

2009 BRIDGE

CB26–C–SK30–ABUT–PC2–02E	CB26–C–SK0..30–PCB–IV–105–01E	CB26–C–SK30–SPR–QUAN–PCB–2–01E	HP1–2–01E
3B26..32–C–SK30–ABUT–MISC–01E	CB26..32–C..I–SK0..30–PCB–DTL–1–01E	CB26..32–C–SK30–WING–PC2–01E	TR3–2–01E
CB26–C–SK30–DKSLB–1–01E	CB26..32–C..I–SK0..30–PCB–DTL–2–01E	CB26–C–SK30–XSECT–PC234–01E	
CB26–C–SK30–DKSLB–2–01E	CB26–C–SK30–LSECT–PCB–01E	CB26–C–SK30–DIA–END–PC234–01E	
CB26–C–SK30–DKSLB–BLIST–01E	CB26–C–SK30–SPR–QUAN–PCB–1–01E	CB26–C–SK0..30–DIA–INT–PCB–01E	
	CB26..32–C..I–SK0..30–GRAU–BC–00E	CB26–C–SK0..30–BRG–PC2–01E	

DATE	
COMM. DIST. 1	
COMM. DIST. 2	
COMM. DIST. 3	
ATTEST	
COUNTY CLERK	

SCALES

PLAN	1"=50'
PROFILE HOR.	1"=50'
VER.	1"=5'
LAYOUT MAP	1"=5,280'

CONVENTIONAL SIGNS

PROPOSED ROAD
RAILROADS
RANGE & TOWNSHIP
SECTION LINES
QUARTER SECTION LINES
FENCES
GROUND LINE
EXISTING ROADS
BASE LINE
GRADE LINES
TELEPHONE & TELEGRAPH
POWER LINES
OIL WELLS
BUILDINGS
DRAINAGE STRUCTURES–IN PLACE
DRAINAGE STRUCTURES–NEW
Press. R/W
RIGHT–OF–WAY LINES–EXISTING
R/W
RIGHT–OF–WAY LINES–NEW
RIGHT–OF–WAY MARKERS–IN PLACE
RIGHT–OF–WAY MARKERS–REMOVE & RESET
RIGHT–OF–WAY MARKERS–NEW
CONTROLLED ACCESS
RIGHT–OF–WAY FENCE

PROJECT LENGTHS BASED ON CRL

ROADWAY LENGTH	1,242.39 FT.	0.235 MI.
BRIDGE LENGTH	107.61 FT.	0.020 MI.
PROJECT LENGTH	1,350.00 FT.	0.255 MI.
EXCEPTIONS	NONE	
EQUATIONS	NONE	

"2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION–ENGLISH GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, DECEMBER 18, 2019."

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

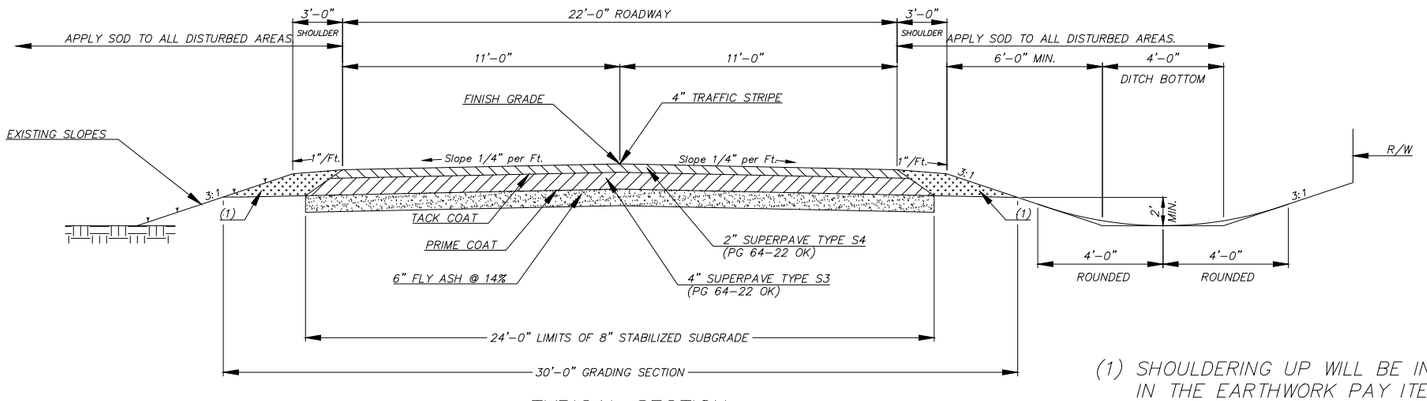
65% PLANS
3/9/22

TYLER D. SCHRODER
REGISTERED PROFESSIONAL ENGINEER NO. 25837
J/P NO. 32852(04)

8

CIRCUIT ENGINEERING DIST. 8
2901 N. VAN BUREN
ENID, OK 73703
(580) 237–4810

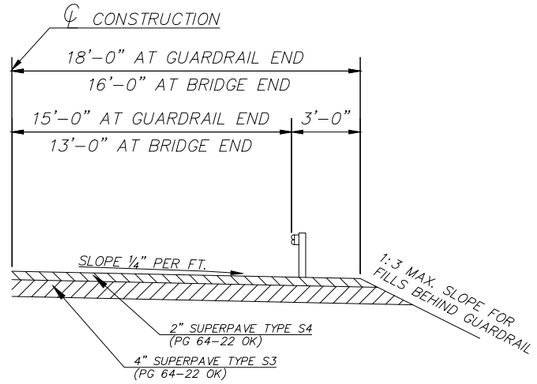
OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATION



TYPICAL SECTION

(1) SHOULDERING UP WILL BE INCLUDED IN THE EARTHWORK PAY ITEM.

SUMMARY OF MAINLINE SURFACING QUANTITIES		
STATION EXTENT	LENGTH	T.B.S.C.
	FT.	TONS
104+00.00 TO 110+37.38	637.38	0.00
111+47.61 TO 117+50.00	602.39	0.00
SHEET TOTALS	1,239.77	0.00



SHOULDER WIDENING FOR GUARDRAIL

GUARDRAIL SCHEDULE				
SHEET	STATION TO STATION	ANCHOR UNITS		LENGTH OF RAIL
		TYPE A	TYPE D-BF	
		EA.	EA.	L.F.
R003	109+13.44 TO 110+13.44 LT.	1.00	1.00	100.00
R003	109+27.98 TO 110+27.98 RT.	1.00	1.00	100.00
R003	111+57.01 TO 112+57.01 LT.	1.00	1.00	100.00
R003	111+71.54 TO 112+71.54 RT.	1.00	1.00	100.00
SHEET TOTALS		4.00	4.00	400.00

SUMMARY OF EARTHWORK		
*EMBANKMENT +20%	0.00	CY.
UNCL. EXCAVATION (RDY)	0.00	CY.
EXCESS MATERIAL FROM BR. UNCL. EXCAVATION	0.00	CY.
UNCLASSIFIED BORROW	0.00	CY.

*INCLUDES 135.00 C.Y. OF EMBANKMENT FOR FIELD ENTRANCES AND DRIVES.

Surfac

GRANT COUNTY UNNAMED CREEK

TYPICALS & SCHEDULES

J/P NO. 32852(04) SHEET NO. 0002

GENERAL CONSTRUCTION NOTES (BRIDGE)

ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION ENGLISH VERSION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

THE BRIDGE SITE WILL BE CLOSED 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.

ABUTMENT PILING CAPACITY:

THE MAXIMUM FACTORED PILE LOAD FOR EACH HP 12X53 PILE IS 60.1 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:

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

THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE COUNTY, CED #8, AND ODOT DIST 4 FOURTEEN (14) CALENDAR DAYS BEFORE ANY CONSTRUCTION OR DEMOLITION BEGINS ON THIS PROJECT.

PAY ITEM NOTES

(TC–28) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC–29) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC–30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC–84) 120 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEM THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.

(1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY. SEE 2019 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, "PLAN QUANTITIES" SECTION 109.01(B).

(2) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSIST OF REMOVAL OF THE EXISTING 30'–59'–30' I–BEAM SPANS. THE REMOVAL SHALL BE IN ACCORDANCE WITH SPECIFICATION 619.04(b)2 OF STANDARD SPECIFICATION AND IN A MANNER APPROVED BY THE ENGINEER. THE EXISTING BEAMS SHALL BE STACKED ON R/W TO BECOME PROPERTY OF THE COUNTY. THE REMAINING MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. CONTRACTOR IS TO TAKE SPECIAL CARE WITH BEAMS DURING REMOVAL. CONTRACTOR SHALL CONTACT THE RESIDENT CONSTRUCTION ENGINEER PRIOR TO BRIDGE REMOVAL TO COORDINATE WITH THE COUNTY.

PAY QUANTITIES

200 BRIDGE NBI NO. 32852(04) 105' PCB SPAN, 26'–0" CL. RDY, TR3 RAILS

ITEM		DESCRIPTION		UNIT	QUANTITY
501(B)	1300	SUBSTRUCTURE EXCAVATION COMMON	(1)	C.Y.	0.00
501(G)	1800	CLSM BACKFILL	(1)	C.Y.	0.00
503(A)	4240	PRESTRESSED CONCRETE BEAMS (TYPE IV)	(1)	L.F.	0.00
504(D)	5410	CONCRETE RAIL (TR3)	(1)	L.F.	0.00
506(A)	7200	STRUCTURAL STEEL	(1)	LB.	0.00
507(A)	8210	WEATHERING STEEL FIXED BEARING ASSEMBLY		EA.	0.00
507(B)	8310	WEATHERING STEEL EXP. BEARING ASSEMBLY		EA.	0.00
509(A)	0210	CLASS AA CONCRETE	(1)	C.Y.	0.00
509(B)	0320	CLASS A CONCRETE	(1)	C.Y.	0.00
511(A)	2210	REINFORCING STEEL	(1)	LB.	0.00
514(A)	5210	PILES, FURNISHED (HP10X42)		L.F.	0.00
514(A)	5220	PILES, FURNISHED (HP12X53)		L.F.	0.00
514(B)	5310	PILES, DRIVEN (HP10X42)		L.F.	0.00
514(B)	5320	PILES, DRIVEN (HP12X53)		L.F.	0.00
514(L)	6300	PILE SPLICE, H–PILE (NON–BIDDABLE)		EA.	0.00
601(B)	1230	TYPE I–A PLAIN RIPRAP		TON	0.00
601(C)	1310	TYPE I–A FILTER BLANKET		TON	0.00
613(H)	6205	6" PERFORATED PIPE UNDERDRAIN ROUND		L.F.	0.00
613(I)	6310	6" NON–PERFORATED PIPE UNDERDRAIN ROUND		L.F.	0.00
619(D)	6700	REMOVAL OF EXISTING BRIDGE STRUCTURE	(2)	L. SUM	0.00

PAY QUANTITIES

0300 TRAFFIC

ITEM		DESCRIPTION		UNIT	QUANTITY
856(A)	8530	TRAFFIC STRIPE (MULTI–POLYMER)(4" WIDE)		L.F.	0.00
880(B)	6300	CONSTRUCTION SIGNS 0.00 TO 6.25 S.F.	(TC–28)(TC–84)	S.D.	0.00
880(B)	6310	CONSTRUCTION SIGNS 6.26 S.F. TO 15.99 S.F.	(TC–29)(TC–84)	S.D.	0.00
880(B)	6320	CONSTRUCTION SIGNS 16.0 S.F. TO 32.99 S.F.	(TC–30)(TC–84)	S.D.	0.00
880(C)	6410	CONSTRUCTION BARRICADES (TYPE III)	(TC–84)	S.D.	0.00
880(E)	6600	WARNING LIGHTS (TYPE A)	(TC–84)	S.D.	0.00

GRANT COUNTY UNNAMED CREEK

PAY QUANTITIES & GENERAL NOTES

J/P NO. 32852(04) SHEET NO. AB01

ENVIRONMENTAL MITIGATION NOTES

EARTHWORK NOTE:
THE CONTRACTOR MUST ENSURE THAT ANY MATERIAL INCORPORATED INTO THE PROJECT IS FREE OF ANY HAZARDOUS, INDUSTRIAL OR CONTAMINATED WASTE, REFER TO SUB–SECTIONS 106.01 AND 202.02 OF THE 2019 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

IMPORTED MATERIAL (EG. BORROW) – IF MATERIAL IS IMPORTED TO THE PROJECT AND AT ANY POINT THE MATERIAL IS DETERMINED BY THE ENGINEER TO INCLUDE ANY TYPE OF UNACCEPTABLE CONTAMINATION, THE MATERIAL MAY REQUIRE REMOVAL, IN WHOLE, OR IN PART. IF REMOVAL IS REQUIRED, THEN THE INITIAL PLACEMENT, REMOVAL AND PROPER DISPOSAL OF THIS MATERIAL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL OF THE UNACCEPTABLE MATERIAL SHALL BE APPROVED BY THE ENGINEER, REFER TO SUB–SECTION 107.15 OF THE 2019 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

TO ASSIST THE CONTRACTOR, THE "OFF PROJECT FACILITY/ BORROW SITE HAZARDOUS MATERIALS QUESTIONNAIRE" IS
PROVIDED ON THE DEPARTMENT'S WEB SITE:

HTTPS://OK.GOV/ODOT/PROGRAMS AND PROJECTS/ENVIRONMENTAL/INDEX.HTML

THIS QUESTIONNAIRE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR SO THAT A CLEARER UNDERSTANDING OF THE CHARACTERISTICS OF THE PROPOSED SITE/ MATERIAL IS ACHIEVED. COMPLETION AND SUBMITTAL OF THIS FORM TO THE ENGINEER DOES NOT EXCUSE THE CONTRACTOR FROM PROVIDING MATERIALS THAT ARE FREE OF HAZARDOUS AND INDUSTRIAL COMPOSITION IN ACCORDANCE WITH SUB–SECTIONS 106.01 AND 202.02 OF THE 2019 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NON–COMPLIANCE NOTE:
FAILURE TO IMPLEMENT THE COMMITMENTS SPECIFIED IN THE PLAN NOTES CAN RESULT IN NON–COMPLIANCE ISSUES ON THE PROJECT. WORK ACTIVITIES MAY BE SUSPENDED ON THE PROJECT, FOR AN UNDETERMINED DURATION, WHILE WORKING WITH REGULATORS TO BRING THE PROJECT BACK INTO COMPLIANCE. THE CONTRACTOR WILL NOT BE COMPENSATED FOR TIME LOST.

WATER QUALITY NOTE:
WATER QUALITY CONSERVATION: APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE IMPACTS FROM STORM WATER DISCHARGES AND SEDIMENTATION IN STREAMS, AS ESTABLISHED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, SHALL BE CONSCIENTIOUSLY IMPLEMENTED THROUGHOUT THE PROPOSED CONSTRUCTION PERIODS, IN ORDER TO MINIMIZE ANY POTENTIAL IMPACTS TO ANY LISTED SPECIES. THE EFFECTIVENESS OF EROSION CONTROLS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS, AND OTHER SUCH SUBSTANCES SHALL BE STORED AT LEAST 100 FEET FROM THE ORDINARY HIGH WATER MARK (OHWM). REFUELING OF CONSTRUCTION EQUIPMENT SHALL ALSO BE CONDUCTED AT LEAST 100 FEET FROM THE OHWMS. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED AROUND STAGING AREAS TO PROHIBIT DISCHARGE OF MATERIALS FROM THESE SITES. CONSTRUCTION WASTE MATERIALS AND DEBRIS SHALL BE STOCKPILED AT LEAST 25 FEET OUTSIDE OF THE OHWMS, AND THESE MATERIALS SHALL BE REMOVED AND DISPOSED OF PROPERLY FOLLOWING COMPLETION OF THE PROJECT. PREVENTATIVE MEASURES MUST BE TAKEN TO PROHIBIT THE DISCHARGE OF CONTAMINANTS INTO ANY SURFACE WATERS.

MIGRATORY BIRDS NOTE:
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 MARCH 1 TO AUGUST 31. MIGRATORY BIRD NESTING USE OF THE EW–48 TURKEY CREEK BRIDGE (NBI:19044) WAS OBSERVED IN JUNE 2017. PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGE SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED. IF PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION CANNOT BE COMPLETED BETWEEN SEPTEMBER 1 AND FEBRUARY 28, THE BRIDGE SHALL BE PROTECTED FROM NEW NEST ESTABLISHMENT PRIOR TO MARCH 1, BY MEANS THAT DO NOT RESULT IN BIRD DEATH OR INJURY. OPTIONS INCLUDE THE EXCLUSION OF ADULT BIRDS FROM SUITABLE NEST SITES ON OR WITHIN A STRUCTURE BY THE PLACEMENT OF WEATHER–RESISTANT POLYPROPYLENE NETTING WITH 0.25–INCH OR SMALLER OPENINGS, PRIOR TO MARCH 1. METHODS OTHER THAN NETTING MUST BE PRE–APPROVED BY THE ODOT BIOLOGIST.

BALD EAGLE NOTE:
THE BALD EAGLE NESTING SEASON IN OKLAHOMA EXTENDS FROM SEPTEMBER 16, THROUGH MAY 31. A BALD EAGLE SURVEY WAS COMPLETED FOR THIS PROJECT IN FEBRUARY 2020. NO NESTS WERE OBSERVED WITHIN THE EXPECTED IMPACT AREA. SURVEY RESULTS ARE VALID ONLY FOR THE NESTING SEASON IN WHICH THE SURVEY WAS PERFORMED. IF CONSTRUCTION ACTIVITIES HAVE BEGUN, BUT ARE NOT COMPLETED BY SEPTEMBER 16, 2020 THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST. THE ODOT BIOLOGIST SHALL SCHEDULE ANY ADDITIONAL SURVEYS THAT MAY BE REQUIRED AS SOON AS LEAVES FALL OFF THE TREES (APPROXIMATELY NOVEMBER 1). BECAUSE NO NESTS WERE OBSERVED DURING THE INITIAL SURVEY, AND IT CAN TAKE A PAIR OF EAGLES ONE TO THREE MONTHS TO CONSTRUCT A NEW NEST, IF CONSTRUCTION ACTIVITIES HAVE BEGUN BEFORE OCTOBER 31, 2020 THEY MAY CONTINUE WHILE ADDITIONAL NEST SEARCH SURVEYS ARE CONDUCTED AFTER LEAF–OFF. IF CONSTRUCTION ACTIVITIES HAVE NOT BEGUN BY OCTOBER 31, 2020 A NEW NEST SURVEY SHALL BE COMPLETED BY THE ODOT BIOLOGIST BEFORE CONSTRUCTION ACTIVITIES CAN BEGIN. NEST SEARCH SURVEYS CAN ONLY BE CONDUCTED WHEN LEAVES ARE NOT ON THE TREES TYPICALLY BETWEEN DECEMBER 1ST AND FEBRUARY 28TH. IF NESTS ARE OBSERVED, UP TO A 1000 FOOT NO–WORK BUFFER SHALL BE PLACED AROUND THE NEST. THE EXACT DISTANCE OF THE BUFFER ZONE SHALL BE ESTABLISHED BY THE ODOT BIOLOGIST IN CONSULTATION WITH US FISH AND WILDLIFE SERVICES. IF THE BUFFER CANNOT BE MAINTAINED, ALL CLEARING, EXTERNAL CONSTRUCTION AND LANDSCAPING ACTIVITIES WITHIN THE BUFFER SHALL BE CONDUCTED BETWEEN JUNE 1 AND SEPTEMBER 15 (OUTSIDE THE NESTING SEASON).

GRANT COUNTY *UNNAMED CREEK*

ENVIRONMENTAL MITIGATION NOTES

J/P NO. 32852(04) *SHEET NO. AE01*

GENERAL CONSTRUCTION NOTES – EROSION CONTROL

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.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE–CALL SYTEM, INC. 72 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE–CALL SYSTEM, INC. 'CALL OKIE' 1–800–522–6543 OR 811.

GRASS: ALL DISTURBED AREAS INCLUDING DITCHES AND SHOULDERS SHALL BE SODDED WITH BERMUDA SOLID SLAB SOD IN ACCORDANCE WITH SECTION 230.04(A) OF THE STANDARD SPECIFICATIONS.

FERTILIZER: AREAS ON WHICH BERMUDA SOLID SLAB SOD IS TO BE PLANTED SHALL HAVE FERTILIZER APPLIED, ONE HALF AFTER WATERING THE PREPARED SURFACE AND PRIOR TO PLANTING OF SOD, AND ONE HALF AFTER SODDING IS COMPLETED WITH WATERING USED TO INCORPORATE THE FERTILIZER INTO THE SOIL.

VEGETATIVE MULCH: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "MULCHING TILLER METHOD", AS SPECIFIED IN SECTION 233.04(B)2 OF THE STANDARD SPECIFICATIONS.

WATERING: ALL AREAS TO BE SODDED SHALL BE WATERED BEFORE SOD IS PLANTED TO OBTAIN ADEQUATE SOIL MOISTURE TO A DEPTH OF AT LEAST 5".

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 FENCING 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 KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

SEASONAL PLANTING RESTRICTIONS:

THE PLANTING OF BERMUDA SOLID SLAB SOD SHALL BE RESTRICTED TO THE PERIOD FROM APRIL 15TH TO SEPTEMBER 15TH.

IF THE DIRT WORK IS COMPLETED AFTER THE APPROVED SEASON FOR BERMUDA SOLID SLAB SODDING HAS ENDED, ALL DISTURBED AREAS WILL BE COVERED WITH VEGETATIVE MULCH IN ACCORDANCE WITH SECTION 233.04(B)2 OF THE STANDARD SPECIFICATIONS.

AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER SHALL NOT BE SODDED.

PAY ITEM NOTES

(1) ESTIMATED QUANTITY ONLY. LOCATION AND ACTUAL QUANTITY REQUIRED TO BE DETERMINED BY THE ENGINEER.

(2) INCLUDES 50.00 TONS TO BE USED IN A MANNER APPROVED BY THE ENGINEER.

(3) IN ADDITION TO THE RESPONSIBILITIES SHOWN IN THE SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND/OR RE–ESTABLISHING THE SURVEY CONTROL POINTS SHOWN ON THE PLANS. STAKING THE CENTERLINE OF CONSTRUCTION AND RE–ESTABLISHING 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.

(4) PRICE BID TO INCLUDE THE COST OF GRINDING THE EXISTING ASPHALT TO PASS A 3 INCH SIEVE AND LOADING IT ONTO COUNTY TRUCKS TO BECOME PROPERTY OF THE COUNTY.

(5) INCLUDES 500.00 C.Y. TO BE USED AT THE DISCRETION OF THE ENGINEER.

(6) PRICE BID TO INCLUDE THE CHEMICAL ADDITIVE(S) TO ACHIEVE THE RATE SPECIFIED FOR THE APPROPRIATE SOIL CLASSIFICATION AS SPECIFIED IN THE MOST CURRENT ODOT MATERIALS DIVISION OHD–L50. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CLASSIFY THE SOIL & DETERMINE THE APPROPRIATE ADDITIVE(S).

PAY ITEM NOTES

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

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

(R–4) AN ESTIMATED QUANTITY OF _____C.Y. TOPSOIL TO BE RESERVED FOR REPLACEMENT OF APPROXIMATELY 5"ON COMPLETED FORESLOPES, DITCHES, AND BACKSLOPES. THIS QUANTITY IS INCLUDED IN THE EARTHWORK BALANCE. ANY ADDITIONAL EXCAVATION REQUIRED IN CUT SECTIONS TO ALLOW FOR PLACEMENT OF TOPSOIL TO FINAL GRADE, SHALL BE INCLUDED IN THE PRICE BID.

(R–6) FOR SOD PRICE BID TO INCLUDE COST OF 10–20–10 FERTILIZER, ESTIMATED AT 200.00 POUNDS PER 1,000.00 SQ. YD.

(R–7) FOR SOD PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 40.00 GALLONS PER SQ. YD.

(R–8) PRICE BID TO INCLUDE COST OF SEDIMENT REMOVAL AND ALL MAINTENANCE. SEDIMENT MUST BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE DEVICE.

(R–11) THE QUANTITY ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 1.46 ACRES. (ONE APPLICATION).

(R–18) ESTIMATED AT 141.00 LBS. PER CU. FT.

(R–21) 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–22) PRICE BID TO INCLUDE COST OF _____ GALLONS OF TACK COAT, MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.

(R–25) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.

(R–31) QUANTITY INCLUDES AN ESTIMATED 10.00 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.

(R–37) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.

(R–38) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.

PAY QUANTITIES

100 ROADWAY

ITEM		DESCRIPTION		UNIT	QUANTITY
201(A)	1200	CLEARING AND GRUBBING		L. SUM	0.00
202(A)	2200	UNCLASSIFIED EXCAVATION	(R–1)	C.Y.	0.00
202(D)	2500	UNCLASSIFIED BORROW	(5)	C.Y.	0.00
205(A)	6200	TYPE A–SALVAGED TOPSOIL	(R–4)	L. SUM	0.00
221(B)	2300	TEMPORARY SILT FENCE	(R–8)(1)	L.F.	0.00
221(E)	2600	TEMPORARY SILT DIKE	(R–8)(1)	L.F.	0.00
230(A)	7200	SOLID SLAB SODDING	(R–6)(R–7)	S.Y.	0.00
233(A)	0200	VEGETATIVE MULCHING	(R–11)	AC.	0.00
307(K)	4200	STABILIZED SUBGRADE	(6)	S.Y.	0.00
402(E)	2600	TRAFFIC BOUND SURFACE COURSE TYPE E	(R–18)(2)	TON	0.00
408	8100	PRIME COAT	(R–21)	GAL.	0.00
411(B)	1330	SUPERPAVE, TYPE S3 (PG 64–22 OK)	(R–22)(R–25)	TON	0.00
411(C)	1430	SUPERPAVE, TYPE S4 (PG 64–22 OK)	(R–25)	TON	0.00
509(D)	0500	CLASS C CONCRETE	(R–31)	C.Y.	0.00
619(A)	6200	REMOVAL OF STRUCTURES & OBSTRUCTIONS	(R–37)(R–38)	L.SUM	0.00
619(B)	6364	REMOVAL OF ASPHALT PAVEMENT	(4)	S.Y.	0.00
619(C)	6600	SAWING PAVEMENT		L.F.	0.00
623(F)	1724	GUARDRAIL ANCHOR UNIT (TYPE D–BF)		EA.	0.00
623(F)	1708	GUARDRAIL ANCHOR UNIT (TYPE A)	(F–50)	EA.	0.00

PAY QUANTITIES

600 STAKING

ITEM		DESCRIPTION		UNIT	QUANTITY
642(B)	3300	CONSTRUCTION STAKING LEVEL II	(3)	L. SUM	1.00

PAY QUANTITIES

640 CONSTRUCTION

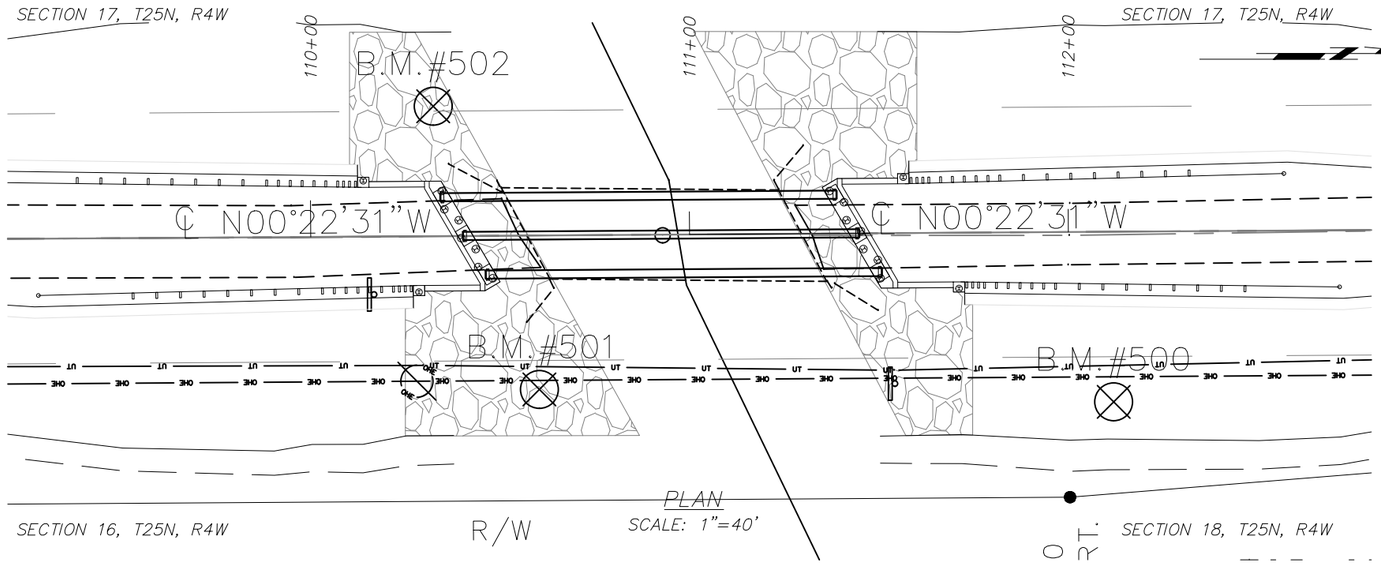
ITEM		DESCRIPTION	UNIT	QUANTITY
220	1100	SWPPP DOCUMENTATION AND MANAGEMENT	L. SUM	1.00
641	2100	MOBILIZATION	L. SUM	1.00

COUNTY TO BE RESPONSIBLE FOR THE FOLLOWING:
1. ACQUIRING ALL REQUIRED R/W.
2. RELOCATING ALL UTILITIES.

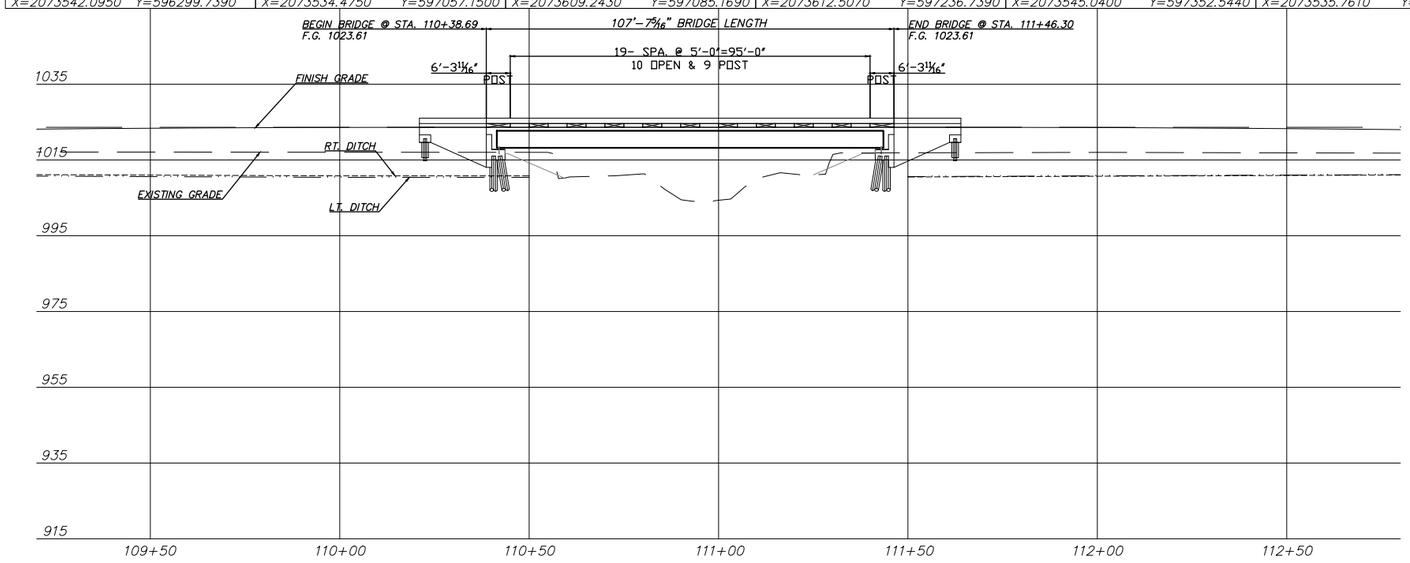
GRANT COUNTY UNNAMED CREEK

PAY QUANTITIES & GENERAL NOTES

J/P NO. 32852(04) SHEET NO. AR01



CONTROL POINT NO. 1	BENCHMARK NO. 502	BENCHMARK NO. 501	BENCHMARK NO. 500	CONTROL POINT NO. 2	CONTROL POINT NO. 3
1/2" IRON PIN 31.62 FT. LT.	1/2" IRON PIN 34.28 FT. LT.	1/2" IRON PIN 34.28 FT. LT.	1/2" IRON PIN 44.93 FT. RT.	1/2" IRON PIN 21.78 FT. LT.	1/2" IRON PIN 24.83 FT. LT.
STA. 102+75.15 ELEV. 1012.81	STA. 110+32.56 ELEV. 1010.51	STA. 110+32.56 ELEV. 1012.16	STA. 112+11.66 ELEV. 1012.16	STA. 113+27.90 ELEV. 1014.22	STA. 122+77.50 ELEV. 1014.13
X=2073542.0950 Y=596299.7390	X=2073534.4750 Y=597057.1500	X=2073609.2430 Y=597085.1690	X=2073612.5070 Y=597236.7390	X=2073545.0400 Y=597352.5440	X=2073535.7610 Y=598302.1060



NOTE:
SEE SHEET NO. B00X – B00X
FOR BORING INFORMATION

ELEVATION
SCALE: 1"=40'

B–1 PENETROMETER TEST	B–2 PENETROMETER TEST
50/0.25", 50/0.13", –	50/0.63", 50/0.25", –
50/0.25", 50/0.25", –	50/1.88", 50/1.75", –
50/3.25", 50/2.38", –	50/1.0", 50/0.5", –
50/2.25", 50/0.88", –	50/0.5", 50/0.13", –
50/0.5", 50/0.38", –	50/0.63", 50/0.25", –
50/0.25", 50/0.88", –	50/0.63", 50/0.25", –

PAY QUANTITIES

ITEM		DESCRIPTION	UNIT	ABUTMENT	SUPER STRUCTURE	TOTAL QUANTITY
501(B)	1300	SUBSTRUCTURE EXCAVATION COMMON	C.Y.			
501(G)	1800	CLSM BACKFILL	C.Y.			
503(A)	4240	PRESTRESSED CONCRETE BEAMS (TYPE IV)	L.F.			
504(D)	5410	CONCRETE RAIL (TR3)	L.F.			
506(A)	7200	STRUCTURAL STEEL	LB.			
507(A)	8210	WEATHERING STEEL FIXED BEARING ASSEMBLY	EA.			
507(B)	8310	WEATHERING STEEL EXP. BEARING ASSEMBLY	EA.			
509(A)	0210	CLASS AA CONCRETE	C.Y.			
509(B)	0320	CLASS A CONCRETE	C.Y.			
511(A)	2210	REINFORCING STEEL	LB.			
514(A)	5210	PILES, FURNISHED (HP10X42)	L.F.			
514(A)	5220	PILES, FURNISHED (HP12X53)	L.F.			
514(B)	5310	PILES, DRIVEN (HP10X42)	L.F.			
514(B)	5320	PILES, DRIVEN (HP12X53)	L.F.			
514(L)	6300	PILES SPLICE, H–PILE (NON–BIDDABLE)	EA.			
601(B)	1230	TYPE I–A PLAIN RIPRAP	TON			
601(C)	1310	TYPE I–A FILTER BLANKET	TON			
613(H)	6205	6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.			
613(I)	6310	6" NON–PERFORATED PIPE UNDERDRAIN ROUND	L.F.			
619(D)	6700	REMOVAL OF EXISTING BRIDGE STRUCTURE	L. SUM			

LOADING DATA

ABUTMENT PILES (HP 12X53):

FACTOR PILE REACTION = 83.9 TONS/PILE. ALL ABUTMENT PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL. STEEL PILING SHALL BE DRIVEN TO POINT BEARING ON SOLID FOUNDATION MATERIAL UNTIL THE REQUIRED FACTOR PILE CAPACITY OF 83.9 TONS PER PILE IS OBTAINED.

DESIGN DATA

CONCRETE (CLASS A) F'C=3,000 PSI
CONCRETE (CLASS AA) F'C=4,000 PSI
REINFORCING STEEL (GR 60) FY=60,000 PSI
STRUCTURAL STEEL (GR 50W) FY=50,000 PSI

LOADING: HL–93 20 PSF FUTURE WEARING SURFACE
5 PSF STAY–IN–PLACE FORMS

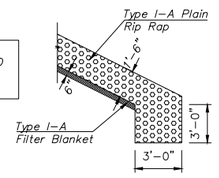
DESIGN SPECIFICATIONS – AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION WITH 2010 INTERIMS, EXCEPT AS MODIFIED BY CURRENT ODOT BRIDGE DIVISION DESIGN POLICIES.
ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.
LFD OPERATING RATING: HS 43.8

HYDRAULIC DATA

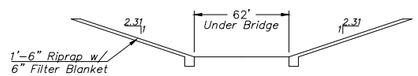
D.A. = 15.02 SQ. MI.
SCS CONTROLLED D.A. = 0.00 SQ. MI.
EFFECTIVE DRAINAGE AREA = 15.02 SQ. MI.
Q25 = 4,970.00 C.F.S.
V25 = 7.42 F.P.S.
Q25 CALC. B.W. 1,017.09 FT.
Q50 = 7,160.00 C.F.S.
V50 = 8.03 F.P.S.
Q50 = CALC. B.W. 1,017.19 FT.
Q100 = 9,070.00 C.F.S.
V100 = 8.73 F.P.S.
Q100 = CALC. B.W. 1,017.34 FT.
QO.T. = 4,970.00 C.F.S.
OVERTOPPING ELEV. (LOW) = 1,016.30 FT.
VO.T. (BRIDGE) = 7.42 F.P.S.
EXTREME HIGH WATER ON RECORD = N/A
MAXIMUM SCOUR DEPTH = 14.74 FT.

CONTRACTOR NOTE:
EXTEND RIP RAP TO THE SECOND GUARDRAIL POST.

NOTE:
"TOEING–IN" APPLIES TO THE ENTIRE LENGTH OF THE BASE OF RIPRAP.



DETAIL OF TYPE I–A PLAIN RIPRAP



TYPICAL CHANNEL SECTION AT BRIDGE

GRANT COUNTY UNNAMED CREEK

GENERAL PLAN & ELEVATION
CL STA. 110+92.50
105' SLAB SPAN, SKEW 30°
W/26'–0" CL. ROADWAY W/TR3 CONC. TRAFFIC RAILS

J/P NO. 32852(04) SHEET NO. B001

STORM WATER MANAGEMENT PLAN

REVISIONS	
DESCRIPTION	DATE

SITE DESCRIPTION

PROJECT LIMITS: COUNTY BRIDGE OVER UNNAMED CREEK, 0.2 MILES NORTH AND 2.9 MILES WEST ON SALT FORK.

PROJECT DESCRIPTION: BRIDGE AND APPROACHES: 1,242.39 FT. OF ROADWAY (6" ASPHALT), 105' PCB SPAN, STANDARD ABUTMENTS = 107'–7 5/16" LONG BRIDGE, SKEWED 30°, GUARDRAIL BRIDGE & RIP RAP CHANNEL, XX S.Y. OF SOLID SLAB SODDING.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED. STRIP, STOCKPILE AND STABILIZE TOPSOIL. CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. IF DIRECTED BY THE ENGINEER, PLANT TEMPORARY SEEDING. REPLACE SALVAGED TOPSOIL. REMOVE TEMPORARY DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: PORT SILT LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: XX AC

ESTIMATED AREA TO BE DISTURBED: XX AC

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE) _____

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.0X AC

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.XX AC

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.X

LATITUDE & LONGITUDE OF CENTER OF PROJECT: LAT. 36° 38' 23"N LONG. 97° 38' 31"W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: UNNAMED TRIB. OF ARKANSAS RIVER

SENSITIVE WATERS OR WATERSHEDS: YES [ ] NO [X]

303(d) IMPAIRED WATERS: YES [ ] NO [X]

IF YES, LIST IMPAIRMENT: _____

LOCATED IN A TMDL: YES [ ] NO [X]

LAKE THUNDERBIRD TMDL: YES [ ] NO [X]

MS4 ENTITY YES [ ] NO [X]

IF YES, LOCATION: _____

NOTE:
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- ____ TEMPORARY SEEDING
- _X_ PERMANENT SODDING, SPRIGGING OR SEEDING
- _X_ VEGETATIVE MULCHING
- ____ SOIL RETENTION BLANKET
- _X_ PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- ____ STABILIZED CONSTRUCTION EXIT
- _X_ TEMPORARY SILT FENCE
- _X_ TEMPORARY SILT DIKES
- ____ TEMPORARY FIBER LOG
- ____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- ____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ____ ROCK FILTER DAMS
- ____ TEMPORARY SLOPE DRAIN
- ____ PAVED DITCH W/ DITCH LINER PROTECTION
- ____ TEMPORARY DIVERSION CHANNELS
- ____ TEMPORARY SEDIMENT BASINS
- ____ TEMPORARY SEDIMENT TRAPS
- ____ TEMPORARY SEDIMENT FILTERS
- _X_ TEMPORARY SEDIMENT REMOVAL
- _X_ RIP RAP
- ____ INLET SEDIMENT FILTER
- ____ TEMPORARY BRUSH SEDIMENT BARRIERS
- ____ SANDBAG BERMS
- _X_ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- ____ HAUL ROADS DAMPENED FOR DUST CONTROL
- _X_ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- ____ EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

_____

_____

_____

_____

_____

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

103.05	BONDING REQUIREMENTS
104.10	FINAL CLEANING UP
104.12	CONTRACTOR'S RESPONSIBILITY FOR WORK
104.13	ENVIRONMENTAL PROTECTION
106.08	STORAGE AND HANDLING OF MATERIAL
107.01	LAWS, RULES AND REGULATIONS TO BE OBSERVED
107.20	STORM WATER MANAGEMENT
220	MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
221	TEMPORARY SEDIMENT CONTROL

IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	JRR	08/21	STORM WATER MANAGEMENT PLAN
CHECKED			
APPROVED			
SQUAD	XXX		

COUNTY GRANT HIGHWAY NS-301 STATE JOB NO. JP32852(04) SHEET NO. R001

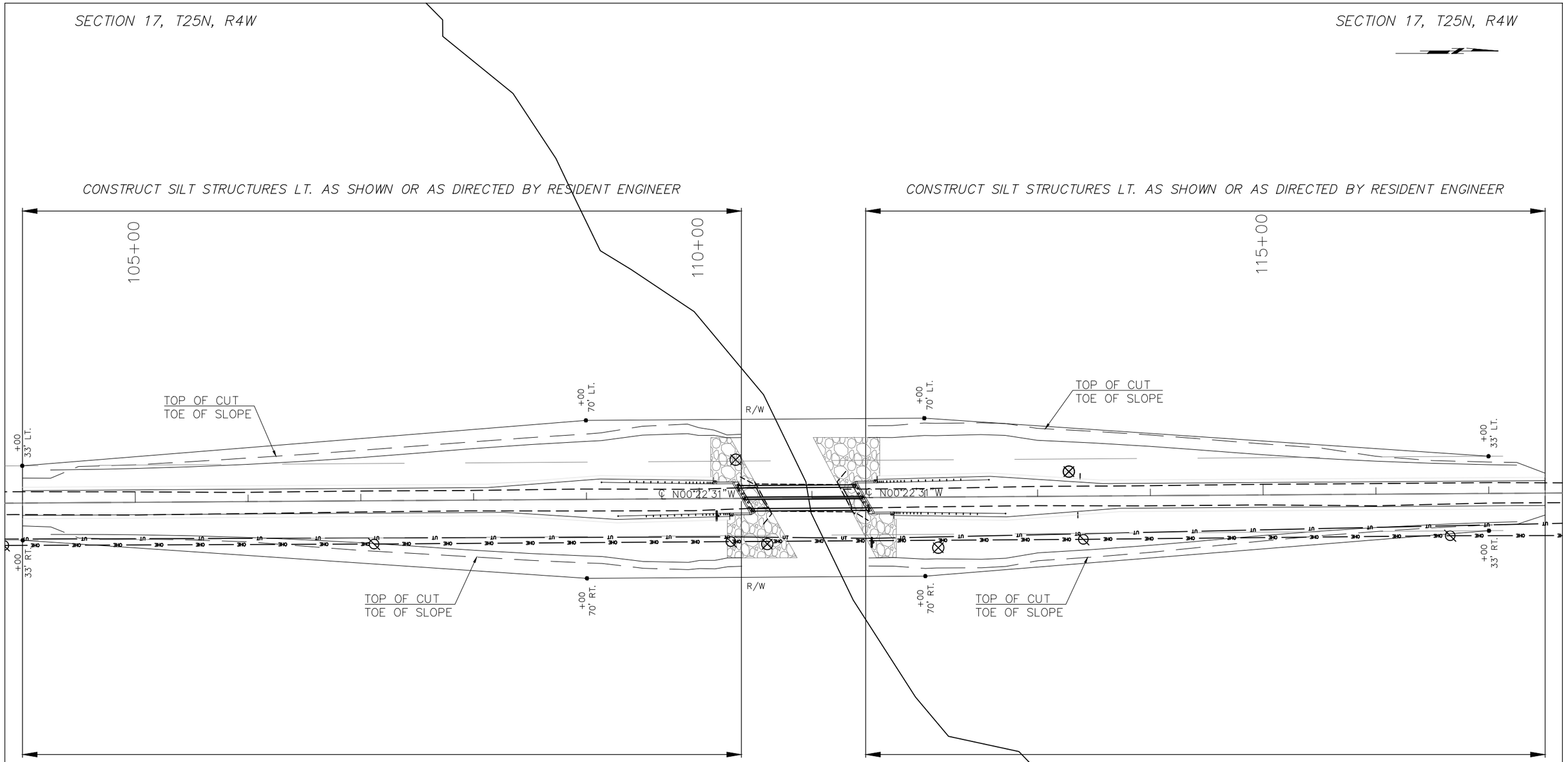
REVISED 07 / 13 / 2017

SECTION 17, T25N, R4W

SECTION 17, T25N, R4W

CONSTRUCT SILT STRUCTURES LT. AS SHOWN OR AS DIRECTED BY RESIDENT ENGINEER

CONSTRUCT SILT STRUCTURES LT. AS SHOWN OR AS DIRECTED BY RESIDENT ENGINEER



CONSTRUCT SILT STRUCTURES RT. AS SHOWN OR AS DIRECTED BY RESIDENT ENGINEER

CONSTRUCT SILT STRUCTURES RT. AS SHOWN OR AS DIRECTED BY RESIDENT ENGINEER

SECTION 16, T25N, R4W

SECTION 16, T25N, R4W

LEGEND

TEMPORARY SILT DIKE

TEMPORARY SILT FENCE

GRANT COUNTY

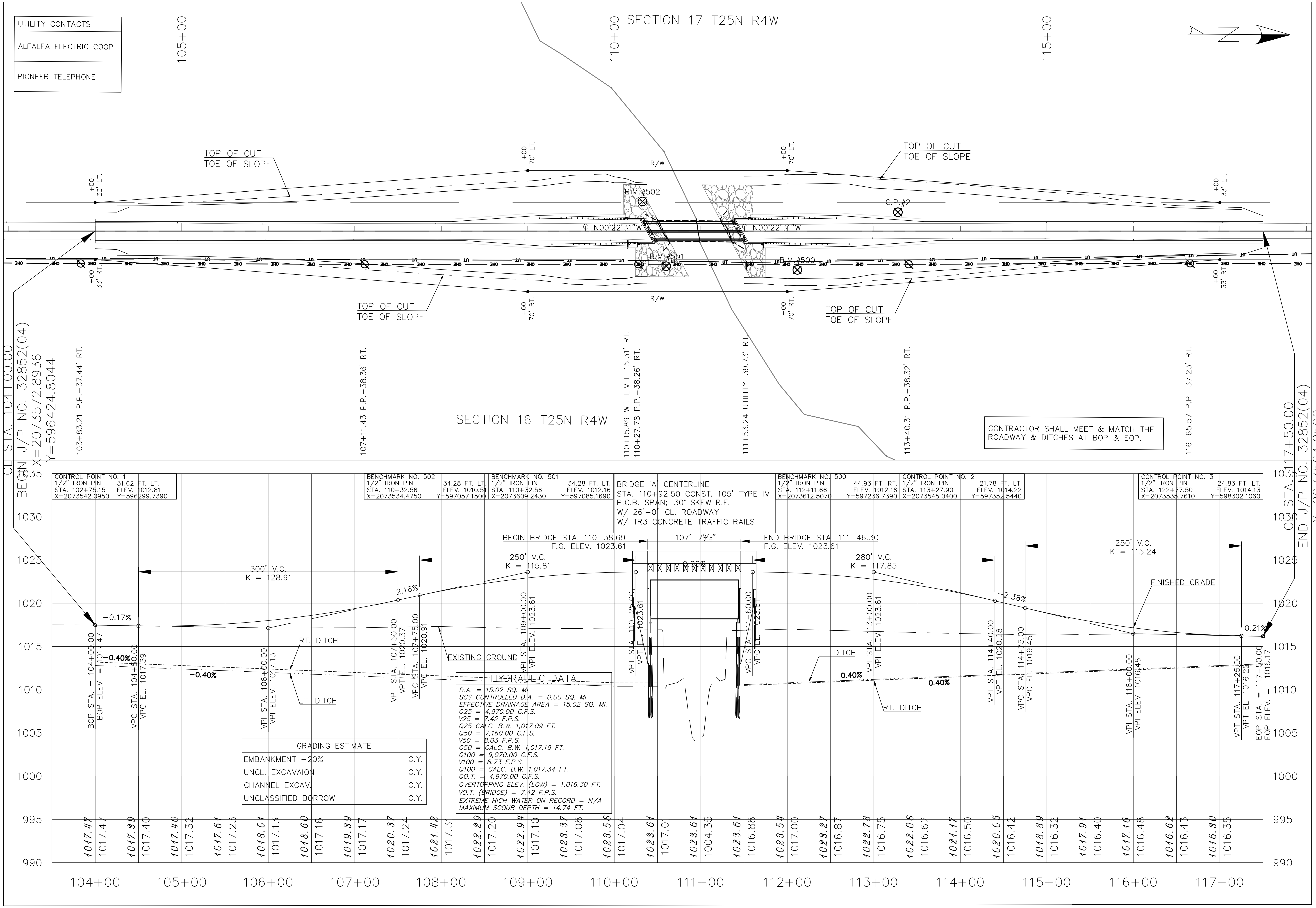
UNNAMED CREEK

EROSION CONTROL

J/P NO. 32852(04)

SHEET NO. R002

UTILITY CONTACTS
ALFALFA ELECTRIC COOP
PIONEER TELEPHONE



CONTRACTOR SHALL MEET & MATCH THE ROADWAY & DITCHES AT BOP & EOP.

CONTROL POINT NO. 1
1/2" IRON PIN 31.62 FT. LT.
STA. 102+75.15 ELEV. 1012.81
X=2073542.0950 Y=596299.7390

BENCHMARK NO. 502
1/2" IRON PIN 34.28 FT. LT.
STA. 110+32.56 ELEV. 1010.51
X=2073534.4750 Y=597057.1500

BENCHMARK NO. 501
1/2" IRON PIN 34.28 FT. LT.
STA. 110+32.56 ELEV. 1012.16
X=2073609.2430 Y=597085.1690

BRIDGE 'A' CENTERLINE
STA. 110+92.50 CONST. 105' TYPE IV
P.C.B. SPAN; 30° SKEW R.F.
W/ 26'-0" CL. ROADWAY
W/ TR3 CONCRETE TRAFFIC RAILS

BENCHMARK NO. 500
1/2" IRON PIN 44.93 FT. RT.
STA. 112+11.66 ELEV. 1012.16
X=2073612.5070 Y=597236.7390

CONTROL POINT NO. 2
1/2" IRON PIN 21.78 FT. LT.
STA. 113+27.90 ELEV. 1014.22
X=2073545.0400 Y=597352.5440

CONTROL POINT NO. 3
1/2" IRON PIN 24.83 FT. LT.
STA. 122+77.50 ELEV. 1014.13
X=2073535.7610 Y=598302.1060

HYDRAULIC DATA

D.A. = 15.02 SQ. MI.
SCS CONTROLLED D.A. = 0.00 SQ. MI.
EFFECTIVE DRAINAGE AREA = 15.02 SQ. MI.
Q25 = 4,970.00 C.F.S.
V25 = 7.42 F.P.S.
Q25 CALC. B.W. 1,017.09 FT.
Q50 = 7,160.00 C.F.S.
V50 = 8.03 F.P.S.
Q50 = CALC. B.W. 1,017.19 FT.
Q100 = 9,070.00 C.F.S.
V100 = 8.73 F.P.S.
Q100 = CALC. B.W. 1,017.34 FT.
QO.T. = 4,970.00 C.F.S.
OVERTOPPING ELEV. (LOW) = 1,016.30 FT.
VO.T. (BRIDGE) = 7.42 F.P.S.
EXTREME HIGH WATER ON RECORD = N/A
MAXIMUM SCOUR DEPTH = 14.74 FT.

GRADING ESTIMATE	
EMBANKMENT +20%	C.Y.
UNCL. EXCAVAION	C.Y.
CHANNEL EXCAV.	C.Y.
UNCLASSIFIED BORROW	C.Y.

GRANT COUNTY
UNNAMED CREEK
SHEET NO. R003

STATE/JOB NO. 32852(04)
CED 8

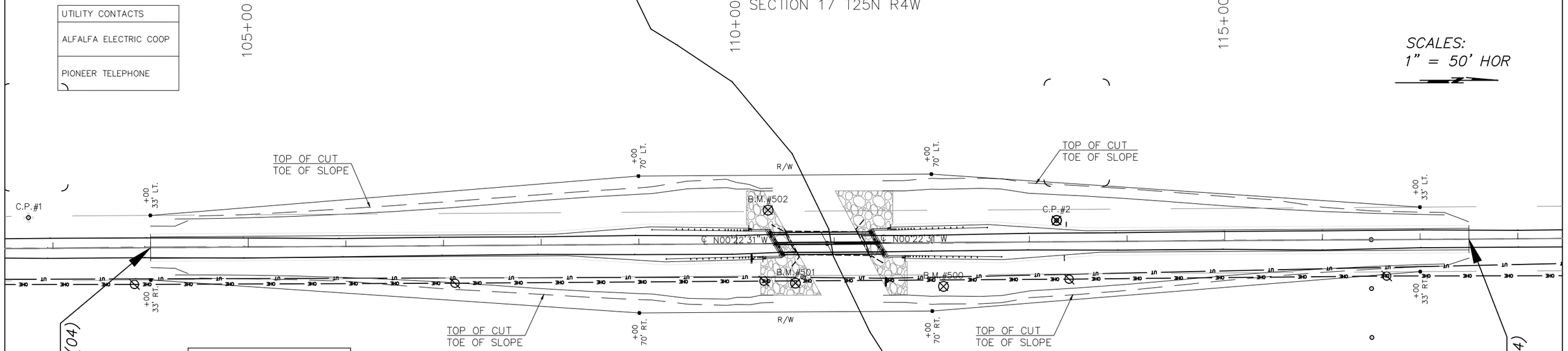
UTILITY CONTACTS
ALFALFA ELECTRIC COOP
PIONEER TELEPHONE

105+00

110+00 SECTION 17 T25N R4W

115+00

SCALES:
1" = 50' HOR



NOTE: RIGHT-OF-WAY DIMENSIONED FROM SECTION LINE.

FROM SECTION LINE TO ¼ SECTION LINE IS 2657.21'

ALL BENCHMARKS ARE REFERENCED FROM SECTION LINE.

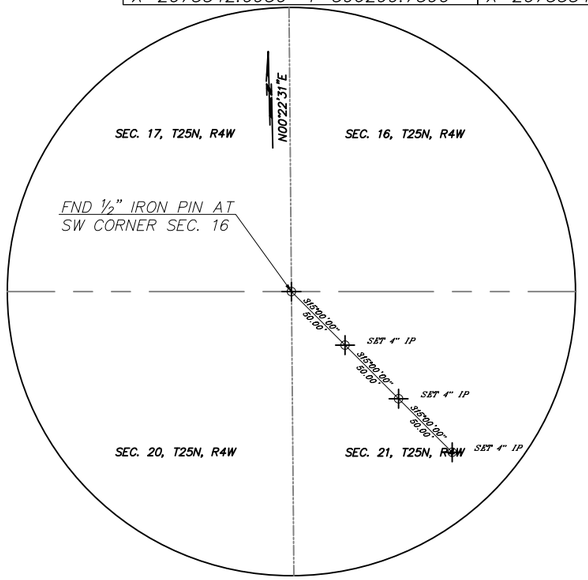
CRL STA. 104+00.00
BEGIN JP NO. 32852(04)
X=2073572.8936
Y=596424.8044

SECTION 16 T25N R4W

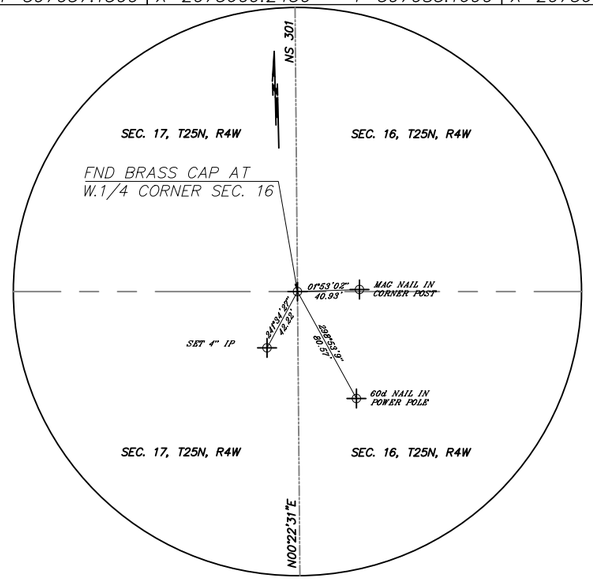
CONTRACTOR SHALL MEET & MATCH THE

CRL STA. 117+50.00
END JP NO. 32852(04)
X=2073564.0500
Y=597774.7754

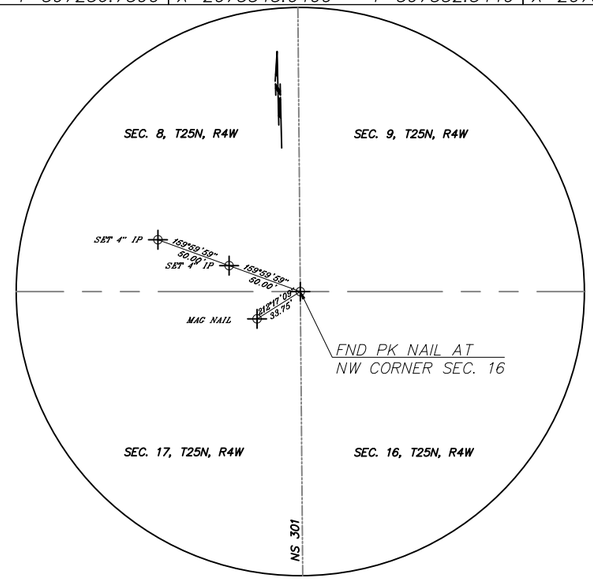
CONTROL POINT NO. 1		BENCHMARK NO. 502		BENCHMARK NO. 501		BENCHMARK NO. 500		CONTROL POINT NO. 2		CONTROL POINT NO. 3	
1/2" IRON PIN	31.62 FT. LT.	1/2" IRON PIN	34.28 FT. LT.	1/2" IRON PIN	34.28 FT. LT.	1/2" IRON PIN	44.93 FT. RT.	1/2" IRON PIN	21.78 FT. LT.	1/2" IRON PIN	24.83 FT. LT.
STA. 102+75.15	ELEV. 1012.81	STA. 110+32.56	ELEV. 1010.51	STA. 110+32.56	ELEV. 1012.16	STA. 112+11.66	ELEV. 1012.16	STA. 113+27.90	ELEV. 1014.22	STA. 122+77.50	ELEV. 1014.13
X=2073542.0950	Y=596299.7390	X=2073534.4750	Y=597057.1500	X=2073609.2430	Y=597085.1690	X=2073612.5070	Y=597236.7390	X=2073545.0400	Y=597352.5440	X=2073535.7610	Y=598302.1060



S.W. SECTION CORNER
SECTION 16, T25N, R4W
STA. 100+00.00
X=2073575.5140
Y=596024.8130



W. ¼ SECTION CORNER
SECTION 16, T25N, R4W
STA. 126+34.00
X=2073558.2570
Y=598659.0730



N.W. SECTION CORNER
SECTION 16, T25N, R4W
STA.152+65.00
X=2073559.3560
Y=601289.8910

GRANT COUNTY UNNAMED CREEK

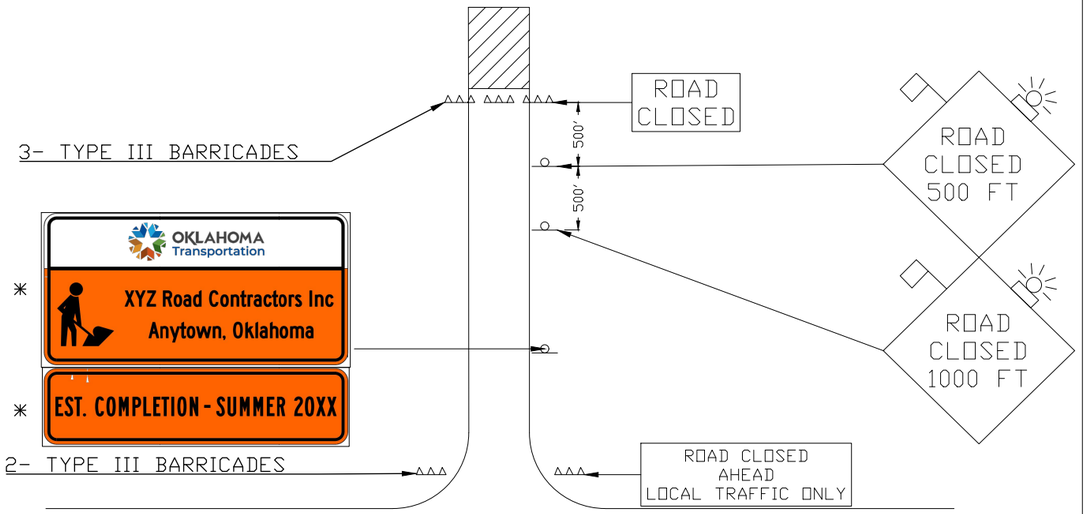
ALIGNMENT, SURVEY
REFERENCES AND R/W

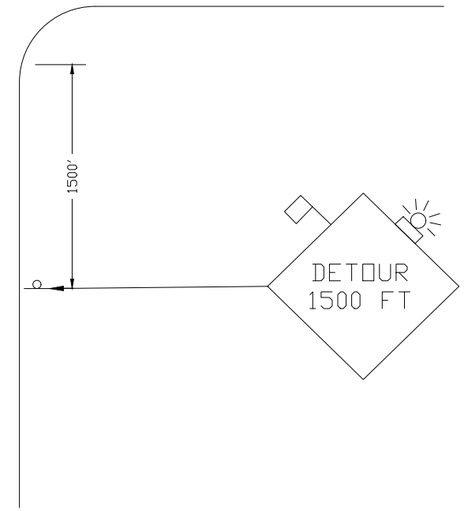
J/P NO. 32852(04)

SHEET NO. S001

SUMMARY OF CONSTRUCTION SIGNS 6.26 TO 15.99 S.F.						
DESCIPTION	TYPE	DIM.	SIZE (S.F.)	NO.	DAYS	S.D.
ROAD CLOSED	R11-2	48X30	10.00	6.00	120.00	720.00
ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY	R11-3A	60X30	12.50	4.00	120.00	480.00
ROAD CLOSED 1000 FT	W20-3	36X36	9.00	2.00	120.00	240.00
ROAD CLOSED 500 FT	W20-3	36X36	9.00	2.00	120.00	240.00
DETOUR 1500 FT	W20-2	36X36	9.00	2.00	120.00	240.00
EST. COMPLETION - SUMMER 20XX		72X18	9.00	2.00	120.00	240.00
SIGNS TO BE USED AT THE DISCRETION OF THE ENGINEER		36X36	9.00	2.00	120.00	240.00
					SHEET TOTALS	2,400.00

SUMMARY OF CONSTRUCTION SIGNS 16.00 TO 32.99 S.F.					
DESCIPTION	DIM.	SIZE (S.F.)	NO.	DAYS	S.D.
OKLAHOMA, XYZ ROAD CONTRACTORS INC.	72X36	18.00	2.00	120.00	240.00
				SHEET TOTALS	240.00





KEY:
- SIGN
- WORK AREA
- TYPE III BARRICADES

TYPICAL APPLICATION
COUNTY ROAD (NO DETOUR IS ESTABLISHED)

NOTES:
WHEN A DETOUR ROUTE IS ESTABLISHED IN CONJUNCTION WITH THE CONSTRUCTION, THE DETOUR ROUTE SHALL BE SHOWN IN THE PLANS. EITHER THE CONTRACTOR OR THE COUNTY WILL BE RESPONSIBLE FOR THE DTOUR SIGNING AND THIS RESPONSIBILITY SHALL BE STATED IN THE PLANS.

THE CONSTRUCTION SIGNING SHOWN ON THIS PLAN SHEET AND FROM THE OPPOSITE DIRECTION (NOT SHOWN) SHALL ALWAYS BE THE RESPONSIBILITY OF THE CONTRACTOR.

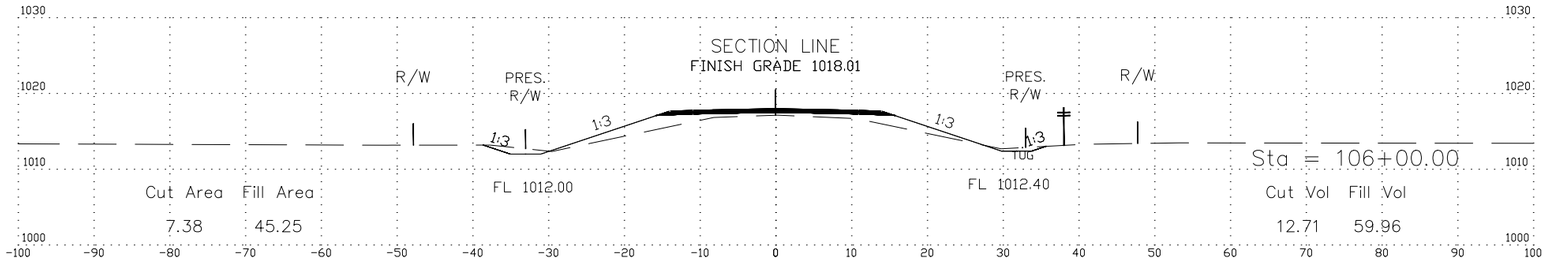
* TO BE FILLED IN WITH THE CORRECT CONTRACTORS INFORMATION AND THE CORRECT COMPLETION DATE.

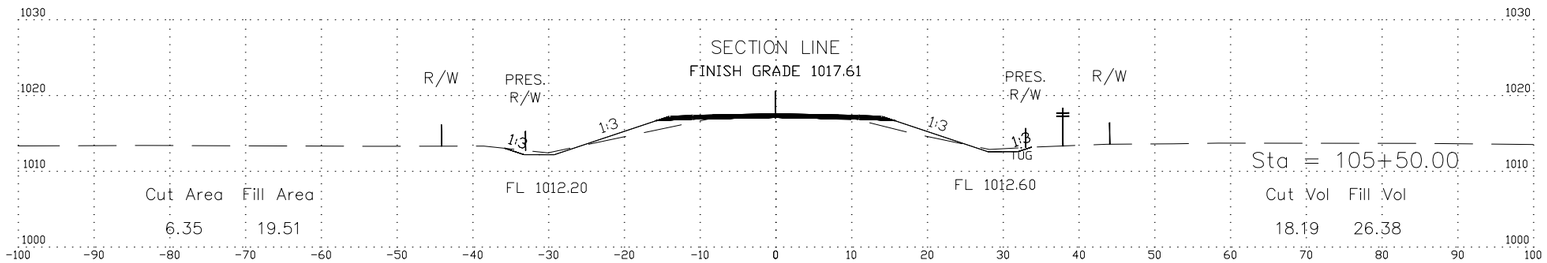
ALL BARRICADES SHALL BE LIGHTED.

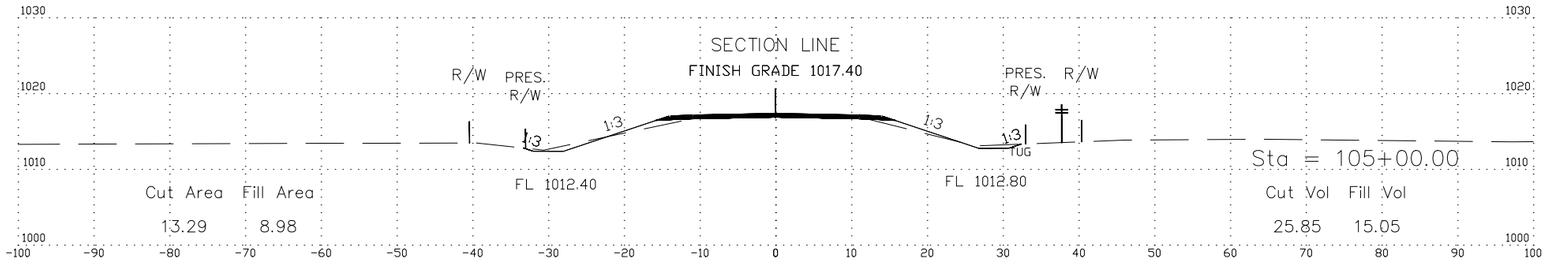
GRANT COUNTY UNNAMED CREEK

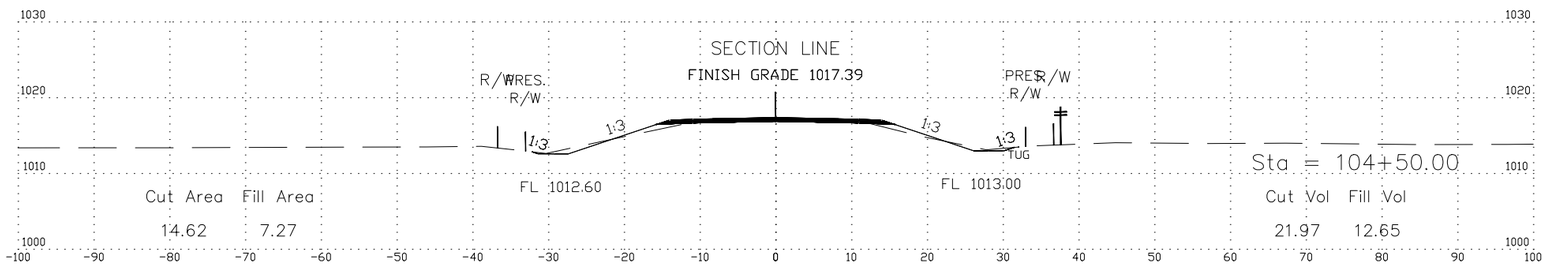
COUNTY ROAD CLOSURE

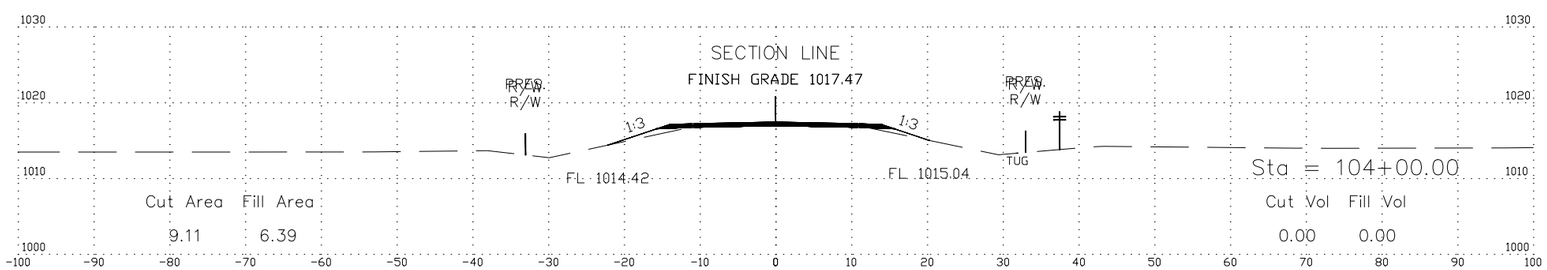
J/P NO. 32852(04) SHEET NO. T001



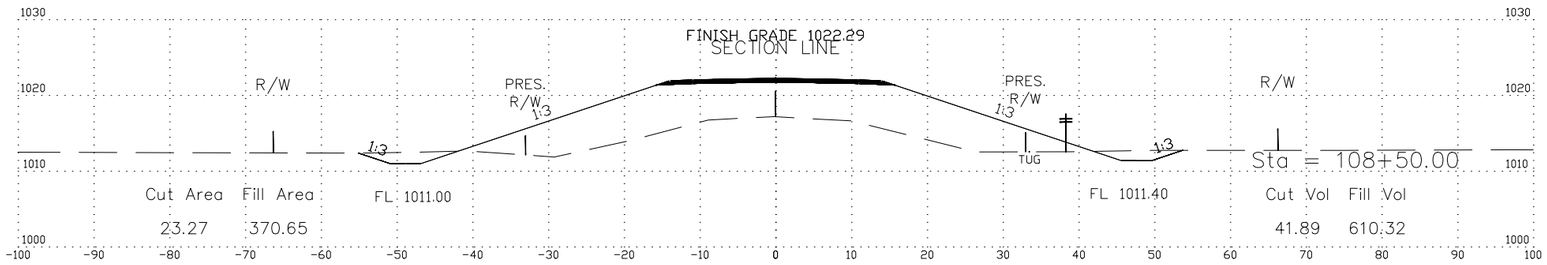


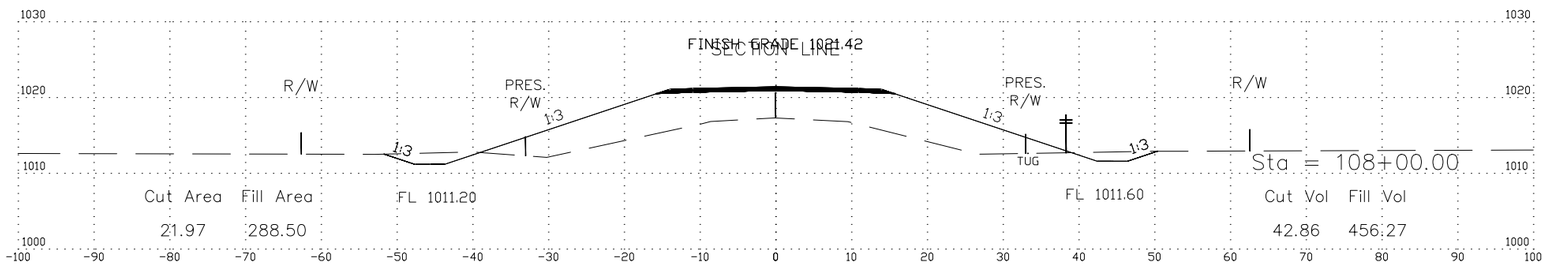


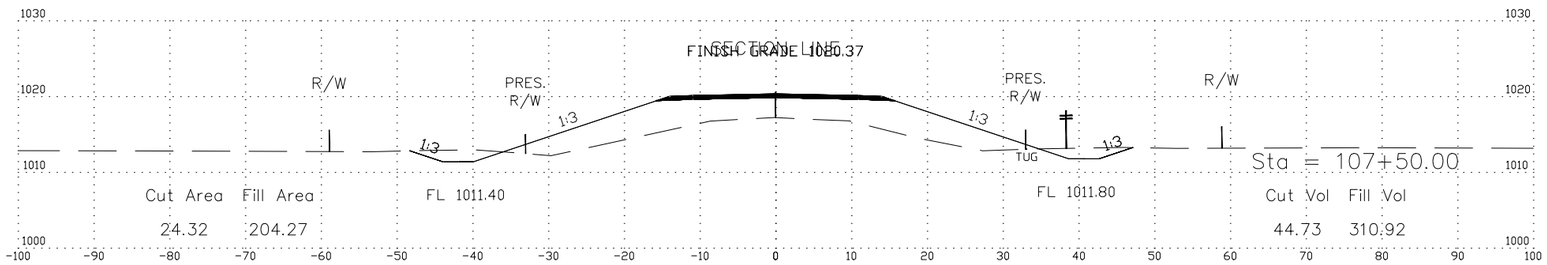


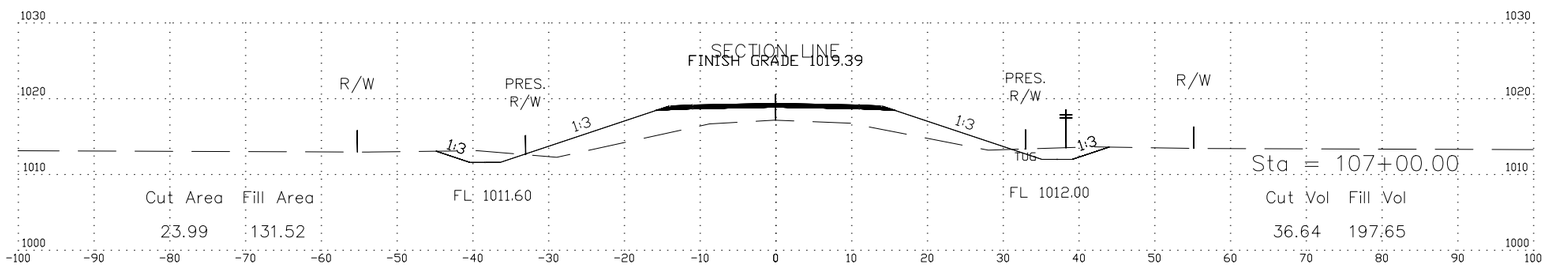


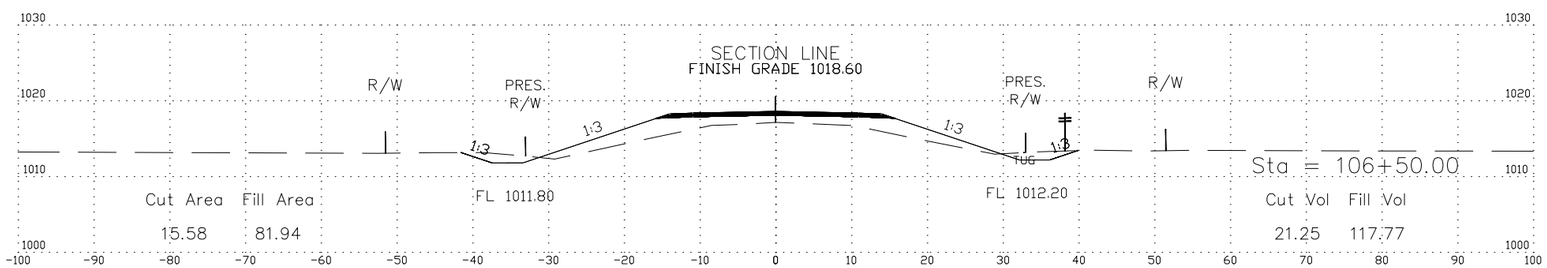
BEGIN CONSTRUCTION 104+00.00


FINISH GRADE 1022.29
SECTION LINE
R/W
PRES.
R/W
1:3
TUG
FL 1011.00
FL 1011.40
Sta = 108+50.00
Cut Area Fill Area
23.27 370.65
Cut Vol Fill Vol
41.89 610.32


FINISH GRADE 1021.42
SECTION LINE
R/W
PRES.
R/W
1:3
TUG
FL 1011.20
FL 1011.60
Sta = 108+00.00
Cut Area Fill Area
21.97 288.50
Cut Vol Fill Vol
42.86 456.27

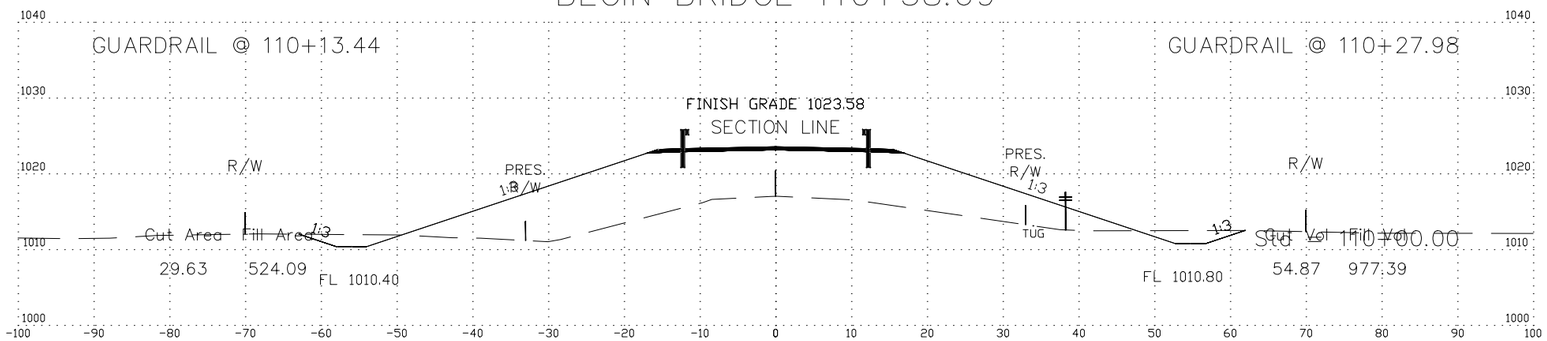

FINISH GRADE 1020.37
SECTION LINE
R/W
PRES.
R/W
1:3
TUG
FL 1011.40
FL 1011.80
Sta = 107+50.00
Cut Area Fill Area
24.32 204.27
Cut Vol Fill Vol
44.73 310.92

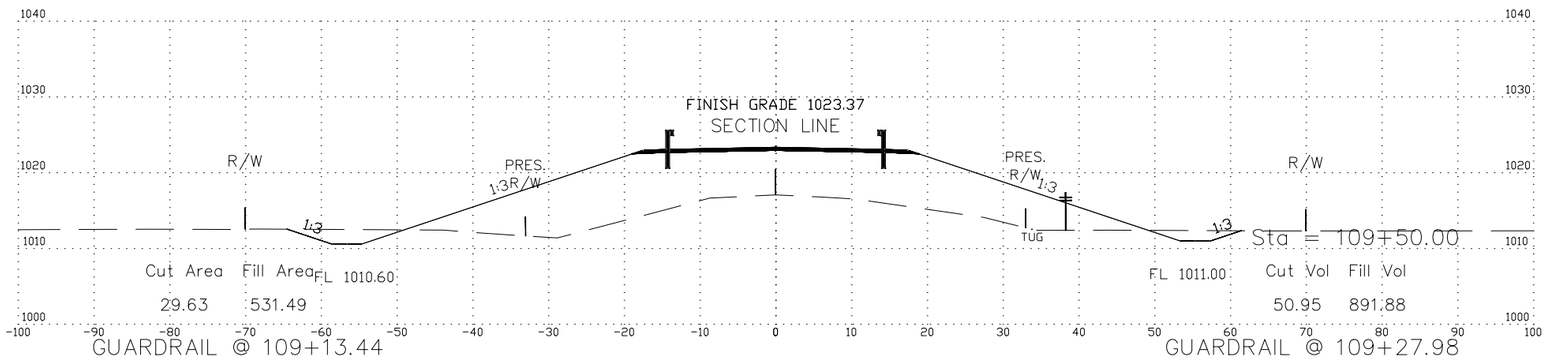

SECTION LINE
FINISH GRADE 1019.39
R/W
PRES.
R/W
1:3
TUG
FL 1011.60
FL 1012.00
Sta = 107+00.00
Cut Area Fill Area
23.99 131.52
Cut Vol Fill Vol
36.64 197.65

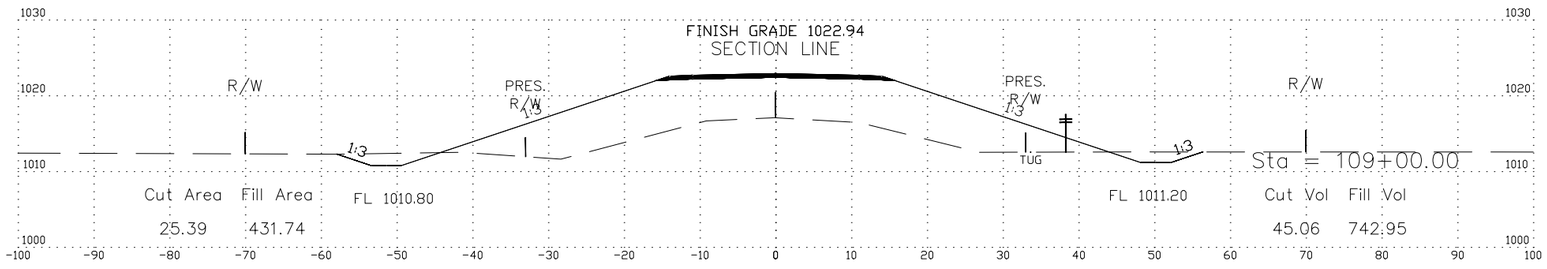

SECTION LINE
FINISH GRADE 1018.60
R/W
PRES.
R/W
1:3
TUG
FL 1011.80
FL 1012.20
Sta = 106+50.00
Cut Area Fill Area
15.58 81.94
Cut Vol Fill Vol
21.25 117.77

BRIDGE 'A' CENTERLINE
STA. 110+92.50 CONST. 105' TYPE IV
P.C.B. SPAN; 30° SKEW R.F.
W/ 26'-0" CL. ROADWAY
W/ TR3 CONCRETE TRAFFIC RAILS

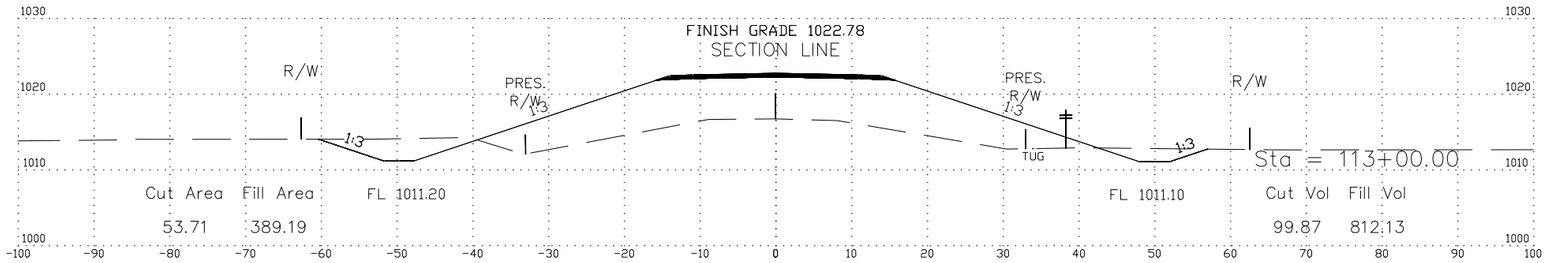
BEGIN BRIDGE 110+38.69

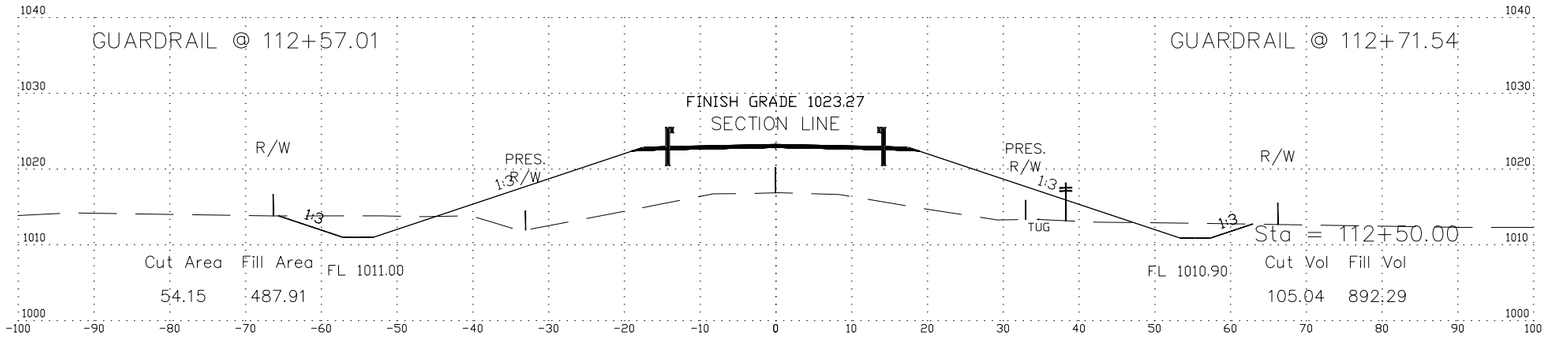


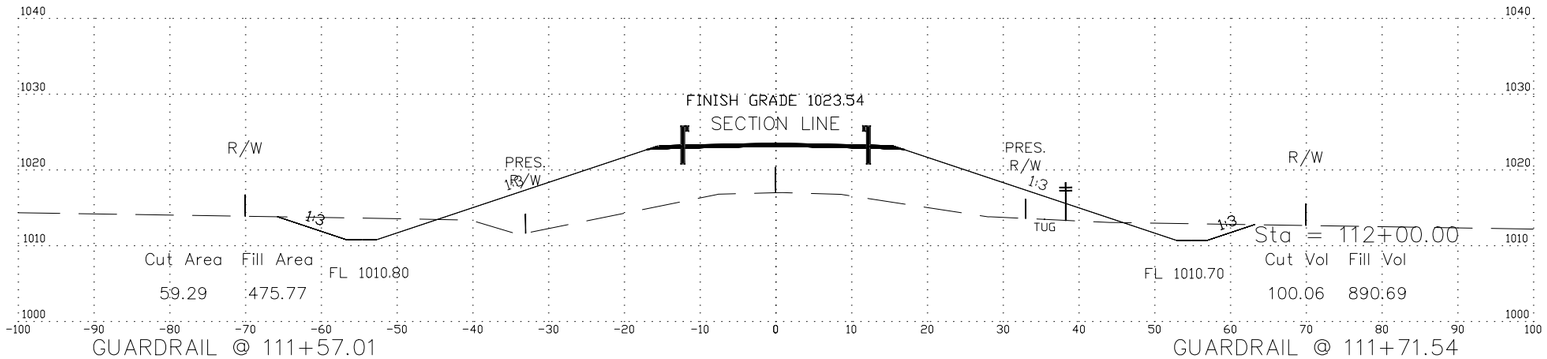


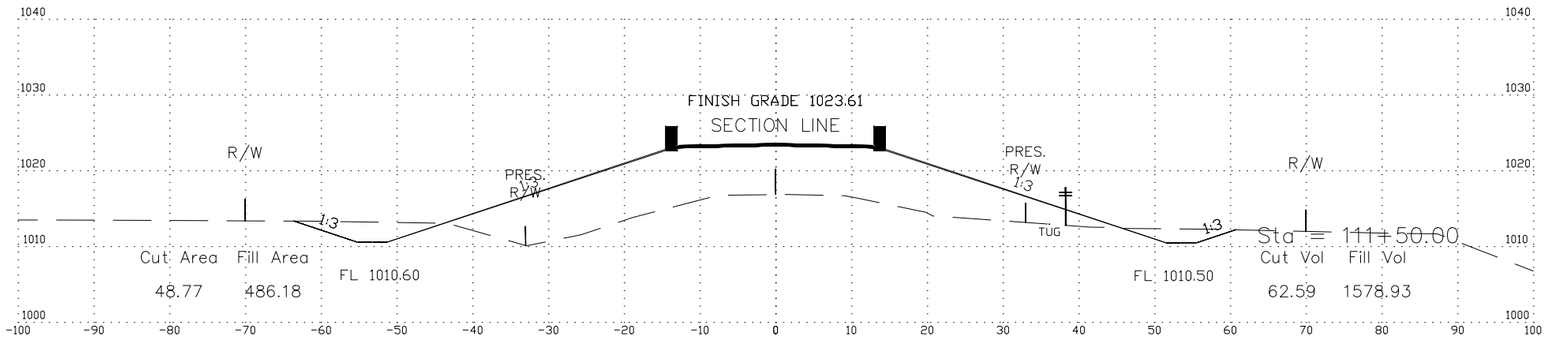


STATE JOB NO. 32852(04) SHEET NO. X003

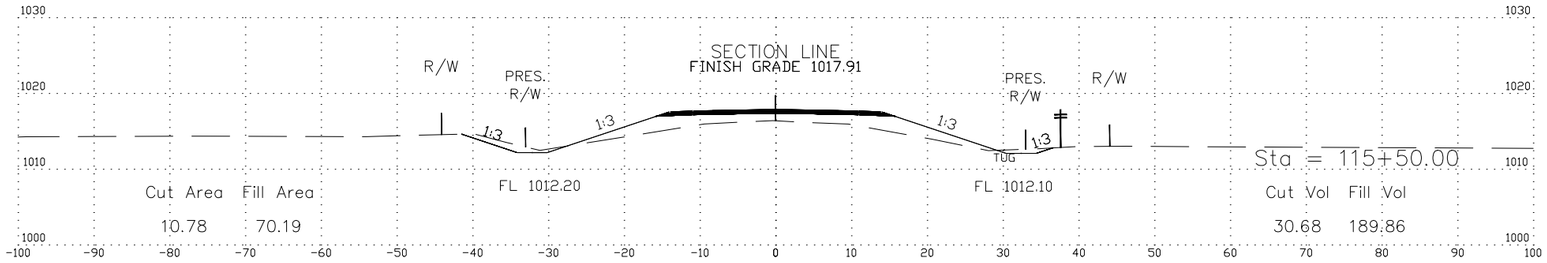


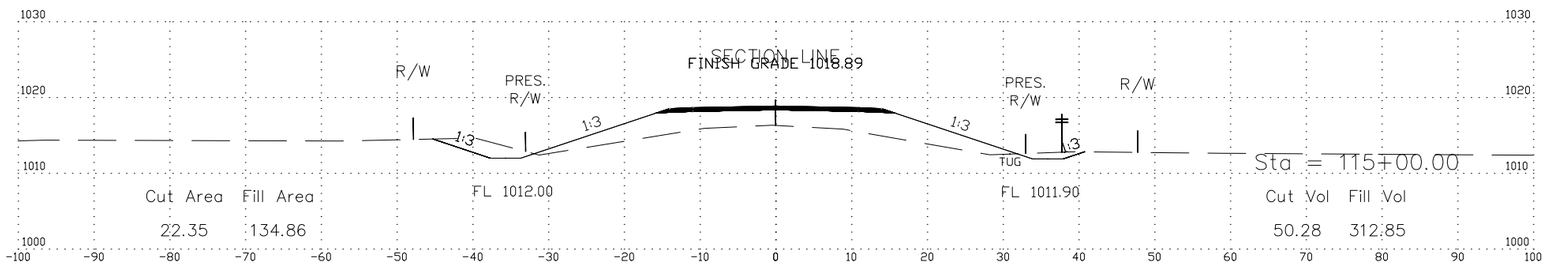


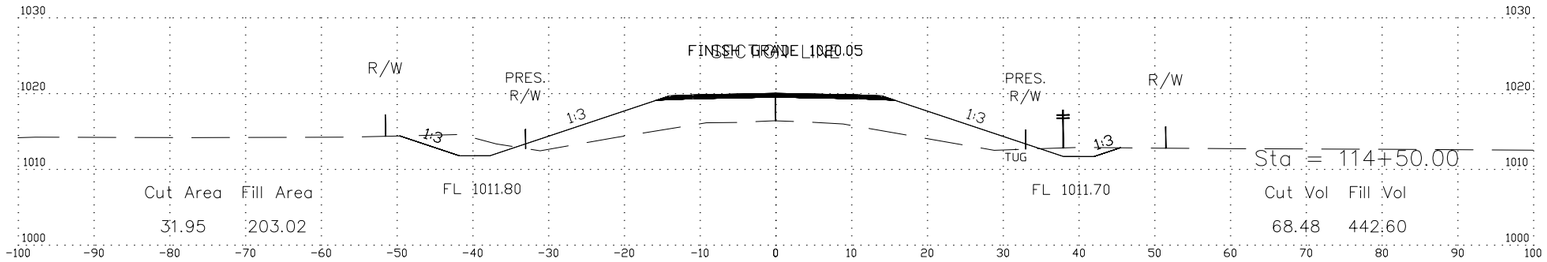


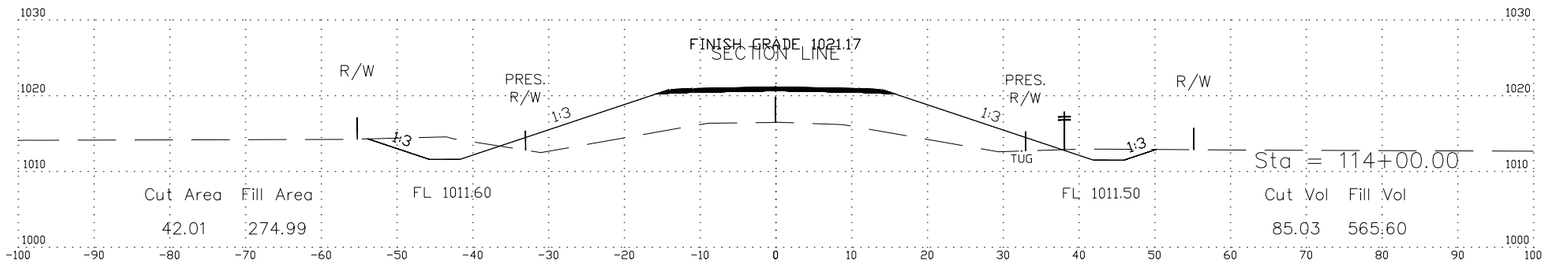


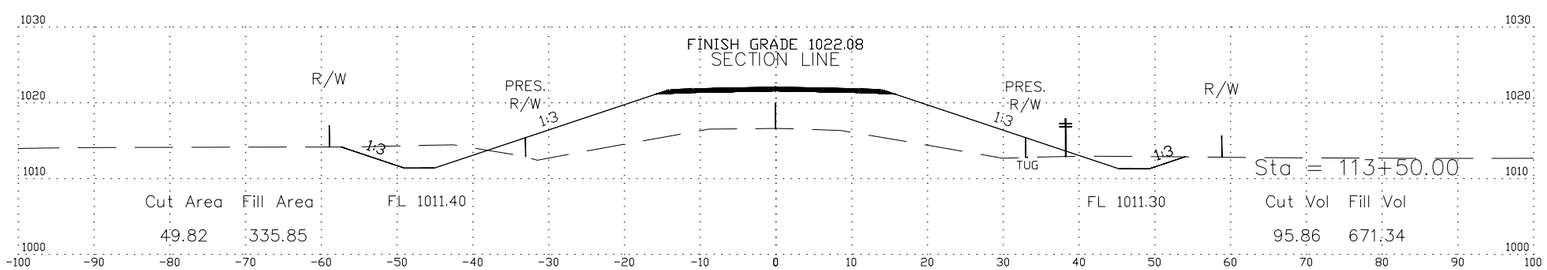
END BRIDGE 111+46.30


SECTION LINE
FINISH GRADE 1017.91
R/W
PRES. R/W
1:3
TUG
FL 1012.20
FL 1012.10
Sta = 115+50.00
Cut Area Fill Area
10.78 70.19
Cut Vol Fill Vol
30.68 189.86


SECTION LINE
FINISH GRADE 1018.89
R/W
PRES. R/W
1:3
TUG
FL 1012.00
FL 1011.90
Sta = 115+00.00
Cut Area Fill Area
22.35 134.86
Cut Vol Fill Vol
50.28 312.85


SECTION LINE
FINISH GRADE 1020.05
R/W
PRES. R/W
1:3
TUG
FL 1011.80
FL 1011.70
Sta = 114+50.00
Cut Area Fill Area
31.95 203.02
Cut Vol Fill Vol
68.48 442.60


SECTION LINE
FINISH GRADE 1021.17
R/W
PRES. R/W
1:3
TUG
FL 1011.60
FL 1011.50
Sta = 114+00.00
Cut Area Fill Area
42.01 274.99
Cut Vol Fill Vol
85.03 565.60


SECTION LINE
FINISH GRADE 1022.08
R/W
PRES. R/W
1:3
TUG
FL 1011.40
FL 1011.30
Sta = 113+50.00
Cut Area Fill Area
49.82 335.85
Cut Vol Fill Vol
95.86 671.34

END CONSTRUCTION 117+50.00