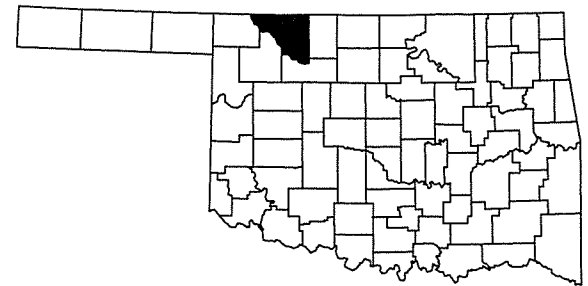


Sub.: June 9, 2016

RANDY MCMURPHY - COUNTY COMMISSIONER
DISTRICT NO. 2

DESIGN DATA

ADT 2015= 25
ADT 2035= 50
DESIGN SPEED=55 M.P.H.
TERRAIN-ROLLING



STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
COUNTY BRIDGE
FEDERAL AID PROJECT NO. ACSTP-276D(020)CI
BRIDGE AND APPROACH PLANS
WOODS COUNTY
(OLD NBI NO. 04935)(NEW NBI NO. 31600)
LOCATION NO. 76N2410E0170001
LITTLE EAGLE CHIEF CREEK
STATE JOB NO. 28347(04)
LAT. 36°46'03"N LONG. 98°43'12"W

SURVEY DATA

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

| INDEX OF SHEETS | |
|-----------------|---|
| SHEET NO. | DESCRIPTION |
| 1 | TITLE |
| 2 | TYPICAL SECTION & SUMMARY OF PAY QUANTITIES & GENERAL NOTES (ROADWAY) |
| 3 | SUMMARY OF PAY QUANTITIES & GENERAL NOTES (BRIDGE) |
| 4 | STORMWATER MANAGEMENT PLAN |
| 5 | EROSION CONTROL PLAN |
| 6 | ALIGNMENT, SURVEY REFERENCE & R/W |
| 7 | PLAN AND PROFILE |
| 8 | GENERAL PLAN & ELEVATION |
| 9 | STAKING LAYOUT, ANCHOR BOLT & PEDESTAL LAYOUT |
| 10-14 | CROSS SECTIONS |
| 15-16 | BORING LOG |
| 17 | COUNTY ROAD CLOSURE |

THE FOLLOWING STANDARDS SHALL BE USED:

| 2009 STANDARDS | | | |
|------------------------------------|------------------------------------|--------------------------------|------------|
| ROADWAY | TRAFFIC | MAINTENANCE | |
| CET4S-3-2 | DU1-1-00 | TCS2-1-00 | GRAU1-1-00 |
| FHTMPP-1-0 | DU2-1-00 | TCS4-1-01 | GRH1-1-00 |
| SPB-1-4 | TCS1-1-01 | TCS5-1-00 | GRH2-1-00 |
| RDI-3-1 | | TCS6-1-02 | GRH3-1-00 |
| SSS-1-1 | | TCS7-1-02 | |
| TSD-2-0 | | TCS8-1-00 | |
| TSC2-3-2 | | TCS9-1-01 | |
| SPI-4-1 | | | |
| BRIDGE | | | |
| CB26..32-C-SKO-ABUT-PC4-02E | CB26..32-C.I-SKO..30-GRAU-BC-00E | CB26-C-SKO-SPR-QUAN-PCB-1-01E | |
| CB26..32-C-SKO-ABUT-MISC-01E | CB26-C-SKO-XSECT-PC234-01E | CB26-C-SKO..30-DIA-INT-PCB-01E | |
| CB26-C-SKO-DKSLB-BLUST-01E | CB26-C-SKO-DIA-END-PC234-01E | CB26-C-SKO..30-BRG-PC4-01E | |
| CB26-C-SKO..30-PCB-IV-100-01E | CB26..32-C.I-SKO..30-PCB-DTL-2-01E | HP1-2-00E | |
| CB26..32-C.I-SKO..30-PCB-DTL-1-01E | CB26-C-SKO-LSECT-PCB-01E | TR3-2-01E | |
| CB26..32-C-SKO-WING-PC4-01E | | | |

| | |
|---------------|------------------------------|
| DATE | 3-7-16 |
| COMM. DIST. 1 | [Signature] |
| COMM. DIST. 2 | Randy McMurphy |
| COMM. DIST. 3 | [Signature] |
| ATTEST | Shelley Reed COUNTY CLERK |

PROJECT LENGTHS BASED ON CRL

SCALES

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

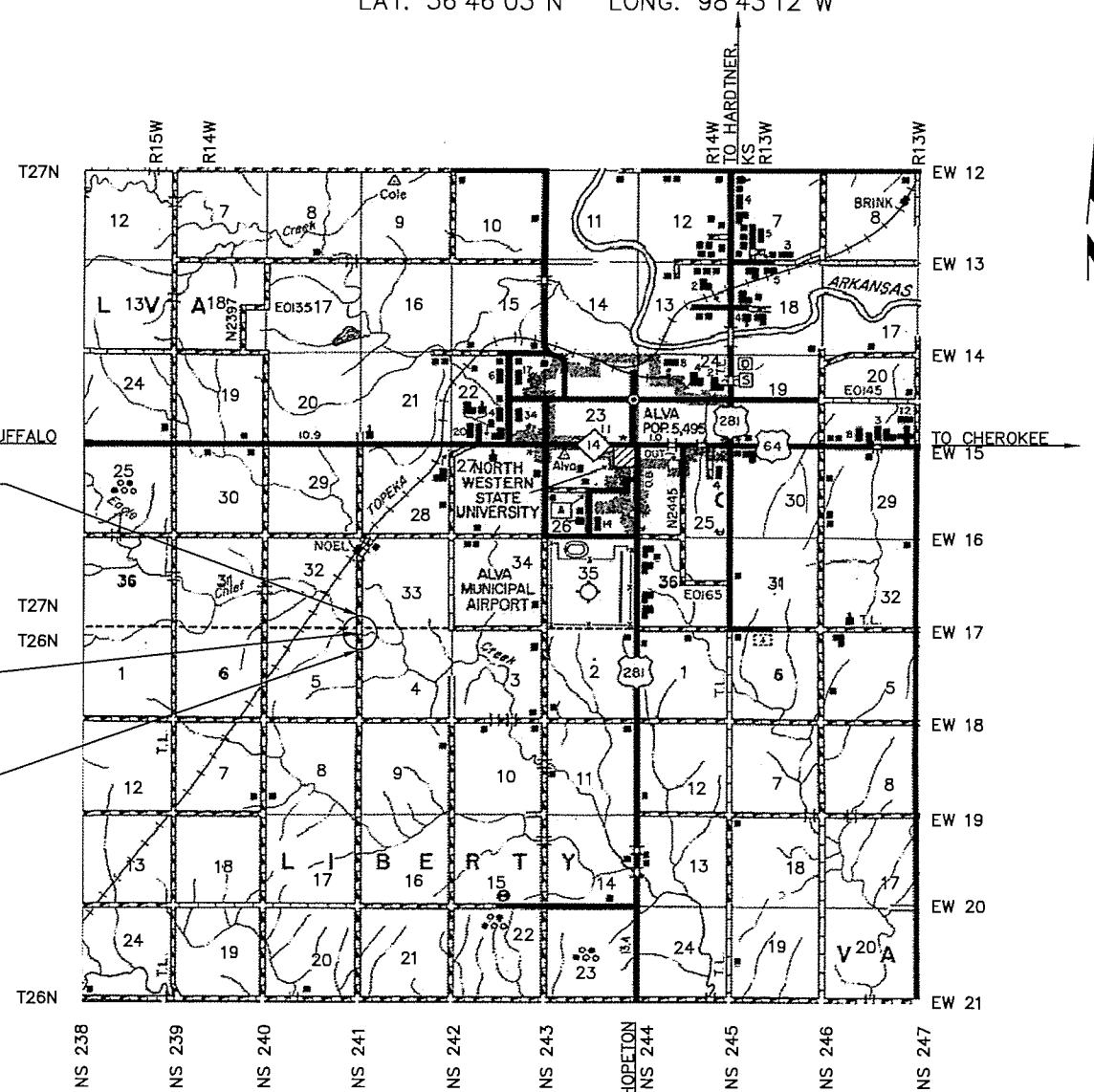
STA. 90+00.00 BEGIN CONSTRUCTION
PROJECT NO. ACSTP-276D(020)CI

BEGIN BRIDGE STA. 95+80.92
BRIDGE LENGTH 103'-2"
END BRIDGE STA. 96+84.09

STA. 100+50.00 END CONSTRUCTION
PROJECT NO. ACSTP-276D(020)CI

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
- RIGHT-OF-WAY LINES-EXISTING
- 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



| | | |
|----------------|--------------|-----------|
| ROADWAY LENGTH | 946.83 FT. | 0.179 MI. |
| BRIDGE LENGTH | 103.17 FT. | 0.020 MI. |
| PROJECT LENGTH | 1,050.00 FT. | 0.199 MI. |
| EXCETIONS | NONE | |
| EQUATIONS | NONE | |

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

WILFORD LEVINGS
LOCAL GOVERNMENT COORDINATION DIVISION
P.E. NO. 28347(01)



TYLER D. SCHRODER
REGISTERED PROFESSIONAL ENGINEER NO. 25837
28347(04)

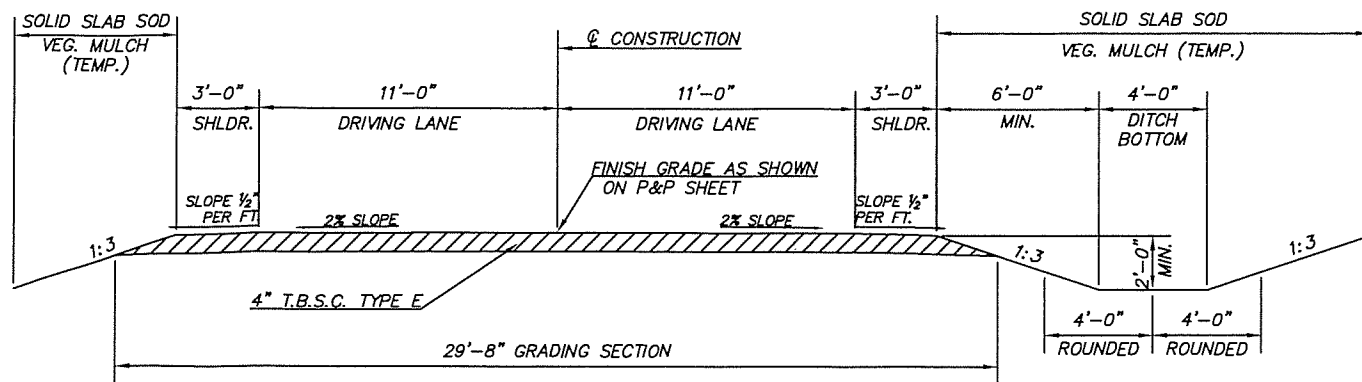
CIRCUIT ENGINEERING DIST. 8

2901 N. VAN BUREN
ENID, OK 73703
(580) 237-4810

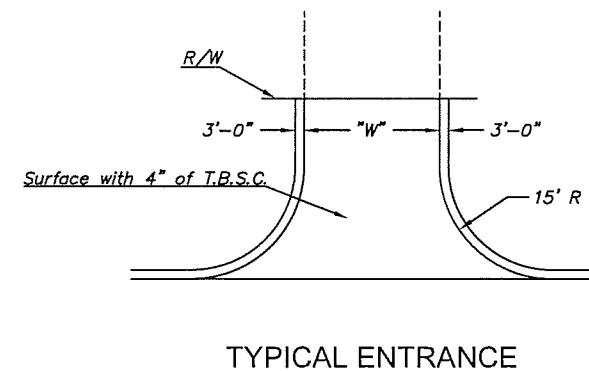
| | |
|--|--|
| OKLAHOMA DEPARTMENT OF TRANSPORTATION | DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION |
| DATE APPROVED _____ | DATE APPROVED _____ |
| BY _____ CHIEF ENGINEER | BY _____ DIVISION ADMINISTRATION |

SWO. F.A. Project No. ACSTP-276D(020)CI Sheet No. 1

"2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION-ENGLISH GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 4, 2010."



TYPICAL SECTION



TYPICAL ENTRANCE

| STATION | LOCATION | STYLE | WIDTH | | T.B.S.C. |
|-----------|----------|-------|-------|-------|----------|
| | | | FT. | TONS | |
| 92+63.00 | LT. | PVRT | 13.00 | 12.00 | |
| 100+03.00 | RT. | FIELD | 17.00 | 15.00 | |
| TOTAL | | | | 27.00 | |

| STR. NO. | P & P SHEET NO. | STATION | DESCRIPTION | DESIGN | FILL HEIGHT | CORR. GALV. STEEL PIPE | | CULVERT END TREATMENT (NON GRATED) | |
|-------------|-----------------|-----------|-----------------------------------|---------|-------------|------------------------|-------|------------------------------------|------|
| | | | | | | 613(B) | | 613(M) | |
| | | | | | | ROUND | ARCH | A4 | B4 |
| 1 | 7 | 92+63.00 | CONST. 35"X24"X60' CGSP ARCH- LT. | CET4S-3 | 1.00 | | 60.00 | | 2.00 |
| 2 | 7 | 100+03.00 | CONST. 18"X70' CGSP- RT. | CET4S-3 | 1.00 | 70.00 | | 2.00 | |
| SHEET TOTAL | | | | | | 70.00 | 60.00 | 2.00 | 2.00 |

PAY ITEM NOTES

(H-13) THE QUANTITY ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 1.04 ACRES. (ONE APPLICATION).

GENERAL CONSTRUCTION NOTES - EROSION CONTROL

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND 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 OKIE' 1-800-522-6543 OR 811.

GRASS: ALL DISTURBED AREAS INCLUDING DITCHES 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 10-20-10 FERTILIZER APPLIED AT THE RATE OF 200 LBS. PER 1,000 SQ. YDS. OF SODDING, 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".

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.

- (1) THIS PAY ITEM TO INCLUDE ROADWAY EXCAVATION, CHANNEL EXCAVATION, UNCLASSIFIED BORROW, CLEARING AND GRUBBING, AND CONSTRUCTION OF ROADWAY EMBANKMENT. INCLUDES ALL COSTS TO REMOVE, STOCKPILE AND REPLACE THE TOP SOIL ON THE FINISHED GRADING SLOPES IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. PRICE BID ALSO INCLUDES COST OF 18-46-0 FERTILIZER ESTIMATED AT 150 LBS. PER ACRE. ANY MATERIAL NOT SUITABLE FOR ROADWAY EMBANKMENT TO BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. SEE SHEET 7 FOR GRADING ESTIMATE.
- (2) ESTIMATED QUANTITY ONLY. LOCATION AND ACTUAL QUANTITY REQUIRED TO BE DETERMINED BY THE ENGINEER.
- (3) PRICE BID TO INCLUDE COST OF SILT REMOVAL.
- (4) SOLID SLAB QUANTITIES TO BE FIELD MEASURED BEFORE CUTTING SOD. CONTRACTOR WILL SUPPLY SUFFICIENT WATER TO PRODUCE ADEQUATE GRASS GROWTH AS APPROVED BY THE ENGINEER. PRICE BID TO INCLUDE THE COST OF WATERING ESTIMATED AT 40 GAL. PER S.Y. AND 10-20-10 FERTILIZER AT 200 LBS. PER 1000 S.Y..
- (5) ESTIMATED AT 141 LBS. PER C.F.
- (6) INCLUDES 28.00 TONS FOR GUARDRAIL WIDENING AND 27.00 TONS FOR FIELD ENTRANCES. INCLUDES 20.00 TONS FOR TEMPORARY USE AS DIRECTED BY THE ENGINEER.
- (7) INCLUDES 10 CU. YDS. TO BE USED IN A MANNER APPROVED BY THE ENGINEER.
- (8) 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.
- (9) PRICE BID TO INCLUDE THE COST OF REMOVAL AND DISPOSAL OF THE EXISTING PIPE.

| 100 ROADWAY | | | |
|-------------|-------------------------------------|-------------|----------|
| ITEM | DESCRIPTION | UNIT | QUANTITY |
| 202(H) 0185 | EARTHWORK | (1) L. SUM | 1.00 |
| 221(C) 2801 | TEMPORARY SILT FENCE | (2)(3) L.F. | 1,070.00 |
| 221(F) 0100 | TEMPORARY SILT DIKE | (2)(3) L.F. | 224.00 |
| 230(A) 2806 | SOLID SLAB SODDING | (4) S.Y. | 5,002.00 |
| 233(A) 2817 | VEGETATIVE MULCHING | (H-13) AC. | 1.04 |
| 402(E) 0225 | TRAFFIC BOUND SURFACE COURSE TYPE E | (5)(6) TON | 721.00 |
| 509(D) 0325 | CLASS C CONCRETE | (7) C.Y. | 10.00 |
| 613(B) 0689 | 18" CORR. GALV. STEEL PIPE | (9) L.F. | 70.00 |
| 613(B) 4529 | 35"X24" CORR. GALV. STEEL PIPE ARCH | (9) L.F. | 60.00 |
| 613(M) 7186 | TYPE A4 CULVERT END TREATMENT | EA. | 2.00 |
| 613(M) 7187 | TYPE B4 CULVERT END TREATMENT | EA. | 2.00 |

| 600 STAKING | | | |
|-------------|-------------------------------|------------|----------|
| ITEM | DESCRIPTION | UNIT | QUANTITY |
| 642(B) 0096 | CONSTRUCTION STAKING LEVEL II | (8) L. SUM | 1.00 |

| 640 CONSTRUCTION | | | |
|------------------|------------------------------------|--------|----------|
| ITEM | DESCRIPTION | UNIT | QUANTITY |
| 220 2800 | SWPPP DOCUMENTATION AND MANAGEMENT | L. SUM | 1.00 |
| 641 1399 | MOBILIZATION | L. SUM | 1.00 |

| STATION EXTENT | LENGTH | T.B.S.C. |
|-----------------------|--------|----------|
| | FT. | TONS |
| 90+00.00 TO 95+80.92 | 580.92 | 410.00 |
| 96+84.09 TO 100+50.00 | 365.92 | 264.00 |
| SHEET TOTALS | 946.84 | 674.00 |

INCLUDES QUANTITY FOR GUARDRAIL WIDENING.

- COUNTY TO BE RESPONSIBLE FOR THE FOLLOWING:
1. ACQUIRING ALL REQUIRED R/W.
 2. REMOVAL AND RESETTING ALL FENCES ON RIGHT-OF-WAY LINES.
 3. RELOCATING ALL UTILITIES.
 4. DETOUR SIGNING IF NECESSARY.

WOODS COUNTY LITTLE EAGLE CHIEF CR.
TYPICAL SECTION & SUMMARY OF PAY QUANTITIES & GENERAL NOTES (ROADWAY)

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 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 71.6 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 = $\phi [(0.875 \sqrt{E} \text{ LOG}_{10}(10N)) - 50]$ (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 DIV 6 FOURTEEN (14) CALENDAR DAYS BEFORE ANY CONSTRUCTION OR DEMOLITION BEGINS ON THIS PROJECT.

| GUARDRAIL SCHEDULE | | | | |
|--------------------|--------------------------|---------------|------------------|------------------------|
| SHEET | STATION TO STATION | ANCHOR UNITS | | LENGTH OF RAIL L.F. |
| | | TYPE A EA. | TYPE D-BF EA. | |
| 7 | 94+66.92 TO 95+66.92 RT. | 1.00 | 1.00 | 100.00 |
| 7 | 94+66.92 TO 95+66.92 LT. | 1.00 | 1.00 | 100.00 |
| 7 | 96+98.08 TO 97+98.08 RT. | 1.00 | 1.00 | 100.00 |
| 7 | 96+98.08 TO 97+98.08 LT. | 1.00 | 1.00 | 100.00 |
| SHEET TOTALS | | 4.00 | 4.00 | 400.00 |

PAY ITEM NOTES

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

(9) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY. SEE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, "PLAN QUANTITIES" SECTION 109.01(B).

(10) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSIST OF REMOVAL OF THE EXISTING 2- 30' LONG X 20' I-BEAM SPANS BRIDGE. THE REMOVAL SHALL BE IN ACCORDANCE WITH SPECIFICATION 619.04(b)1 OF STANDARD SPECIFICATION AND IN A MANNER APPROVED BY THE ENGINEER. THE BEAMS ARE TO BE STACKED ON R/W TO BECOME PROPERTY OF THE COUNTY.

(11) 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.

ENVIRONMENTAL MITIGATION NOTES

CLIFF SWALLOWS AND BARN SWALLOWS ARE SMALL COLONIAL NESTING BIRDS PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. THESE SPECIES COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR THE SWALLOWS RUNS FROM APRIL 1 TO AUGUST 31. ANY ACTIVITIES WHICH WOULD DESTROY ACTIVE NESTS OR HARM EGGS OR BIRDS WOULD VIOLATE THE MIGRATORY BIRD TREATY ACT. SWALLOW USE OF BRIDGE NBI NO. 04935 WAS NOT OBSERVED DURING THE INITIAL SURVEYS CONDUCTED AS PART OF THE BIOLOGICAL STUDIES IN 2015. SWALLOWS MAY OCCUPY THE BRIDGE IN THE FUTURE NESTING SEASONS. THE RESIDENT ENGINEER WILL EVALUATE THE CONTRACTOR'S PROPOSED WORK METHODS AND CONCLUDE WHETHER THE PROPOSED WORK WOULD POSE DISRUPTION TO ANY NESTING BIRDS BEFORE WORK NEAR THE STRUCTURE IS AUTHORIZED. IF THE PROPOSED WORK WILL HARM ANY NESTING BIRDS, THE BRIDGE MAY BE NETTED PRIOR TO APRIL 1 OR THE WORK DELAYED UNTIL THE NESTING SEASON IS COMPLETE. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

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.

T26N R14W:

SECTION 3: NW¼ SW¼ NW¼
SECTION 4: NE¼

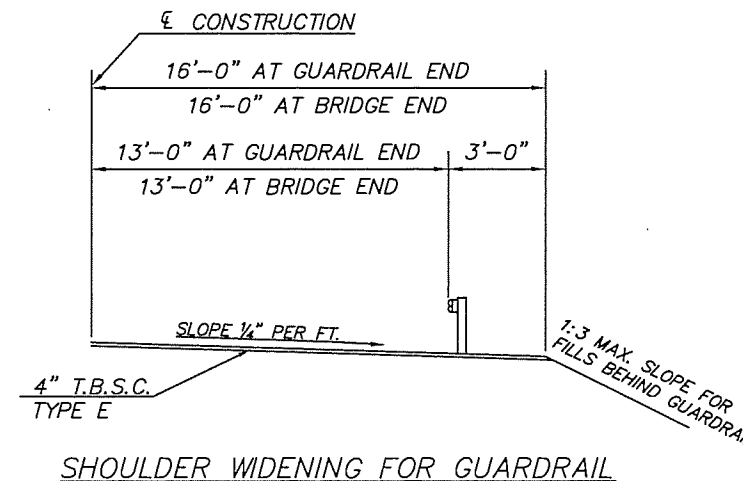
T27N R14W:

SECTION 33: NW¼ SW¼

PAY QUANTITIES

200 BRIDGE PCB 100.00 FT. SINGLE SPAN TYPE IV, 26'-0" CL. RDY, TR3 RAILS

| ITEM | DESCRIPTION | UNIT | QUANTITY |
|-------------|---|--------|-----------|
| 501(B) 1307 | SUBSTRUCTURE EXCAVATION COMMON (9) | C.Y. | 190.00 |
| 501(F) 6352 | GRANULAR BACKFILL (9) | C.Y. | 88.00 |
| 503(A) 1313 | PRESTRESSED CONCRETE BEAMS (TYPE IV) (9) | L.F. | 299.00 |
| 504(D) 6239 | CONCRETE RAIL (TR3) (9) | L.F. | 266.40 |
| 506(A) 1322 | STRUCTURAL STEEL (9) | LB. | 510.00 |
| 507(A) 6172 | WEATHERING STEEL FIXED BEARING ASSEMBLY | EA. | 3.00 |
| 507(B) 6176 | WEATHERING STEEL EXP. BEARING ASSEMBLY | EA. | 3.00 |
| 509(A) 1326 | CLASS AA CONCRETE (9) | C.Y. | 79.00 |
| 509(B) 1328 | CLASS A CONCRETE (9) | C.Y. | 69.80 |
| 511(A) 1332 | REINFORCING STEEL (9) | LB. | 28,300.00 |
| 514(A) 6010 | PILES, FURNISHED (HP10X42) | L.F. | 130.00 |
| 514(A) 6011 | PILES, FURNISHED (HP12X53) | L.F. | 385.00 |
| 514(B) 6292 | PILES, DRIVEN (HP10X42) | L.F. | 130.00 |
| 514(B) 6294 | PILES, DRIVEN (HP12X53) | L.F. | 385.00 |
| 514(L) 6220 | PILE SPLICE, H-PILE (NON-BIDDABLE) | EA. | 1.00 |
| 601(B) 1353 | TYPE I-A PLAIN RIPRAP | TON | 541.00 |
| 601(C) 1355 | TYPE I-A FILTER BLANKET | TON | 181.00 |
| 613(H) 6204 | 6" PERFORATED PIPE UNDERDRAIN ROUND | L.F. | 52.00 |
| 613(I) 6207 | 6" NON-PERFORATED PIPE UNDERDRAIN ROUND | L.F. | 30.00 |
| 619(D) 1397 | REMOVAL OF EXISTING BRIDGE STRUCTURE (10) | 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 (11) | L. SUM | 1.00 |



WOODS COUNTY LITTLE EAGLE CHIEF CR.

SUMMARY OF PAY QUANTITIES & GENERAL NOTES (BRIDGE)

STORM WATER MANAGEMENT PLAN

| REVISIONS | |
|-------------|------|
| DESCRIPTION | DATE |
| | |
| | |

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE OVER LITTLE EAGLE CHIEF CREEK,
3.0 MI. WEST AND 2.1 MI. SOUTH OF US-64/US-281.

PROJECT DESCRIPTION: BRIDGE AND APPROACH PLANS, ROADWAY LENGTH =
946.83' OF TRAFFIC BOUND SURFACE COURSE TYPE "E" AT 4",
100' PCB SPAN = 103.17' LONG BRIDGE,
SKewed 0'. GUARDRAIL BRIDGE & RIP RAP CHANNEL.
5,002.00 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: GRANT SILT LOAM

AREA TO BE DISTURBED: 1.04 ACRES
 OFFSITE AREA TO BE DISTURBED: _____
 (FOR CONTRACTOR USE)
 MAXIMUM ACRES TO BE
 DISTURBED AT ANY ONE TIME: _____
 (FOR CONTRACTOR USE)

LATITUDE & LONGITUDE OF
 CENTER OF PROJECT: LAT. 36° 46' 03"N LONG. 98° 43' 12"W

NAME OF RECEIVING WATERS: LITTLE EAGLE CHIEF CREEK

SENSITIVE WATERS OR WATERSHEDS: YES NO

303(d) IMPAIRED WATERS: YES NO

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
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- _____ SOIL RETENTION BLANKET
- 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
- TEMPORARY SILT FENCE
- 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
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- _____ TEMPORARY BRUSH SEDIMENT BARRIERS
- _____ SANDBAG BERMS
- _____ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- 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) FORMS 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 2009 ODOT STANDARD SPECIFICATIONS SHOULD
 BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEAN 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, 2012.

| | | | | |
|----------|-----|------|--|--|
| Design | | | | OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DRAWING STORM WATER MANAGEMENT PLAN STATE JOB NO. <u>28347(04)</u> SHEET NO. <u>4</u> |
| Drawn | JRR | 7/15 | | |
| Checked | | | | |
| Approved | | | | |
| Squad | | | | |

SECTION 5, T26N, R14W

SECTION 5, T26N, R14W

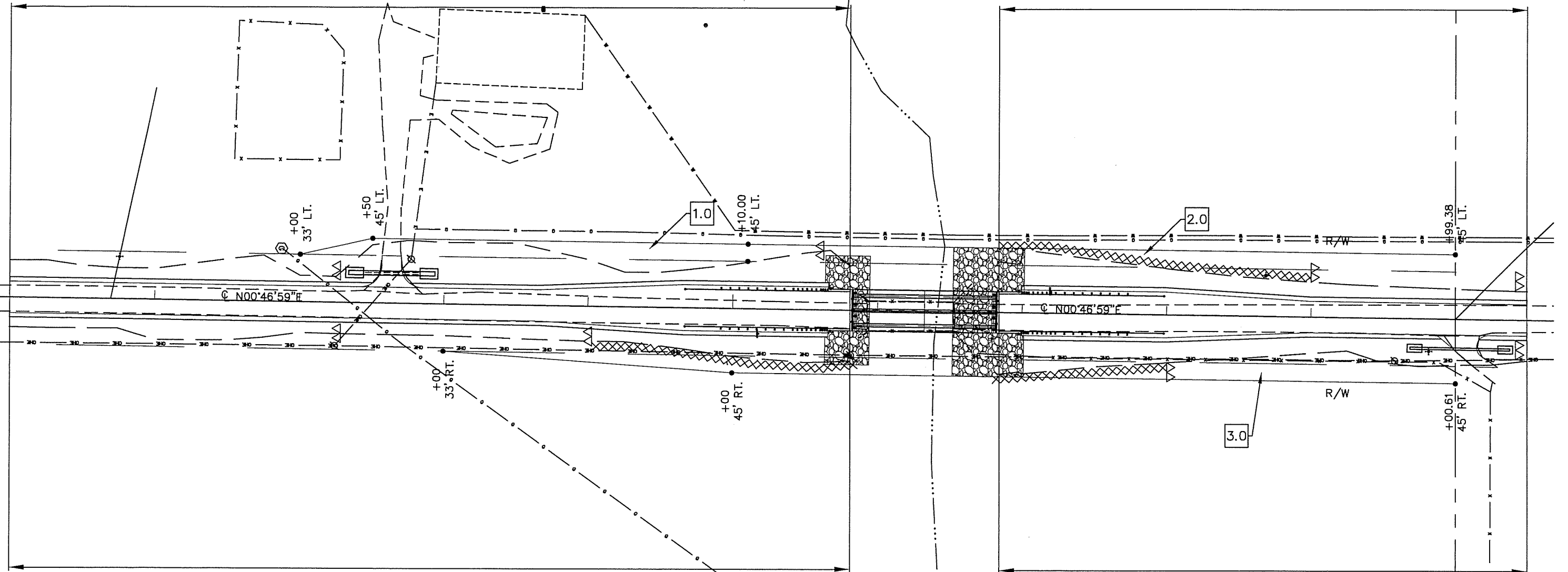
90+00

95+00

100+00

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 4, T26N, R14W

SECTION 4, T26N, R14W

| LEGEND | |
|----------------------|--------|
| TEMPORARY SILT DIKE | ▲▲▲▲▲▲ |
| TEMPORARY SILT FENCE | XXXXXX |

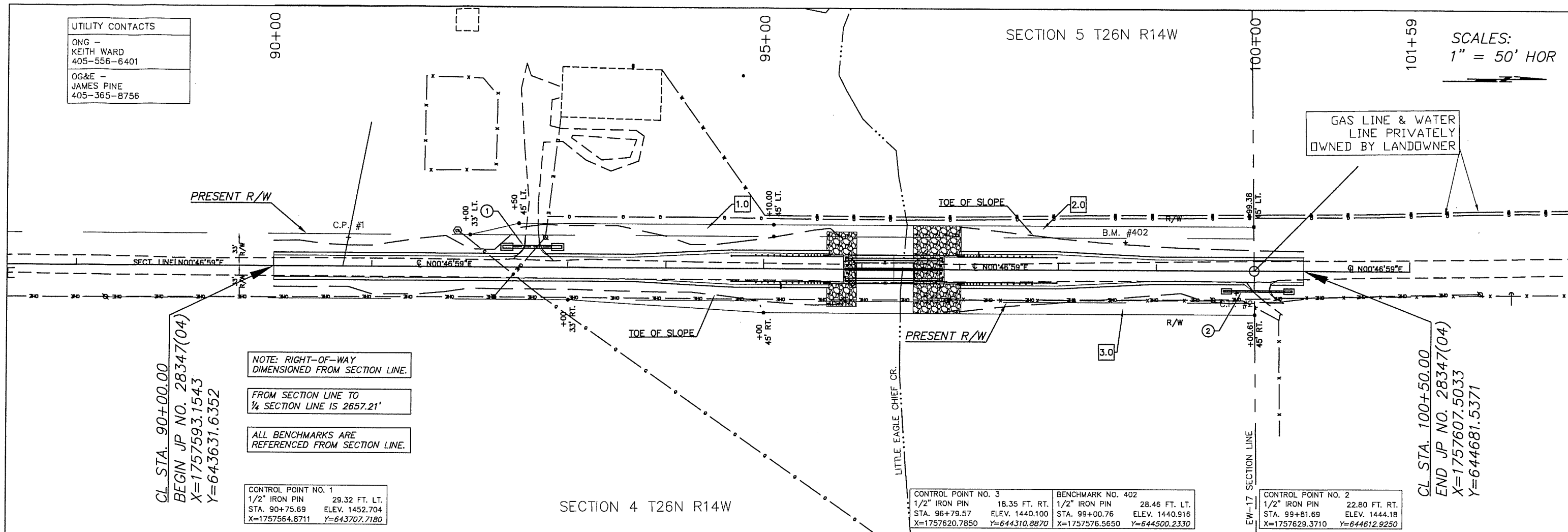
WOODS COUNTY LITTLE EAGLE CHIEF CR.

EROSION CONTROL

| UTILITY CONTACTS | |
|------------------|--------------|
| ONG - | KEITH WARD |
| | 405-556-6401 |
| OG&E - | JAMES PINE |
| | 405-365-8756 |

SECTION 5 T26N R14W

SCALES:
1" = 50' HOR



CL STA. 90+00.00
BEGIN JP NO. 28347(04)
X=1757593.1543
Y=643631.6352

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

FROM SECTION LINE TO
1/4 SECTION LINE IS 2657.21'

ALL BENCHMARKS ARE
REFERENCED FROM SECTION LINE.

CONTROL POINT NO. 1
1/2" IRON PIN 29.32 FT. LT.
STA. 90+75.69 ELEV. 1452.704
X=1757564.8711 Y=643707.7180

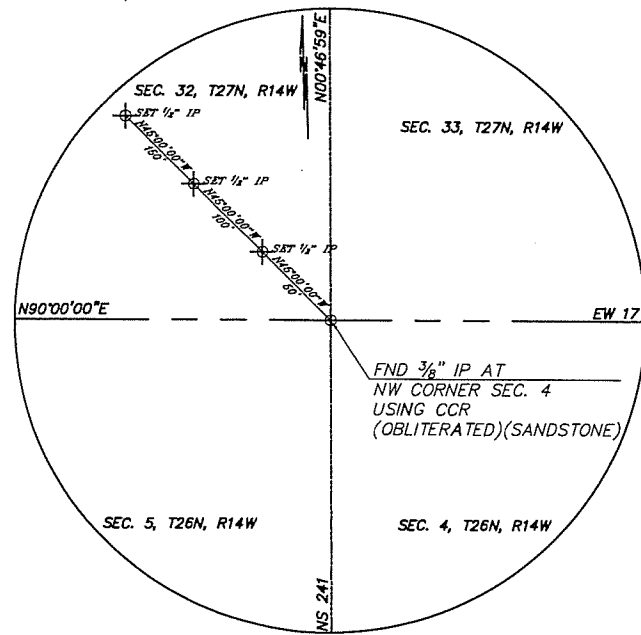
SECTION 4 T26N R14W

CONTROL POINT NO. 3
1/2" IRON PIN 18.35 FT. RT.
STA. 96+79.57 ELEV. 1440.100
X=1757620.7850 Y=644310.8870

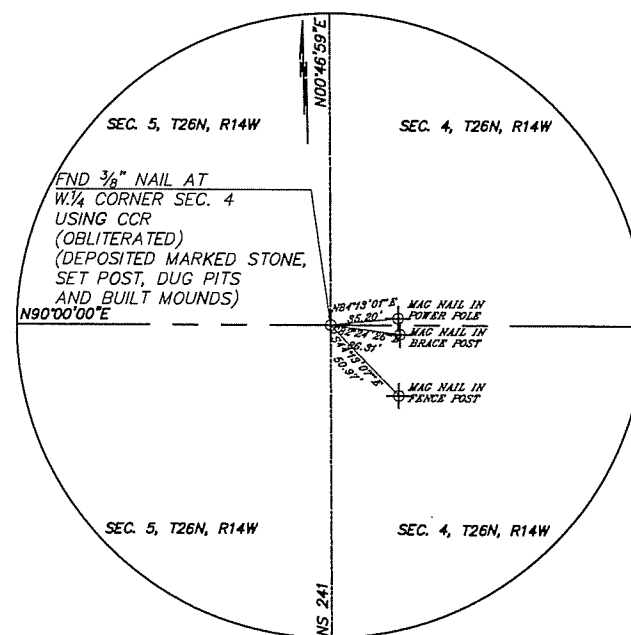
BENCHMARK NO. 402
1/2" IRON PIN 28.46 FT. LT.
STA. 99+00.76 ELEV. 1440.916
X=1757576.5650 Y=644500.2330

CONTROL POINT NO. 2
1/2" IRON PIN 22.80 FT. RT.
STA. 99+81.69 ELEV. 1444.18
X=1757629.3710 Y=644612.9250

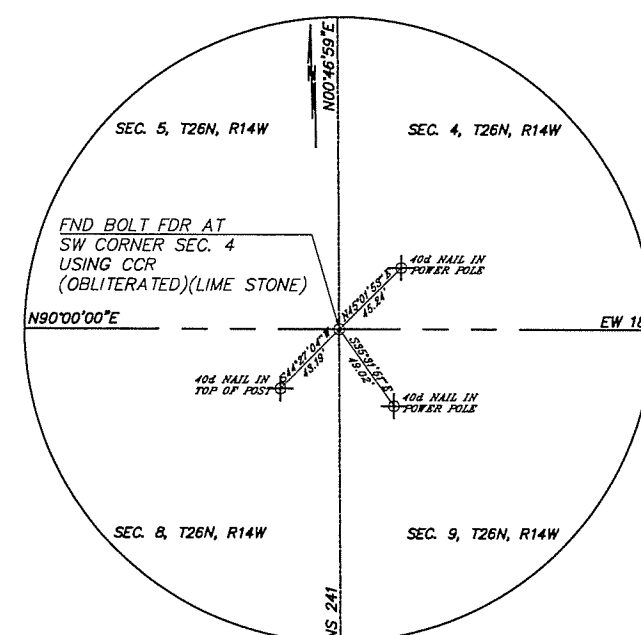
CL STA. 100+50.00
END JP NO. 28347(04)
X=1757607.5033
Y=644681.5371



N.W. SECTION CORNER
SECTION 4, T26N, R14W
STA. 100+00.00
X=1757606.8200
Y=644631.5418



W. 1/4 SECTION CORNER
SECTION 4, T26N, R14W
STA. 73+63.40
X=1757570.7890
Y=641995.1880



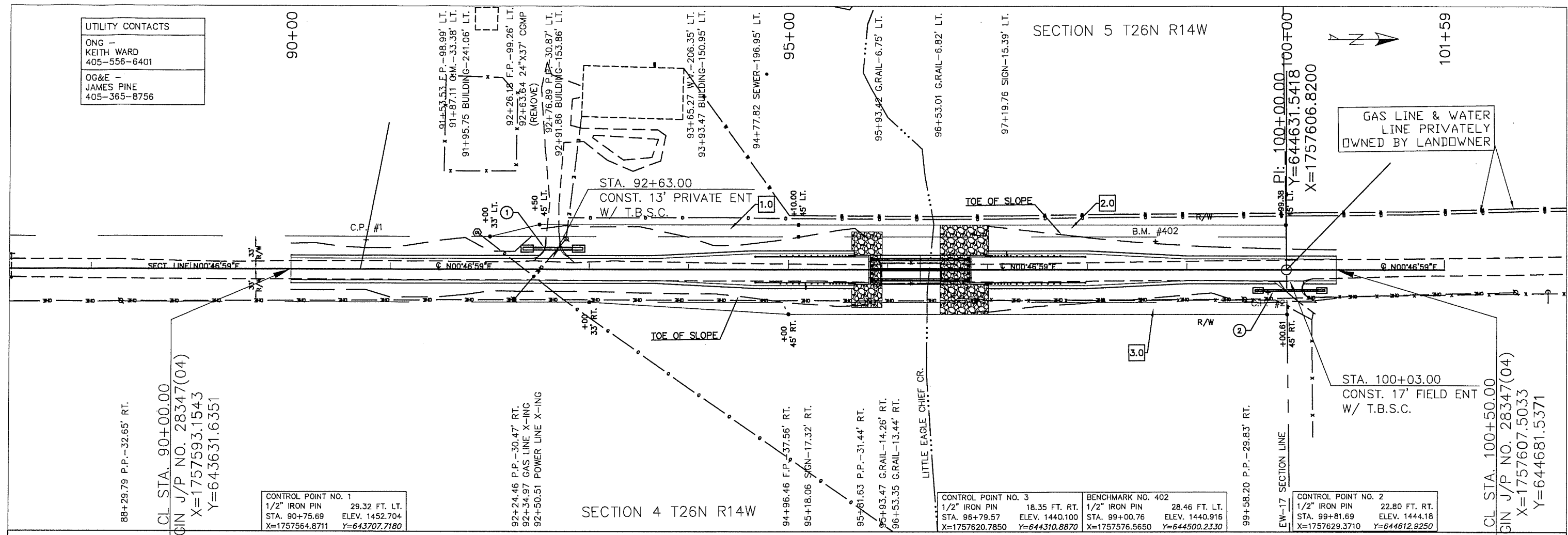
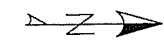
S.W. SECTION CORNER
SECTION 4, T26N, R14W
STA. 46+92.63
X=1757535.4250
Y=639324.6570

WOODS COUNTY LITTLE EAGLE CHIEF CR.

ALIGNMENT, SURVEY
REFERENCES AND R/W

| UTILITY CONTACTS | |
|------------------|----------------------------|
| ONG - | KEITH WARD 405-556-6401 |
| OG&E - | JAMES PINE 405-365-8756 |

SECTION 5 T26N R14W

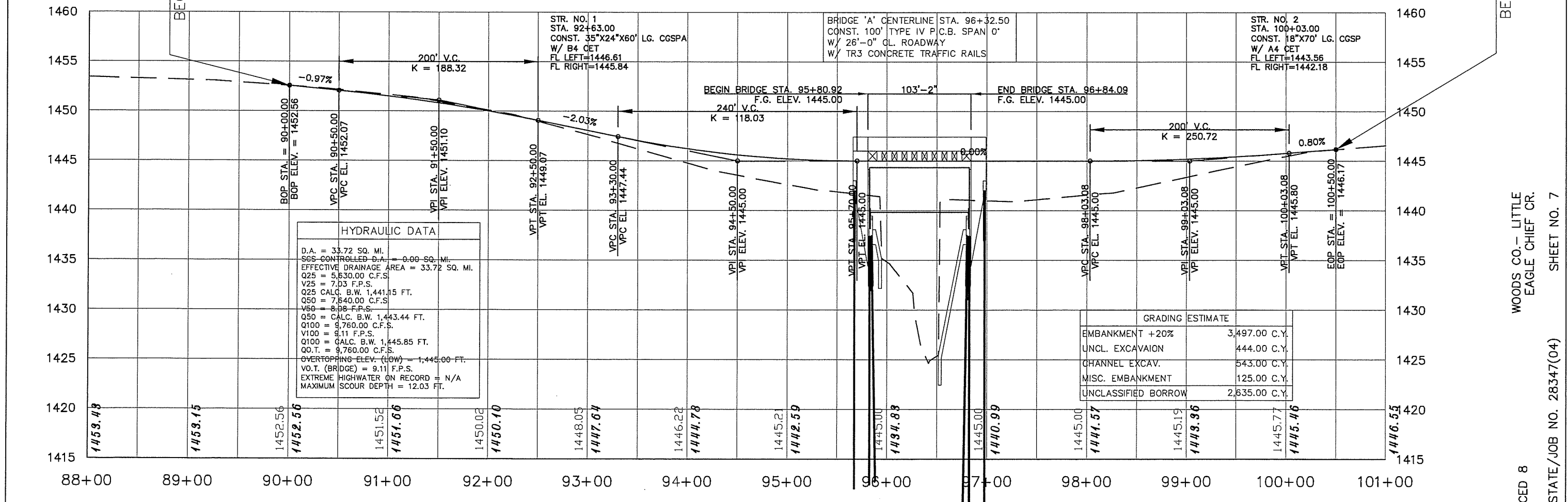


| CONTROL POINT NO. 1 | |
|---------------------|----------------|
| 1/2" IRON PIN | 29.32 FT. LT. |
| STA. 90+75.69 | ELEV. 1452.704 |
| X=1757564.8711 | Y=643707.7180 |

| CONTROL POINT NO. 3 | |
|---------------------|----------------|
| 1/2" IRON PIN | 18.35 FT. RT. |
| STA. 96+79.57 | ELEV. 1440.100 |
| X=1757620.7850 | Y=644310.8870 |

| BENCHMARK NO. 402 | |
|-------------------|----------------|
| 1/2" IRON PIN | 28.46 FT. LT. |
| STA. 99+00.76 | ELEV. 1440.916 |
| X=1757576.5650 | Y=644500.2330 |

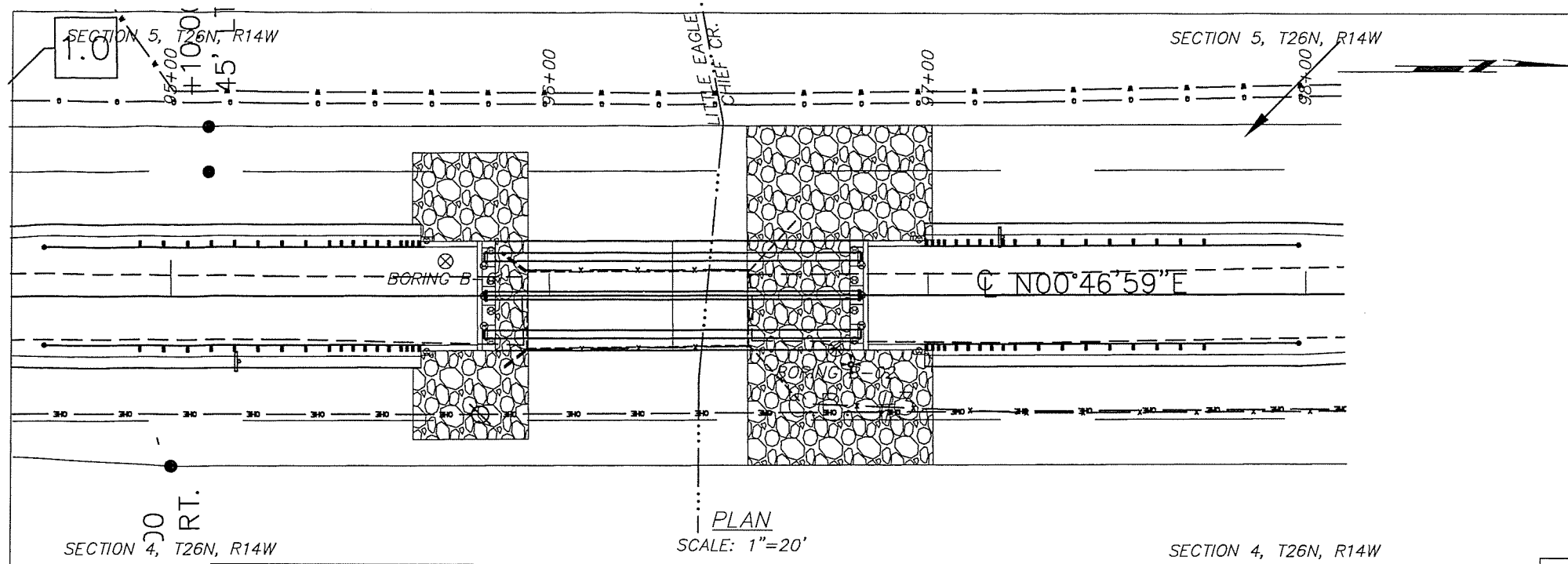
| CONTROL POINT NO. 2 | |
|---------------------|---------------|
| 1/2" IRON PIN | 22.80 FT. RT. |
| STA. 99+81.69 | ELEV. 1444.18 |
| X=1757629.3710 | Y=644612.9250 |



| HYDRAULIC DATA | |
|-------------------------------|-----------------|
| D.A. = | 33.72 SQ. MI. |
| EFF. DRAINAGE AREA = | 33.72 SQ. MI. |
| Q25 = | 5,630.00 C.F.S. |
| Q50 = | 7,640.00 C.F.S. |
| Q100 = | 9,760.00 C.F.S. |
| Q25 CALC. B.W. = | 1,441.15 FT. |
| Q50 CALC. B.W. = | 1,443.44 FT. |
| Q100 CALC. B.W. = | 1,445.85 FT. |
| EXTREME HIGHWATER ON RECORD = | N/A |
| MAXIMUM SCOUR DEPTH = | 12.03 FT. |

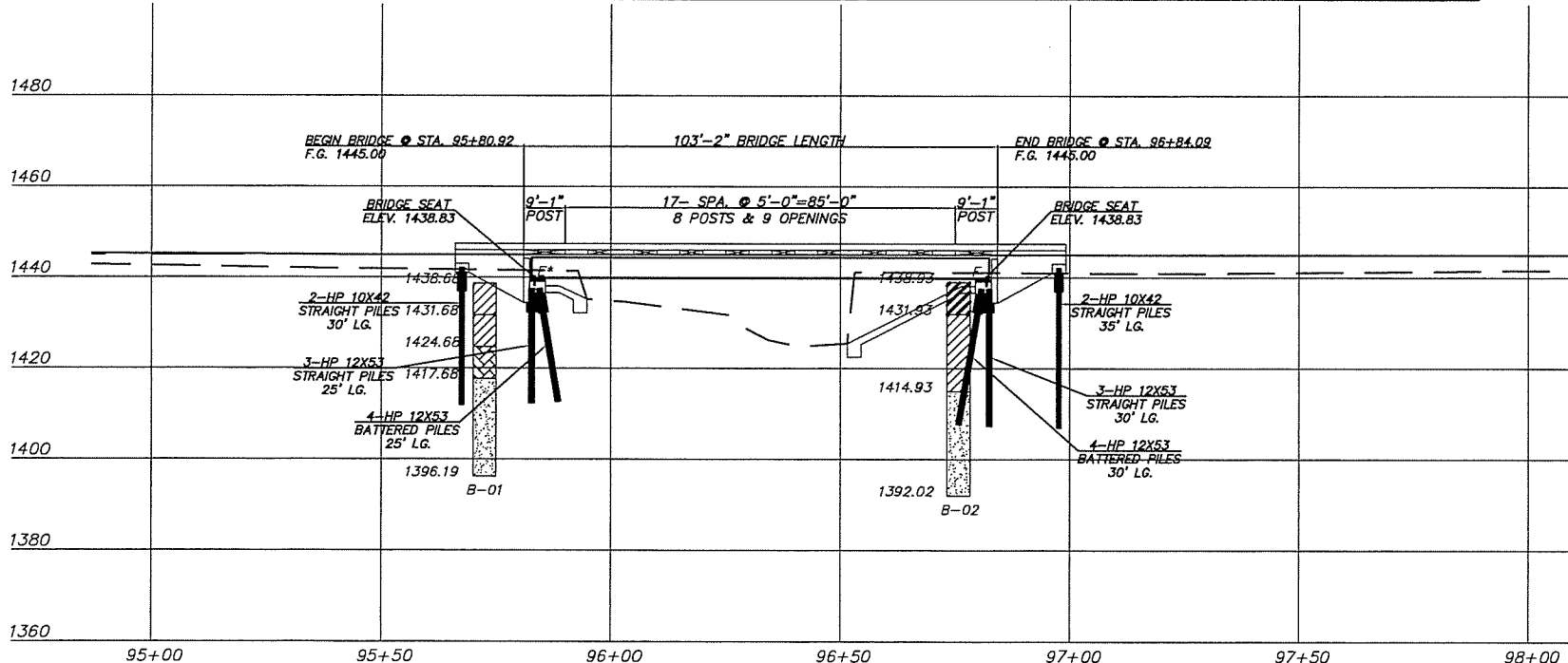
| GRADING ESTIMATE | |
|---------------------|---------------|
| EMBANKMENT +20% | 3,497.00 C.Y. |
| UNCL. EXCAVATION | 444.00 C.Y. |
| CHANNEL EXCAV. | 543.00 C.Y. |
| MISC. EMBANKMENT | 125.00 C.Y. |
| UNCLASSIFIED BORROW | 2,635.00 C.Y. |

WOODS CO. - LITTLE EAGLE CHIEF CR.
SHEET NO. 7
STATE/JOB NO. 28347(04)
CED 8



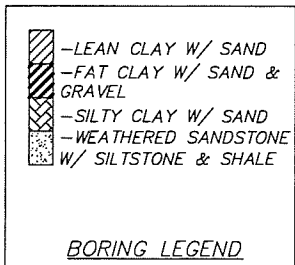
| PAY QUANTITIES | | | | | | |
|----------------|-------------|---|----------|-----------------|----------------|-----------|
| ITEM | DESCRIPTION | UNIT | ABUTMENT | SUPER STRUCTURE | TOTAL QUANTITY | |
| 501(B) | 1307 | SUBSTRUCTURE EXCAVATION COMMON | C.Y. | 190.00 | 0.00 | 190.00 |
| 501(F) | 6352 | GRANULAR BACKFILL | C.Y. | 88.00 | 0.00 | 88.00 |
| 503(A) | 1313 | PRESTRESSED CONCRETE BEAMS (TYPE IV) | L.F. | 0.00 | 299.00 | 299.00 |
| 504(D) | 6239 | CONCRETE RAIL (TR3) | L.F. | 60.00 | 206.40 | 266.40 |
| 506(A) | 1322 | STRUCTURAL STEEL | LBS. | 0.00 | 510.00 | 510.00 |
| 507(A) | 6172 | WEATHERING STEEL FIXED BEARING ASSEMBLY | EA. | 0.00 | 3.00 | 3.00 |
| 507(B) | 6176 | WEATHERING STEEL EXP. BEARING ASSEMBLY | EA. | 0.00 | 3.00 | 3.00 |
| 509(A) | 1326 | CLASS AA CONCRETE | C.Y. | 0.00 | 79.00 | 79.00 |
| 509(B) | 1328 | CLASS A CONCRETE | C.Y. | 69.80 | 0.00 | 69.80 |
| 511(A) | 1332 | REINFORCING STEEL | LBS. | 9,960.00 | 18,340.00 | 28,300.00 |
| 514(A) | 6010 | PILES, FURNISHED (HP10X42) | L.F. | 130.00 | 0.00 | 130.00 |
| 514(A) | 6011 | PILES, FURNISHED (HP12X53) | L.F. | 385.00 | 0.00 | 385.00 |
| 514(B) | 6292 | PILES, DRIVEN (HP10X42) | L.F. | 130.00 | 0.00 | 130.00 |
| 514(B) | 6294 | PILES, DRIVEN (HP12X53) | L.F. | 385.00 | 0.00 | 385.00 |
| 601(B) | 1353 | TYPE I-A PLAIN RIPRAP | TON | 541.00 | 0.00 | 541.00 |
| 601(C) | 1355 | TYPE I-A FILTER BLANKET | TON | 181.00 | 0.00 | 181.00 |
| 613(H) | 0450 | 6" PERFORATED PIPE UNDERDRAIN ROUND | L.F. | 52.00 | 0.00 | 52.00 |
| 613(I) | 1096 | 6" NON-PERFORATED PIPE UNDERDRAIN ROUND | L.F. | 30.00 | 0.00 | 30.00 |
| 619(D) | 1397 | REMOVAL OF EXISTING BRIDGE STRUCTURE | L. SUM | 0.00 | 0.00 | 1.00 |
| 623(F) | 5686 | GUARDRAIL ANCHOR UNIT (TYPE D-BF) | EA. | 0.00 | 0.00 | 4.00 |
| 623(F) | 6030 | GUARDRAIL ANCHOR UNIT (TYPE A) | EA. | 0.00 | 0.00 | 4.00 |
| 880(J) | 8905 | CONSTRUCTION TRAFFIC CONTROL | L. SUM | 0.00 | 0.00 | 1.00 |

| CONTROL POINT NO. 1 | | CONTROL POINT NO. 3 | | BENCHMARK NO. 402 | | CONTROL POINT NO. 2 | |
|---------------------|----------------|---------------------|----------------|-------------------|----------------|---------------------|---------------|
| 1/2" IRON PIN | 29.32 FT. LT. | 1/2" IRON PIN | 18.35 FT. RT. | 1/2" IRON PIN | 28.46 FT. LT. | 1/2" IRON PIN | 22.80 FT. RT. |
| STA. 90+75.69 | ELEV. 1452.704 | STA. 96+79.57 | ELEV. 1440.100 | STA. 99+00.76 | ELEV. 1440.916 | STA. 99+81.69 | ELEV. 1444.18 |
| X=1757564.8711 | Y=643707.7180 | X=1757620.7850 | Y=644310.8870 | X=1757576.5650 | Y=644500.2330 | X=1757629.3710 | Y=644612.9250 |



NOTE:
SEE SHEET NO. 15-16
FOR BORING INFORMATION
*USE SLOTTED ANCHOR PLATES,
SEE STD.
CB26-C-SK0..30-BRG-PC4-01E

| B-1 PENETROMETER TEST | | B-2 PENETROMETER TEST | |
|-----------------------|----------|-----------------------|---------|
| 50/1.75" | 50/1.0" | 1416.93 | 1412.43 |
| 50/1.25" | 50/0.63" | 1411.68 | 1407.43 |
| 50/1.0" | 50/0.5" | 1406.68 | 1401.93 |
| 50/1.63" | 50/1.0" | 1401.43 | 1396.68 |
| 50/2.0" | 50/1.25" | 1396.19 | 1392.02 |



LOADING DATA
ABUTMENT PILES (HP 12X53):
FACTOR PILE REACTION = 71.6 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 71.6 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) F_y=60,000 PSI
STRUCTURAL STEEL (GR 50W) F_y=50,000 PSI

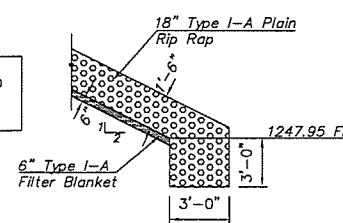
LOADING: HL-93 20 PSF FUTURE WEARING SURFACE
5 PSF STAY-IN-PLACE FORMS

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 54.2

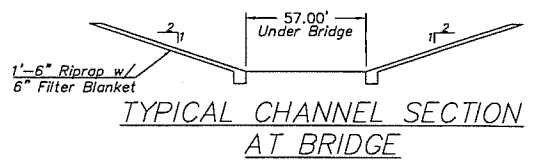
HYDRAULIC DATA
D.A. = 33.72 SQ. MI.
SCS CONTROLLED D.A. = 0.00 SQ. MI.
EFFECTIVE DRAINAGE AREA = 33.72 SQ. MI.
Q25 = 5,630.00 C.F.S.
V25 = 7.03 F.P.S.
Q25 CALC. B.W. 1,441.15 FT.
Q50 = 7,640.00 C.F.S.
V50 = 8.08 F.P.S.
Q50 = CALC. B.W. 1,443.44 FT.
Q100 = 9,760.00 C.F.S.
V100 = 9.11 F.P.S.
Q100 = CALC. B.W. 1,445.85 FT.
OO.T. = 9,760.00 C.F.S.
OVERTOPPING ELEV. (LOW) = 1,445.00 FT.
VO.T. (BRIDGE) = 9.11 F.P.S.
EXTREME HIGHWATER ON RECORD = N/A
MAXIMUM SCOUR DEPTH = 12.03 FT.

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

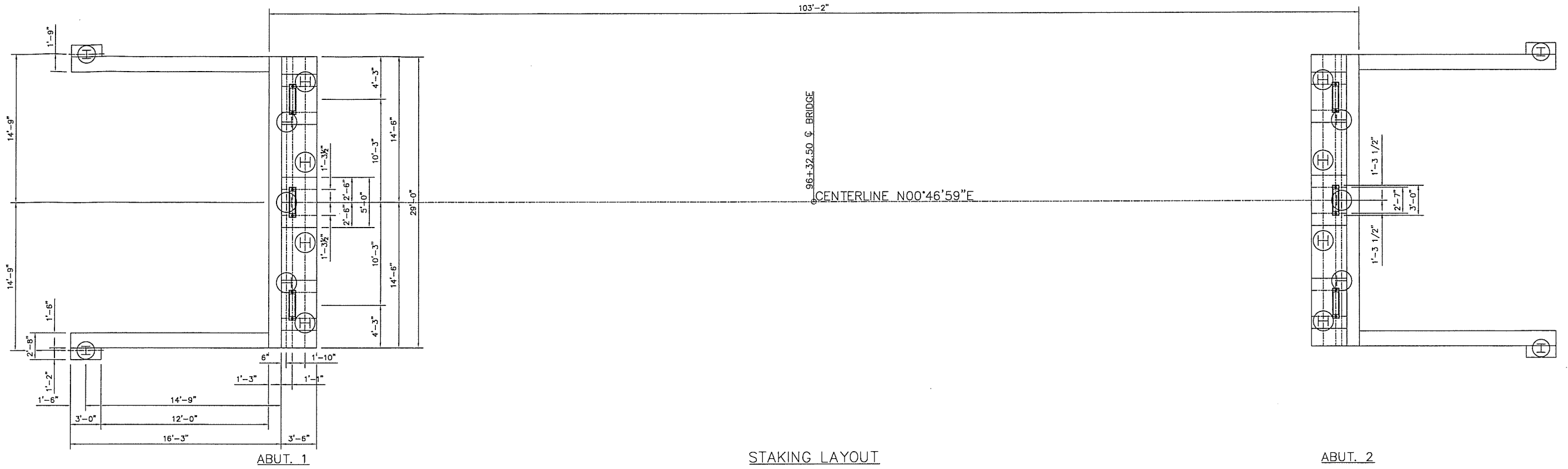
NOTE:
"TOEING-IN" APPLIES TO
THE ENTIRE LENGTH OF
THE BASE OF RIPRAP.



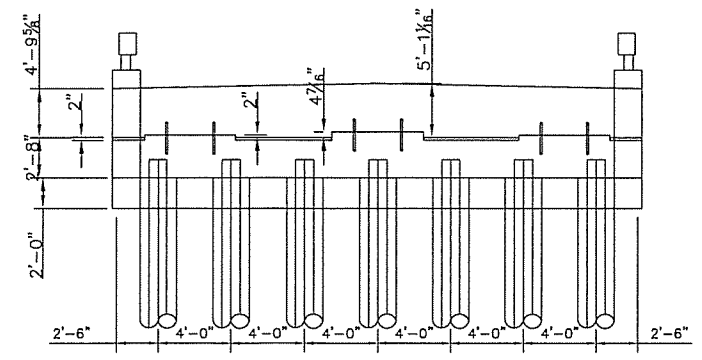
DETAIL OF TYPE I-A PLAIN RIPRAP



WOODS COUNTY LITTLE EAGLE CHIEF CR.
GENERAL PLAN & ELEVATION
CL STA. 96+32.50
100' TYPE IV PCB SPANS W/26'-0" CL. RDY.
0 DEG. L.F. W/1'-1" TR3 CONC. RAILS
J/P NO. 28347(04) SHEET NO. 8

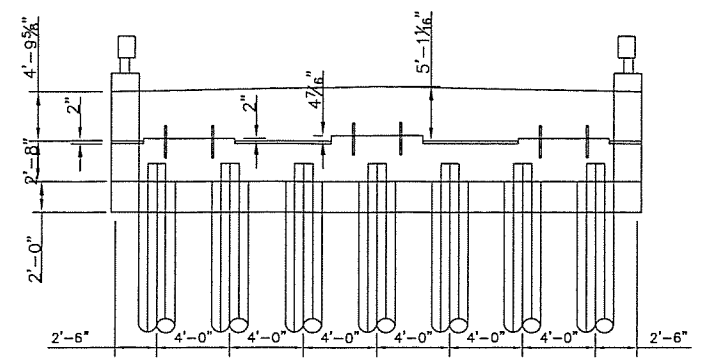


STAKING LAYOUT

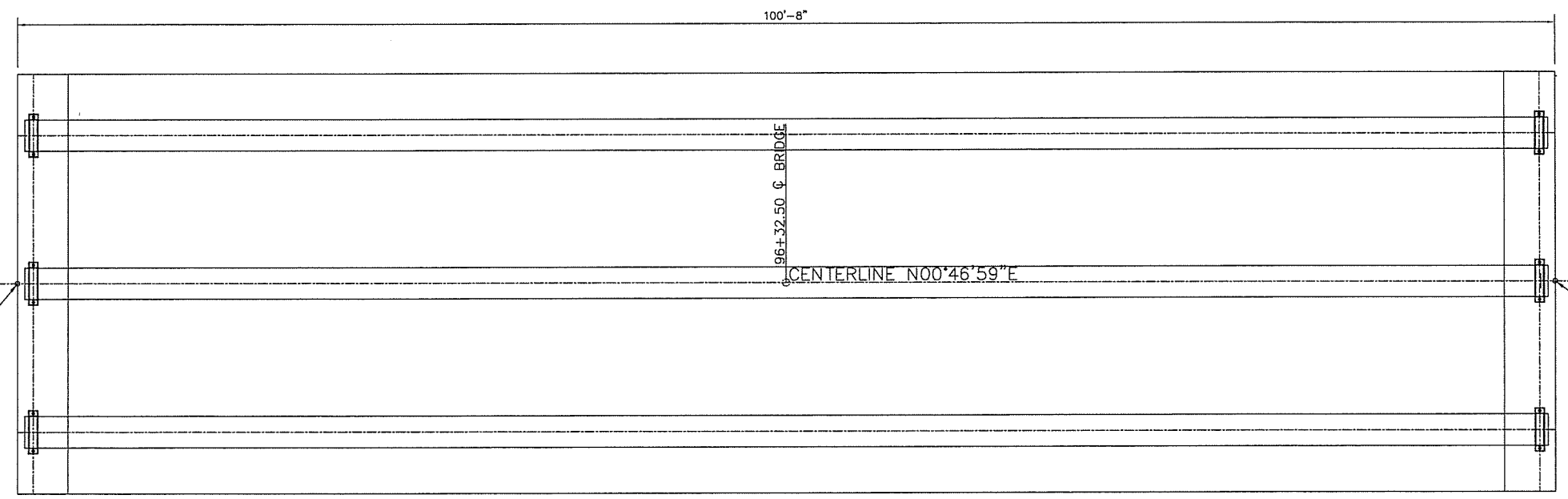


FRONT ELEVATION
(ABUTMENT 1)

WORKING POINT
FRONT FACE BKWLL.
STA. 95+82.17



FRONT ELEVATION
(ABUTMENT 2)

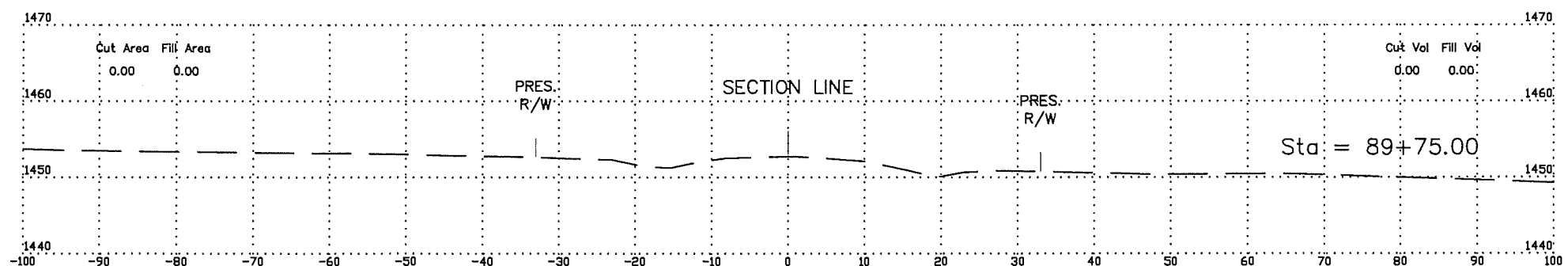
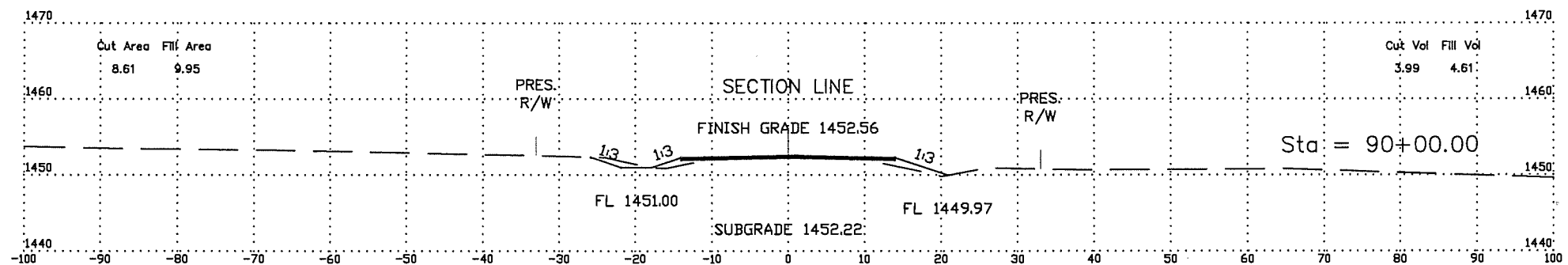
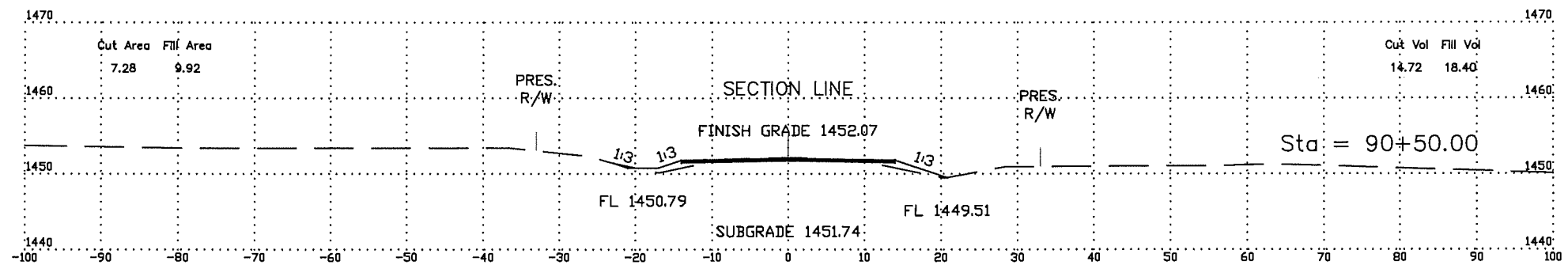
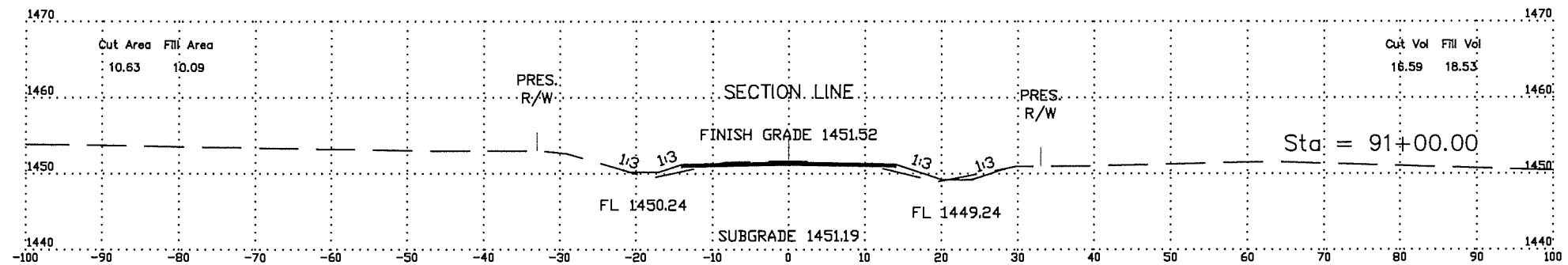
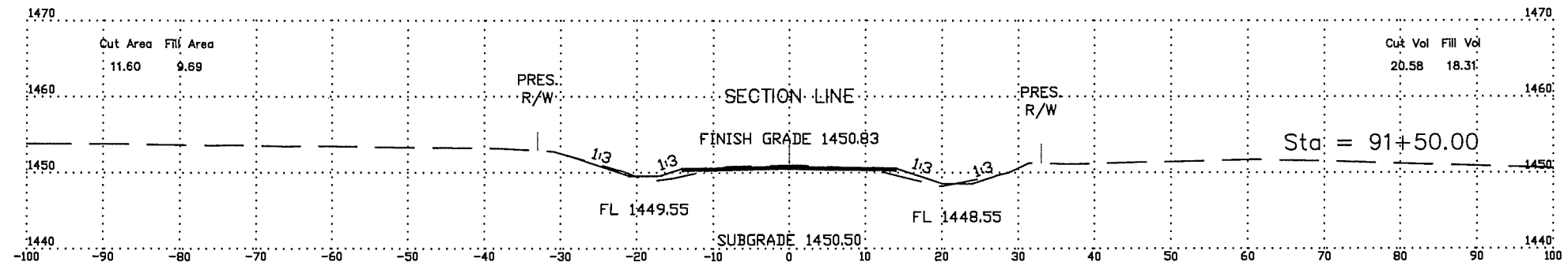


ANCHOR BOLT AND PEDESTAL LAYOUT

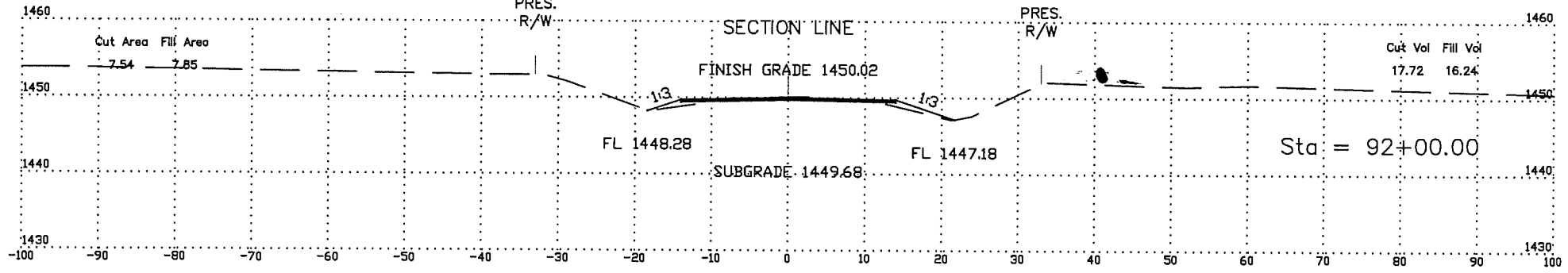
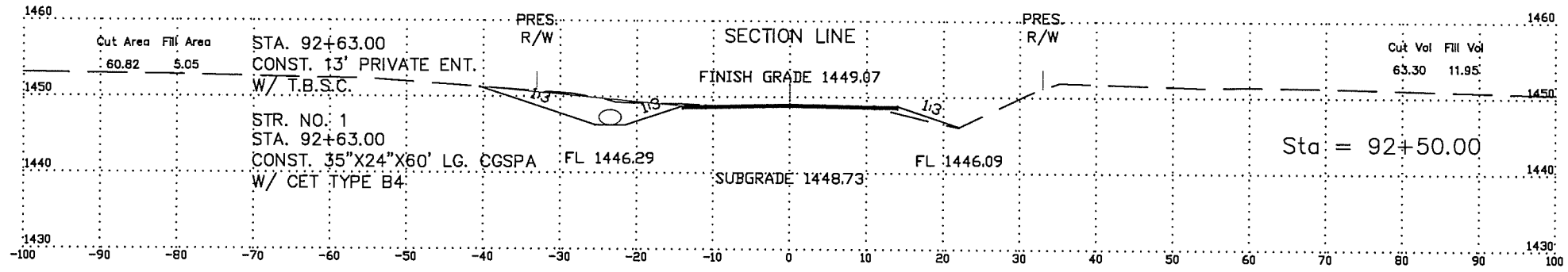
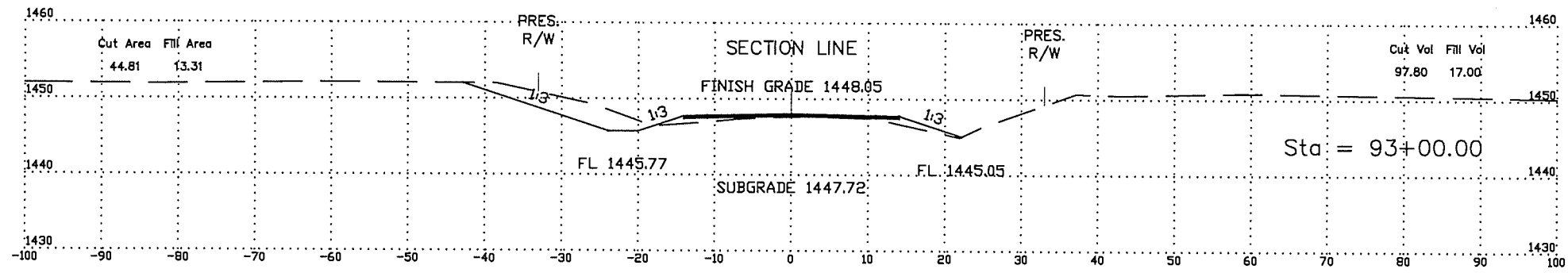
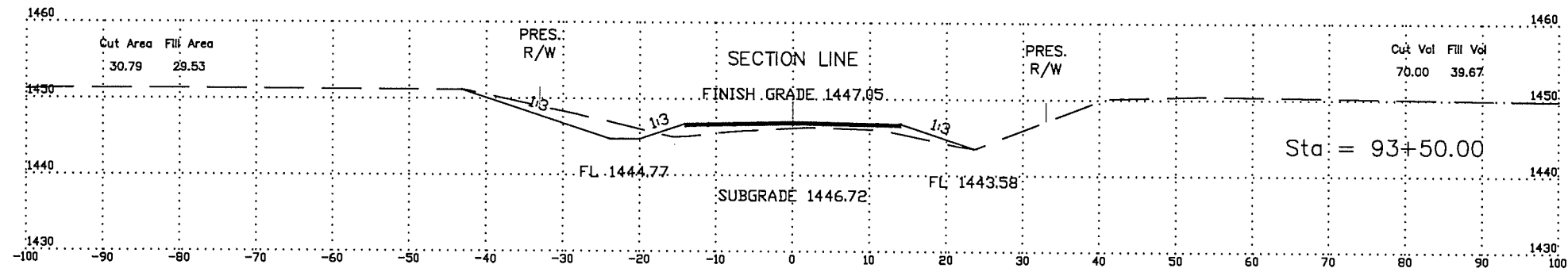
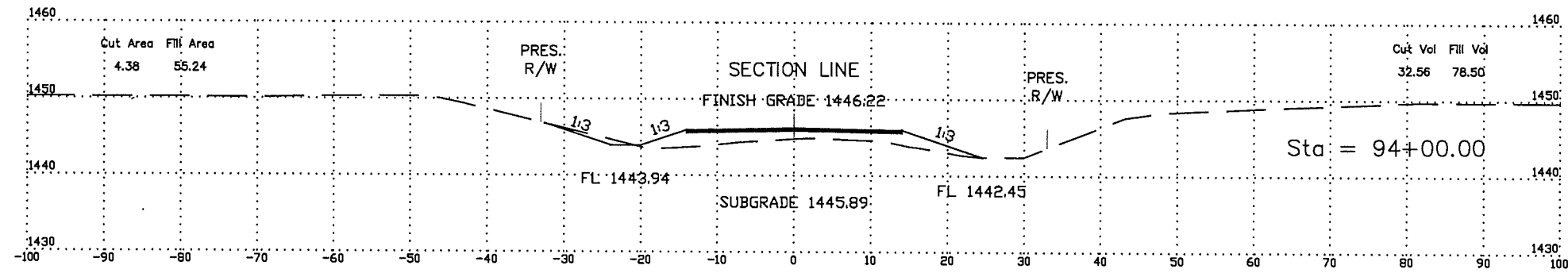
WORKING POINT
FRONT FACE BKWLL.
STA. 96+82.84

WOODS COUNTY LITTLE EAGLE CHIEF CR

STAKING LAYOUT, ANCHOR BOLTS
& PEDESTAL LAYOUT

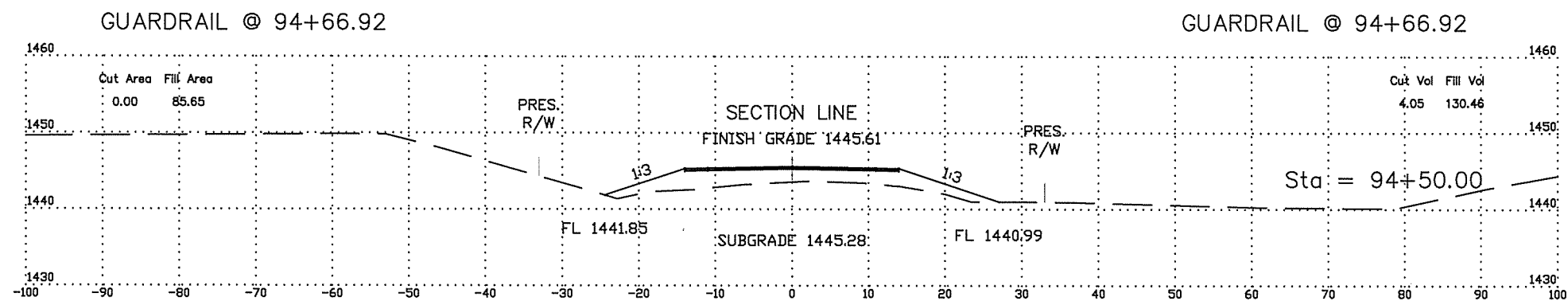
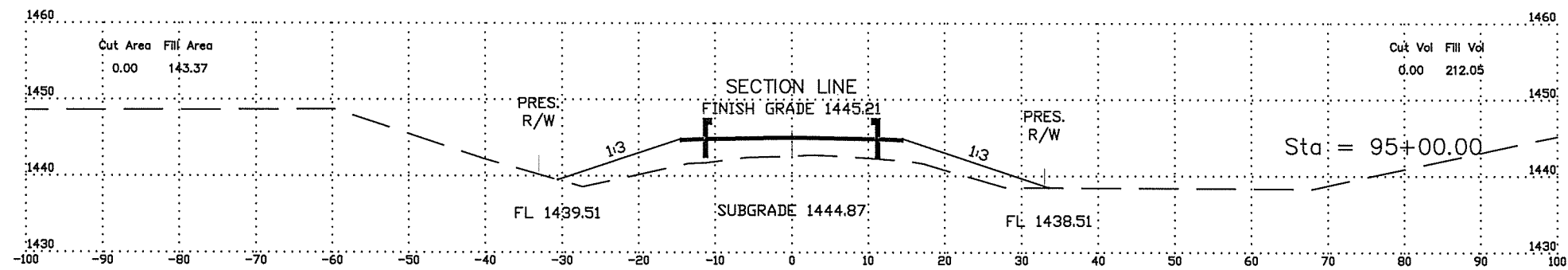
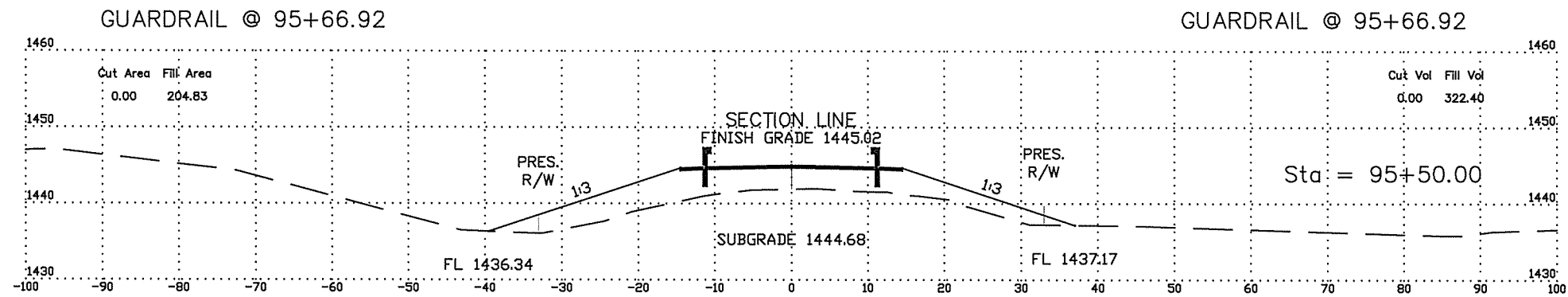


SCALE:
1" = 10'

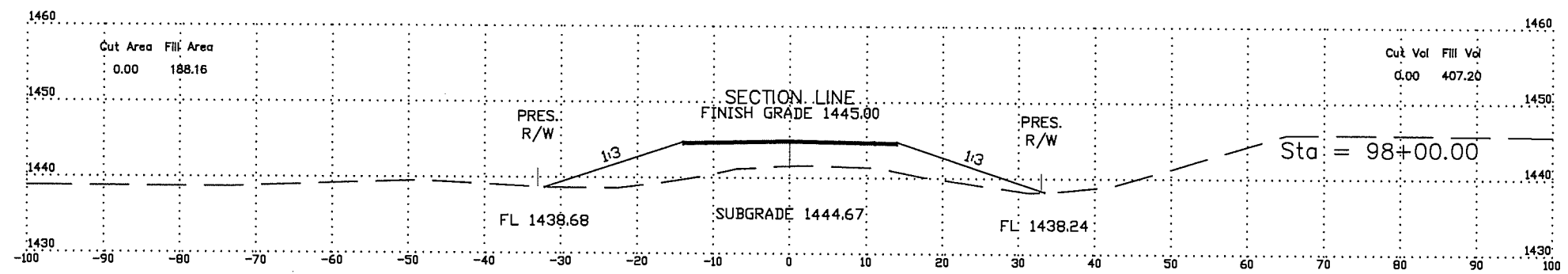
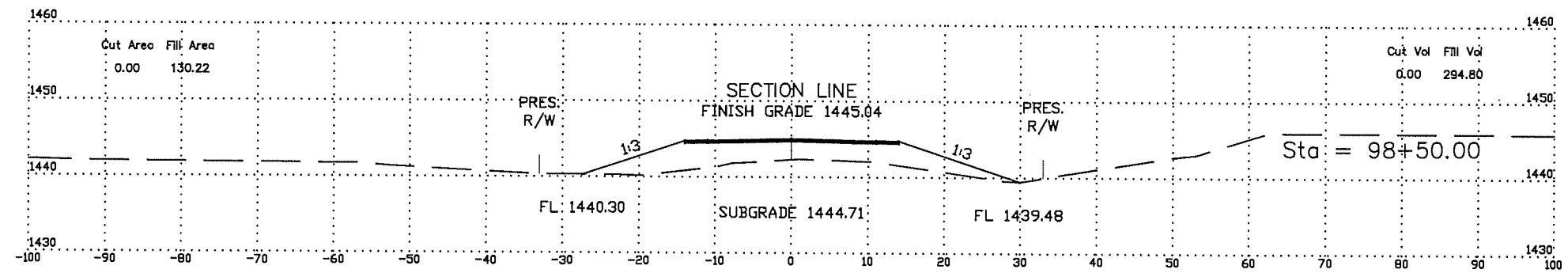
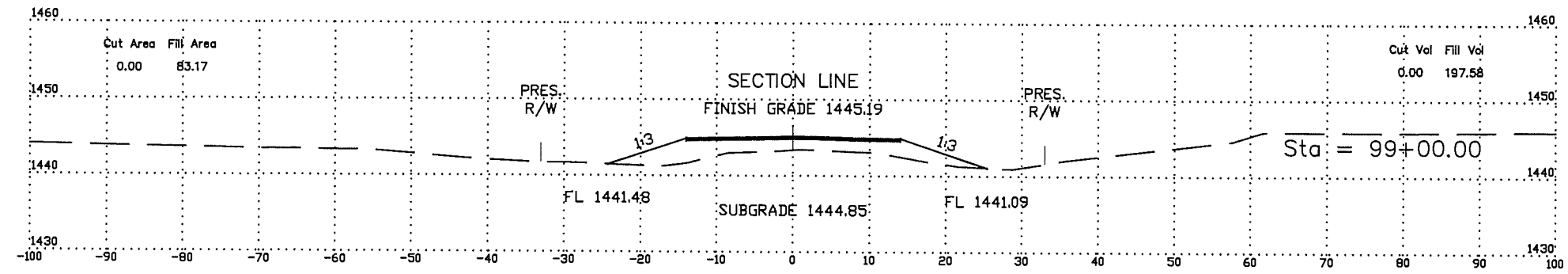


SCALE:
1" = 10'

END BRIDGE @ 96+84.09
100' PCB SPAN (103'-2")
CENTERLINE 96+32.50 SKEW 0°
BEGIN BRIDGE @ 95+80.92

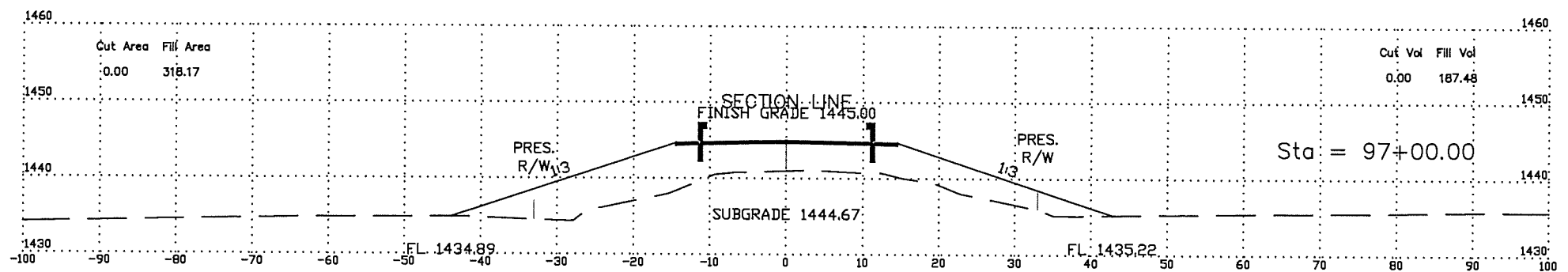
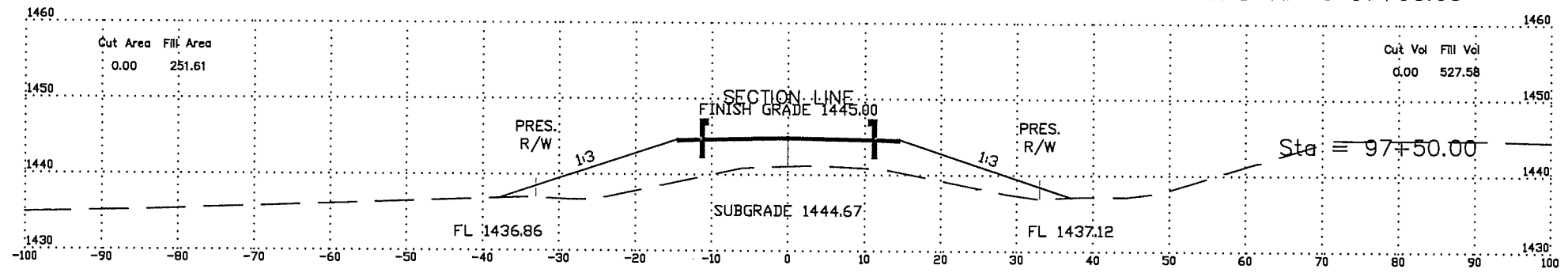


SCALE:
1" = 10'

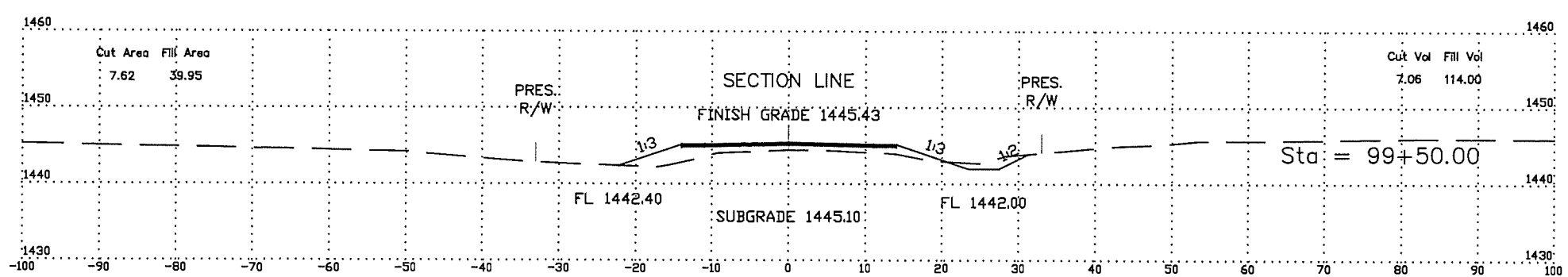
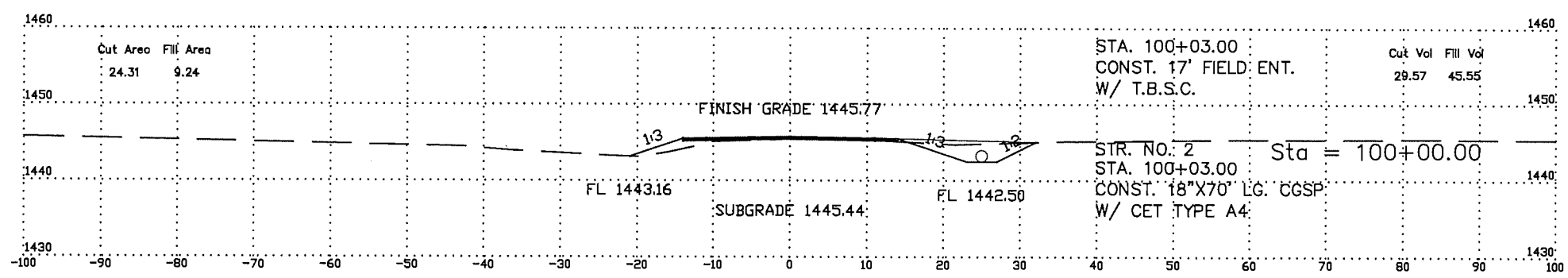
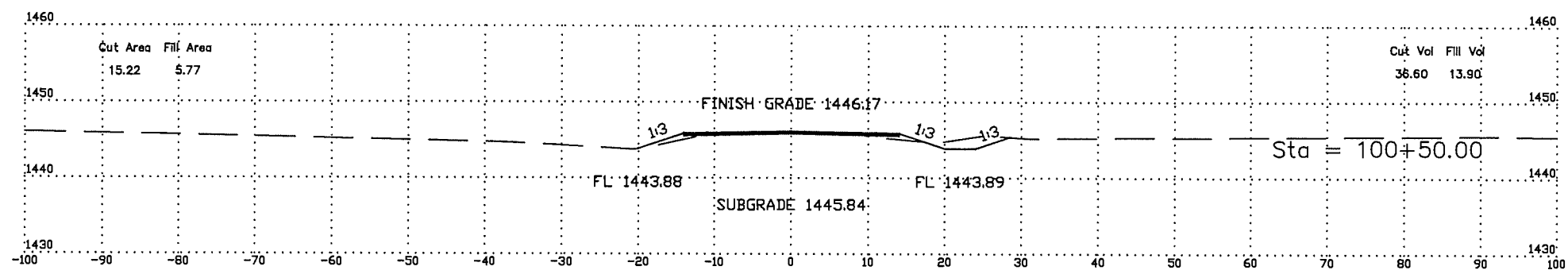
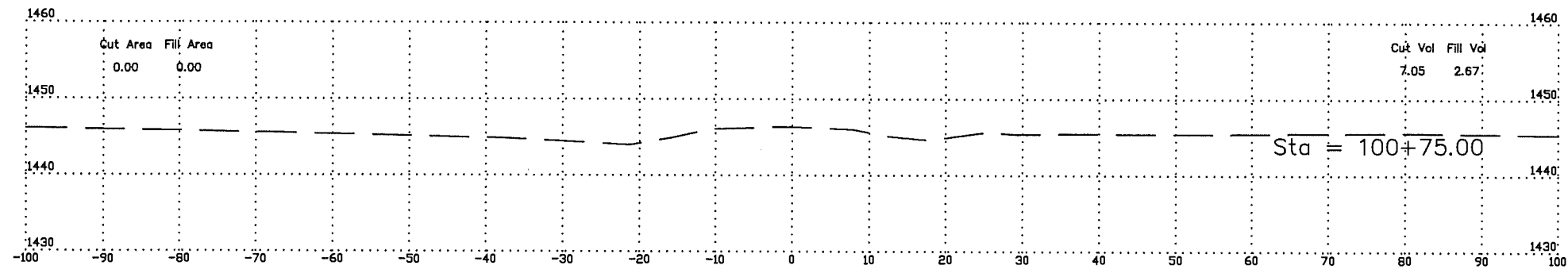


GUARDRAIL @ 97+98.08

GUARDRAIL @ 97+98.08



SCALE:
1" = 10'



SCALE:
1" = 10'

| BORING LOG | | BORING NO. B-01 | | PAGE 1 OF 2 | | | | | | | |
|--|--|--|-------------|-------------|------|--------------------------|-------------------|-------------|--|--------------------------|--|
| CLIENT: CIRCUIT ENGINEERING DISTRICT #8 | | ENGINEER: TYLER SCHRODER, PE | | | | | | | | | |
| LOCATION: NS241 OVER L. EAGLE CHIEF CREEK-WOODS | | PROJECT: J/P 28347(04)-BRIDGE REPL OVER L. EAGLE CHIEF CREEK | | | | | | | | | |
| COUNTY, OK | | | | | | | | | | | |
| GRAPHICS LOG | LAYER / MATERIAL DESCRIPTION <small>Station= 95+72.4, 9.2 FT LT. CL SUR. Surface Elev. = 1433.68 feet Veg. Thick: NA--GRAVEL ROAD</small> | DEPTH, FT. | SAMPLES | | | TESTS | | | | | |
| | | | USCS SYMBOL | NUMBER | TYPE | RECOVERY, IN. | SPT-N BLOWS / FT. | MOISTURE, % | DRY DENSITY, PCF | UNCONFINED STRENGTH, PSF | LIMITS (LL) (PL) INDEXES (PI) #200 SIEVE |
| | STIFF, RED BROWN, LEAN CLAY WITH SAND ELEV. = 1431.65 | 5 | HS | | | | | | | | |
| | CL 1 SS '8 15 14.9 | | | | | | | | LL = 29 PL = 13 PI = 16 UCS = 75.25 | | |
| | MEDIUM STIFF, DARK RED BROWN, LEAN CLAY WITH SAND ELEV. = 1424.65 | 10 | HS | | | | | | | | |
| | CL 2 SS '8 7 19.3 | | | | | | | | LL = 41 PL = 16 PI = 25 UCS = 72.25 | | |
| | MEDIUM STIF, DARK RED BROWN WITH GRAY SEAMS, SILTY CLAY WITH SAND GRAY MOTTLING ELEV. = 1417.65 | 15 | HS | | | | | | | | |
| | CL-ML 3 SS '8 9 24.7 | | | | | | | | LL = 28 PL = 21 PI = 7 UCS = 91.25 | | |
| | CEMENTED, RED BROWN WEATHERED SANDSTONE WITH SILTSTONE & SHALE SEAMS | 25 | RB | | | | | | | | |
| | 5 A TCP A 0 501.75 5011.0' | | | | | | | | | | |
| | 6 A TCP A 0 501.25 5010.63' | | | | | | | | | | |
| | Bottom of Boring at 42.49 feet | 30 | RB | | | | | | | | |
| REMARKS: SOIL AND ROCK CLASSIFICATIONS ARE FROM DISTURBED SAMPLES. CORE SAMPLES AND FURTHER LABORATORY TESTING MAY REVEAL OTHER ROCK AND/OR SOIL TYPES. THE STRATIFICATION SHOWN IN THE SOIL AND ROCK ABOVE IS AN ESTIMATION OF IN-SITU CONDITIONS. THEREFORE, THE NATURAL TRANSITION BETWEEN SOIL AND ROCK TYPES MAY BE GRADUAL. *ESTIMATED FROM POCKET PENETROMETER | | | | | | WATER LEVEL OBSERVATIONS | | | DATE STARTED 12/3/15 | | |
| ARROWHEAD ENGINEERING COMPANY 3300 108TH AVENUE NORMAN, OK 73069 PHONE (405) 596-7542 | | | | | | WL 17 FT--WD N/A--AS | | | DATE COMPLETED 12/4/15 | | |
| | | | | | | WL 14 FT--21 HRS AS | | | RIG CME-550 FOREMAN C.K. | | |
| | | | | | | WL WET CAVE-IN AT 20 FT | | | REVIEWED C.K. JOB NO. 1455 | | |

| BORING LOG | | BORING NO. B-01 | | PAGE 2 OF 2 | | | | | | | |
|--|---|--|-------------|-------------|------|--------------------------|-------------------|-------------|----------------------------|--------------------------|--|
| CLIENT: CIRCUIT ENGINEERING DISTRICT #8 | | ENGINEER: TYLER SCHRODER, PE | | | | | | | | | |
| LOCATION: NS241 OVER L. EAGLE CHIEF CREEK-WOODS | | PROJECT: J/P 28347(04)-BRIDGE REPL OVER L. EAGLE CHIEF CREEK | | | | | | | | | |
| COUNTY, OK | | | | | | | | | | | |
| GRAPHICS LOG | LAYER / MATERIAL DESCRIPTION <small>Station= 95+72.4, 9.2 FT LT. CL SUR. (Continued)</small> | DEPTH, FT. | SAMPLES | | | TESTS | | | | | |
| | | | USCS SYMBOL | NUMBER | TYPE | RECOVERY, IN. | SPT-N BLOWS / FT. | MOISTURE, % | DRY DENSITY, PCF | UNCONFINED STRENGTH, PSF | LIMITS (LL) (PL) INDEXES (PI) #200 SIEVE |
| | CEMENTED, RED BROWN WEATHERED SANDSTONE WITH SILTSTONE & SHALE SEAMS (continued) | 35 | RB | | | | | | | | |
| | 7 A TCP A 0 501.0' 500.5' | | | | | | | | | | |
| | 8 A TCP A 0 501.63' 501.0' | | | | | | | | | | |
| | 9 A TCP A 0 502.0' 501.25' | | | | | | | | | | |
| | Bottom of Boring at 42.49 feet | 45 | RB | | | | | | | | |
| REMARKS: SOIL AND ROCK CLASSIFICATIONS ARE FROM DISTURBED SAMPLES. CORE SAMPLES AND FURTHER LABORATORY TESTING MAY REVEAL OTHER ROCK AND/OR SOIL TYPES. THE STRATIFICATION SHOWN IN THE SOIL AND ROCK ABOVE IS AN ESTIMATION OF IN-SITU CONDITIONS. THEREFORE, THE NATURAL TRANSITION BETWEEN SOIL AND ROCK TYPES MAY BE GRADUAL. *ESTIMATED FROM POCKET PENETROMETER | | | | | | WATER LEVEL OBSERVATIONS | | | DATE STARTED 12/3/15 | | |
| ARROWHEAD ENGINEERING COMPANY 3300 108TH AVENUE NORMAN, OK 73069 PHONE (405) 596-7542 | | | | | | WL 17 FT--WD N/A--AS | | | DATE COMPLETED 12/4/15 | | |
| | | | | | | WL 14 FT--21 HRS AS | | | RIG CME-550 FOREMAN C.K. | | |
| | | | | | | WL WET CAVE-IN AT 20 FT | | | REVIEWED C.K. JOB NO. 1455 | | |

WOODS COUNTY LITTLE EAGLE CHIEF

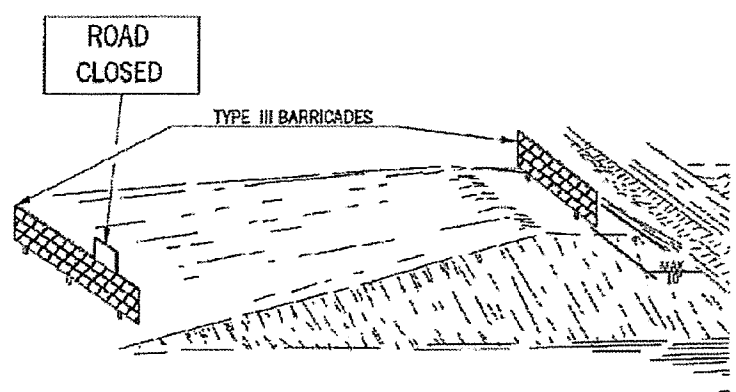
BORING LOGS

J/P NO. 28347(04)

SHEET NO. 15

| BORING LOG | | BORING NO. B-02 | | PAGE 1 OF 2 | | | |
|--|---|--|--------------------|----------------------------|---------------|--|---|
| CLIENT: CIRCUIT ENGINEERING DISTRICT #8 | | ENGINEER: TYLER SCHRODER, PE | | | | | |
| LOCATION: NS241 OVER L. EAGLE CHIEF CREEK-WOODS | | PROJECT: J/P 28347(04)-BRIDGE REPL OVER L. EAGLE CHIEF CREEK | | | | | |
| COUNTY, OK | | TESTS | | | | | |
| GRAPHICS LOG | LAYER / MATERIAL DESCRIPTION Station= 96+75.7, 14.2 FT RT. CL SUR. Surface Elev. = 1433.93 feet Veg. Thick.: NA--GRAVEL ROAD | DEPTH, FT. | SAMPLES | | | LIMITS (LL) (PL) INDEXES (PI) #200 SIEVE | |
| | | | USCS SYMBOL NUMBER | TYPE | RECOVERY, IN. | | |
| | | | | SPT-N BLOWS / FT. | MOISTURE, % | DRY DENSITY, PCF | UNCONFINED STRENGTH, PSF |
| | MEDIUM STIFF, RED BROWN, FAT CLAY WITH TRACES OF SAND AND GRAVEL ELEV. = 1431.85 | 5 | HS | | | | |
| | | | CH 1 | SS '8 | 8 | 19.0 | |
| | | | | | | | LL = 52 PI = 18 FI = 14 UC90 = 28.25 |
| | | 10 | HS | | | | |
| | | | CL 2 | SS '8 | 5 | 21.2 | |
| | | | | | | | LL = 48 PI = 17 FI = 23 UC90 = 14.25 |
| | SOFT, DARK RED BROWN LEAY CLAY WITH SAND | 15 | HS | | | | |
| | | | CL 3 | SS '8 | 5 | 23.2 | |
| | | | | | | | LL = 38 PI = 18 FI = 20 UC90 = 27.25 |
| | | 20 | HS | | | | |
| | | | CL-ML 4 | SS '8 | 26 | 18.9 | |
| | | | | | | | LL = 28 PI = 7 FI = 7 UC90 = 21.25 |
| | | 25 | HS | | | | |
| | | | ML 5 | SS '2 | 17.5 | 21.2 | |
| | | | | | | | LL = 58 PI = 48 FI = 22 UC90 = 32.75 |
| | | | 6 | TC ² 0 | | | |
| | | | | | | | LL = 50 PI = 30 FI = 30 UC90 = 32.75 |
| | | 30 | RB | | | | |
| REMARKS: SOIL AND ROCK CLASSIFICATIONS ARE FROM DISTURBED SAMPLES. CORE SAMPLES AND FURTHER LABORATORY TESTING MAY REVEAL OTHER ROCK AND/OR SOIL TYPES. THE STRATIFICATION SHOWN IN THE SOIL AND ROCK ABOVE IS AN ESTIMATION OF IN-SITU CONDITIONS. THEREFORE, THE NATURAL TRANSITION BETWEEN SOIL AND ROCK TYPES MAY BE GRADUAL. *ESTIMATED FROM POCKET PENETROMETER | | | | | | | |
| ARROWHEAD ENGINEERING COMPANY 3330 108TH AVE SE NORMAN, OK 73069 PHONE (405) 296-7642 | | WATER LEVEL OBSERVATIONS | | DATE STARTED 12/4/15 | | | |
| | | WL 24 FT-WO N/A-AS | | DATE COMPLETED 12/4/15 | | | |
| | | WL 7 FT-2 HRS AB | | RIG CME-550 FOREMAN C.K. | | | |
| | | WL WET CAVE-IN AT 21 FEET | | REVIEWED C.K. JOB NO. 1456 | | | |

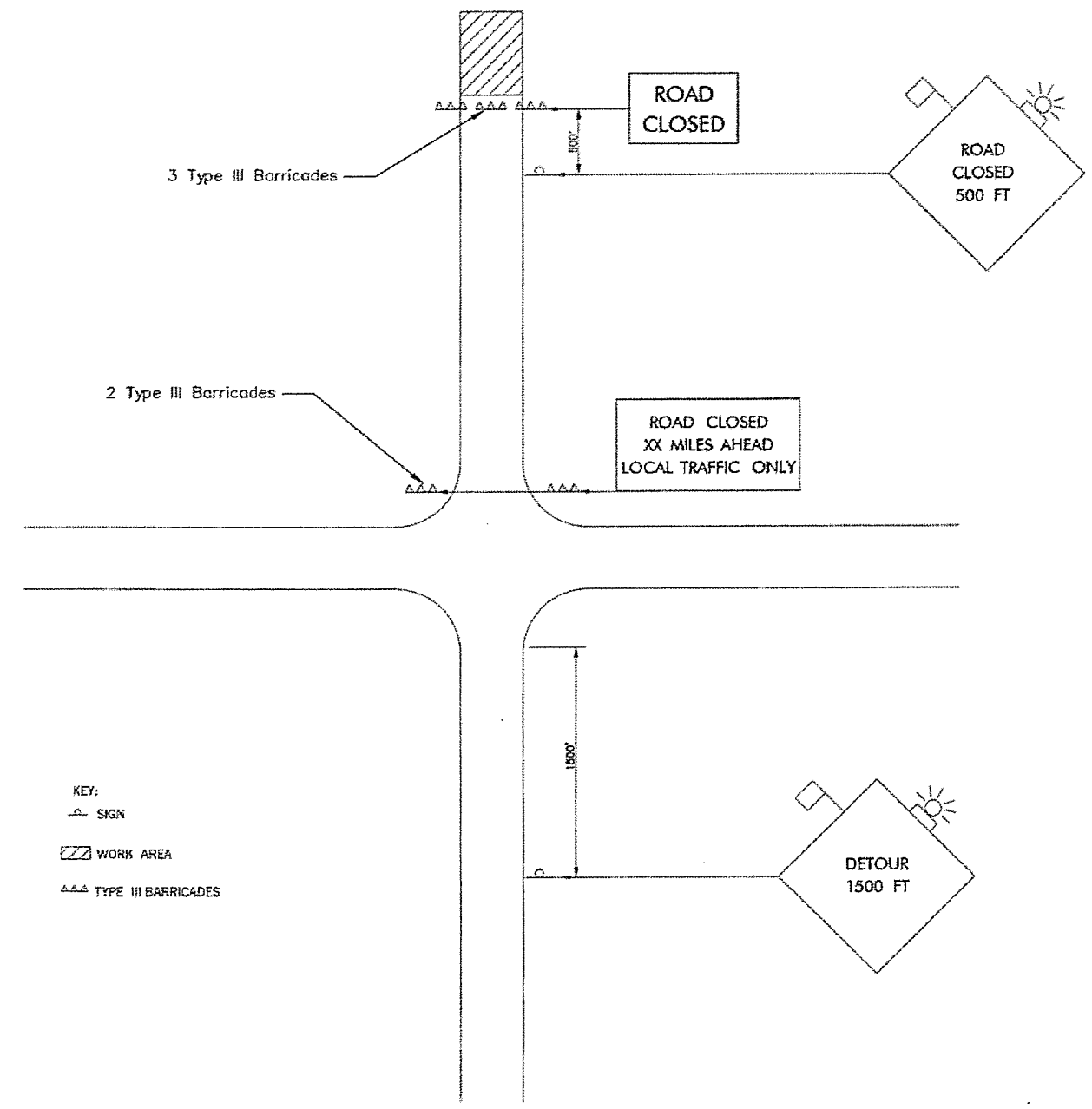
| BORING LOG | | BORING NO. B-02 | | PAGE 2 OF 2 | | | |
|--|--|--|--------------------|----------------------------|---------------|--|---|
| CLIENT: CIRCUIT ENGINEERING DISTRICT #8 | | ENGINEER: TYLER SCHRODER, PE | | | | | |
| LOCATION: NS241 OVER L. EAGLE CHIEF CREEK-WOODS | | PROJECT: J/P 28347(04)-BRIDGE REPL OVER L. EAGLE CHIEF CREEK | | | | | |
| COUNTY, OK | | TESTS | | | | | |
| GRAPHICS LOG | LAYER / MATERIAL DESCRIPTION Station= 96+75.7, 14.2 FT RT. CL SUR. (Continued) | DEPTH, FT. | SAMPLES | | | LIMITS (LL) (PL) INDEXES (PI) #200 SIEVE | |
| | | | USCS SYMBOL NUMBER | TYPE | RECOVERY, IN. | | |
| | | | | SPT-N BLOWS / FT. | MOISTURE, % | DRY DENSITY, PCF | UNCONFINED STRENGTH, PSF |
| | | 35 | | | | | |
| | | | 7 | TC ² 0 | | | |
| | | | | | | | LL = 50 PI = 38 FI = 38 UC90 = 38.25 |
| | | 40 | RB | | | | |
| | | | 8 | TC ² 0 | | | |
| | | | | | | | LL = 52 PI = 25 FI = 25 UC90 = 25.25 |
| | | 45 | RB | | | | |
| | | | 9 | TC ² 0 | | | |
| | | | | | | | LL = 52 PI = 25 FI = 25 UC90 = 25.25 |
| | | 50 | RB | | | | |
| | | | 10 | TC ² 0 | | | |
| | | | | | | | LL = 52 PI = 25 FI = 25 UC90 = 25.25 |
| | | 55 | | | | | |
| | | | | | | | |
| | | 60 | | | | | |
| REMARKS: SOIL AND ROCK CLASSIFICATIONS ARE FROM DISTURBED SAMPLES. CORE SAMPLES AND FURTHER LABORATORY TESTING MAY REVEAL OTHER ROCK AND/OR SOIL TYPES. THE STRATIFICATION SHOWN IN THE SOIL AND ROCK ABOVE IS AN ESTIMATION OF IN-SITU CONDITIONS. THEREFORE, THE NATURAL TRANSITION BETWEEN SOIL AND ROCK TYPES MAY BE GRADUAL. *ESTIMATED FROM POCKET PENETROMETER | | | | | | | |
| ARROWHEAD ENGINEERING COMPANY 3330 108TH AVE SE NORMAN, OK 73069 PHONE (405) 296-7642 | | WATER LEVEL OBSERVATIONS | | DATE STARTED 12/4/15 | | | |
| | | WL 24 FT-WO N/A-AS | | DATE COMPLETED 12/4/15 | | | |
| | | WL 7 FT-2 HRS AB | | RIG CME-550 FOREMAN C.K. | | | |
| | | WL WET CAVE-IN AT 21 FEET | | REVIEWED C.K. JOB NO. 1455 | | | |



**TYPICAL BARRICADE PLACEMENT AT BRIDGE
FILL BY BRIDGE CONTRACTOR**

FILLS MADE BY BRIDGE CONTRACTOR

- (1) THE CONTRACTOR SHALL PLACE AND MAINTAIN THE BARRICADES AS SHOWN UNTIL THEY ARE NO LONGER NEEDED.
- (2) THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO REMOVAL OF THE BARRICADES.
- (3) BARRICADES AT BRIDGE FILL SHALL BE IN PLACE AND MAINTAINED AT ALL TIMES UNTIL OPENED TO TRAFFIC, HOWEVER, BARRICADES MAY BE REMOVED OR ADJUSTED, AS NEEDED, TO ALLOW ACCESS TO THE WORK AREA.



**TYPICAL APPLICATION
COUNTY ROAD (NO DETOUR IS ESTABLISHED)**

WOODS COUNTY

COUNTY ROAD CLOSURE