CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	1

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000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREA OF REINFORCEMENT BARS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
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420401-05	BRIDGE APPROACH PAVEMENT
421001-01	BAR REINFORCEMENT FOR CRC PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
542401	METAL END SECTION FOR PIPE CULVERTS
601101	CONCRETE HEADWALL FOR PIPE DRAIN
609006-02	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
630001-06	STEEL PLATE BEAM GUARDRAIL
630201-03	PCC/ BITUMINOUS STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-05	TRAFFIC BARRIER TERMINAL, TYPE 6
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
667101	PERMANENT SURVEY MARKERS
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
702001-06	TRAFFIC CONTROL DEVICES
720011	METAL POSTS FOR SIGNS, MARKERS, AND DELINEATORS
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

TRAFFIC DATA

HIGHWAY CLASSIFICATION: RURAL MAJOR COLLECTOR
2008 ADT = 2600
DESIGN SPEED 55 MPH
POSTED SPEED 55 MPH

0 5' 10' 15' — 1"= 5' CROSS SECTION (VERTICAL)

0 5' 10' 15' — 1"= 5' CROSS SECTION (HORIZONTAL)

0 1000' 2000' 3000' — 1"= 1000' HORIZONTAL AND VERTICAL CONTROL

0 50' 100' — 1"= 20' PLAN AND PROFILE SHEETS

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

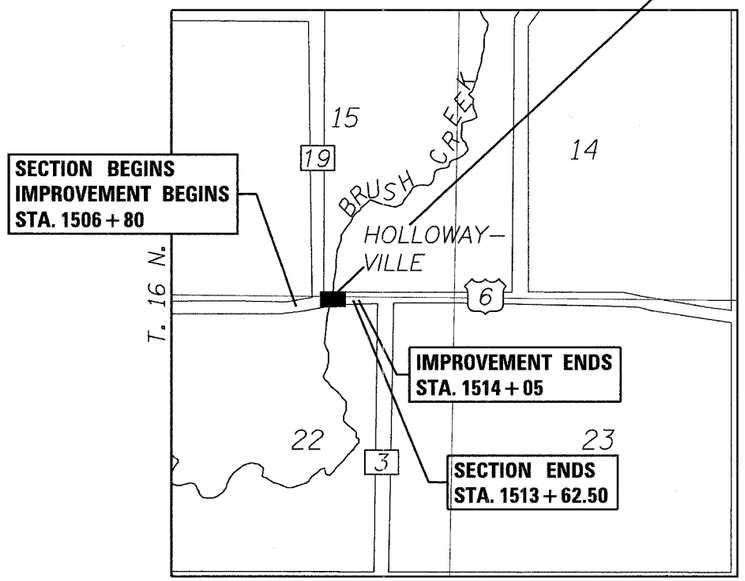
CONTRACT NO. 64938

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FAS ROUTE 2247 (U.S. 6)
SECTION 13X-BR-1
OVER BRUSH CREEK
BUREAU COUNTY
PROJECT NO. BRS-2247(104)

C-92-089-06

R. 10 E. 4th P.M.



NET LENGTH OF SECTION 682.5 FEET (0.129 MILES)
GROSS LENGTH OF SECTION 682.5 FEET (0.129 MILES)

-1/2 0 1
SCALE IN MILE

SECTION 13X-BR-1 INCLUDES THE REMOVAL OF EXISTING STRUCTURE NO. 006-0071 AND CONSTRUCTION OF THE NEW STRUCTURE NO. 006-0169, A THREE SPAN COMPOSITE STEEL BEAM BRIDGE OVER BRUSH CREEK AT STA. 1510+65.80, 127'-0" BK TO BK ABUTMENT.

D-92-089-03

LOCATION OF SECTION INDICATED THUS: -■-

3

9/15/06
date

JAMES K. CLINARD
LICENSED PROFESSIONAL ENGINEER NO. 062-041793
STATE OF ILLINOIS
expires 11-30-2007

signature

PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-001717

CHAMLIN & ASSOCIATES
PERU ILLINOIS MORRIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED _____ 20 ____

Gregory T. Martin
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 13, 20 06
Mike Hine PE
ENGINEER OF DESIGN AND ENVIRONMENT

October 13, 20 06
Milton R. Sees, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

DISTRICT 3 OTTAWA IL.

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER
BECKY MARRUFFO

SQUAD LEADER
THOMAS HALLA
815-234-5993

SQUAD LEADER
JEFF
815-434-8454

SENIOR SQUAD LEADER
MIKE YUSEF
815-234-5354

DISTRICT 3 CONTACT:
PROJECT ENGINEER: DAN DRAPER
815-434-8454

JAMES K CLINARD
CHAMLIN & ASSOCIATES
815-223-3344

SELBY TOWNSHIP SECTION 15 BUREAU COUNTY SECTION: 13X-BR-1 ROUTE: FAS ROUTE 2247 (U.S. 6)

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	2
STA.	TO STA.			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

1. THE REMOVAL OF BITUMINOUS SURFACING NOT ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE SHALL BE REMOVED AS EARTH EXCAVATION. THE REMOVAL OF BITUMINOUS SURFACING ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAVEMENT REMOVAL OF THE TYPE SPECIFIED.

2. THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. THE SOIL MUST BE FROM THE A HORIZON (ZERO TO 2' DEEP) OF SOIL PROFILES OF LOCAL SOILS.

3. IT IS ESTIMATED THAT 234 CUBIC YARDS OF EARTH WILL BE HAULED TO THE JOB FROM OUTSIDE THE PROJECT LIMITS. A SHRINKAGE FACTOR OF 25% HAS BEEN USED.

4. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 2A SALT TOLERANT ROAD MIXTURE SHALL BE USED, EXCEPT IN FRONT OF PROPERTIES WHERE THE GRASS WILL BE MOWED, THEN USE SEEDING, CLASS 1 LAWN MIXTURE. THIS WORK WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION.

5. FERTILIZER SHALL BE APPLIED TO ALL DISTURBED ARRAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SEEDING OR PLACEMENT OF SOD AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

6. MULCH METHOD 2 SHALL BE APPLIED OVER ALL SEEDED AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE EARTH EXCAVATION.

7. MULCH ON TEMPORARY SEEDING SHALL BE MULCH METHOD 2.

8. PREVIOUSLY PUGMILLED STOCKPILES OF "TYPE A" OLDER THAN 1 MONTH WILL NOT BE APPROVED FOR USE UNTIL A MOISTURE CHECK IS RUN TO VERIFY MOISTURE CONTENT. MATERIAL SHIPPED TO PROJECTS WITHOUT BEING TESTED WILL NOT BE ACCEPTED.

9. BITUMINOUS AND AGGREGATE PRIME COAT SHALL BE PLACED IN ACCORDANCE WITH SECTION 406 OF THE STANDARD SPECIFICATIONS. THE COST OF THE PRIME COATS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER TON FOR LEVELING BINDER (MACHINE METHOD) OF THE TYPE SPECIFIED.

10. EXCEPT FOR THE TOP 75 MM (3"), ALL AGGREGATE BASES AND SUBBASES 300 MM (12") IN THICKNESS SHALL BE CONSTRUCTED OF AGGREGATE GRADATION CA-2. IF THE SPECIFIED THICKNESS EXCEEDS 300 MM (12"), THE BASES OR SUBBASES SHALL BE CONSTRUCTED OF TOP SIZE 150 MM (6") BREAKER- RUN CRUSHED STONE WITH 70% TO 90% BY WEIGHT, PASSING THE 4" SIEVE AND 15% TO 40% BY WEIGHT, PASSING THE 50 MM (2" SIZE) SIEVE, EXCEPT FOR THE TOP 75 MM (3"). THE BREAKER- RUN CRUSHED STONE SHALL BE REASONABLY UNIFORMLY GRADE FROM COARSE TO FINE AND BE TAKEN FROM A QUARRY LEDGE CAPABLE OF PRODUCING CLASS "D" QUALITY AGGREGATE. THE TOP 75 MM (3") SHALL BE GRADATION CA-6 OR CA-10 REGARDLESS OF THICKNESS. THE WATER NECESSARY TO ACHIEVE COMPACTION IN ALL BUT THE TOP 75 MM (3") LAYER MAY BE ADDED AFTER THE SUBBASE OR BASE COURSE IS PLACED ON THE GRADE.

11. THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

	SUPERPAVE BINDER	SUPERPAVE LEVEL BINDER	SUPERPAVE SURFACE	SUPERPAVE SHOULDER
PG GRADE	PG 64-22	PG 64-22	PG 64-22	PG 58-22
MAX % RAP ALLOWABLE **	25%	25%	15%	40%
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	3.0% @ N50
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 12.5 OR IL 9.5	IL 19.0
FRICTION AGGREGATE			MIXTURE C	
PLANT CONTROL LIMITS	CLASS I	CLASS I	CLASS I	NON-CLASS I
DENSITY TEST METHOD	CORES/ NUCLEAR	SATISFACTION OF ENGINEER	CORES/ NUCLEAR	*

* SEE SPECIALS
** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

12. THE CONTRACTOR WILL BE REQUIRED TO FURNISH 5 ½" HIGH BRASS STENCILS AS APPROVED BY THE ENGINEER AND INSTALL STATIONING AT 250' INTERVALS. STATIONING SHALL BE PLACED ON BOTH LANES OF 2-LANE HIGHWAYS AND ON THE OUTSIDE LANES IN BOTH DIRECTIONS ON 4-LANE HIGHWAYS THE STATIONS SHALL BE PLACED 6" INSIDE THE PAVEMENT MARKING EDGE SO THEY CAN BE READ FROM THE SHOULDER. THIS WORK WILL BE INCLUDED IN THE COST OF THE FINAL PAVEMENT SURFACE.

13. A NATIONWIDE 404 PERMIT HAS BEEN ISSUED FOR THIS PROJECT AND THE CONDITIONS OF THAT PERMIT MUST BE ADHERED TO.

14. THE NEW NUMBER FOR THIS STRUCTURE WILL BE 006-0169.

15. THE CONTRACTOR SHALL SUBMIT FOUR COPIES OF THE REQUIRED SHOP DRAWINGS FOR REVIEW AND APPROVAL TO THE BUREAU OF BRIDGES AND STRUCTURES, 2300 SOUTH DIRKSEN PARKWAY, SPRINGFIELD, IL. 62764. AFTER APPROVAL OF INITIAL SUBMITTAL, THE CONTRACTOR SHALL SUBMIT ONE SET OF SHOP DRAWINGS TO ERIC HARM, ENGINEER OF MATERIALS, 126 EAST ASH STREET, SPRINGFIELD, IL 62706, AND EIGHT (8) SETS OF SHOP DRAWINGS TO BE DISTRIBUTED TO:

DISTRICT 3 DISTRICT ENGINEER (1)
FABRICATOR (1)
CONTRACTOR (2)
RESIDENT ENGINEER (2)
DISTRICT 3 BUREAU OF MATERIALS (2)

16. THE THICKNESS FOR THE BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) ADJACENT TO EXISTING PAVEMENT SHALL BE A MINIMUM OF 12". THE MATERIAL SHALL BE 1 12" BITUMINOUS CONCRETE SURFACE COURSE MIXTURE C, AND THE REMAINING THICKNESS SHALL BE BITUMINOUS BINDER COURSE.

17. THE CURB IS REQUIRED ON THE BRIDGE APPROACH PAVEMENT AS SHOWN ON STANDARD 420401.

18. CULVERT AND BRIDGE FLOWS MUST BE MAINTAINED THROUGHOUT THE PROJECT. NORMAL FLOW SHALL BE ALLOWED TO PASS AT THE RATE IT ENTERS THE JOB SITE. HIGH FLOWS SHALL BE ALLOWED TO PASS WITHOUT CAUSING DAMAGE TO UPSTREAM PROPERTIES.

19. THE CONTRACTOR SHALL SUPPLY THE RESIDENT ENGINEER WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS FOR THE TYPE OF STEEL PLATE BEAM GUARDRAIL TERMINAL TYPE 1 SPECIAL (TANGENT) OR STEEL PLATE BEAM GUARDRAIL TERMINAL TYPE 1 SPECIAL (FLARED).

20. ONE 16D GALVANIZED NAIL SHALL BE USED TO TOE NAIL THE WOOD BLOCK OUT TO THE WOOD POST ON ALL TRAFFIC BARRIER TERMINAL TYPE I SPECIALS.

21. DELINEATORS SHALL BE INSTALLED AS SHOWN ON STANDARD 635001, EXCEPT THAT THE POST SHALL BE ROTATED 180^ AND ONLY METAL BACKED DELINEATORS SHALL BE PERMITTED.

22. DELINEATORS SHALL BE PLACED AT THE ENDS OF APPROACH GUARDRAIL TERMINAL SECTIONS, AND AT EACH HEADWALL OR END SECTION OF AR CULVERTS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR DELINEATORS.

23. PERMANENT SURVEY MARKERS, TYPE II, SHALL BE SET AT INTERVALS OF 1 MILE OR AS DIRECTED BY THE ENGINEER. BRIDGE OR CULVERT PROJECTS SHALL HAVE ONE SURVEY MARKER PLACED NEAR THE STRUCTURE. ESTIMATED: 2 EACH.

24. PERMANENT SURVEY MARKERS, TYPE II SHALL BE CAST-IN-PLACE AS SHOWN ON HIGHWAY STANDARD 667101.

25. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A DESCRIPTION OF LOCATION, ELEVATION, AND COORDINATES FOR EACH PERMANENT SURVEY MARKER. THE ENGINEER SHALL SUBMIT THIS INFORMATION TO THE SURVEY CREW.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON -EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. THE FOLLOWING LISTED UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS ARE MEMBERS OF JULIE:

VERIZON	TELEPHONE
FRONTIER COMMUNICATIONS	TELEPHONE
SBC/AMERITECH TELEPHONE COMPANY	TELEPHONE
AMEREN IP	ELECTRIC AND GAS

FOLLOWING ARE THE KNOWN UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS WHICH ARE NOT MEMBERS OF JULIE AND SHOULD BE NOTIFIED INDIVIDUALLY BY THE CONTRACTOR:

VILLAGE OF SEATONVILLE	WATER AND SEWER
IDOT-DISTRICT 3 700 E. NORRIS DRIVE OTTAWA, IL	GOVERNMENT (815) 434-8453

27. THE APPLICABLE PORTIONS OF ARTICLE 105.07 OF THE STANDARD SPECIFICATION SHALL APPLY EXCEPT FOR THE FOLLOWING: THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE THE VERTICAL DEPTHS OF THE UNDERGROUND UTILITIES WHICH MAY INTERFERE WITH CONSTRUCTION OPERATIONS. THIS WORK WILL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICE FOR THE ITEM OF CONSTRUCTION INVOLVED.

PER SB 699 (90 DAY UTILITY RELOCATION LAW), ONCE RIGHT-OF-WAY IS CLEAR TO AWARD THE PROJECT, A NOTICE WILL BE SENT TO THE UTILITY COMPANIES INSTRUCTING THEM TO HAVE THEIR FACILITIES RELOCATED WITHIN 90 DAYS. ESTIMATED DATE RELOCATION COMPLETE = LETTING DATE + 135 DAYS.

28. CADD DATA WILL BE AVAILABLE TO CONTRACTORS AND CONSULTANTS WORKING ON THIS PROJECT. THIS INFORMATION WILL BE PROVIDED UPON REQUEST AS MICROSTATION CADD FILES AND GEOPAK COORDINATE GEOMETRY FILES ONLY. IF DATA IS REQUIRED IN OTHER FORMATS IT WILL BE YOUR RESPONSIBILITY TO MAKE THESE CONVERSIONS. IF ANY DISCREPANCY OR INCONSISTENCY ARISES BETWEEN THE ELECTRONIC DATA AND THE INFORMATION ON THE HARD COPY, THE INFORMATION ON THE HARD COPY SHOULD BE USED. CONTACT THE DISTRICT'S PROJECT ENGINEER TO REQUEST THESE FILES.

29. PAVEMENT MARKING SHALL BE DONE ACCORDING TO STANDARD 780001 EXCEPT THE DISTANCE BETWEEN YELLOW NO-PASSING LINES SHALL BE 8", NOT 7" AS SHOWN IN THE DETAIL OF TYPICAL LANE AND EDGE LINES.

COMMITMENTS

1. TREES SHOWN OUTSIDE OF THE CONSTRUCTION LIMITS WILL NOT BE REMOVED.

2. THIS PROJECT INVOLVES A STATE ROUTE MARKED DETOUR. THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY COORDINATION WITH THE BUREAU COUNTY ENGINEER, BUREAU COUNTY SHERIFF'S DEPARTMENT, EMERGENCY SERVICES, SCHOOL DISTRICTS, POSTAL SERVICES AND ANY OTHER AFFECTED LOCAL AGENCIES ARE COMPLETED PRIOR TO IMPLEMENTATION OF THE PROPOSED DETOUR.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

REVIEWED BY: _____
DISTRICT STUDIES & PLANS ENGINEER

DATE: _____

EXAMINED BY: _____
DISTRICT CONSTRUCTION ENGINEER

_____
DISTRICT MATERIALS ENGINEER

_____
DISTRICT OPERATIONS ENGINEER

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
FAS 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: VERT. HORIZ.
DRAWN BY —
DATE 02-06
CHECKED BY JKC

PLOT DATE = 6456
FILE NAME = Z:\SHEETS\GNOTES1
PLOT SCALE = NONE
USER NAME = CHEARS

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Item No.	Item	Unit	Total QUANTITY	80% FED 20% STATE X071-2A ROADWAY	BRIDGE
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	76	76	--
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	30	30	--
20200100	EARTH EXCAVATION	CU YD	72	72	--
20300100	CHANNEL EXCAVATION	CU YD	380	--	380
20400800	FURNISHED EXCAVATION	CU YD	234	234	--
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	83	--	83
25100630	EROSION CONTROL BLANKET	SQ YD	586	586	--
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	21	21	--
28000400	PERIMETER EROSION BARRIER	FOOT	320	320	--
28000500	INLET AND PIPE PROTECTION	EACH	1	1	--
28100107	STONE RIPRAP, CLASS A4	SQ YD	506	--	506
28200200	FILTER FABRIC	SQ YD	506	--	506
35100100	AGGREGATE BASE COURSE, TYPE A	TON	68	68	--
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	625	625	--
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	111	111	--
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	112	112	--
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	46	46	--
44000700	APPROACH SLAB REMOVAL	SQ YD	119	119	--
48101200	AGGREGATE SHOULDERS, TYPE B	TON	120	120	--
48202400	BITUMINOUS SHOULDERS SUPERPAVE 6"	SQ YD	485	485	--
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	--	1
50200100	STRUCTURE EXCAVATION	CU YD	31	--	31
50300100	FLOOR DRAINS	EACH	12	--	12
50300225	CONCRETE STRUCTURES	CU YD	108.2	--	108.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	159.3	--	159.3
50300260	BRIDGE DECK GROOVING	SQ YD	423	--	423
50300300	PROTECTIVE COAT	SQ YD	781	223	558
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	--	1
50500505	STUD SHEAR CONNECTORS	EACH	1944	--	1944
50800105	REINFORCEMENT BARS	POUND	1870	1870	--
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	41980	--	41980
51201100	FURNISHING METAL PILE SHELLS 14"	FOOT	839	--	839
51202600	DRIVING AND FILLING SHELLS	FOOT	839	--	839
51203200	TEST PILE METAL SHELLS	EACH	2	--	2
51500100	NAME PLATES	EACH	1	--	1
54002020	EXPANSION BOLTS 3/4 INCH	EACH	16	16	--
54003000	CONCRETE BOX CULVERTS	CU YD	13.9	13.9	--

Item No.	Item	Unit	Total QUANTITY	80% FED 20% STATE X071-2A ROADWAY	BRIDGE
54213447	END SECTIONS 12"	EACH	2	2	--
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	56	--	56
60100945	PIPE DRAINS 12"	FOOT	32	32	--
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	152	--	152
60900140	TYPE B INLET BOX, STANDARD 609006	EACH	2	2	--
60900515	CONCRETE THRUST BLOCKS	EACH	2	2	--
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	456	456	--
* 63100085	TRAFFIC BARRIER TERMINAL TYPE 6	EACH	4	4	--
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	2	2	--
* 63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	2	2	--
63200310	GUARDRAIL REMOVAL	FOOT	657	657	--
63500105	DELINEATORS	EACH	5	5	--
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	2	2	--
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8	--
67100100	MOBILIZATION	L SUM	1	1	--
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	3062	3062	--
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	11	11	--
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	7	7	--
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2	2	--
78200410	GUARDRAIL MARKER, TYPE A	EACH	8	8	--
78200520	BARRIER WALL MARKER, TYPE B	EACH	4	4	--
78201000	TERMINAL MARKER-DIRECT APPLIED	EACH	4	4	--
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	7	7	--
X0324043	GRATING FOR CONCRETE HEADWALL	EACH	1	1	--
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	167	167	--
X4066735	LEVELING BINDER (HAND METHOD), SUPERPAVE N50	TON	3	3	--
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	512	512	--
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1	--	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1	--	1
X7013015	TRAFFIC CONTROL FOR ROAD CLOSURE	L SUM	1	1	--
Z0002600	BAR SPLICERS	EACH	64	--	64
Z0005400	BREAKER RUN CRUSHED STONE	TON	5	5	--
Z0028415	GEOTECHNICAL REINFORCEMENT	SQ YD	100	100	--
X0325519	DRAIN FOR AGGREGATE BASE COURSE	SQ YD	7	7	--

• SPECIALTY ITEM

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

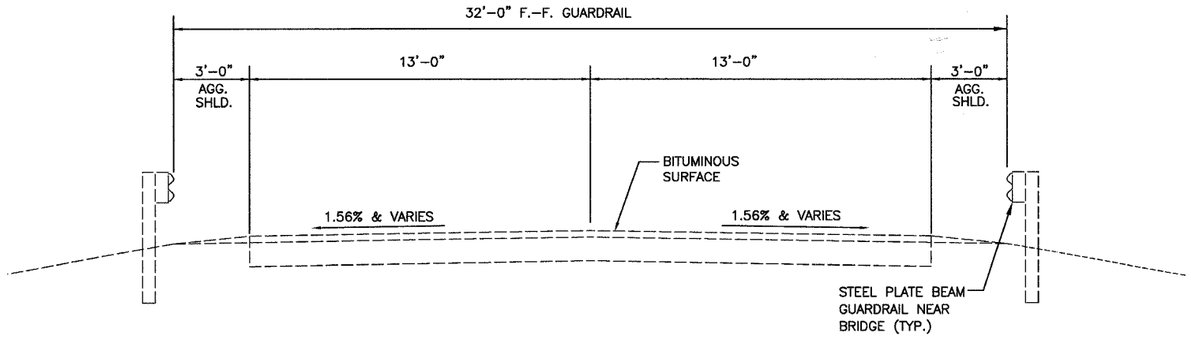
SUMMARY OF QUANTITIES
FAS 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: VERT. HORIZ.
DATE 02/06
DRAWN BY ---
CHECKED BY JKC

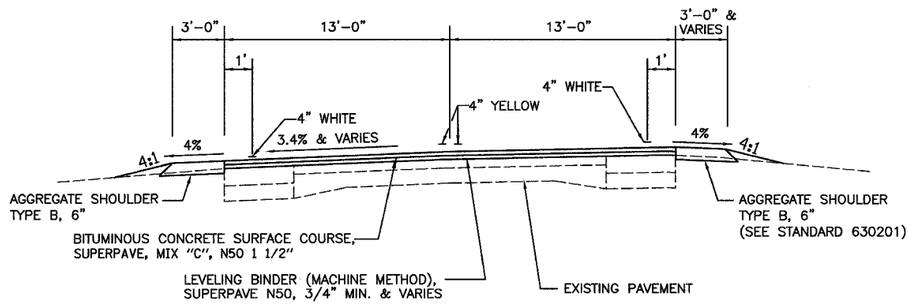
PLOT DATE = 01/06
FILE NAME = X:\PROJS\SUMQUANT
PLOT SCALE = NONE
USER NAME = CHAMS

CONTRACT NO. 64938

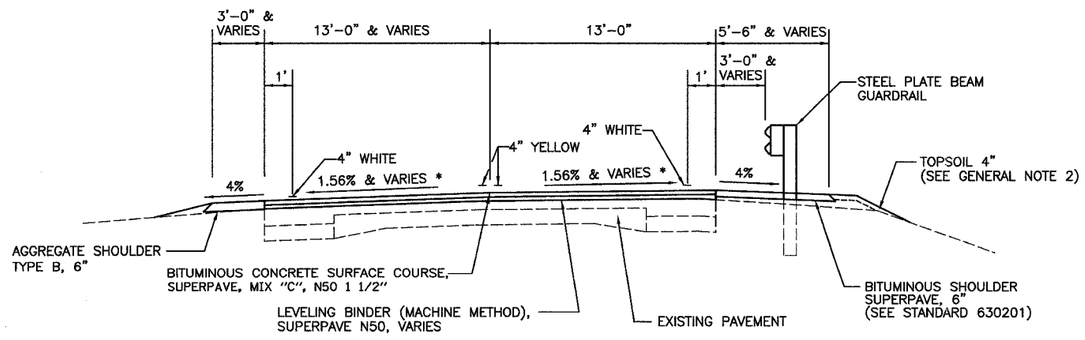
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING
TYPICAL SECTION
STA. 1506+80.00 TO STA. 1513+62.50

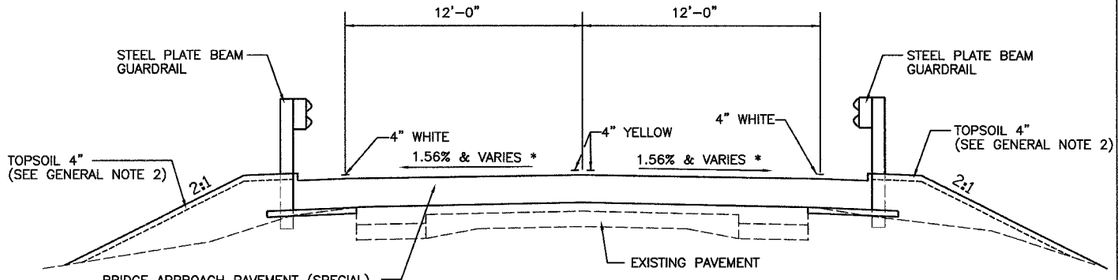


TYPICAL SECTION
STA. 1506+80.00 TO STA. 1507+12.00
LT. STA. 1514+02.00 TO STA. 1514+05.00
RT. STA. 1512+83.50 TO STA. 1513+62.50

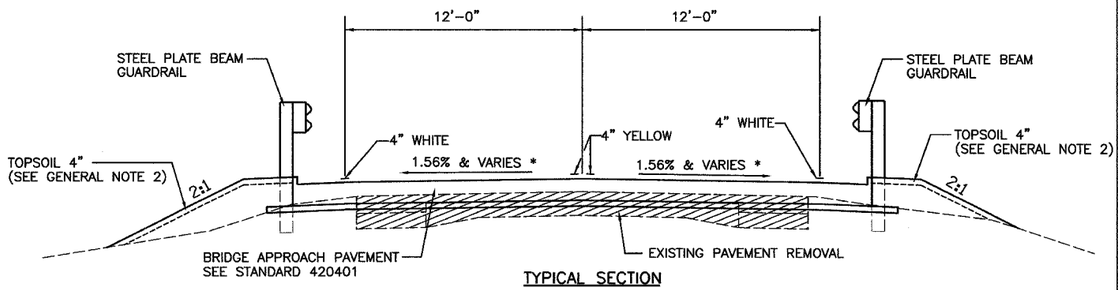


TYPICAL SECTION
STA. 1507+12.00 TO STA. 1509+72.30

* SUPERELEVATION TRANSITION
SEE SHEET 43



TYPICAL SECTION
STA. 1509+72.30 TO STA. 1510+02.30



TYPICAL SECTION
STA. 1511+29.30 TO STA. 1511+59.30

BITUMINOUS 112 LBS / SQ. YD.-IN.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

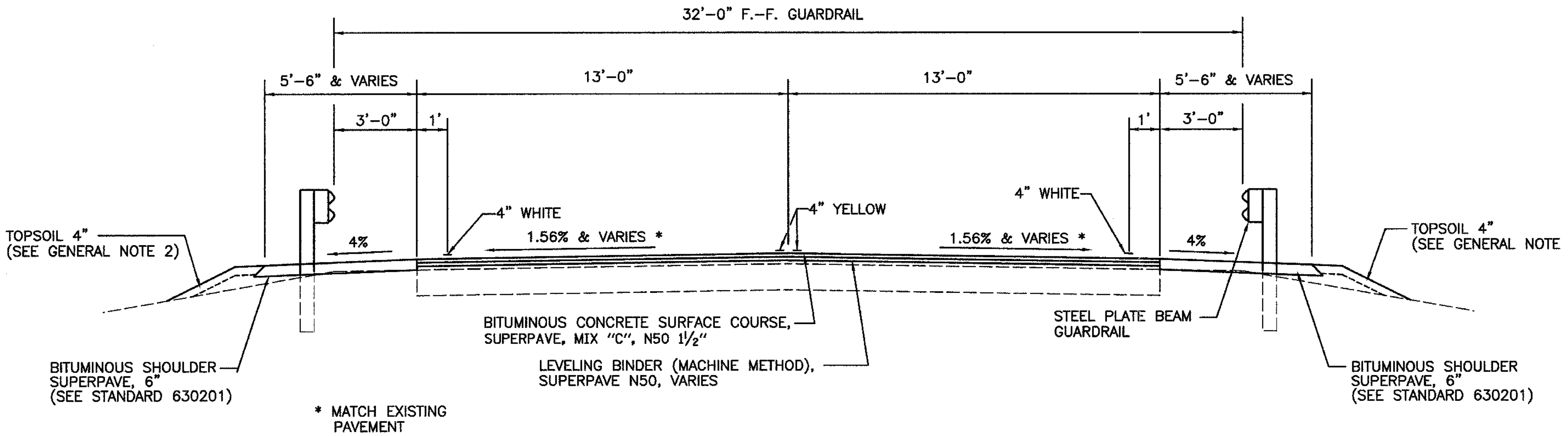
TYPICAL SECTIONS
FAS 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: VERT.
HORIZ.
DATE 07/06

DRAWN BY ARR
CHECKED BY JKC

PLOT DATE = 6/4/06
FILE NAME = Z:\DRAWINGS\TYP
PLOT SCALE = NONE
USER NAME = CHANS

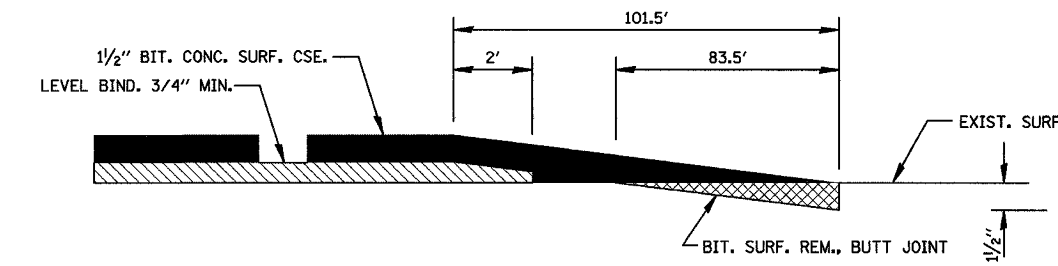
			CONTRACT NO. 64938	
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION

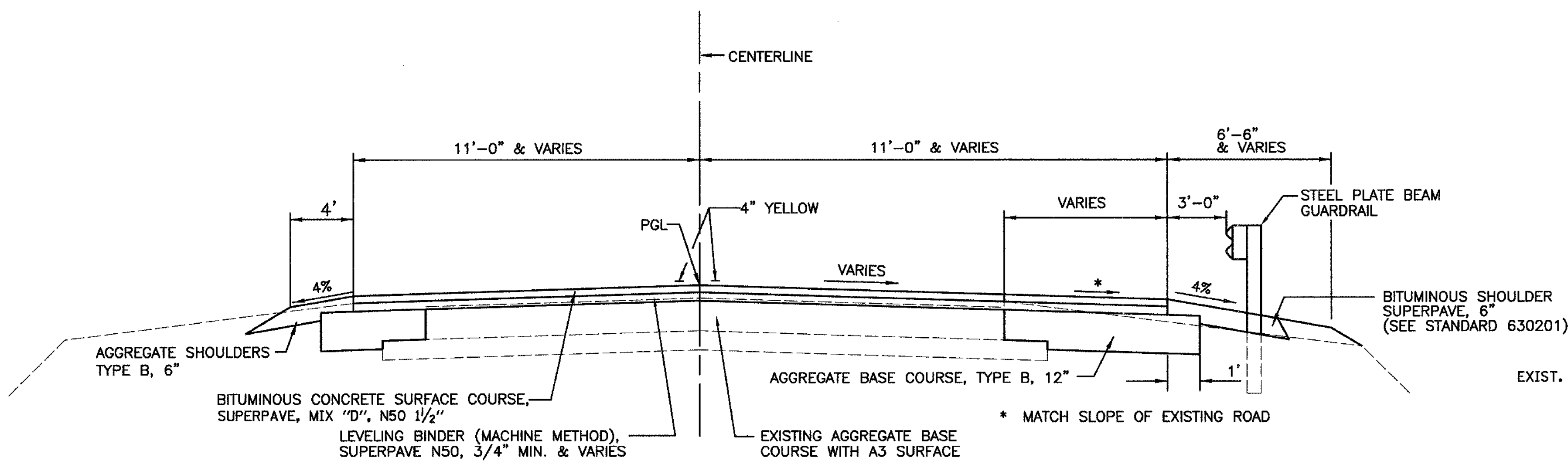
LT. STA. 1511+59.30 TO STA. 1514+02.00

RT. STA. 1511+59.30 TO STA. 1512+83.50



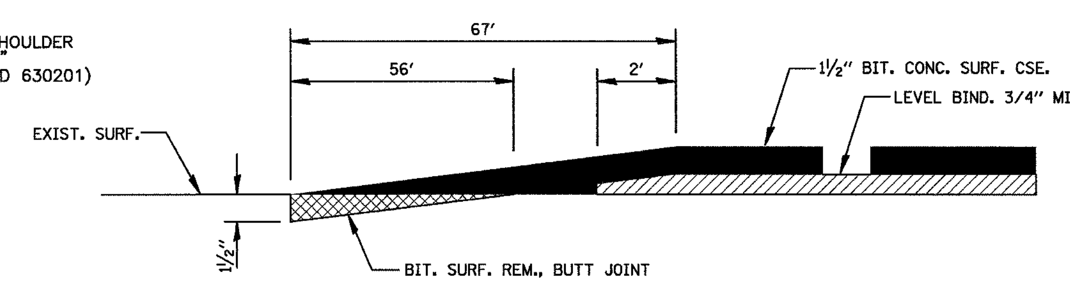
BUTT JOINT DETAIL

STA. 1512+61 TO STA. 1513+62.50



TYPICAL SECTION

(WIDENING FOR CH 19)



BUTT JOINT DETAIL

STA. 1506+80.00 TO STA. 1507+47.00

PAVEMENT DESIGN DATA

ADT = 3000 (2018)
PV = 2850 MU = 66 SU = 84
TRAFFIC FACTOR = 0.5
POOR SUBGRADE SUPPORT

BITUMINOUS 112 LBS / SQ. YD.-IN.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

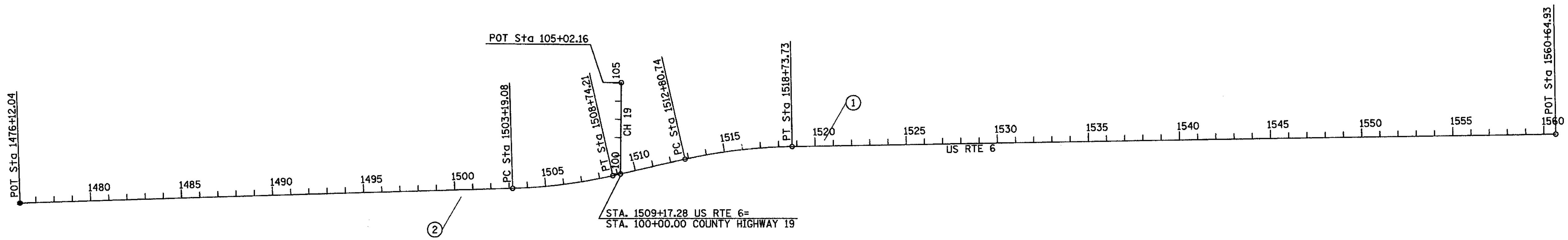
TYPICAL SECTIONS
FAS 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: VERT. HORIZ.
DATE 07/06
DRAWN BY ARR
CHECKED BY JKC

PLOT DATE = 04/06
FILE NAME = Z08903TYP
PLOT SCALE = NONE
USER NAME = CHAMS

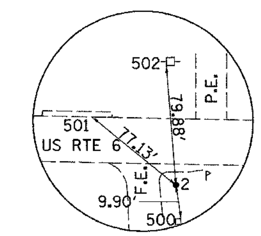
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	6
STA. __________	TO STA.__________			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

EXISTING HORIZONTAL & VERTICAL CONTROL

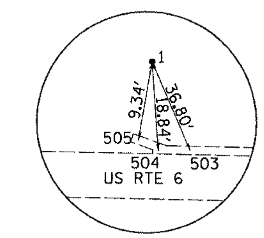



```
Chain ALIGN6 contains:
 21 CUR 230 CUR 240 22

Beginning chain ALIGN6 description
==========================================================================

Point 21          N 1,711,565.4400    E 2,524,111.6500    Sta  1476+12.040

Course from 21 to PC 230 N 88• 20' 06.68" E Dist 2,707.0394

                              Curve Data
                              *----------*

Curve 230
P.I.  Station        1505+97.518     N 1,711,652.1752      E 2,527,095.8675
Delta         =    11° 06' 07.64" (LT)
Degree        =     1° 59' 59.65"
Tangent       =          278.4383
Length        =          555.1332
Radius        =        2,864.9284
External      =           13.4987
Long Chord    =          554.2651
Mid. Ord.     =           13.4354
P.C.  Station        1503+19.079     N 1,711,644.0859      E 2,526,817.5467
P.T.  Station        1508+74.213     N 1,711,713.7061      E 2,527,367.4220
C.C.                                 N 1,714,507.8050      E 2,526,734.3137
Back          = N 88° 20' 06.67" E
Ahead         = N 77° 13' 59.03" E
Chord Bear    = N 82° 47' 02.85" E

Course from PT 230 to PC 240     N 77° 13' 59.08" E     Dist 406.5226

                              Curve Data
                              *----------*

Curve 240
P.I.  Station        1515+78.296     N 1,711,869.2984      E 2,528,054.0987
Delta         =    11° 51' 33.54" (RT)
Degree        =     1° 59' 59.63"
Tangent       =          297.5611
Length        =          592.9959
Radius        =        2,864.9344
External      =           15.4114
Long Chord    =          591.9379
Mid. Ord.     =           15.3289
P.C.  Station        1512+80.735     N 1,711,803.5417      E 2,527,763.8942
P.T.  Station        1518+73.731     N 1,711,874.0118      E 2,528,351.6224
C.C.                                 N 1,709,009.4368      E 2,528,397.0033
Back          = N 77° 13' 59.07" E
Ahead         = N 89° 05' 32.61" E
Chord Bear    = N 83° 09' 45.84" E

Course from PT 240 to 22     N 89° 05' 32.65" E     Dist 4,191.2034

Point 22          N 1,711,940.4000    E 2,532,542.3000    Sta  1560+64.934

==========================================================================
Ending chain ALIGN6 description
```

```
Chain ALIGNCH contains:
 23 24

Beginning chain ALIGNCH description
==========================================================================
Point 23          N 1,711,723.2230    E 2,527,409.4240    Sta  100+00.000

Course from 23 to 24   N 0° 35' 48.29" E     Dist  502.1592

Point 24          N 1,712,225.3550    E 2,527,414.6540    Sta  105+02.159

==========================================================================
Ending chain ALIGNCH description
```



HORIZONTAL CONTROL POINT No. 2



HORIZONTAL CONTROL POINT No. 1

CURVE POINT NUMBERS

CURVE	PI	CC	PC	PT
230	230	231	232	233
240	240	241	242	243

REFERENCE TIES

POINT	CHAIN	STATION	OFFSET	DESCRIPTION
500	ALIGN6	1500+34.09	49.88' RT.	RAILROAD TIE GATE POST
501	ALIGN6	1500+52.55	37.68' LT.	SURVEY NAIL BETWEEN BIT. & CONC. GUTTER
502	ALIGN6	1499+82.20	16.89' LT.	SURVEY NAIL IN POWER POLE
503	ALIGN6	1520+86.23	18.83' LT.	CHISELED X IN CONC. GUTTER
504	ALIGN6	1520+62.77	17.19' LT.	CHISELED X IN CONC. GUTTER
505	ALIGN6	1520+49.15	23.95' LT.	CHISELED X IN CONC. GUTTER

HORIZONTAL CONTROL POINTS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
1	1711909.606	2528529.487	666.392	ALIGN6	1520+52.14	32.77' LT.	REBAR WITH RED AMERICAN SURVEY CONSULTANT CAP
2	1711595.786	2526534.026	672.196	ALIGN6	1500+34.28	40.04' RT.	REBAR WITH RED AMERICAN SURVEY CONSULTANT CAP

BENCH MARKS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
400	1711759.0700	2527486.1000	632.93	ALIGN6	1509+99.98	18.02' LT	CHISELED SQUARE ON TOP OF N.W. WINGWALL
401	1712343.2400	2527434.5000	631.06	ALIGN6	1510+78.75	599.15' LT	CHISELED SQUARE ON NORTH END OF CONCRETE HEADWALL 600' ± N. OF RTE 6 E. SIDE OF 2750 N. RD. (CH 19)

FILE NAME = Z08903HVC
PLOT SCALE = AS NOTED
PLOT DATE = 300
OPERATOR = CHAMS

20100110

TREE REMOVAL (6 TO 15 UNITS DIAMETER)

LOCATION	UNIT
STA 101+09, RT.	44
STA 100+81, RT.	8
STA 1513+55, LT.	24
TOTAL	76

20100210

TREE REMOVAL (OVER 15 UNITS DIAMETER)

LOCATION	UNIT
STA 1511+38, RT	30
TOTAL	30

20200100

EARTHWORK QUANTITIES

LOCATION	THEORETICAL		SHORTAGE (−) OR EXCESS (+)	REMARKS
	CUT	FILL		
	CU YD	CU YD	CU YD	
			[(A)0.75]−(B)	
	(A)	(B)	(C)	
STA 1506+80 TO STA 1510+02.30	24	68	−50	US RT. 6
STA 1511+29.30 TO STA 1514+05	35	160	−134	US RT. 6
STA 100+45 TO STA 101+46	13	60	−50	C.H. 19
TOTAL	72	288	−234	
	PAY ITEM 20200100	INFO ONLY	PAY ITEM 20400800	

20300100

CHANNEL EXCAVATION

LOCATION	CU YD
BRIDGE	380
TOTAL	380

25100630

EROSION CONTROL BLANKET

LOCATION	SQ YD
STA 1508+00 TO STA 1509+89.4, RT.	88
STA 1509+75 TO STA 1510+15.5, LT.	49
STA 1511+16.2 TO STA 1512+50, RT.	151
STA 1511+42.2 TO STA 1514+00, LT.	298
TOTAL	586

28000400

PERIMETER EROSION BARRIER

LOCATION	FOOT
STA 1509+00 TO STA 1509+90, RT.	90
STA 1511+50 TO STA 1513+00, RT.	150
STA 1513+25 TO STA 1514+05, LT.	80
TOTAL	320

28000500

INLET AND PIPE PROTECTION

LOCATION	EACH
STA 101+00, LT	1
TOTAL	1

PAVEMENT SCHEDULE

LOCATION (STA. TO STA.)	Z0028415 GEOTECHNICAL REINFORCEMENT	35100100 AGGREGATE BASE COURSE, TYPE A	40600980 BITUMINOUS SURFACE REMOVAL - BUTT JOINT	48101200 AGGREGATE SHOULDER TYPE B	48202400 BITUMINOUS SHOULDER SUPERPAVE 6"	X4066414 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	X4066735 LEVELING BINDER (HAND METHOD), SUPERPAVE N50	X4066765 LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	#2001380 DRAIN FOR AGGREGATE BASE COURSE
	SQ YD	TON	SQ YD	TON	TON	TON	TON	TON	SQ YD
STA 100+15.84 TO STA 100+60.00								172	
STA 100+15.84 TO STA 101+46.43						72			
STA 100+51.95 TO STA 101+46.43 RT.	40	27							1.5
STA 100+60.00 TO STA 101+46.40			222						
STA 100+65.27 TO STA 101+46.43 LT.	21	14							1.5
STA 101+46.90 RT. TO STA 1509+79.10 LT.					93				
STA 1506+80.00 LT. TO STA 101+46.30 LT.				92					
STA 1506+80.00 TO STA 1507+36.00			162						
STA 1506+80.00 TO STA 1509+66.30						47			
STA 1506+80.00 RT. TO STA 1507+18.00 RT.				8					
STA 1507+11.69 RT. TO STA 1509+56.70 RT.					149				
STA 1507+38.00 TO STA 1509+66.30								289	
STA 1508+30.73 TO STA 1508+92.50 LT.	39	27							4
STA 1511+54.60 RT. TO STA 1512+83.50 RT.					91				
STA 1511+65.30 TO STA 1512+77.00								51	
STA 1511+65.30 TO STA 1513+62.50						48			
STA 1511+72.80 LT. TO STA 1514+01.70 LT.					152				
STA 1512+77.00 RT. TO STA 1513+62.50 RT.				18					
STA 1512+79.00 TO STA 1513+62.50			241						
STA 1513+95.60 LT. TO STA 1514+05.00 LT.				2					
AS DIRECTED BY ENGINEER							3		
TOTAL	100	68	625	120	485	167	3	512	7

BRIDGE APPROACH PAVEMENT SCHEDULE

LOCATION (STA. TO STA.)	42001165 BRIDGE APPROACH PAVEMENT	42001400 BRIDGE APPROACH PAVEMENT (SPECIAL)	42001430 BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	50300300 PROTECTIVE COAT
	SQ YD	SQ YD	SQ YD	SQ YD
STA 1509+66.30 TO STA 1509+72.30			24	
STA 1509+72.30 TO STA 1510+02.30		112		112
STA 1511+29.30 TO STA 1511+59.30	111			111
STA 1511+59.30 TO STA 1511+65.30			22	
TOTAL	111	112	46	223

44001200

APPROACH SLAB REMOVAL

LOCATION	SQ YD
STA 1509+68.84 TO STA 1509+75.76	23
STA 1511+33.04 TO STA 1511+65.30	96
TOTAL	119

54213447

END SECTIONS

LOCATION	EACH
STA 1511+33.2, 31' RT	1
STA 1511+58.5, 33' LT	1
TOTAL	2

60100945

PIPE DRAINS 12"

LOCATION	FOOT
STA 1511+33.5, RT	15
STA 1511+58.5, LT	17
TOTAL	32

60900140

TYPE B INLET BOX, STANDARD 609006

LOCATION	EACH
STA 1511+33.5, RT	1
STA 1511+58.5, LT	1
TOTAL	2

60900515

CONCRETE THRUST BLOCKS

LOCATION	EACH
STA 1511+33.5, RT	1
STA 1511+58.5, LT	1
TOTAL	2

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
FAS 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: VERT. HORIZ. DRAWN BY KKP
DATE: 03/06 CHECKED BY JKC

PLOT DATE = 04/06
FILE NAME = 2BR\03SCHED
PLOT SCALE = NONE
USER NAME = CHAMS

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	8
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

63000000

STEEL PLATE BEAM GUARD RAIL, TYPE A	
LOCATION	FOOT
STA 1507+74.28, 16' TO STA 1509+61.25, 16' RT	187.5
STA 1511+50.47, 16' TO STA 1512+12.97, 16' RT	62.5
STA 1511+69.42, 16' TO STA 1513+31.92, 16' LT	162.5
STA 1509+81.43, 18.4' TO STA 100+60.54, 27.9' RT	43.75
TOTAL	456

63100085

TRAFFIC BARRIER TERMINAL TYPE 6	
LOCATION	EACH
STA 1509+91.86, RT	1
STA 1510+11.78, LT	1
STA 1511+19.82, RT	1
STA 1511+38.78, LT	1
TOTAL	4

63100167

TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	
LOCATION	EACH
STA 100+60.54, RT.	1
STA 1507+74.28, RT.	1
TOTAL	2

63100169

TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	
LOCATION	EACH
STA 1512+12.97, RT.	1
STA 1513+31.92, LT.	1
TOTAL	2

63200310

GUARDRAIL REMOVAL	
LOCATION	FOOT
STA 1507+52.08 (20' O/S) TO STA 1509+77.19 (17' O/S)	292
STA 1509+61.18 (43' O/S) TO STA 1513+83.37 (18' O/S)	365
TOTAL	657

63500105

DELINEATORS	
LOCATION	EACH
STA 101+05.00, LT.	1
STA 101+09.62, RT.	1
STA 1507+24.58, RT.	1
STA 1512+62.97, RT.	1
STA 1513+81.92, LT.	1
TOTAL	5

THERMOPLASTIC PAVEMENT MARKING			
	78000200 4" WHITE	78000200 4" YELLOW	78000650 24" WHITE
LOCATION	FOOT	FOOT	FOOT
STA 100+68.49			11
STA 100+70.50 TO STA 101+46.43		152	
STA 101+46.43 TO STA 1513+62.50, LT.	520		
STA 1506+80.00 TO STA 101+46.43, LT.	342		
STA 1506+80.00 TO STA 1513+62.50	683	1365	
TOTAL	1545	1517	11

78100100

RAISED REFLECTIVE PAVEMENT MARKER	
LOCATION	EACH
STA 1506+80.00 TO STA 1513+62.50	7
TOTAL	7

78100105

RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	
LOCATION	EACH
STA 1510+02.30 TO STA 1511+29.30	2
TOTAL	2

78200410

GUARDRAIL MARKERS, TYPE A	
LOCATION	EACH
STA 1507+24.58 TO STA 1513+81.30	8
TOTAL	8

78200520

BARRIER WALL MARKERS, TYPE B *	
LOCATION	EACH
BRIDGE	4
TOTAL	4

* MARKERS SHALL BE BIDIRECTIONAL SILVER/ SILVER

78201000

TERMINAL MARKER - DIRECT APPLIED	
LOCATION	EACH
1 AT EACH TYPE 1 TERMINAL	4
TOTAL	4

78300200

RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	
LOCATION	EACH
STA 1506+80.00 TO STA 1513+62.50	7
TOTAL	7

X0324043

GRATING FOR CONCRETE HEADWALL	
LOCATION	EACH
STA 101+00.00, LT.	1
TOTAL	1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
FAS 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: VERT. HORIZ.
DATE: 03/06

DRAWN BY KKP
CHECKED BY JKC

PLOT DATE = 12/05
FILE NAME = Z0893SCHED
PLOT SCALE = NONE
USER NAME = CHAMS

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	9
STA. _____	TO STA. _____			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
NOTE BOOK
NO.
DATE / BY

BEGIN PROJECT
STA. 1506+80.00

OWNER UNKNOWN
EXISTING R.O.W.
STA 1508+87.80, 28.83' LT.
STA 1508+24.95, 13' LT.
CONSTRUCTION LIMITS
FL= 629.612
15" CMP
℄ C.H. 19
STA 1508+74.21
PC STA 1508+74.21
BIT
GUARDRAIL REMOVAL, 52 FOOT
STA 1509+54.49, 49.13' LT.
TRAFFIC BARRIER TERMINAL TYPE 6, STEEL PLATE BEAM GUARDRAIL TYPE A, 43.75 FOOT, TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)
STA 1509+75.85, 16.55' LT.
FLOW BRUSH CREEK
CONSTRUCTION LIMITS
TRAFFIC BARRIER TERMINAL TYPE 6, STEEL PLATE BEAM GUARDRAIL TYPE A, 162.5 FOOT, TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)
30°
+68.42
MATCH LINE STA. 1512+00.00
1506
1507
+36
1508
℄ US RTE 6
1509
100+00
73°38'11"
1510+00
1511
RET WALL
TELE MK
+74.28
CONSTRUCTION LIMITS
GUARDRAIL REMOVAL, 226 FOOT
+61.21
℄ STRUCTURE STA. 1510+60.80
30°
+50.47
CONSTRUCTION LIMITS
+50
PERIMETER EROSION BARRIER
+00
+60
STA. 1509+17.28 US RTE 6= STA. 100+00.00 COUNTY HIGHWAY 19
EXISTING R.O.W.
TRAFFIC BARRIER TERMINAL TYPE 6, STEEL PLATE BEAM GUARDRAIL TYPE A, 62.5 FOOT, TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)
PERIMETER EROSION BARRIER

PROP. CURVE
PI STA. = 1505+97.52
Δ = 11° 06' 08" (LT)
D = 2° 00' 00"
R = 2,864.93'
T = 278.44'
L = 555.13'
E = 13.50'
e = 3.4%
T.R. = 43
L_1 = 94
P.C. STA. = 1503+19.08
P.T. STA. = 1508+74.21
SE REMOVED
STA. 1508+27 TO STA. 1509+64

TRAFFIC BARRIER TERMINAL TYPE 6, STEEL PLATE BEAM GUARDRAIL TYPE A, 187.5 FOOT, TRAFFIC BARRIER TERMINAL TYPE 1

MONTEREY MUSHROOMS

JOSEPH D. DEMITO, et ux

TYPE B INLET BOX, STANDARD 609006
LT STA 1511+58.53 1 EACH
PIPE DRAINS 12" 17 FOOT
CONCRETE THRUST BLOCKS 1 EACH
END SECTIONS 12"
33' LT. STA 1511+58.53
℄ ELEV. 628.70 1 EACH

TYPE B INLET BOX, STANDARD 609006
RT STA 1511+33.32 1 EACH
PIPE DRAINS 12" 15 FOOT
CONCRETE THRUST BLOCKS 1 EACH
END SECTIONS 12"
31' RT. STA 1511+33.32
℄ ELEV. 627.50 1 EACH

N

GRAPHIC SCALE
FEET
20 0 20 40 60 80 100

LEGEND
- RIPRAP CL A4
- BITUMINOUS SURFACE REMOVAL BUTT JOINT
- PAVEMENT WIDENING
- APPROACH SLAB REMOVAL

BENCHMARK: CHISLED "□" ON TOP OF NORTHWEST WINGWALL OF S.N. 006-0071
ELEV. = 632.93

PROFILE
SURVEYED
PLOTTED
DRAWN
CHECKED
NOTE BOOK
NO.
STRUCTURE NO. 006-0169

MIN 2¼" BITUMINOUS OVERLAY
BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) (STD 420401)
BRIDGE APPROACH PAVEMENT (STD 420401)
PROPOSED BRIDGE SN 006-0169
BRIDGE APPROACH PAVEMENT (STD 420401)
BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) (STD 420401)

PVC STA. 1506+80
EL. = 643.22
280.00' V.C.
e = 1.92'
-5.98%
-0.50%
VPI STA. 1508+20.00
ELEVATION 634.85
STA. 1509+66.30
STA. 1509+72.30
PVT STA. 1509+60
EL. = 634.15
STA. 1510+02.30
STA. 1511+29.30
PVC STA. 1511+37.5
EL. = 633.26
STA. 1511+59.30
STA. 1511+65.30
EARTH EXCAVATION CU YD. 24
FURNISHED EXCAVATION CU YD. 50
WASTE CU YD.
EARTHWORK LIMITS SEE SCHEDULE OF QUANTITIES
▽ D.H.W. 627.67
EARTHWORK LIMITS SEE SCHEDULE OF QUANTITIES
THE CONTRACTOR SHALL REMOVE EXCESS SILT DEPOSITS DOWNSTREAM AND UPSTREAM OF THE STRUCTURE WITHIN R.O.W. AS DIRECTED BY THE ENGINEER. (TRANSITION FROM AS SHOWN AT STRUCTURE TO MATCH EXISTING AT R.O.W. LINE). THIS WILL BE PAID FOR AS CHANNEL EXCAVATION.
STREAM BED ELEV. 618.00

655 650 645 640 635 630 625 620 615

1506+00	1506+50	1507+00	1507+50	1508+00	1508+50	1509+00	1509+50	1510+00	1510+50	1511+00	1511+50	1512+00
648.03	644.99	642.04 / 642.06	639.29 / 639.51	636.98 / 637.45	635.13 / 635.88	633.73 / 634.80	632.82 / 634.21	625.80 / 633.95	619.06 / 633.70	622.01 / 633.45	632.45 / 633.22	632.94 / 633.41

PLOT DATE = 8/4/06
FILE NAME = Z:\BDS\BGPLN1
PLOT SCALE = 1:20
USER NAME = CHAMS

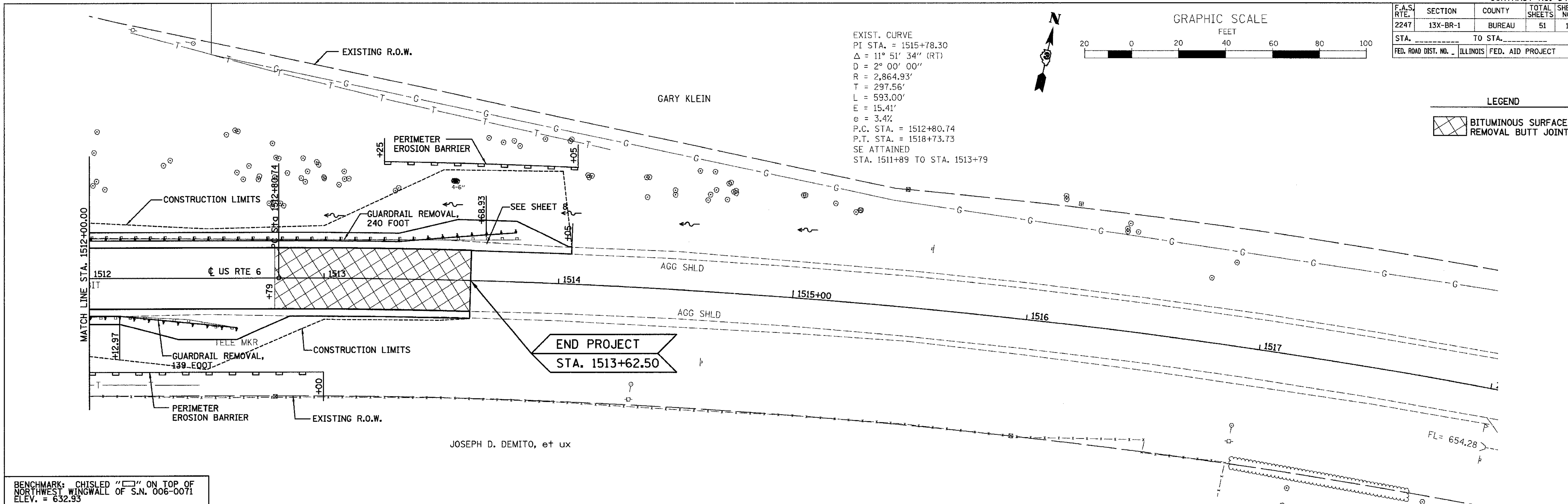
US RTE 6

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	10

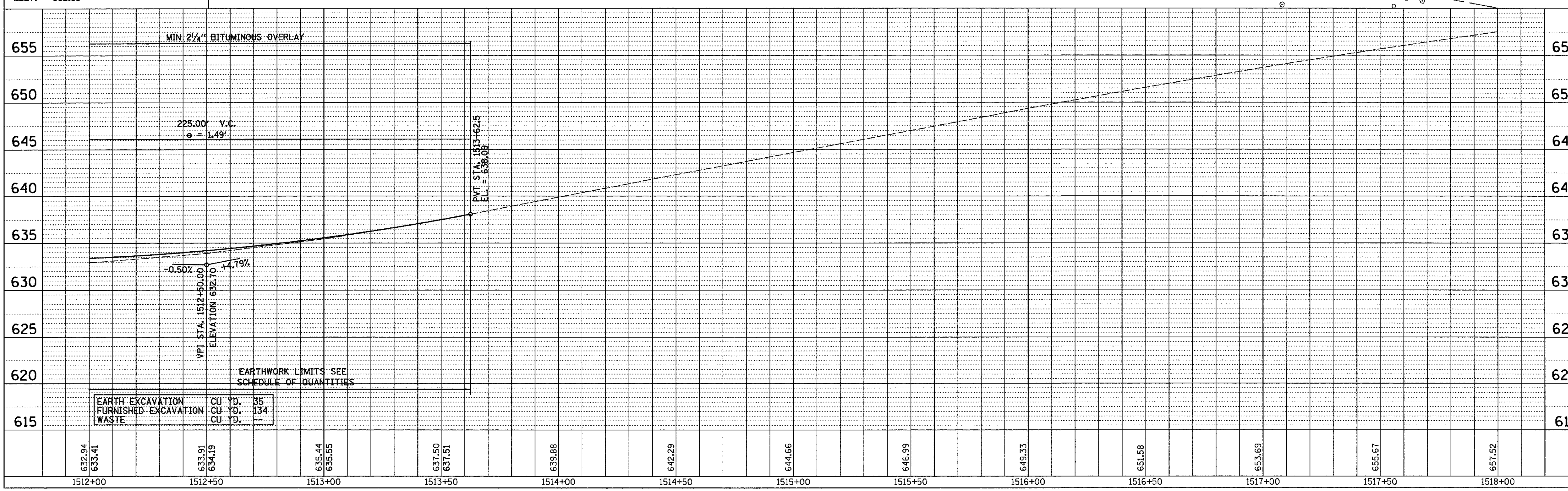
STA. ________ TO STA. ________

FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT



GRAPHIC SCALE
FEET
20 0 20 40 60 80 100
N
LEGEND
BITUMINOUS SURFACE REMOVAL BUTT JOINT
EXIST. CURVE
PI STA. = 1515+78.30
Δ = 11° 51' 34" (RT)
D = 2° 00' 00"
R = 2,864.93'
T = 297.56'
L = 593.00'
E = 15.41'
e = 3.4%
P.C. STA. = 1512+80.74
P.T. STA. = 1518+73.73
SE ATTAINED
STA. 1511+89 TO STA. 1513+79
EXISTING R.O.W.
GARY KLEIN
PERIMETER EROSION BARRIER
CONSTRUCTION LIMITS
GUARDRAIL REMOVAL, 240 FOOT
SEE SHEET
MATCH LINE STA. 1512+00.00
Sta 1512+80.74
℄ US RTE 6
AGG SHLD
1512
1513
1514
1515+00
1516
1517
TELE MKR
GUARDRAIL REMOVAL, 139 FOOT
CONSTRUCTION LIMITS
END PROJECT
STA. 1513+62.50
PERIMETER EROSION BARRIER
EXISTING R.O.W.
JOSEPH D. DEMITO, et ux
FL= 654.28

BENCHMARK: CHISLED "▭" ON TOP OF NORTHWEST WINGWALL OF S.N. 006-0071
ELEV. = 632.93



MIN 2¼" BITUMINOUS OVERLAY
225.00' V.C.
e = 1.49'
PVT STA. 1513+62.5
EL. = 638.09
-0.50%
+4.79%
VPI STA. 1512+50.00
ELEVATION 632.70
EARTHWORK LIMITS SEE SCHEDULE OF QUANTITIES
655
650
645
640
635
630
625
620
615
632.94 633.41
633.91 634.19
635.44 635.55
637.50 637.51
639.88
642.29
644.66
646.99
649.33
651.58
653.69
655.67
657.52
1512+00
1512+50
1513+00
1513+50
1514+00
1514+50
1515+00
1515+50
1516+00
1516+50
1517+00
1517+50
1518+00

EARTH EXCAVATION	CU YD.	35
FURNISHED EXCAVATION	CU YD.	134
WASTE	CU YD.	--

PLAN: NOTE BOOK, NO. — SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.O.W. CHECKED, CADD FILE NAME — BY / DATE

PROFILE: NOTE BOOK, NO. — SURVEYED, PLOTTED, GRADES CHECKED, B.M. NOTED, STRUCTURE NOTATIONS CHKD — BY / DATE

PLOT DATE = 04/06
FILE NAME = Z8P0EPLN2
PLOT SCALE = 1:20
USER NAME = CHAMS

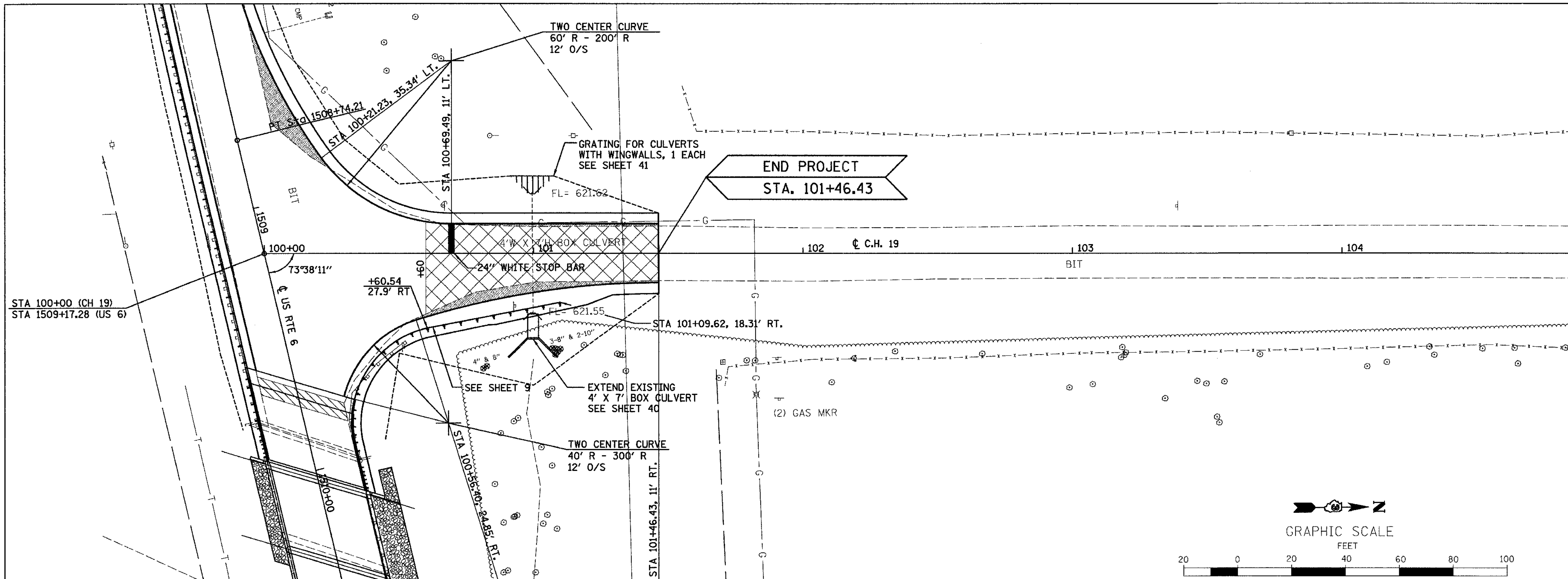
US RTE 6

CONTRACT NO. 64938

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	11

STA. ________ TO STA. ________

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT



LEGEND

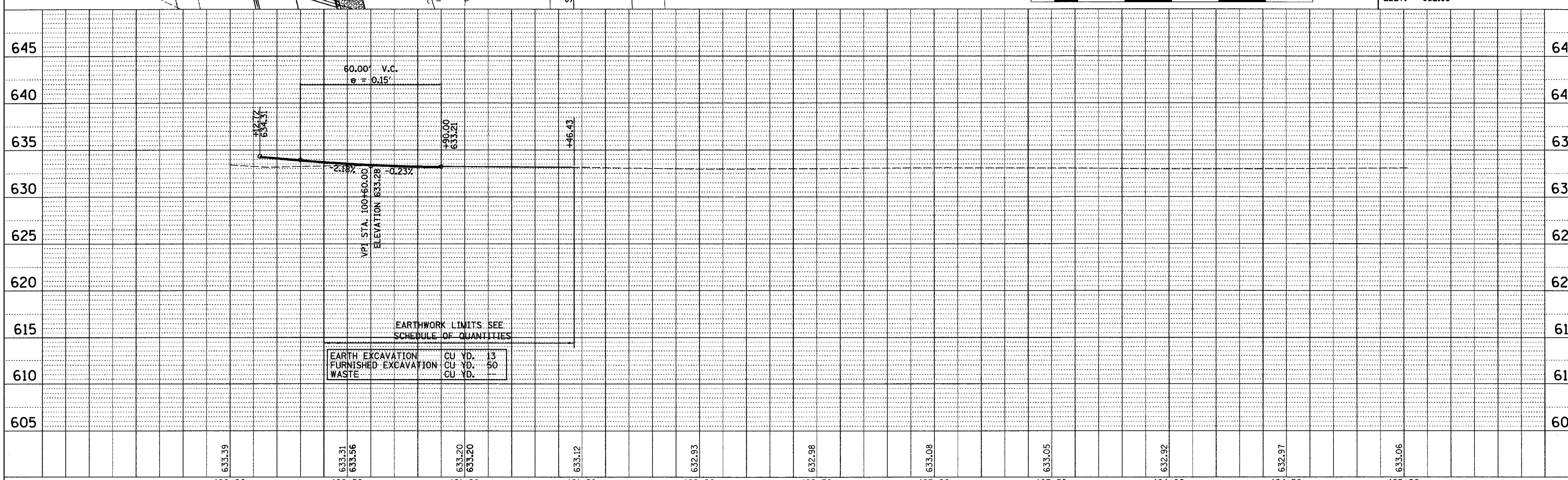
- RIPRAP CL A4
- BITUMINOUS SURFACE REMOVAL BUTT JOINT
- PAVEMENT WIDENING

N

GRAPHIC SCALE
FEET
20 0 20 40 60 80 100

BENCHMARK: CHISLED "▭" ON NORTH END OF CONCRETE HEADWALL 600' ± N. OF RTE 6 E. SIDE OF 2750 N. RD. (CH 19) ELEV. = 631.06

BENCHMARK: CHISLED "▭" ON TOP OF NORTHWEST WINGWALL OF S.N. 006-0071 ELEV. = 632.93



EARTH EXCAVATION	CU YD.	13
FURNISHED EXCAVATION	CU YD.	50
WASTE	CU YD.	—

PLAN: SURVEYED / PLOTTED / ALIGNMENT CHECKED / R. OF WAY CHECKED / CADD FILE NAME — BY: CHAMLIN, ARR, LAG, KG — DATE: 4/06, 4/06, 4/06 — NOTE BOOK NO.

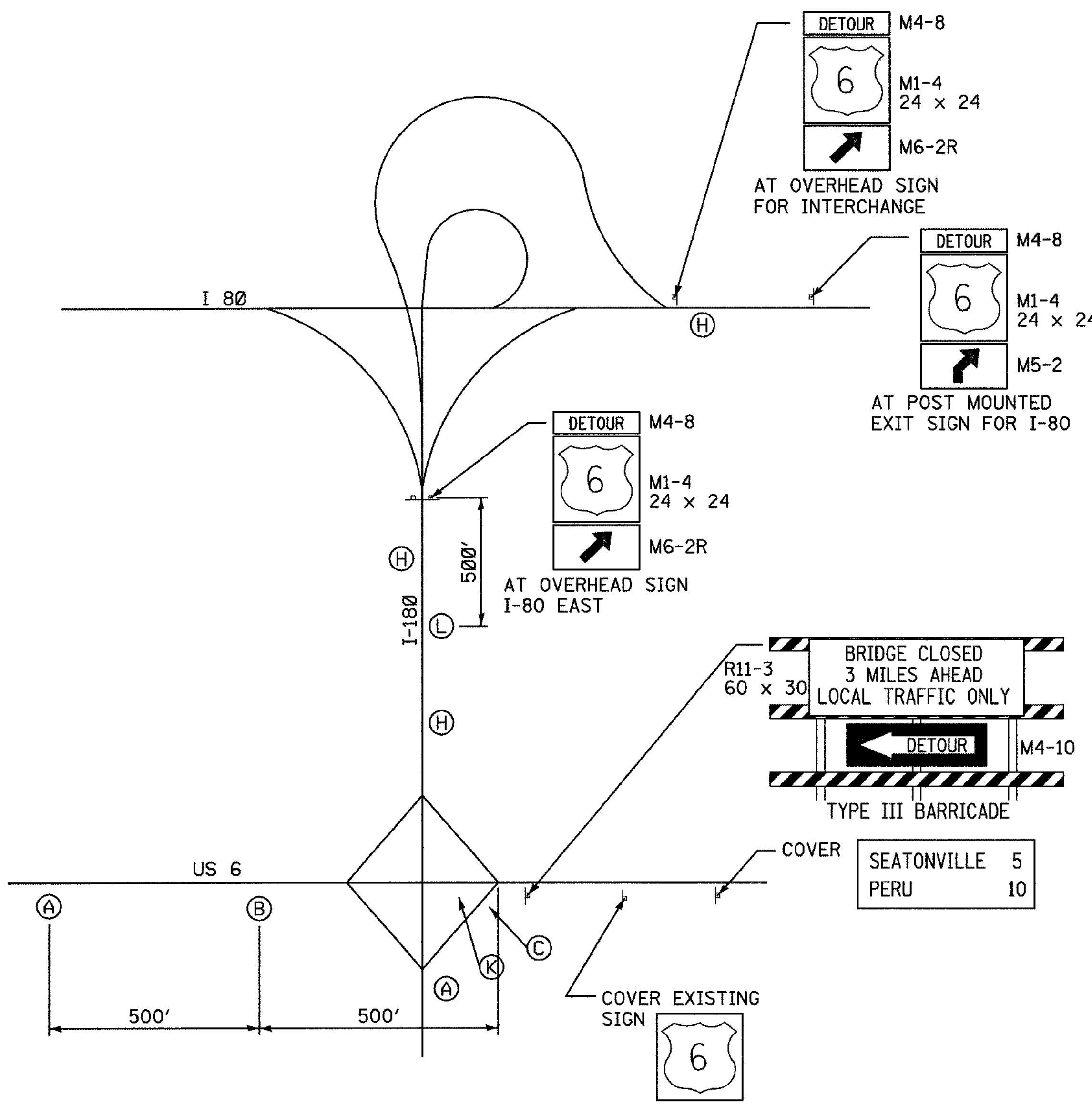
PROFILE: SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATIONS CHECKED — BY — DATE — NOTE BOOK NO.

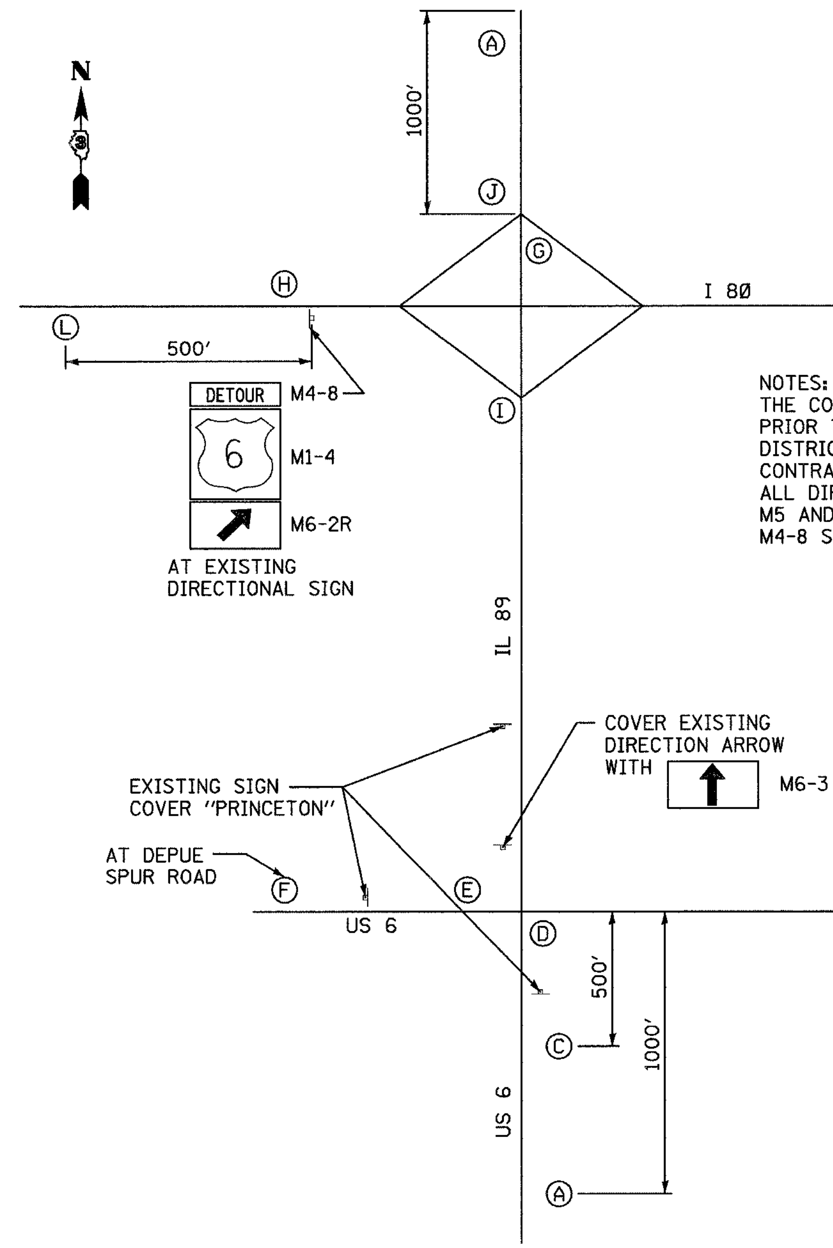
PLOT DATE = 04/06
FILE NAME = Z88903PLN3
PLOT SCALE = 1:20
USER NAME = CHAMS

COUNTY HIGHWAY 19

CONTRACT NO. 64938

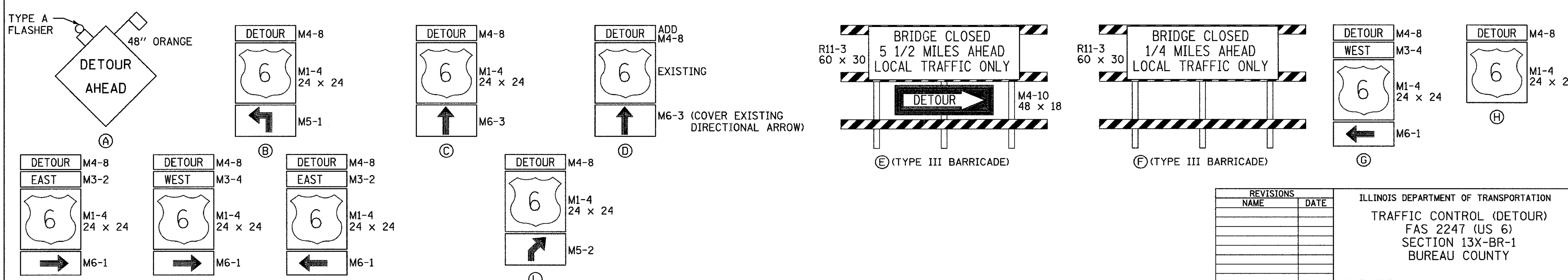
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





NOTES:
THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER THREE WEEKS (21 DAYS) PRIOR TO THE ANTICIPATED CLOSURE DATE.
DISTRICT 3 WILL PROVIDE US 6 (M-4) SIGNS. UPON TERMINATION OF DETOUR THE CONTRACTOR SHALL RETURN THE SIGNS, IN GOOD CONDITION, TO THE DISTRICT.
ALL DIRECTIONAL ARROWS SHALL BE BLACK WITH FLUORESCENT ORANGE.
M5 AND M6 SIGNS SHALL BE 21 x 15.
M4-8 SIGNS SHALL BE 24 x 12.

DETOUR SIGNS



PLOT DATE = 04/06
FILE NAME = Z8892STRAFFCNTL
PLOT SCALE = 1" = 100'
USER NAME = CHAMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL (DETOUR)
FAS 2247 (US 6)
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: NOT TO SCALE
DATE 7/06
DRAWN BY ARR
CHECKED BY JKC

Benchmark: Chiseled "□" on top of N.W. Wingwall of S.N. 006-0071. Elev. 632.93

Existing Structure: SN 006-0071 to be removed.

Originally built in 1936 as S.A. 3 Section 13-X-B. Superstructure was widened and replaced in 1960. Three span prestressed concrete box beam with open abutments on piles and pile bent piers. 147'-8 1/2" Bk. to Bk. Abutments.

Construction to be completed using detour.

No Salvage.

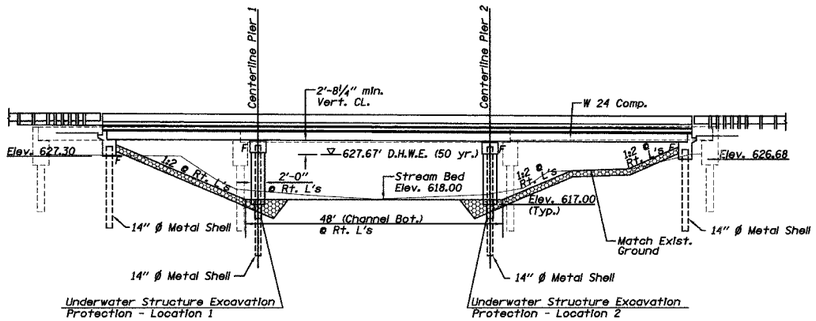
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

See Sheet 2 of 19 for Total Bill of Materials and General Notes.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	13
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 19 SHEETS

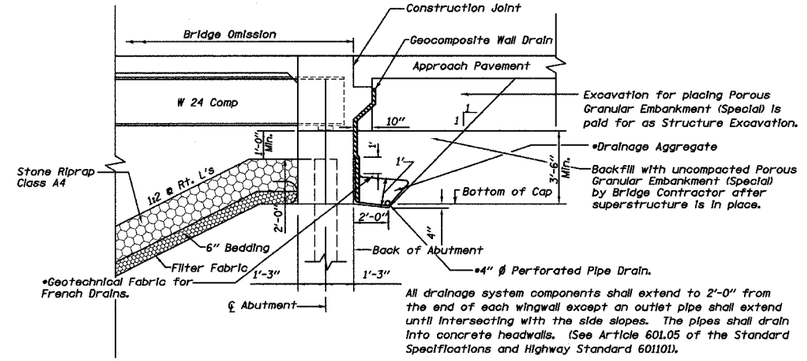
Contract #64938



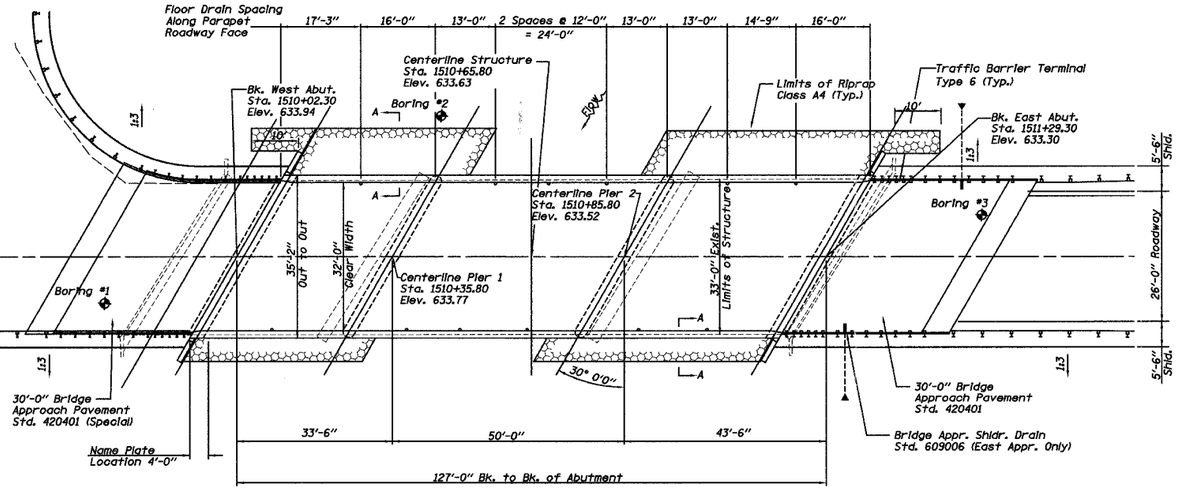
ELEVATION
(Looking North)

STATION 1510+65.80
BUILT 200_ BY
STATE OF ILLINOIS
F.A.S. RT. 2247 SEC. 13X-BR-1
LOADING HS20
STR. NO. 006-0169

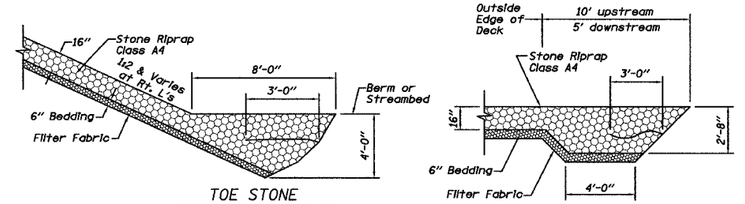
NAME PLATE DETAIL
See Std. 515001



SECTION THRU INTEGRAL ABUTMENT
DIMENSIONS AT RIGHT ANGLES
* Included in the cost of "Pipe Underdrains for Structures"

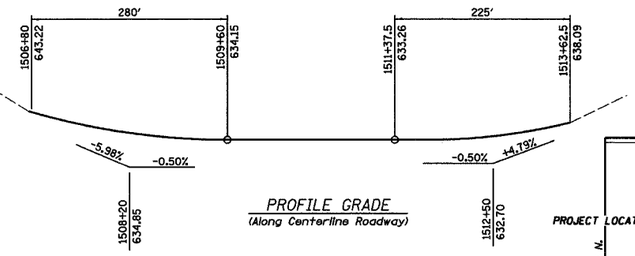


PLAN

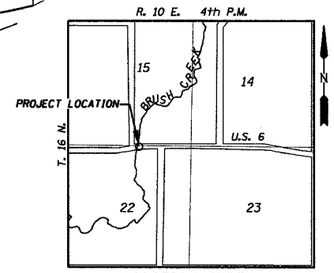


TOE STONE RIPRAP TREATMENT

SECTION A-A



PROFILE GRADE
(Along Centerline Roadway)



LOCATION SKETCH

DESIGN SCOUR ELEVATION	W. ABUT	PIER 1	PIER 2	E. ABUT
	627.00	610.00	610.00	626.60

WATERWAY INFORMATION

DRAINAGE AREA= 43.1 SQ. MI.

Exist. Low Grade Elev.= 632.70 @ Sta. 1510+60.8
Prop. Low Grade Elev.= 633.20 @ Sta. 1511+58.7

FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ. FT. EXIST.	OPENING SQ. FT. PROP.	NAT. H.W.E.	HEAD - FT. EXIST.	HEAD - FT. PROP.	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
	10	2665	500.75	576.88	626.86	0.12	0.04	626.98	626.90
DESIGN	50	3922	578.79	657.63	627.67	0.21	0.17	627.88	627.84
BASE	100	4436	607.23	685.04	627.92	0.26	0.21	628.18	628.13
OVERTOPPING	-	-	-	-	-	-	-	-	-
MAX. CALC.	500	5634	662.98	738.76	628.41	0.42	0.34	628.83	628.75

10 Year Velocity Through Existing Bridge= 5.17 fps
10 Year Velocity Through Prop. Bridge= 4.60 fps

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (JJD)
ENGINEER OF BRIDGES AND STRUCTURES

8/15/06
date
JAMES K. CLINARD
LICENSED STRUCTURAL ENGINEER NO. 081-004655
STATE OF ILLINOIS
expires 11-30-2006
signature
PROFESSIONAL DESIGN FIRM LICENSE NO. 184-001717

CHAMLIN & ASSOCIATES
PERU ILLINOIS MORRIS

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
Field Units

f'c = 3,500 psi (Substructure)
f'c = 3,500 psi (Superstructure)
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (M270 Grade 50W Structural Steel)

SEISMIC DATA
S.P.C.= A
A= 0.04
S= 1.0

GENERAL PLAN
FAS ROUTE 2247 (U.S. 6) OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 19 SHEETS

Contract #64938

General Notes

1. Fasteners shall be high strength bolts (AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas.) Bolts 7/8" Ø, open holes 15/16" Ø, unless otherwise noted.
2. Calculated weight of Structural Steel = 63,828 pounds
3. All structural steel shall be AASHTO M 270 Grade 50W.
4. Field welding of construction accessories will not be permitted to beams or girders.
5. Anchor bolts shall be set before bolting diaphragms over supports.
6. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
7. Reinforcement bars shall conform to the requirements of AASHTO M31, or M322 Grade 60.
8. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
9. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
10. The contractor shall drive one (1) metal shell test pile in a permanent location at the east abutment and pier 2 as directed by the Engineer before ordering the remainder of piles.
11. AASHTO M270 Grade 50W structural steel shall only be painted, at the ends of beams, for a distance equal to the depths of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with an inorganic zinc rich primer per AASTHO M 300, Type 1. No field painting shall be required. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".
12. All construction joints shall be bonded.

TOTAL BILL OF MATERIALS

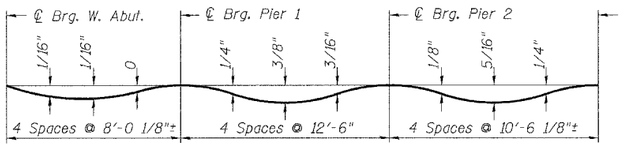
ITEM	UNIT	SUPER	SUB	TOTAL
POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	--	--	83
STONE RIPRAP, CLASS A4	SQ YD	--	--	506
REMOVAL OF EXISTING STRUCTURES	EACH	--	--	1
STRUCTURE EXCAVATION	CU YD	--	31	31
FLOOR DRAINS	EACH	12	--	12
CONCRETE STRUCTURES	CU YD	--	108.2	108.2
CONCRETE SUPERSTRUCTURE	CU YD	159.3	--	159.3
BRIDGE DECK GROOVING	SQ YD	423	--	423
PROTECTIVE COAT	SQ YD	558	--	558
FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	--	1
STUD SHEAR CONNECTORS	EACH	1944	--	1944
REINFORCEMENT BARS, EPOXY COATED	POUND	34410	7570	41980
FURNISHING METAL PILE SHELLS 14"	FOOT	--	839	839
DRIVING AND FILLING SHELLS	FOOT	--	839	839
TEST PILE METAL SHELLS	EACH	--	2	2
NAME PLATES	EACH	1	--	1
GEOCOMPOSITE WALL DRAIN	SQ YD	--	--	56
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	--	--	152
UNDERWATER STRUCTURE EXCAVATION PROTECTION-LOCATION 1	EACH	--	1	1
UNDERWATER STRUCTURE EXCAVATION PROTECTION-LOCATION 2	EACH	--	1	1
BAR SPLICERS	EACH	64	--	64
FILTER FABRIC	SQ YD	--	--	506

Index of Bridge Plans

1. General Plan
2. General Notes and Bill of Materials
3. Deck Elevations
4. Superstructure Plan and Section
5-6. Superstructure Details
7. Framing Plan
8. Framing Details
9. Bearing Details
10. West Abutment
11. East Abutment
12. Pier #1 & #2
13. Anchor Bolt Details for Bearings
14. Bar Splicer Assembly Details
15. Cantilever Forming Brackets
16. Concrete Pile Details
17-19. Soil Borings

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

GENERAL NOTES AND BILL OF MATERIALS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

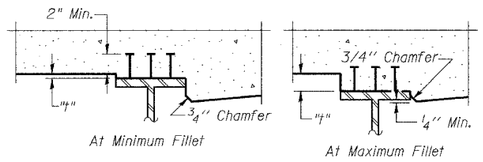


DEAD LOAD DEFLECTION DIAGRAM

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

SCREED ELEVATION FOR BEAM BM1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BKWAB	1510+10.84	14.792	633.6498	633.6498
BRWAB	1510+12.28	14.792	633.6426	633.6426
A	1510+22.28	14.792	633.5926	633.5974
B	1510+32.28	14.792	633.5426	633.5449
PIER1	1510+44.34	14.792	633.4823	633.4823
C	1510+54.34	14.792	633.4323	633.4472
D	1510+64.34	14.792	633.3823	633.4107
E	1510+74.34	14.792	633.3323	633.3591
F	1510+84.34	14.792	633.2823	633.2941
PIER2	1510+94.34	14.792	633.2323	633.2323
G	1511+04.34	14.792	633.1823	633.1927
H	1511+14.34	14.792	633.1323	633.1558
I	1511+24.34	14.792	633.0823	633.1047
BREAB	1511+36.40	14.792	633.0220	633.0220
BKEAB	1511+37.84	14.792	633.0148	633.0148



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

SCREED ELEVATION FOR BEAM BM2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BKWAB	1510+07.42	8.875	633.7739	633.7739
BRWAB	1510+08.87	8.875	633.7667	633.7667
A	1510+18.87	8.875	633.7167	633.7215
B	1510+28.87	8.875	633.6667	633.6690
PIER1	1510+40.92	8.875	633.6064	633.6064
C	1510+50.92	8.875	633.5564	633.5713
D	1510+60.92	8.875	633.5064	633.5348
E	1510+70.92	8.875	633.4564	633.4832
F	1510+80.92	8.875	633.4064	633.4182
PIER2	1510+90.92	8.875	633.3564	633.3564
G	1511+00.92	8.875	633.3064	633.3168
H	1511+10.92	8.875	633.2564	633.2799
I	1511+20.92	8.875	633.2064	633.2288
BREAB	1511+32.98	8.875	633.1461	633.1461
BKEAB	1511+34.42	8.875	633.1389	633.1389

SCREED ELEVATION FOR BEAM BM3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BKWAB	1510+04.01	2.958	633.8840	633.8840
BRWAB	1510+05.45	2.958	633.8768	633.8768
A	1510+15.45	2.958	633.8268	633.8316
B	1510+25.45	2.958	633.7768	633.7791
PIER1	1510+37.51	2.958	633.7165	633.7165
C	1510+47.51	2.958	633.6665	633.6814
D	1510+57.51	2.958	633.6165	633.6449
E	1510+67.51	2.958	633.5665	633.5933
F	1510+77.51	2.958	633.5165	633.5283
PIER2	1510+87.51	2.958	633.4665	633.4665
G	1510+97.51	2.958	633.4165	633.4269
H	1511+07.51	2.958	633.3665	633.3900
I	1511+17.51	2.958	633.3165	633.3389
BREAB	1511+29.56	2.958	633.2562	633.2562
BKEAB	1511+31.01	2.958	633.2490	633.2490

SCREED ELEVATION FOR BEAM PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BKWAB	1510+02.30	0.000	633.9385	633.9385
BRWAB	1510+03.74	0.000	633.9313	633.9313
A	1510+13.74	0.000	633.8813	633.8861
B	1510+23.74	0.000	633.8313	633.8336
PIER1	1510+35.80	0.000	633.7710	633.7710
C	1510+45.80	0.000	633.7210	633.7359
D	1510+55.80	0.000	633.6710	633.6994
E	1510+65.80	0.000	633.6210	633.6478
F	1510+75.80	0.000	633.5710	633.5828
PIER2	1510+85.80	0.000	633.5210	633.5210
G	1510+95.80	0.000	633.4710	633.4814
H	1511+05.80	0.000	633.4210	633.4445
I	1511+15.80	0.000	633.3710	633.3934
BREAB	1511+27.86	0.000	633.3107	633.3107
BKEAB	1511+29.30	0.000	633.3035	633.3035

SCREED ELEVATION FOR BEAM BM4

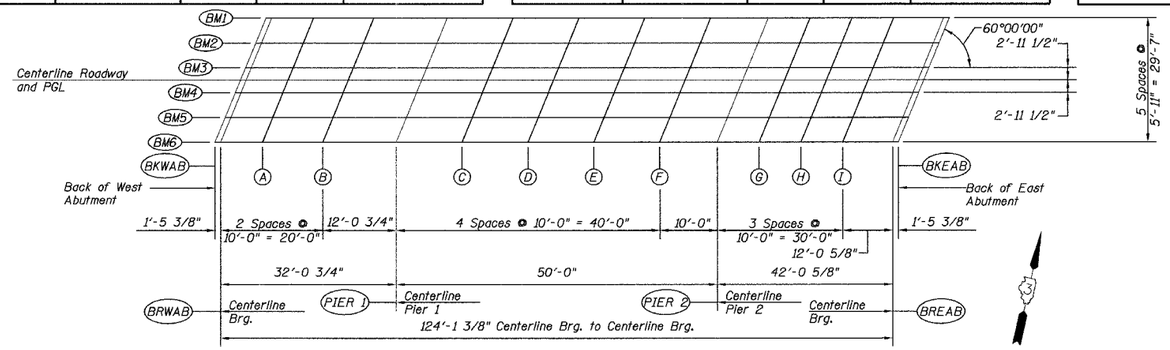
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BKWAB	1510+00.59	-2.958	633.9011	633.9011
BRWAB	1510+02.03	-2.958	633.8939	633.8939
A	1510+12.03	-2.958	633.8439	633.8487
B	1510+22.03	-2.958	633.7939	633.7962
PIER1	1510+34.09	-2.958	633.7336	633.7336
C	1510+44.09	-2.958	633.6836	633.6985
D	1510+54.09	-2.958	633.6336	633.6620
E	1510+64.09	-2.958	633.5836	633.6104
F	1510+74.09	-2.958	633.5336	633.5454
PIER2	1510+84.09	-2.958	633.4836	633.4836
G	1510+94.09	-2.958	633.4336	633.4440
H	1511+04.09	-2.958	633.3836	633.4071
I	1511+14.09	-2.958	633.3336	633.3560
BREAB	1511+26.15	-2.958	633.2733	633.2733
BKEAB	1511+27.59	-2.958	633.2661	633.2661

SCREED ELEVATION FOR BEAM BM5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BKWAB	1509+97.17	-8.875	633.8251	633.8251
BRWAB	1509+98.62	-8.875	633.8179	633.8179
A	1510+08.62	-8.875	633.7679	633.7727
B	1510+18.62	-8.875	633.7179	633.7202
PIER1	1510+30.67	-8.875	633.6576	633.6576
C	1510+40.67	-8.875	633.6076	633.6225
D	1510+50.67	-8.875	633.5576	633.5860
E	1510+60.67	-8.875	633.5076	633.5344
F	1510+70.67	-8.875	633.4576	633.4694
PIER2	1510+80.67	-8.875	633.4076	633.4076
G	1510+90.67	-8.875	633.3576	633.3680
H	1511+00.67	-8.875	633.3076	633.3311
I	1511+10.67	-8.875	633.2576	633.2800
BREAB	1511+22.73	-8.875	633.1973	633.1973
BKEAB	1511+24.17	-8.875	633.1901	633.1901

SCREED ELEVATION FOR BEAM BM6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BKWAB	1509+93.76	-14.792	633.7352	633.7352
BRWAB	1509+95.20	-14.792	633.7280	633.7280
A	1510+05.20	-14.792	633.6780	633.6828
B	1510+15.20	-14.792	633.6280	633.6303
PIER1	1510+27.26	-14.792	633.5677	633.5677
C	1510+37.26	-14.792	633.5177	633.5326
D	1510+47.26	-14.792	633.4677	633.4961
E	1510+57.26	-14.792	633.4177	633.4445
F	1510+67.26	-14.792	633.3677	633.3795
PIER2	1510+77.26	-14.792	633.3177	633.3177
G	1510+87.26	-14.792	633.2677	633.2781
H	1510+97.26	-14.792	633.2177	633.2412
I	1511+07.26	-14.792	633.1677	633.1901
BREAB	1511+19.32	-14.792	633.1074	633.1074
BKEAB	1511+20.76	-14.792	633.1002	633.1002



PLAN

DECK ELEVATIONS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
19 SHEETS

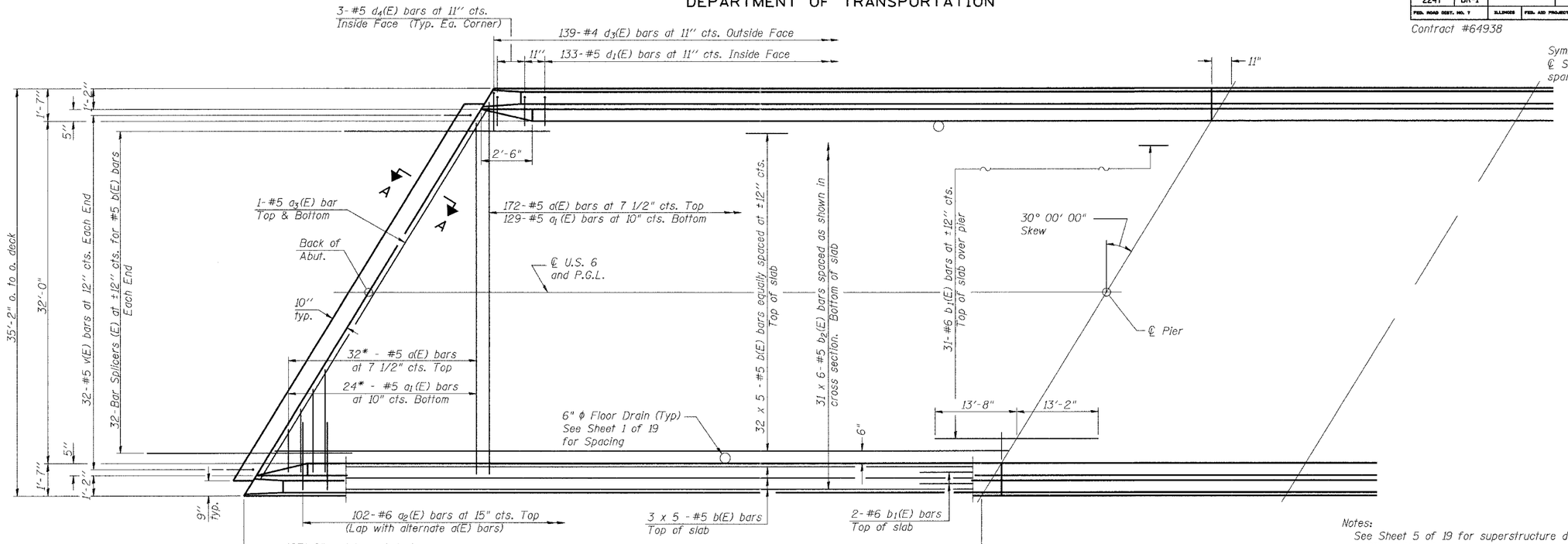
Contract #64938

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	16	SHEET NO. 4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			19 SHEETS

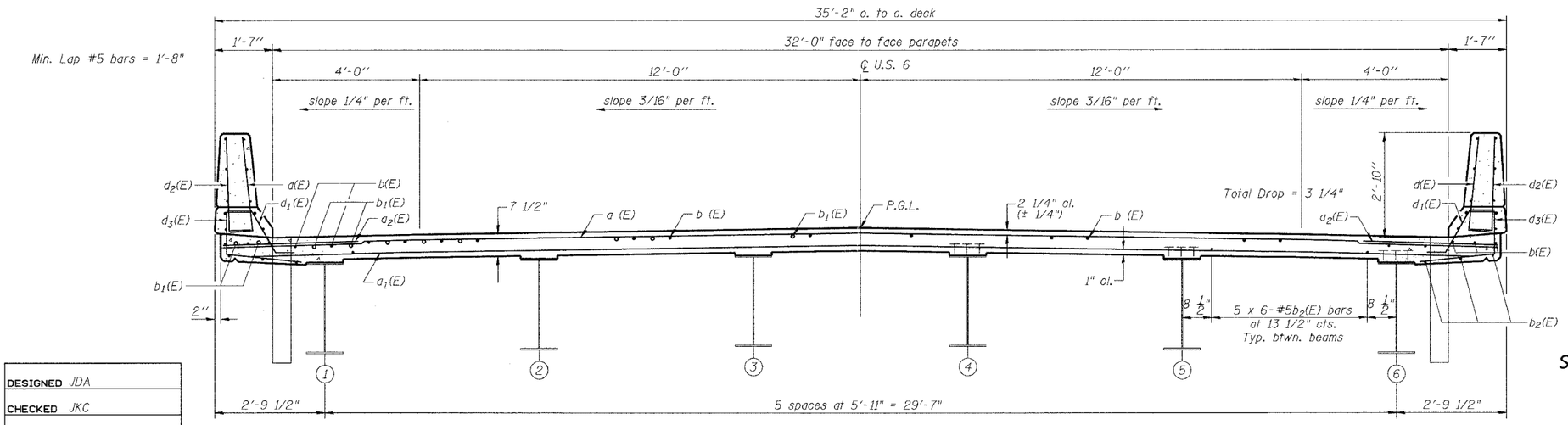
Contract #64938



* Order a(E) and a_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

HALF PLAN

Notes:
See Sheet 5 of 19 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 5 of 19 for parapet reinforcement.



NEAR PIER — NEAR MIDSPAN

CROSS SECTION
(Looking East)

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

SI-2-L 10-22-04

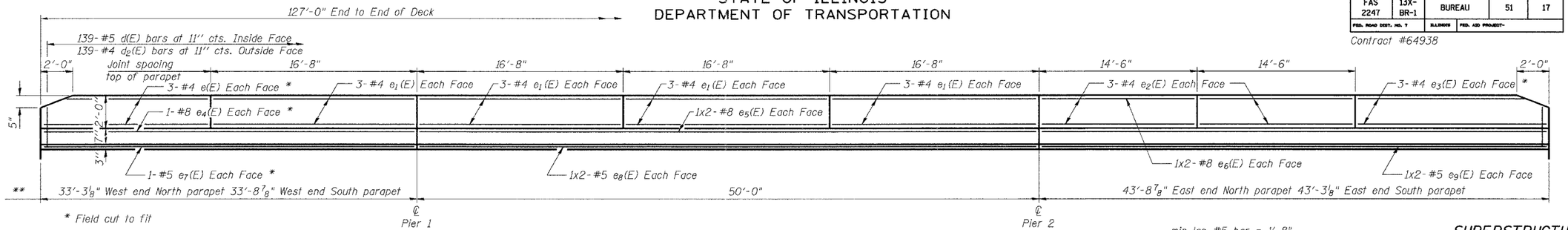
SUPERSTRUCTURE PLAN AND SECTION
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
19 SHEETS

Contract #64938

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



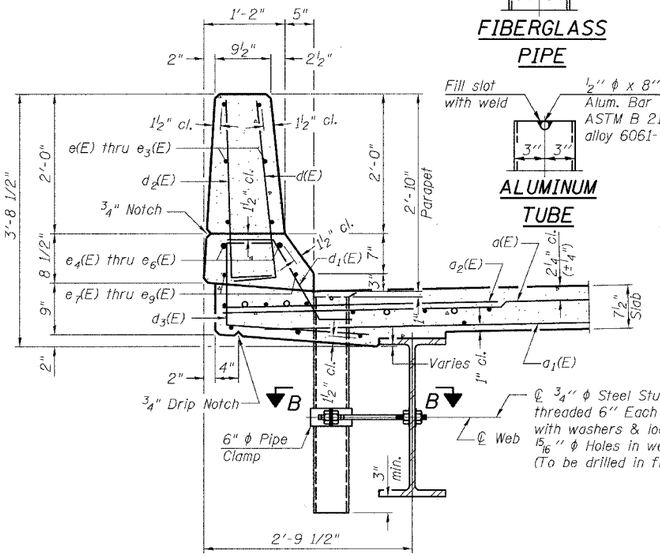
* Field cut to fit

** Aluminum sheeted joint spacing in base of parapet

min lap #5 bar = 1'-8"
min lap #8 bar = 3'-8"

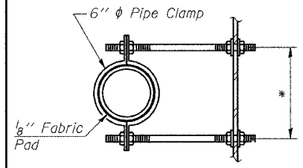
INSIDE ELEVATION OF NORTH PARAPET

(SOUTH PARAPET MIRROR IMAGE AS NOTED)

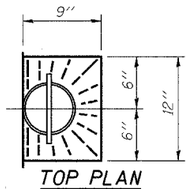


SECTION THRU PARAPET

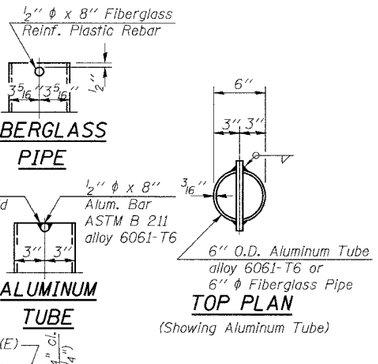
* Dimension as required by Pipe Clamp

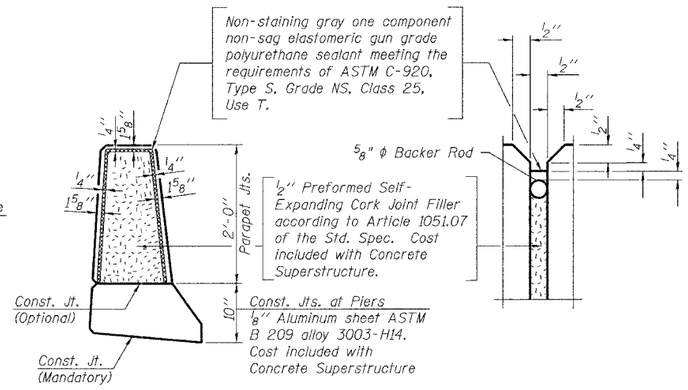


SECTION B-B



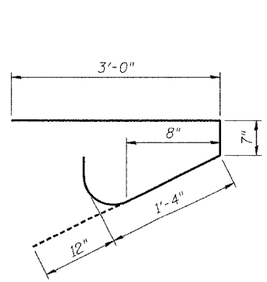
TOP PLAN



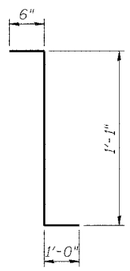


PARAPET JOINT DETAILS

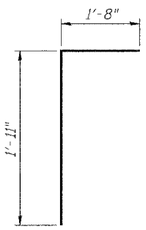
Notes:
Floor Drains need not be painted.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.



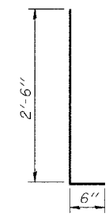
BAR s (E)



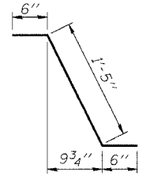
BAR d4(E)



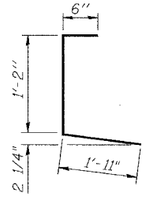
BAR v(E)



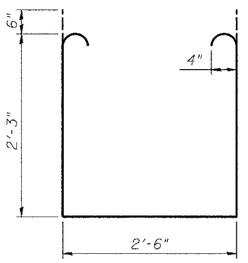
BARS d(E) & d2(E)



BAR d1(E)



BAR d3(E)



BAR s1(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	204	#5	34'-7"	
a_1(E)	153	#5	32'-7"	
a_2(E)	204	#6	4'-6"	
a_3(E)	4	#5	39'-11"	
b(E)	190	#5	26'-9"	
b_1(E)	70	#6	26'-10"	
b_2(E)	186	#5	22'-7"	
d(E)	278	#5	3'-0"	
d_1(E)	266	#5	2'-5"	
d_2(E)	278	#4	3'-0"	
d_3(E)	278	#4	3'-7"	
d_4(E)	12	#5	2'-7"	
e(E)	12	#4	16'-8"	
e_1(E)	48	#4	16'-5"	
e_2(E)	24	#4	14'-3"	
e_3(E)	12	#4	14'-5"	
e_4(E)	4	#8	33'-6"	
e_5(E)	8	#8	26'-9"	
e_6(E)	8	#8	25'-6"	
e_7(E)	4	#5	33'-6"	
e_8(E)	8	#5	25'-9"	
e_9(E)	8	#5	22'-7"	
m(E)	4	#6	38'-7"	
m_1(E)	6	#6	40'-4"	
m_2(E)	24	#6	9'-0"	
m_3(E)	10	#6	6'-7"	
m_4(E)	4	#6	2'-11"	
s(E)	62	#5	5'-11"	
s_1(E)	62	#4	8'-0"	
v(E)	64	#5	3'-7"	
Reinforcement Bars, Epoxy Coated			Pound	34410
Concrete Superstructure			Cu. Yds.	159.3
Bar Splicers			Each	64

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2- #5 etc. indicates 1 line of bars with 2 lengths per line.

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

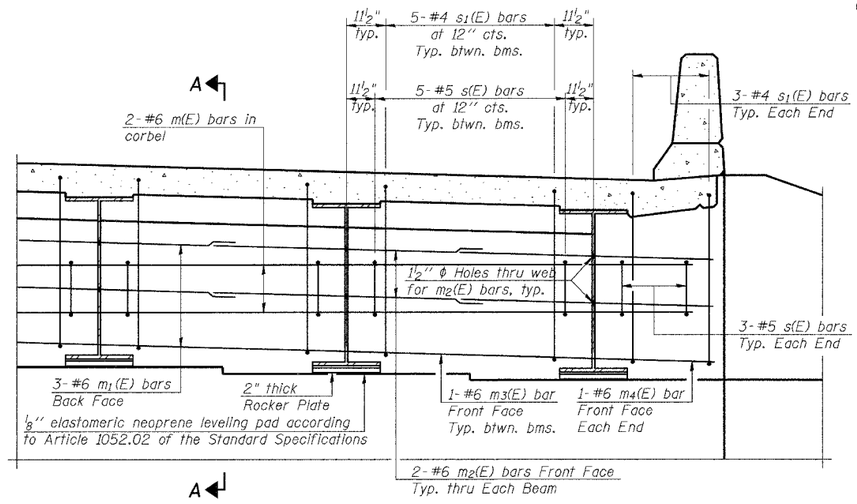
S-1-D 10-22-04

SUPERSTRUCTURE DETAILS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	18	SHEET NO. 6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			19 SHEETS

Contract #64938

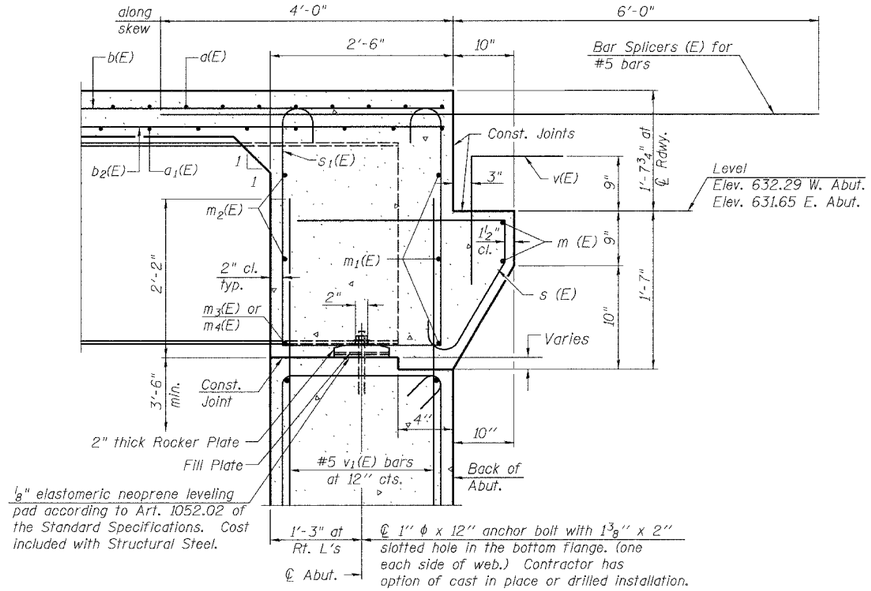


DIAPHRAGM ELEVATION AT ABUTMENT

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 5 of 19.
Concrete in diaphragm is included with Concrete Superstructure on sheet 5 of 19.
For details of bars s(E) & s_1(E) see sheet 5 of 19.
The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
For anchor bolt details see sheet 13 of 19.

MIN. BAR LAP

#6 bar = 2'-9"



SECTION A-A

Dimensions at right angles to abutment, except as shown.

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

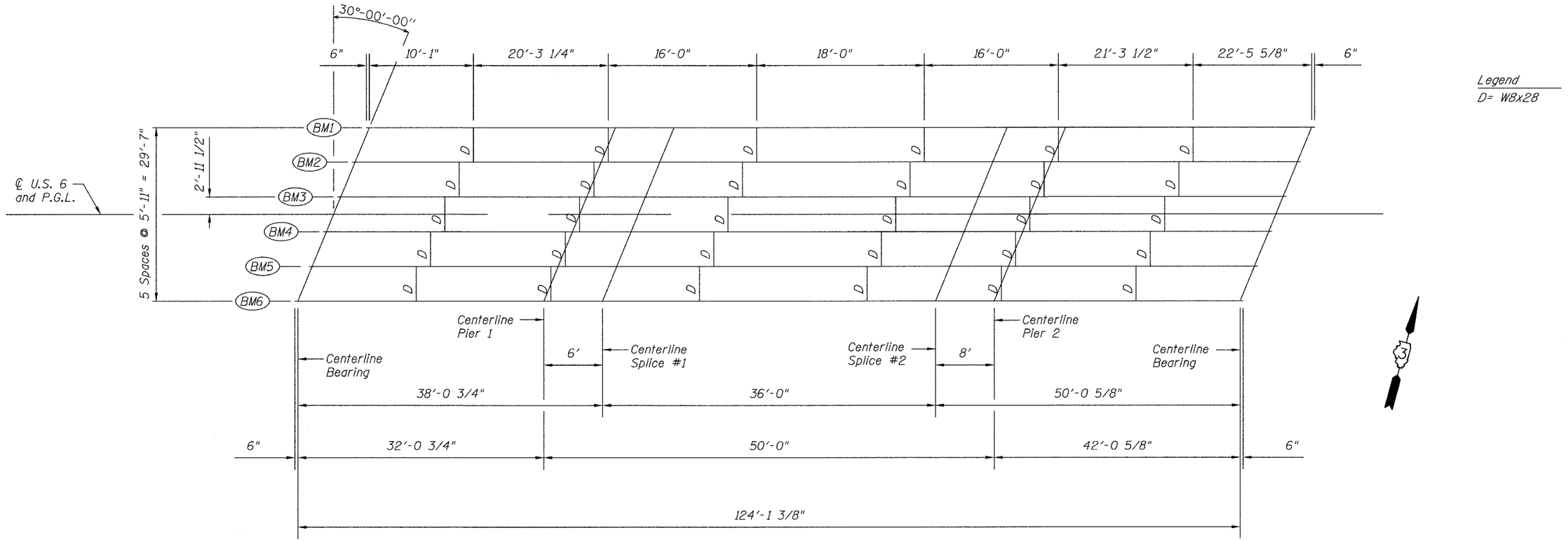
SI-DS1 10-22-04

SUPERSTRUCTURE DETAILS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAP 2247	13X-BR-1	BUREAU	51	19	SHEET NO. 7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			19 SHEETS

Contract #64938



Legend
D= W8x28

FRAMING PLAN

INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
Is	(in^4)	1830	1830	1830	1830	1830
Ic (n)	(in^4)	6214	-	6214	-	6214
Ic (3n)	(in^4)	4716	-	4716	-	4716
Ss	(in^3)	154	154	154	154	154
Sc (n)	(in^3)	253	-	253	-	253
Sc (3n)	(in^3)	229	-	229	-	229
Z	(in^3)	-	-	-	-	-
D_ℓ	(k/')	0.64	1.06	0.64	1.06	0.64
M_ℓ	('k)	34.8	167.8	73.1	215.8	78.4
s_ℓ	(k/')	0.42	-	0.42	-	0.42
Ms_ℓ	('k)	28.4	-	65.2	-	59.4
M_4	('k)	145.2	102.8	241.6	112.7	228.2
M (Imp)	('k)	43.5	30.9	70.0	32.7	63.9
$5/3[M_4+M(Imp)]$	('k)	314.5	222.8	519.3	242.3	486.8
Ma	('k)	491.0	507.8	854.9	595.6	812.0
Mu	('k)	1366	-	1366	-	1366
fs_ℓ (non-comp)	(ksi)	2.71	13.08	5.70	16.82	6.11
fs_ℓ (comp)	(ksi)	1.49	-	3.42	-	3.11
$fs\,5/3(M_4+Imp)$	(ksi)	14.92	17.36	24.63	18.88	23.09
fs (Overload)	(ksi)	19.12	30.44	33.75	35.70	32.31
fs (Total)	(ksi)	-	39.57	-	46.41	-
VR	(k)	43.0	-	49.0	-	46.0

INTERIOR GIRDER REACTION TABLE					
		W. Abut.	Pier 1	Pier 2	E. Abut.
R_ℓ	(k)	11.7	47.6	54.7	17.1
R_4	(k)	30.3	37.9	38.7	33.1
Imp.	(k)	9.1	11.4	11.3	9.9
R (Total)	(k)	51.1	96.9	104.7	60.1

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic (n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic (3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[$M_\ell + Ms_\ell + 5/3(M_4 + M(Imp))$].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to $M_\ell + Ms_\ell + 5/3(M_4 + M(Imp))$.

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[$M_\ell + Ms_\ell + 5/3(M_4 + M(Imp))$].

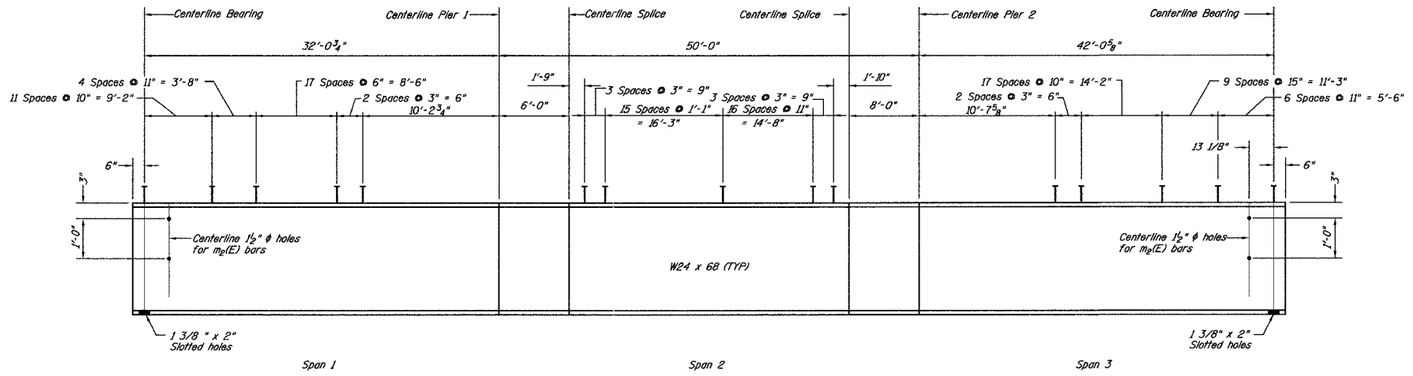
Note:
All beams and splice plates shall be NTR (notch toughness-zone 2) and M270 Grade 50W.

FRAMING PLAN
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

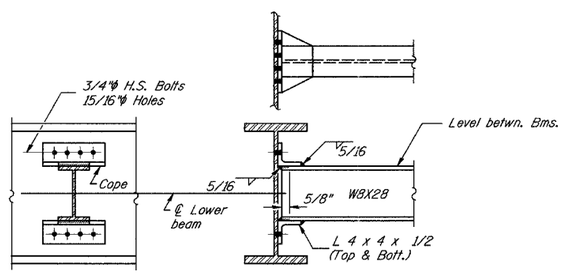
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
FAS 2247	13X-BR-1	BUREAU	51	20	19 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64938



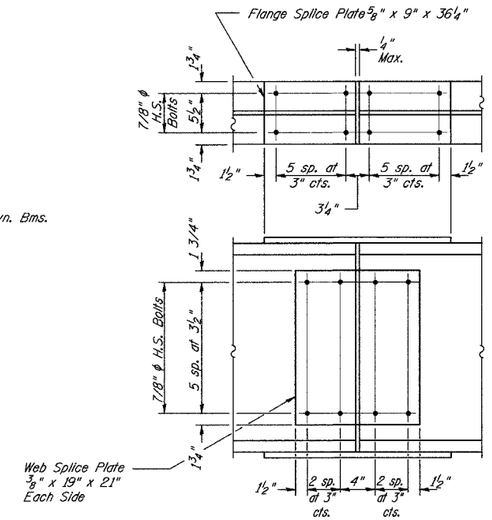
BEAM ELEVATION SHOWING STUDS
(324 Studs Req'd / Beam)

TOP OF BEAM ELEVATION (FOR FABRICATION ONLY)						
Beam	Centerline Brg. W. Abut.	Centerline Pier 1	Centerline Splice 1	Centerline Splice 2	Centerline Pier 2	Centerline Brg. E. Abut.
1	632.96	632.76	632.72	632.54	632.51	632.33
2	633.08	632.88	632.85	632.67	632.63	632.46
3	633.19	632.99	632.96	632.78	632.74	632.57
4	633.21	633.01	632.97	632.79	632.76	632.59
5	633.13	632.93	632.90	632.72	632.68	632.51
6	633.04	632.84	632.81	632.63	632.59	632.42

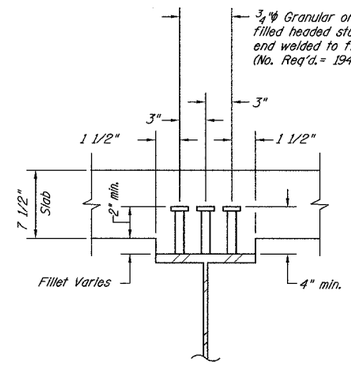


DIAPHRAGM D
30 Required

Note: Two hardened washers shall be required over all oversize holes for diaphragms.



SPLICE
(12 Required)



SHEAR CONNECTOR DETAIL

Note:
All beams and splice plates shall be NTR (notch toughness - zone 2) and M270 Grade 50W.

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

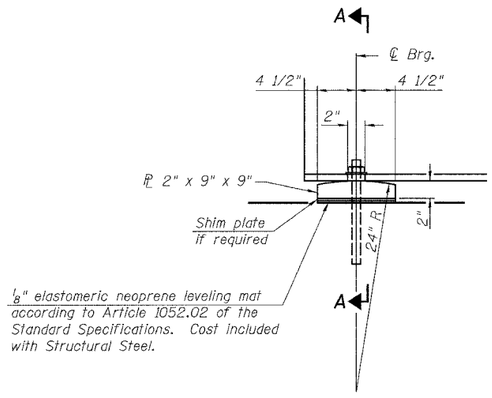
FRAMING DETAILS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

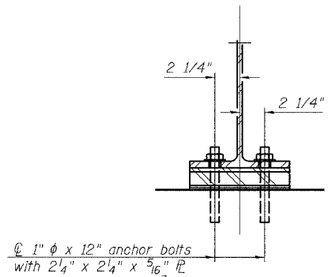
SHEET NO. 9
19 SHEETS

Contract #64938



1/8" elastomeric neoprene leveling mat according to Article 1052.02 of the Standard Specifications. Cost included with Structural Steel.

ELEVATION AT ABUTMENT

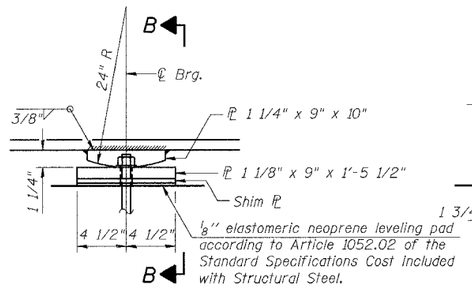


℄ 1" ϕ x 12" anchor bolts with 2 1/4" x 2 1/4" x 5/16" ℄ washer under nut. 1 3/8" x 2" slotted hole in flange. 1 1/2" ϕ holes in bearing plate.

SECTION A-A

FIXED BEARING AT ABUTMENT
(12 REQUIRED)

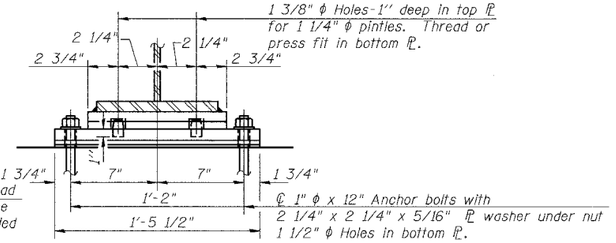
Notes:
Anchor bolts at fixed bearings may be built into the masonry.
See sheet 13 of 19 for Anchor Bolt installation.



1/8" elastomeric neoprene leveling pad according to Article 1052.02 of the Standard Specifications Cost included with Structural Steel.

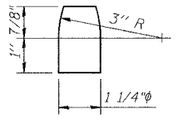
ELEVATION AT PIER

FIXED BEARING AT PIER
(12 REQUIRED)



℄ 1" ϕ x 12" Anchor bolts with 2 1/4" x 2 1/4" x 5/16" ℄ washer under nut 1 1/2" ϕ Holes in bottom ℄.

SECTION B-B



PINTLE

SHIM TABLE

Beam	1	2	3	4	5	6
W. Abut.	-	-	-	1 @ 1/4"	-	-
Pier 1	-	-	-	1 @ 1/4"	-	-
Pier 2	-	-	-	1 @ 1/4"	-	-
E. Abut.	-	-	-	1 @ 1/4"	-	-

Shims at Abutments 9" x 9"
Shims at Piers 9" x 1'-5 1/2"

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

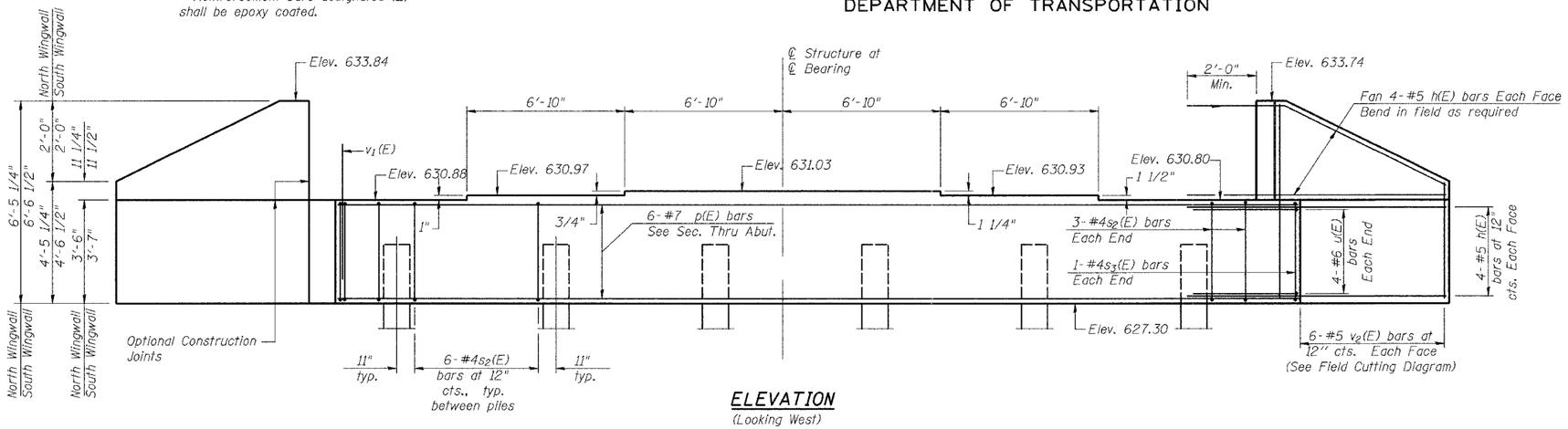
BEARING DETAILS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	22	SHEET NO. 10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			19 SHEETS

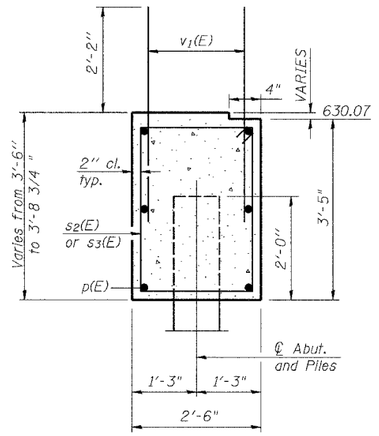
Contract #64938

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes: Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.



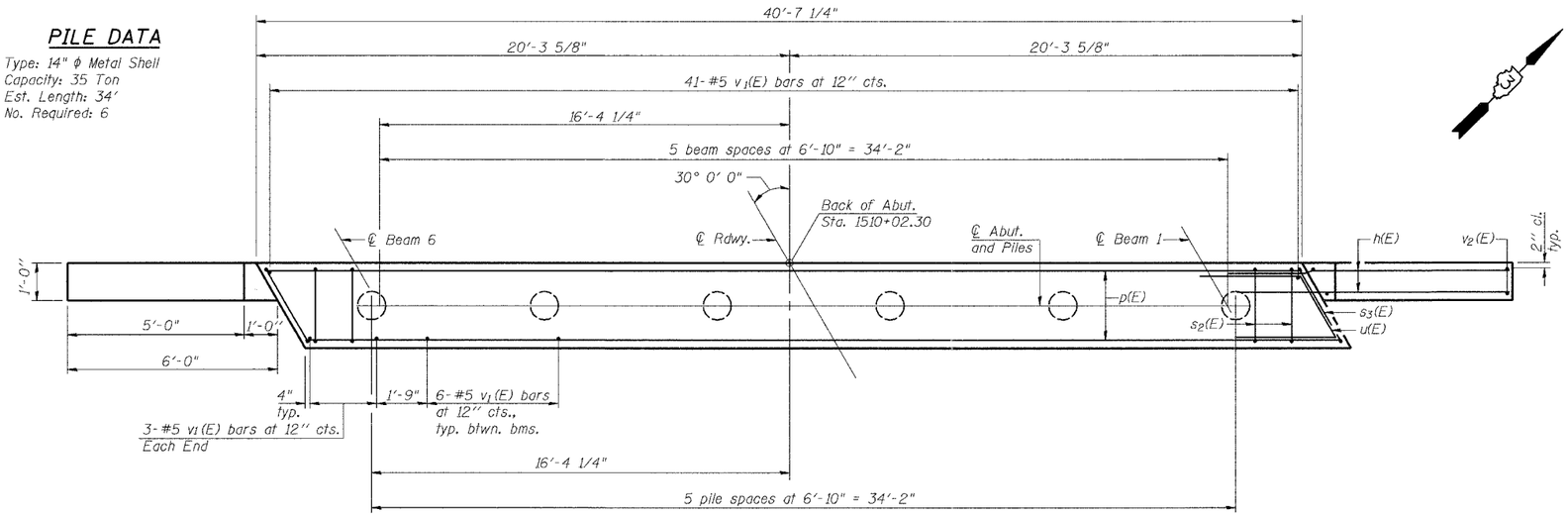
ELEVATION
(Looking West)



SEC. THRU ABUT.

PILE DATA

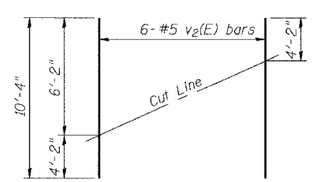
Type: 14" ϕ Metal Shell
Capacity: 35 Ton
Est. Length: 34'
No. Required: 6



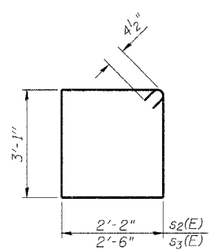
PLAN

BILL OF MATERIAL

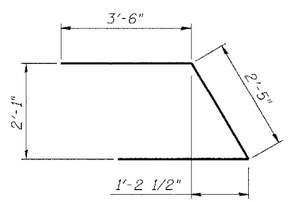
Bar	No.	Size	Length	Shape
h(E)	32	#5	8'-4"	
p(E)	6	#7	40'-4"	
s2(E)	36	#4	11'-3"	
s3(E)	2	#4	11'-11"	
u(E)	8	#6	9'-5"	
v1(E)	77	#5	4'-4"	
v2(E)	12	#5	10'-4"	
Concrete Structures		Cu. Yd.	15.5	
Reinforcement Bars, Epoxy Coated		Pound	1650	
Structure Excavation		Cu. Yd.	3	
Furnishing Metal Pile Shells 14 Inch		Foot	204	
Driving and Filling Shells		Foot	204	



FIELD CUTTING DIAGRAM
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)

DESIGNED	JDA
CHECKED	JKC
DRAWN	KKP
CHECKED	JDA

AI-L 10-22-04

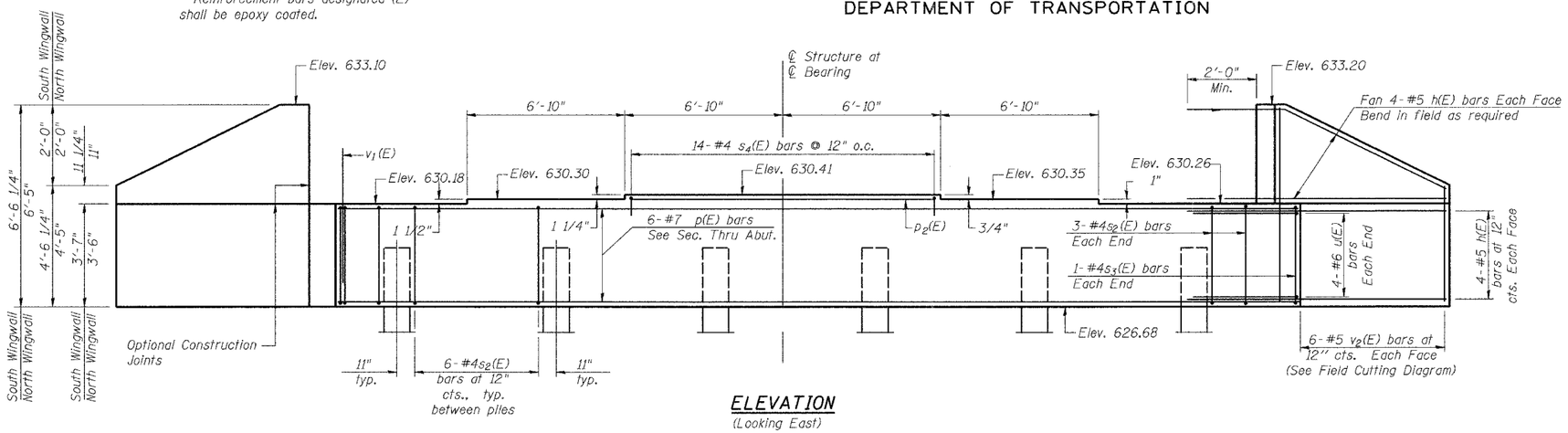
WEST ABUTMENT
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

Notes: Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.

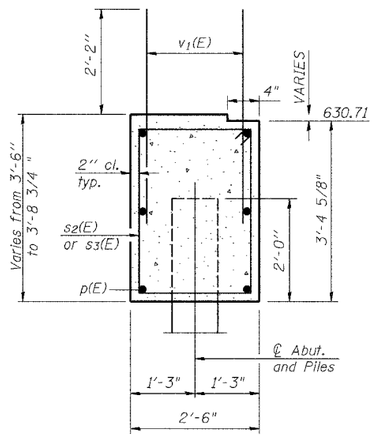
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	23	SHEET NO. 11
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		19 SHEETS

Contract #64938



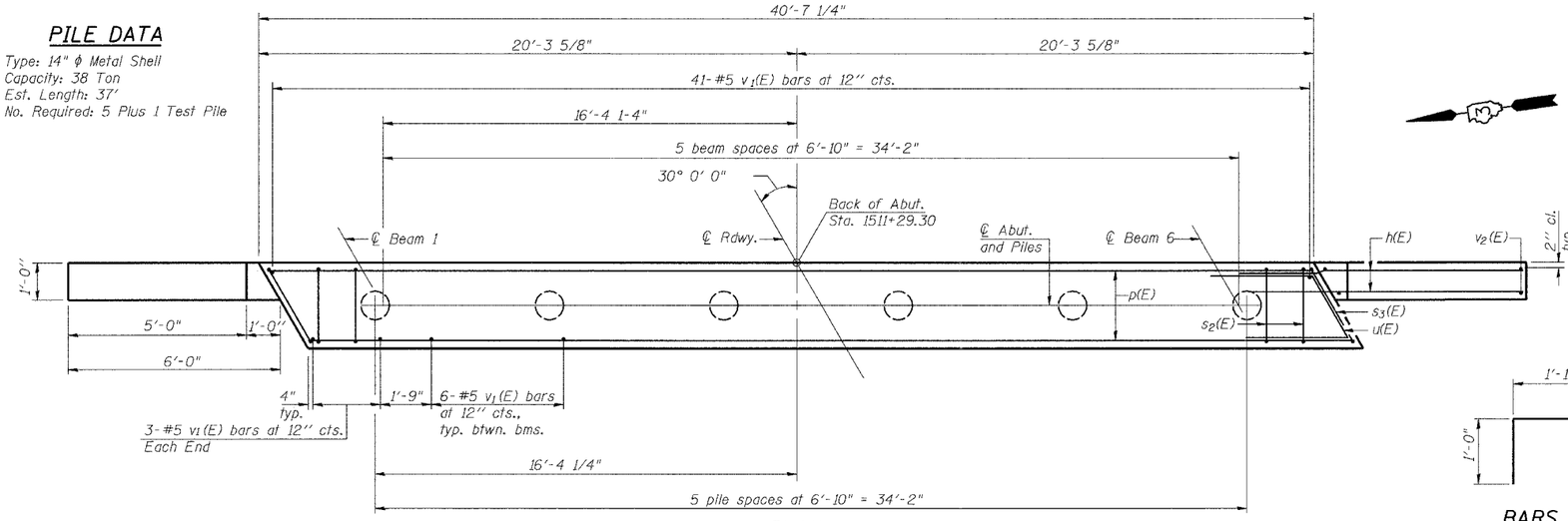
ELEVATION
(Looking East)



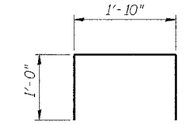
SEC. THRU ABUT.

PILE DATA

Type: 14" ϕ Metal Shell
Capacity: 38 Ton
Est. Length: 37'
No. Required: 5 Plus 1 Test Pile



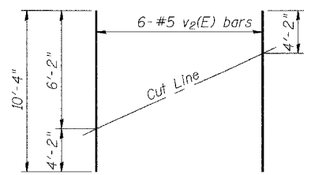
PLAN



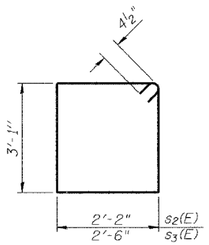
BARS s4(E)

BILL OF MATERIAL

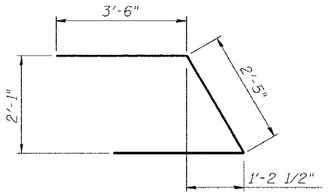
Bar	No.	Size	Length	Shape
h(E)	32	#5	8'-4"	
p(E)	6	#7	40'-4"	
p2(E)	2	#7	13'-4"	
s2(E)	36	#4	11'-3"	
s3(E)	2	#4	11'-11"	
s4(E)	14	#4	3'-10"	
u(E)	8	#6	9'-5"	
v1(E)	77	#5	4'-4"	
v2(E)	12	#5	10'-4"	
Concrete Structures		Cu. Yd.	15.5	
Reinforcement Bars, Epoxy Coated		Pound	1740	
Structure Excavation		Cu. Yd.	8	
Furnishing Metal Pile Shells 14 Inch		Foot	185	
Driving and Filling Shells		Foot	185	
Test Pile Metal Shells		Each	1	



FIELD CUTTING DIAGRAM
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)

DESIGNED	JDA
CHECKED	JKC
DRAWN	KKP
CHECKED	JDA

AI-L 10-22-04

EAST ABUTMENT
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.

PILE DATA

Pier #1

Type: 14"ϕ Metal Shell
Design Capacity: 37 Tons
Est. Length: 40'
No. Req'd: 6

PILE DATA

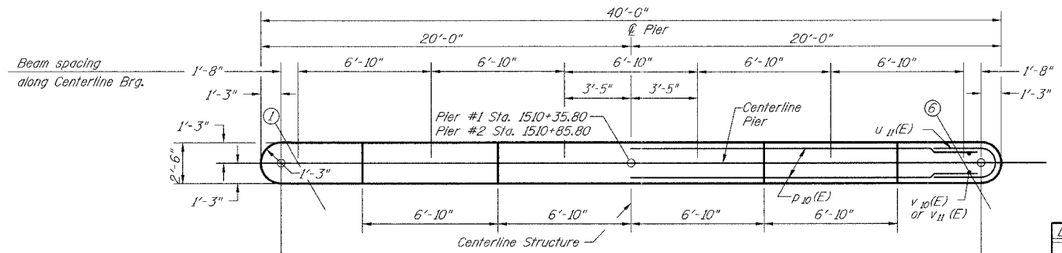
Pier #2

Type: 14"ϕ Metal Shell
Design Capacity: 40 Tons
Est. Length: 42'
No. Req'd: 5 Plus 1 Test Pile

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

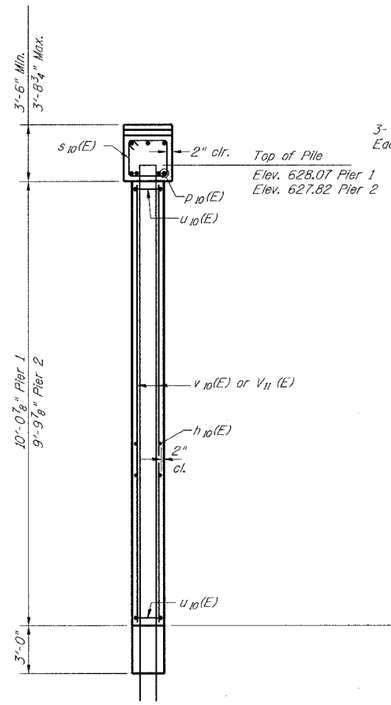
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	24	SHEET NO. 12
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		19 SHEETS

Contract #64938

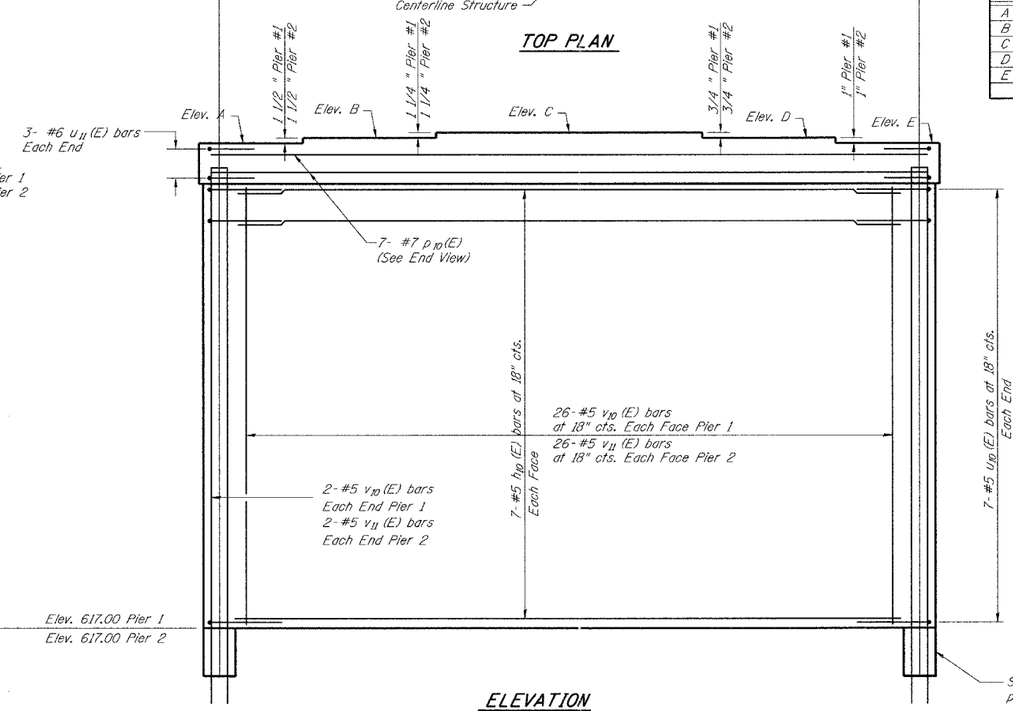


TOP PLAN

Loc.	Pier 1	Pier 2
A	630.57	630.32
B	630.69	630.44
C	630.80	630.55
D	630.74	630.49
E	630.65	630.40

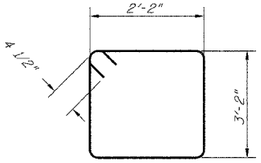


END VIEW



ELEVATION

(LOOKING EAST)



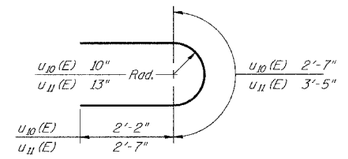
BAR s10(E)

BILL OF MATERIAL - 2 PIERS

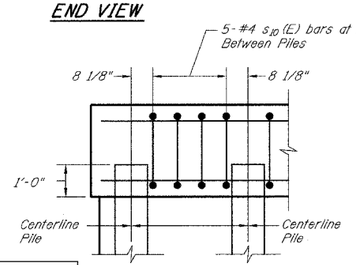
Bar	No.	Size	Length	Shape
h 10(E)	28	#5	37'-6"	——
p 10(E)	14	#7	37'-6"	——
s 10(E)	70	#4	11'-5"	□
u 10(E)	28	#5	6'-11"	⌓
u 11(E)	12	#6	8'-7"	⌓
v 10(E)	56	#5	9'-9"	——
v 11(E)	56	#5	9'-6"	——
Concrete Structures		Cu Yd	77.2	
Reinforcement Bars, Epoxy Coated		Pound	4180	
Test Pile Metal Shells		Each	1	
Furnishing Metal Pile Shells 14 Inch		Foot	450	
Driving and Filling Shells		Foot	450	
Structure Excavation		Cu Yd	20	*

* 10 Cu Yd Pier 1
10 Cu Yd Pier 2

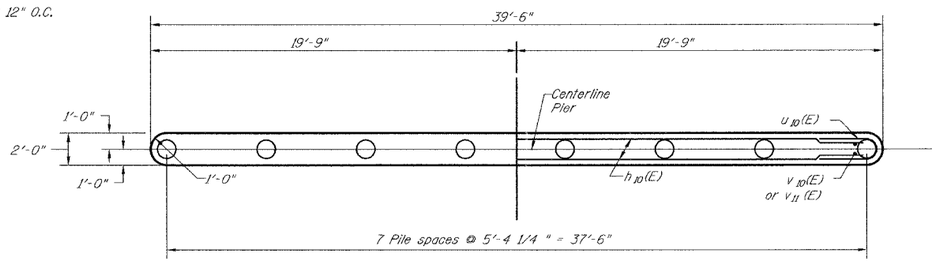
Reinforcement Bars designated (E) shall be epoxy coated.



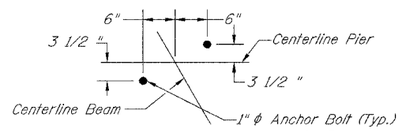
BARS u10(E) and u11(E)



PARTIAL ELEVATION



SECTION



TYPICAL ANCHOR BOLT LAYOUT

DESIGNED	JDA
CHECKED	GRE
DRAWN	KKP
CHECKED	JDA

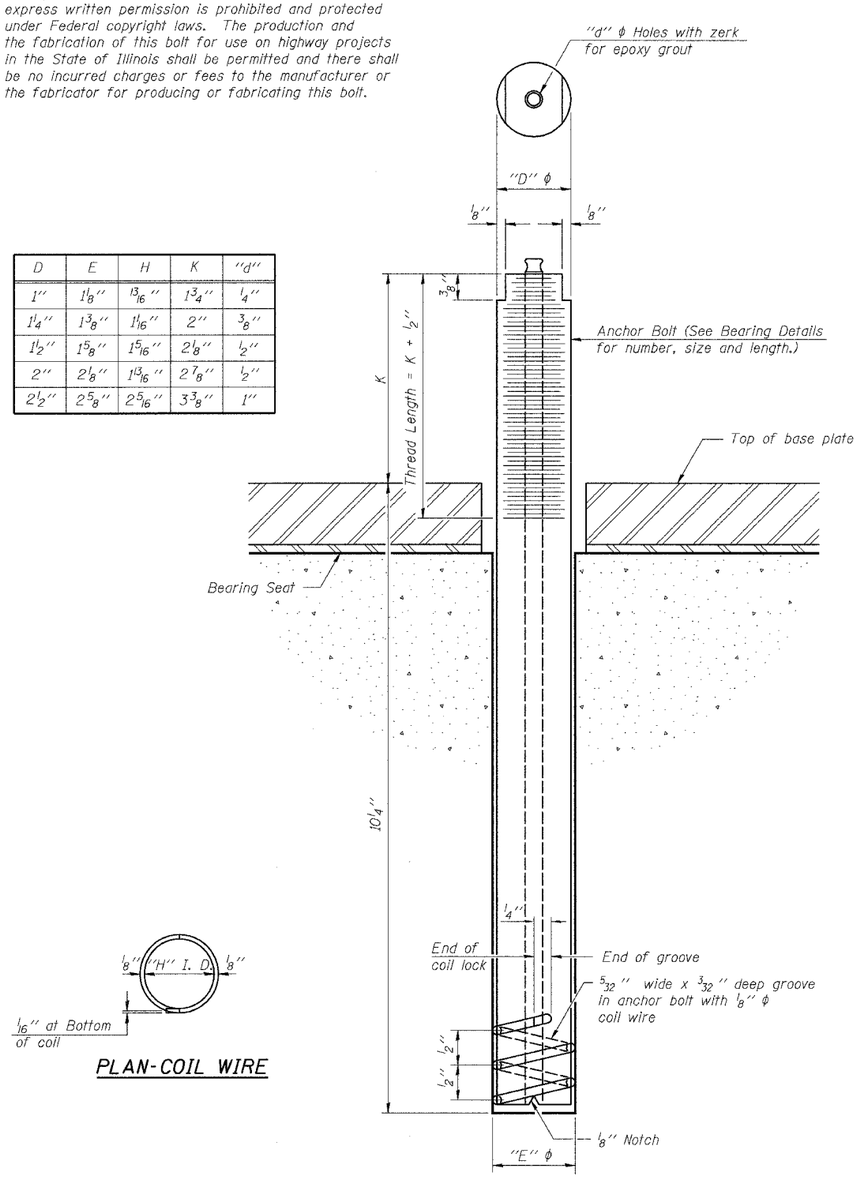
PIER #1 & #2
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	25	SHEET NO. 13
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		19 SHEETS

Contract #64938

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$\frac{13}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{4}$"	$1\frac{3}{8}$"	$1\frac{1}{16}$"	2"	$\frac{3}{8}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
2"	$2\frac{1}{8}$"	$1\frac{13}{16}$"	$2\frac{7}{8}$"	$\frac{1}{2}$"
$2\frac{1}{2}$"	$2\frac{5}{8}$"	$2\frac{5}{16}$"	$3\frac{3}{8}$"	1"



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
ABUTS	A307
PIERS	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

DESIGNED	--
CHECKED	--
DRAWN	KKP
CHECKED	JDA

ABB-1 10-22-04

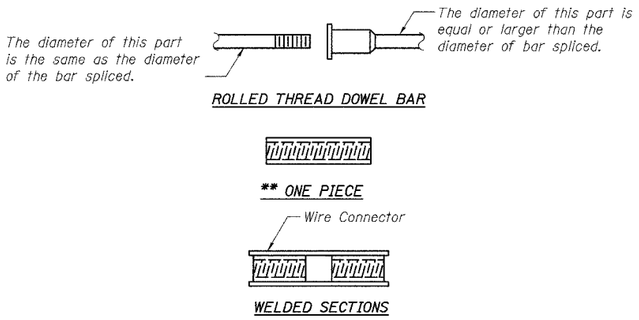
ANCHOR BOLT DETAILS FOR BEARINGS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

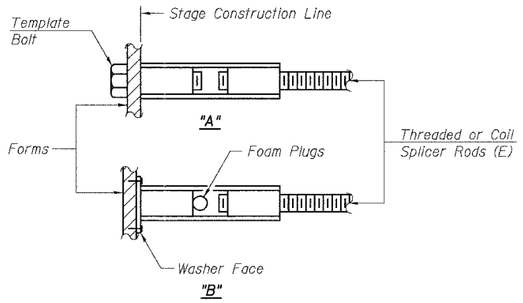
SHEET NO. 14
19 SHEETS

Contract #64938



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

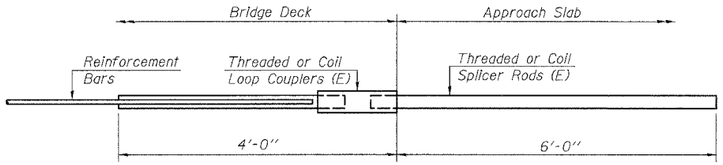
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

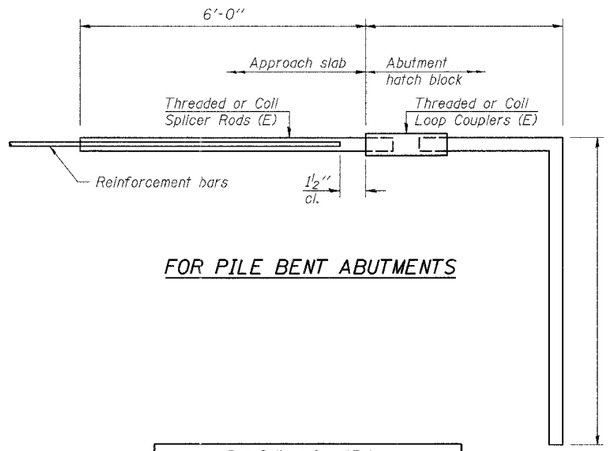
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



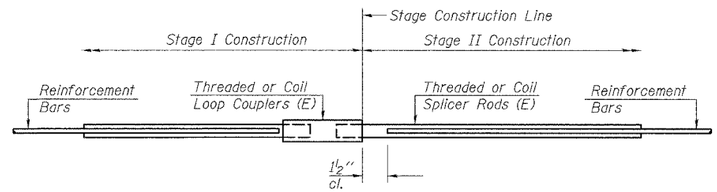
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 64



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location

DESIGNED	--
CHECKED	--
DRAWN	KKP
CHECKED	JDA

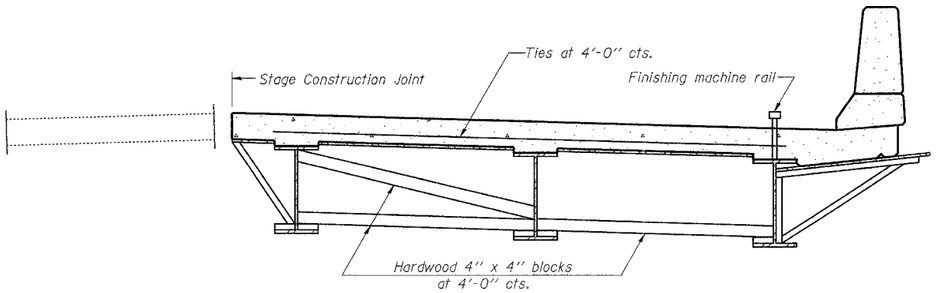
BSD-1 10-22-04

BAR SPLICER ASSEMBLY DETAILS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

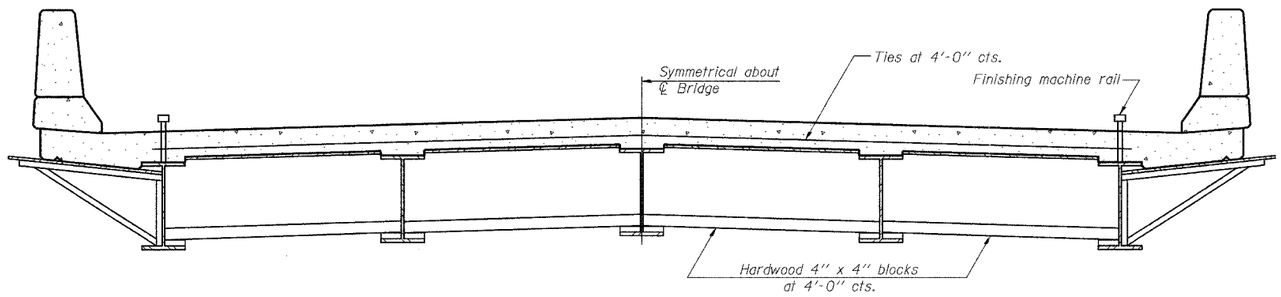
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	27	SHEET NO. 15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			19 SHEETS

Contract #64938



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STANDARD CONSTRUCTION

When cantilever forming brackets are used, the work shall be done according to Article 503.06, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.

DESIGNED	--
CHECKED	--
DRAWN	NQ
CHECKED	JDA

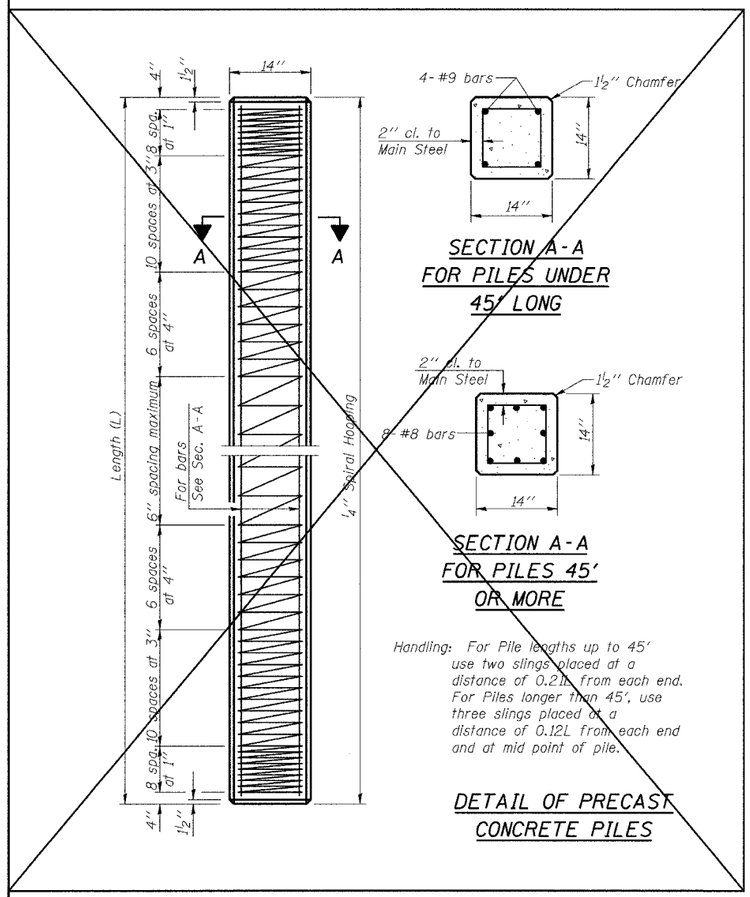
SB-1 10-22-04

CANTILEVER FORMING BRACKETS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAS 2247	13X-BR-1	BUREAU	51	28	SHEET NO. 16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			19 SHEETS

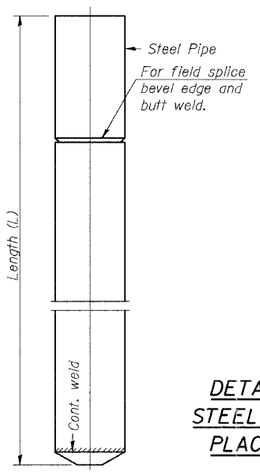
Contract #64938



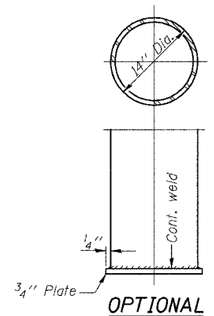
Handling: For Pile lengths up to 45' use two slings placed at a distance of 0.21L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12L from each end and at mid point of pile.

DETAIL OF PRECAST CONCRETE PILES

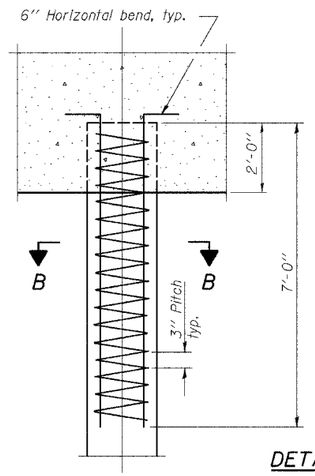
Notes:
Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.250 inches with a tolerance of 5 % .
The shell shall be according to Article 1006.05(a) of the Standard Specifications.



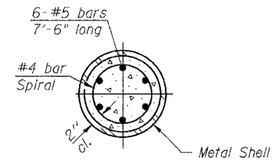
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



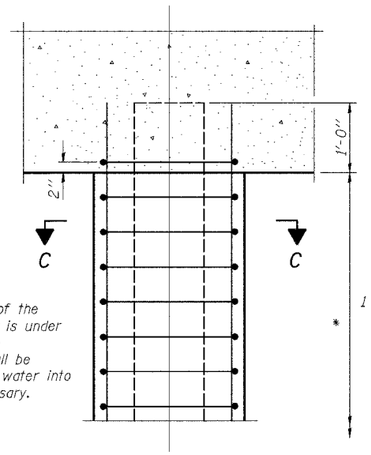
OPTIONAL FLAT END



DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS

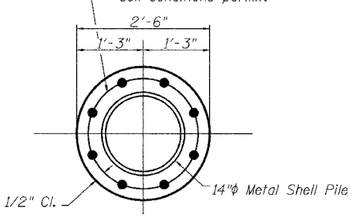


SECTION B-B



* If a portion of the pile encasement is under water, Concrete Encasement shall be tremmied under water into forms as necessary.

Welded wire fabric 6 x 6-W4.0 x W4.0 with a weight of 58#/100 sq. ft.
The cost of Excavation, Class SI Concrete Encasement and Reinforcement is included in the cost of furnishing piles.
Forms for encasement may be omitted when soil conditions permit.



SECTION C-C

DETAIL OF PROTECTION FOR METAL SHELLS AT PIERS

DESIGNED	--
CHECKED	--
DRAWN	KKP
CHECKED	JDA

X-PB 10-22-04

CONCRETE PILE DETAILS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
19 SHEETS

Contract #64938

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 2

Date 2/26/04

ROUTE FAS 2247 DESCRIPTION P92-089-03 US 6 Bridge over Brush Creek, .1 m. W. of DePue Spur LOGGED BY W. Garza

SECTION 13X - BR-1 LOCATION Selby Twp. - 15 SE, 22NE, SEC. , TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 006-0169
Station 1510+61

BORING NO. B-1
Station 1509+74
Offset 10.00ft Rt of CL
Ground Surface Elev. 631.5 ft

Surface Water Elev. 620.7 ft
Stream Bed Elev. 619.7 ft

Groundwater Elev.:
First Encounter 618.5 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
12" Asphalt				MEDIUM gray SAND & GRAVEL	9		
MEDIUM tan SAND			7		7		
				610.00	12		
629.00							
MEDIUM tan SAND & GRAVEL	5			Wash	9		
	8				8		
	12			MEDIUM gray SAND & GRAVEL	8		
627.00				607.50			
-5				-25			
VERY STIFF dark gray SILTY CLAY LOAM	2			Wash	8		
	4	3.0	21	MEDIUM gray clean medium coarse GRAVEL	9		
	5	P			11		
625.00				604.50			
MEDIUM dark gray SILTY CLAY LOAM	2			VERY STIFF gray CLAY TILL	3		
	2	0.8	20		4	2.9	22
	3	P			8	B	
622.00				602.50			
-10				-30			
MEDIUM tan SAND & GRAVEL	8			VERY STIFF gray CLAY TILL	3		
	6				6	3.3	21
	7				9	B	
620.00				600.00			
LOOSE gray medium SAND ▼	5			STIFF gray CLAY TILL	4		
	4				5	1.7	26
	5				6	B	
617.50				597.50			
-15				-35			
MEDIUM gray SAND & GRAVEL	6			STIFF gray CLAY TILL with SILT lens	2		
	6				3	1.7	25
	7				5	B	
615.00				595.00			
MEDIUM gray SAND & GRAVEL	8			VERY STIFF gray SILT with SAND	6		
	6				9	2.3	9
	7				9	S	
612.50				592.00			
-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 2

Date 2/26/04

ROUTE FAS 2247 DESCRIPTION P92-089-03 US 6 Bridge over Brush Creek, .1 m. W. of DePue Spur LOGGED BY W. Garza

SECTION 13X - BR-1 LOCATION Selby Twp. - 15 SE, 22NE, SEC. , TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 006-0169
Station 1510+61

BORING NO. B-1
Station 1509+74
Offset 10.00ft Rt of CL
Ground Surface Elev. 631.5 ft

Surface Water Elev. 620.7 ft
Stream Bed Elev. 619.7 ft

Groundwater Elev.:
First Encounter 618.5 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM gray dirty SAND & GRAVEL	6		
	11		
590.00	17		
VERY DENSE gray well-cemented SAND with CLAY TILL lens	5		
	11		
	50		
587.00			
-45			
VERY STIFF gray CLAY TILL with GRAVEL	8		
	9	2.5	9
585.00	14	B	
VERY DENSE gray hard CLAY TILL	20		
	27		
582.50	37		
-50			
VERY DENSE gray hard CLAY TILL	26		
	100/11"		
580.00	PEN		
VERY DENSE gray hard CLAY TILL	63		
	45		
577.50	55		
End of Boring			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SOIL BORINGS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
19 SHEETS

Contract #64938

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 2

Date 2/27/04

ROUTE FAS 2247 DESCRIPTION P92-089-03 US 6 Bridge over Brush Creek, .1 m. W. of DePue Spur LOGGED BY W. Garza

SECTION 13X - BR-1 LOCATION Selby Twp. - 15 SE, 22 NE, SEC. , TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 006-0169 (Prop)
Station 1510+61

BORING NO. B-2
Station 1510+36
Offset 27.00ft Lt of CL
Ground Surface Elev. 626.9 ft

Surface Water Elev. 620.7 ft
Stream Bed Elev. 619.7 ft

Groundwater Elev.:
First Encounter 618.9 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
		0.6 P	17	MEDIUM brown SILTY CLAY LOAM
624.40				
	4 4 4	2.5 B	23	VERY STIFF brown SILTY CLAY LOAM
622.90				
-5				
	3 3 2	0.4 B	32	SOFT brown SILTY LOAM
619.90				
	4 4 4			LOOSE gray SAND & GRAVEL
617.90				
-10				
	4 5 6			MEDIUM gray SAND & GRAVEL
615.40				
	5 7 8			MEDIUM gray clean medium coarse GRAVEL
612.90				
-15				
	6 7 8			MEDIUM, Same as above
610.40				
	9 6 7			Wash MEDIUM gray clean medium coarse GRAVEL
607.90				
-20				
	9 6 6			MEDIUM gray clean medium coarse GRAVEL
604.90				
	3 4 8	1.9 B	20	Wash STIFF gray CLAY TILL with SILT lens
602.90				
-25				
	6 9 10	1.1 P	20	STIFF gray CLAY TILL
600.40				
	5 5 8	2.1 B	17	VERY STIFF gray CLAY TILL
597.90				
-30				
	7 9 14	4.1 B	18	HARD gray CLAY TILL with SAND lens
594.90				
	15 10 15			MEDIUM gray clean medium coarse GRAVEL
592.40				
-35				
	6 7 15	3.9 B	13	Wash VERY STIFF gray CLAY TILL with SAND lens
590.40				
	10 15 30	4.7 S	8	HARD gray CLAY TILL with bottom 5" SAND
587.90				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 2

Date 2/27/04

ROUTE FAS 2247 DESCRIPTION P92-089-03 US 6 Bridge over Brush Creek, .1 m. W. of DePue Spur LOGGED BY W. Garza

SECTION 13X - BR-1 LOCATION Selby Twp. - 15 SE, 22 NE, SEC. , TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 006-0169 (Prop)
Station 1510+61

BORING NO. B-2
Station 1510+36
Offset 27.00ft Lt of CL
Ground Surface Elev. 626.9 ft

Surface Water Elev. 620.7 ft
Stream Bed Elev. 619.7 ft

Groundwater Elev.:
First Encounter 618.9 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	15 19 21	4.4 S	9	DENSE gray hard CLAY TILL
584.90				
	22 34 47			VERY DENSE gray fine SAND
582.40				
-45				
	7 18 20	8.7 S	9	HARD gray CLAY TILL with GRAVEL
580.40				
	36 100/10" PEN	3.7 S	8	top 8" VERY STIFF gray CLAY TILL with GRAVEL, bottom 8" VERY DENSE gray fine SAND
577.90				
				End of Boring
-50				
-55				
-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SOIL BORINGS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2247	13X-BR-1	BUREAU	51	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19
19 SHEETS

Contract #64938

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 2

Date 3/1/04

ROUTE FAS 2247 DESCRIPTION P92-089-03 US 6 Bridge over Brush Creek, .1 m. W. of DePue Spur LOGGED BY W. Garza

SECTION 13X - BR-1 LOCATION Selby Twp. - 15 SE, 22 NE, SEC. , TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 006-0169 (Prop)
Station 1510+61

BORING NO. B-3
Station 1511+63
Offset 9.00ft Lt of CL
Ground Surface Elev. 631.1 ft

Surface Water Elev. 620.7 ft
Stream Bed Elev. 619.7 ft

Groundwater Elev.:
First Encounter 618.1 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
			8	6" Asphalt, 11" Concrete brown SANDY LOAM
628.60				
	17 8 9	1.0 P	10	MEDIUM gray LOAM
627.10				
-5				
	3 3 3	0.8 P	26	MEDIUM dark gray SILTY LOAM
624.60				
	2 2 3	0.6 S	18	MEDIUM brown SANDY LOAM
621.60				
-10				
	3 5 6			MEDIUM gray dirty SAND & GRAVEL
619.60				
	1 4 3			LOOSE tan dirty SAND
617.10				
-15				
	1 4 3			LOOSE gray SAND
614.60				
	7 7 13			Wash MEDIUM gray SAND & GRAVEL
612.10				
-20				
	9 9 8			MEDIUM gray SAND & GRAVEL
609.60				
	7 7 7			MEDIUM gray medium clean coarse GRAVEL
607.10				
-25				
	7 8 9			Wash MEDIUM gray medium clean coarse GRAVEL
604.10				
	4 5 9	1.7 B	20	Wash STIFF gray CLAY TILL
602.10				
-30				
	1 3 4	1.7 B	21	STIFF gray CLAY TILL with SAND lens
599.60				
	1 3 4	1.6 B	22	STIFF gray CLAY TILL
597.10				
-35				
	2 5 7	1.7 B	21	STIFF gray CLAY TILL
594.60				
	8 11 21	7.2 B	16	Wash HARD gray CLAY TILL
591.60				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 2

Date 3/1/04

ROUTE FAS 2247 DESCRIPTION P92-089-03 US 6 Bridge over Brush Creek, .1 m. W. of DePue Spur LOGGED BY W. Garza

SECTION 13X - BR-1 LOCATION Selby Twp. - 15 SE, 22 NE, SEC. , TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 006-0169 (Prop)
Station 1510+61

BORING NO. B-3
Station 1511+63
Offset 9.00ft Lt of CL
Ground Surface Elev. 631.1 ft

Surface Water Elev. 620.7 ft
Stream Bed Elev. 619.7 ft

Groundwater Elev.:
First Encounter 618.1 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
	16 16 13			MEDIUM gray medium SAND
589.60				
	6 8 13			Wash MEDIUM gray medium clean SAND
587.10				
-45				
	10 18 25			Wash DENSE gray SAND, bottom 3" CLAY TILL
584.10				
	21 31 44	6.0 S	7	HARD gray CLAY TILL with GRAVEL
582.10				
-50				
	18 30 45	3.9 S	7	VERY STIFF gray CLAY TILL with GRAVEL
579.60				
	29 100/10" PEN			VERY DENSE gray CLAY TILL with GRAVEL
577.10				
-55				End of Boring
-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SOIL BORINGS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY
STA. 1510+65.80
SN 006-0169

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	32
STA.	TO STA.			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY 32 OF 51

EH-3

FEDERAL-AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
154	13X-BY	BUREAU	N	1
S. P. R. SEC. NO. 4	ILLINOIS	PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALES { PLAN 1 INCH 100 FT. | PROFILE, HOR. 1 INCH 100 FT. | PROFILE, VERT. 1 INCH 10 FT. | CROSS-SECTIONS 1 INCH 8 FT.

F.A. ROUTE 154 – SEC. 13 X – BY
BUREAU COUNTY

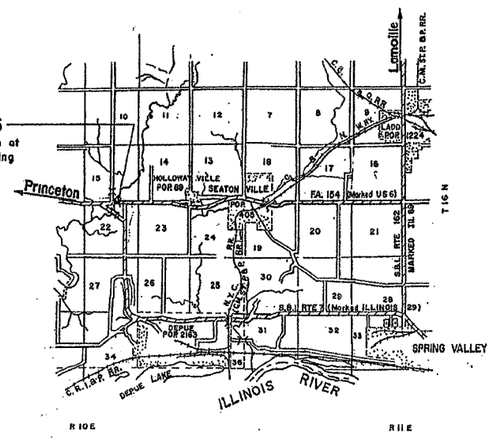
INDEX OF SHEETS

1. TITLE SHEET
   INDEX OF SHEETS
   SUMMARY OF QUANTITIES
2. PLAN AND PROFILE
3-7. BRIDGE PLANS
8. STD. 1913T GUTTER OUTLET
   STD. 1795T GUTTER OUTLET
9. STD. 1687S STEEL PLATE BEAM GUARD RAIL
   OUTLET HEADWALL FOR CORRUGATED METAL PIPE
10. STD. 2131-2 EXPANSION BOLTS
    STD. 1971S "ROAD UNDER CONSTRUCTION" SIGN
    STD. 1971R DESIGN FOR BARRICADE
    STD. 2114 FLAGMAN'S TRAFFIC CONTROL SIGN
11. STD. 2113 NAME PLATE

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM
4,790	SQ.FT.	PRECAST PRESTRESSED CONCRETE BRIDGE DECK
40192.1	CU.YDS.	CLASS X CONCRETE
1.6	CU.YDS.	HANDRAIL CONCRETE
4,680	LBS.	REINFORCEMENT BARS
267	LIN.FT.	FURNISHING AND ERECTING METAL HANDRAIL
480	LIN.FT.	FURNISHING PRECAST CONCRETE PILES
480	LIN.FT.	DRIVING PRECAST CONCRETE PILES
8	CU.YDS.	CONCRETE REMOVAL
188	EACH	EXPANSION BOLTS $\frac{3}{4}$"
1	EACH	NAME PLATES
700	LBS.	STRUCTURAL STEEL
50	GALS.	BITUMINOUS MATERIALS (PRIME COAT)
55	TONS	BITUMINOUS CONCRETE SURFACE COURSE, SUBCLASS I-11
100	LIN.FT.	STEEL PLATE BEAM GUARD RAIL

SECTION 13 X-BY INCLUDES
A Precast Prestressed R.C. Beam Bridge, 1 Span at 58'-3¾" & 2 Spans at 43'-5" on The Existing Extended Substructure at Sta. 19+58



LAYOUT
Scale 1" = 1 Mile
Net Length = 146.6 Ft. = 0.028 Mi.

LOCATION OF SECTION INDICATED THUS:—

ENTIRE SECTION INSPECTED AND APPROVED AS TO POLICY.
DATE October 13, 1959
DISTRICT ENGINEER. M. M. Saunders

ROAD CLASSIFICATION
200-M-60

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
SUBMITTED October 13, 1959 — M. M. Saunders, DISTRICT ENGINEER
EXAMINED October 23, 1959 — William Randall, CHIEF OF BUREAU OF ROAD PLANS AND CONTRACTS
PASSED October 23, 1959 — [illegible], DIRECTOR OF HIGHWAYS
APPROVED October 23, 1959 — M. M. Saunders, CHIEF HIGHWAY ENGINEER
APPROVED October 23, 1959 — [illegible], DIRECTOR

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

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CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	33
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY 33 of 51

USGS DATUM
5th GA 1929

Permanent B.M. Top Steel Post
56' Rt. 6+77 El. 673.91

BM Spk. & W. in Root of 30" Oak
49' Lt. 12+36 El. 671.64

B.M. Spk. & W. in 18" Pine
45' Lt. 30+96 El. 672.75

CURVE DATA (SEC 13X)
Δ = 11°-06'
D = 2°-00'
R = 2864.93
T = 279.2
L = 556.7
E = 13.6
S = .034'/Ft.
LEAD = 190'

P.I. 15+00

CURVE DATA (SEC 13X)
Δ = 11°-51'
D = 2°-00'
R = 2864.93
T = 297.3
L = 592.5
E = 15.4
S = .034'/Ft.
LEAD = 190'

P.I. 16+00

P.O.T. 32+00

ROUTE NO.	SEC.	CONTRACT	TOTAL SHEETS	SHEET NO.
FA 1541	13X-BY	BUREAU	14	8
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

To Princeton

To Seatonville

PC 12+328
PT 15+00
PT 17+725
SA RTE 19
CREEK
Remove
PC 21+81.2
PT 24+78.5
PT 27+737
PE 143
POT 32+00
SR +52
BRUSH

GENERAL NOTES:
THE SURFACE ADJACENT TO THE END OF THE BRIDGE SHALL BE ADJUSTED WITH THE BRIDGE SURFACE TO MAKE A SMOOTH RIDING SURFACE AS DIRECTED BY THE ENGINEER.
EST. BITUMINOUS MATERIALS (Prime Coat ------ 11 Gals.
BITUMINOUS CONC. SURF. CSE Subclass I-II ---5 Tons

SEC 13X-BY Includes a Precast Prestressed R.C. Beam Bridge, 1 Span at 58'-3¾" & 2 Spans at 43'-5" on the existing Extended Substructure at Sta 19+58

INSTALL STEEL PLATE BEAM GUARD RAIL AT THE CORNERS OF BRIDGE:

STATION - STATION	
R 19+56 - 19+83	25 LIN.FT.
L 19+67 - 19+92	25 LIN.FT.
R 20+24 - 20+49	25 LIN.FT.
L 20+43 - 20+68	25 LIN.FT.

RECONSTRUCT THE GUTTER OUTLETS ON THE WEST SIDE OF THE BRIDGE, L&R STA. 19+, WITH SIMILAR TYPE STRUCTURES TO CLEAR THE NEW BRIDGE AND FIT FUTURE 24 FOOT WIDENED PAVEMENT AS DIRECTED BY THE ENGINEER.
THE CAST IRON GRATE AND COVER AND THE METAL PIPE SHALL BE SALVAGED AND USED IN THE NEW CONSTRUCTION.
THE COST OF REMOVING THE EXISTING STRUCTURES, SALVAGING AND INSTALLATION OF THE GRATE, COVER AND PIPE IN THE NEW CONSTRUCTION, THE RESTORATION OF SHOULDERS AND SLOPES AND THE REMOVAL OF ALL SURPLUS MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR CLASS X CONCRETE.
ESTIMATED: CLASS X CONCRETE 12.0 Cu. Yds.
REINFORCEMENT BAR 50 Lbs.

THE COST OF REMOVING SMALL TREE L 20250 SHALL BE INCLUDED IN THE UNIT PRICE FOR CLASS X CONCRETE

Orig. Grade Line
P.I. 9+75 - El. 679.30'
V.C. 1000' - X. 9.61'

Orig. Grade Line
P.I. 17+56.3 - El. 632.50'
V.C. 300' - X. 2.25'

Orig. Grade Line
P.I. 21+50 - 632.50'
V.C. 200' - X. 1.20'

Orig. Grade Line
P.I. 29+75 - El. 672.10
V.C. 1100' - X. 6.27'

+1.70%
-8.99%
0.0%
+4.80%
+0.24%
+4.80%

Existing I-II Surface
Proposed I-II Surf
Crown of Pvt. Sec 13X

Bk. Ab. 18+84.14
Bk. Ab. 20+31.66

680
670
660
650
640
630
620

REVISIONS NAME	DATE

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CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	34
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

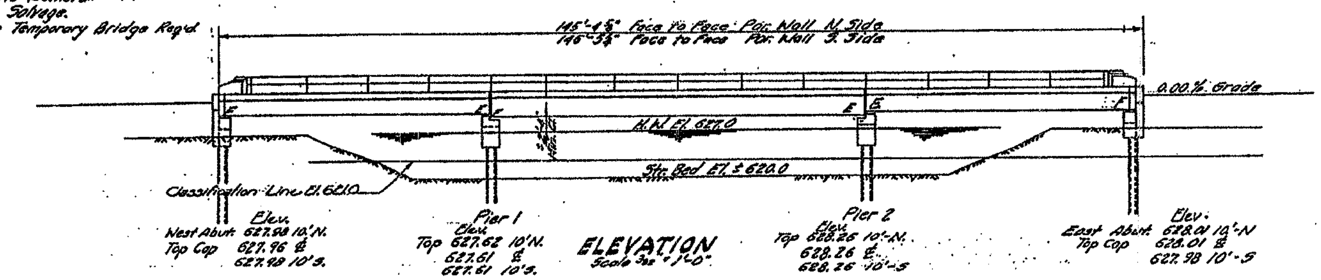
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

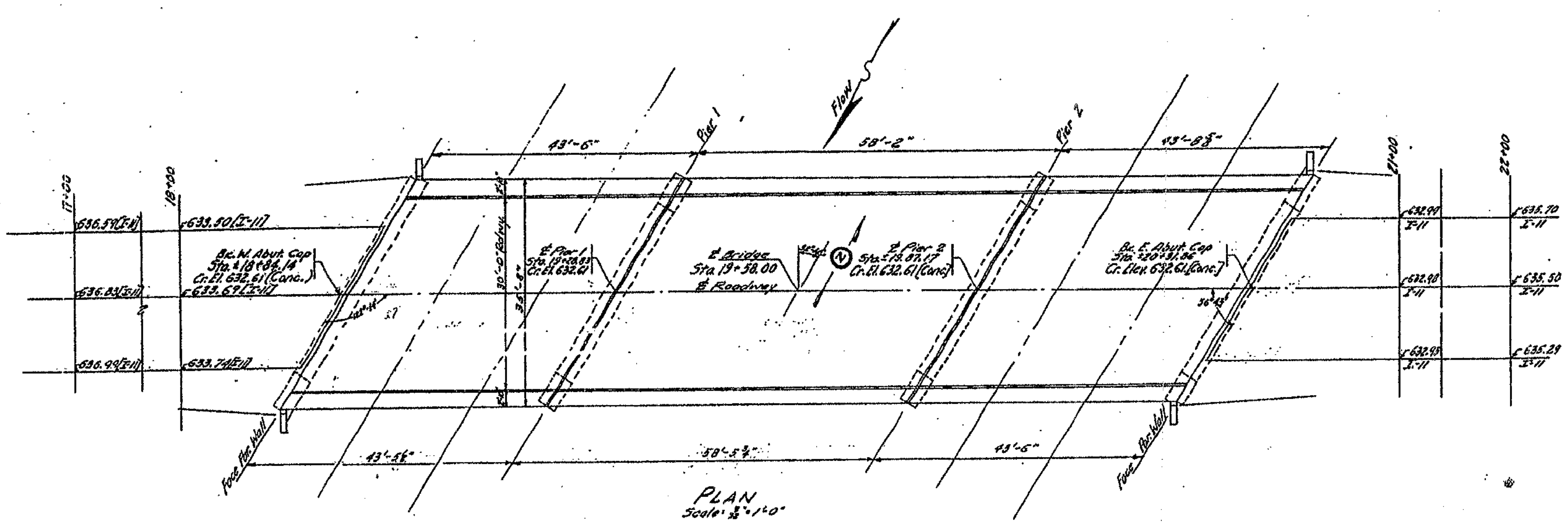
F.A. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
154	13X-BY	Bureau	11	3

SHEET NO. 1
5 SHEETS

B.M. Top of steel R on top S.E. Bridge Corner Lt. Sta. 18+15 El. 629.13
Existing Bridge: Continuous Haunched R.C.D.G. on Pile Bent Piers & Abuts.
Superstructure to be removed by others prior to construction. Portions of Abut. wings to be removed by Contractor under item "Concrete Removal".
No Salvage.
No Temporary Bridge Req'd.



ELEVATION
Scale 1/16" = 1'-0"



PLAN
Scale: 1/8" = 1'-0"

GENERAL NOTES

Class X Concrete shall be used in abutments, Piers and Curbs.

Handrail Concrete shall be used in End Posts.

For item, "Precast Prestressed Concrete Bridge Deck," see Special Provisions.

All surfaces of expansion guards inaccessible after erection shall be given two shop coats of red lead paint; the anchor bolts shall not be painted.

Expansion guards shall be fabricated and erected in accordance with Article 51.13(d) of the Standard Specifications. Cost to be incidental to "Precast Prestressed Concrete Bridge Deck."

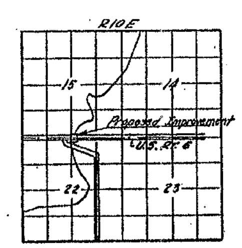
Structural Steel (4×3×¼ ∠ for I-11) shall be painted one shop coat of red lead paint and 2 field coats of aluminum paint.

STATION 19+50
BUILT 19 BY
STATE OF ILLINOIS
F.A. RT. 154 SEC. 13X-BY
LOADING H-20-S16

NAME PLATE LETTERING
See Standard 2113

TOTAL BILL OF MATERIAL

Item		Super.	Sub.	Total
Precast Prestressed Conc. Br. Deck	Sq. Ft.	4790		4790
Class X Concrete	Cu. Yds.	40.9	45.1	86.0
Handrail Concrete	Cu. Yds.	1.6		1.6
Reinforcement Bars	lbs.	2180	2450	4630
Metal Handrail	Lin. Ft.	267		267
Precast Concrete Piles (16")	Lin. Ft.		400	400
Concrete Removal	Cu. Yds.		8	8
¾" φ Expansion Bolts	Ea.		100	100
Name Plate	Ea.	1		1
Structural Steel	Lbs.	700		700
Bit. Mat'ls. (Prime Coat)	Gals.	49		49
Bit. Conc. Surf. Crse. I-11	Tons	60		60



LOCATION SKETCH

DESIGNED Abraham K. El-Bek
CHECKED [signature]
J. B. Brown
SEPT. 25 1959
EXAMINED [signature]
PASSED [signature]

PRESTRESSED UNITS DESIGN STRESSES
f_c = 5000 p.s.i.
f_{ci} = 4000 p.s.i.
f_s = 250,000 p.s.i. (Cables)
f_{si} = 160,000 p.s.i.
f_s = 18,000 p.s.i. (Struct.)

FIELD UNITS DESIGN STRESSES
f_c = 1400 p.s.i. Super & Sub.
f_s = 20,000 p.s.i. Reinf.
f_s = 18,000 p.s.i. Struct.
n = 10

BRUSH CREEK
F.A. RT. 154 SEC. 13X-BY
BUREAU COUNTY
STA. 19+58

REVISIONS NAME	DATE

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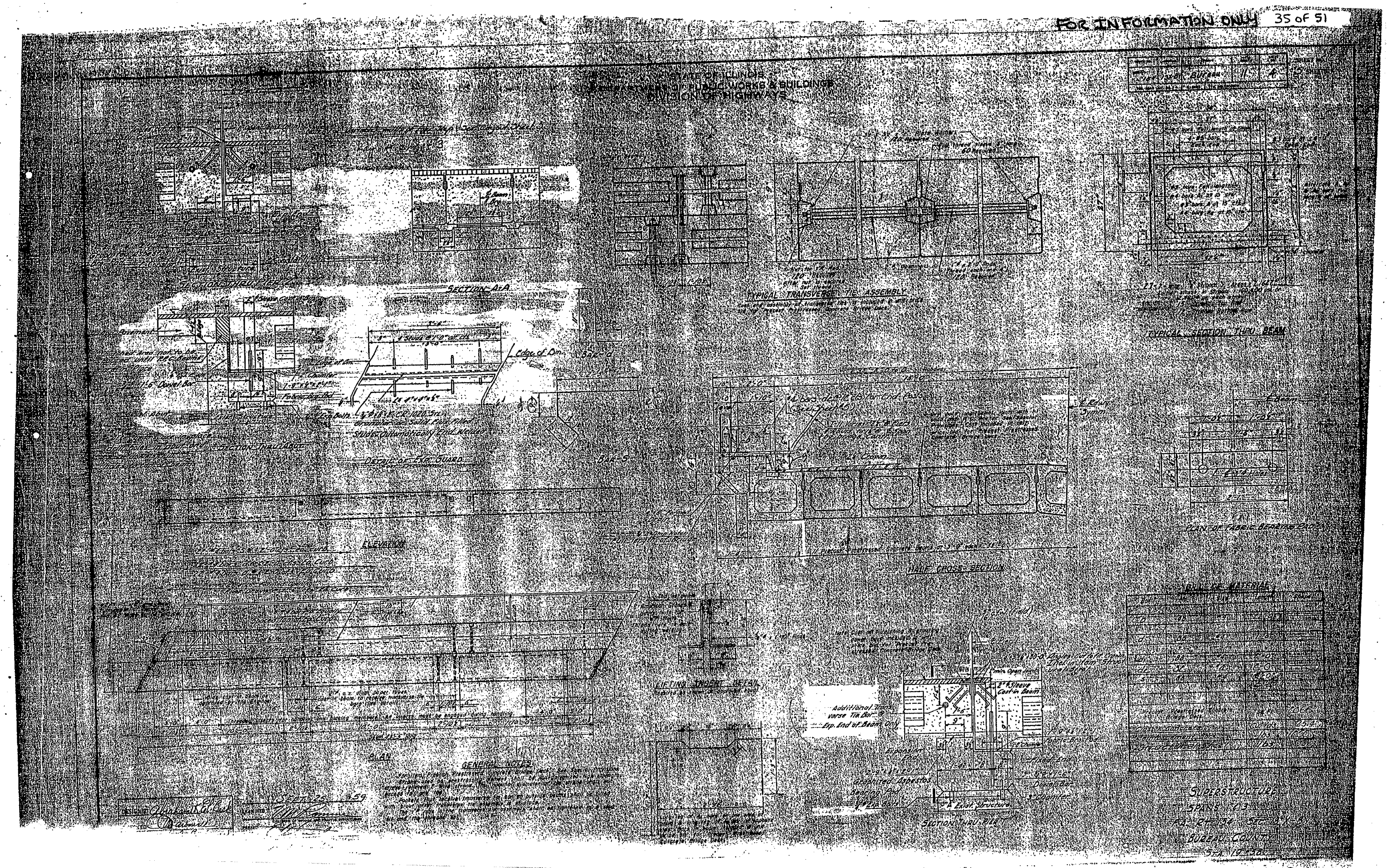
CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	35

STA. TO STA.

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



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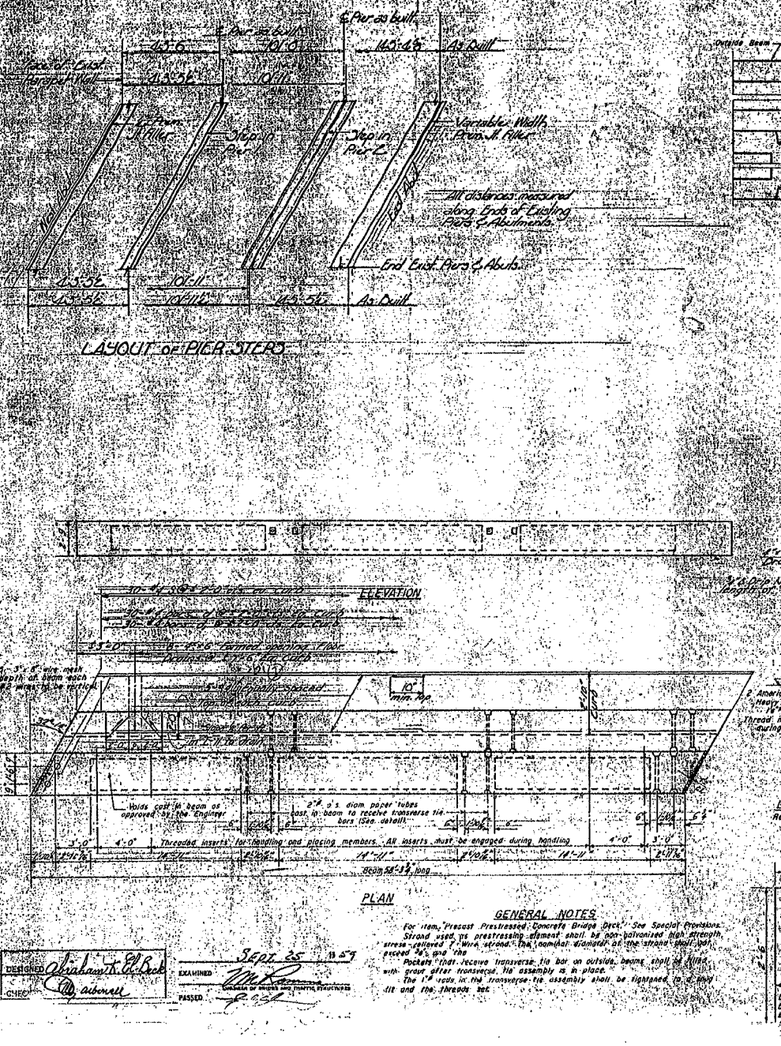

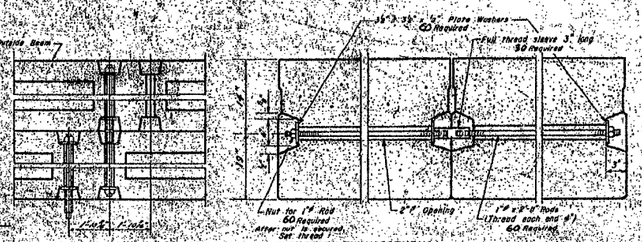

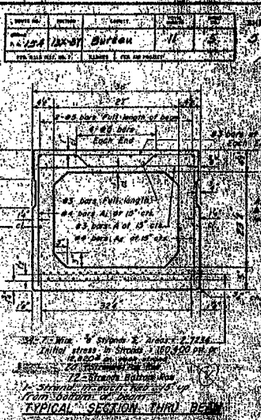

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	36

STA. TO STA.

FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY 36 of 51

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

GENERAL NOTES

For item "Precast Prestressed Concrete Bridge Deck." See Special Provisions.

Strand used as prestressing element shall be non-galvanized high strength, stress-relieved 7-Wire strand. The nominal diameter of the strand shall not exceed ⅜", and the

Pockets that receive transverse tie bar on outside beams shall be filled with grout after transverse tie assembly is in place.

The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set.

DESIGNED Abraham K. El Beck
CHECKED
EXAMINED
PASSED
Sept 25 1959

BILL OF MATERIAL SPAN 2

Bar	No.	Size	Length	
b1	24	#4	29'-6"	
d	60	#4	1'-6"	
d1	60	#4	2'-0"	
s	60	#4	5'-0" 6'-0"	
Precast Prestressed Concrete Bridge Deck			Sq. Ft.	1964
Class X Concrete			Cu. Yds.	15.5
Reinforcement Bars			lbs.	810
Structural Steel			lbs.	350

SUPERSTRUCTURE
SPAN 2
F.A. RT. 134 SEC. 13X-BY
BUREAU COUNTY

REVISIONS	
NAME	DATE

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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	37

STA. TO STA.

FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT

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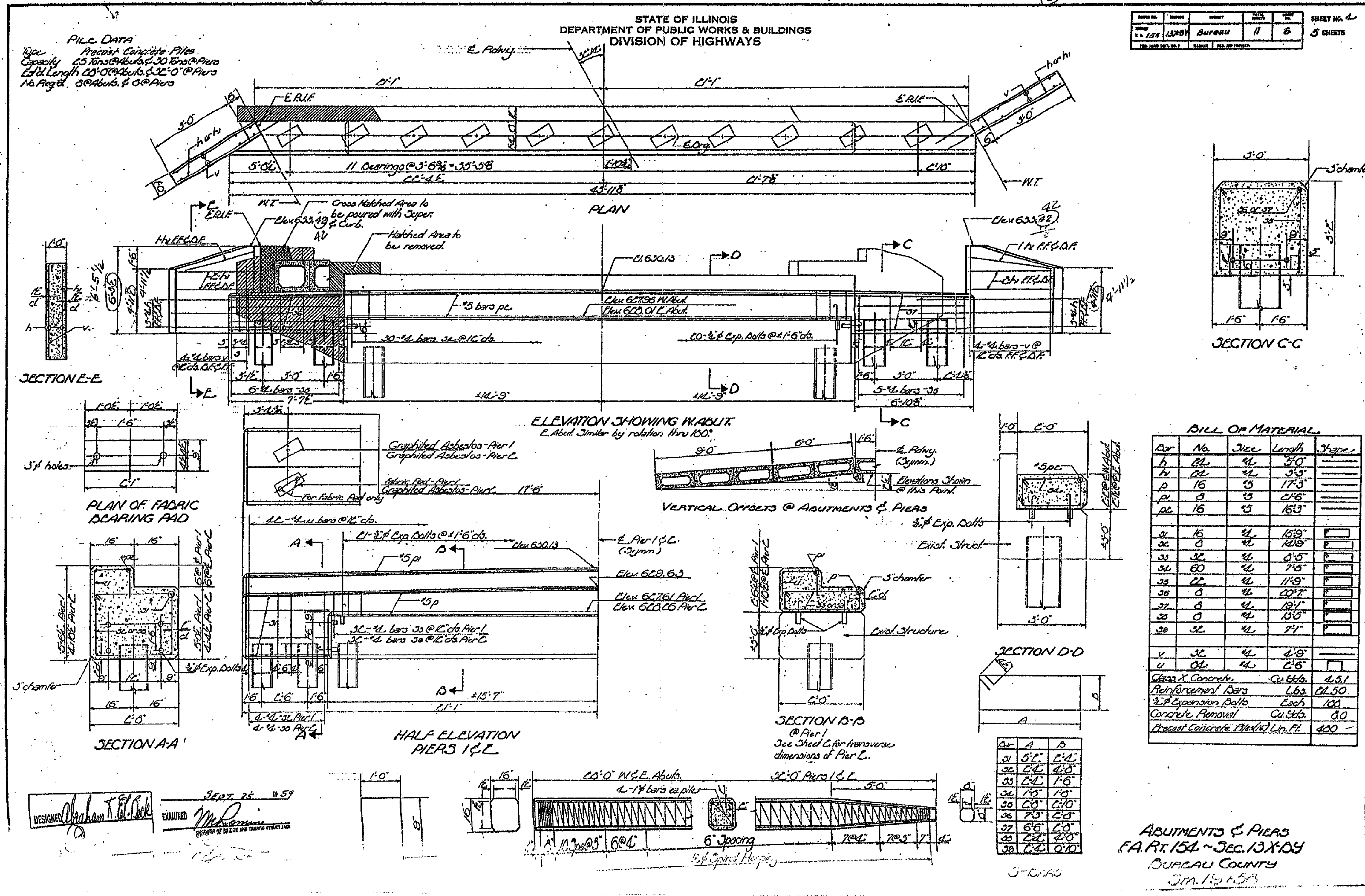
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	24	#4	5'0"	straight
h1	24	#4	3'3"	straight
p	16	#5	17'3"	straight
p1	8	#5	21'6"	straight
p2	16	#5	16'3"	straight
s1	16	#4	15'9"	stirrup
s2	8	#4	14'9"	stirrup
s3	32	#4	8'5"	stirrup
s4	60	#4	7'5"	stirrup
s5	22	#4	11'9"	stirrup
s6	8	#4	20'7"	stirrup
s7	8	#4	19'1"	stirrup
s8	8	#4	13'5"	stirrup
s9	32	#4	7'1"	stirrup
v	32	#4	4'9"	straight
u	84	#4	2'6"	stirrup

Item	Unit	Quantity
Class X Concrete	Cu. Yds.	45.1
Reinforcement Bars	Lbs.	2450
3/4"φ Expansion Bolts	Each	100
Concrete Removal	Cu. Yds.	8.0
Precast Concrete Piles (16)	Lin. Ft.	400

Bar	A	B
s1	5'2"	2'4"
s2	2'4"	4'8"
s3	2'4"	1'6"
s4	1'8"	1'8"
s5	2'8"	2'10"
s6	7'3"	2'8"
s7	6'6"	2'8"
s8	2'4"	4'0"
s9	2'4"	0'10"

DESIGNED Abraham T. El-Bek EXAMINED ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES SEPT. 25 1959

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

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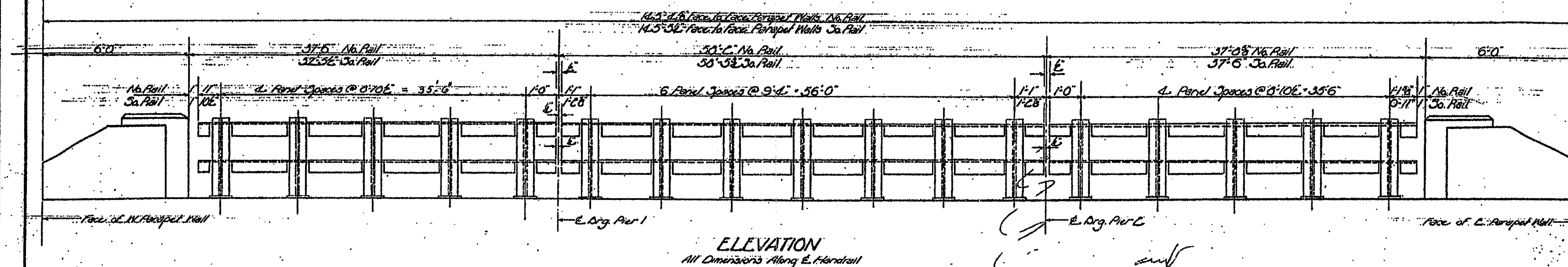
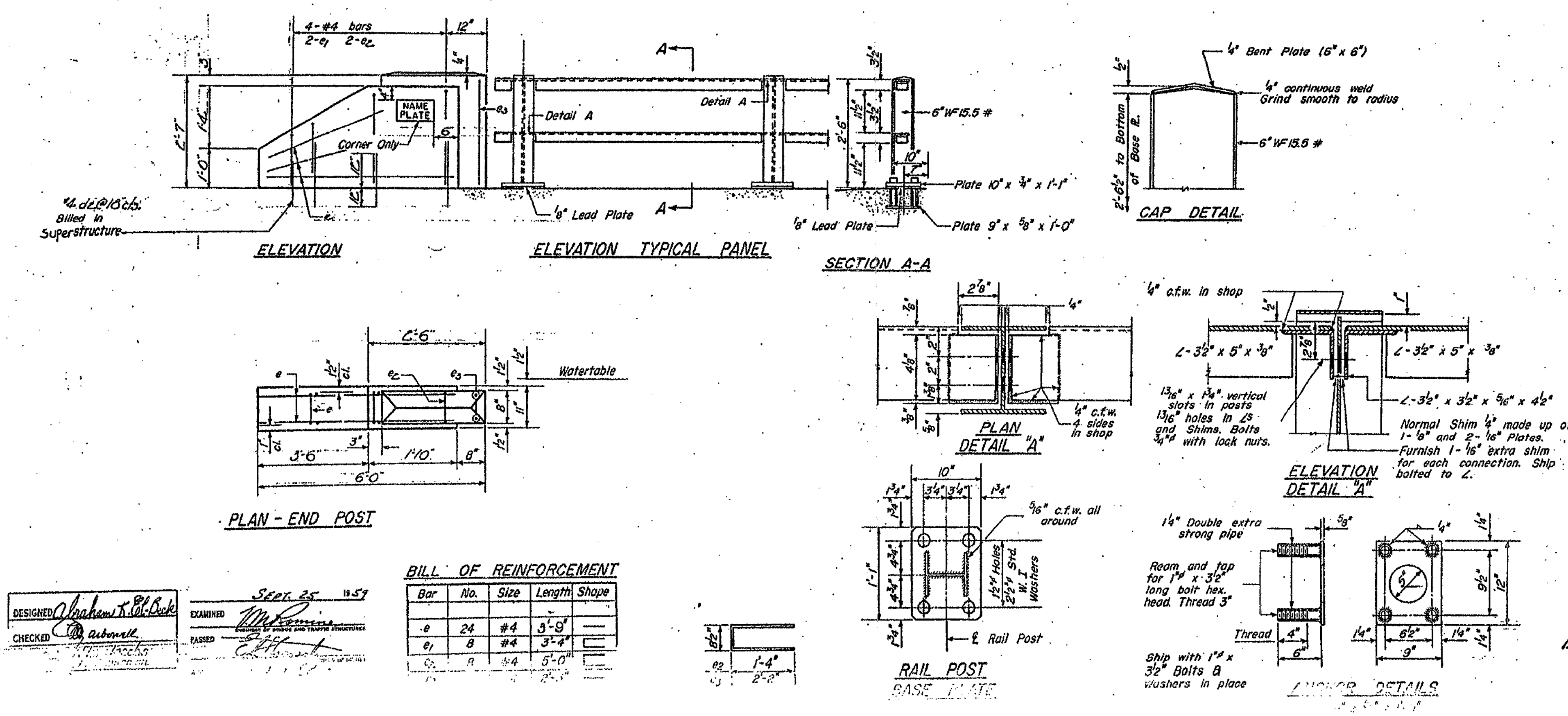
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	38
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 5
5 SHEETS





GENERAL NOTES

All End Posts shall be Handrail Concrete.

After erection all Bolts and Washers shall be spot painted with one coat of red lead and two coats of aluminum paint.

BILL OF MATERIAL

Handrail Concrete	Cu. Yd.	1.6
Reinforcement Bars	Lbs.	120
Metal Handrail	Lin. Ft.	267

BILL OF REINFORCEMENT

Bar	No.	Size	Length	Shape
e	24	#4	3'-9"	
e_1	8	#4	3'-4"	
e_2	8	#4	5'-0"	
			2'-2"	

HANDRAIL DETAILS
F.A. Rt. 154 Sec. 13X-BY
Bureau County
STA. 19+58

DESIGNED — CHECKED — EXAMINED — PASSED
Sept. 25 1959

REVISIONS	
NAME	DATE

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CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	39
STA.	TO STA.			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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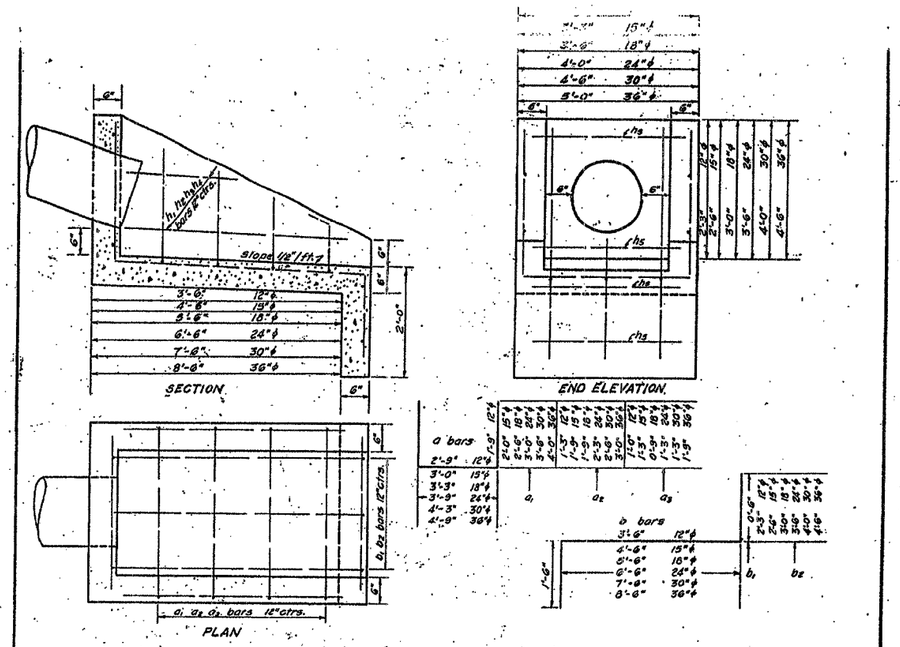

Diameter Pipe	Bars a1	a2	a3	b1	b2	h1	h2	h3	h4	h5	Reinforcement Bars Lbs.	Class X Conc. Cu.Yds.
12"	1@6'3"	1@5'3"	1@4'9"	1@5'6"	2@7'3"	2@3'0"	2@1'3"			4@2'6"	40	0.6
15"	1@7'0"	1@6'6"	2@5'6"	1@6'6"	2@8'6"	2@4'0"	2@2'0"			4@2'9"	50	0.8
18"	2@8'3"	2@6'9"	1@4'9"	1@7'6"	2@10'0"	2@5'0"	2@3'0"			4@3'0"	60	1.0
24"	2@9'9"	2@8'3"	2@6'3"	1@8'6"	2@11'6"	2@6'0"	2@4'0"	2@2'0"		4@3'6"	80	1.3
30"	2@11'3"	3@9'3"	2@6'9"	3@9'6"	2@13'0"	2@6'6"	2@5'0"	2@3'0"		4@4'0"	110	1.6
36"	2@12'9"	3@10'9"	3@8'3"	3@10'6"	2@14'6"	2@8'0"	2@6'0"	2@4'0"	2@2'0"	4@4'6"	130	2.0

Note: All Bars Size ④

F.A. ROUTE 154 SEC. 13X-BY
BUREAU COUNTY
DISTRICT NO. 2 DIXON
Drawn H.K.Walder Date Dec. 1951
Checked

REVISIONS NAME	DATE

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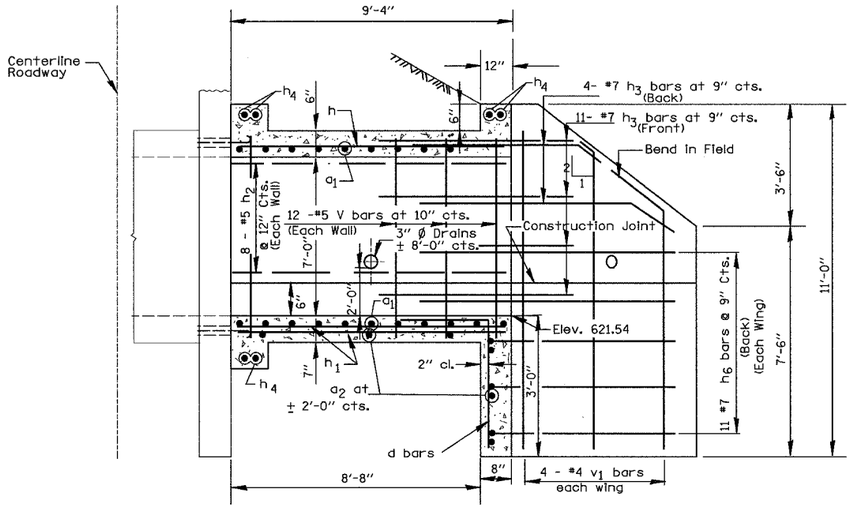
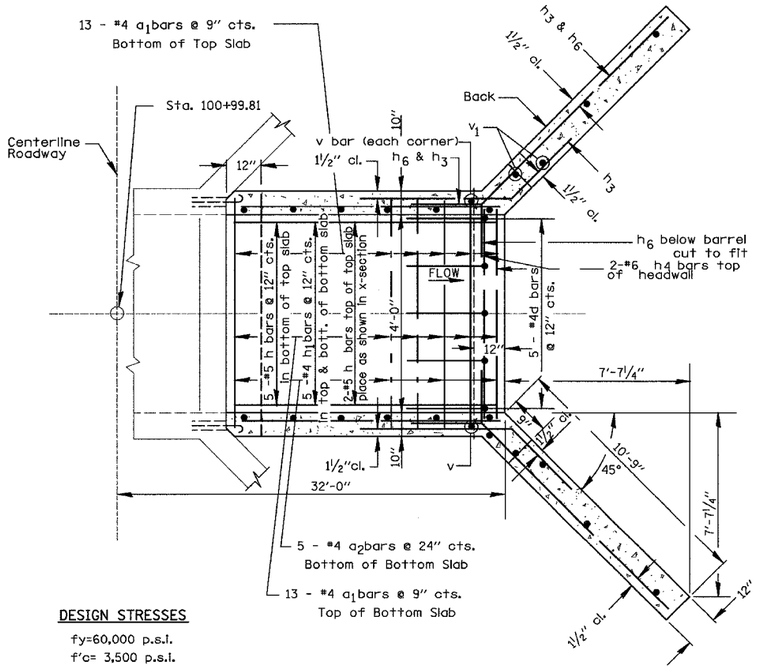
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	40
STA. _____	TO STA. _____			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

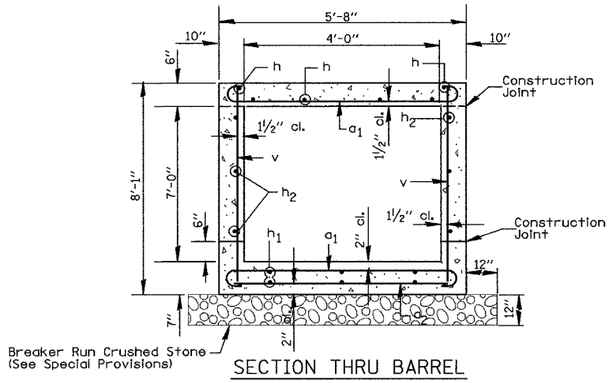


PLAN

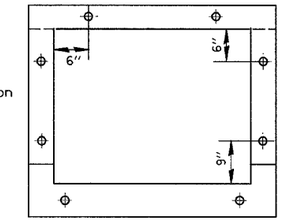
DESIGN STRESSES

fy=60,000 p.s.i.
f'c= 3,500 p.s.i.

LOADING HS 20-44



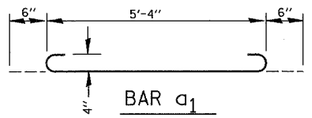
SECTION THRU BARREL



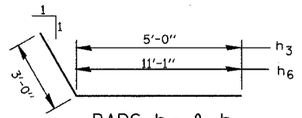
Top & Bottom . . 3 @ 18" Cts.
Sidewalls . . . . . 5 @ 18" Cts.

EXPANSION BOLT LOCATION

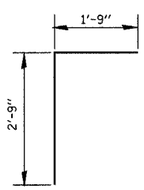
Note: Expansion bolts shall consist of self drilling expansion shield and ¾" diameter hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete.
Minimum Certified Proof Load = 4,080 lbs



BAR a_1



BARS h_3 & h_6



BAR d

BILL OF MATERIALS

Bar	Number	Size	Length
a_1	26	#4	6'-4"
a_2	7	#4	5'-5"
d	5	#4	4'-6"
h	7	#5	9'-1"
h_1	10	#4	9'-1"
h_2	16	#5	9'-1"
h_3	30	#7	8'-0"
h_4	6	#6	5'-5"
h_6	22	#7	14'-1"
v	26	#5	7'-10"
v_1	8	#4	10'-9"
Concrete Box Culverts		Cu. Yds.	13.9
Reinforcement Bars		Lbs.	1870
Expansion Bolts ¾Inch		Each	16
Breaker Run Crushed Stone		Ton	5

GENERAL NOTES

Class SI Concrete shall be used throughout.
At least six feet of Barrel shall be poured monolithically with wingwalls.
Exposed edges shall be beveled ¾".
For backfilling and embankments see Standard Specifications.
Tilt hook of a_1 bars, if necessary, to obtain 1½" minimum clearance at top of hook.
Reinforcement Bars shall conform to the requirements of AASHTO M-31, or M-322, Grade 60.

REVISIONS NAME	DATE

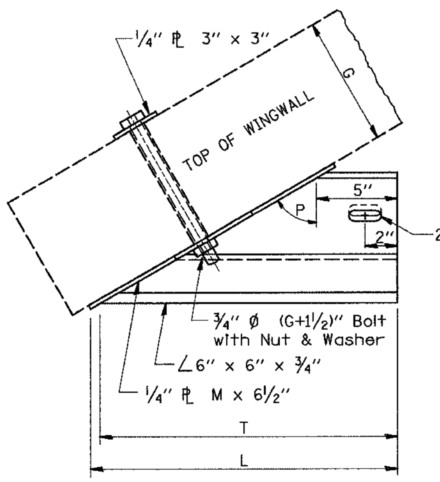
ILLINOIS DEPARTMENT OF TRANSPORTATION
BOX CULVERT EXTENSION DETAILS
FAS ROUTE 2247 (U.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
BUREAU COUNTY

SCALE: VERT. HORIZ.
DATE 07/06
DRAWN BY NQ
CHECKED BY JDA

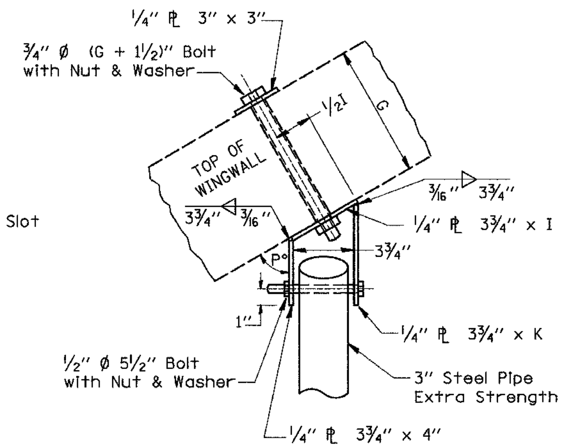
PLOT DATE = 4/06
FILE NAME = Z08903CULV
PLOT SCALE = 1" = 50'
USER NAME = AMR

CONTRACT NO. 64938

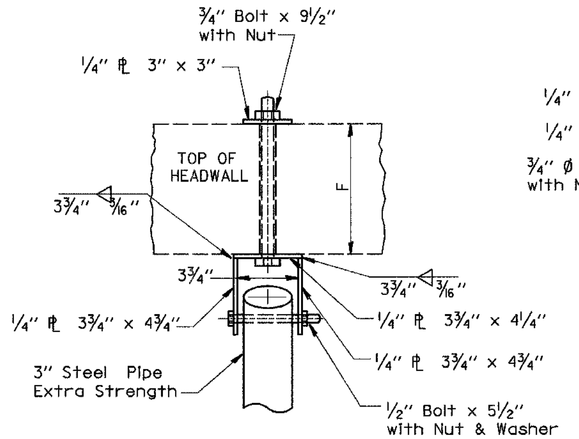
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	41
STA. ________	TO STA. ________			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



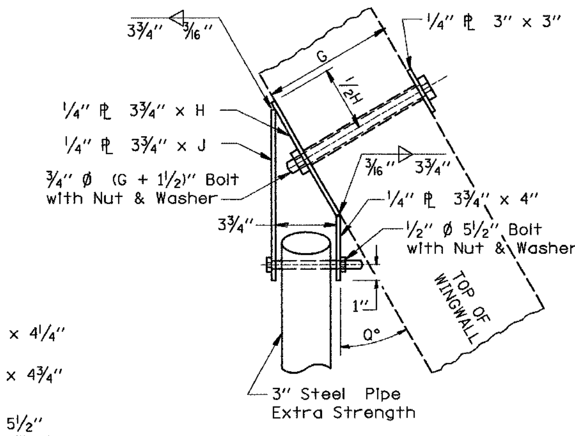
PLAN
END BRACKET ASSEMBLY - LEFT



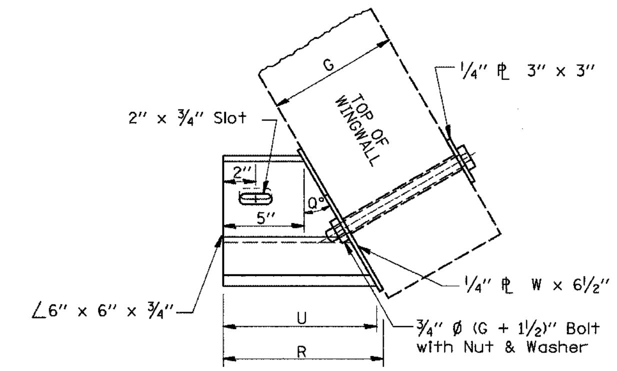
PLAN
WINGWALL BRACKET ASSEMBLY - LEFT



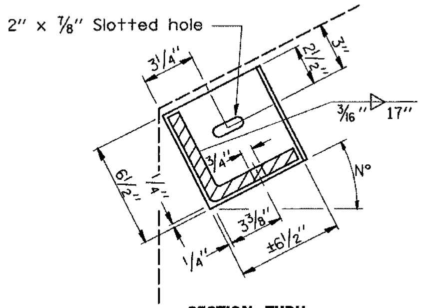
PLAN
HEADWALL BRACKET ASSEMBLY



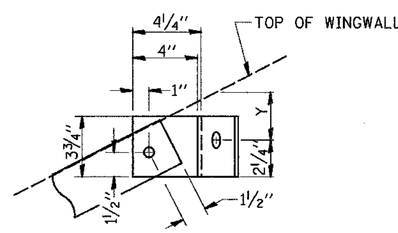
PLAN
WINGWALL BRACKET ASSEMBLY - RIGHT



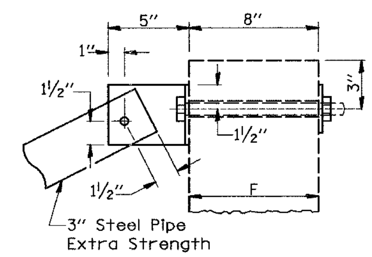
PLAN
END BRACKET ASSEMBLY - RIGHT



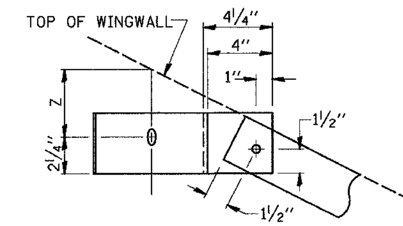
SECTION THRU
DETAIL A



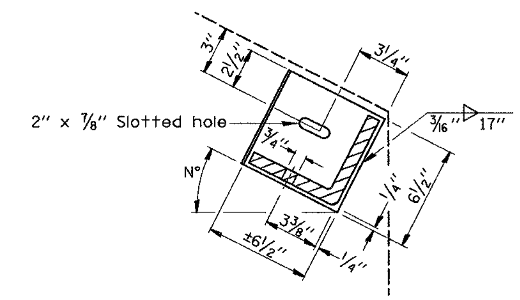
SECTION THRU
DETAIL B



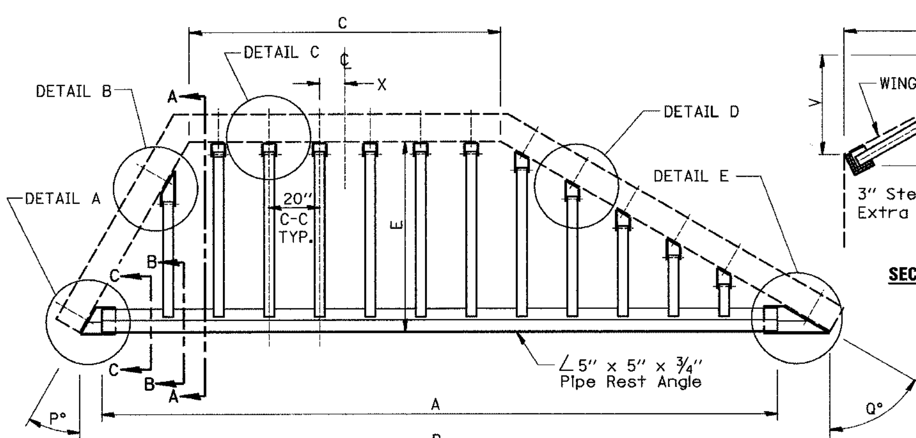
SECTION THRU
DETAIL C



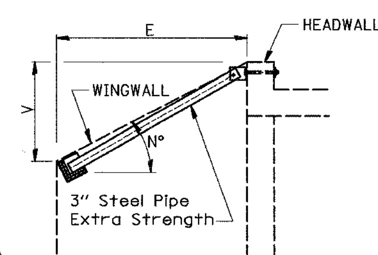
SECTION THRU
DETAIL D



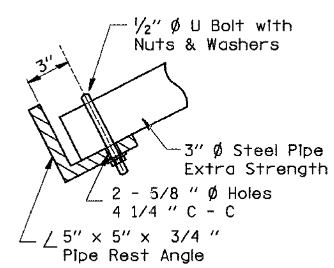
SECTION THRU
DETAIL E



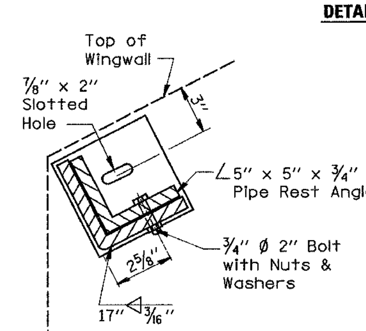
PLAN VIEW



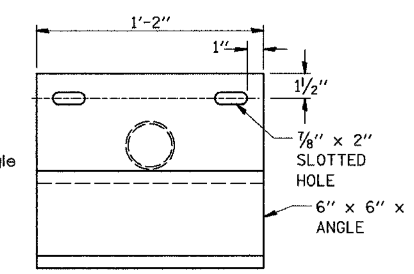
SECTION A-A



SECTION B-B

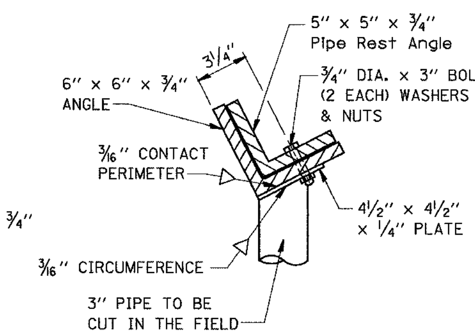


SECTION C-C

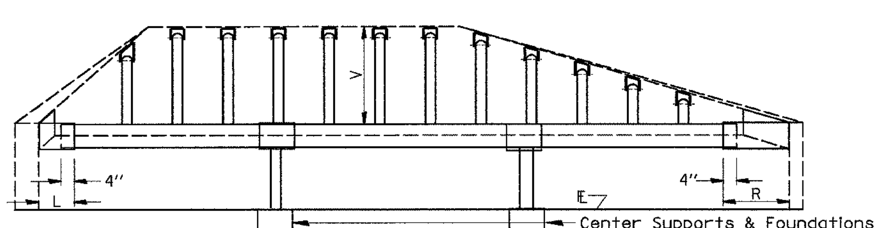


PLAN VIEW OF SUPPORT

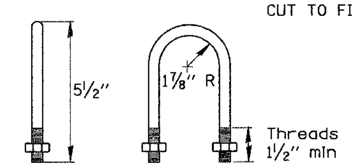
3" STEEL PIPE, EXTRA STRENGTH
x 2' LONG TO BE
CUT TO FIT IN THE FIELD



END VIEW OF SUPPORT



ELEV. VIEW



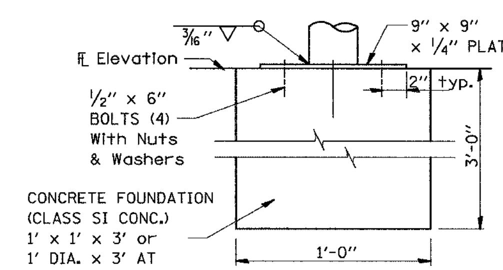
1/2" ∅ U BOLT
(1 PER PIPE REQ'D)

GENERAL NOTES

BOLTS AND NUTS SHALL CONFORM TO ASTM A 307.
ALL BOLTS SHALL HAVE WASHERS AT EACH END.
HOLES SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED EXCEPT IN CONCRETE WHICH SHALL BE 1/8" OVERSIZE.
ANGLES AND STEEL PLATES SHALL CONFORM TO AASHTO M183.
STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B OR ASTM A 501.
STEEL PIPES, ANGLES AND PLATES SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF AASHTO M111.
BOLTS, NUTS AND WASHERS SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF AASHTO M232.
THE APPROXIMATE WEIGHT OF STEEL GIVEN IN TABLES INCLUDES PLATES ANGLES, AND PIPES. BOLTS, NUTS AND WASHERS ARE NOT INCLUDED.
ALL DIMENSIONS ARE TO BE VERIFIED IN THE FIELD.
CUTTING OF THE EXTRA STRENGTH PIPE AND ANGLES TO THE EXACT LENGTHS AND DRILLING HOLES IS TO BE DONE IN THE FIELD.
THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE "EACH" FOR GRATING FOR CONCRETE HEADWALLS IN PLACE, AND SHALL INCLUDE FABRICATION PAINTING, CENTER SUPPORTS WHEN REQUIRED, AND INSTALLATION OF THE GRATING AS DETAILED.

DETERMINING NEED OF CENTER SUPPORTS

TIP TO TIP OF WINGWALLS (DIMENSION "D")	NUMBER OF SUPPORTS REQUIRED	LOCATION
0'-0" TO 12'-6"	0	--
12'-6" TO 18'-0"	1	CENTER OF SPAN
18'-0" TO 24'-0"	2	1/3 OF SPAN
24'-0" TO 30'-0"	3	1/4 OF SPAN



CENTER SUPPORT FOUNDATION

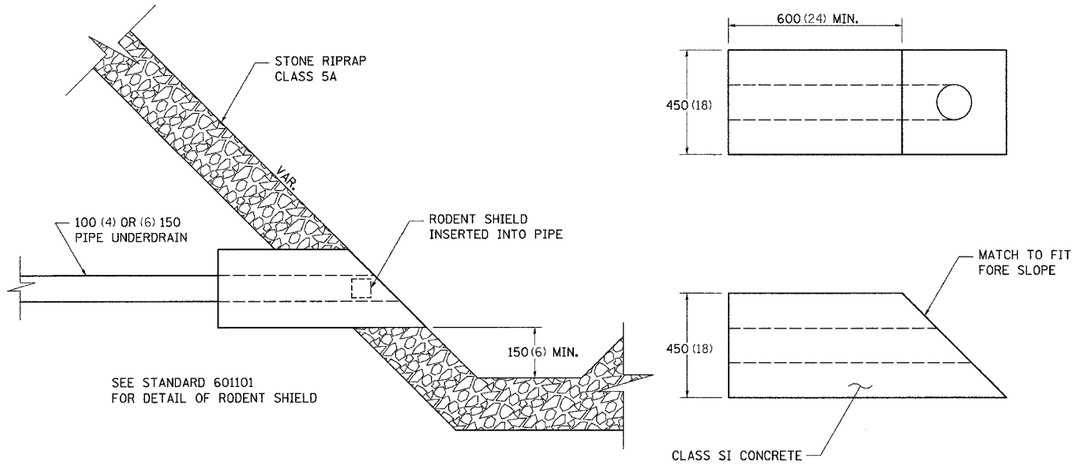
GRATING FOR CULVERTS WITH WINGWALLS

PLOT DATE = 4/06
FILE NAME = 28840SPL
PLOT SCALE = 1" = 5'0"
USER NAME = ARR

CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	42
STA.	TO STA.			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CONCRETE HEADWALLS FOR PIPE DRAINS

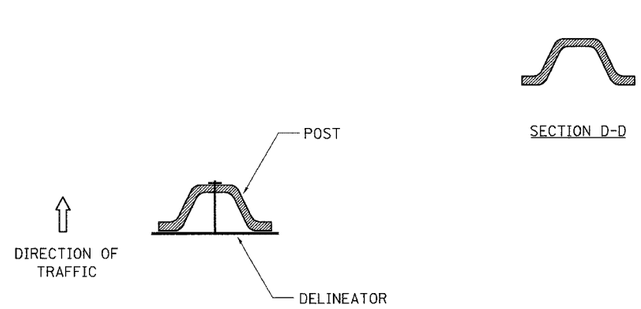


ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

CONCRETE HEADWALLS FOR PIPE DRAINS 27.4

REVISED 10-15-04

DELINEATOR AND POST ORIENTATION



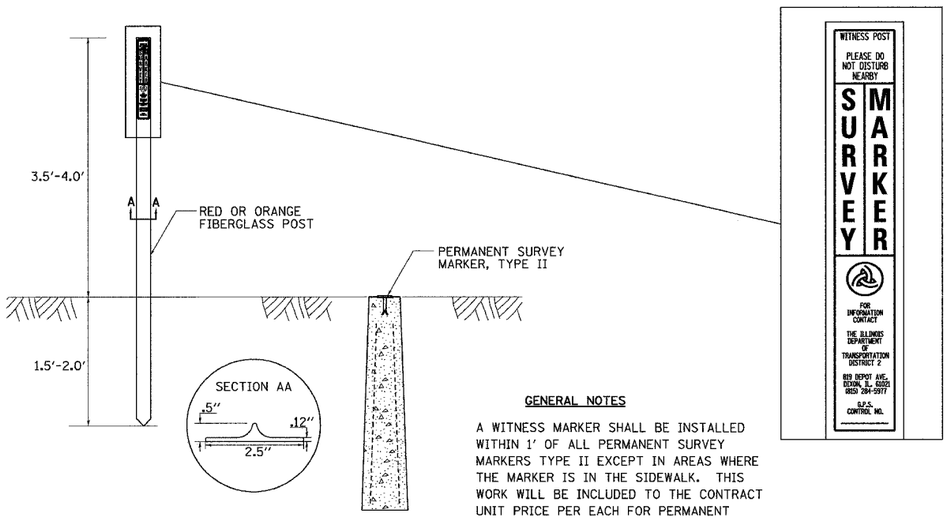
DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180° . THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHECD AS SHOWN ABOVE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

DELINEATOR AND POST ORIENTATION 37.4

REVISED 1-31-00

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II



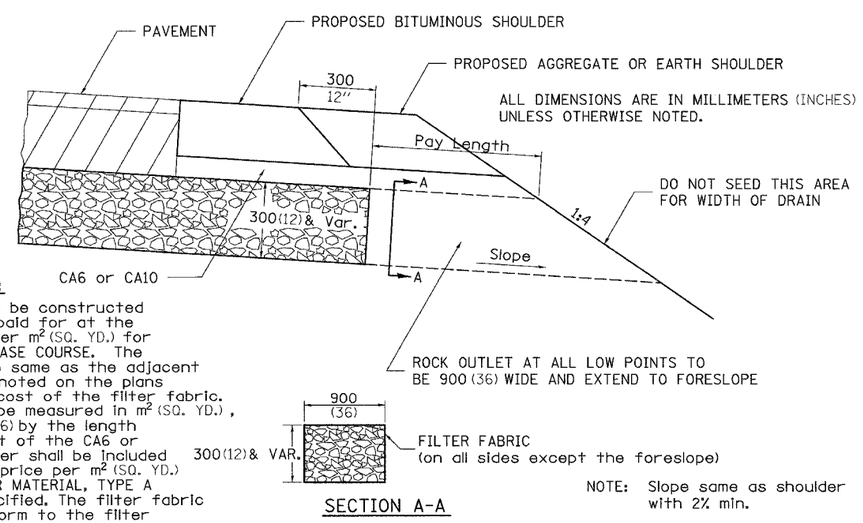
GENERAL NOTES

A WITNESS MARKER SHALL BE INSTALLED WITHIN 1' OF ALL PERMANENT SURVEY MARKERS TYPE II EXCEPT IN AREAS WHERE THE MARKER IS IN THE SIDEWALK. THIS WORK WILL BE INCLUDED TO THE CONTRACT UNIT PRICE PER EACH FOR PERMANENT SURVEY MARKERS, TYPE II.

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II 38.4

REVISED 1-31-00

DRAIN FOR AGGREGATE BASE COURSE



NOTES:

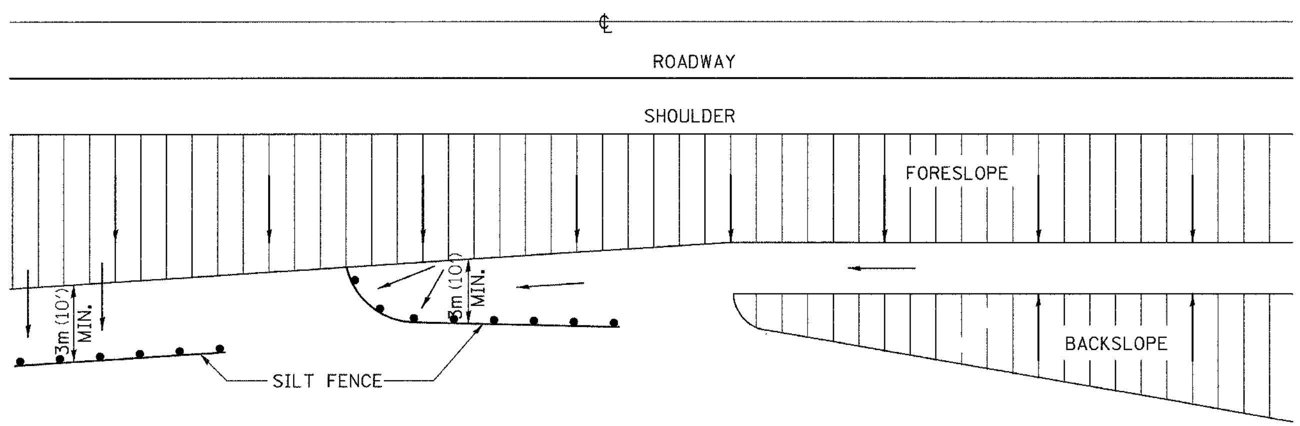
The rock outlets shall be constructed using CA7 and will be paid for at the contract unit price per m^2 (SQ. YD.) for DRAIN FOR AGGREGATE BASE COURSE. The thickness shall be the same as the adjacent sub-base material as noted on the plans and shall include the cost of the filter fabric. The Rock outlets will be measured in m^2 (SQ. YD.), the width being 900 (36) by the length shown above. The cost of the CA6 or CA10 under the shoulder shall be included in the contract unit price per m^2 (SQ. YD.) for SUB-BASE GRANULAR MATERIAL, TYPE A of the thickness specified. The filter fabric to be used shall conform to the filter fabric used for Riprap.

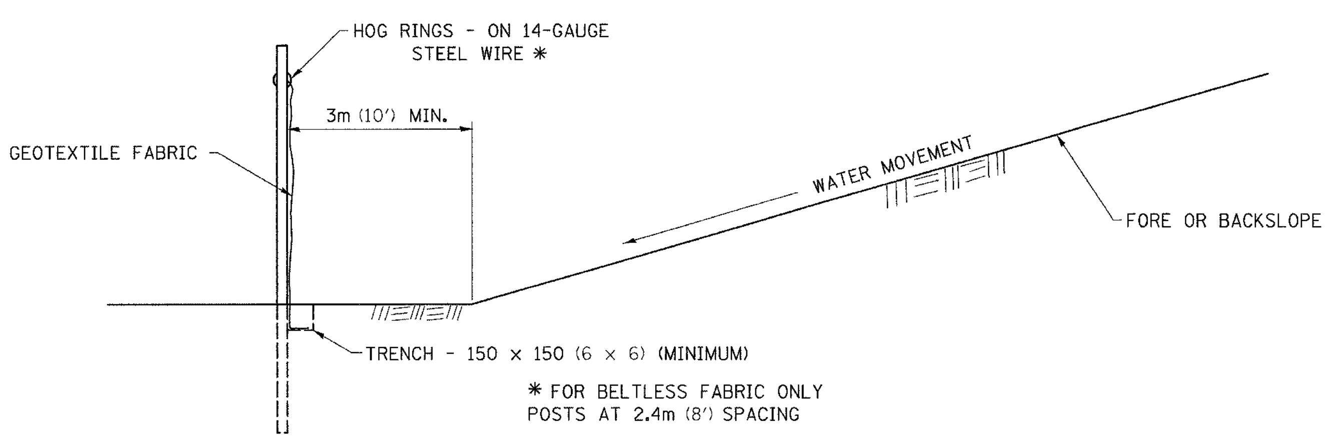
DRAIN FOR AGGREGATE BASE COURSE 96.4

REVISED 6-5-06

PLOT DATE = 4/06
FILE NAME = 208902BSPL
PLOT SCALE = 1' = 50'

EROSION CONTROL DETAILS FOR SILT FENCE



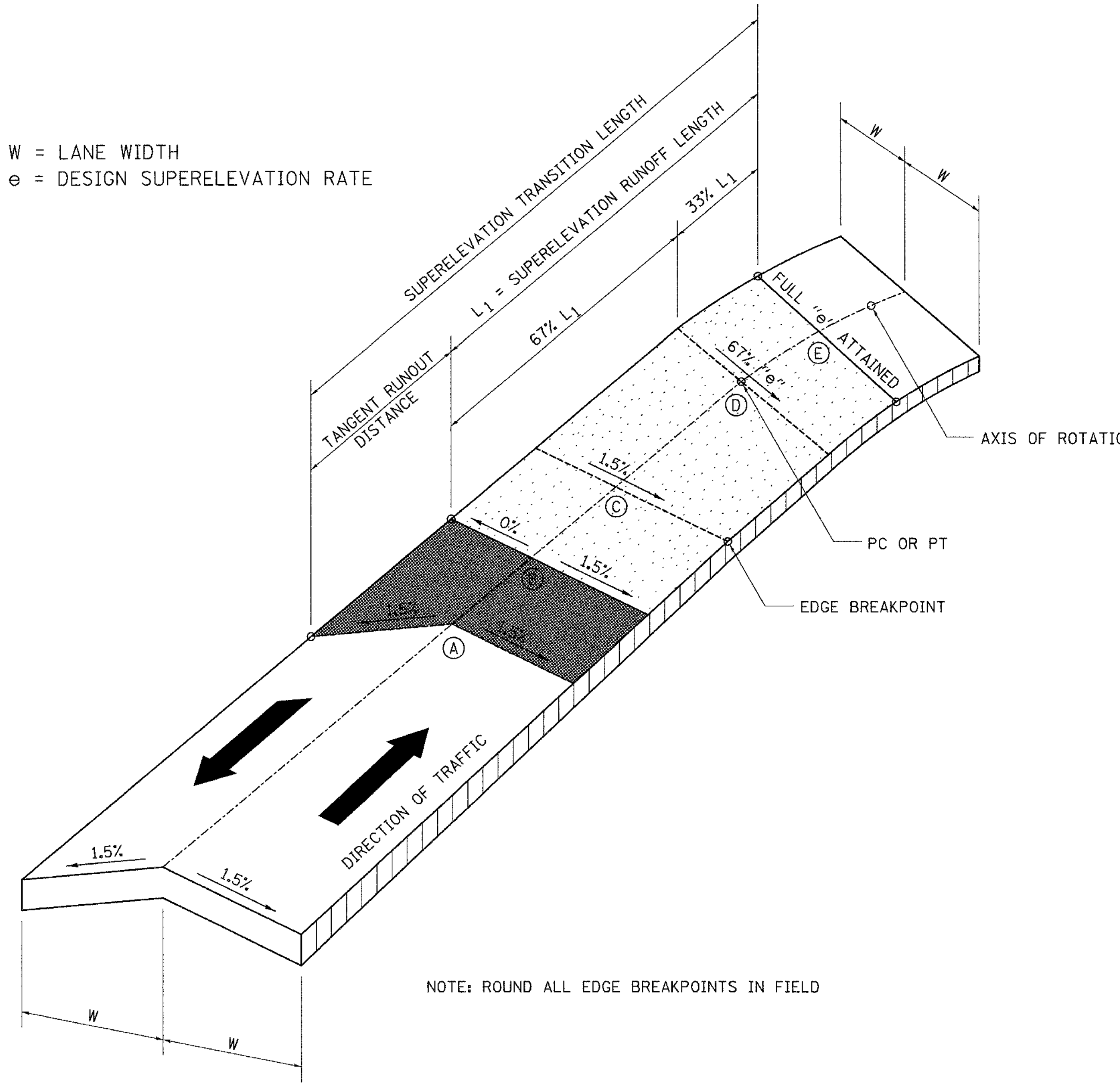


DETAILS OF SILT FENCE

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

SUPERELEVATION TRANSITION ON TWO-LANE HIGHWAY

W = LANE WIDTH
e = DESIGN SUPERELEVATION RATE



NOTE: ROUND ALL EDGE BREAKPOINTS IN FIELD

TRANSITION CURVE TABLE

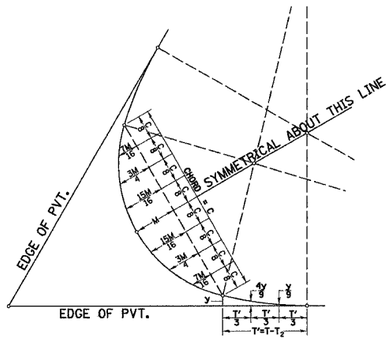
CURVE PI STA.	SUPERELEVATION "e"	W	SUPERELEVATION TRANSITION LENGTH	TANGENT RUNOUT DISTANCE	SUPERELEVATION RUNOUT LENGTH
1505+97.52	3.4%	13'	136'	43'	93'

PLOT DATE = 4/06
FILE NAME = Z08903SPL
PLOT SCALE = 1" = 50'

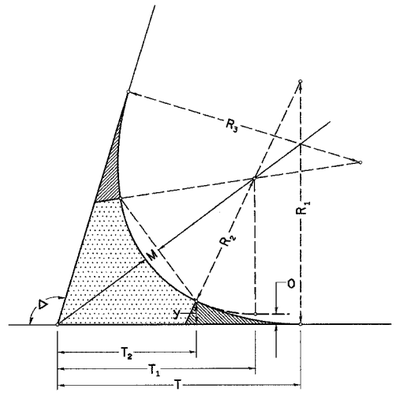
CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	44
STA.	TO STA.			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

THREE CENTER CURVE DATA



FIELD LAYOUT METHOD



FOR SYMMETRICAL CURVES

SYMMETRICAL CURVES

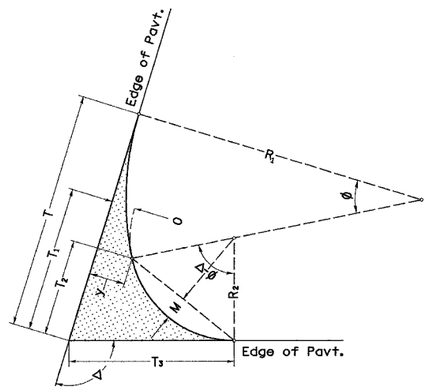
CURVE *							
R_1							
R_2							
R_3							
O							
Δ							
T							
T_1							
T_2							
T'							
y							
$\frac{4y}{9}$							
$\frac{y}{9}$							
M							
$\frac{15M}{16}$							
$\frac{3M}{4}$							
$\frac{7M}{16}$							
C							

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

Ⓐ FOR NW CURVE THESE NUMBERS ARE ALONG A LOCAL TANGENT TO MAINLINE AT STA. 1508+04.15, 12' LT.

Ⓑ FROM EOP ALONG THE MAINLINE CURVE

TWO CENTER CURVE DATA



TWO CENTER CURVES

• INTERSECTION US 6 WITH CH 19

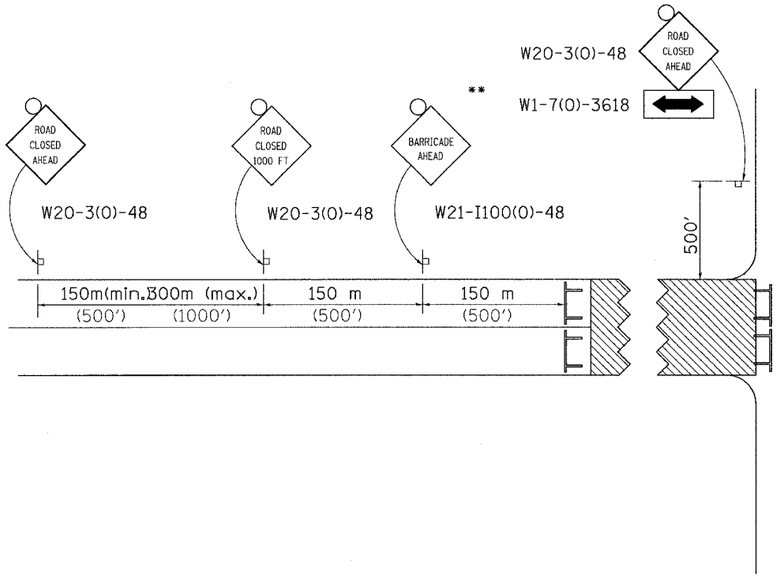
CURVE *	NE •	NW•					
R_1	300	200					
R_2	40	60					
Ø	17°-31'-29"	24°-30'-02"					
Δ	103°-21'-49"	78°-02'-15"					
T	131.54	104.01	Ⓐ				
T_1	53.47	44.70	Ⓐ				
T_2	41.46	21.07	Ⓐ				
T_3	62.95	61.51					
y	13.85	18.01					
$\frac{4y}{9}$	6.16	8.00					
$\frac{y}{9}$	1.54	2.00					
M	10.72	6.43					
$\frac{15M}{16}$	10.05	6.03					
$\frac{3M}{4}$	8.04	4.82					
$\frac{7M}{16}$	4.69	2.81					
O	12.00	12.00	Ⓑ				

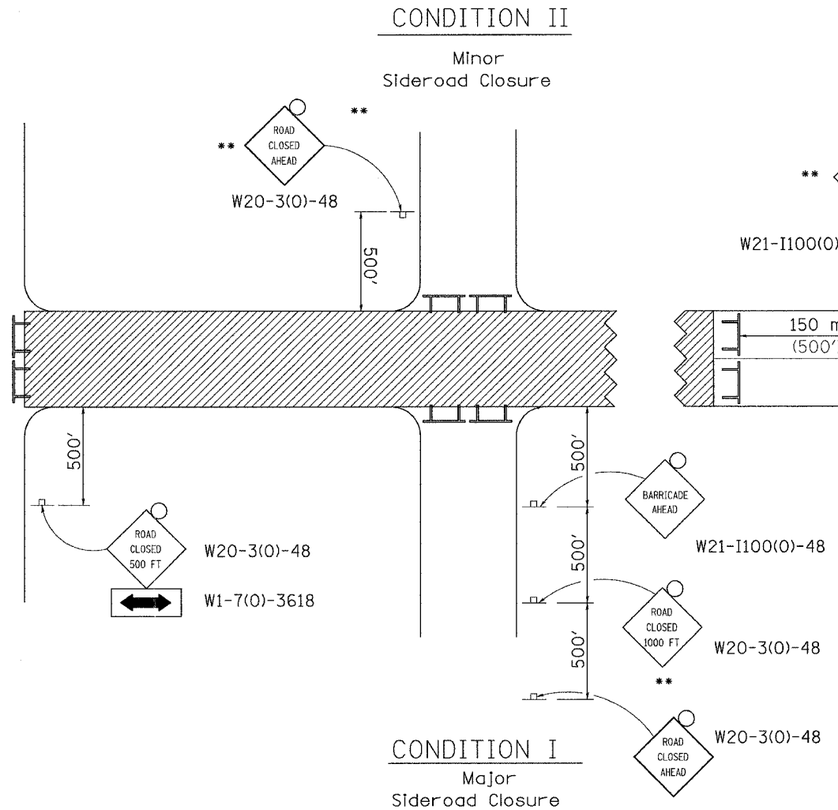
PLOT DATE = 7/26/00
FILE NAME = Z2609028PL
PLOT SCALE = NONE
REFERENCE = NONE

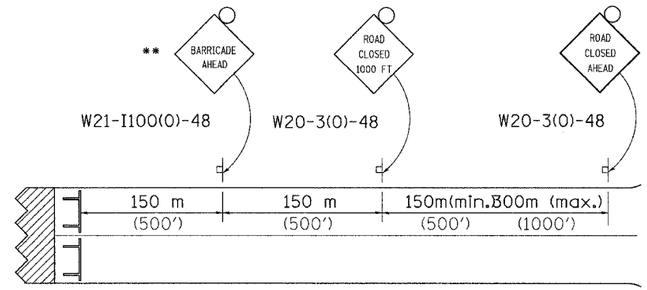
CONTRACT NO. 64938

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	45
STA.	TO STA.			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL FOR ROAD CLOSURE







GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

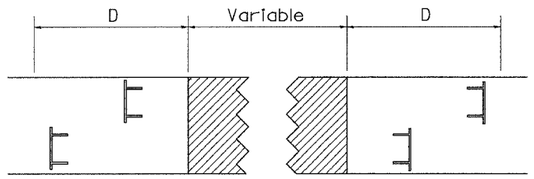
When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

** Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic.

Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 702001.

ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 702001. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

SYMBOLS

Work area

Type III Barricade with Flashers

Sign with flashing light

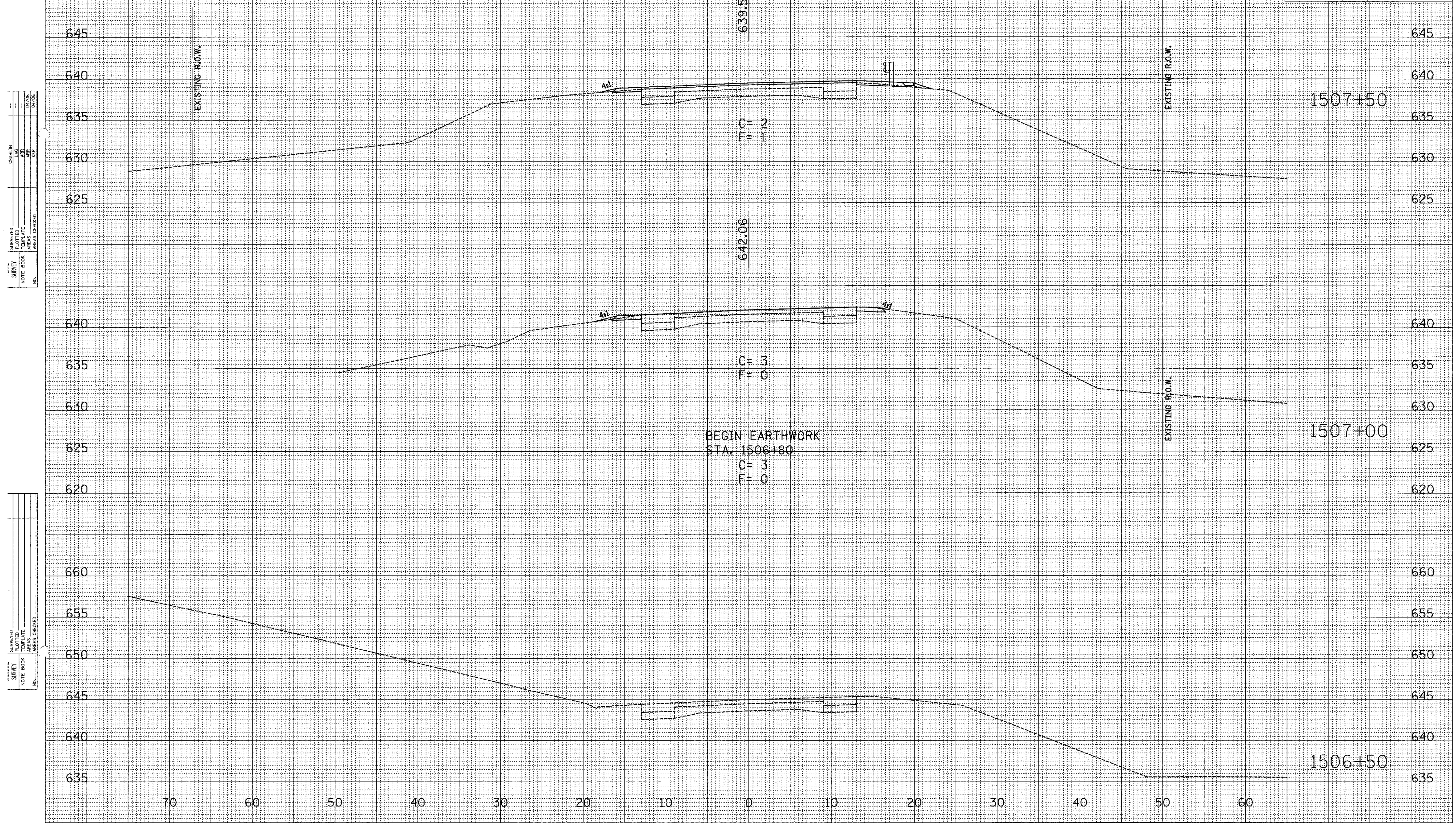
All dimensions are in millimeters (inches) unless otherwise shown.

TYPICAL APPLICATION FOR ROAD CLOSURE

PLOT DATE = 4/1/99
FILE NAME = 702R903SPL
PLOT SCALE = 1" = 50'

CONTRACT NO. 64938

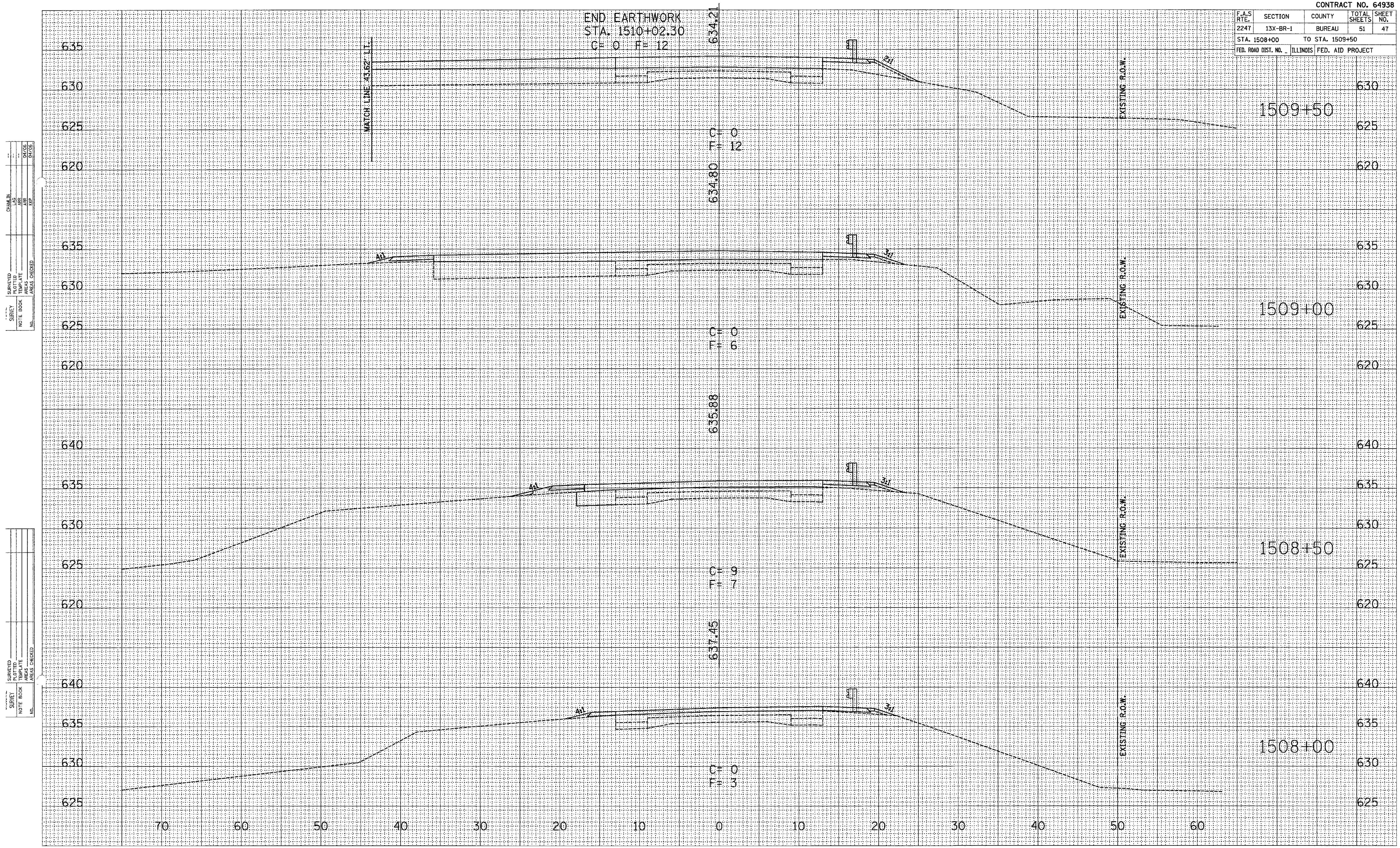
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	46
STA. 1506+50	TO STA. 1507+50			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



FAS 2247 (US 6)

CONTRACT NO. 64938

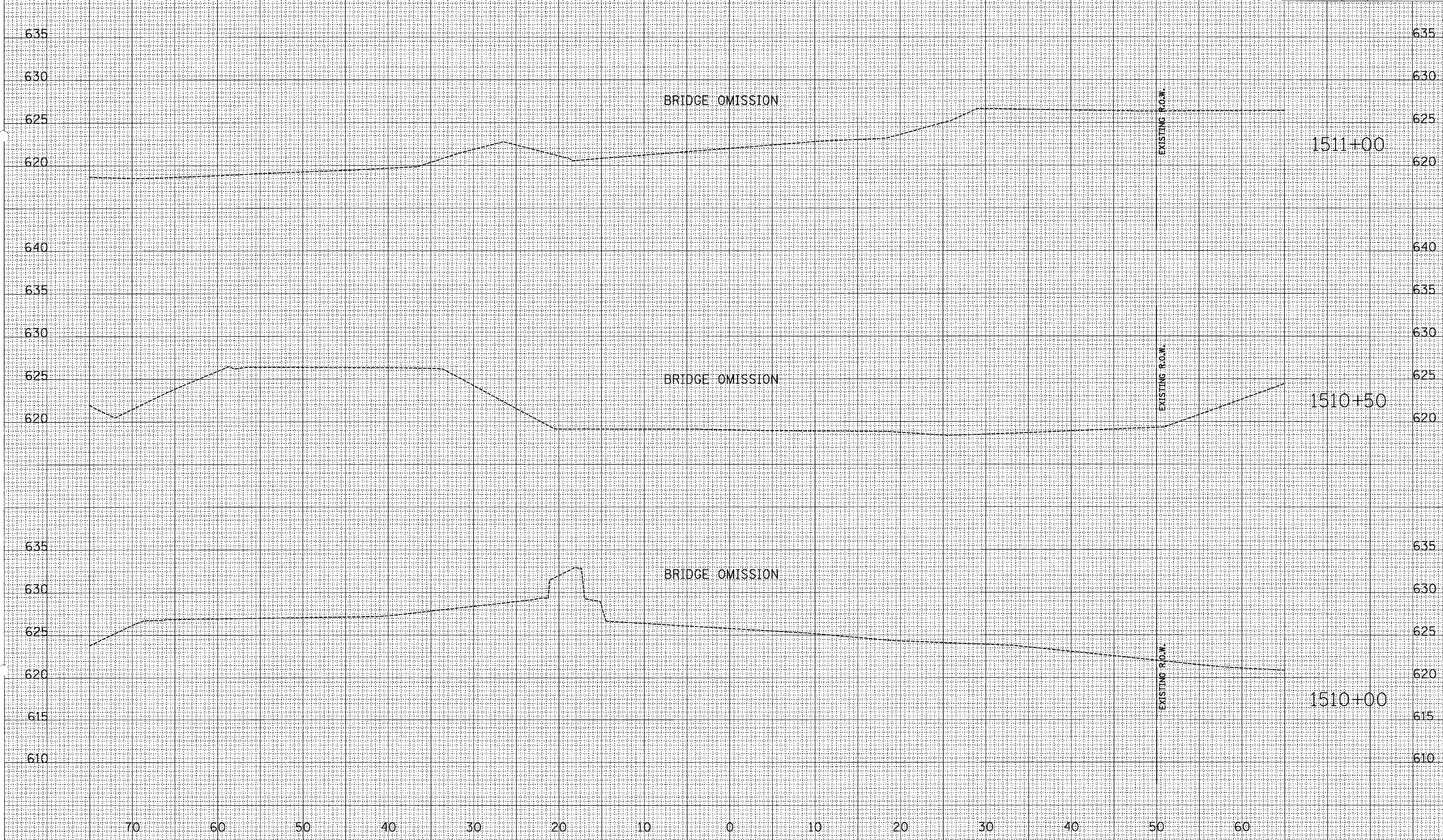
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	47
STA. 1508+00	TO STA. 1509+50			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



FAS 2247 (US 6)

CONTRACT NO. 64938

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	48
STA. 1510+00	TO STA. 1511+00			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



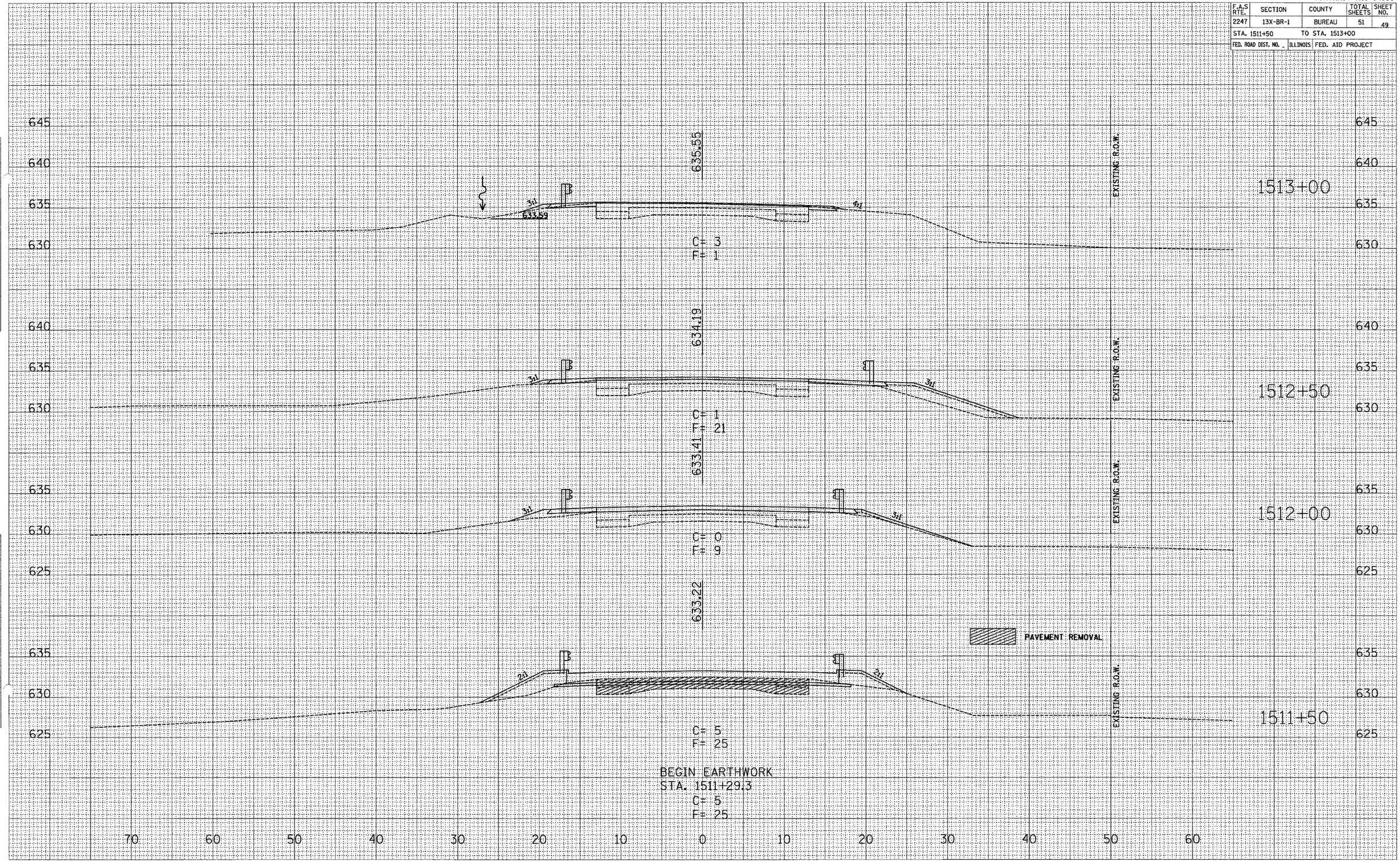
FAS 2247 (US 6)

CONTRACT NO. 64938

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	49
STA. 1511+50	TO STA. 1513+00			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

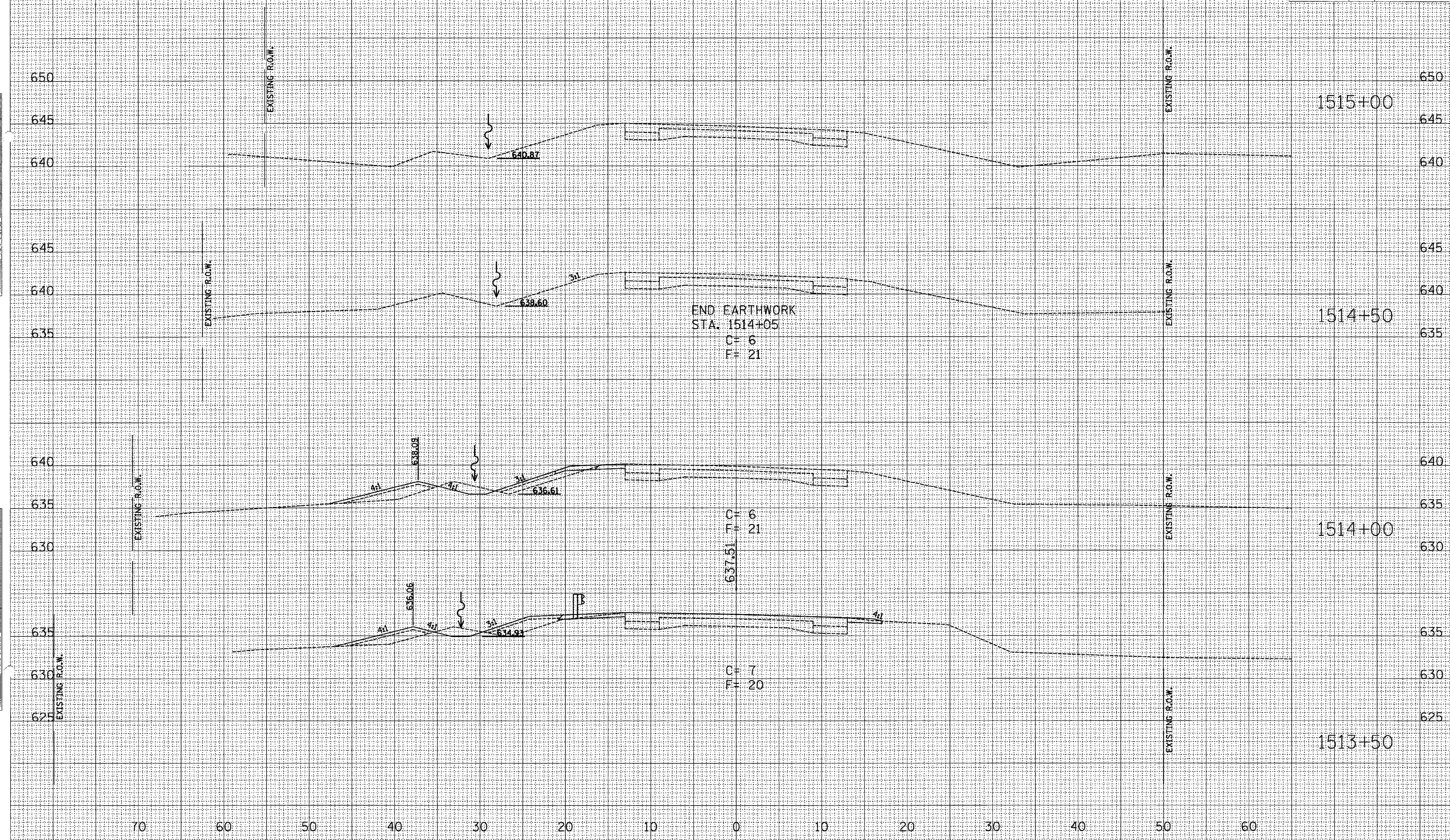
SURVEY	SURVEYED	CHALKIN	--
	PLOTTED	AS	--
NOTE BOOK	TEMPLATE	ARR	6/4/06
	AREAS	ARR	6/4/06
NO.	AREAS CHECKED	MWH	6/4/06

SURVEY	SURVEYED	
	PLOTTED	
NOTE BOOK	TEMPLATE	
	AREAS	
NO.	AREAS CHECKED	



CONTRACT NO. 64938

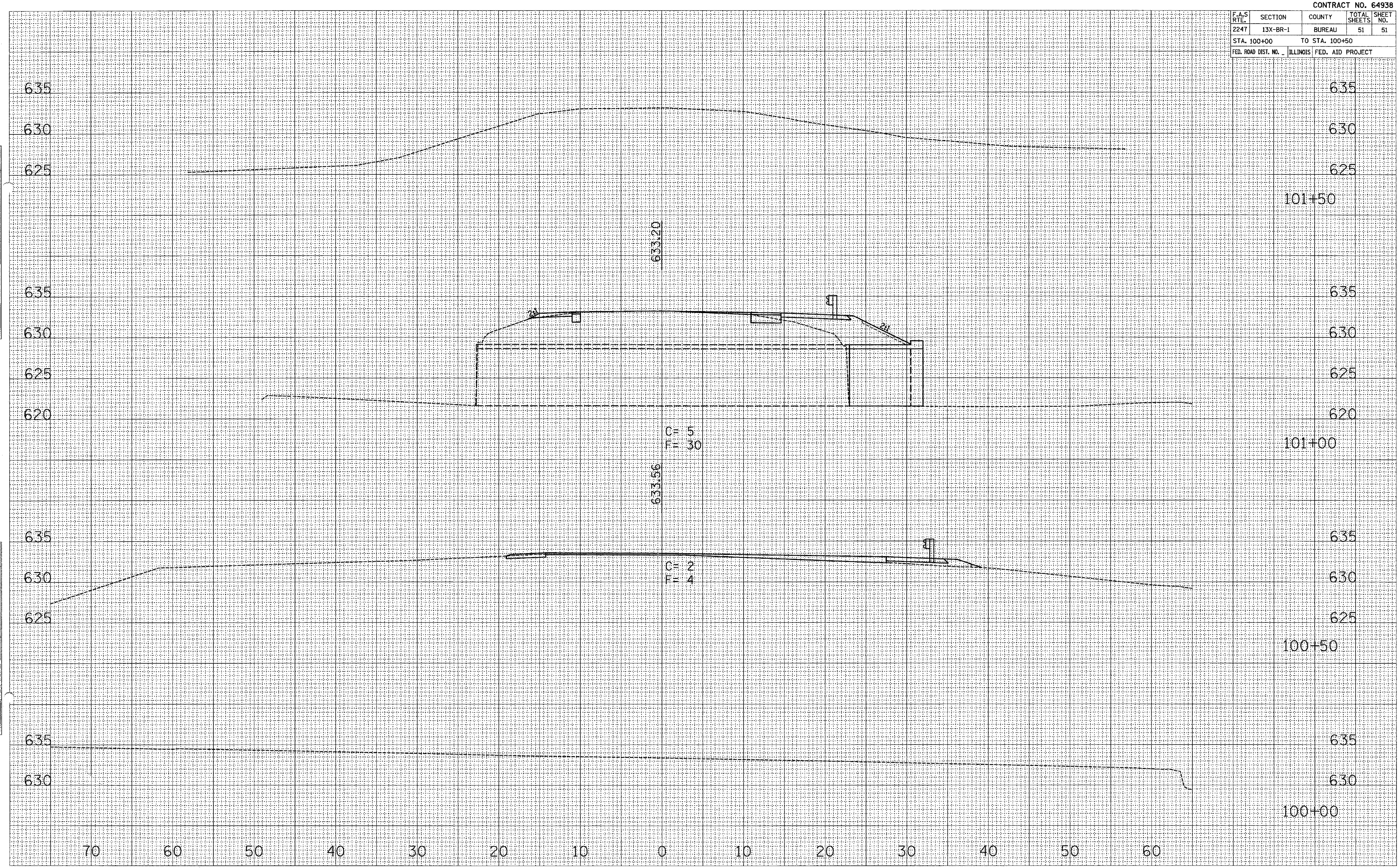
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	50
STA. 1513+50	TO STA. 1515+00			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



FAS 2247 (US 6)

CONTRACT NO. 64938

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2247	13X-BR-1	BUREAU	51	51
STA. 100+00	TO STA. 100+50			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



COUNTY HIGHWAY 19