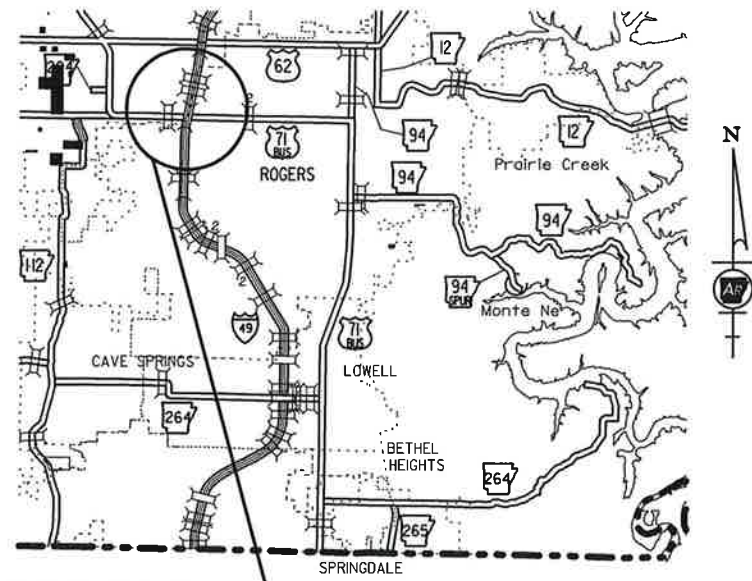


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
06-20-18				6	ARK.			
				JOB NO.	BB0903		1	368

"A FULLY CONTROLLED ACCESS FACILITY"
 ARKANSAS DEPARTMENT OF TRANSPORTATION
 CONSTRUCTION PLANS FOR STATE HIGHWAY



PROJECT LOCATION VICINITY MAP



ARK. HWY. DIST. NO. 9

HWY. 71B INTCHNG. IMPVTS. (S)

BENTON COUNTY
 ROUTE 49 SECTION 29

JOB BB0903

FED. AID PROJ. NHPP-540-1(78)85

• DESIGN TRAFFIC DATA •

	I-49	HWY. 71B
DESIGN YEAR	2038	2038
2018 ADT	73,620	39,000
2038 ADT	122,800	55,000
2038 DHV	13,508	6,050
DIRECTIONAL DISTRIBUTION	60%	60%
TRUCKS	13%	3%
DESIGN SPEED	70 MPH	45/35 MPH

STA. 1245+06.39 @ I-49 =
 LOG MILE 84.34

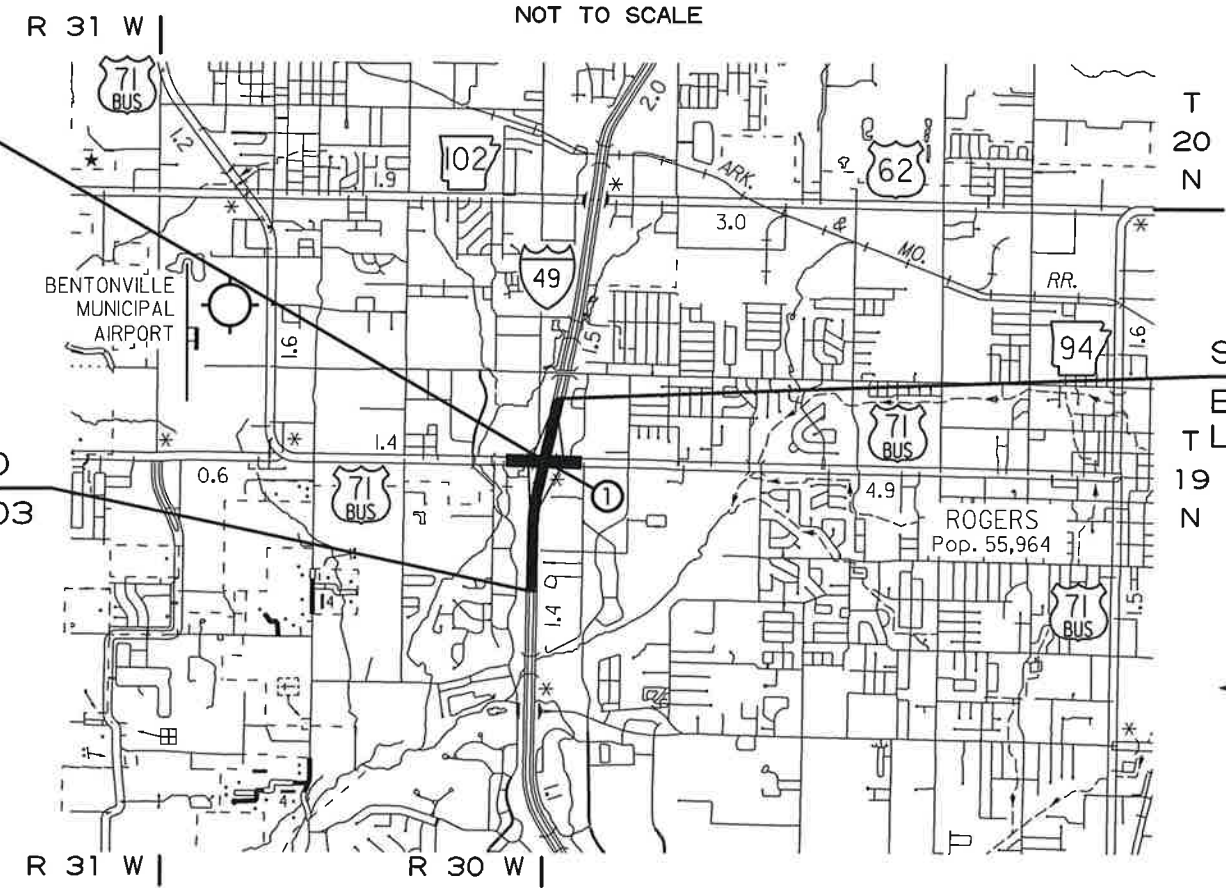
STA. 107+80.90 @ CONST. HWY. 71B

BRIDGE DATA

- ① STA. 1243+86.33 - BRIDGE END
 BR. NO. 07405
 237'-0" SIMPLE COMPOSITE
 PLATE GIRDER SPAN
 126'-0" CLEAR ROADWAY
 239'-2 1/2" BRIDGE LENGTH
 STA. 1246+25.54 - BRIDGE END

STA. 1208+90.00
 BEGIN JOB BB0903
 LOG MILE 83.66

STA. 1264+00.00
 END JOB BB0903
 T LOG MILE 84.56



LENGTH COMPUTED ALONG CENTERLINE OF I-49

	5510.00	FEET	OR	1.043	MILES
GROSS LENGTH OF PROJECT	5510.00			1.043	
NET " " ROADWAY	5270.79			0.998	
NET " " BRIDGES	239.21			0.045	
NET " " PROJECT	5510.00			1.043	

BEGINNING OF PROJECT	MID-POINT OF PROJECT	END OF PROJECT
LAT. = N 36°19'31"	LAT. = N 36°19'58"	LAT. = N 36°20'24"
LONG. = W 94°11'05"	LONG. = W 94°11'03"	LONG. = W 94°10'55"



P.E. BB0903

USER: mh514
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		2	368
				JOB NO.	BB0903		2	368

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2	INDEX OF SHEETS AND STANDARD DRAWINGS		
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES		
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178	DETAILS OF MSE RETAINING WALLS (SHEET 2 OF 3)	07405	59349
179	DETAILS OF MSE RETAINING WALLS (SHEET 3 OF 3)	07405	59350
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181	DETAILS OF STAGE CONSTRUCTION BRIDGE OVER HWY. 71B (SHEET 2 OF 3)	07405	59352
182	DETAILS OF STAGE CONSTRUCTION BRIDGE OVER HWY. 71B (SHEET 3 OF 3)	07405	59353
183	DETAILS OF STATE OF ARKANSAS FORM INSERT	07405	59354
184	DETAILS OF END BENT 1 & 2 (SHEET 1 OF 2)	07405	59355
185	DETAILS OF END BENT 1 & 2 (SHEET 2 OF 2)	07405	59356
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187	DETAILS OF 237'-0" SIMPLE COMPOSITE PLATE GIRDER SPAN (SHEET 1 OF 10)	07405	59358
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195	DETAILS OF 237'-0" SIMPLE COMPOSITE PLATE GIRDER SPAN (SHEET 9 OF 10)	07405	59366
196	DETAILS OF 237'-0" SIMPLE COMPOSITE PLATE GIRDER SPAN (SHEET 10 OF 10)	07405	59367
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200	DETAILS OF SIGNAL SUPPORTS (SHEET 1 OF 3)	07405	59371
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202	DETAILS OF SIGNAL SUPPORTS (SHEET 3 OF 3)	07405	59373
203 - 368	CROSS SECTIONS		

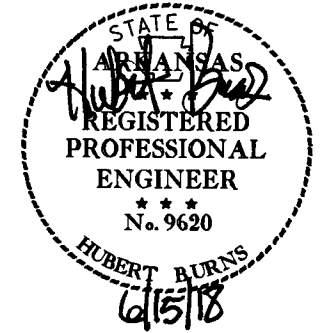
NOTE: CROSS SECTIONS NOT NORMALLY INCLUDED IN PLANS SOLD TO PROSPECTIVE BIDDERS, BUT MAY BE HAD UPON REQUEST.

BRIDGE STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
55000	STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS	02-27-14
55001	STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES	02-27-14
55002	STANDARD DETAILS FOR CONCRETE RIPRAP	02-27-14
55005	STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS	03-24-16
55007	STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES	02-11-16
55009	STANDARD DETAILS FOR NEOPRENE STRIP SEAL JOINTS	02-11-16
55010	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE	01-17-17
55020	STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS	03-24-16

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	02-27-14
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9D	DETAILS OF DROP INLETS	08-22-02
FPC-9E	DETAILS OF DROP INLETS (TYPE C)	08-22-02
FPC-9M	DETAILS OF DROP INLET (TYPE MO)	08-22-02
FPC-9N	DETAILS OF DROP INLETS AND SPILLWAY OUTLET	07-02-98
FPC-9S	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	07-26-12
GR-8	GUARD RAIL DETAILS	11-16-17
GR-8A	GUARD RAIL DETAILS	11-16-17
GR-9	GUARD RAIL DETAILS	04-17-08
GR-9A	GUARD RAIL DETAILS	04-17-08
GR-10	GUARD RAIL DETAILS	11-16-17
GR-11	GUARD RAIL DETAILS	11-16-17
GR-12	GUARD RAIL DETAILS	11-16-17
GRT-1	GUARD RAIL DETAILS	11-16-17
IB-1	IMPACT ATTENUATION BARRIERS	10-15-09
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PM-1	PAVEMENT MARKING DETAILS	06-01-17
PM-2	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS	12-08-16
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
SD-5	CONTROLLER CABINET UTILITY DRAWER	09-12-13
SD-6	HEAVY DUTY PULL BOX	11-16-17
SD-7	SPAN WIRE ASSEMBLY WOOD POLE	11-16-17
SD-8	SIGNAL HEAD PLACEMENT	12-08-16
SD-9	SERVICE POINT	11-16-17
SD-11	STEEL POLE WITH MAST ARM	11-16-17
SE-1	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC	01-09-87
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	10-18-96
SES-1	SAFETY END SECTION FOR CIRCULAR AND ARCH PIPES	10-18-96
SHS-1	STANDARD HIGHWAY SIGNS AND SUPPORTS ASSEMBLIES	09-12-13
SHS-2	U-CHANNEL POST ASSEMBLIES	02-27-14
SHS-3	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS	09-12-13
SHS-4	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS	09-12-13
SHS-5	DETAILS OF GUIDE SIGN PANELS	09-12-13
SHS-6	MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS	09-12-13
SHS-7	DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS	09-12-13
SHS-8	TYPICAL DELINEATOR PLACEMENT ALONG THE INTERSTATE SYSTEM	11-16-17
SI-1	DETAILS OF SPECIAL ITEMS	09-12-13
SI-2	DETAILS OF SPECIAL ITEMS	05-12-16
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-13-17
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-4	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	02-27-14
TC-5	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	10-15-09
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-2	TEMPORARY EROSION CONTROL DEVICES	06-02-94
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94
TEC-4	TEMPORARY EROSION CONTROL DEVICES	07-26-12
TR-1A	DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)	08-22-02
WF-1	WIRE FENCE TYPE A AND B	08-22-02
WR-1	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	11-10-05



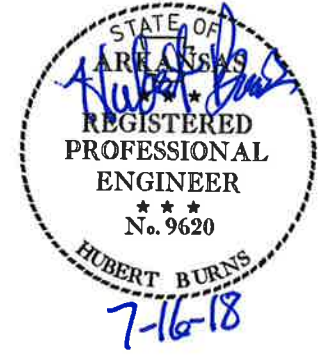
INDEX OF SHEETS & STANDARD DRAWINGS

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
06-20-18				6	ARK.			
07-05-18								
07-16-18								
				JOB NO.		BB0903	3	368

2 GOVERNING SPECIFICATIONS & GENERAL NOTES



NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - TRAINING PROGRAM - JOB BB0903
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
505-1	PORTLAND CEMENT CONCRETE DRIVEWAY
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
605-1	CONCRETE DITCH PAVING
617-1	GUARDRAIL TERMINAL (TYPE 2)
620-1	MULCH COVER
621-1	FILTER SOCKS
632-1	CONCRETE ISLAND
633-1	CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
634-1	CURBING
JOB BB0903	ACCESSIBLE PEDESTRIAN SIGNAL (APS)
JOB BB0903	ACTUATED CONTROLLER
JOB BB0903	ARCHITECTURAL FINISH
JOB BB0903	ASSESSMENT OF WORKING DAYS - MAINTENANCE OF TRAFFIC
JOB BB0903	BIDDING REQUIREMENTS AND CONDITIONS
JOB BB0903	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB BB0903	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB BB0903	CABINET DRAWER ASSEMBLY
JOB BB0903	CARGO PREFERENCE ACT REQUIREMENTS
JOB BB0903	CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB BB0903	COMMUNICATON CABLE - FIBER
JOB BB0903	CONCRETE BARRIER WALL
JOB BB0903	CONCRETE WALKS (TYPE SPECIAL)
JOB BB0903	COORDINATION OF WORK
JOB BB0903	DELAY IN RIGHT OF WAY OCCUPANCY
JOB BB0903	DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB BB0903	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB BB0903	EDGE CARD VIDEO PROCESSOR
JOB BB0903	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB BB0903	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB BB0903	EMERGENCY BATTERY BACKUP SYSTEM INSTALLATION
JOB BB0903	EMPLOYMENT REPORTING
JOB BB0903	ENHANCED THERMOPLASTIC PAVEMENT MARKING
JOB BB0903	EXTENSION FOR PIPE CULVERTS
JOB BB0903	FIBERGLASS CONDUIT
JOB BB0903	FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT
JOB BB0903	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB BB0903	IP VIDEO DETECTION SYSTEM
JOB BB0903	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB BB0903	LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)
JOB BB0903	LED TRAFFIC SIGNAL HEAD
JOB BB0903	LIQUID ANTI-STRIPPING ADDITIVE
JOB BB0903	MAINTENANCE OF TRAFFIC
JOB BB0903	MANDATORY ELECTRONIC CONTRACT
JOB BB0903	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB BB0903	NESTING SITES OF MIGRATORY BIRDS
JOB BB0903	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT
JOB BB0903	OVERHEAD SIGN STRUCTURE FOUNDATION
JOB BB0903	PARTNERING REQUIREMENTS
JOB BB0903	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB BB0903	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB BB0903	PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB BB0903	PROTECTION OF WATER QUALITY AND WETLANDS

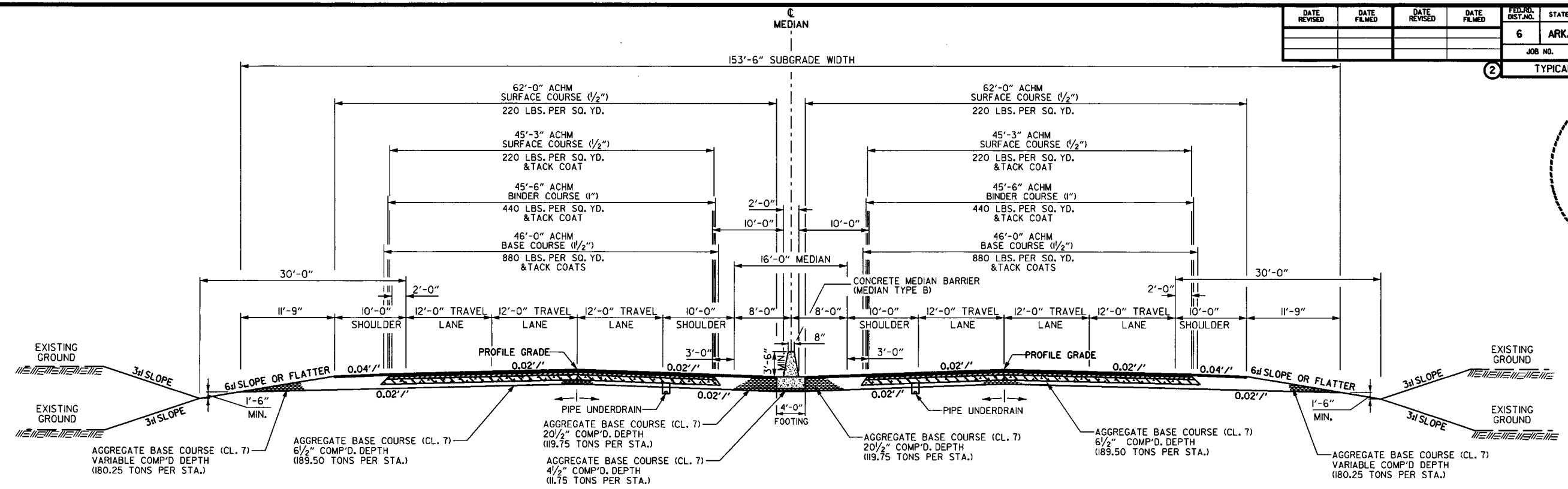
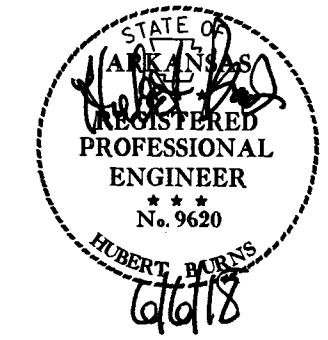
JOB BB0903	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB BB0903	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE
JOB BB0903	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB BB0903	RETAINING WALLS
JOB BB0903	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB BB0903	SHORING
JOB BB0903	SHORING FOR CULVERTS
JOB BB0903	SITE USE (A+B+C METHOD) - CALENDAR DAY CONTRACT
JOB BB0903	SOIL STABILIZATION
JOB BB0903	SPECIAL SAFETY REQUIREMENTS FOR BRIDGES
JOB BB0903	SPLICE CABINET INSTALLATION
JOB BB0903	STORM WATER POLLUTION PREVENTION PLAN
JOB BB0903	STREET NAME SIGN (MAST ARM MOUNTED)
JOB BB0903	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB BB0903	SYSTEM LOCAL CONTROLLER
JOB BB0903	SYSTEM LOCAL CONTROLLER (FIBER)
JOB BB0903	TEMPORARY RETAINING WALLS
JOB BB0903	TEXTURED COATING FINISH
JOB BB0903	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB BB0903	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)
JOB BB0903	TRENCHING AND SHOULDER PREPARATION FOR TEMPORARY WIDENING
JOB BB0903	UNDERPASS LUMINAIRE
JOB BB0903	UTILITY ADJUSTMENTS
JOB BB0903	VALUE ENGINEERING
JOB BB0903	VIDEO DETECTOR (COLOR)
JOB BB0903	VIDEO DETECTOR ROTATION
JOB BB0903	WARM MIX ASPHALT
JOB BB0903	WIC FIBER ENCLOSURE

GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	5	368	

2 TYPICAL SECTIONS OF IMPROVEMENT

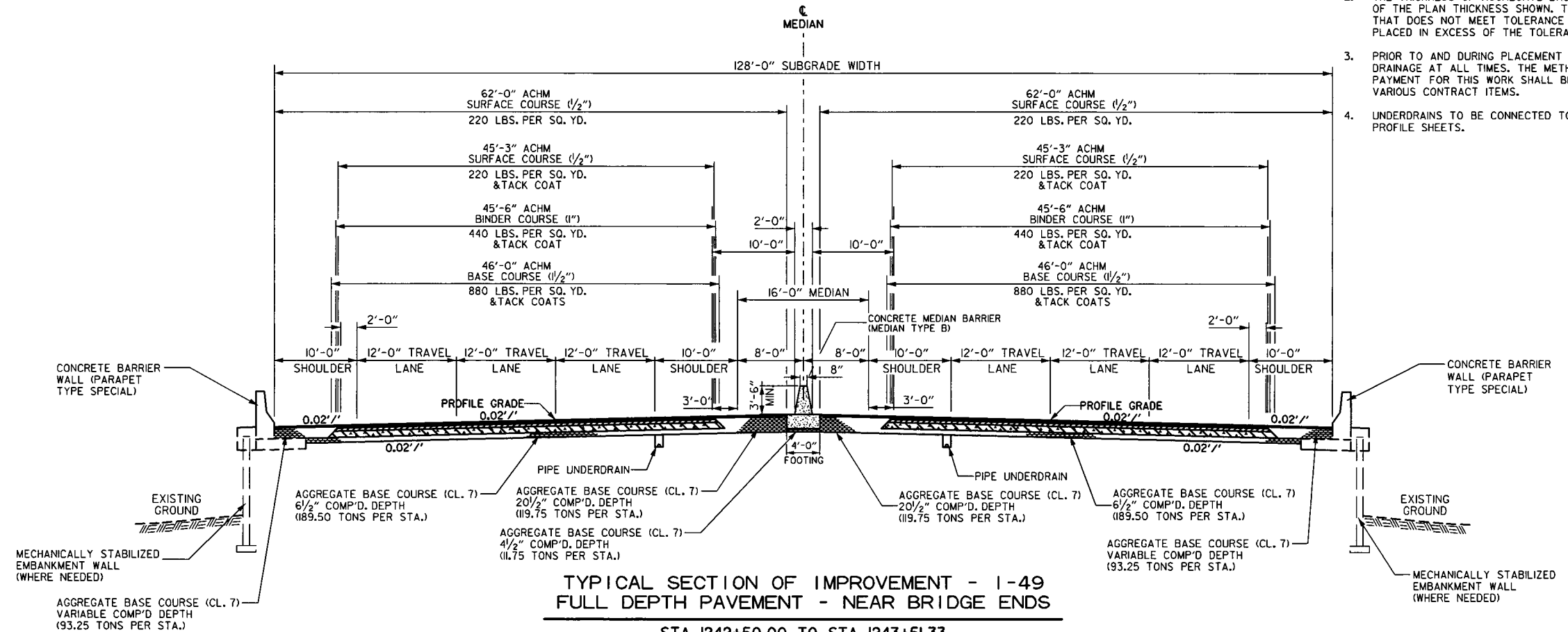


TYPICAL SECTION OF IMPROVEMENT - 1-49
FULL DEPTH PAVEMENT

STA. 1239+05.83 TO STA. 1242+50.00
STA. 1247+65.00 TO STA. 1257+00.00

TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
- PRIOR TO AND DURING PLACEMENT OF PAVEMENT, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
- UNDERDRAINS TO BE CONNECTED TO DROP INLETS AS SHOWN ON THE PLAN AND PROFILE SHEETS.



TYPICAL SECTION OF IMPROVEMENT - 1-49
FULL DEPTH PAVEMENT - NEAR BRIDGE ENDS

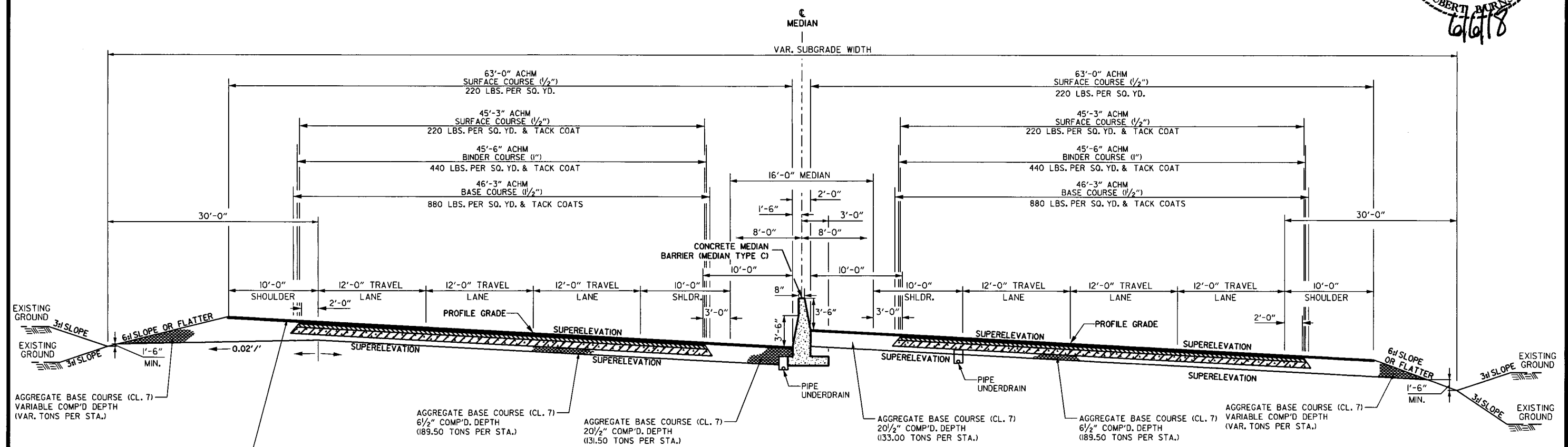
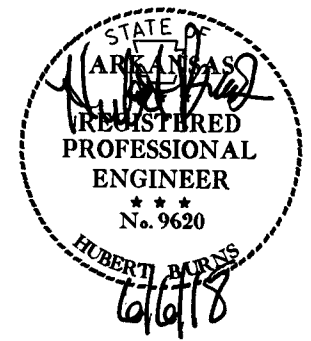
STA. 1242+50.00 TO STA. 1243+51.33
STA. 1246+60.54 TO STA. 1247+65.00

TYPICAL SECTIONS OF IMPROVEMENT

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		6	368

2 TYPICAL SECTIONS OF IMPROVEMENT



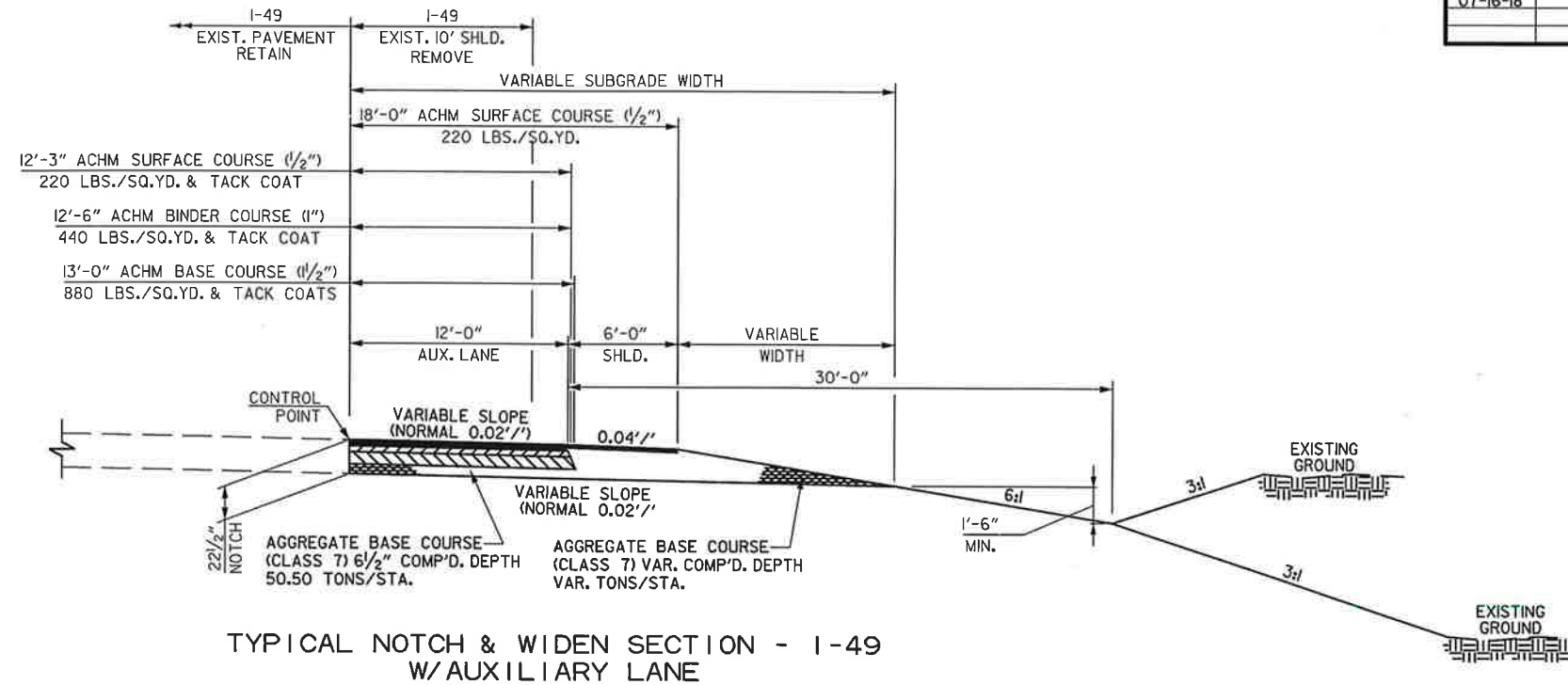
TYPICAL SECTION OF IMPROVEMENT - I-49
 SUPERELEVATION
 FULL DEPTH PAVEMENT
 STA. 1234+15.00 TO STA. 1239+05.83

- TYPICAL SECTION NOTES:
- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 - THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
 - PRIOR TO AND DURING PLACEMENT OF PAVEMENT, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
 - UNDERDRAINS TO BE CONNECTED TO DROP INLETS AS SHOWN ON THE PLAN AND PROFILE SHEETS.

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07-16-18				6	ARK.		7	368

2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL NOTCH & WIDEN SECTION - I-49
W/AUXILIARY LANE

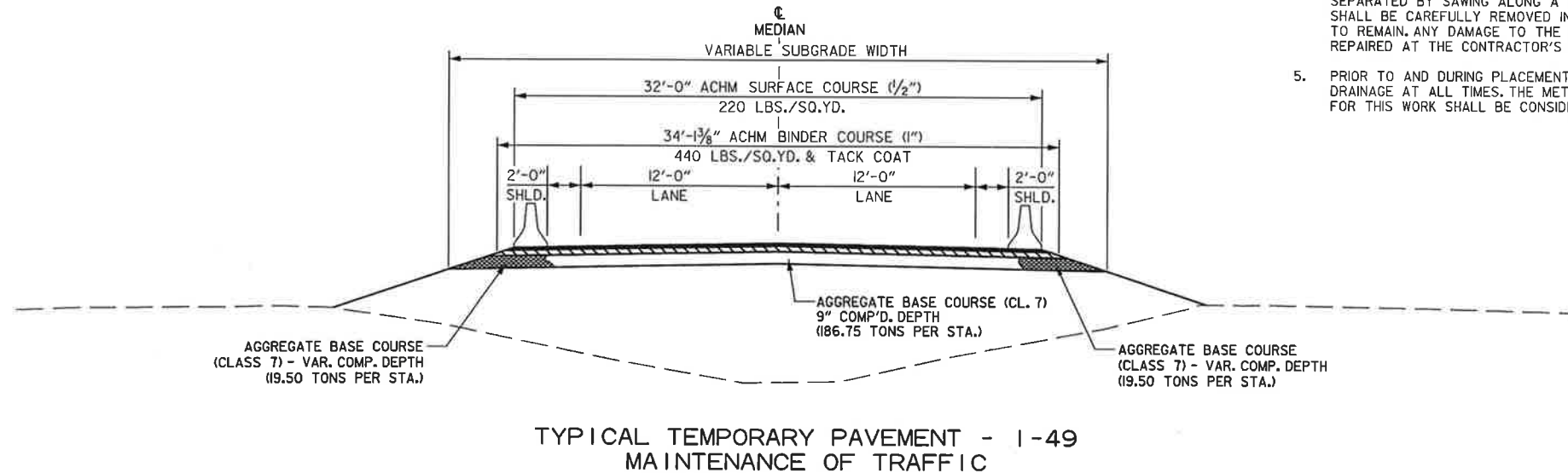
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 1211+90.00 TO STA. 1221+40.00 - AUXILIARY LANE (RAMP 4)
STA. 1224+40.00 TO STA. 1229+00.00 - AUXILIARY LANE (RAMP 4)
STA. 1260+00.00 TO STA. 1264+00.00 - AUXILIARY LANE (RAMP 2)

NOTE: TAPER FROM 0'-0" TO 12'-0" LANE FROM STA. 1208+90.00 TO 1211+90.00
TAPER FROM 12'-0" LANE TO 2-24'-0" LANES FROM STA. 1221+40.00 TO STA. 1224+40.00

TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
- THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE TO THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- PRIOR TO AND DURING PLACEMENT OF PAVEMENT, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



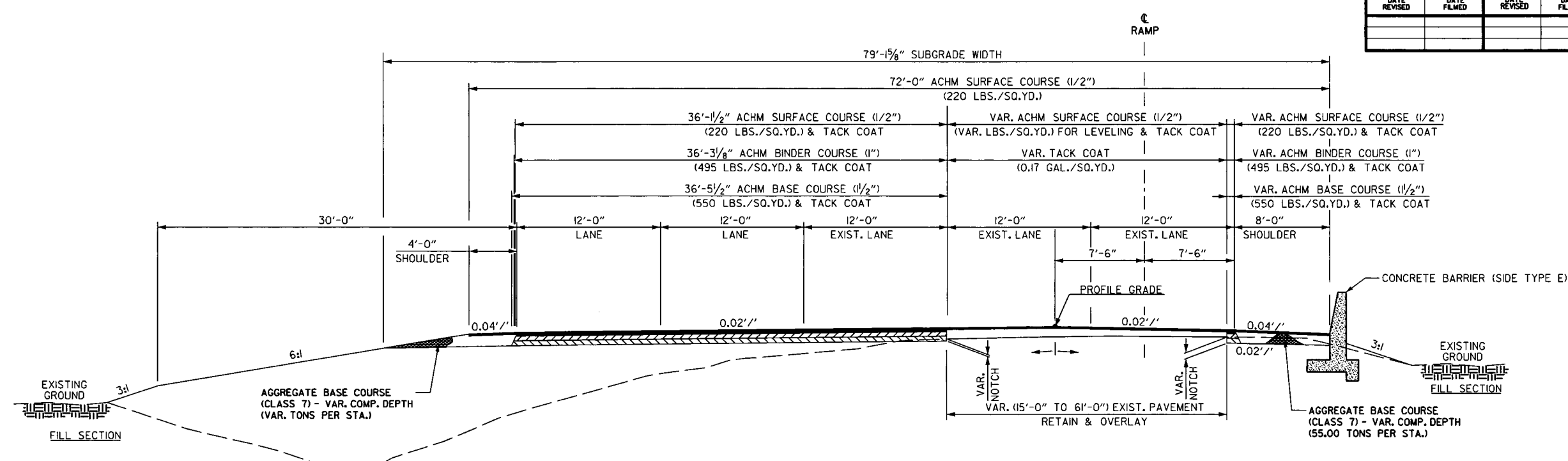
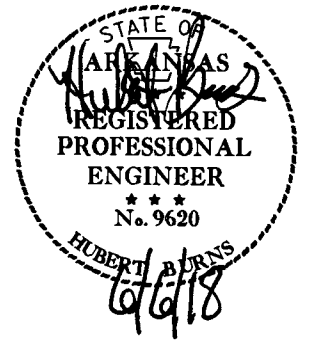
TYPICAL TEMPORARY PAVEMENT - I-49
MAINTENANCE OF TRAFFIC

(SHOWN IN DIRECTION OF TRAFFIC)

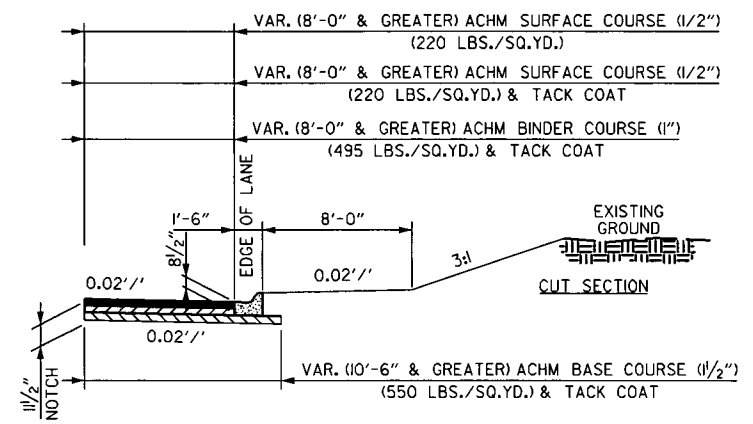
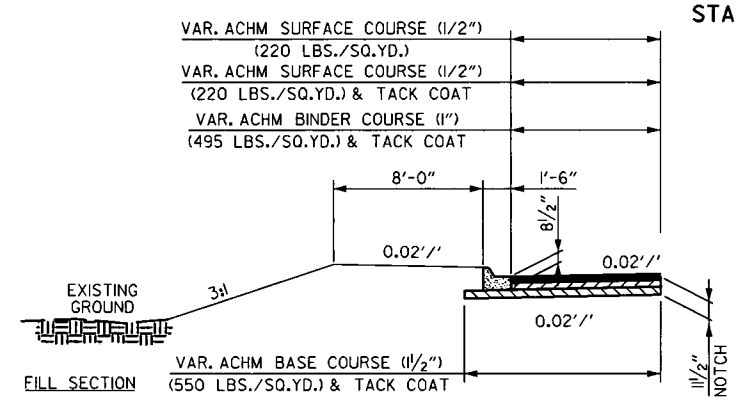
STA. 1229+00.00 TO STA. 1260+00.00 - I-49 (MOT STAGES 1B & 2)
STA. 941+37.02 TO STA. 949+50 - EXIST. RAMP 4 (MOT STAGES 1B & 2)
STA. 955+84.67 TO STA. 965+75.31 - EXIST. RAMP 3 (MOT STAGE 2)

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2 TYPICAL SECTIONS OF IMPROVEMENT

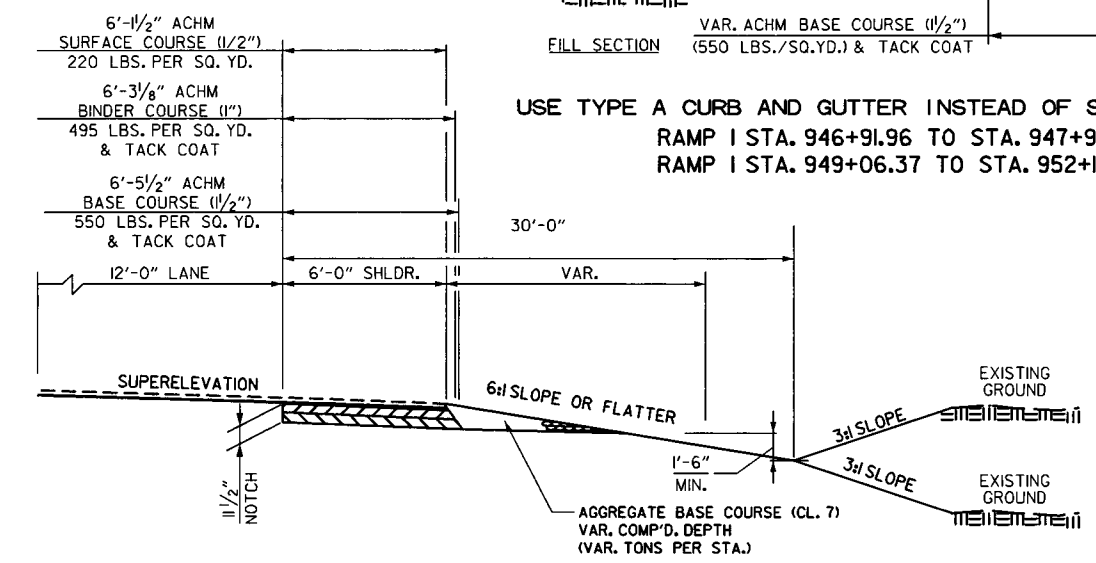


TYPICAL SECTION OF IMPROVEMENT - RAMP 1
NOTCH & WIDENING - OPEN SECTION
(SHOWN IN DIRECTION OF TRAFFIC)
STA. 941+05.00 TO STA. 952+08.63



USE TYPE A CURB AND GUTTER INSTEAD OF SHOULDER SECTION
RAMP I STA. 950+03.76 TO STA. 952+30.96 RT.

USE TYPE A CURB AND GUTTER INSTEAD OF SHOULDER SECTION
RAMP I STA. 946+91.96 TO STA. 947+91.99 LT.
RAMP I STA. 949+06.37 TO STA. 952+11.29 LT.



FULL DEPTH SHOULDER FOR MAINTENANCE OF TRAFFIC
(SHOWN IN THE DIRECTION OF TRAFFIC)
STA. 937+00.00 TO STA. 941+50.00 - RAMP I

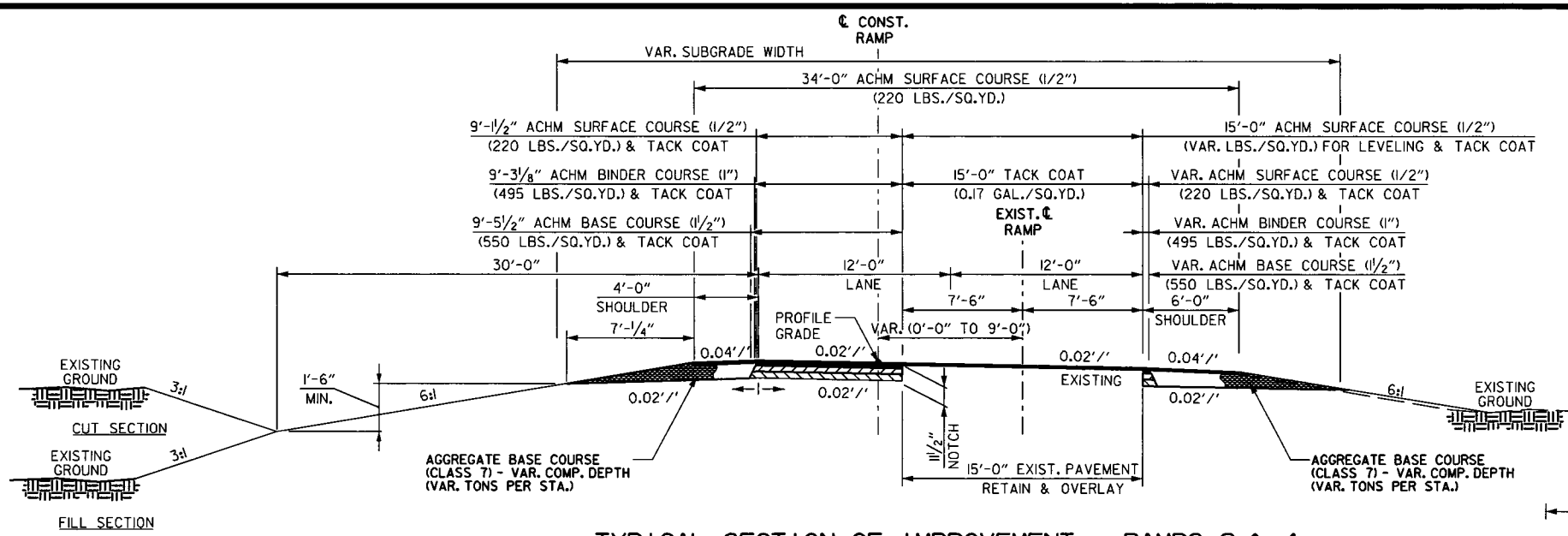
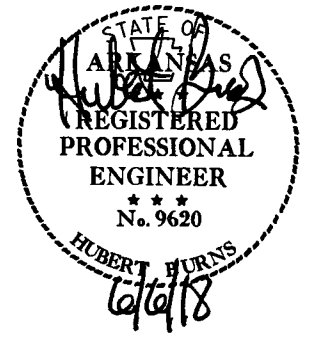
TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
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- PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB OR CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

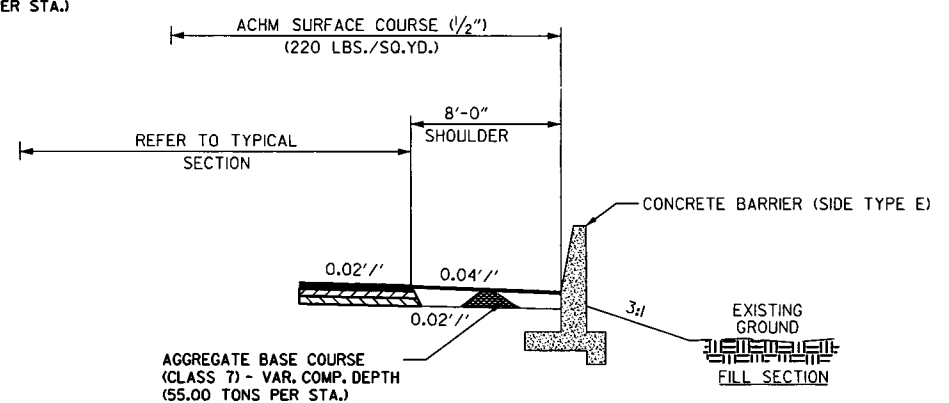
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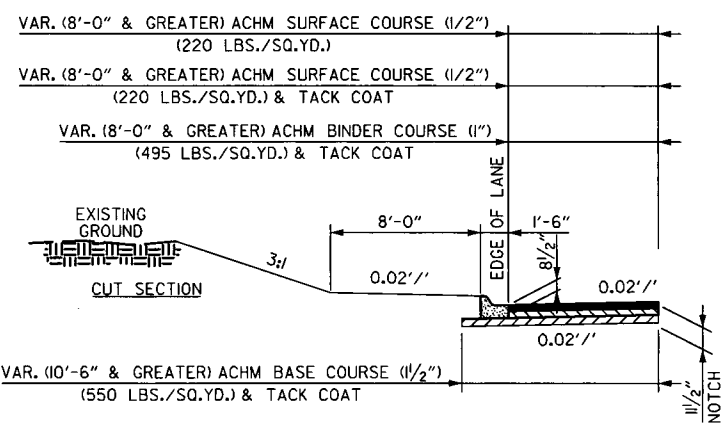
2 TYPICAL SECTIONS OF IMPROVEMENT



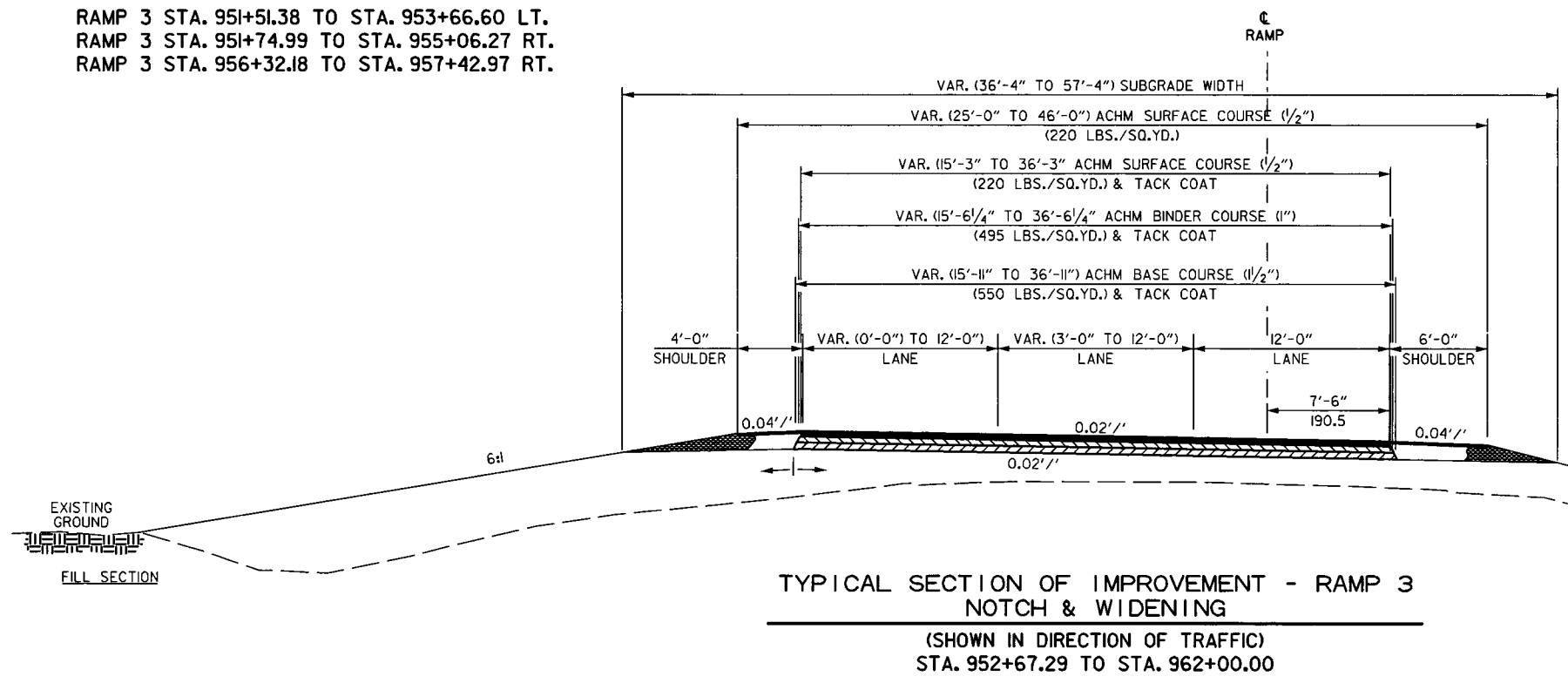
TYPICAL SECTION OF IMPROVEMENT - RAMP 2 & 4
NOTCH & WIDENING
 (SHOWN IN DIRECTION OF TRAFFIC)
 STA. 956+58.59 TO STA. 963+33.65 - RAMP 2
 STA. 941+10.00 TO STA. 947+66.23 - RAMP 4



USE CONCRETE BARRIER (SIDE TYPE E) INSTEAD OF SHOULDER SECTION
 RAMP 4 STA. 941+10.00 TO STA. 947+66.23 RT.



USE TYPE A CURB AND GUTTER INSTEAD OF SHOULDER SECTION
 RAMP 3 STA. 951+51.38 TO STA. 953+66.60 LT.
 RAMP 3 STA. 951+74.99 TO STA. 955+06.27 RT.
 RAMP 3 STA. 956+32.18 TO STA. 957+42.97 RT.



TYPICAL SECTION OF IMPROVEMENT - RAMP 3
NOTCH & WIDENING
 (SHOWN IN DIRECTION OF TRAFFIC)
 STA. 952+67.29 TO STA. 962+00.00

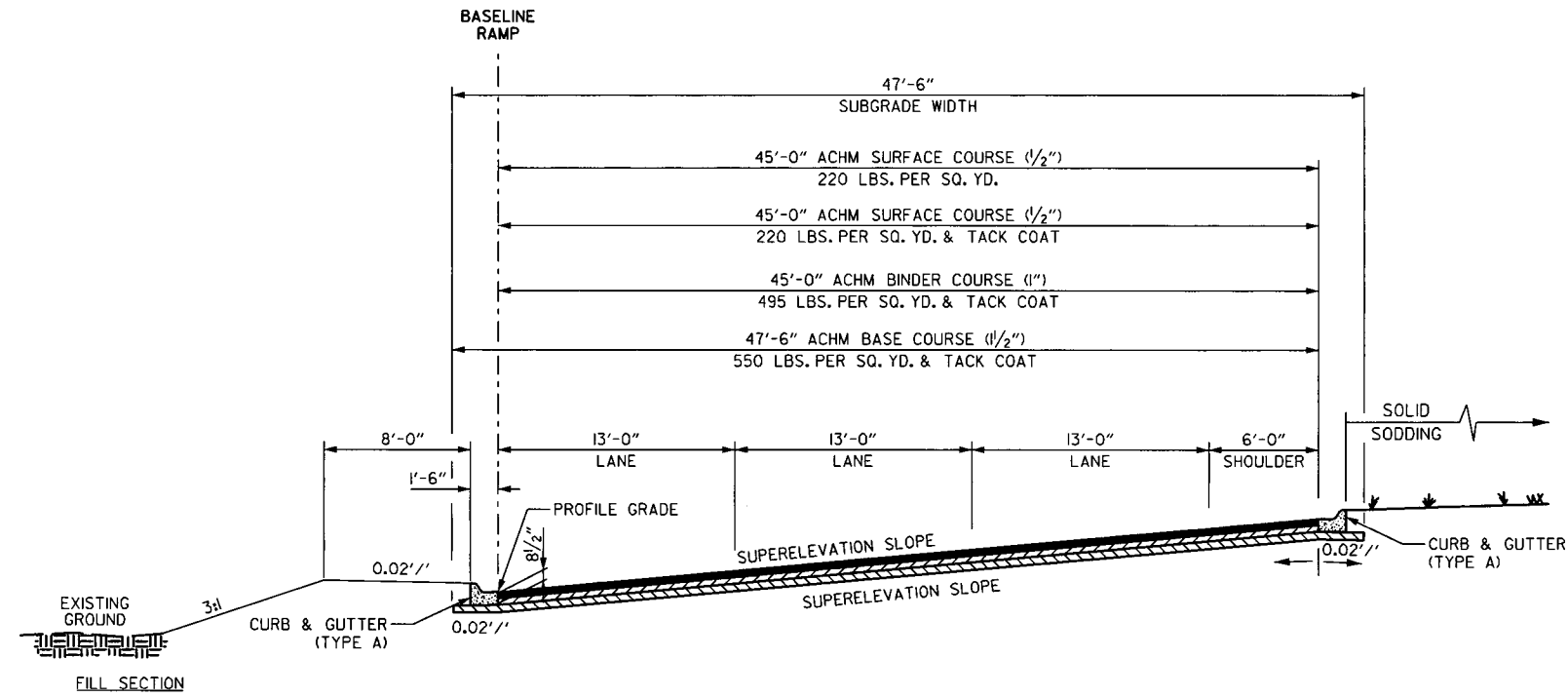
- TYPICAL SECTION NOTES:**
1. REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 2. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
 3. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
 4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE TO THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 5. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB OR CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

TYPICAL SECTIONS OF IMPROVEMENT

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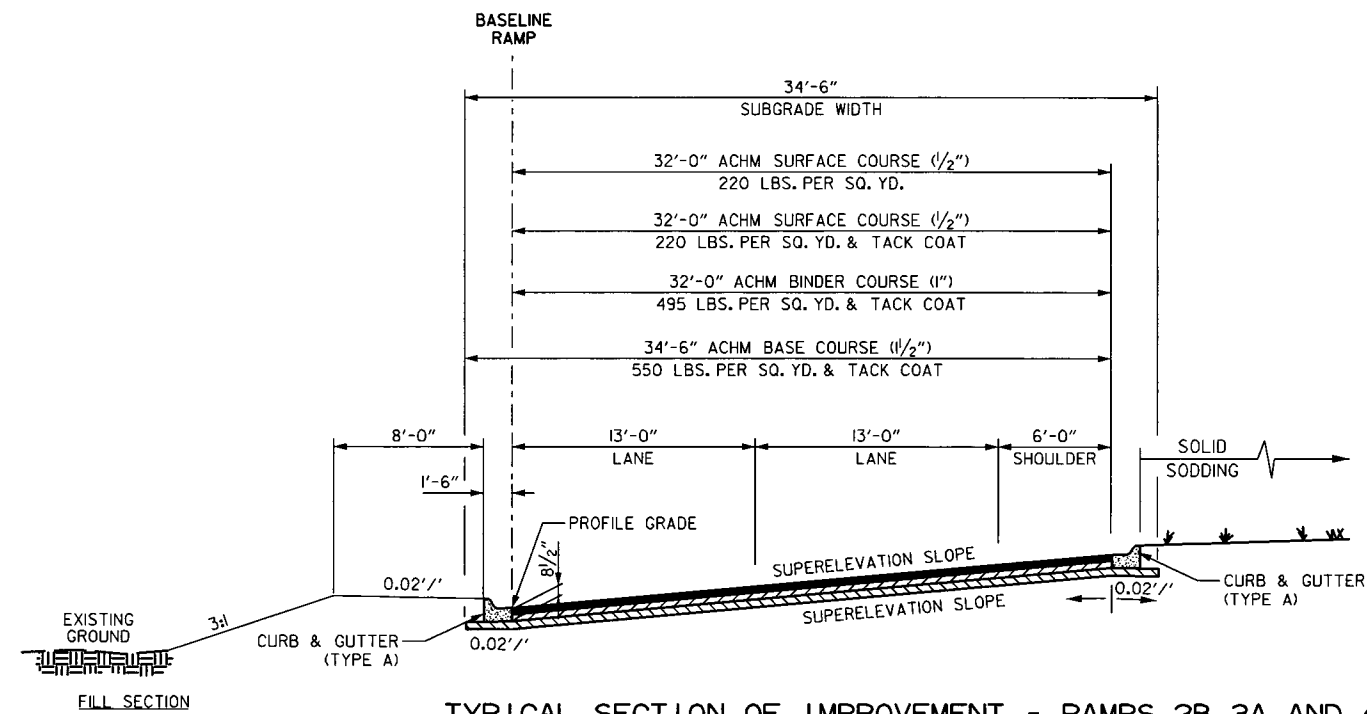
2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT - RAMP 1A
SINGLE POINT URBAN INTERCHANGE

(SHOWN IN DIRECTION OF TRAFFIC)

STA. 0+00.00 TO STA. 4+11.64



TYPICAL SECTION OF IMPROVEMENT - RAMPS 2B, 3A, AND 4A
SINGLE POINT URBAN INTERCHANGE

(SHOWN IN DIRECTION OF TRAFFIC)

STA. 0+00.00 TO STA. 4+44.68 - RAMP 2B

STA. 0+00.00 TO STA. 4+46.38 - RAMP 3A

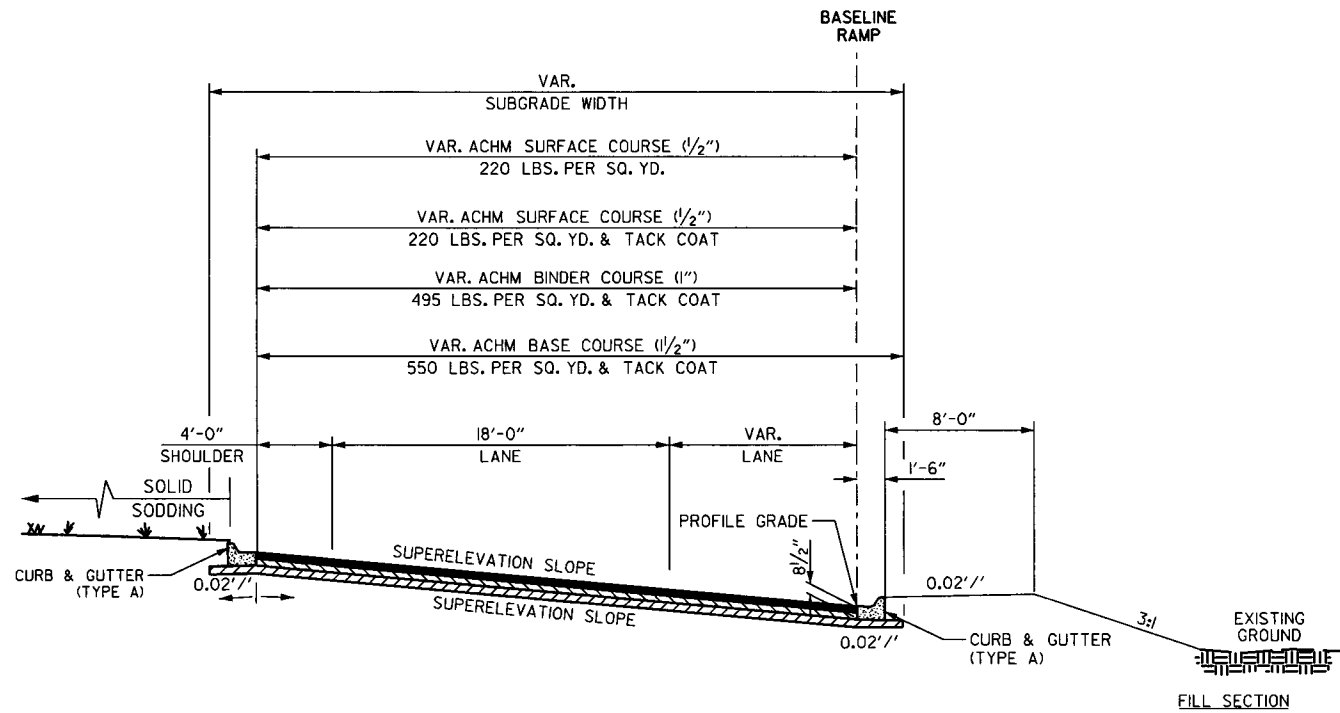
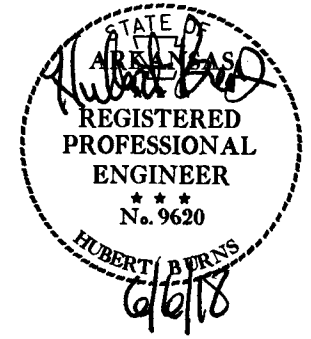
STA. 0+00.00 TO STA. 4+17.51 - RAMP 4A

TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
- PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB OR CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

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				JOB NO.	BB0903	II	368	

2 TYPICAL SECTIONS OF IMPROVEMENT



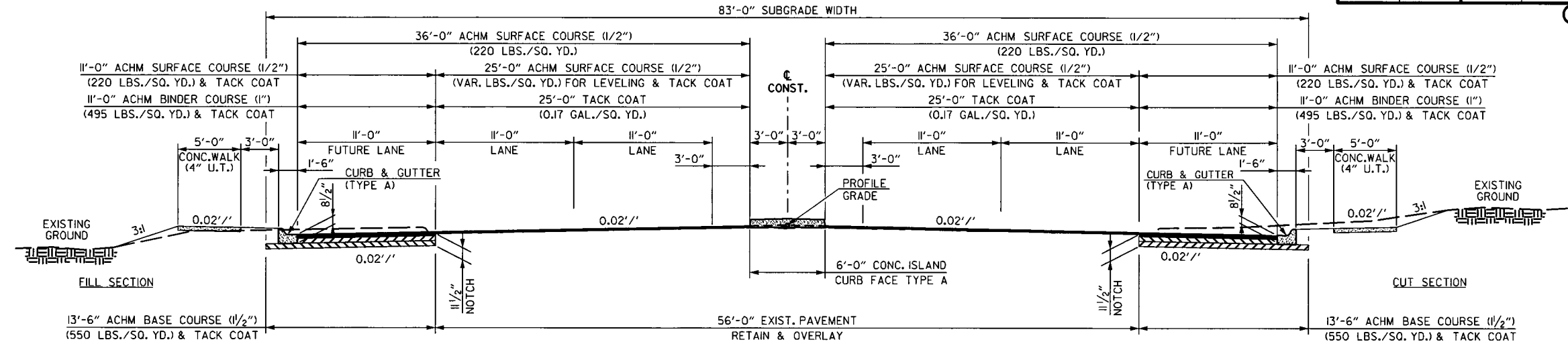
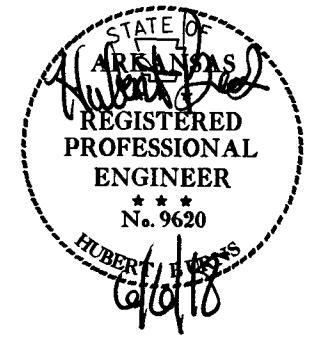
TYPICAL SECTION OF IMPROVEMENT - RAMPS 2A AND 4B
 SINGLE POINT URBAN INTERCHANGE
 (SHOWN IN DIRECTION OF TRAFFIC)
 STA. 0+00.00 TO STA. 2+64.13 - RAMP 2A
 STA. 0+00.00 TO STA. 2+55.74 - RAMP 4B

TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
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2 TYPICAL SECTIONS OF IMPROVEMENT



SIX LANES - HWY. 71B
NOTCH & WIDENING

STA. 92+43.00 TO STA. 94+62.78

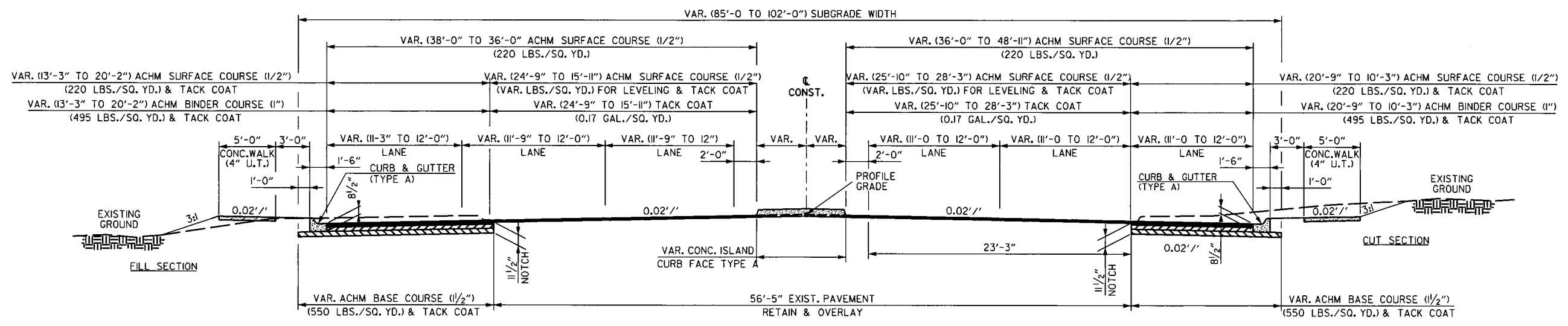
NOTE: TRANSITION FROM 2" MILL & INLAY AT STA. 92+43.00 TO 2" MIN. OVERLAY AT STA. 93+43.00.

TRANSITION FROM FOUR LANE SECTION (FUTURE SIX LANE SECTION) AT STA. 94+09.08 TO EIGHT LANE SECTION AT STA. 97+85.76. CONCRETE ISLAND CURB FACE TYPE A WIDTH VARIES FROM 6' MIN. TO 20'-6" MAX. BETWEEN STA. 94+39.88 TO 97+37.51.

FUTURE LANE RT. ENDS AT STA. 93+61.13
FUTURE LANE LT. BEGINS AT STA. 95+90.23

TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
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SIX LANES - HWY. 71B
NOTCH & WIDENING - OUTSIDE RAMPS

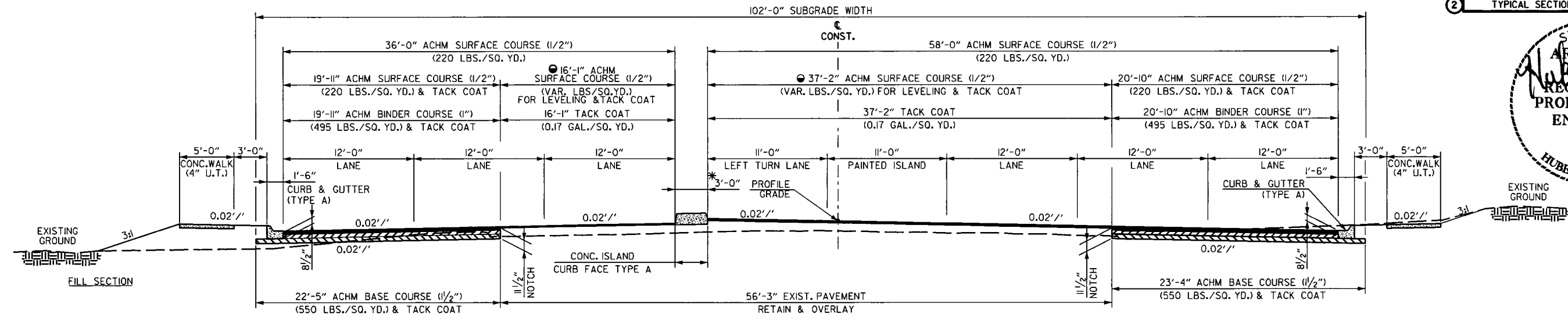
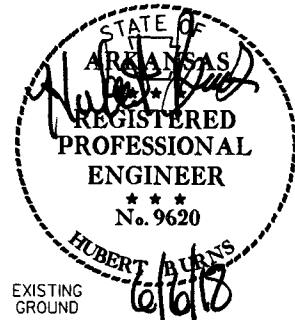
STA. 94+62.78 TO STA. 97+00.84

TYPICAL SECTIONS OF IMPROVEMENT

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				JOB NO.	BB0903	13	368	

2 TYPICAL SECTIONS OF IMPROVEMENT



**EIGHT LANES - HWY. 71B
NOTCH & WIDENING - NEAR 46TH ST. INTERSECTION
STA. 97+00.84 TO STA. 99+40.40**

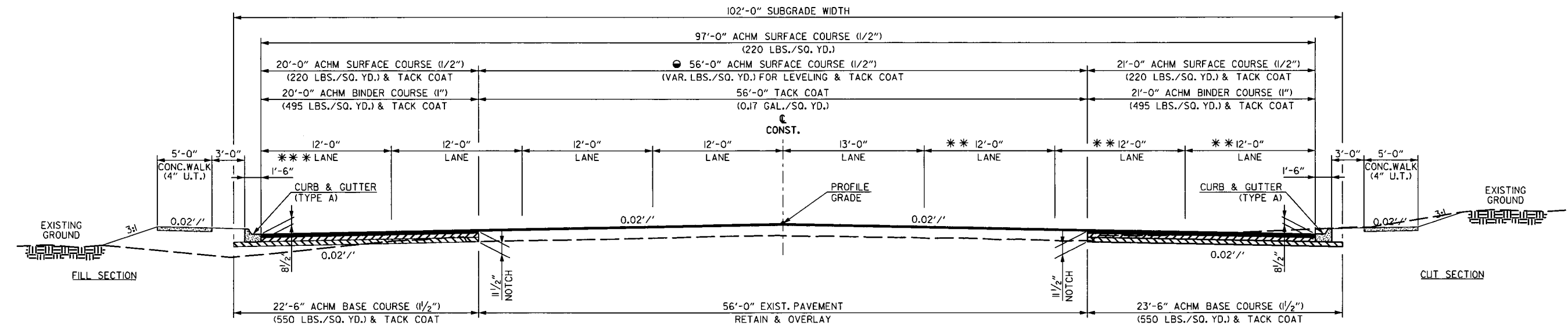
LEFT TURN LANE FROM STA. 97+88.90 TO STA. 99+38.99
PAINTED ISLAND FROM STA. 97+13.69 TO STA. 99+38.99

* STA. 97+00.84 TO 97+53.00 - WIDTH TRANSITION MEDIAN ISLAND FROM 12'-0" TO 3'-0"

● USE ACHM BINDER COURSE (1") FOR LEVELING FROM STATION 98+50.00 TO 106+15.08

TYPICAL SECTION NOTES:

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**EIGHT LANES - HWY. 71B
NOTCH & WIDENING - 46TH ST. INTERSECTION AND MOBERLY LANE
STA. 99+40.40 TO STA. 100+68.43
STA. 113+06.74 TO STA. 114+24.11**

** STA. 113+06.74 TO 114+24.11 MOBERLY LANE - LANE WIDTHS ARE VARIABLE WIDTHS FROM 12'-0" TO 13'-0"
*** STA. 113+06.74 TO 114+24.11 MOBERLY LANE - BECOMES RIGHT TURN LANE

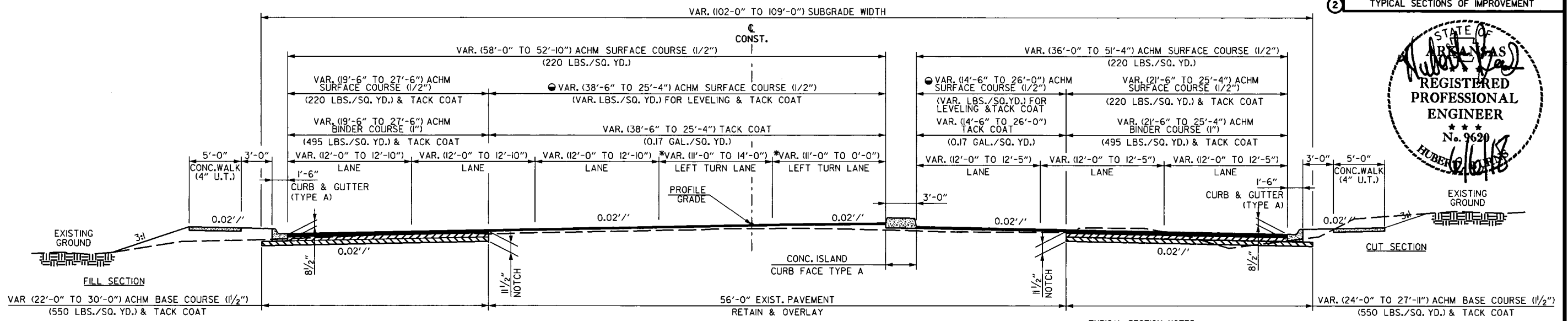
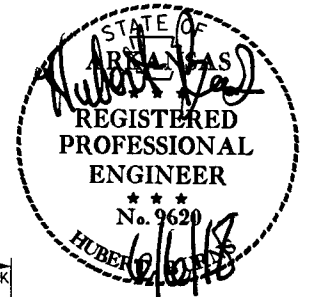
● USE ACHM BINDER COURSE (1") FOR LEVELING FROM STATION 98+50.00 TO 106+15.08

TYPICAL SECTIONS OF IMPROVEMENT

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				JOB NO.	BB0903	14	368	

2 TYPICAL SECTIONS OF IMPROVEMENT



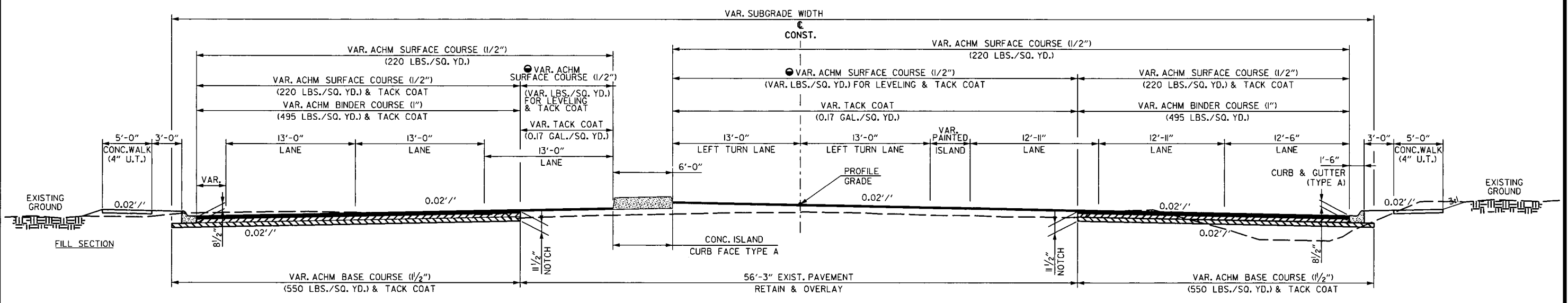
* DUAL LEFT TURN LANES FROM STA. 100+69.93 TO STA. 102+63.99

STA. 102+63.99 TO 103+10.00 - WIDTH TRANSITION MEDIAN ISLAND FROM 3'-0" TO 4'-4"

**EIGHT LANES - HWY. 71B
NOTCH & WIDENING - NEAR 46TH ST. INTERSECTION
STA. 100+68.43 TO STA. 103+10.00**

● USE ACHM BINDER COURSE (1") FOR LEVELING FROM STATION 98+50.00 TO 106+15.08

- TYPICAL SECTION NOTES:**
- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 - ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
 - THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
 - THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE TO THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 - PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB OR CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



● USE ACHM BINDER COURSE (1") FOR LEVELING FROM STATION 98+50 TO 106+15.08

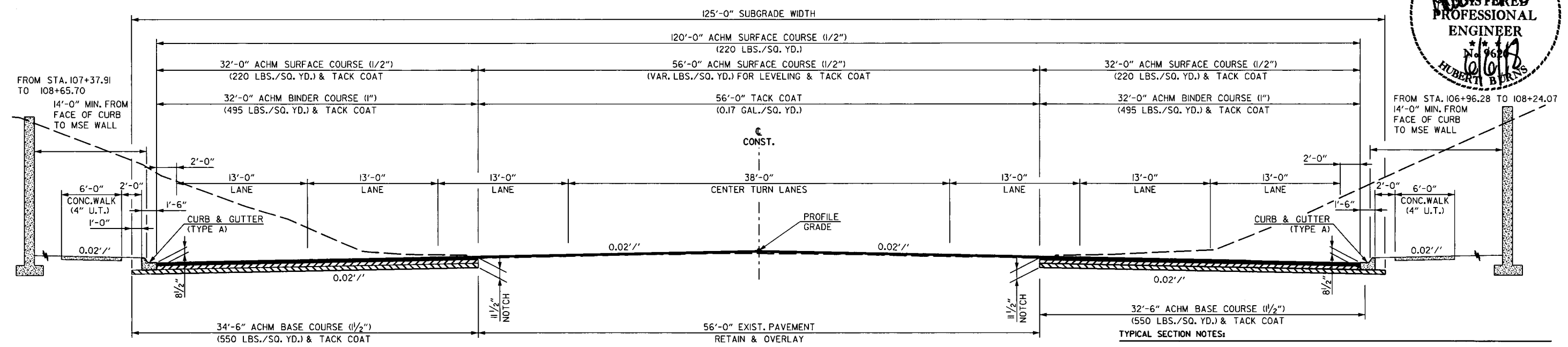
**EIGHT LANES - HWY. 71B - NOTCH & WIDENING
STA. 103+10.00 TO STA. 106+15.08**

TYPICAL SECTIONS OF IMPROVEMENT

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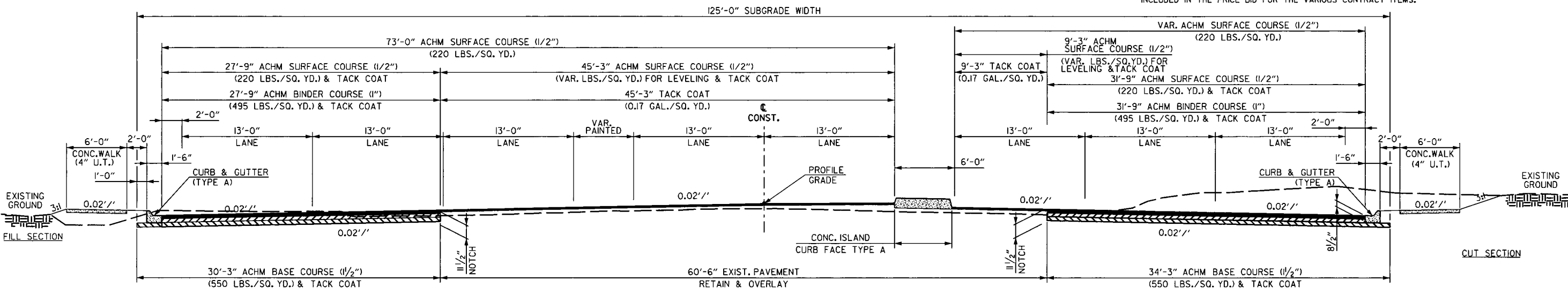
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				6	ARK.			
				JOB NO.	BB0903	15	368	

2 TYPICAL SECTIONS OF IMPROVEMENT



**TYPICAL SECTION OF IMPROVEMENT
EIGHT LANES - HWY. 71B
UNDER BRIDGE
NOTCH & WIDENING
STA. 106+15.08 TO STA. 109+50.44**

- TYPICAL SECTION NOTES:**
- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 - ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
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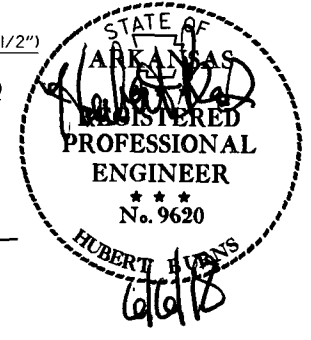
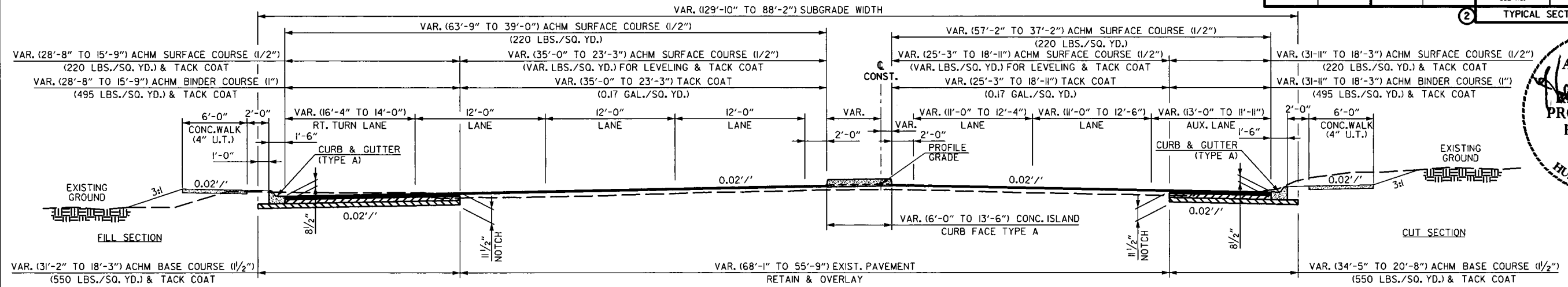
**EIGHT LANES - HWY. 71B - NOTCH & WIDENING
STA. 109+50.44 TO STA. 111+90.00**

TYPICAL SECTIONS OF IMPROVEMENT

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	16	368	

2 TYPICAL SECTIONS OF IMPROVEMENT

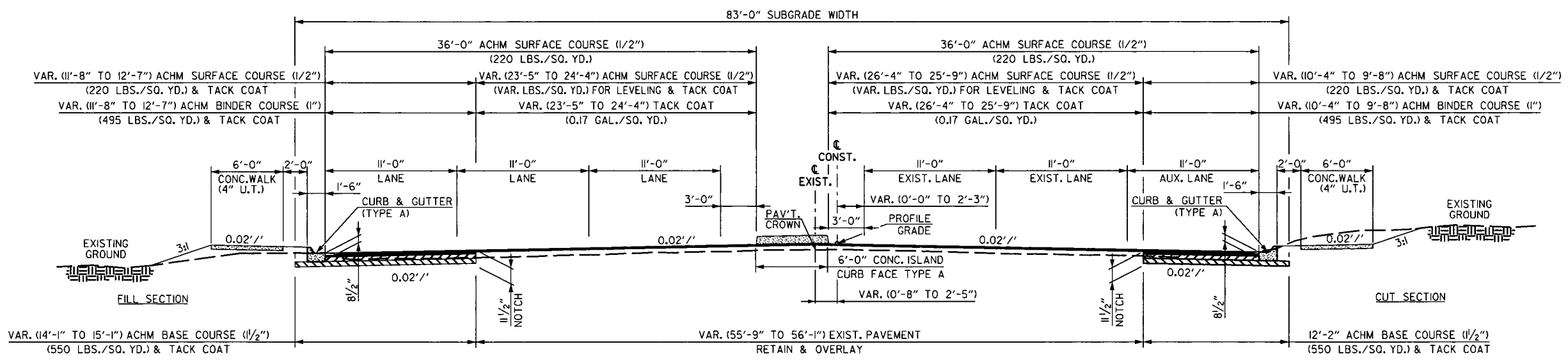


EIGHT LANES - HWY. 71B - NOTCH & WIDENING

STA. 113+90.00 TO STA. 113+06.74
STA. 114+24.11 TO STA. 117+40.04

NOTE: TRANSITION FROM EIGHT LANE SECTION WITH MEDIAN ISLAND ON RIGHT AT STA. 1190.00 TO EIGHT LANE SECTION WITH MEDIAN ISLAND ON LEFT.
ADD DUAL LEFT TURN LEFT TURN LANE FROM STA. 112+43.63 TO 113+06.74

- TYPICAL SECTION NOTES:**
- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 - ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
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**SIX LANES - HWY. 71B
NOTCH & WIDENING**

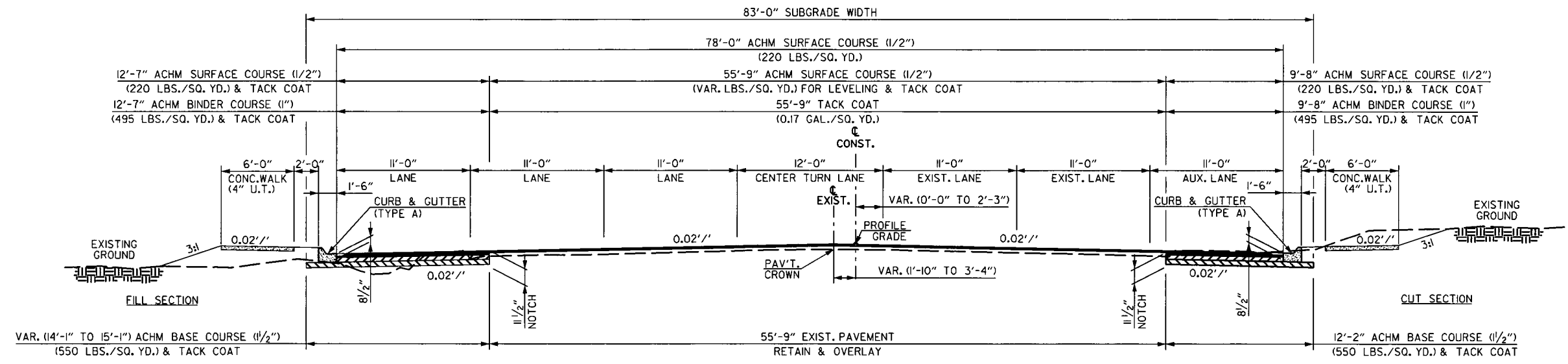
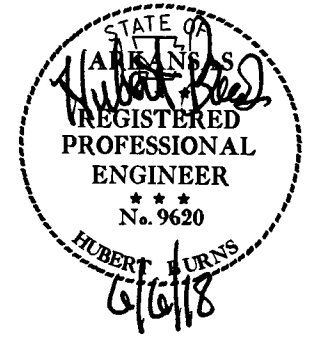
STA. 117+40.04 TO STA. 121+34.37

TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
				JOB NO.	BB0903		17	368

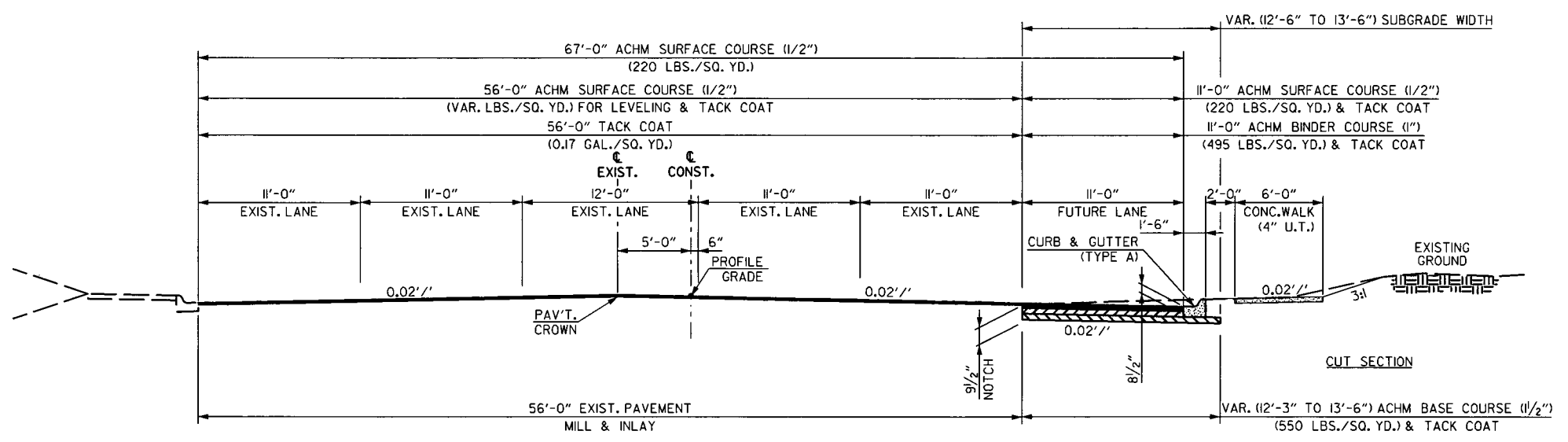
2 TYPICAL SECTIONS OF IMPROVEMENT



**SEVEN LANES - HWY. 71B
NOTCH & WIDENING - (W/O RAISED ISLAND)
STA. 121+34.37 TO STA. 122+53.08**

TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
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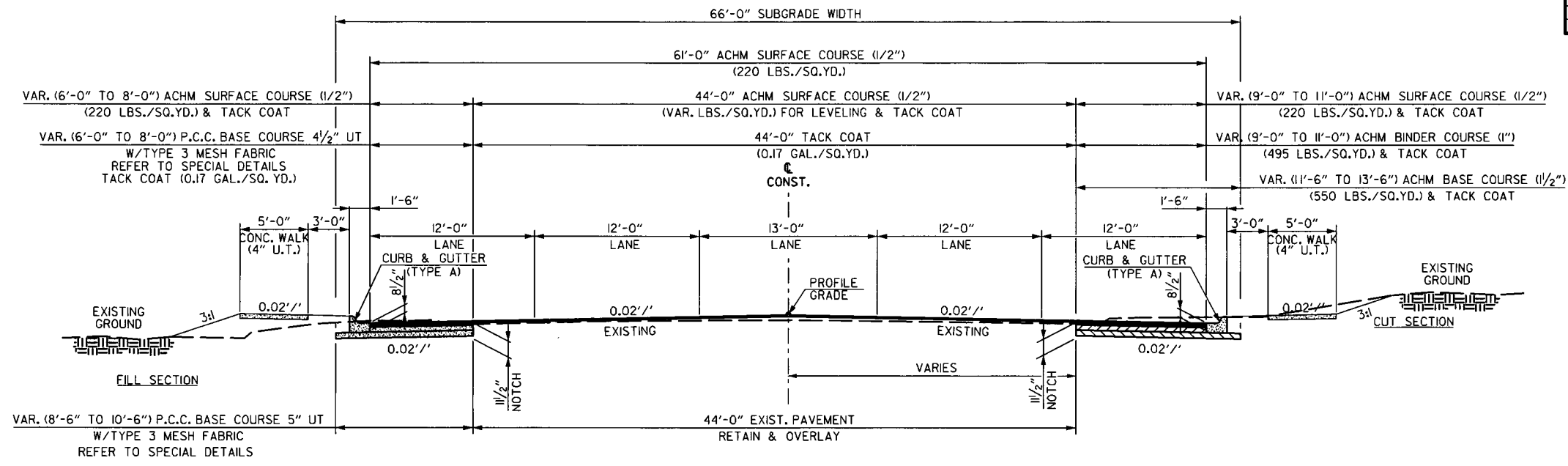
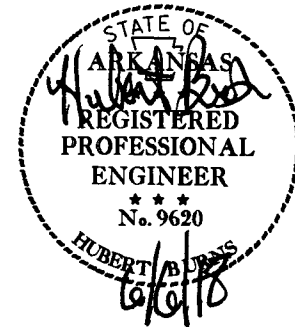


**TRANSITION TO FIVE LANES - HWY. 71B
NOTCH & WIDENING
STA. 122+53.08 TO STA. 124+76.00**

TYPICAL SECTIONS OF IMPROVEMENT

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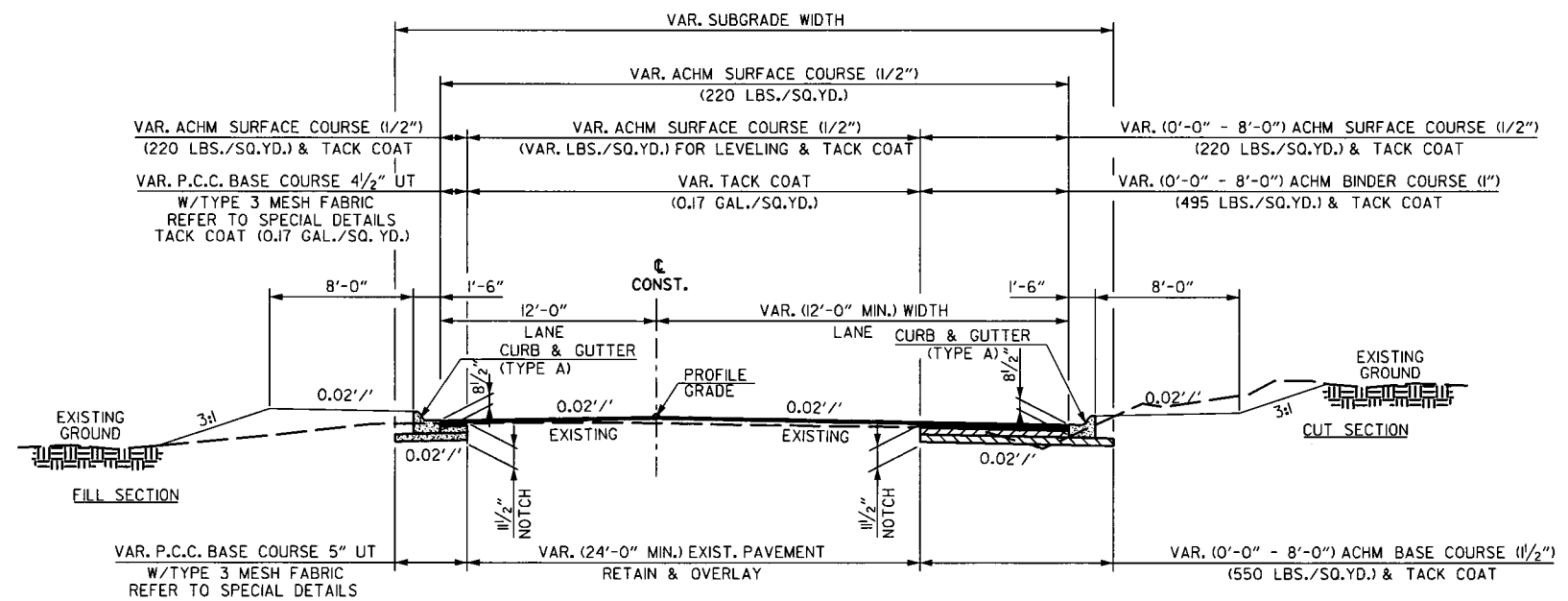
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				6	ARK.			
				JOB NO.	BB0903	18	368	
2 TYPICAL SECTIONS OF IMPROVEMENT								



**FIVE LANES - 46TH STREET
NOTCH & WIDENING**
STA. 10+49.00 TO STA. 13+56.49

TYPICAL SECTION NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
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**TYPICAL SECTION OF IMPROVEMENT
TWO LANES - MOBERLY LANE RETURN
NOTCH & WIDENING**
STA. 10+62.43 TO STA. 14+71.30

USER: mh514
 DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\typical\BB0903_TS_01.dgn
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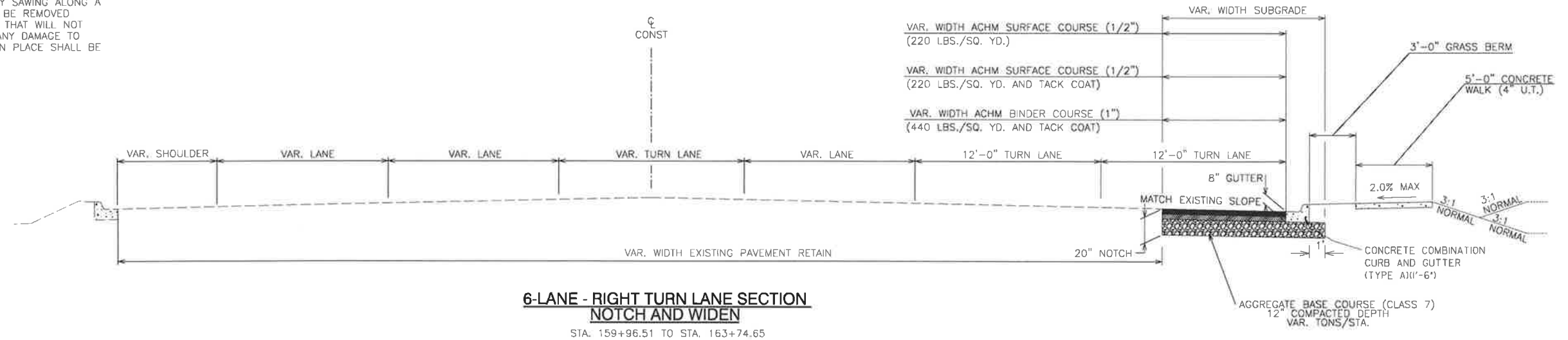
1. THE FINAL 2 INCHES OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.
2. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND CUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHODS USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
3. THE THICKNESS OF AGG. BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
4. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.
5. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE TO THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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07/16/18								
				JOB NO.	BBO903	18A	368	

2 TYPICAL SECTIONS OF IMPROVEMENT

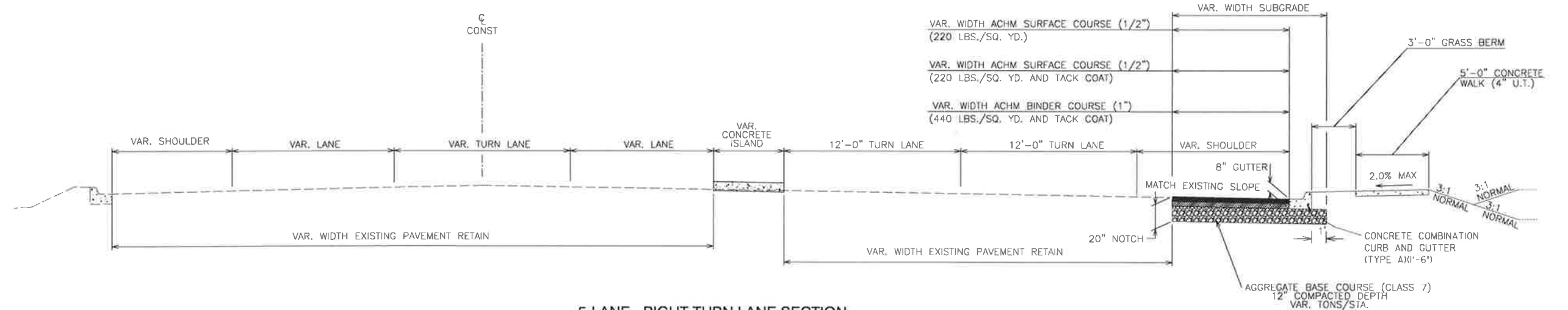


07/16/2018



**6-LANE - RIGHT TURN LANE SECTION
NOTCH AND WIDEN**

STA. 159+96.51 TO STA. 163+74.65



**5-LANE - RIGHT TURN LANE SECTION
NOTCH AND WIDEN**

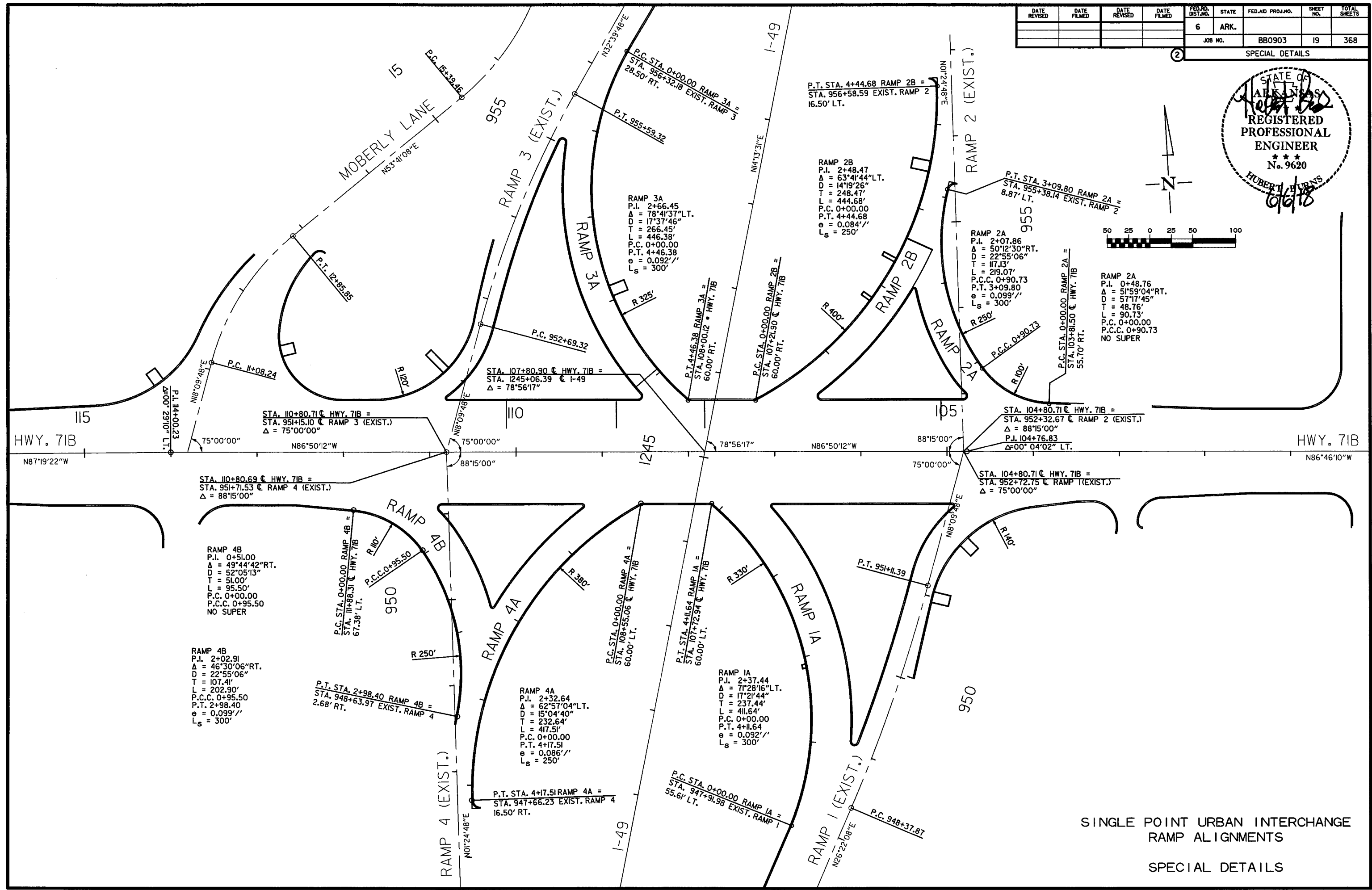
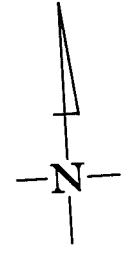
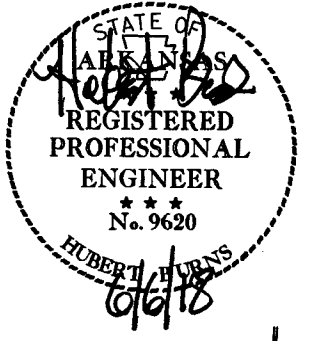
STA. 163+74.65 TO STA. 164+94.14

TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
				JOB NO.	BB0903	19	368	

2 SPECIAL DETAILS



SINGLE POINT URBAN INTERCHANGE
RAMP ALIGNMENTS
SPECIAL DETAILS

USER: mh514
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PLOTTED: 6/6/2018 11:01 SCALE: 1/8"=1'-0"

ISLAND - A			
POINT	STATION	OFFSET	*ELEVATION
1A	121+31.37	2.50' LT.	1276.40'
2A	119+78.50	2.50' LT.	1279.03'
3A	114+32.42	17.95' RT.	1279.92'
4A	114+32.19	11.95' RT.	1280.03'
5A	116+26.84	4.66' RT.	1279.55'
6A	116+48.80	2.63' RT.	1279.48'
7A	116+98.80	4.82' LT.	1279.27'
8A	117+26.84	6.99' LT.	1279.20'
9A	121+31.37	8.50' LT.	1276.29'
10A	115+23.09	5.46' LT.	1279.56'
11A	114+32.42	2.06' LT.	1280.13'
12A	114+29.31	5.06' LT.	1280.09'
13A	114+29.31	7.73' LT.	1280.04'
14A	114+32.33	10.73' LT.	1279.96'
15A	115+23.03	9.96' LT.	1279.47'

ISLAND - B			
POINT	STATION	OFFSET	*ELEVATION
1B	113+03.74	7.00' LT.	1281.28'
2B	112+43.63	7.00' LT.	1282.32'
3B	111+94.49	1.27' RT.	1282.85'
4B	111+67.23	10.73' RT.	1283.22'
5B	111+18.10	19.00' RT.	1284.09'
6B	109+88.66	19.00' RT.	1285.81'
7B	109+52.22	16.99' RT.	1285.76'
8B	109+52.44	13.00' RT.	1285.84'
9B	111+18.10	13.00' RT.	1284.20'
10B	111+65.27	5.06' RT.	1283.38'
11B	111+92.53	4.39' LT.	1282.81'
12B	112+43.63	13.00' LT.	1282.20'
13B	113+03.74	13.00' LT.	1281.17'

ISLAND - B (CONT.)			
POINT	STATION	OFFSET	*ELEVATION
14B	113+25.12	17.00' RT.	1280.81'
15B	113+25.12	7.00' RT.	1281.01'
16B	112+60.07	17.00' RT.	1281.61'
17B	112+58.44	16.72' RT.	1281.64'
18B	112+50.26	13.89' RT.	1281.81'
19B	112+50.26	10.11' RT.	1281.88'
20B	112+58.44	7.28' RT.	1281.83'
21B	112+60.07	7.00' RT.	1281.81'

ISLAND - C			
POINT	STATION	OFFSET	*ELEVATION
1C	106+13.09	13.00' LT.	1290.28'
2C	103+63.99	12.87' LT.	1294.07'
3C	103+22.50	3.80' LT.	1294.28'
4C	103+05.59	3.93' RT.	1294.28'
5C	102+63.99	13.00' RT.	1294.82'
6C	100+69.93	13.00' RT.	1294.84'
7C	100+69.93	10.00' RT.	1294.90'
8C	102+60.59	10.00' RT.	1294.90'
9C	103+12.34	4.43' LT.	1294.21'
10C	103+63.98	18.87' LT.	1293.96'
11C	105+87.73	19.00' LT.	1290.89'
12C	106+13.40	16.98' LT.	1290.20'

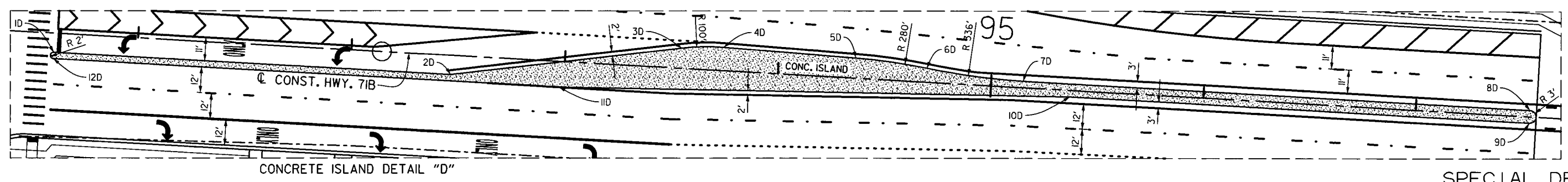
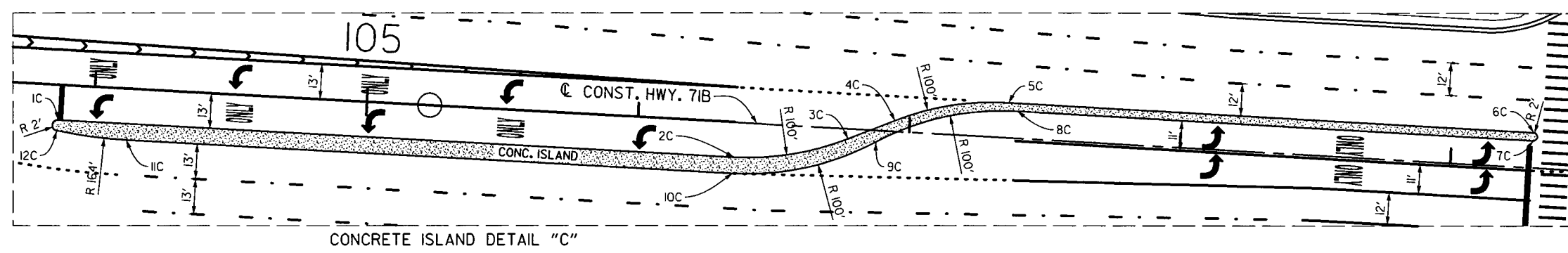
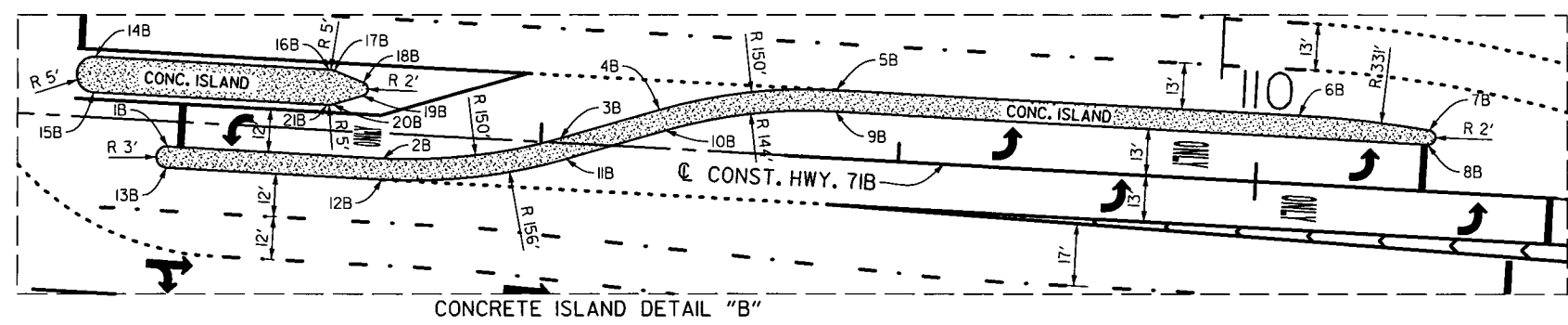
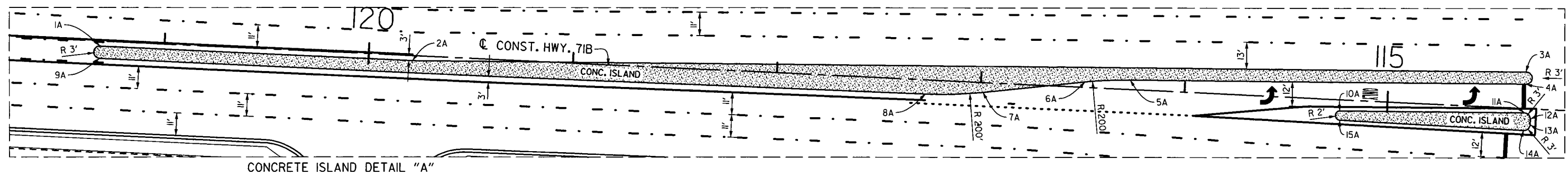
ISLAND - D			
POINT	STATION	OFFSET	*ELEVATION
1D	99+38.90	9.00' LT.	1294.18'
2D	97+53.00	9.02' LT.	1292.89'
3D	96+45.65	9.54' RT.	1292.37'
4D	96+26.11	10.97' RT.	1292.33'
5D	95+63.92	9.41' RT.	1292.31'
6D	95+30.37	6.54' RT.	1292.35'
7D	94+81.69	3.00' RT.	1292.38'
8D	92+46.02	3.00' RT.	1292.72'
9D	92+46.02	3.00' LT.	1292.72'
10D	94+62.78	3.00' LT.	1292.37'
11D	97+02.11	12.04' LT.	1292.38'
12D	99+38.90	12.00' LT.	1294.12'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		20	368

2 SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9620
HUBERT BURNS

*ELEVATIONS ARE TOP OF CURB



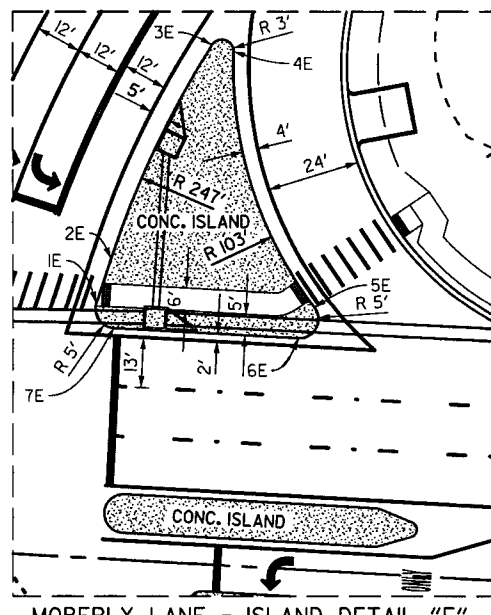
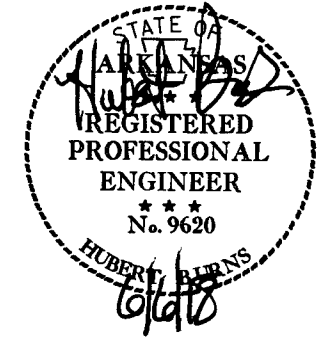
ISLAND DETAILS
HWY. 71B

SPECIAL DETAILS

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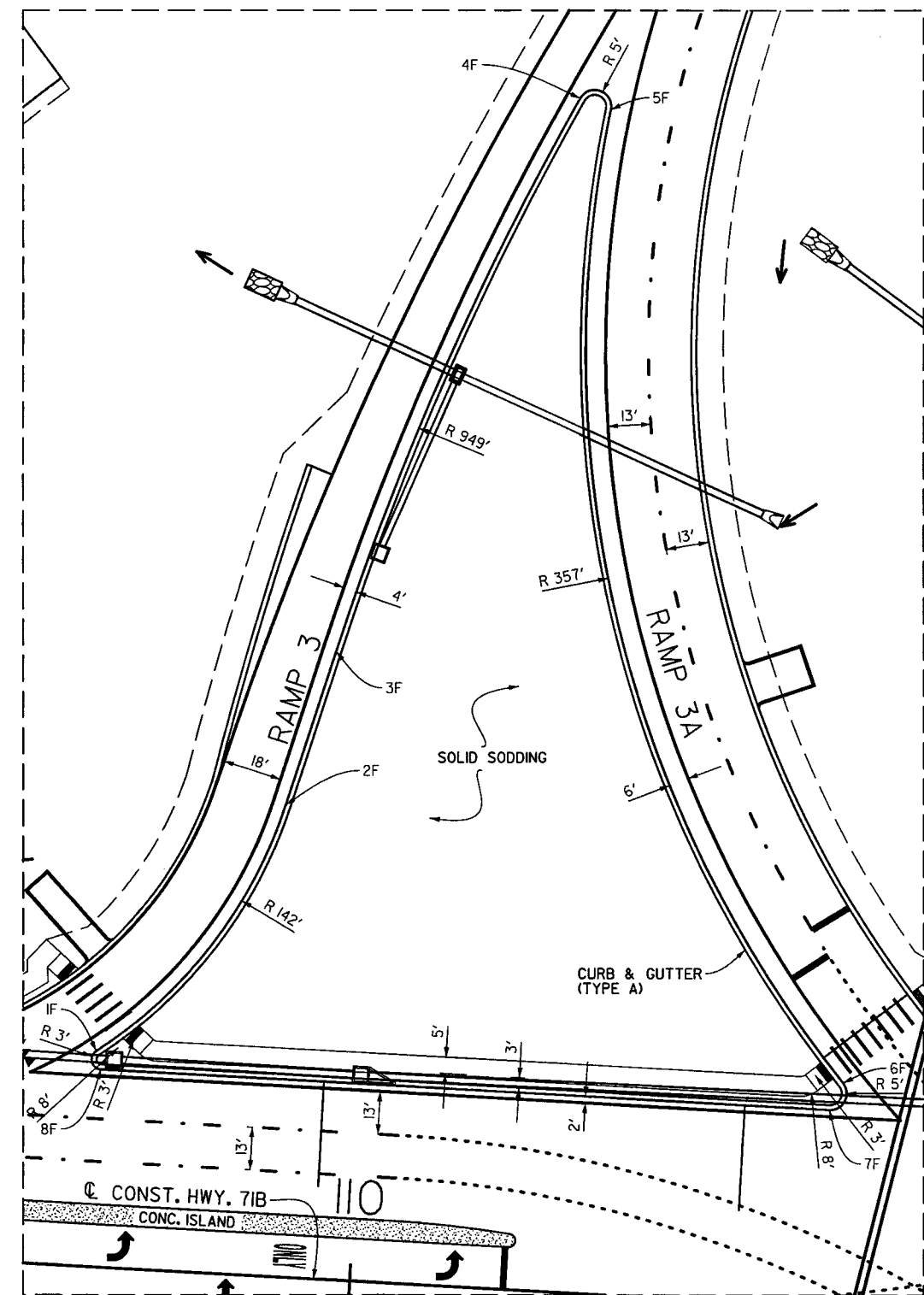
2 SPECIAL DETAILS



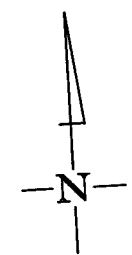
MOBERLY LANE - ISLAND DETAIL "E"

ISLAND - E			
POINT	STATION	OFFSET	*ELEVATION
1E	113+35.14	66.29' RT.	1279.72'
2E	113+32.00	78.00' RT.	1279.51'
3E	113+08.87	134.86' RT.	1278.75'
4E	113+03.25	133.44' RT.	1278.64'
5E	112+78.70	68.24' RT.	1280.23'
6E	112+82.51	60.00' RT.	1280.46'
7E	113+30.31	60.00' RT.	1279.89'

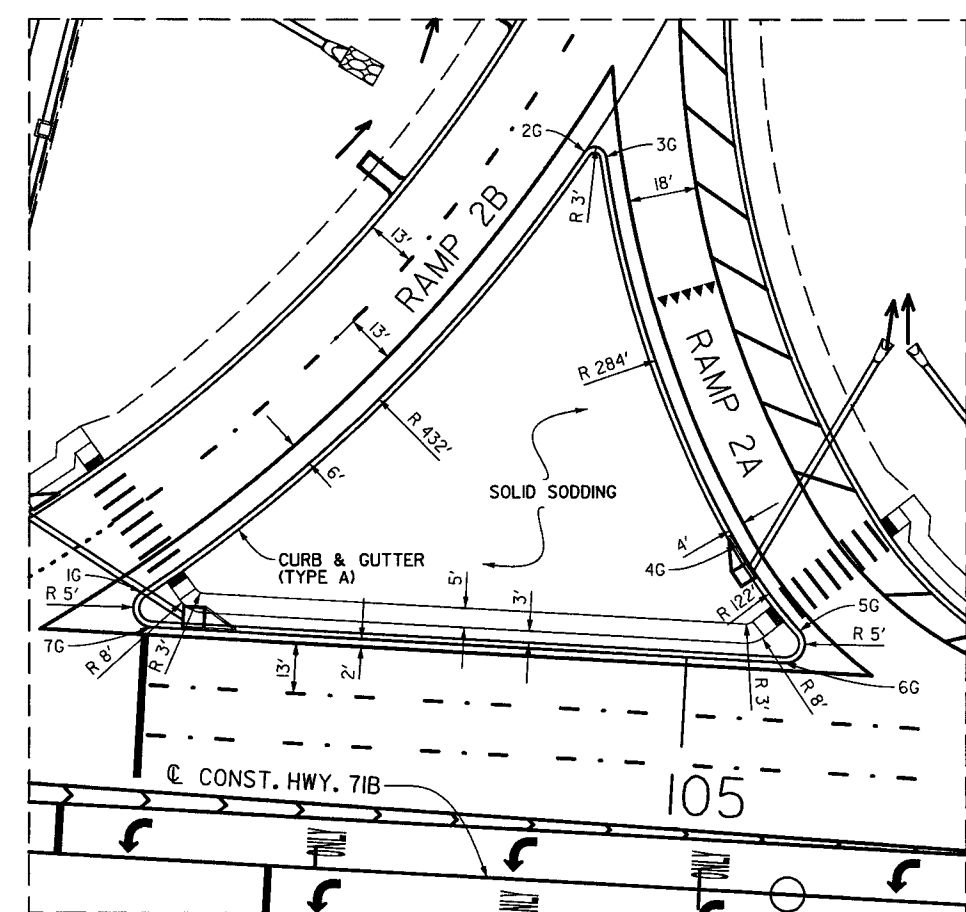
ISLAND - F			
POINT	STATION	OFFSET	*ELEVATION
1F	110+80.60	65.42' RT.	1283.20'
2F	110+27.32	143.25' RT.	1283.99'
3F	110+14.58	190.77' RT.	1284.48'
4F	109+50.08	362.79' RT.	1290.36'
5F	109+40.65	359.83' RT.	1290.16'
6F	108+54.12	68.33' RT.	1285.82'
7F	108+57.85	60.00' RT.	1285.89'
8F	110+78.83	60.00' RT.	1283.29'



ISLAND DETAIL "F"



ISLAND - G			
POINT	STATION	OFFSET	*ELEVATION
1G	106+48.73	68.98' RT.	1288.66'
2G	105+40.27	189.60' RT.	1293.61'
3G	105+34.76	188.63' RT.	1293.89'
4G	104+94.81	89.86' RT.	1291.90'
5G	104+77.39	68.58' RT.	1291.58'
6G	104+80.88	60.00' RT.	1291.49'
7G	106+45.70	60.00' RT.	1288.77'



ISLAND DETAIL "G"

*ELEVATIONS ARE TOP OF CURB

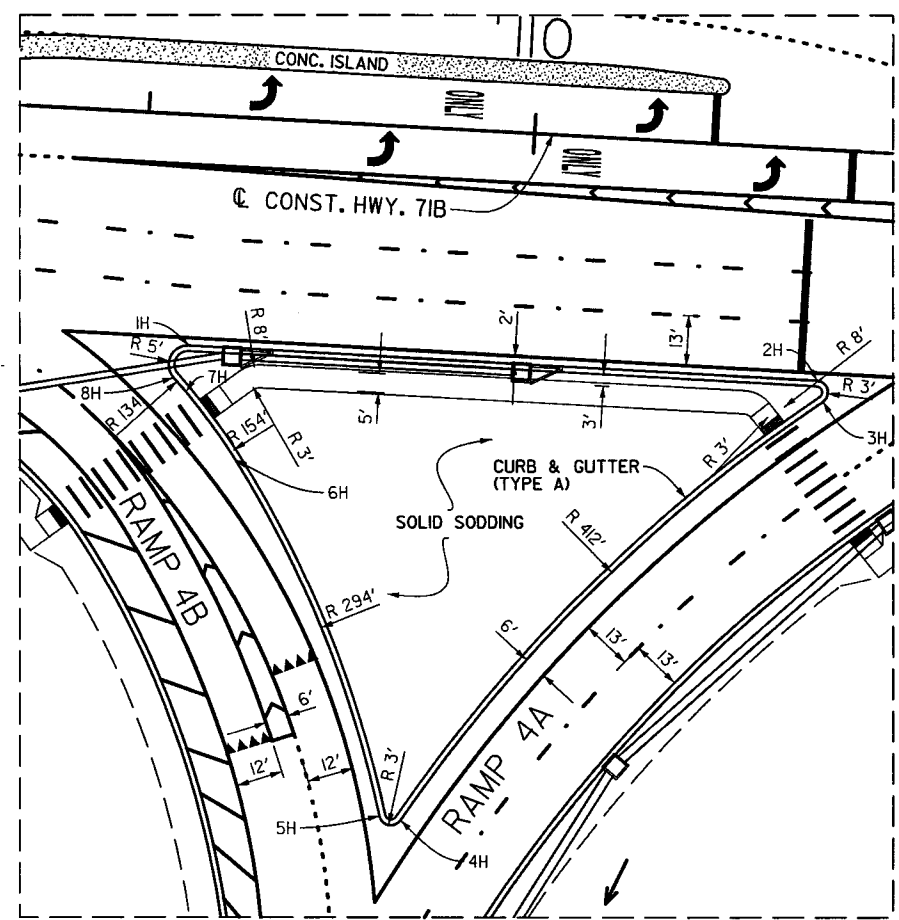
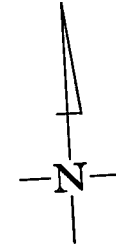
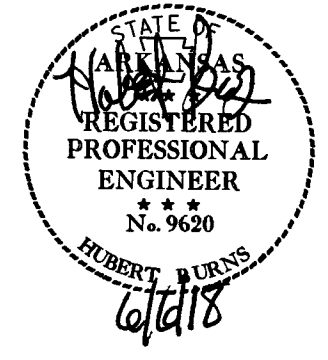
ISLAND DETAILS
HWY. 71B

SPECIAL DETAILS

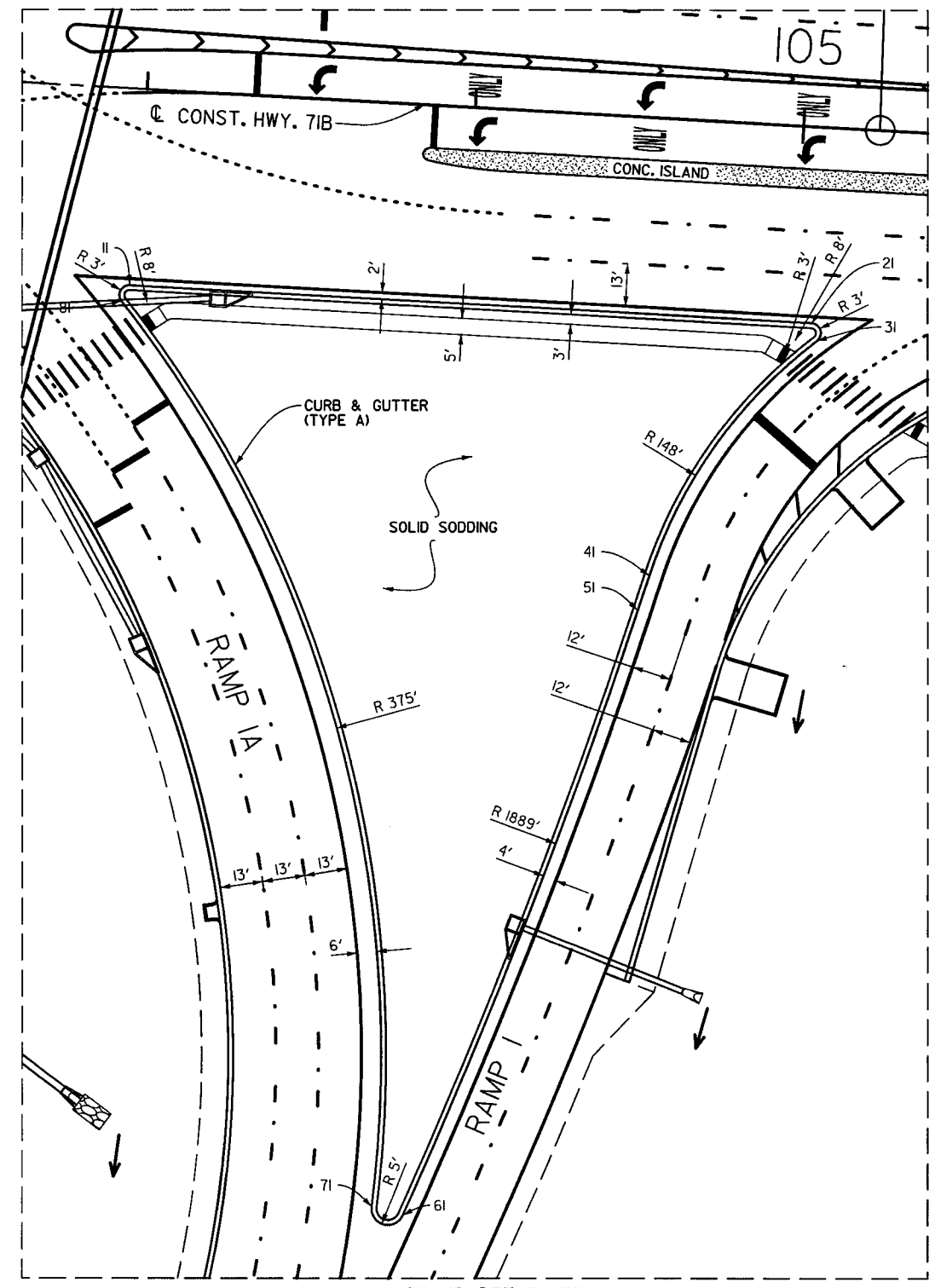
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	22	368	

2 SPECIAL DETAILS



ISLAND - H			
POINT	STATION	OFFSET	*ELEVATION
1H	110+86.25	60.00' LT.	1283.19'
2H	109+23.64	60.00' LT.	1285.16'
3H	109+21.83	65.39' LT.	1285.08'
4H	110+24.82	180.26' LT.	1286.93'
5H	110+30.29	179.50' LT.	1287.00'
6H	110+72.61	89.08' LT.	1283.70'
7H	110+86.36	72.07' LT.	1283.23'
8H	110+89.77	68.54' LT.	1283.15'



ISLAND - I			
POINT	STATION	OFFSET	*ELEVATION
1I	107+01.91	60.00' LT.	1287.95'
2I	104+94.27	60.00' LT.	1291.32'
3I	104+92.32	65.28' LT.	1291.30'
4I	105+39.37	139.69' LT.	1291.58'
5I	105+42.28	150.56' LT.	1291.62'
6I	106+03.39	338.65' LT.	1292.34'
7I	106+13.05	336.52' LT.	1291.75'
8I	107+04.17	64.97' LT.	1287.94'

*ELEVATIONS ARE TOP OF CURB

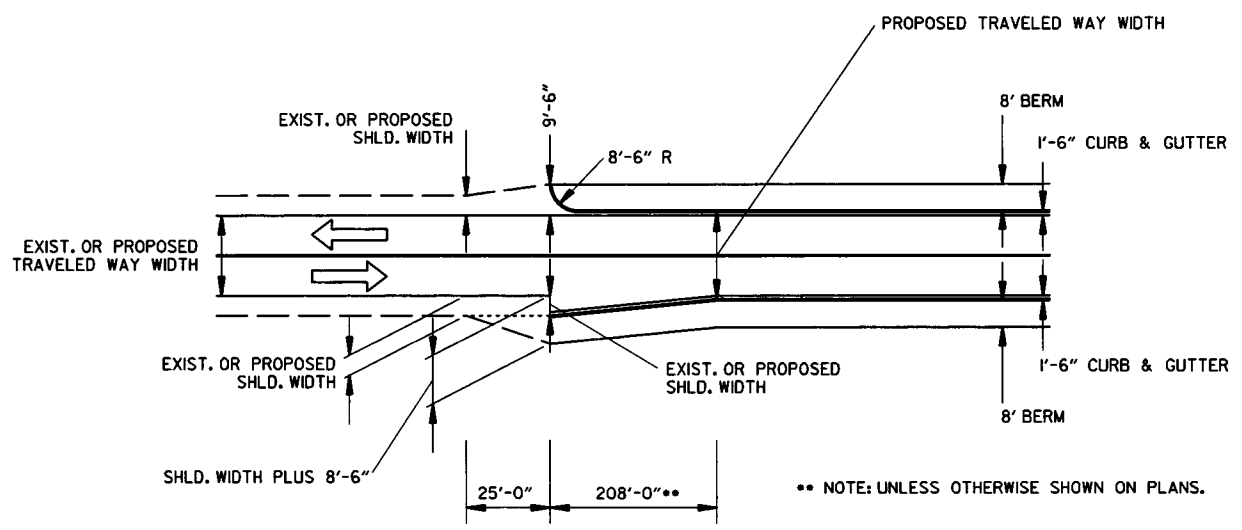
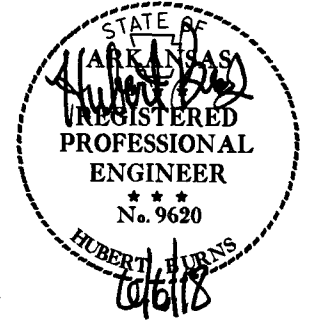
ISLAND DETAILS
HWY. 71B

SPECIAL DETAILS

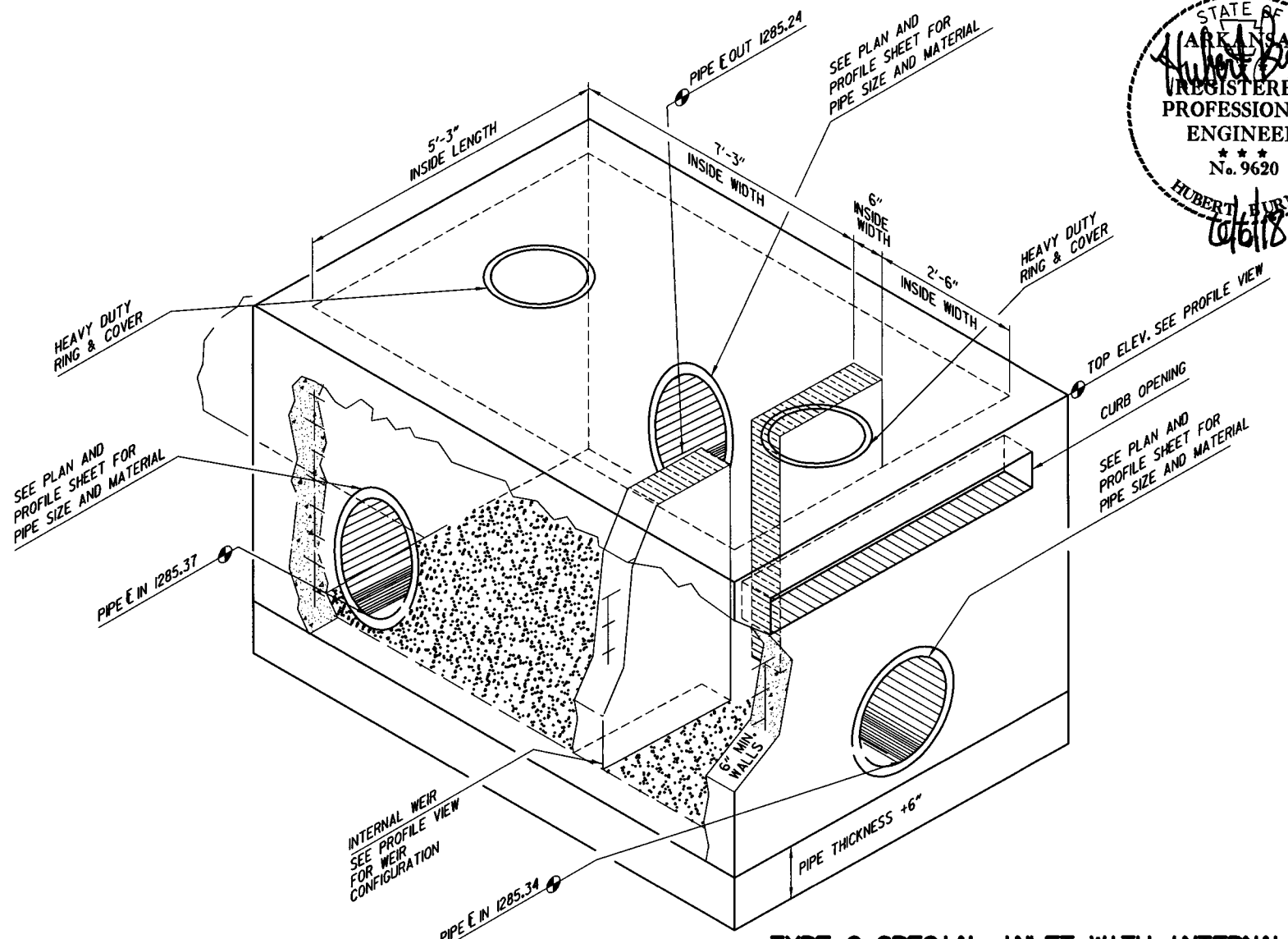
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				6	ARK.			
				JOB NO.	BB0903	23	368	

2 SPECIAL DETAILS

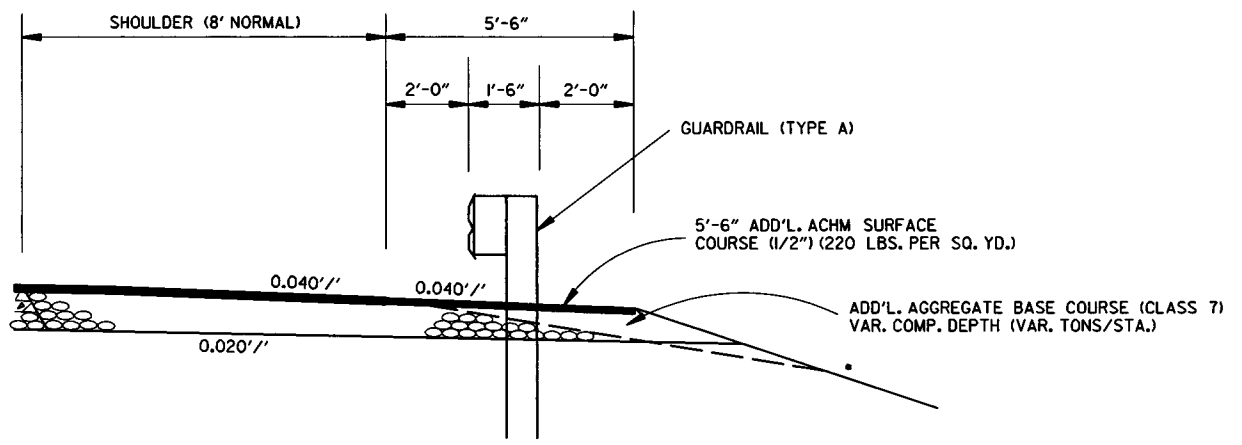


TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION
(NOT TO SCALE)



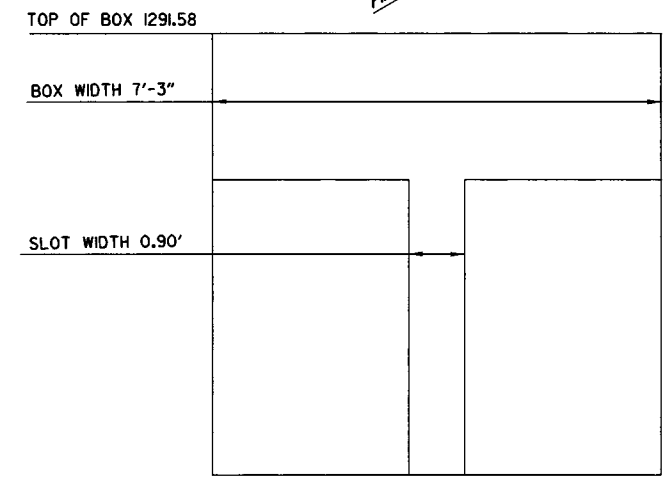
TYPE C SPECIAL INLET WITH INTERNAL WEIR
STA. 95+78.96 LT.
(NOT TO SCALE)

NOTE:
FOR ALL OTHER INLET DETAILS
INCLUDING REINFORCEMENT, SEE
STANDARD DRAWING FPC-9E.



WIDENING FOR GUARDRAIL
(NOT TO SCALE)

NOTE:
REFER TO STD. DWG. GR-9A
AND CROSS SECTIONS FOR SLOPE
REQUIREMENTS BEHIND GUARDRAIL.



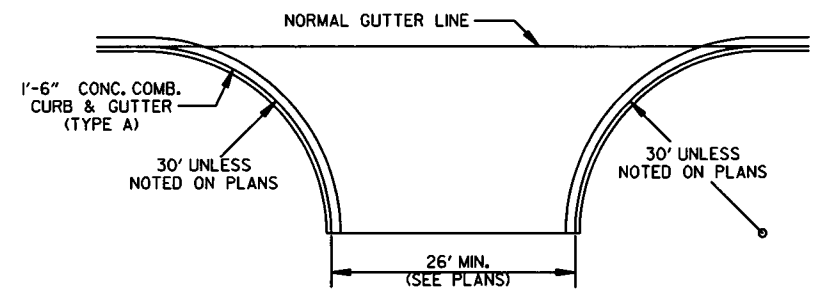
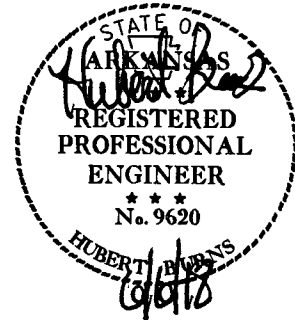
INTERNAL WEIR PROFILE VIEW
(NOT TO SCALE)

SPECIAL DETAILS

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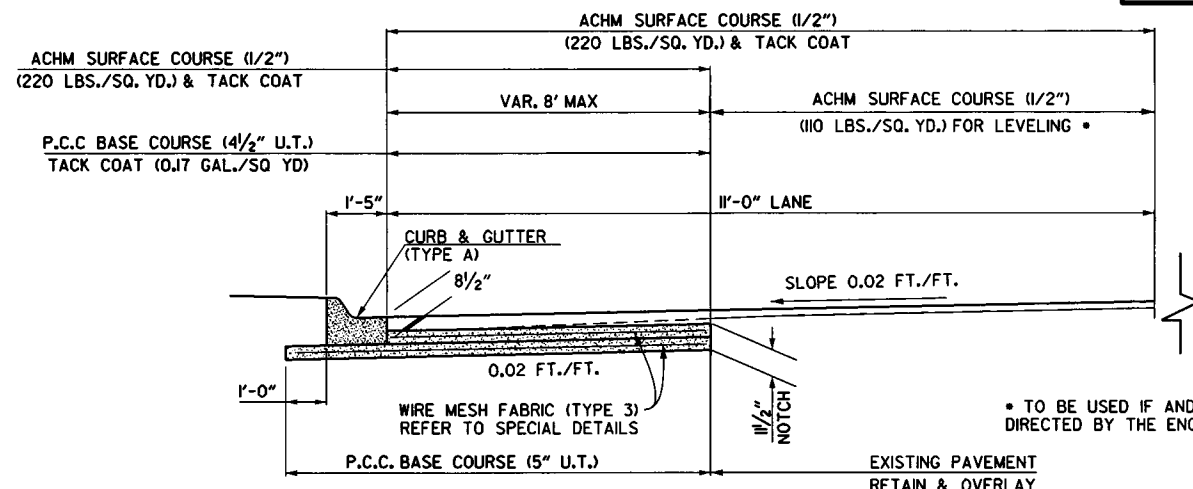
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				6	ARK.		24	368
				JOB NO.	BB0903			

2 SPECIAL DETAILS



**DETAIL OF TURNOUTS
ASPHALT STREETS, COUNTY ROADS,
& STATE HIGHWAYS**
(NOT TO SCALE)

NOTE:
THE TYPICAL SECTION FOR THE CITY STREET CONNECTIONS IN THE CURB & GUTTER SECTION SHALL MATCH THE PROPOSED WIDENING SECTION SHOWN FOR THE MAIN LANES, UNLESS OTHERWISE NOTED ON THE PLANS, ALL CITY STREET RADII WILL BE 30'.



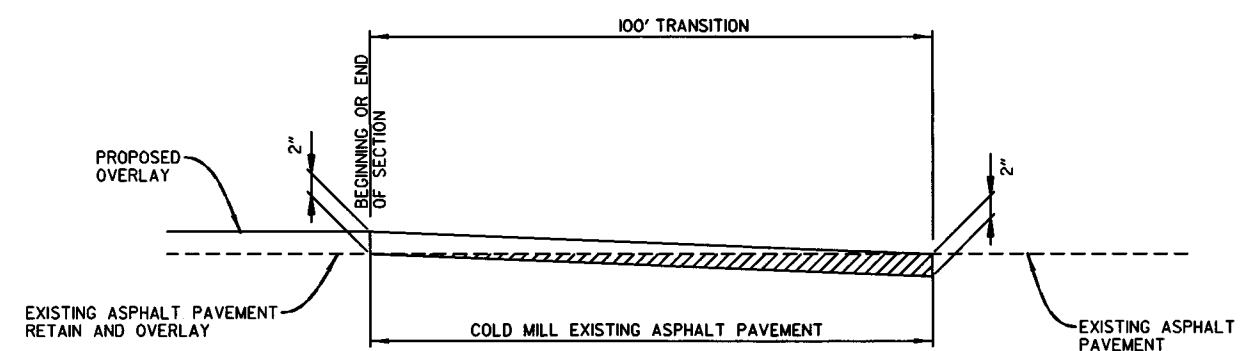
P.C.C. BASE WIDENING DETAIL
P.C.C. BASE WIDENING TO BE USED AS SHOWN ON THE PLANS.
(NOT TO SCALE)

* TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

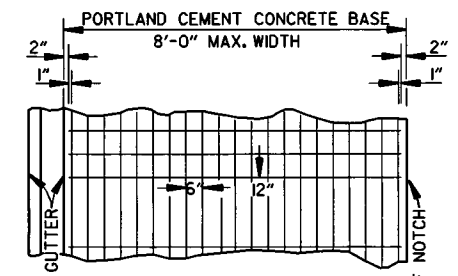
Job XXXXXX
Start Date Mo Year
Est Completion Mo Year
IDRIVE
ARKANSAS.COM

27.9	11.1	6	23.1	27.9				
14.3	14.4	6	13.2	6	8	6.1	13.8	14.2
6.4	8.5	6	34.9	6	8	6	13.8	6.4
15.4	25.5	55.1						
16.4	63.4	16.2						
96								

6.0' Radius, 1.3' Border, Black on Orange;
* Job XXXXXX' C 2K; * Start Date Mo Year' C 2K;
* Est Completion Mo Year' C 2K; * IDRIVE
* ARKANSAS.COM * Arial;

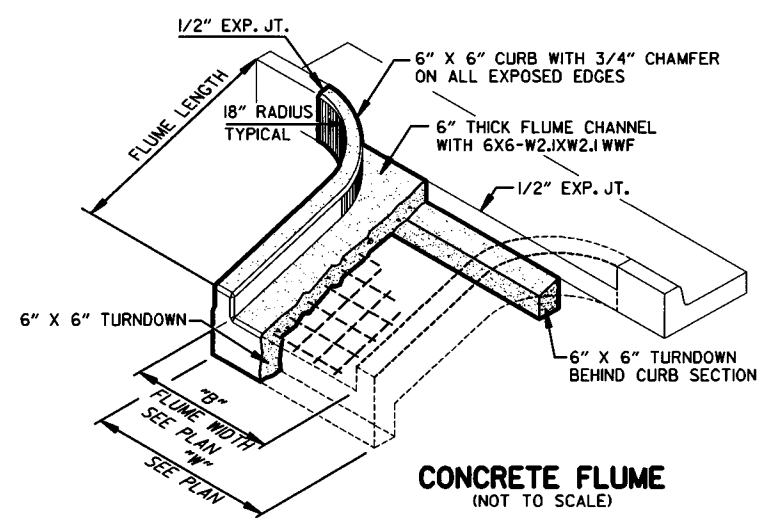


MILL & OVERLAY TRANSITION DETAIL
(NOT TO SCALE)



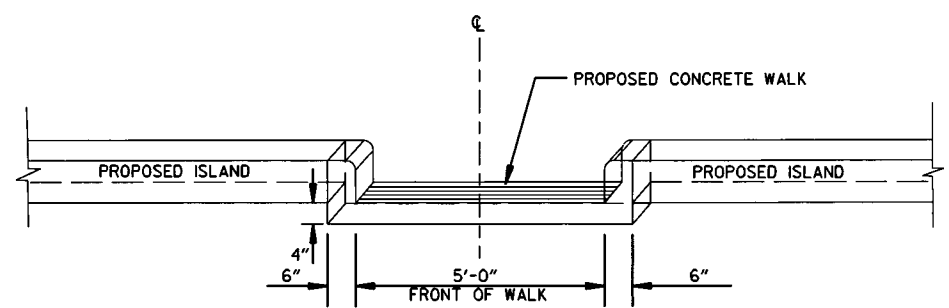
**DETAIL OF REINFORCING STEEL FOR PAVEMENT
(MESH FABRIC TYPE 3)**
(NOT TO SCALE)

6" X 12" MESH FABRIC (TYPE 3) (W5.5 x W2.9) = 4.26 LBS./SQ.YD.
NOTES:
1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (4.5" U.T.) AND PORTLAND CEMENT CONCRETE BASE (5" U.T.).



CONCRETE FLUME
(NOT TO SCALE)

NOTES:
PAYMENT FOR CONCRETE, WELDED WIRE FABRIC, & ALL ITEMS TO CONSTRUCT CONCRETE FLUME SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD FOR CONCRETE DITCH PAVING (TYPE SPECIAL).
AT LOCATIONS ON PLANS NOTED AS CONCRETE FLUME EXTENSION, THE RADIUS PORTION OF THE CURB IS NOT REQUIRED.



CONCRETE WALK THROUGH ISLAND
(NOT TO SCALE)

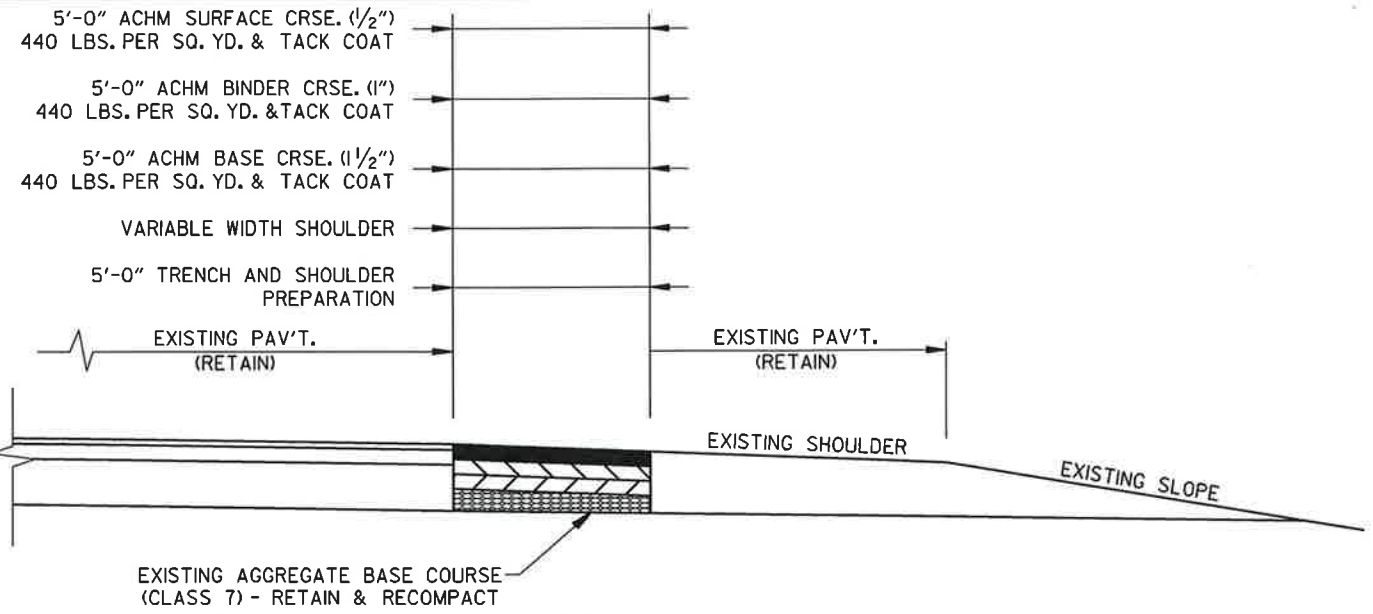
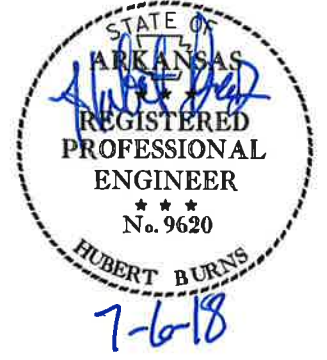
NOTE:
CONCRETE WALK THROUGH ISLAND SHALL BE POURED MONOLITHICALLY. ALL MATERIALS REQUIRED TO CONSTRUCT CONCRETE WALK THROUGH ISLAND SHALL BE INCLUDED IN THE PRICE BID FOR CONCRETE ISLAND.

CONSTRUCTION PROJECT INFORMATION SIGN

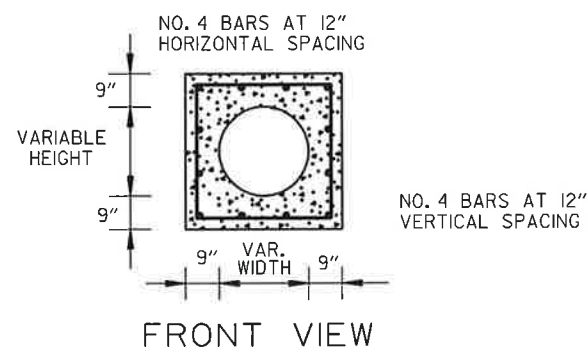
SPECIAL DETAILS

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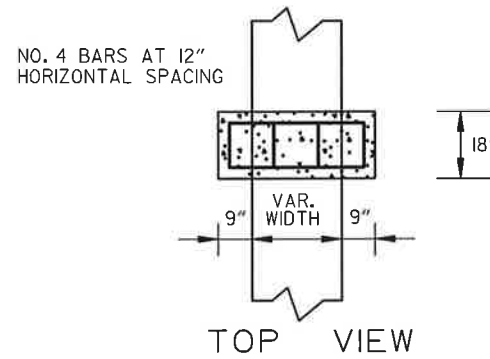
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07-05-18				6	ARK.			
						JOB NO.	BB0903	25
						SPECIAL DETAILS		



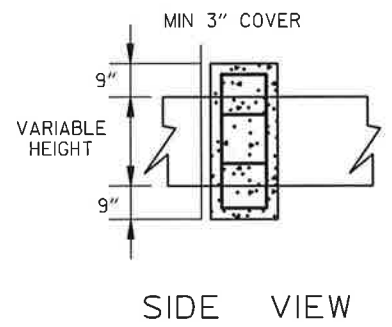
SHOULDER TRENCHING AND PREPARATION
(SHOWN IN DIRECTION OF TRAFFIC)
(NOT TO SCALE)



FRONT VIEW

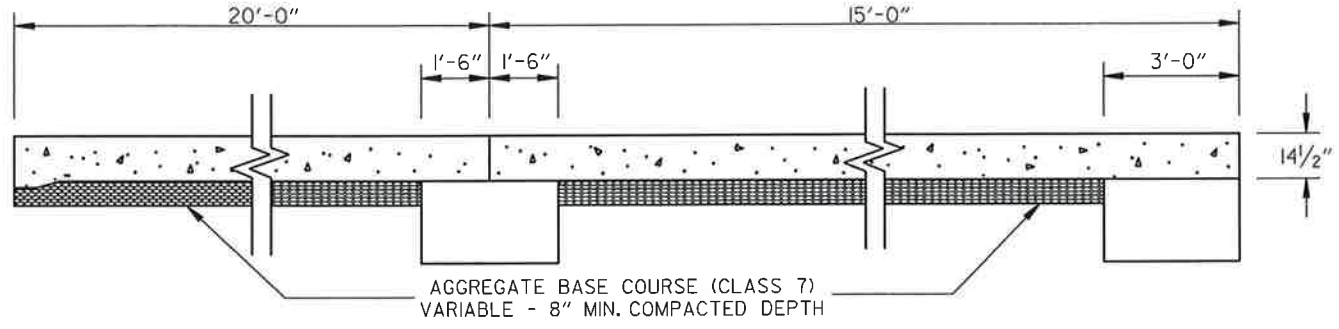


TOP VIEW



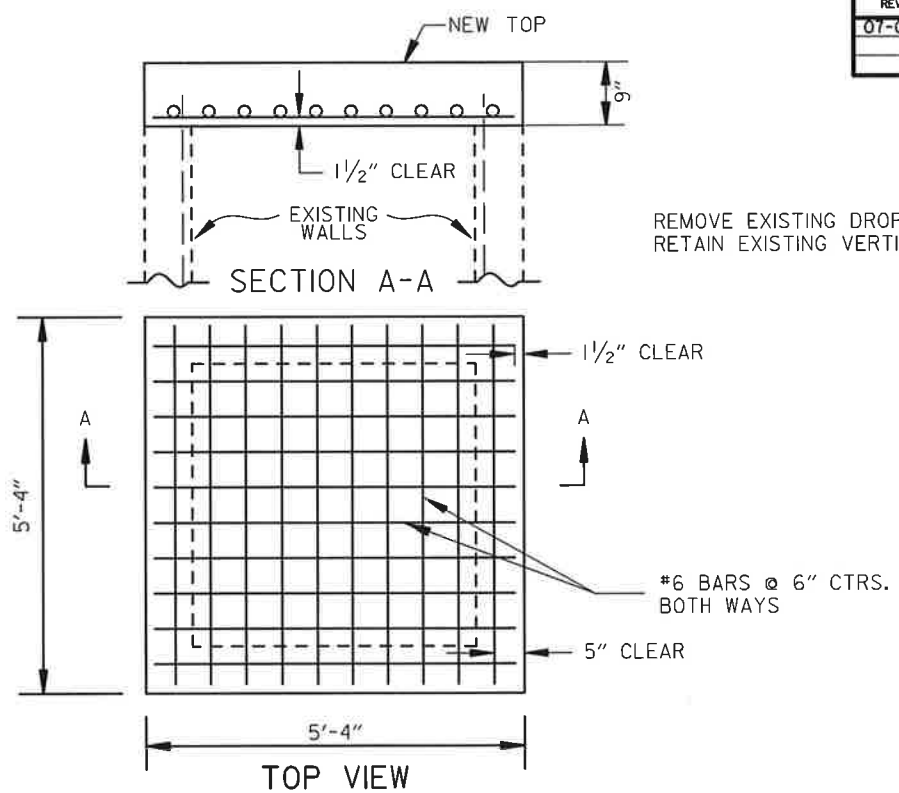
SIDE VIEW

PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL
(NOT TO SCALE)

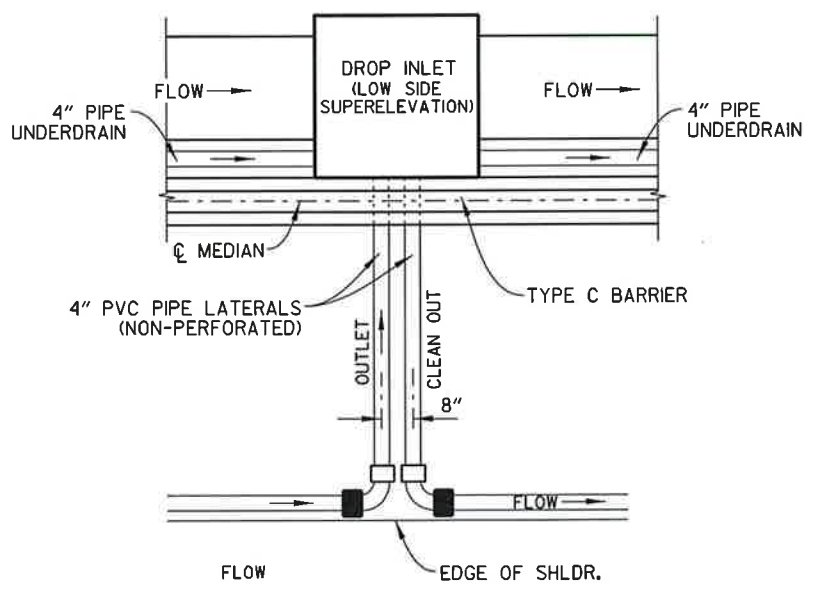


DETAIL OF APPROACH SLAB
(NOT TO SCALE)

NOTE: REFER TO BRIDGE DRAWINGS 07405 FOR ADDITIONAL INFORMATION.

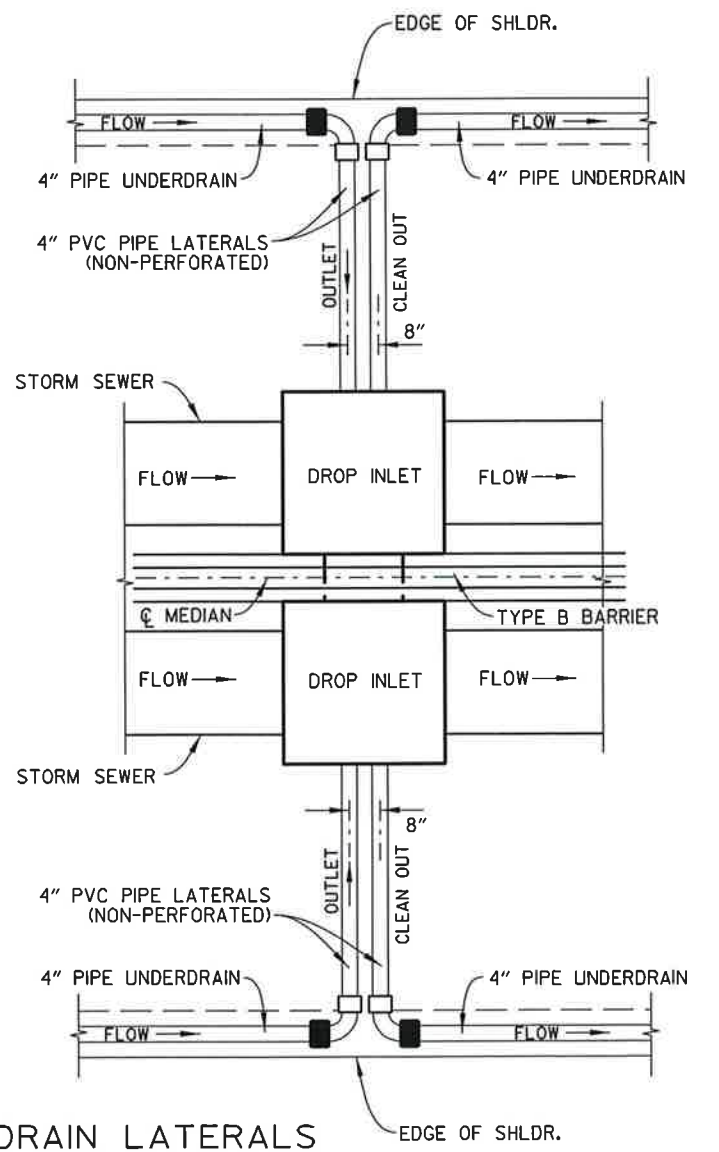


DETAILS OF MODIFIED DROP INLET
(NOT TO SCALE)



- NOTES:
- FOR MATERIAL REQUIREMENTS REFER TO STD. DWG. PU-1
 - TYPICAL SHOWN FOR INLETS AND DRAIN ON GRADE. FOR INLETS IN SAG, BOTH LATERALS FLOW INTO INLET.
 - ANY LATERAL CROSSING ϕ MEDIAN MUST BE BELOW MEDIAN BARRIER.

PLAN DETAIL OF PIPE UNDERDRAIN LATERALS
(NOT TO SCALE)

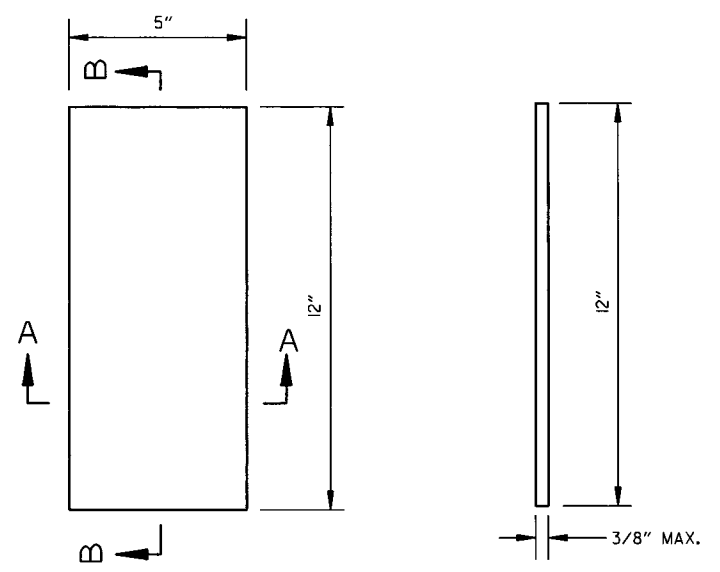
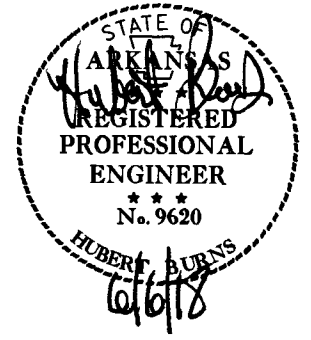


SPECIAL DETAILS

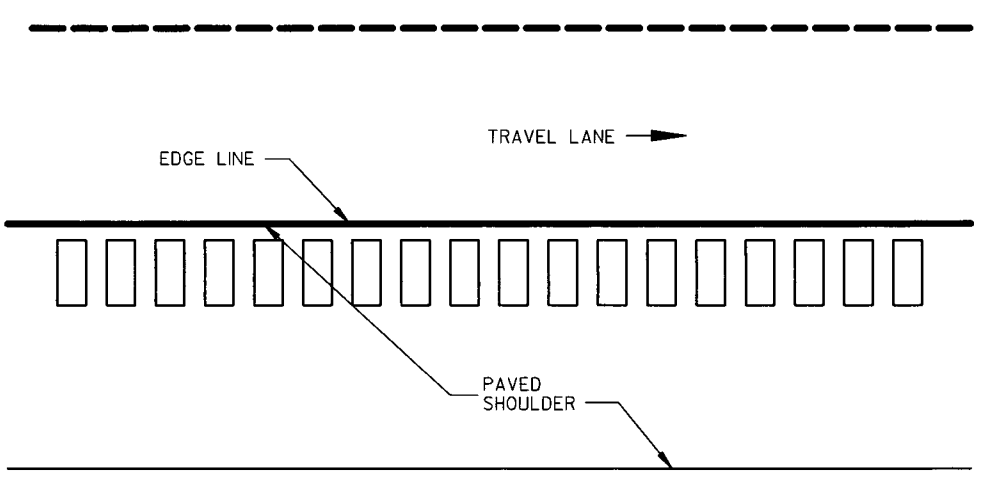
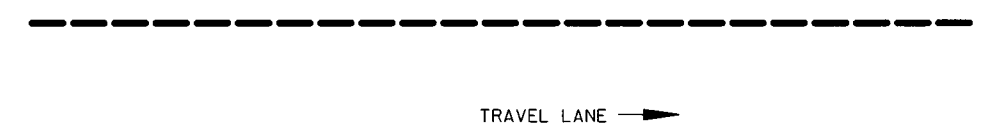
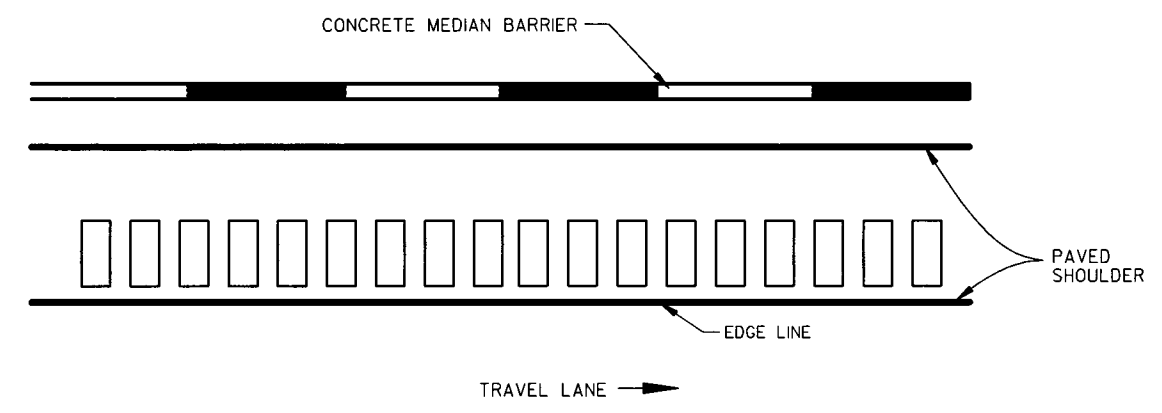
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	26	368	

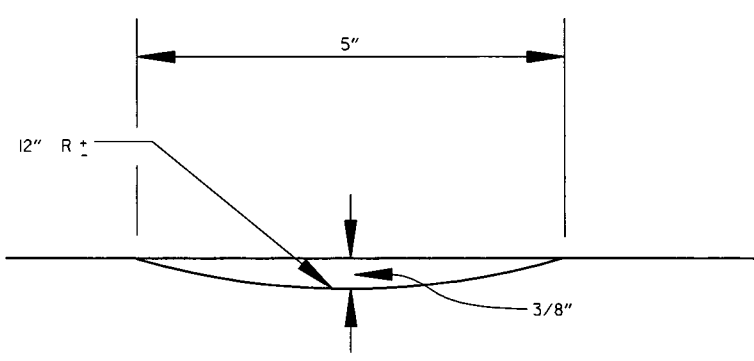
2 SPECIAL DETAILS



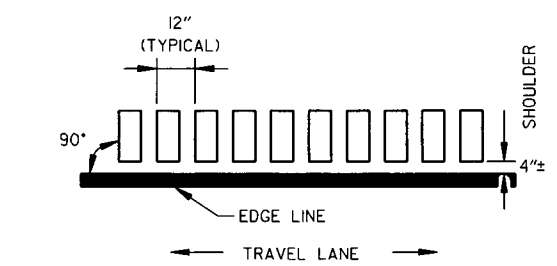
PLAN SECTION B-B



PLAN VIEW (NOT TO SCALE)



SECTION A-A

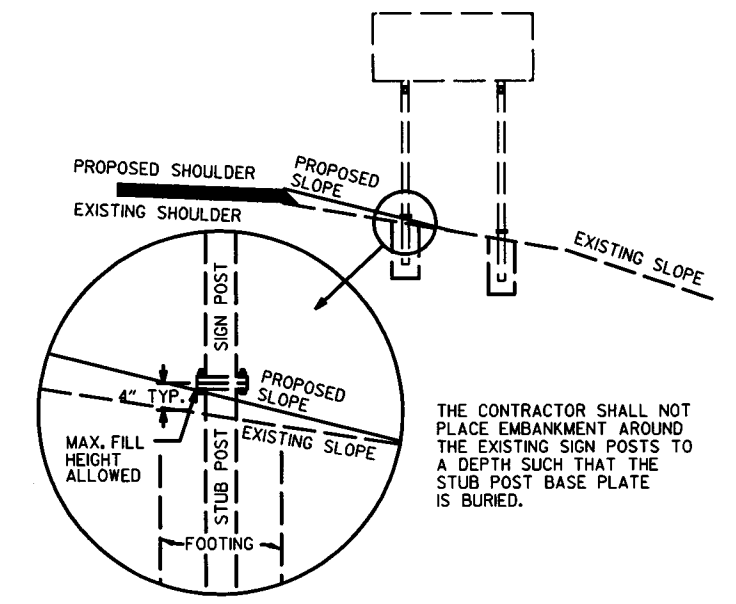


LOCATION PLAN OF RUMBLE STRIPS LEFT OR RIGHT SHOULDER

GENERAL NOTES

1. RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.
4. RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPS HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPS HAVE NOT BEEN CONSTRUCTED.
5. THE 3/4" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12' LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.

DETAILS OF RUMBLE STRIPS



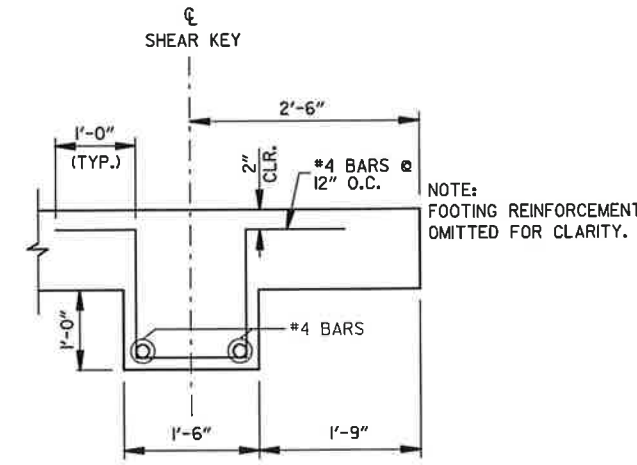
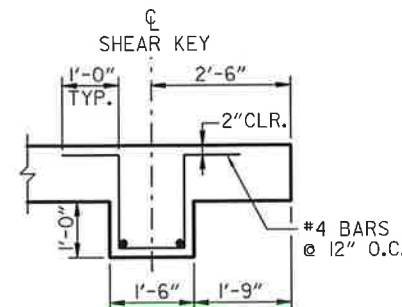
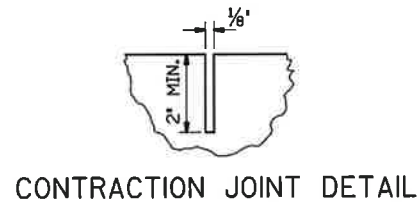
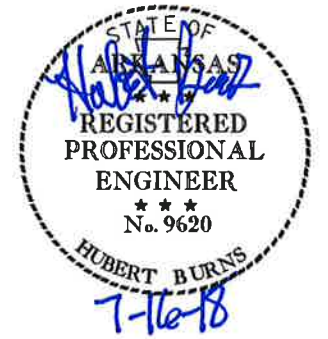
DETAIL FOR THE MAINTENANCE OF EXISTING BREAKAWAY SIGN STRUCTURES

THE CONTRACTOR SHALL NOT PLACE EMBANKMENT AROUND THE EXISTING SIGN POSTS TO A DEPTH SUCH THAT THE STUB POST BASE PLATE IS BURIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/16/18				6	ARK.			
						JOB NO.	BB0903	27
						SPECIAL DETAILS		

GENERAL NOTES FOR CONCRETE BARRIER WALLS

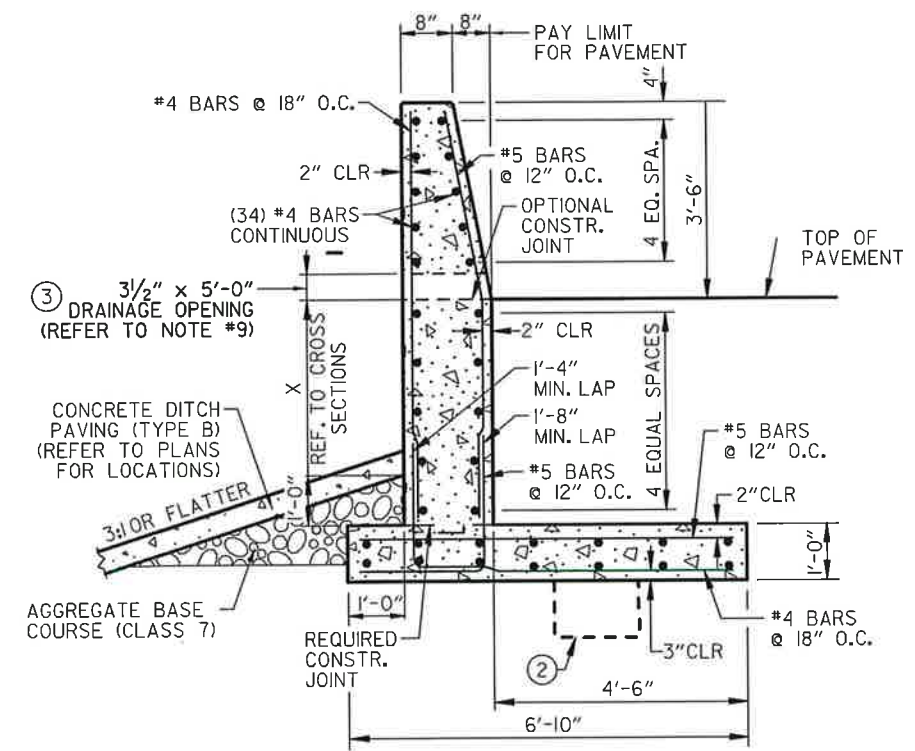
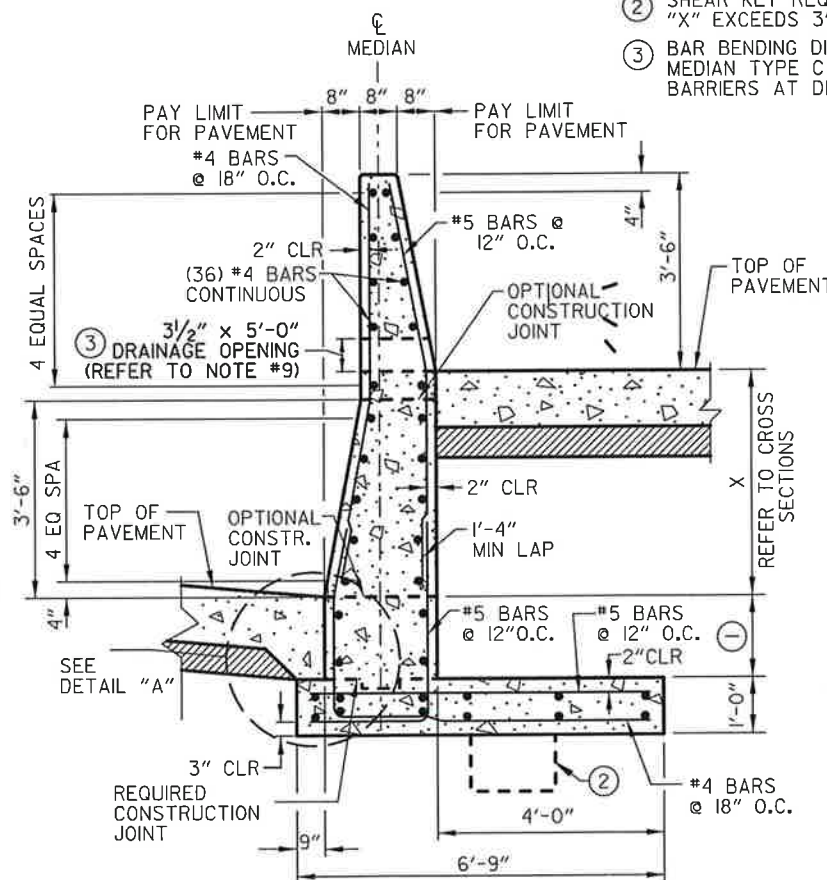
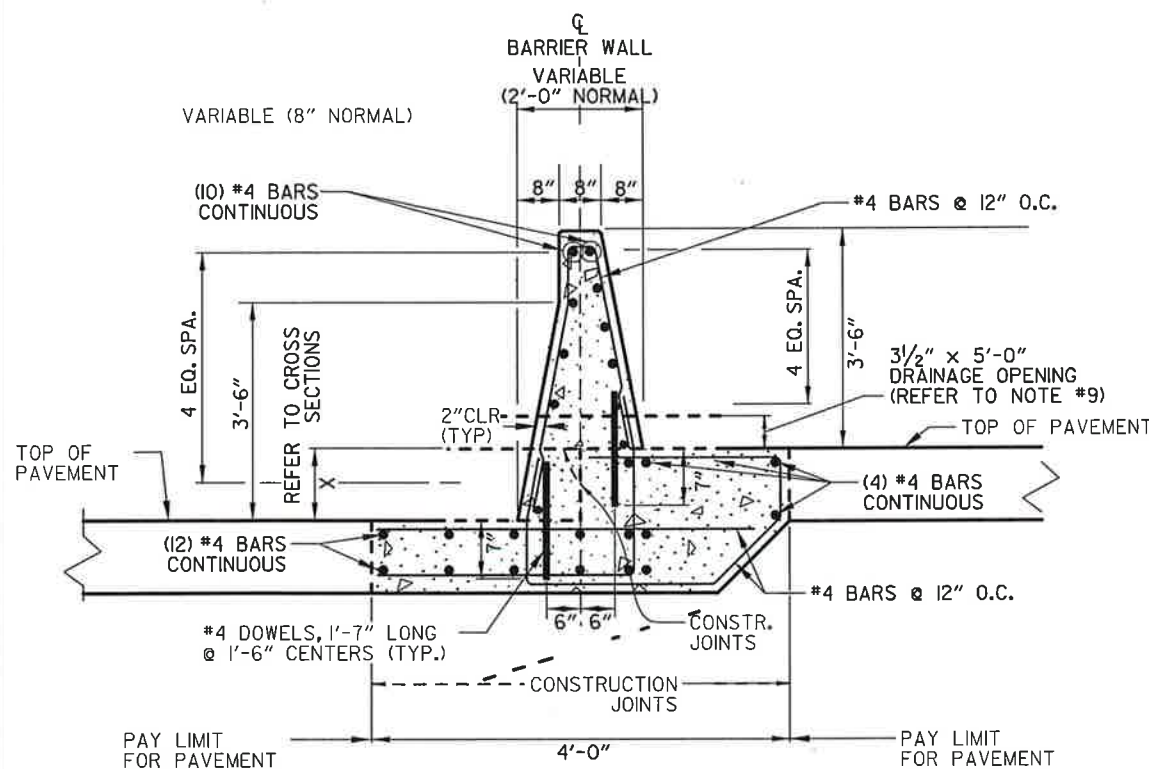
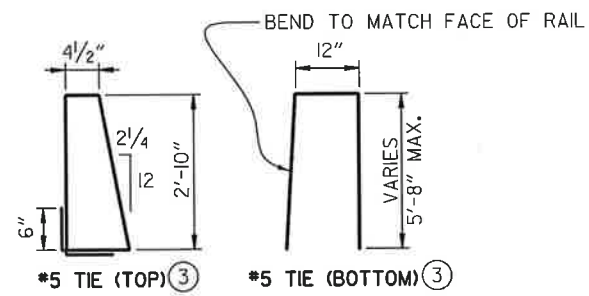
- ALL BARRIER WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 631 OF THE STANDARD SPECIFICATIONS, 2014 EDITION.
- CONTRACTION JOINTS REQUIRED @ 15'-0" MAXIMUM SPACING FOR BARRIER MEDIAN TYPE B. A 30'-0" MAXIMUM SPACING IS REQUIRED FOR TYPES MEDIAN C & SIDE E.
- ALL CONTRACTION JOINTS TO BE FORMED IN FRESH CONCRETE ON TOP AND IN SIDES OF BARRIER WALL.
- DOWEL BARS FOR BARRIER MEDIAN TYPE B WILL NOT BE REQUIRED IF BARRIER AND MINIMUM 4' WIDE BASE ARE CAST AS A COMPLETE UNIT.
- ALL EXPOSED EDGES OF CONCRETE BARRIER WALL SHALL HAVE A 3/4" CHAMFER.
- THE DESIGN OF BARRIER WALL TYPES MEDIAN C & SIDE E, IS BASED ON A MINIMUM FOUNDATION BEARING CAPACITY OF ONE TON PER SQUARE FOOT. UNSTABLE FOUNDATION MATERIAL SHALL BE REMOVED AND REPLACED TO PROVIDE A FIRM FOUNDATION AS DIRECTED BY THE ENGINEER.
- SPACING BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 400 FT. FOR BARRIER MEDIAN TYPE B OR 120 FT. FOR BARRIER TYPES MEDIAN C & SIDE E. EXPANSION JOINTS SHALL BE FORMED USING 1" PREFORMED JOINT FILLER. CONTINUOUS REINFORCEMENT SHALL BE CUT 2" CLEAR OF EXPANSION JOINTS.
- PROVIDE 1/2" EXPANSION JOINT MATERIAL BETWEEN FOOTING AND DROP INLET STRUCTURES. SHIFT REINFORCING STEEL IN FOOTINGS TO PROVIDE 3" CLR. FROM DROP INLET STRUCTURES.
- CONTRACTOR MAY OMIT BARRIER WALL FOOTING OR SHEAR KEY IF NECESSARY AROUND DROP INLETS.
- MAINTAIN 3" CLEARANCE ON ALL FOOTING REINFORCEMENT AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT, UNLESS OTHERWISE NOTED.



NOTE: FOOTING REINFORCEMENT OMITTED FOR CLARITY.

SHEAR KEY DETAIL

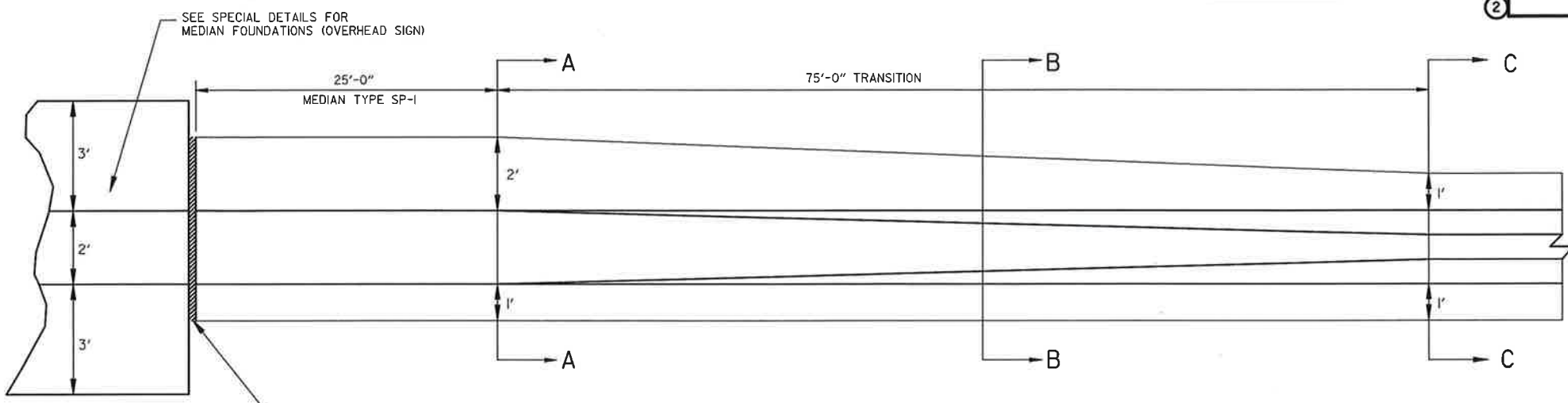
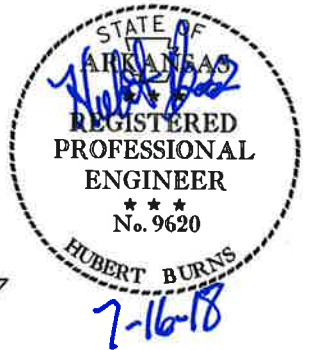
- ① MATCH DEPTH OF PAVEMENT
- ② SHEAR KEY REQUIRED WHEN "X" EXCEEDS 3'-6"
- ③ BAR BENDING DIAGRAMS FOR MEDIAN TYPE C & SIDE TYPE E BARRIERS AT DRAINAGE OPENINGS



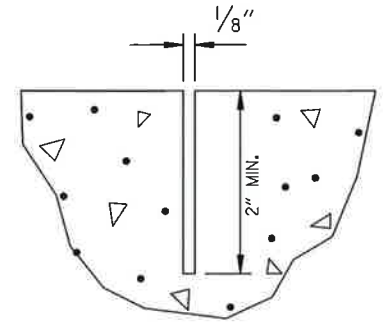
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 SCALE: 1:20

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. NO. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/16/18				6	ARK.			
						JOB NO.	BB0903	29
						SPECIAL DETAILS		

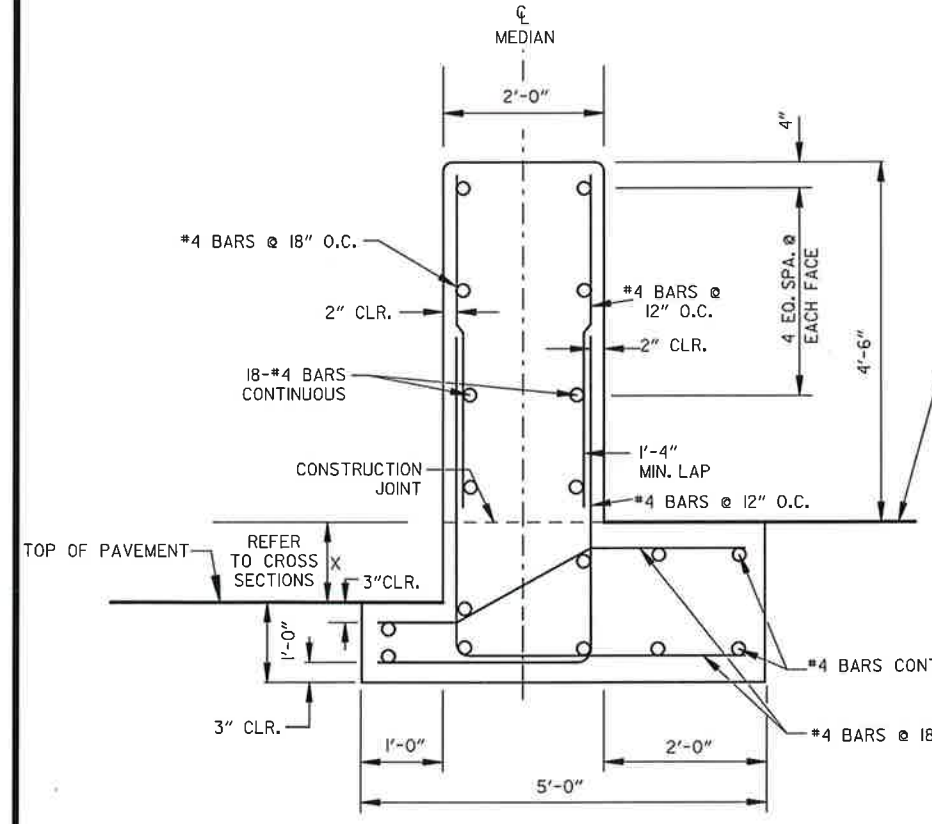
- GENERAL NOTES FOR CONCRETE BARRIER WALLS**
- ALL BARRIER WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 631 OF THE STANDARD SPECIFICATIONS, 2014 EDITION.
 - ALL EXPOSED EDGES SHALL HAVE $\frac{3}{4}$ " CHAMFERS.
 - CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
 - CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
 - MAINTAIN 3" CLEARANCE ON ALL FOOTING REINFORCEMENT AND 2" ON ALL OTHER REINFORCEMENT, UNLESS OTHERWISE NOTED.
 - DOWEL BARS WILL NOT BE REQUIRED IF BARRIER AND BASE ARE CAST AS A COMPLETE UNIT.
 - CONTRACTOR MAY OMIT BARRIER WALL FOOTING OR SHEAR KEY IF NECESSARY AROUND DROP INLETS.



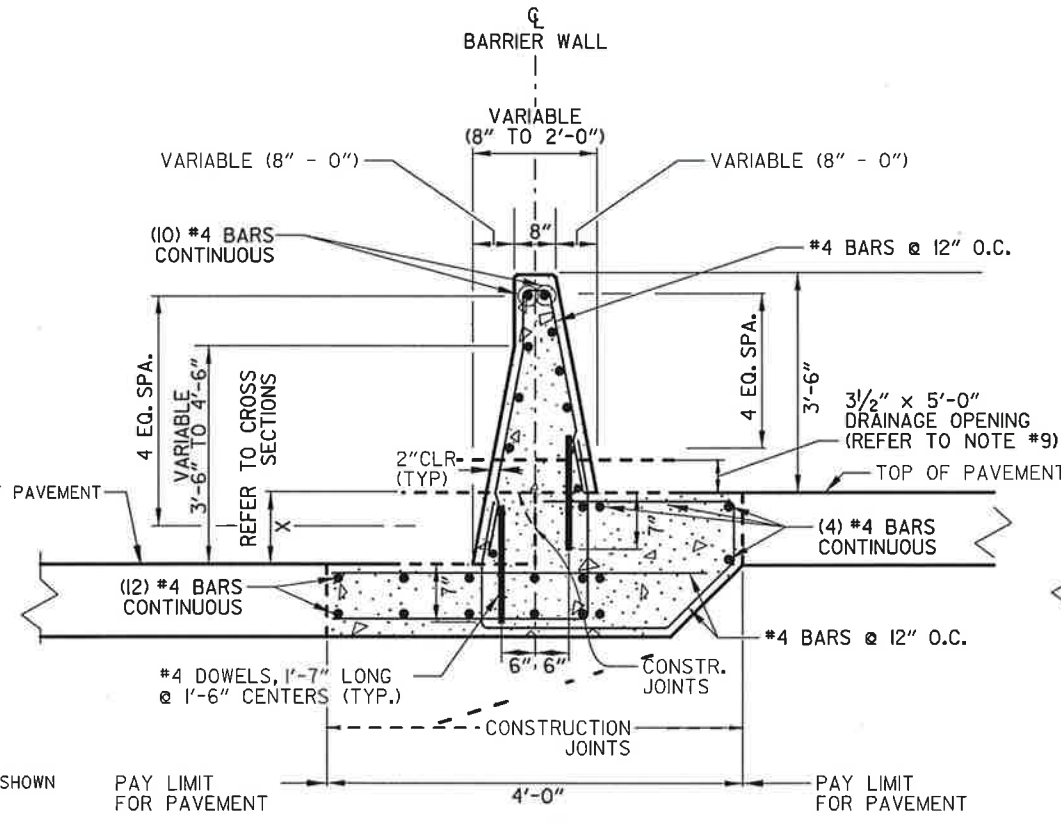
PLAN VIEW
CONCRETE BARRIER WALL (MEDIAN TYPE B; MASH TL-4) TRANSITION



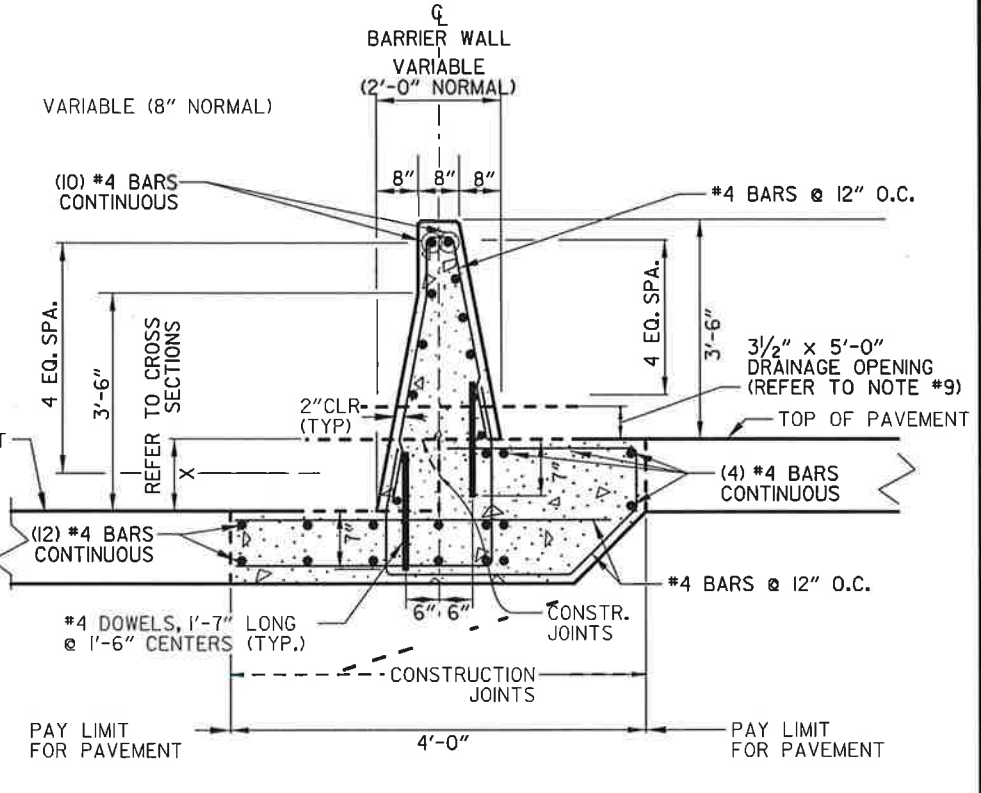
CONTRACTION JOINT DETAIL



(SECTION A-A)
CONCRETE BARRIER WALL (MEDIAN TYPE SP-1)
 X = 0'-0" TO 1'-0" MAX.



(SECTION B-B)
CONCRETE BARRIER WALL
(MEDIAN TYPE B; MASH TL-4) TO CONCRETE BARRIER WALL
(MEDIAN TYPE SP-1) TO MEDIAN FOUNDATION
(OVERHEAD SIGN)
 X = 0'-0" TO 1'-0" MAX
 (NOT TO SCALE)

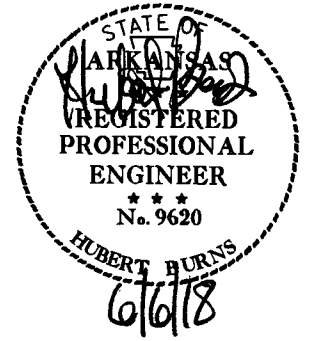


(SECTION C-C)
CONCRETE BARRIER WALL
(MEDIAN TYPE B; MASH TL-4)
 X = 0'-0" TO 1'-0" MAX

USER: mh514
 DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\special_details\BB0903_SpecialDtlis_04.dgn
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	30	368	

2 SPECIAL DETAILS



GENERAL NOTES:

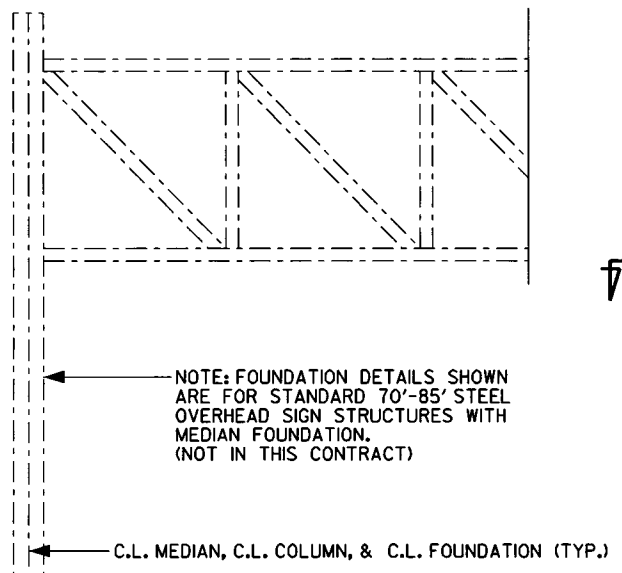
FOUNDATION MATERIALS AND STRENGTHS:

CLASS S CONCRETE F'C= 3,500 PSI
 REINFORCING STEEL (GRADE 60, AASHTO M 310R M 322, TYPE A) FY= 60,000 PSI

ANCHOR BOLTS SHALL COMPLY WITH AASHTO M 314, GRADE 55 INCLUDING SUPPLEMENTARY REQUIREMENT S1, AND GALVANIZED ACCORDING TO SUBSECTION 807.07. NUTS FOR BOLTS SHALL BE AS SPECIFIED IN SECTION 807.07.

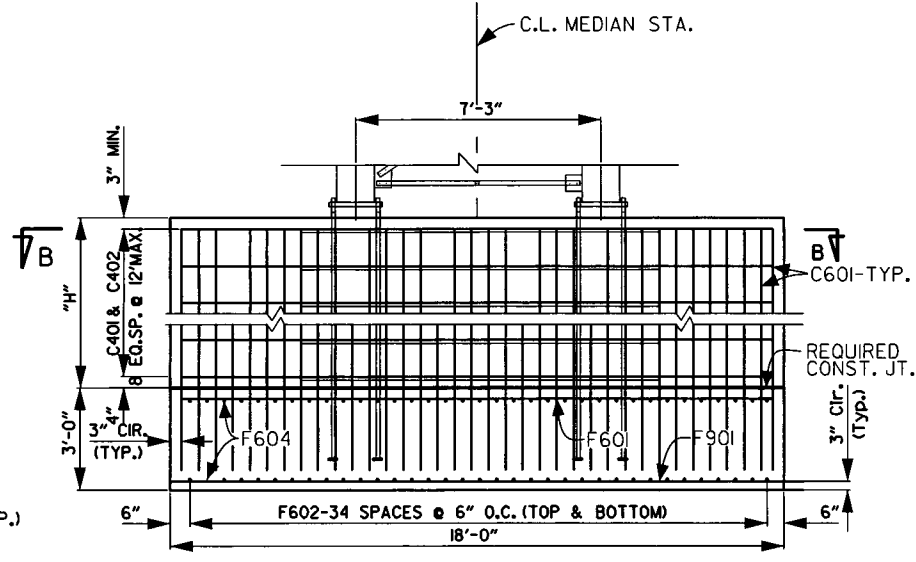
SHORING MAY BE REQUIRED TO PROTECT EXISTING SHOULDERS DURING EXCAVATION. ANY SHORING REQUIRED SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.

PAYMENT FOR CLASS S CONCRETE, REINFORCING STEEL, EXCAVATION, ANCHOR BOLTS, NUTS, WASHERS, AND FOR ALL OTHER MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEM "OVERHEAD SIGN STRUCTURE FOUNDATION."



NOTE: FOUNDATION DETAILS SHOWN ARE FOR STANDARD 70'-85' STEEL OVERHEAD SIGN STRUCTURES WITH MEDIAN FOUNDATION. (NOT IN THIS CONTRACT)

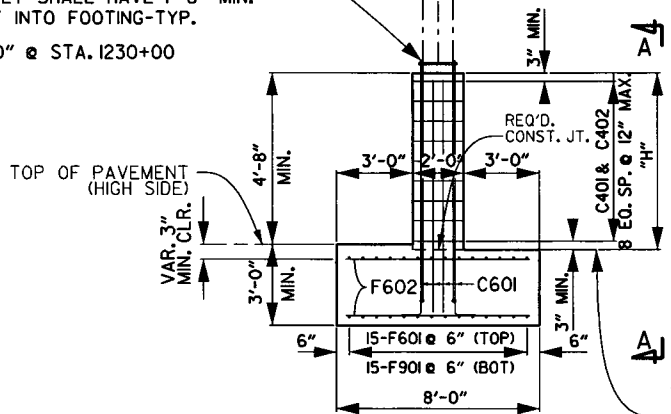
C.L. MEDIAN, C.L. COLUMN, & C.L. FOUNDATION (TYP.)



VIEW A-A

ANCHOR BOLTS SHALL BE INSTALLED DURING FOUNDATION CONSTRUCTION. SEE "ANCHOR BOLT LAYOUT." ANCHOR BOLT SHALL HAVE 1'-6" MIN. EMBEDMENT INTO FOOTING-TYP.

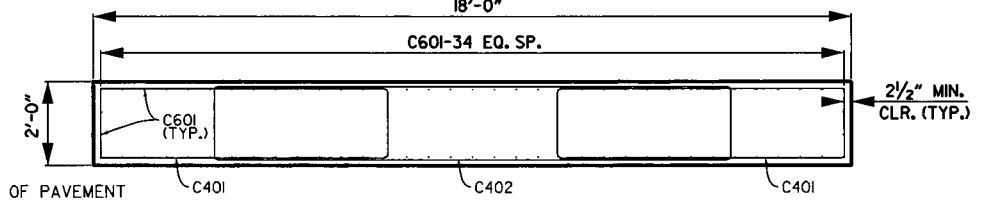
"H" = 6'-10" @ STA. 1230+00



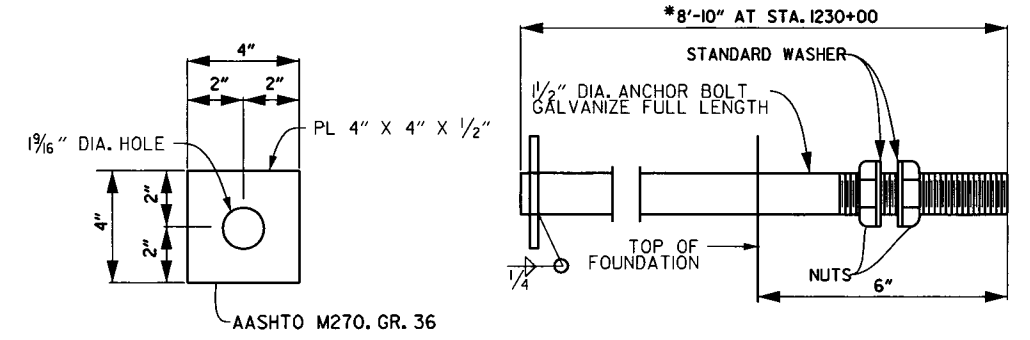
ELEVATION

NOTE:

- FOR MEDIAN BARRIER ON EITHER SIDE OF FOUNDATION, SEE ROADWAY PLANS.
- TOP OF SIGN FOOTING SHALL MATCH TOP OF MEDIAN BARRIER FOOTING WHEN CONNECTING TO CONCRETE BARRIER WALL (MEDIAN TYPE B). TOP OF FOOTING SHALL MATCH TOP OF PAVEMENT LOW SIDE WHEN CONNECTING TO TYPES OF CONCRETE BARRIER WALL OTHER THAN CONCRETE BARRIER WALL (MEDIAN TYPE B).



SECTION B-B



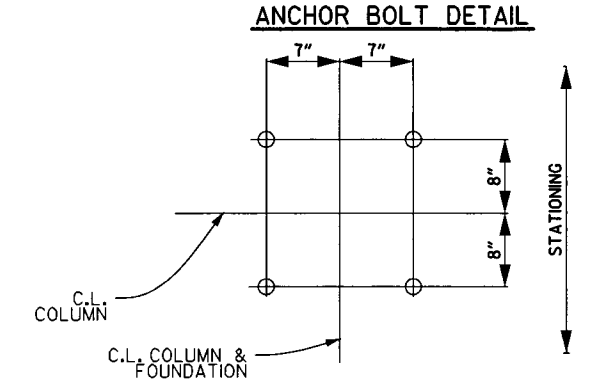
ANCHOR BOLT DETAIL

MARK	NO.	REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
C401	14		17'-8"	3"	
C402	7		24'-8"	3"	
C601	74		9'-9"	4 1/2"	
F601	15		17'-6"	Str.	
F602	70		7'-6"	Str.	
F901	15		17'-6"	Str.	

*APPROXIMATE QUANTITIES FOR FOUNDATION (FOR INFORMATION ONLY)

CLASS S CONCRETE (CU. YDS.)	REINFORCING STEEL (LBS.)	EXCAVATION (CU. YDS.)
24.4	3440	28.1

* NOTE: ANCHOR BOLT LENGTH, BAR LIST, AND QUANTITIES BASED ON 6'-4" COLUMN HEIGHT. CONTRACTOR SHALL MAKE APPROPRIATE ADJUSTMENTS FOR OTHER COLUMN HEIGHTS.



ANCHOR BOLT LAYOUT

DETAILS FOR MEDIAN FOUNDATIONS (OVERHEAD SIGN)

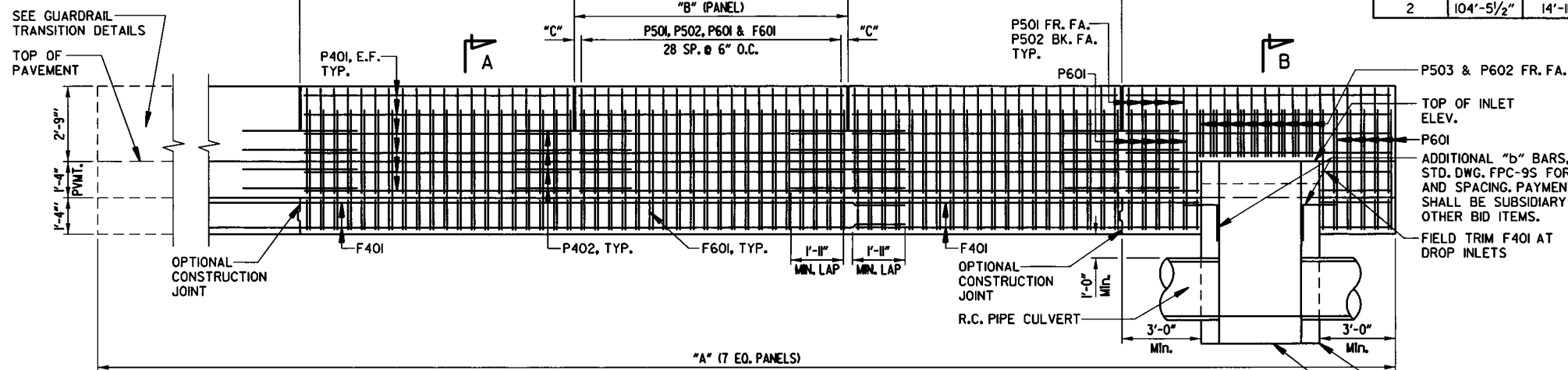
SPECIAL DETAILS

TABLE OF VARIABLES

BENT NO.	A	B	C
1	101'-4"	14'-5 1/4"	2 7/8"
2	104'-5 1/2"	14'-11"	5 1/2"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	31
						SPECIAL DETAILS		

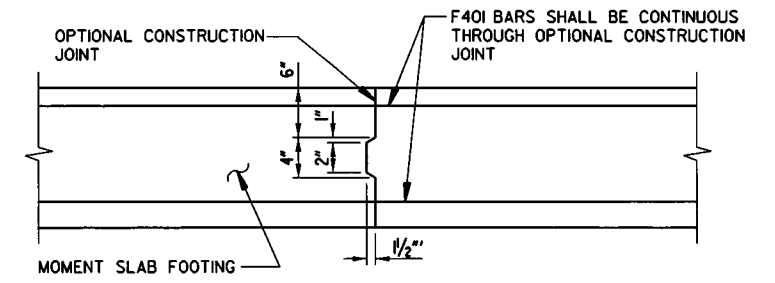
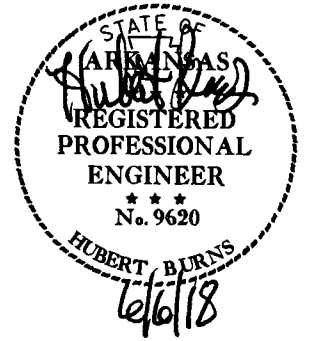
Ⓟ PARTIAL-DEPTH PARAPET JOINT (1/4" TO 1" MAX.). STOP 1'-2" FROM TOP OF PAVEMENT.



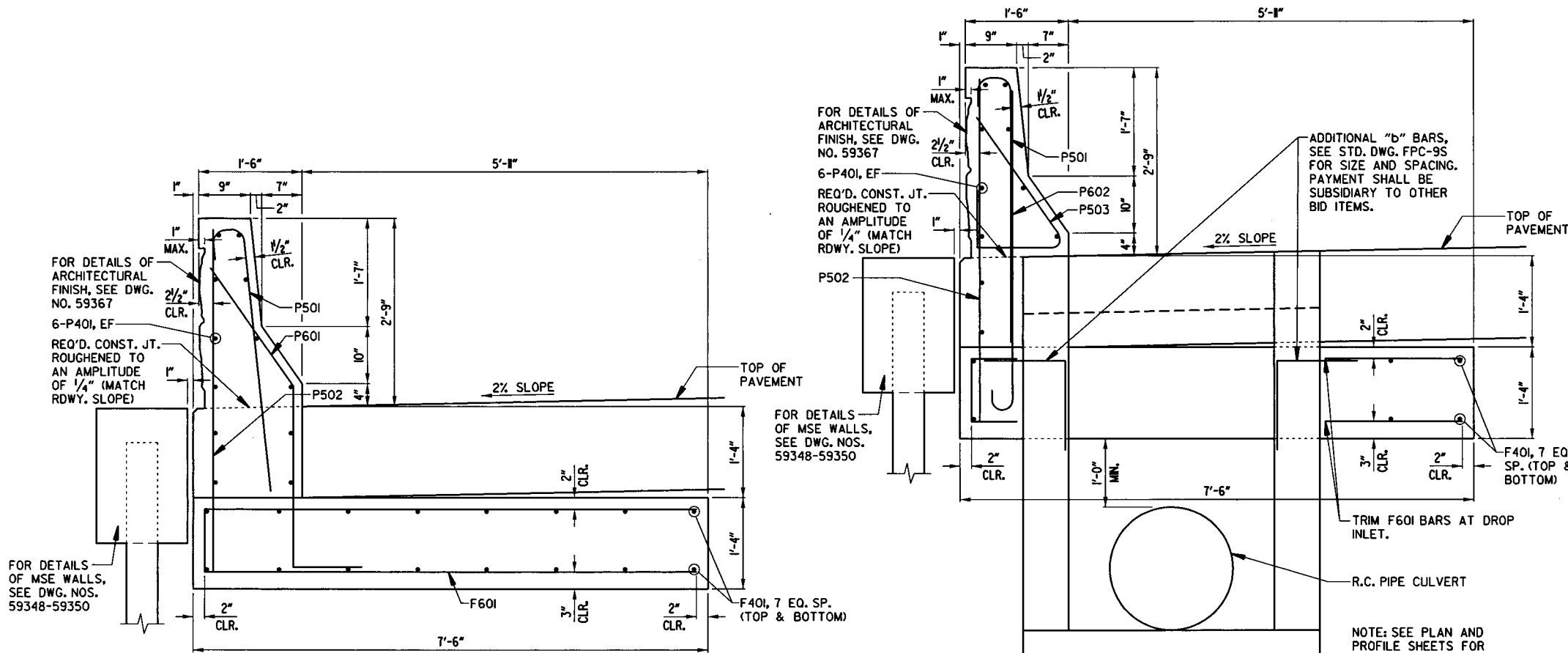
PARAPET AND MOMENT SLAB ELEVATION
(LOOKING AT ROADWAY FACE)
(NOT TO SCALE)

GENERAL NOTES

- ALL EXPOSED EDGES SHALL HAVE 3/4" CHAMFERS.
- CONCRETE SHALL BE CLASS 'S/AE' WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF F'C=4000 PSI. CONCRETE SHALL BE POURED IN THE DRY.
- ALL REINFORCING STEEL SHALL BE GRADE 60 (FY = 60,000 PSI) AASHTO M 31 OR M 322, TYPE A WITH MILL TEST REPORTS.
- ALL COST ASSOCIATED WITH THE CONSTRUCTION OF THE PARAPET AND MOMENT SLAB (FOOTING) INCLUDING CONCRETE, REINFORCING STEEL, JOINT MATERIAL, & DOWEL BARS SHALL BE INCLUDED IN THE LINEAR FOOT COST OF "CONCRETE BARRIER WALL (PARAPET TYPE SPECIAL)".
- ALL COST ASSOCIATED WITH THE CONSTRUCTION OF THE DROP INLETS SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.



OPTIONAL CONSTRUCTION JOINT DETAIL
(NOT TO SCALE)



SECTION A-A
(NOT TO SCALE)

SECTION B-B
(NOT TO SCALE)

CONCRETE BARRIER WALL (PARAPET TYPE SPECIAL)

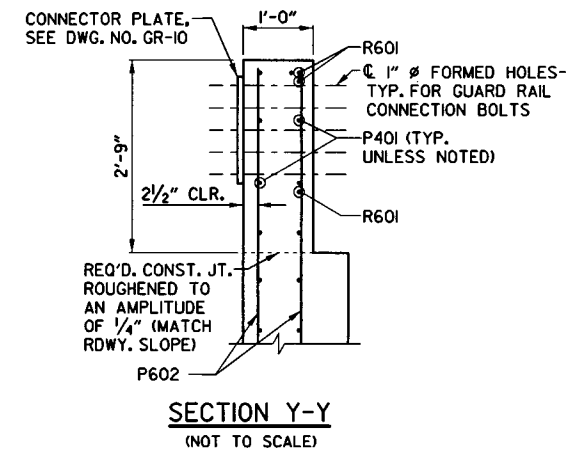
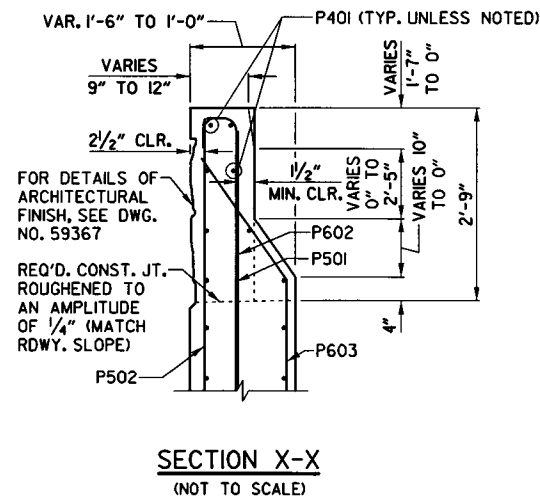
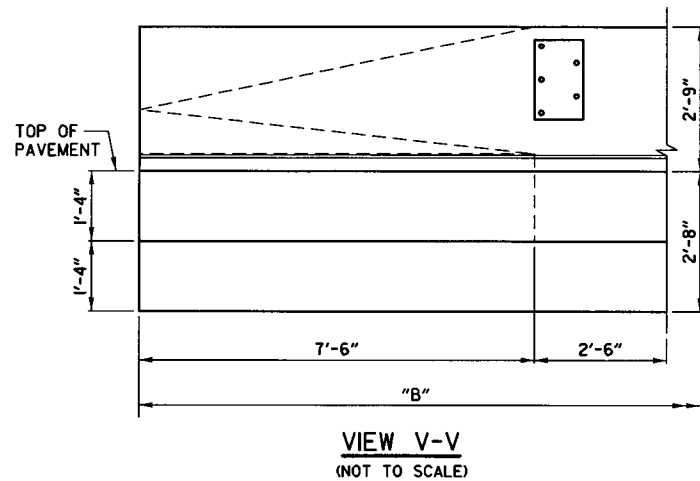
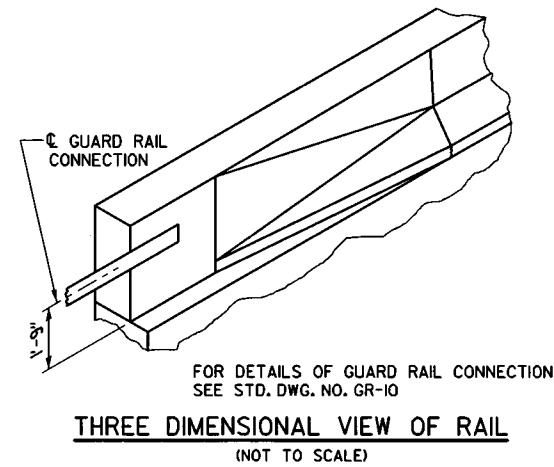
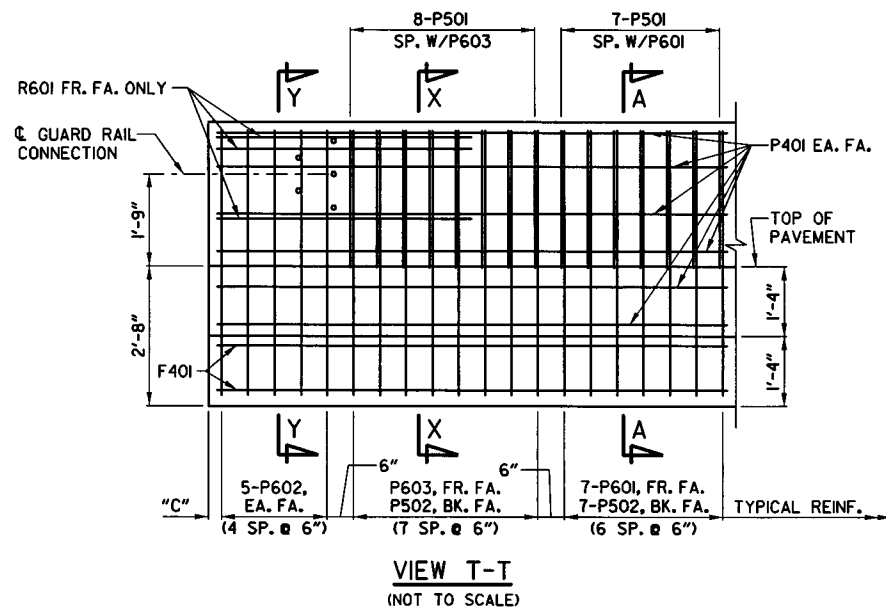
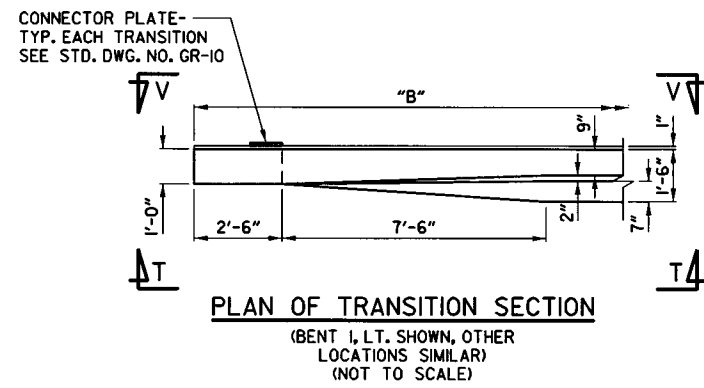
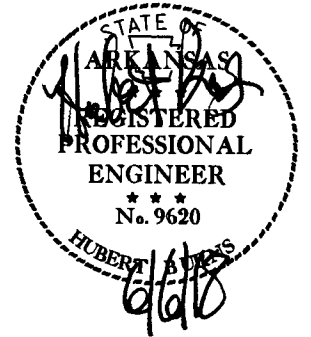
BAR LIST - END BENT 1				BENDING DIAGRAMS	
MARK	NO. REQ'D	LENGTH	P.D.	DIMENSIONS ARE OUT TO OUT OF BARS	
F401	96	35'-0"	STR.	7'-2"	
F601	406	15'-0"	4 1/2"	3'-10"	
P401	168	14'-0"	STR.	12"	
P402	96	4'-2"	STR.	1/4"	
P501	406	4'-6"	3 3/4"	12"	
P502	396	5'-0"	STR.	1/4"	
P503	18	3'-10"	3 3/4"	12"	
P601	378	5'-8"	4 1/2"	12"	
P602	38	5'-6"	4 1/2"	12"	
P603	16	5'-3"	4 1/2"	12"	
R601	6	5'-0"	STR.	12"	

BAR LIST - END BENT 2			
MARK	NO. REQ'D	LENGTH	P.D.
F401	96	36'-0"	STR.
F601	406	15'-0"	4 1/2"
P401	168	14'-7"	STR.
P402	96	4'-2"	STR.
P501	406	4'-6"	3 3/4"
P502	396	5'-0"	STR.
P503	18	3'-10"	3 3/4"
P601	378	5'-8"	4 1/2"
P602	38	5'-6"	4 1/2"
P603	16	5'-3"	4 1/2"
R601	6	5'-0"	STR.

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	32	368	

2 SPECIAL DETAILS



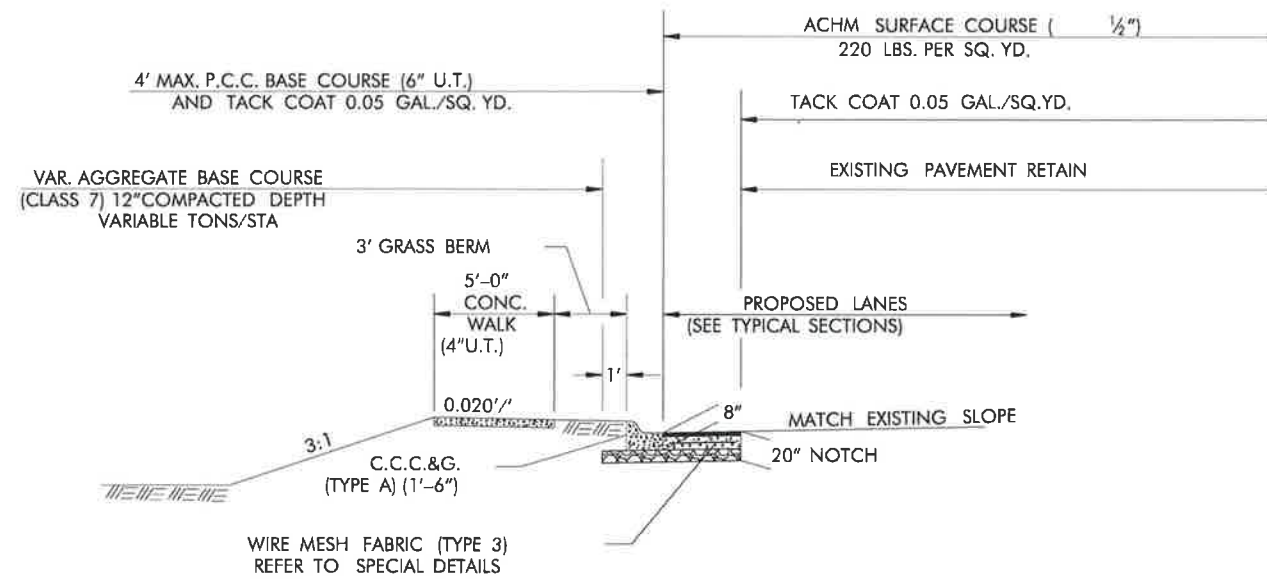
SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18								
JOB NO. BBO903							32A	368

2 SPECIAL DETAILS



07/16/2018



P.C.C. BASE WIDENING DETAIL – HWY. 12

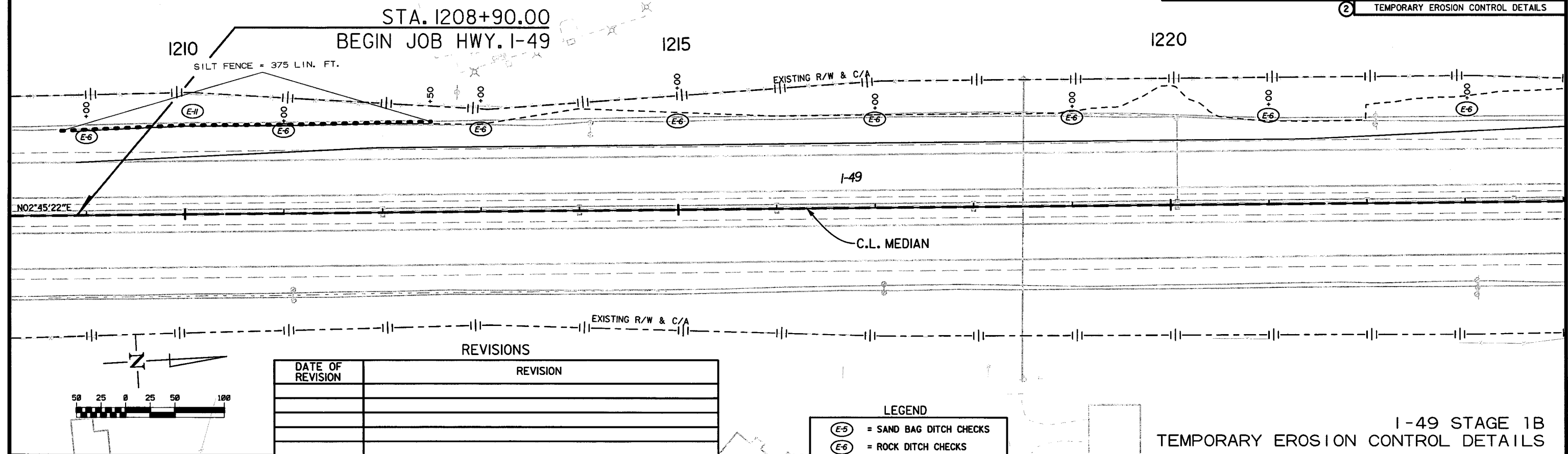
P.C.C. BASE WIDENING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

twrccor/mick 7/16/2018 3:44:53 PM
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 REVISION DATE:

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	33	368

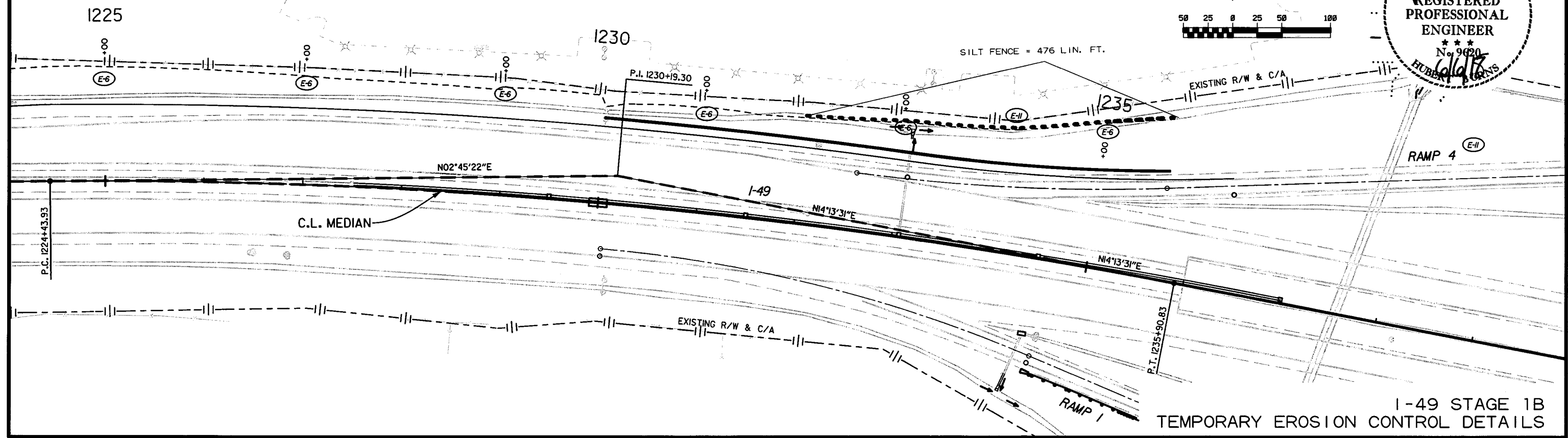
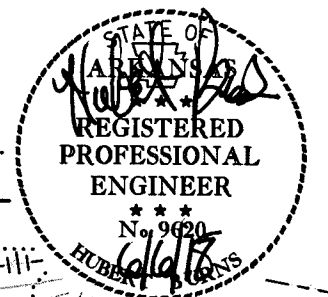
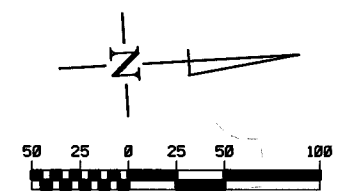
② TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND	
(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-II)	= SILT FENCE

I-49 STAGE 1B
TEMPORARY EROSION CONTROL DETAILS

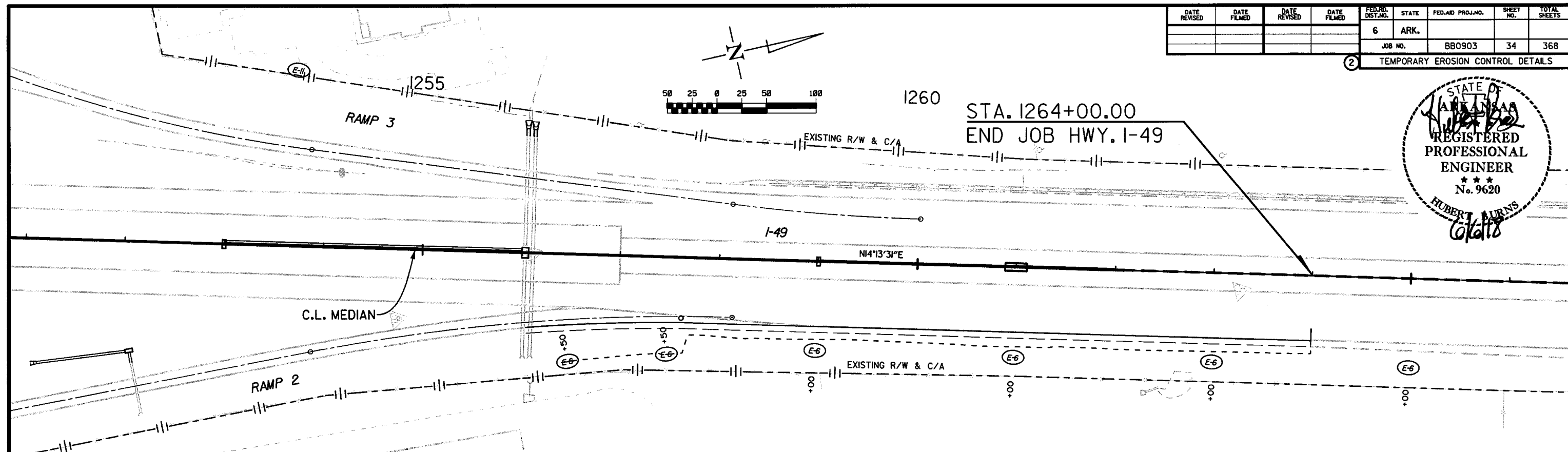
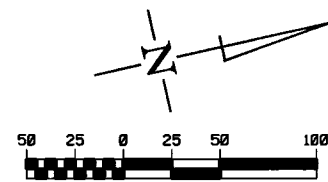
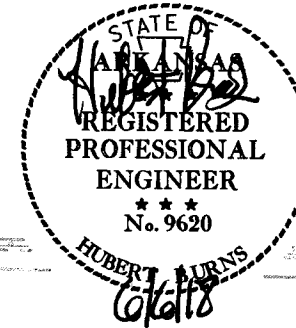


I-49 STAGE 1B
TEMPORARY EROSION CONTROL DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		34	368
				JOB NO.	BB0903		34	368

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

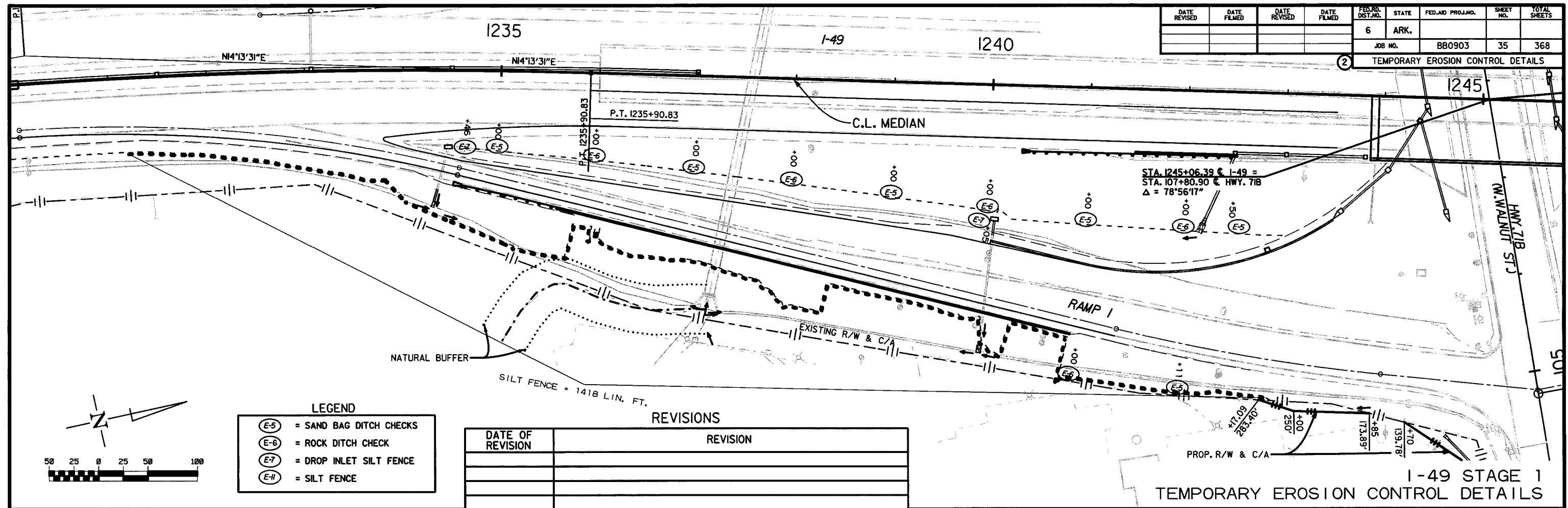
LEGEND

	= SAND BAG DITCH CHECKS
	= ROCK DITCH CHECKS
	= DROP INLET SILT FENCE
	= SILT FENCE

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	35	368	

TEMPORARY EROSION CONTROL DETAILS



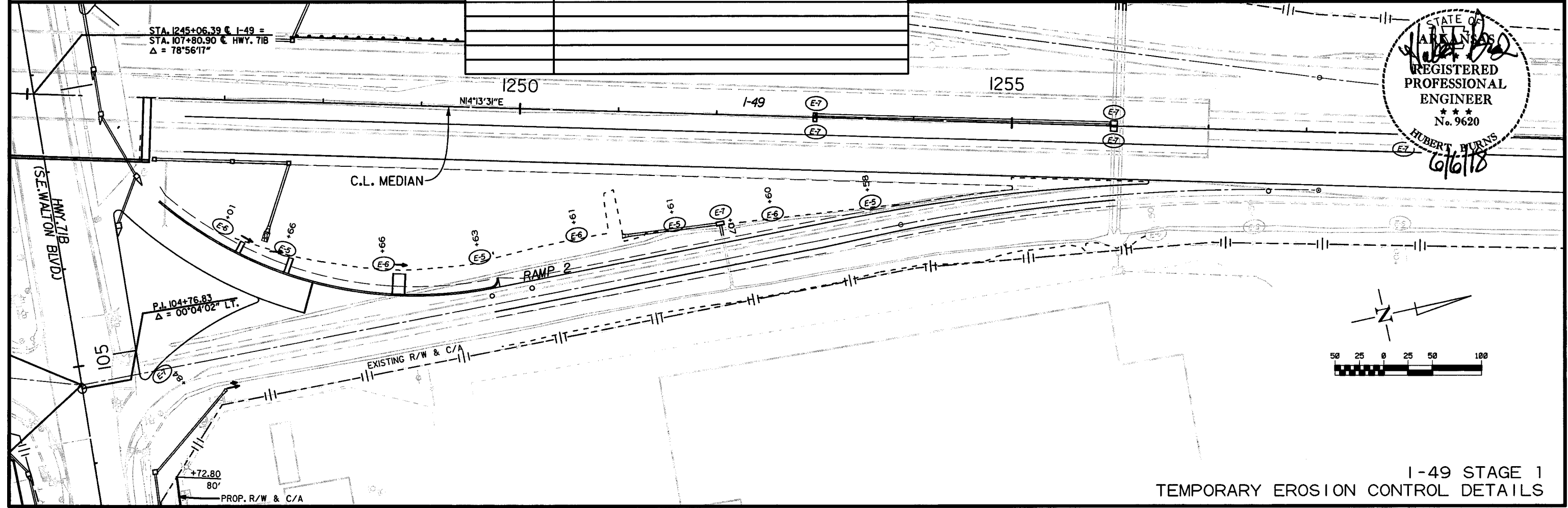
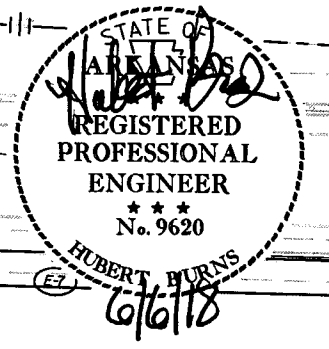
LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-8) = SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

I-49 STAGE 1
TEMPORARY EROSION CONTROL DETAILS

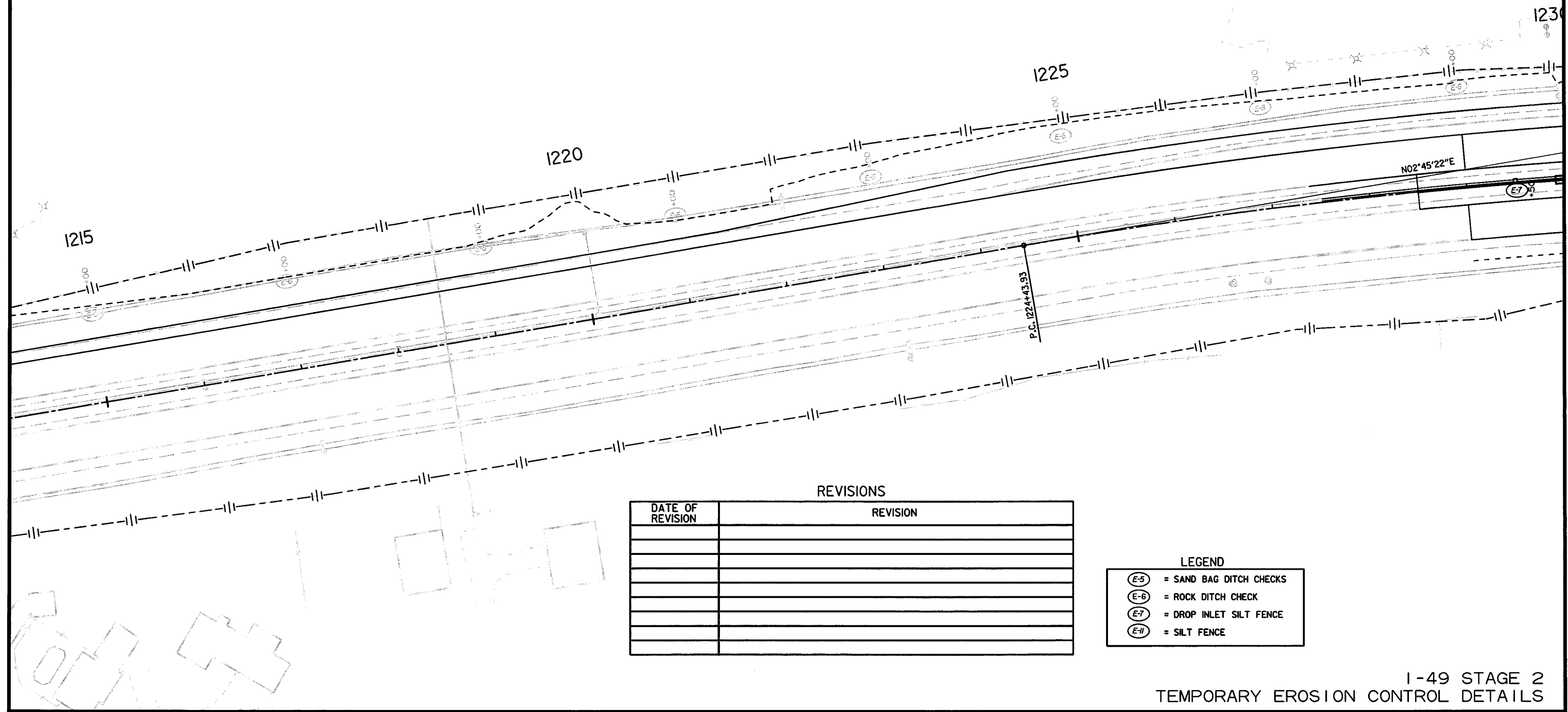
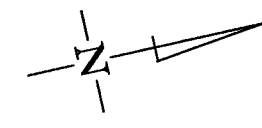
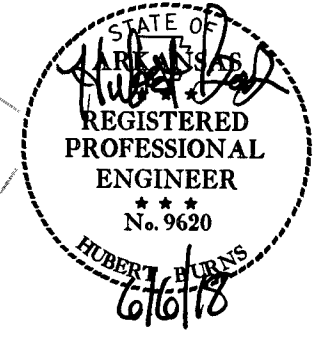


I-49 STAGE 1
TEMPORARY EROSION CONTROL DETAILS

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				6	ARK.			
				JOB NO.		BB0903	36	368

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

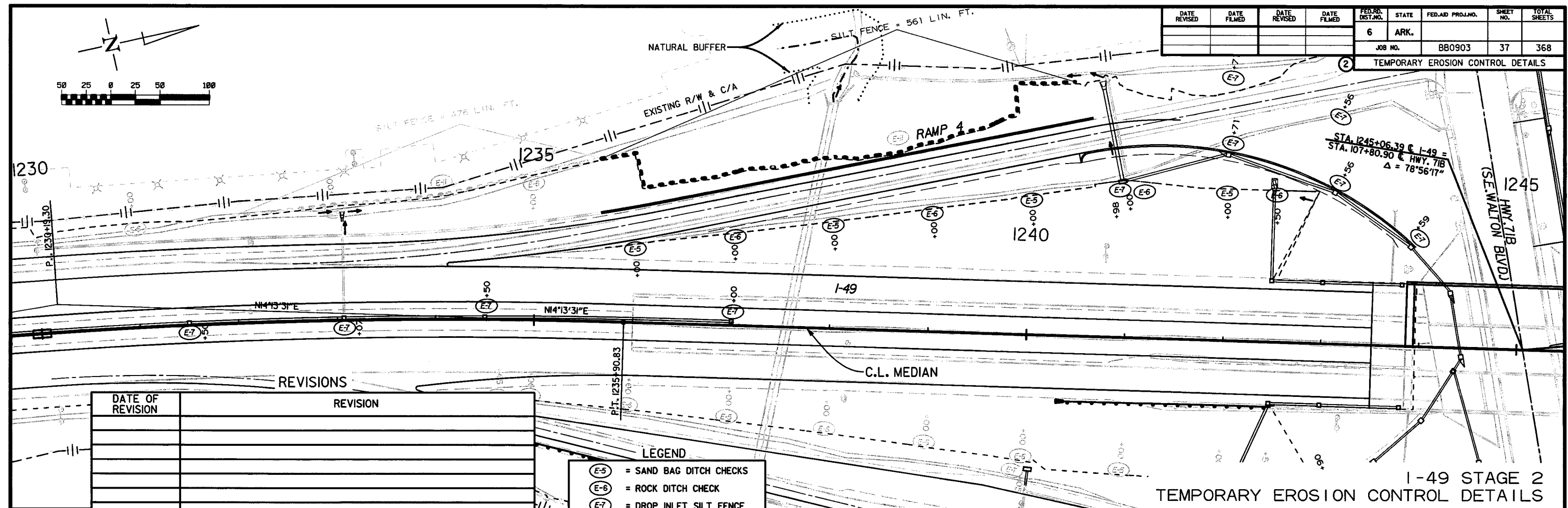
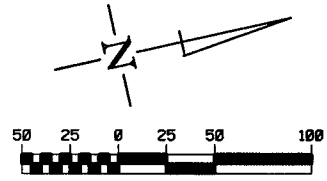
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE

1-49 STAGE 2
TEMPORARY EROSION CONTROL DETAILS

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				JOB NO.		BB0903	37	368

TEMPORARY EROSION CONTROL DETAILS



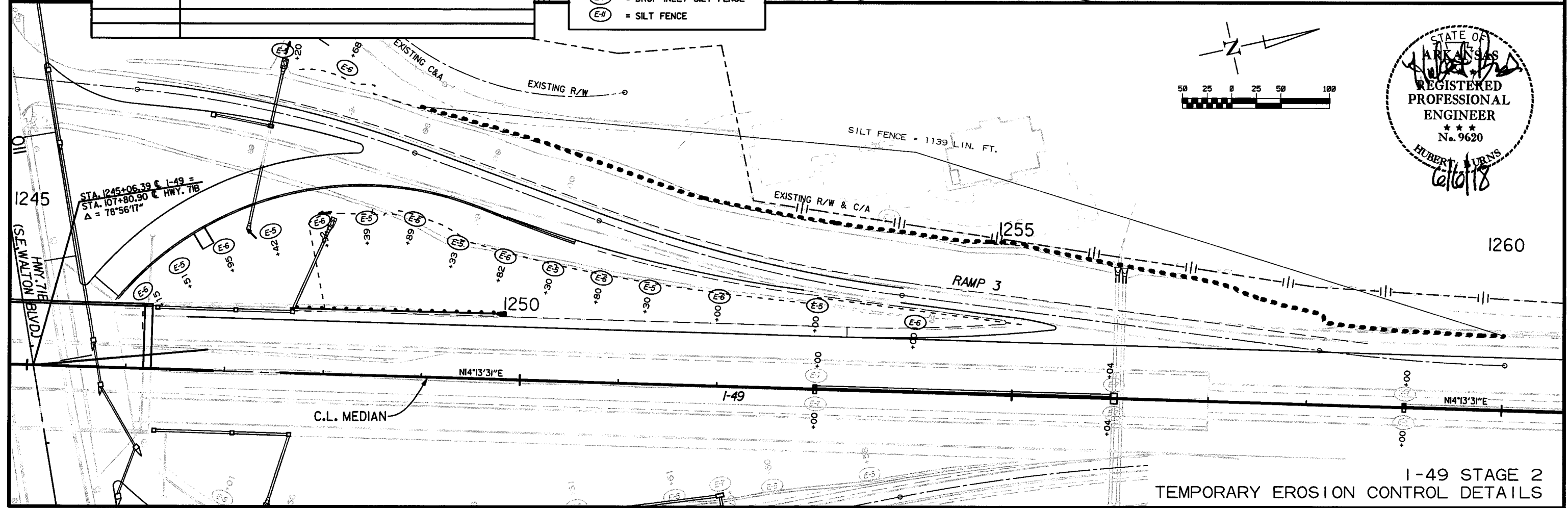
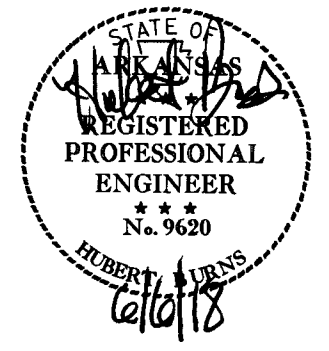
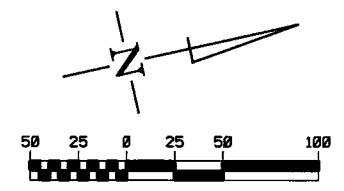
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-4) = SILT FENCE

I-49 STAGE 2
TEMPORARY EROSION CONTROL DETAILS

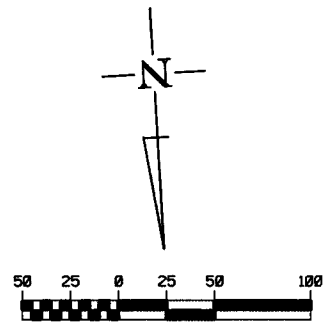
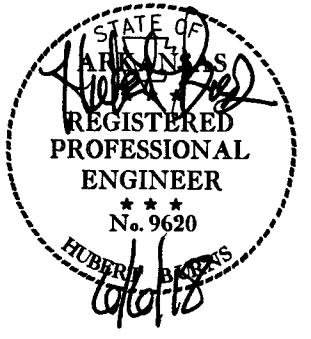


I-49 STAGE 2
TEMPORARY EROSION CONTROL DETAILS

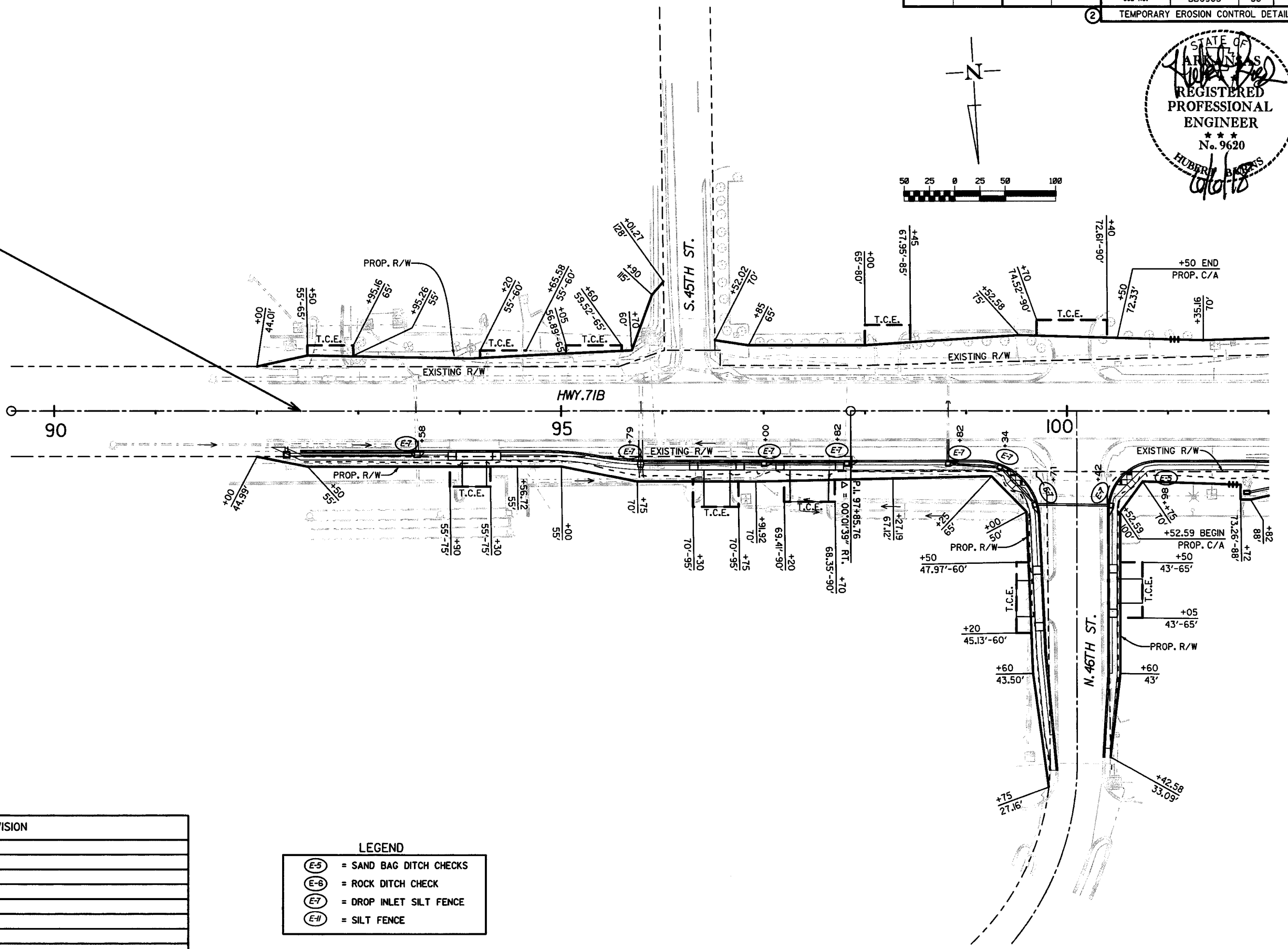
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 SCALE: 1/8"=1'-0"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	38	368

2 TEMPORARY EROSION CONTROL DETAILS



STA. 92+43.00
BEGIN CONSTRUCTION HWY. 71B



REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-#) = SILT FENCE

HWY. 71B STAGE 1
TEMPORARY EROSION CONTROL DETAILS

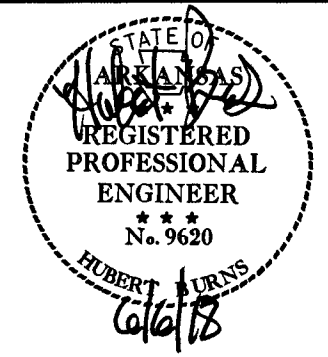
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REVISIONS

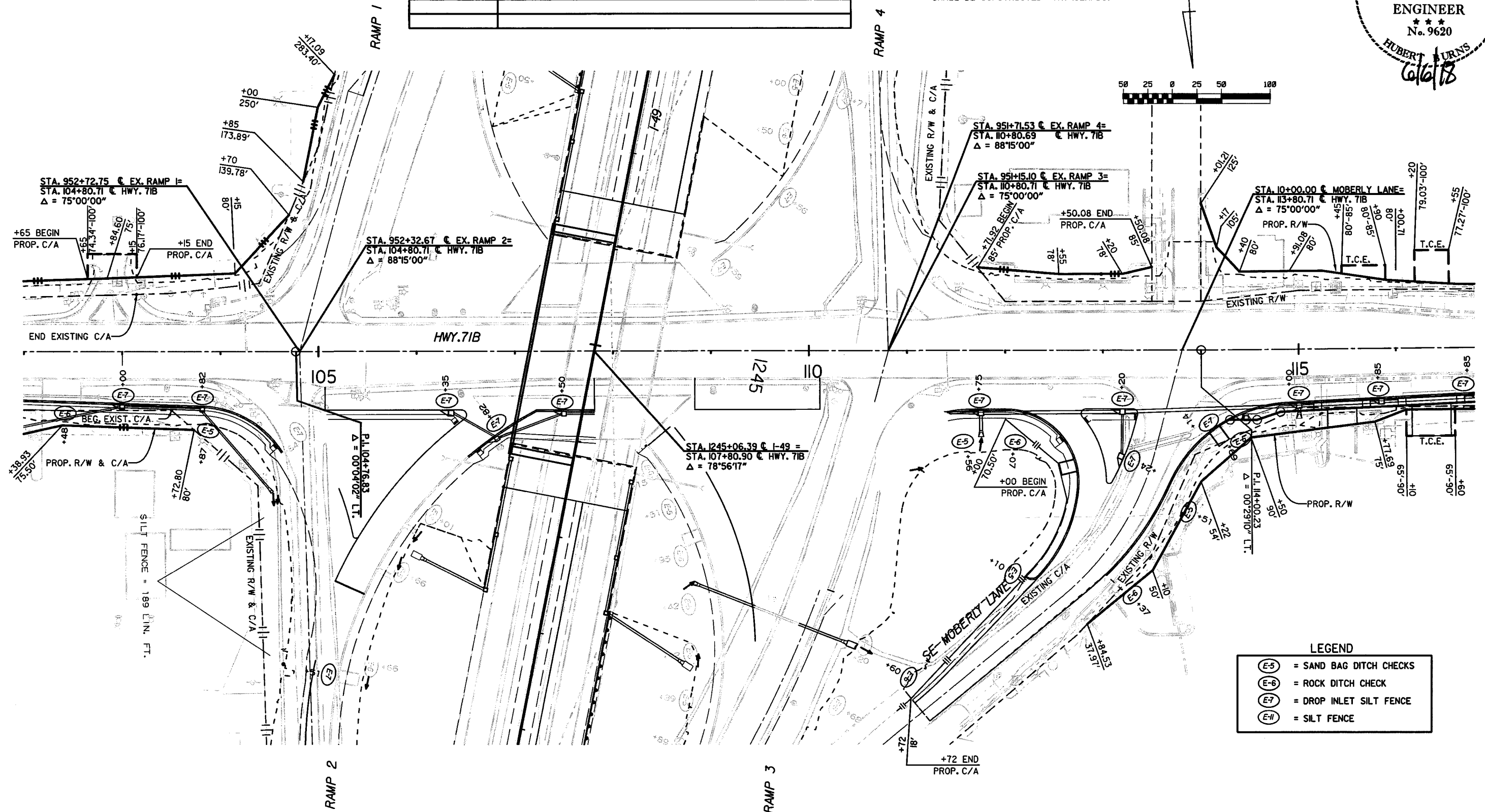
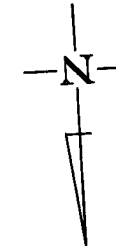
DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		39	368

2 TEMPORARY EROSION CONTROL DETAILS



NOTE: DROP INLETS IN EXISTING ROADWAY SHALL BE CONSTRUCTED WITH ISLANDS.



LEGEND

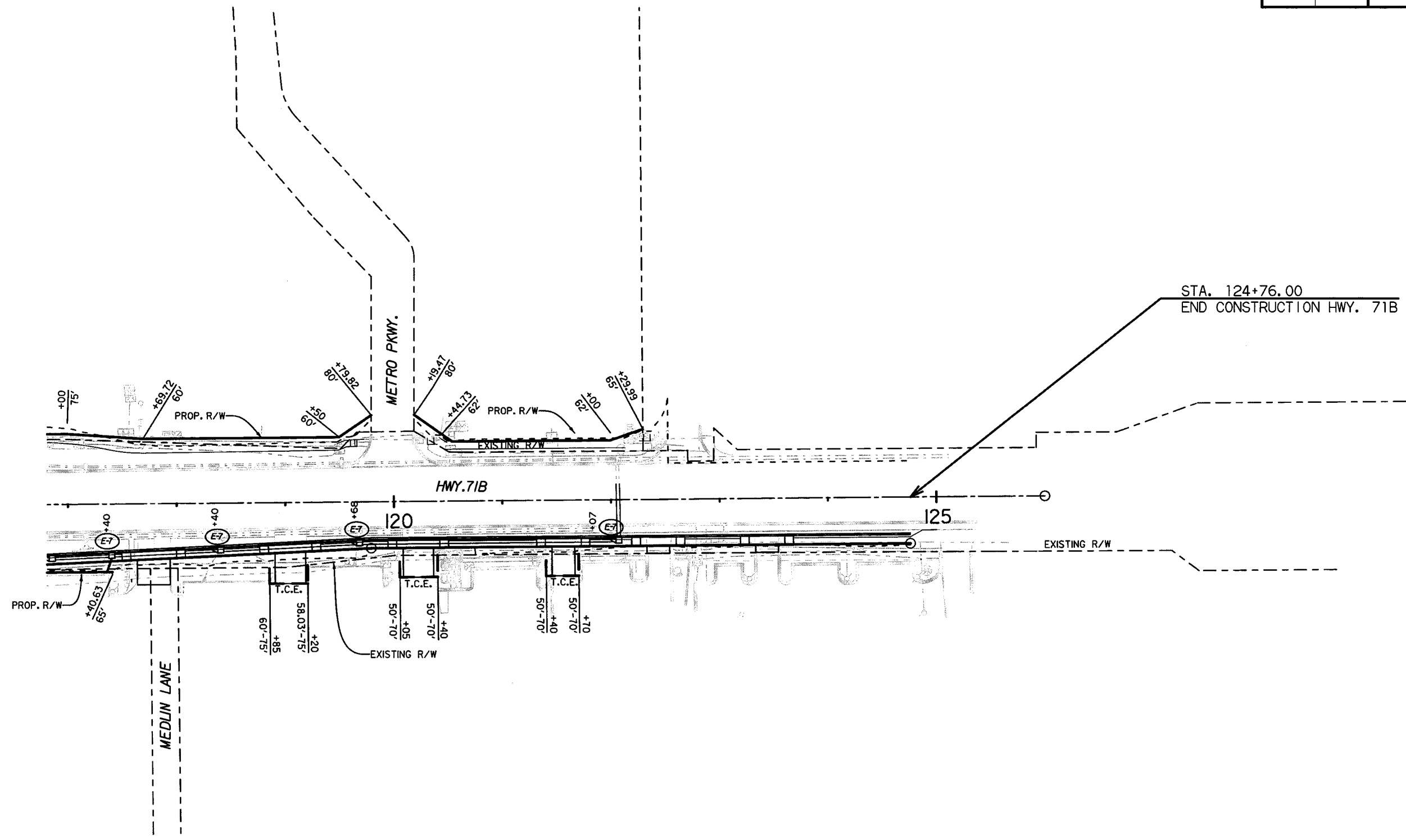
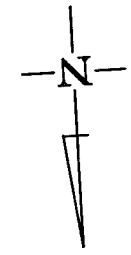
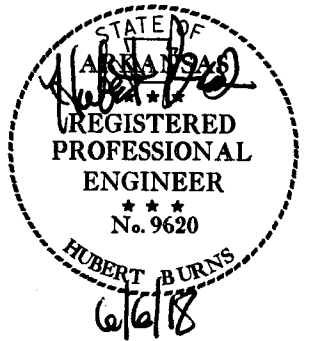
(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECK
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE

HWY. 71B STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hwy71\TRANSP.dgn
 PLOTTED: 6/6/2018 11:02
 SCALE: 1/800

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	40	368

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

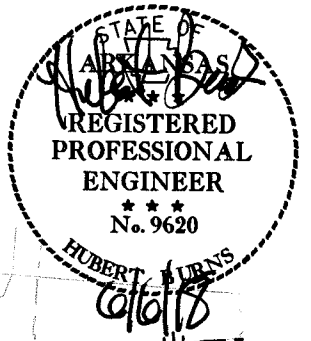
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-#) = SILT FENCE

HWY. 71B STAGE 1
TEMPORARY EROSION CONTROL DETAILS

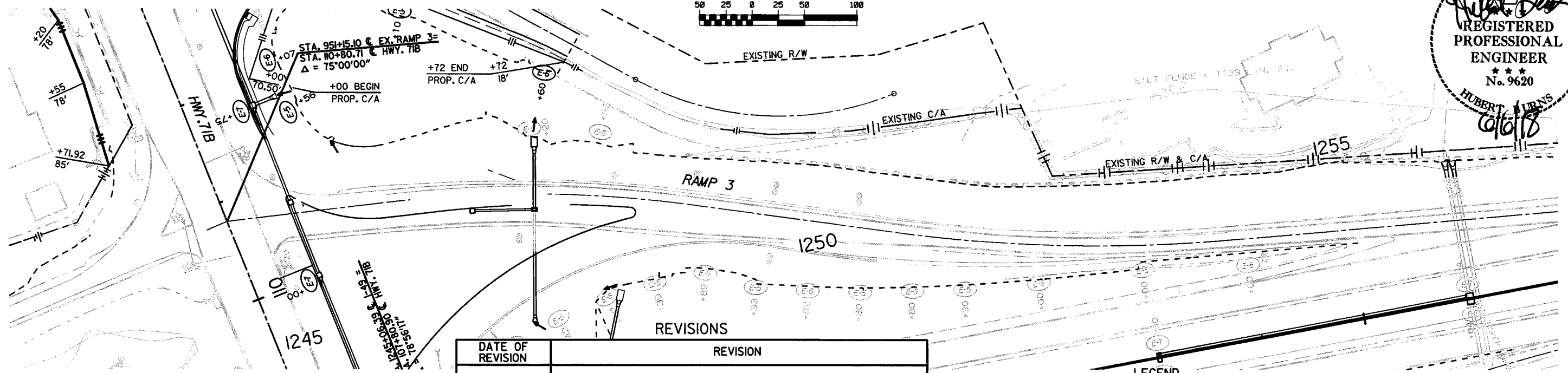
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	41	368

2 TEMPORARY EROSION CONTROL DETAILS

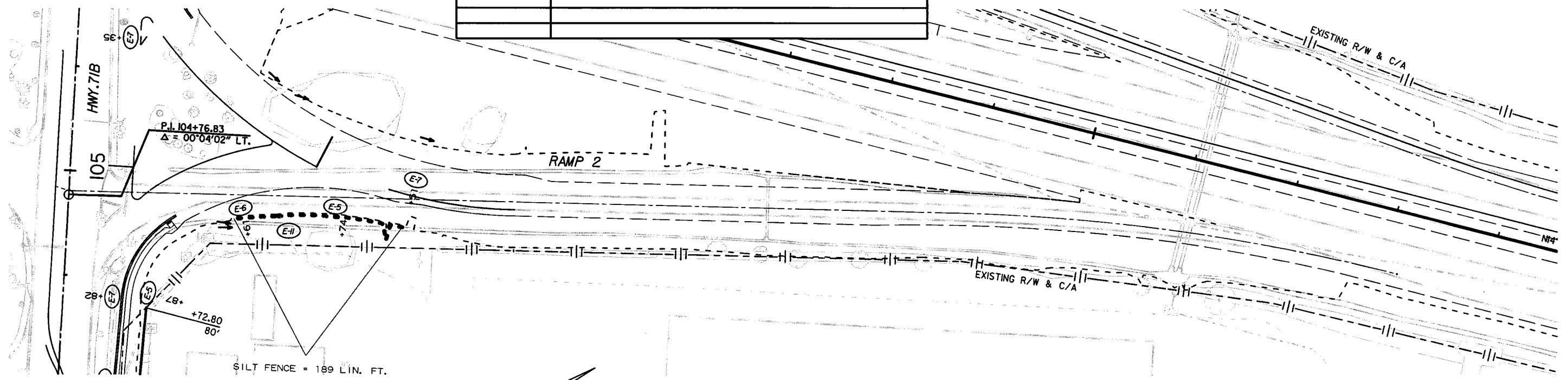


NOTE:
DROP INLETS IN EXISTING ROADWAY
SHALL BE CONSTRUCTED WITH ISLANDS.



DATE OF REVISION	REVISION

LEGEND	
(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECK
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE

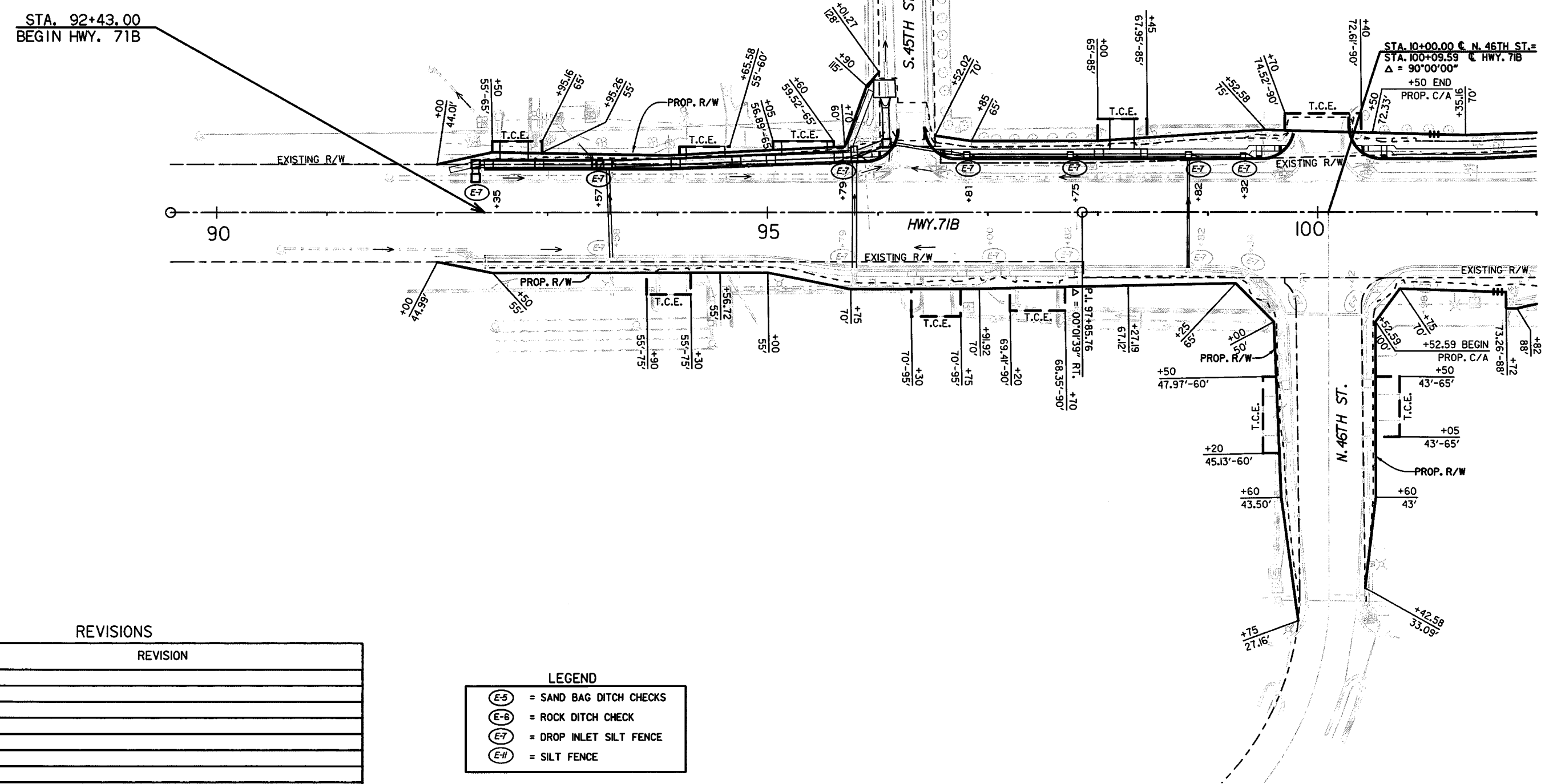
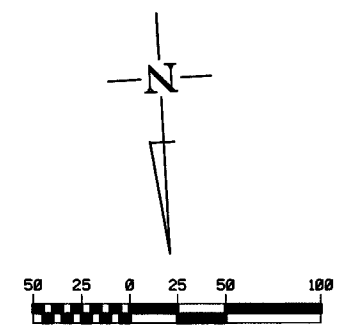
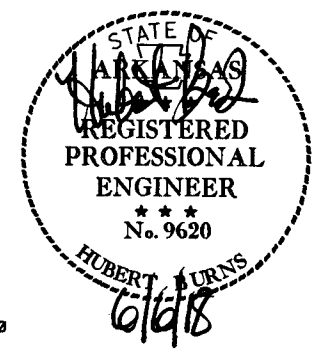


HWY. 71B STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\eroston\BB0903_EC_HWY71B_01.dgn
 PLOTTED: 6/6/2018 11:02
 SCALE: 1/80

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	42	368	

2 TEMPORARY EROSION CONTROL DETAILS



STA. 92+43.00
BEGIN HWY. 71B

STA. 10+00.00 @ N. 46TH ST. =
STA. 100+09.59 @ HWY. 71B
 $\Delta = 90^{\circ}00'00''$
+50 END
PROP. C/A

REVISIONS

DATE OF REVISION	REVISION

LEGEND

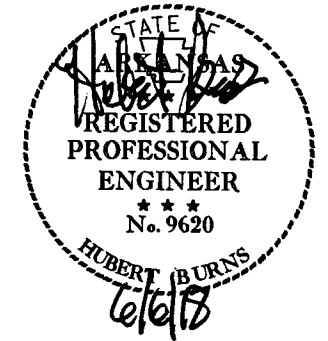
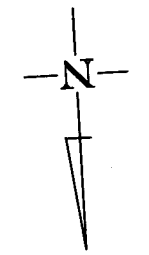
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-4) = SILT FENCE

HWY. 71B STAGE 2
TEMPORARY EROSION CONTROL DETAILS

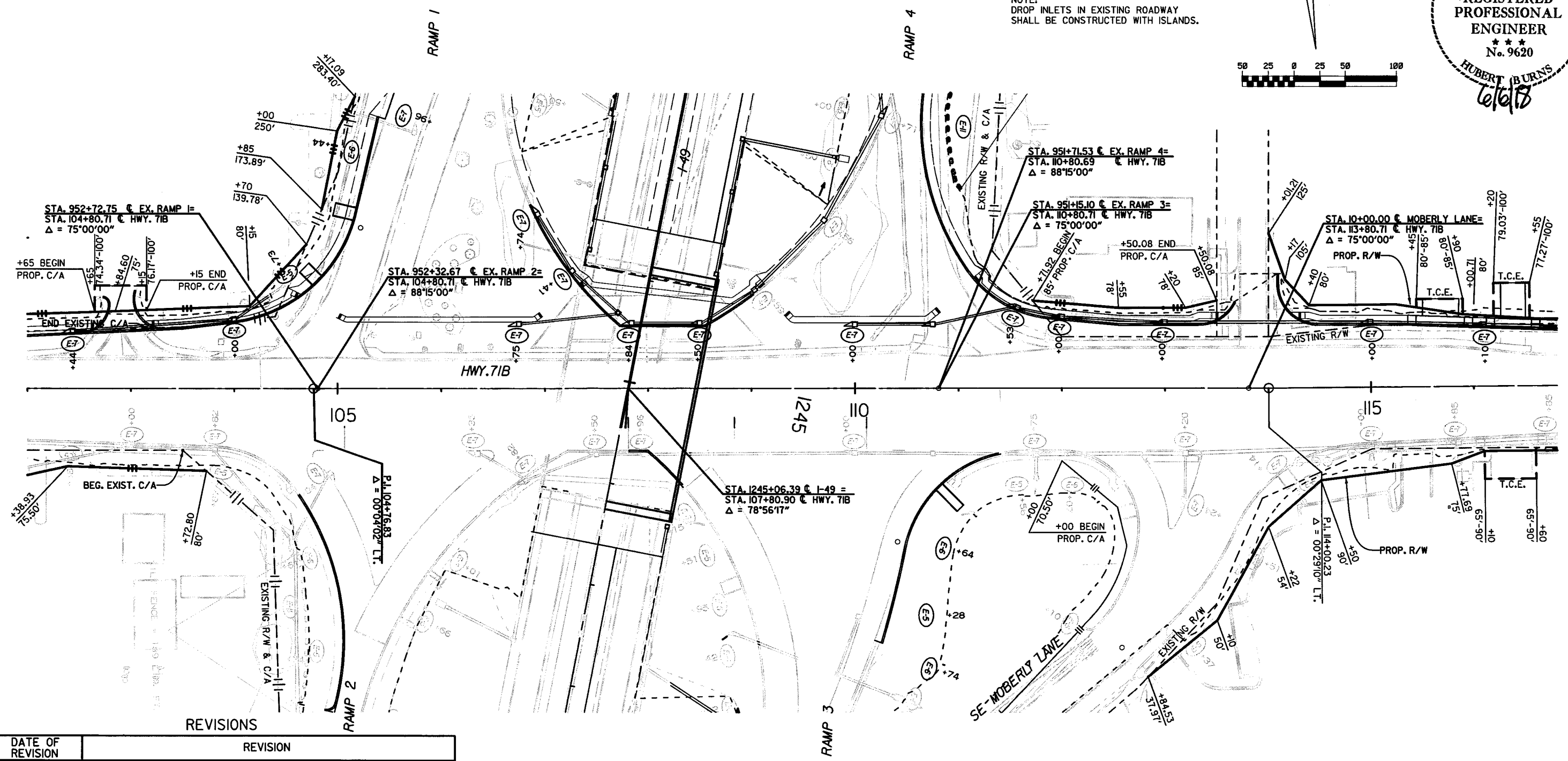
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	43	368

2 TEMPORARY EROSION CONTROL DETAILS



NOTE:
DROP INLETS IN EXISTING ROADWAY
SHALL BE CONSTRUCTED WITH ISLANDS.



REVISIONS

DATE OF REVISION	REVISION

LEGEND

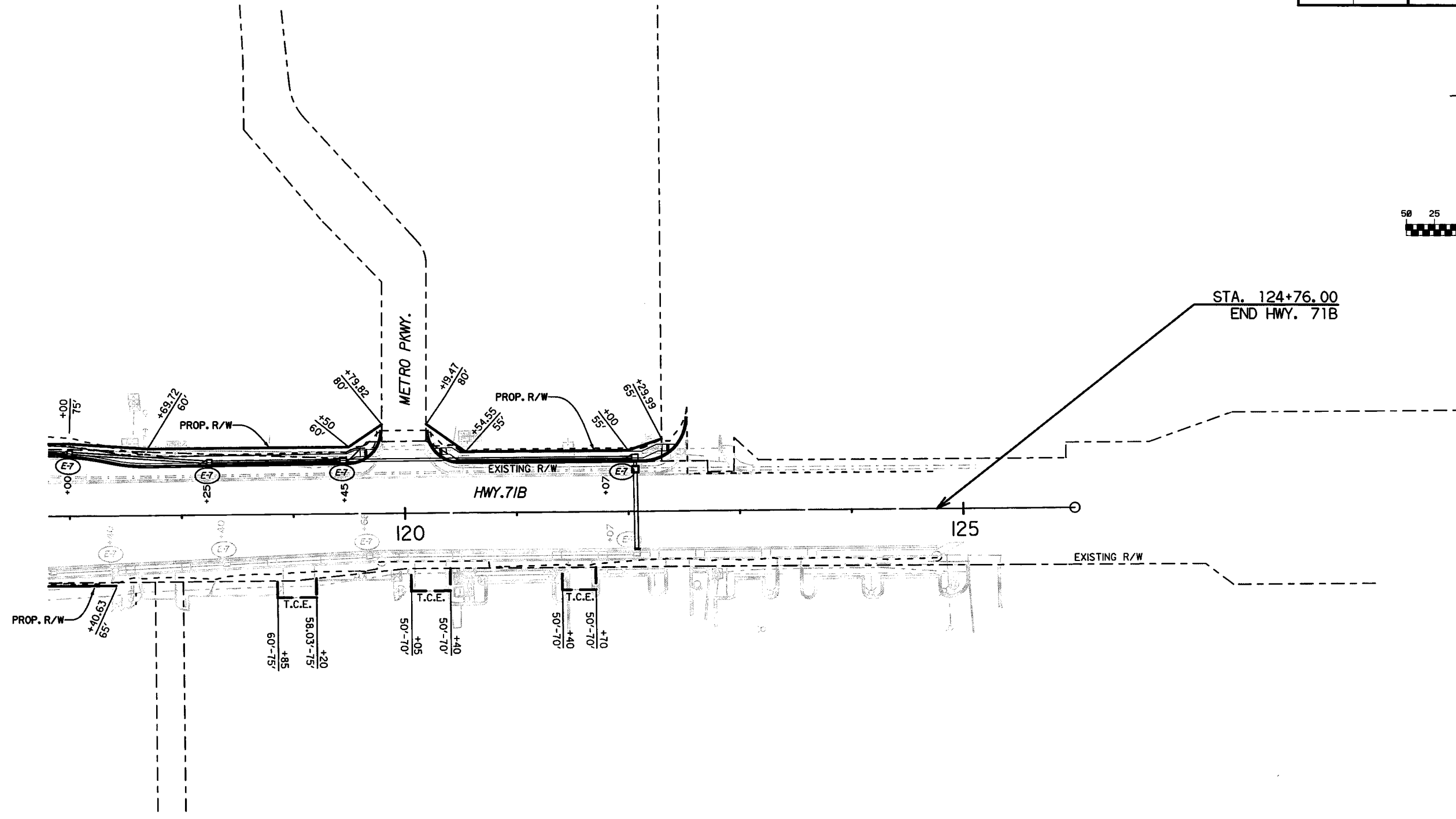
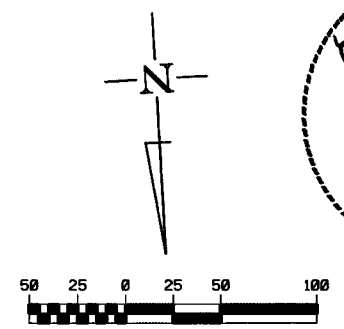
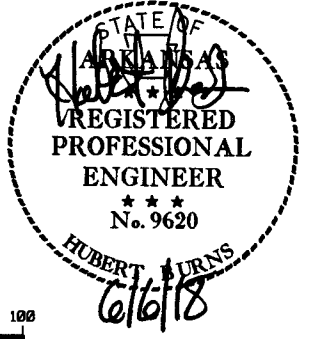
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-4) = SILT FENCE

HWY. 71B STAGE 2
TEMPORARY EROSION CONTROL DETAILS

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\mchq\TRANSP\dgn\erosion\BB0903_EC.HWY71B_01.dgn
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 SCALE: 1/800

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		44	368

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

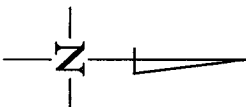
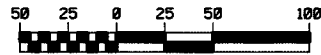
DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-8) = SILT FENCE

HWY. 71B STAGE 2
TEMPORARY EROSION CONTROL DETAILS

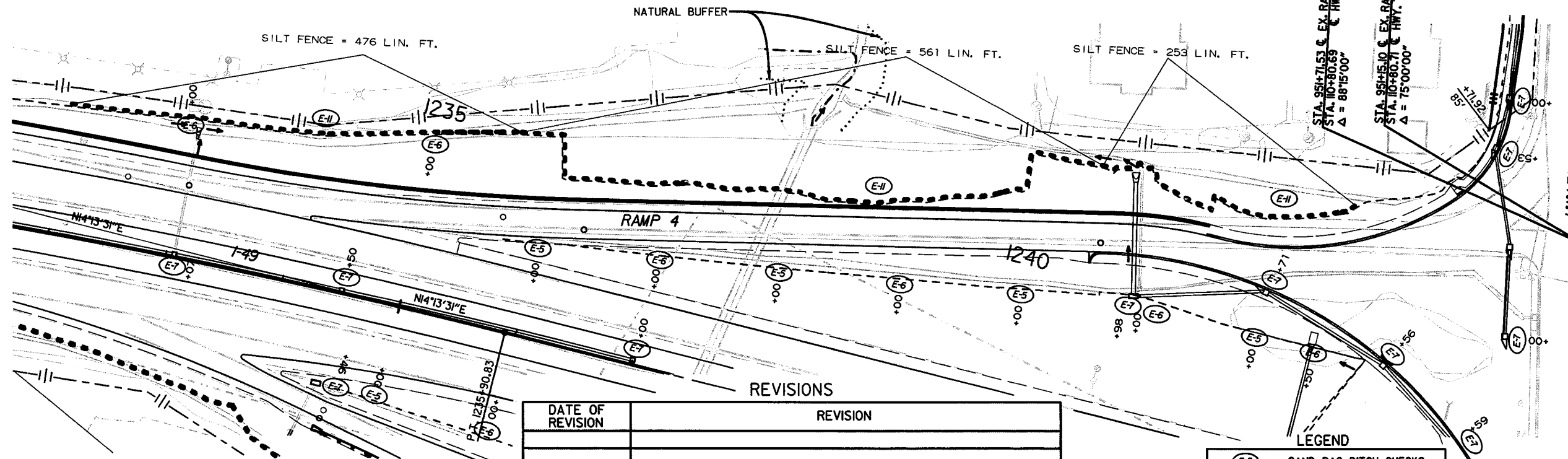
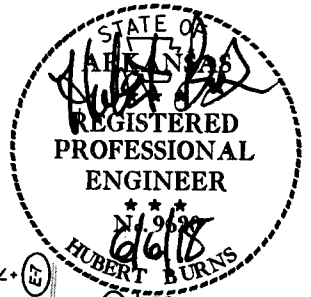
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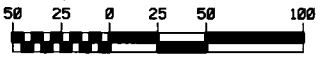
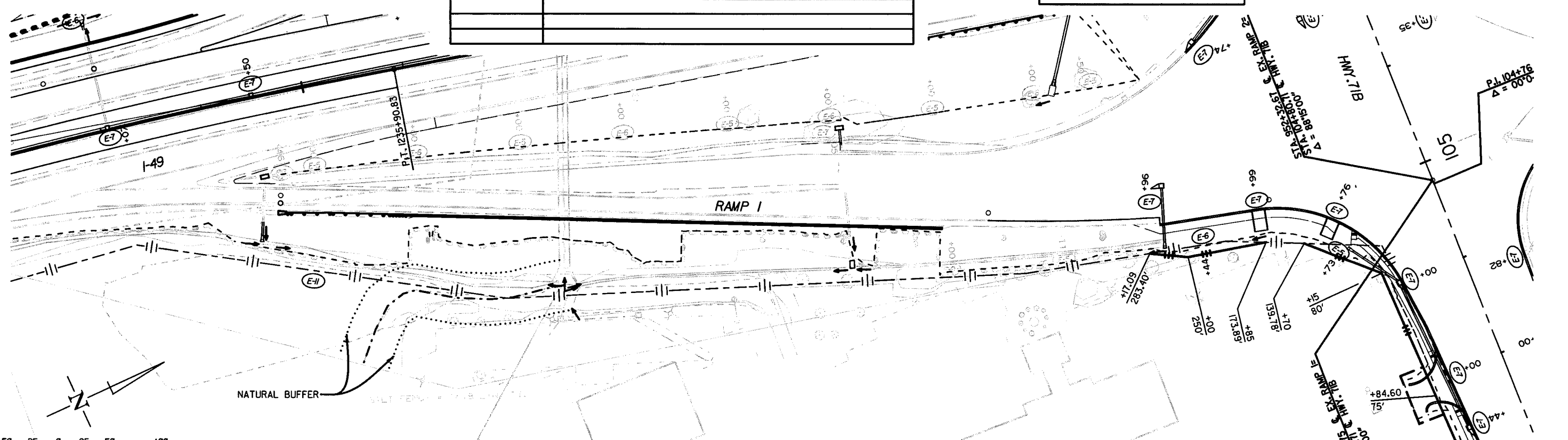
NOTE:
DROP INLETS IN EXISTING ROADWAY
SHALL BE CONSTRUCTED WITH ISLANDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903		45	368

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION



HWY. 71B STAGE 2
TEMPORARY EROSION CONTROL DETAILS

USER: mh514
DESIGN FILE: G:\2103305.Hwy71inch\TRANSP\dgn\erosion\BBO903_EC_HWY71B_01.dgn
PLOTTED: 6/6/2018 11:02 SCALE: 1/80

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18						JOB NO. BB0903	45A	368

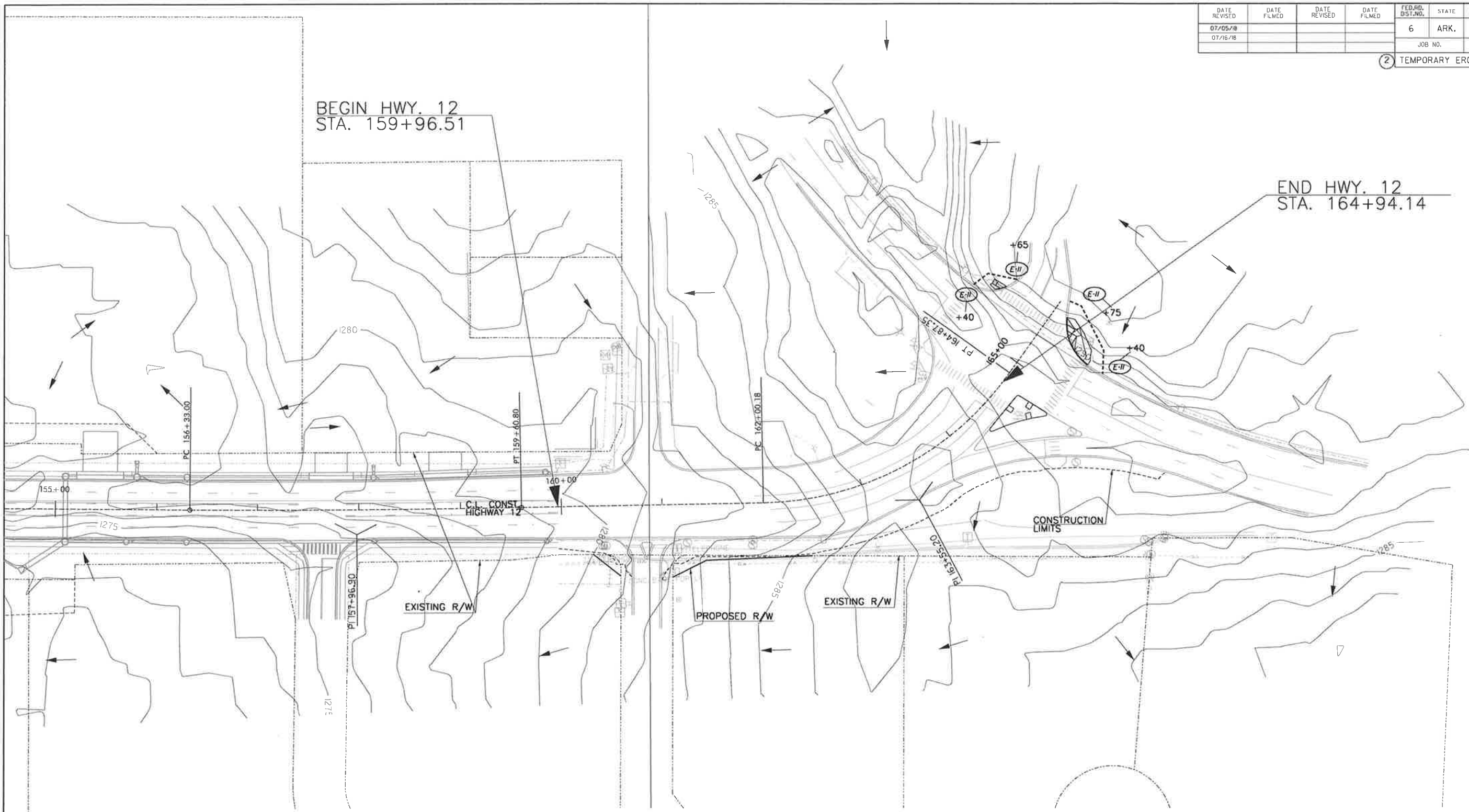
2 TEMPORARY EROSION CONTROL DETAILS



07/16/2018

BEGIN HWY. 12
STA. 159+96.51

END HWY. 12
STA. 164+94.14



- STAGE 1** SEQUENCE OF CONSTRUCTION OF E&SC FEATURES:
1. INSTALL SILT FENCE.
 2. CLEAR/GRUBBING ACTIVITIES.
 3. INSTALL DIVERSION DITCHES.
 4. INSTALL ROCK/SAND BAG DITCH CHECKS.

- STAGE 2**
1. INSTALL ROCK/SAND BAG DITCH CHECKS.
 2. INSTALL DROP INLET SILT FENCE.
 3. TEMPORARY SEEDING/SODDING.
 4. REMOVE TEMPORARY E&SC FEATURES AFTER FINAL STABILIZATION.

NOTES:
ALL DISTURBED AREAS CONTAINING EXPOSED SOIL SHALL RECEIVE TEMPORARY EROSION AND SEDIMENT CONTROL APPLICATIONS.

CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT AS NEEDED TO PREVENT TRACKOUT. CONCRETE WASHOUT SHALL BE LOCATED IN THE STAGING AREA TO BE DETERMINED BY THE CONTRACTOR IN A LOCATION APPROVED BY THE ENGINEER.

REVISION BOX

DATE	REVISION

LEGEND

- = ROCK DITCH CHECK
- = DROP INLET SILT FENCE
- = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

TEMPORARY EROSION CONTROL DETAILS (STAGE 1)

7/16/2018 3:45:50 PM
 WORKSPACE\eggs_2018
 L:\2018\06059550 - Brivar Hwy 12\Drawings\Water Intersection Drawings\H12_EC_H12_STG1.dwg
 REVISION DATE:



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/08				6	ARK.			
07/16/08								

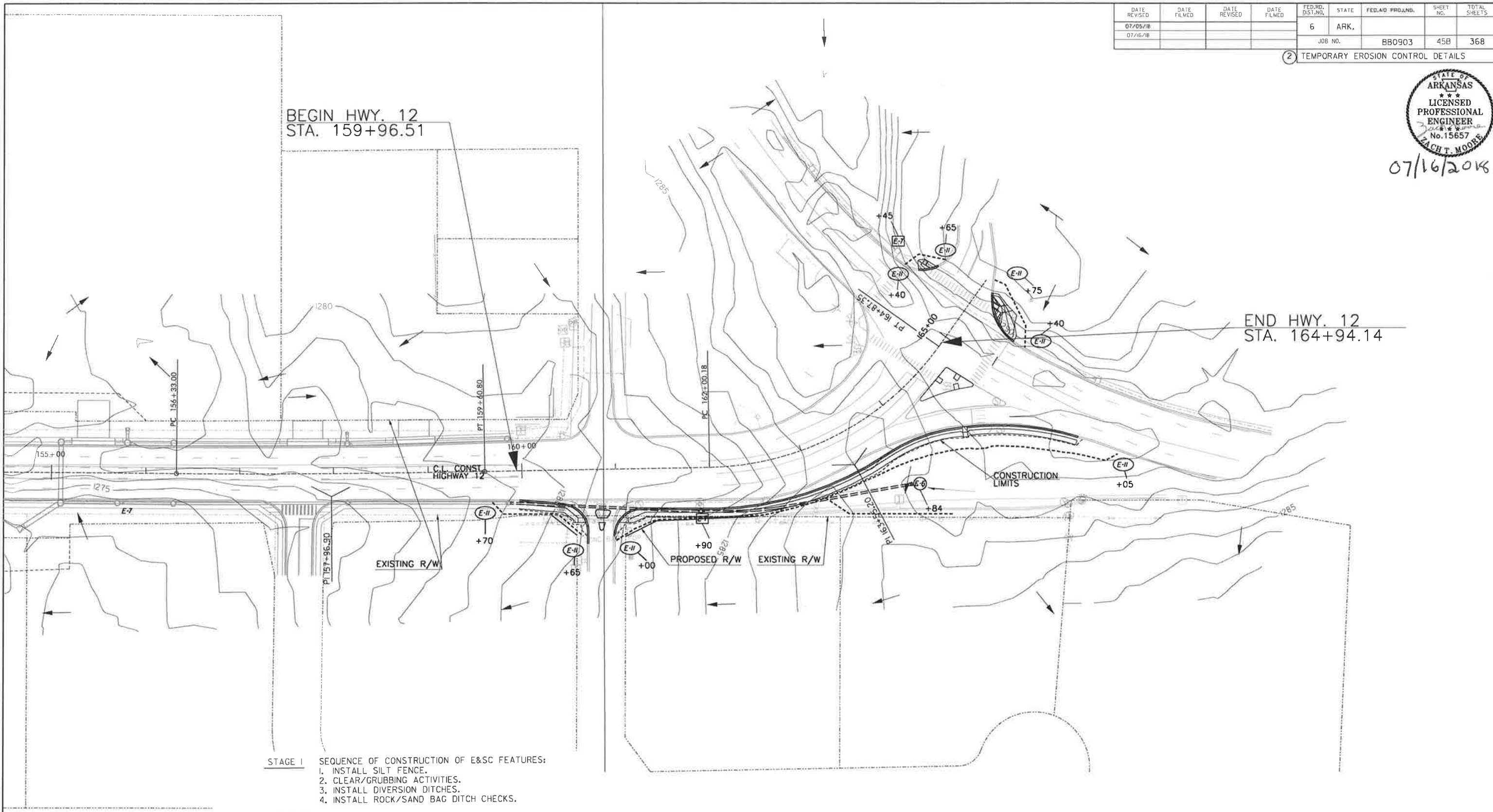
2 TEMPORARY EROSION CONTROL DETAILS



07/16/2008

BEGIN HWY. 12
STA. 159+96.51

END HWY. 12
STA. 164+94.14



- STAGE 1** SEQUENCE OF CONSTRUCTION OF E&SC FEATURES:
1. INSTALL SILT FENCE.
 2. CLEAR/GRUBBING ACTIVITIES.
 3. INSTALL DIVERSION DITCHES.
 4. INSTALL ROCK/SAND BAG DITCH CHECKS.
- STAGE 2**
1. INSTALL ROCK/SAND BAG DITCH CHECKS.
 2. INSTALL DROP INLET SILT FENCE.
 3. TEMPORARY SEEDING/SODDING.
 4. REMOVE TEMPORARY E&SC FEATURES AFTER FINAL STABILIZATION.

NOTES:
ALL DISTURBED AREAS CONTAINING EXPOSED SOIL SHALL RECEIVE TEMPORARY EROSION AND SEDIMENT CONTROL APPLICATIONS.

CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT AS NEEDED TO PREVENT TRACKOUT. CONCRETE WASHOUT SHALL BE LOCATED IN THE STAGING AREA TO BE DETERMINED BY THE CONTRACTOR IN A LOCATION APPROVED BY THE ENGINEER.

REVISION BOX

DATE	REVISION

LEGEND

- = ROCK DITCH CHECK
- = DROP INLET SILT FENCE
- = SILT FENCE

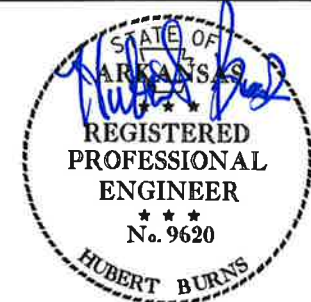
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

TEMPORARY EROSION CONTROL DETAILS (STAGE 2)

7/18/2008 3:46:35 PM
 tmmccormick
 WORKSPACE
 L:\2008\08033550 - Brivar Hwy 12\Drawings\Watson Intersection Drawings\H2.EC.H2.ST02.01.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-05-18				6	ARK.			
						JOB NO. BB0903	46	368

2 MAINTENANCE OF TRAFFIC DETAILS



7-9-18

CONSTRUCTION SEQUENCE:

INSTALL ADVANCE WARNING SIGNS AT THE LOCATIONS LISTED ON THE ADVANCE WARNING DETAIL. INSTALL END ROAD WORK SIGNS AND SPEED LIMIT SIGNS AT THE END OF JOB AND AT EACH ENTRANCE RAMP AS SHOWN ON THE ADVANCE WARNING DETAIL. INSTALL ROAD WORK AHEAD (W20-1) SIGN AND END ROAD WORK (G20-2) ON RAMP AS SHOWN ON THE ADVANCE WARNING DETAIL.

STAGE IA & IB:
 CONSTRUCT SHOULDER TRENCHING FOR MOT TRAFFIC SHIFT AS FOLLOWING.
 REFER TO SPECIAL DETAILS FOR SHOULDER TRENCHING,
 FROM STA. 1240+69.17 TO STA. 1243+69.17 LML,
 FROM STA. 1240+90.36 TO STA. 1243+90.36 RML,
 FROM STA. 1246+22.71 TO STA. 1249+22.71 LML,
 FROM STA. 1246+43.64 TO STA. 1249+43.64 RML.

STAGE 2:
 INSTALL CONSTRUCTION PAVEMENT MARKINGS ON ROADWAY, REMOVABLE CONSTRUCTION PAVEMENT MARKING ON EXISTING BRIDGE DECKS, AND PRECAST CONCRETE BARRIERS AS SHOWN IN STAGE IA & IB MAINTENANCE OF TRAFFIC DETAILS.

TRAFFIC WILL BE MAINTAINED ON EXISTING PAVEMENT IN (2) 11'-0" LANES EXCEPT WHEN CROSSING THE EXISTING BRIDGE.
 REFER TO STA. 1227+50.00 TO STA. 1231+98.34 ON RML.
 REFER TO STA. 1257+65.00 TO STA. 1262+04.44 ON RML.

STAGE 3:
 INSTALL CONSTRUCTION PAVEMENT MARKINGS ON ROADWAY, REMOVABLE CONSTRUCTION PAVEMENT MARKING ON EXISTING BRIDGE DECKS, AND PRECAST CONCRETE BARRIERS AS SHOWN IN STAGE IA & IB MAINTENANCE OF TRAFFIC DETAILS.

TRAFFIC WILL BE MAINTAINED ON EXISTING PAVEMENT IN (2) 11'-0" LANES EXCEPT WHEN CROSSING THE EXISTING BRIDGE.
 REFER TO STA. 1227+50.00 TO STA. 1231+98.21 ON LML.
 REFER TO STA. 1257+65.00 TO STA. 1262+04.44 ON LML.

STAGE 4:
 CONSTRUCT CONCRETE BARRIER WALL AND PAVEMENT WIDENING IN THE MEDIAN OF I-49.
 CONSTRUCT THE PORTION OF BRIDGE ON BOTH LML & RML.

REMOVE PRECAST CONCRETE BARRIER WALL.

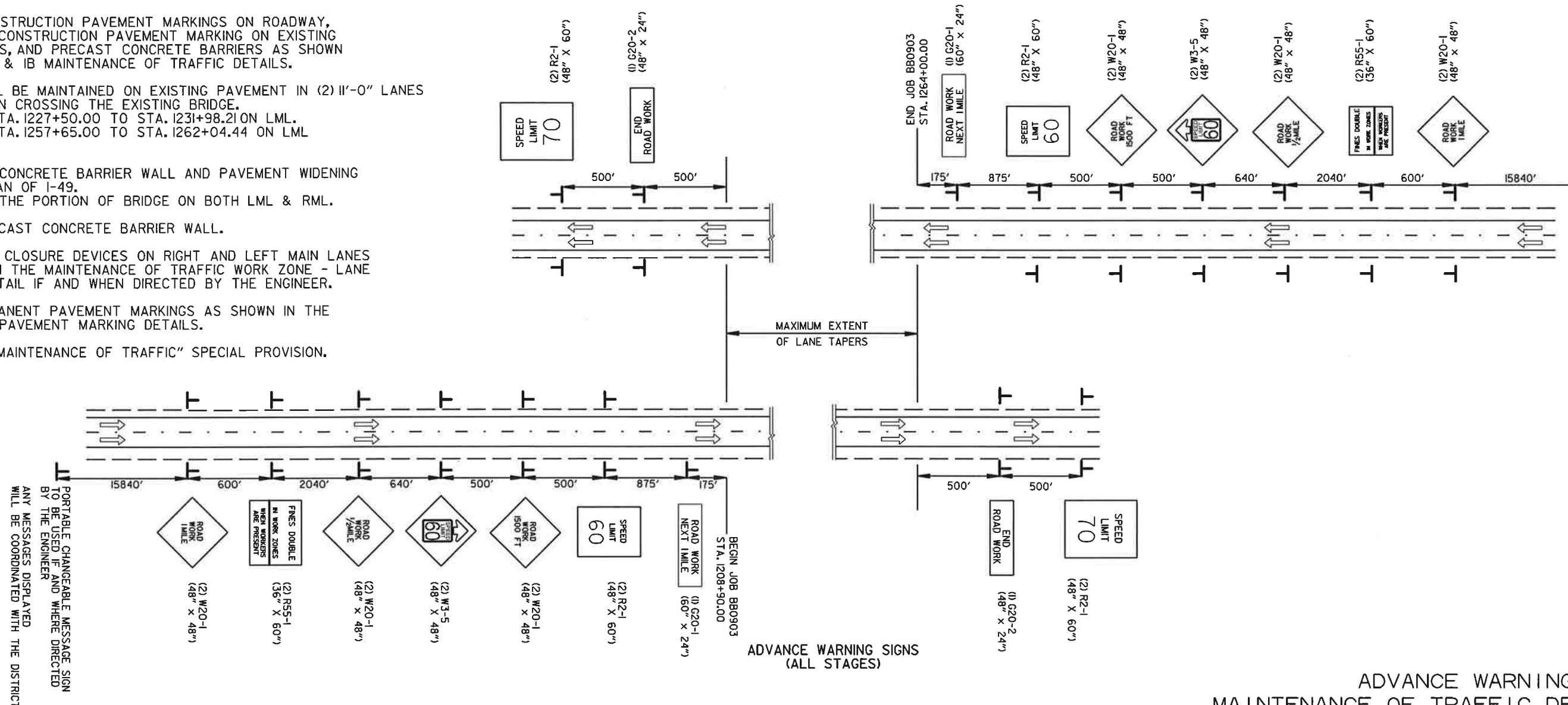
PLACE LANE CLOSURE DEVICES ON RIGHT AND LEFT MAIN LANES AS SHOWN IN THE MAINTENANCE OF TRAFFIC WORK ZONE - LANE CLOSURE DETAIL IF AND WHEN DIRECTED BY THE ENGINEER.

PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.

REFER TO "MAINTENANCE OF TRAFFIC" SPECIAL PROVISION.

NOTES: I-49 STAGE CONSTRUCTION 2 AND 3 ARE INDEPENDENT FROM HWY. 71B STAGE CONSTRUCTION 2 AND 3.

THE REMOVAL OF THE EXISTING BRIDGE STRUCTURES AND EMBANKMENT ON I-49 ARE TO BE COMPLETED PRIOR TO THE BEGINNING OF WORK ON HIGHWAY 71B.

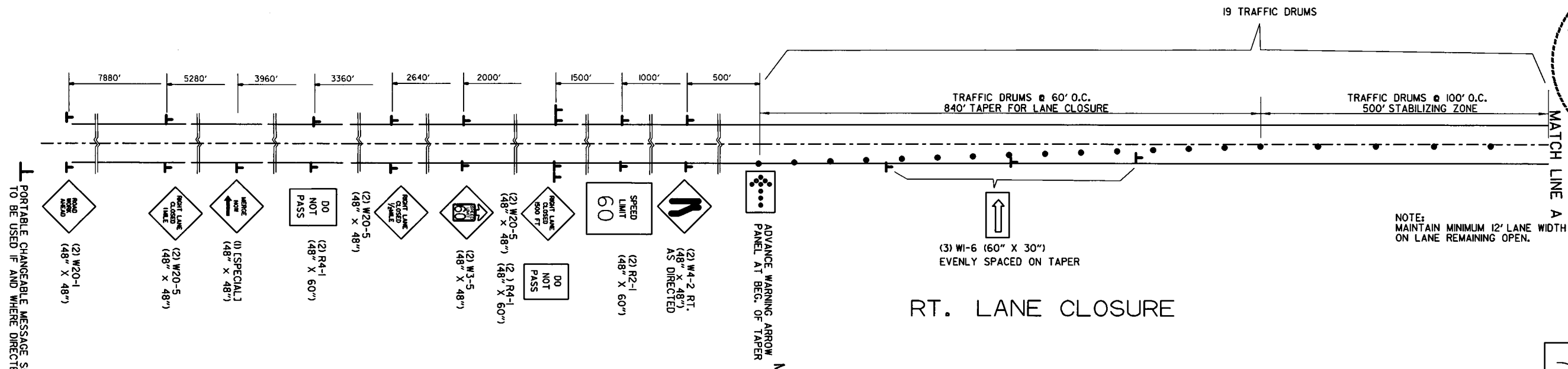
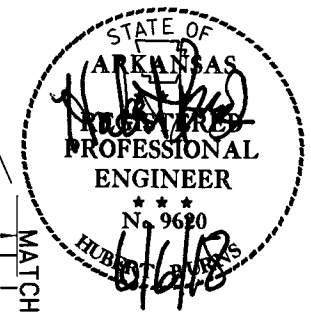


PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
 ANY MESSAGES DISPLAYED WILL BE COORDINATED WITH THE DISTRICT

ADVANCE WARNING I-49
 MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		47	368

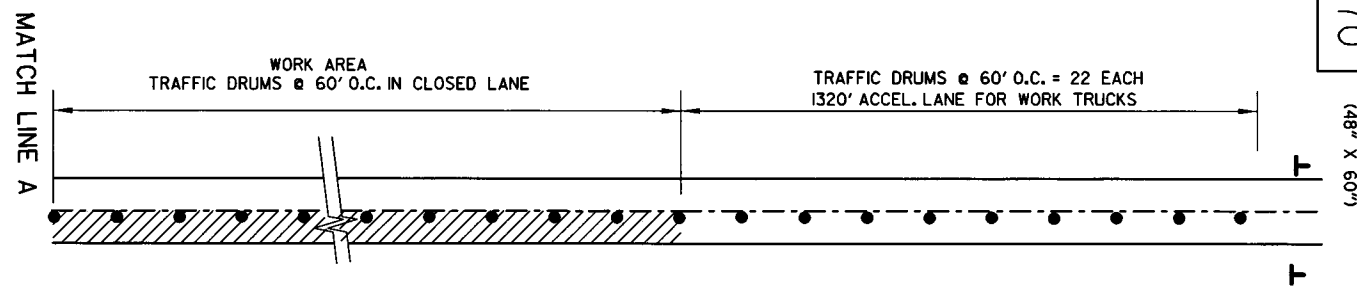
2 MAINTENANCE OF TRAFFIC DETAILS



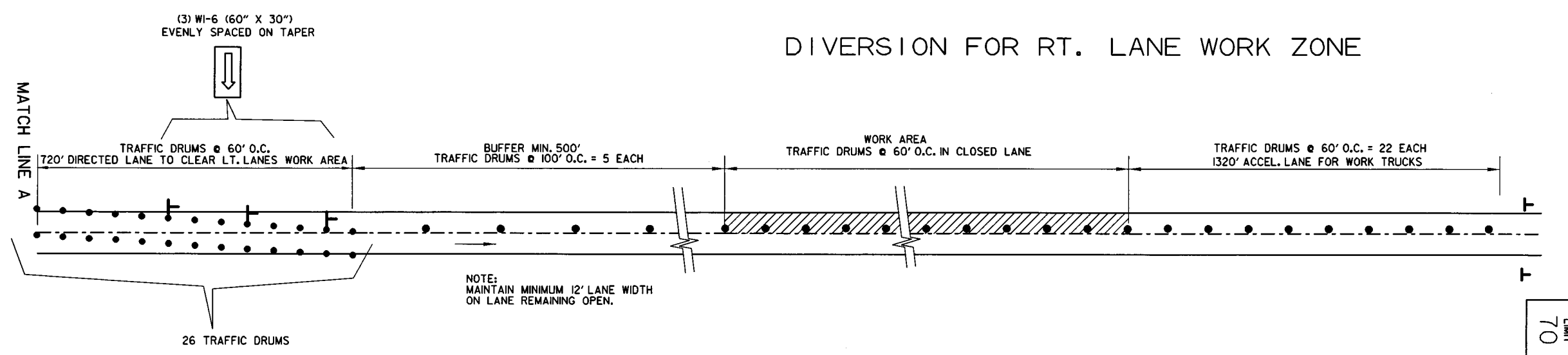
PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

SPEED LIMIT SIGNS ARE ALSO PROVIDED FOR PLACEMENT PAST ENTRANCE RAMP WITHIN THE WORK ZONE.

NOTE: MAINTAIN MINIMUM 12' LANE WIDTH ON LANE REMAINING OPEN.



DIVERSION FOR RT. LANE WORK ZONE



NOTE: MAINTAIN MINIMUM 12' LANE WIDTH ON LANE REMAINING OPEN.

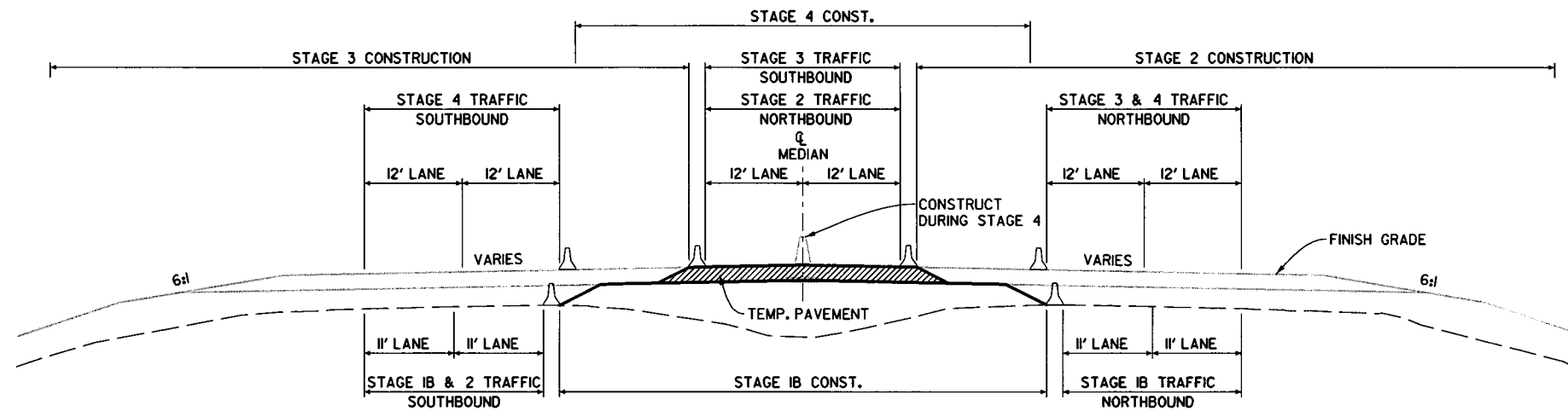
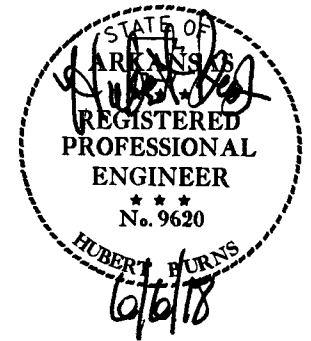
DIVERSION FOR LT. LANE WORK ZONE

WORK ZONE - I-49 LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

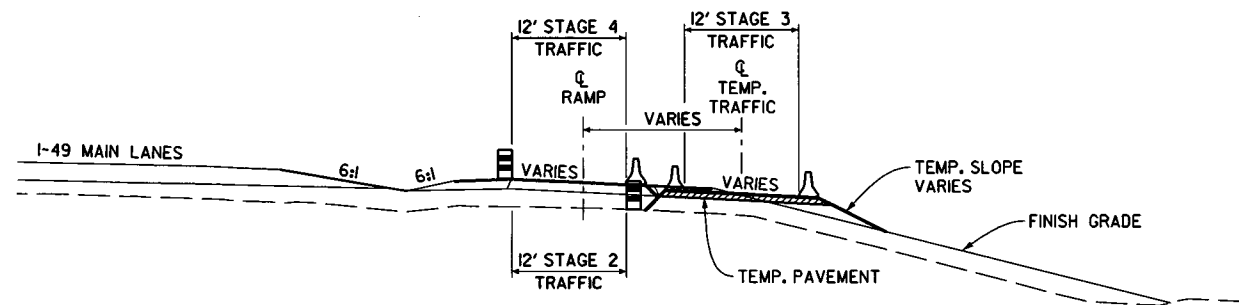
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	48	368	

2 MAINTENANCE OF TRAFFIC DETAILS

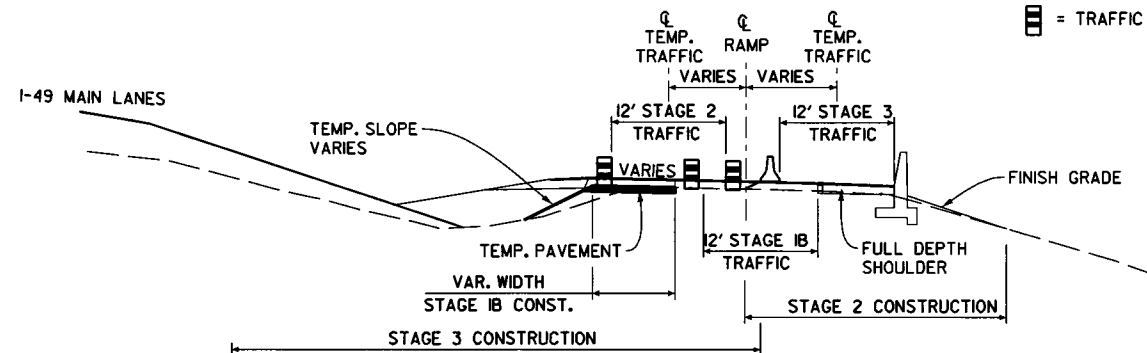


DETAIL OF STAGE CONSTRUCTION
I-49



DETAIL OF STAGE CONSTRUCTION
I-49 RAMP 3
(SHOWN IN DIRECTION OF TRAFFIC)

- = PRECAST CONCRETE BARRIER
- = TRAFFIC DRUM

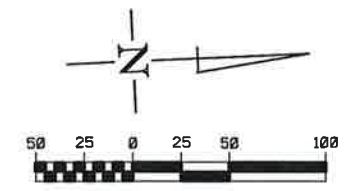


DETAIL OF STAGE CONSTRUCTION
I-49 RAMP 4
(SHOWN IN DIRECTION OF TRAFFIC)

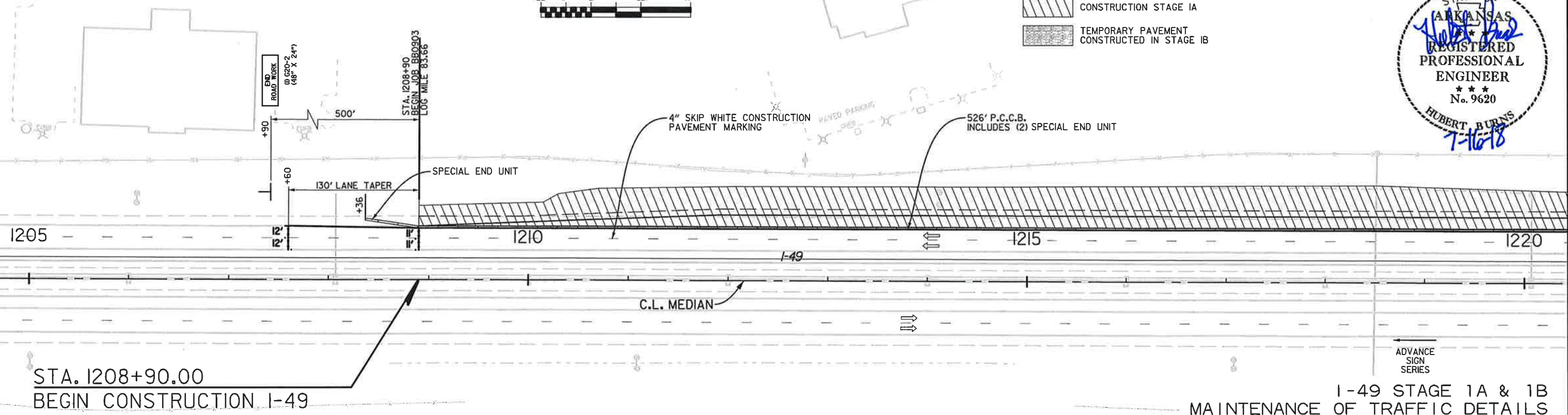
WORK ZONE - I-49 LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
							JOB NO.	368
							BB0903	49

2 MAINTENANCE OF TRAFFIC DETAILS



CONSTRUCTION STAGE IA
 TEMPORARY PAVEMENT CONSTRUCTED IN STAGE IB

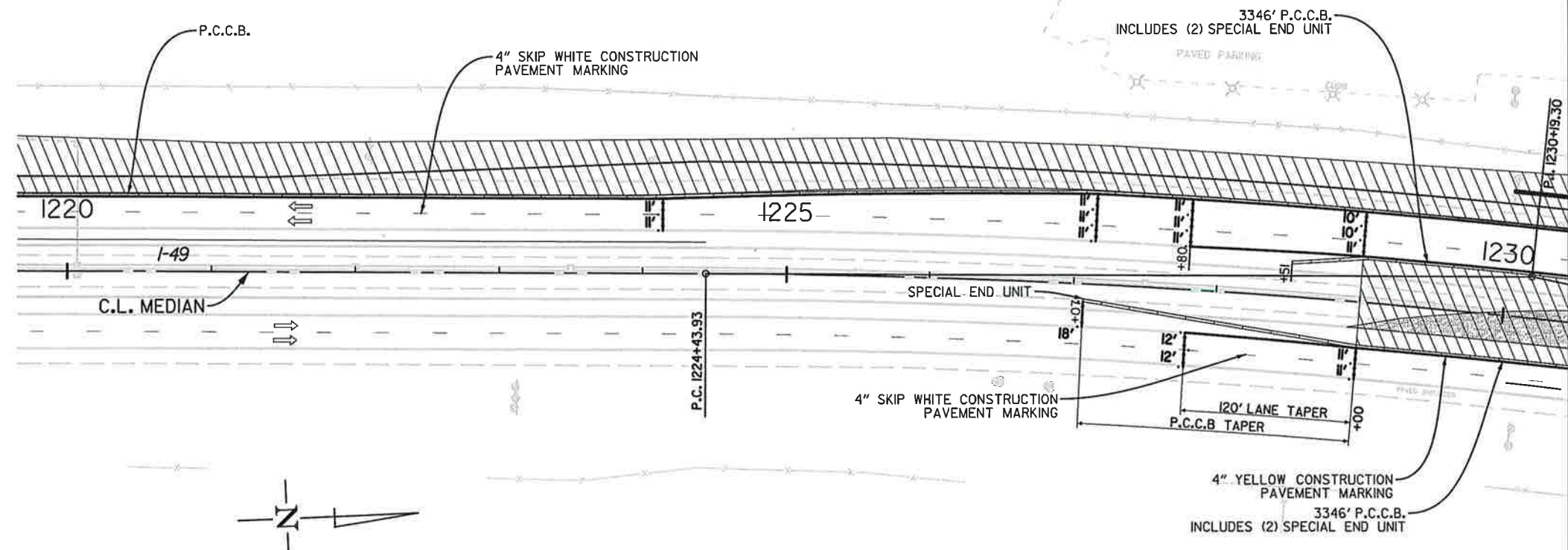


I-49 STAGE 1A & 1B
 MAINTENANCE OF TRAFFIC DETAILS

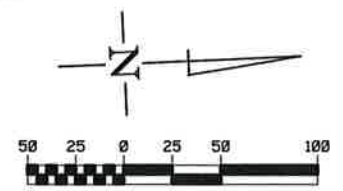
I-49 STAGE IA & IB - CONSTRUCTION SEQUENCE

- INSTALL CONSTRUCTION PAVEMENT MARKINGS AND PRECAST CONCRETE BARRIERS AS SHOWN.
 - CONSTRUCT TEMPORARY DRAINAGE STRUCTURES TO SUPPLY ADEQUATE DRAINAGE DURING STAGES 2 & 3 CONSTRUCTION.
 - CONSTRUCT TEMPORARY PAVEMENT IN CENTER MEDIAN OF I-49 AND ALONG RAMP 4. NOTCH AND WIDEN THE EXTENDED NB AND SB AUXILIARY LANES FOR ENTRANCE RAMP 2 AND 4.
 - CONSTRUCT TEMPORARY RETAINING WALLS AT BRIDGE ENDS AND APPROX. 46' OF NEW BRIDGE LOCATED IN THE CENTER MEDIAN.
- ADDITIONAL STAGE I QUANTITIES:
- TRAFFIC DRUMS = 30 EACH
 - FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 7218 LIN. FT.
 - REMOVABLE CONSTRUCTION PAVEMENT MARKINGS = 1014 LIN. FT.
 - CONSTRUCTION PAVEMENT MARKINGS = 20122 LIN. FT.
 - REMOVAL OF PERMANENT PAVEMENT MARKINGS = 2176 LIN. FT.

NOTE:
 THE CONSTRUCTION PAVEMENT MARKING QUANTITY FOR STAGE IB IS BASED ON A SINGLE APPLICATION OF THE STRIPING SHOWN ON THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR I-49 STAGE IB.



I-49 STAGE 1A & 1B
 MAINTENANCE OF TRAFFIC DETAILS



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07-16-18				6	ARK.			
				JOB NO.	BB0903	50	368	
MAINTENANCE OF TRAFFIC DETAILS								

STA. 1231+50 - CONSTRUCT DROP INLET 25' LT. OF C.L. H=3'-0" WITH 18" X 20' R.C. PIPE OUTLET TO EXIST. DROP INLET LT. TYPE ST DROP INLET 3'-8" X 3'-0" 18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 20 LIN. FT. (REMOVE AFTER STAGE 3 CONST. IS COMPLETED)

STA. 1234+50 - CONSTRUCT DROP INLET 22' LT. OF C.L. H=3'-0" WITH 18" X 17' R.C. PIPE OUTLET TO EXIST. DROP INLET LT. TYPE ST DROP INLET 3'-8" X 3'-0" 18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 17 LIN. FT. (REMOVE AFTER STAGE 3 CONST. IS COMPLETED)

300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP. * 180' TAPER TEMPORARY PAVEMENT 4" WHITE CONSTRUCTION PAVEMENT MARKING

TEMPORARY RETAINING WALL 180' TAPER TEMPORARY PAVEMENT 300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP. * 4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING 4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

I-49 STAGE 1A & 1B MAINTENANCE OF TRAFFIC DETAILS

STA. 1259+00 - CONSTRUCT DROP INLET 24' LT. OF C.L. H=3'-0" WITH 18" X 19' R.C. PIPE OUTLET TO EXIST. DROP INLET LT. TYPE ST DROP INLET 3'-8" X 3'-0" 18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 19 LIN. FT. (REMOVE AFTER STAGE 3 CONST. IS COMPLETED)

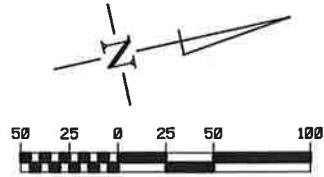


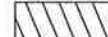

I-49 STAGE 1A & 1B MAINTENANCE OF TRAFFIC DETAILS

STA. 1259+00 - CONSTRUCT TYPE ST DROP INLET 25' RT. OF C.L. WITH 18" X 20' PIPE OUTLET CONNECT TO EXIST. DROP INLET STA. 1259+00 2.5' RT. OF C.L. DROP INLET 3'-8" X 3'-0" X H= 3'-0" 18" SIDE DRAIN = 20 LIN. FT. (REMOVE AFTER STAGE 3 CONST. IS COMPLETED)

TRAFFIC DRUMS @ 30' O.C.

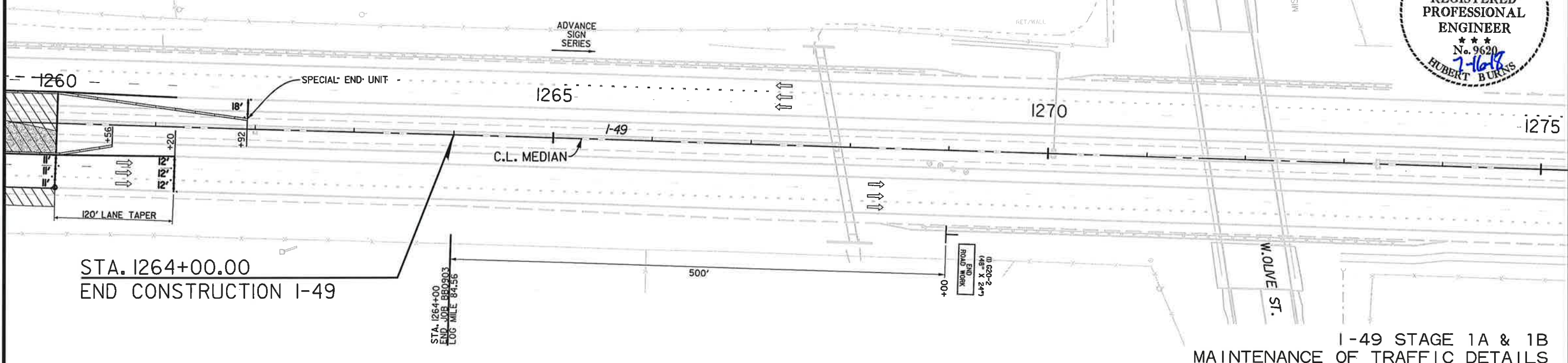
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 SCALE: 1/800



 CONSTRUCTION STAGE 1A
 TEMPORARY PAVEMENT
 CONSTRUCTED IN STAGE 1B

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
				JOB NO.	BBO903	51	368	

② MAINTENANCE OF TRAFFIC DETAILS

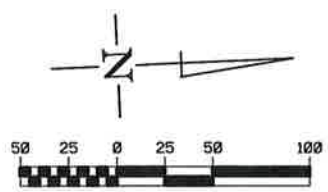


I-49 STAGE 1A & 1B
MAINTENANCE OF TRAFFIC DETAILS

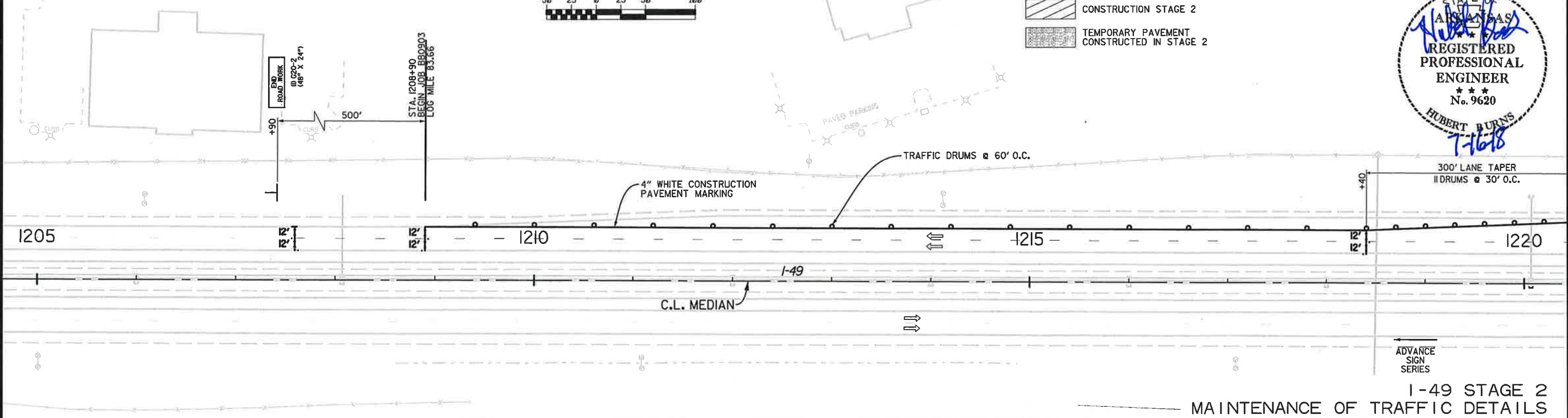
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
				JOB NO.	BB0903	52	368	

2 MAINTENANCE OF TRAFFIC DETAILS



CONSTRUCTION STAGE 2
 TEMPORARY PAVEMENT
 CONSTRUCTED IN STAGE 2



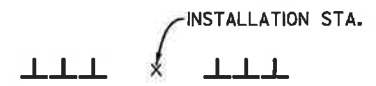
I-49 STAGE 2
 MAINTENANCE OF TRAFFIC DETAILS

I-49 STAGE 2 - CONSTRUCTION SEQUENCE

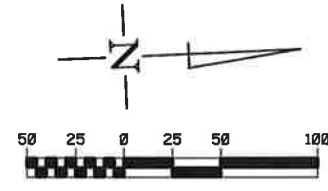
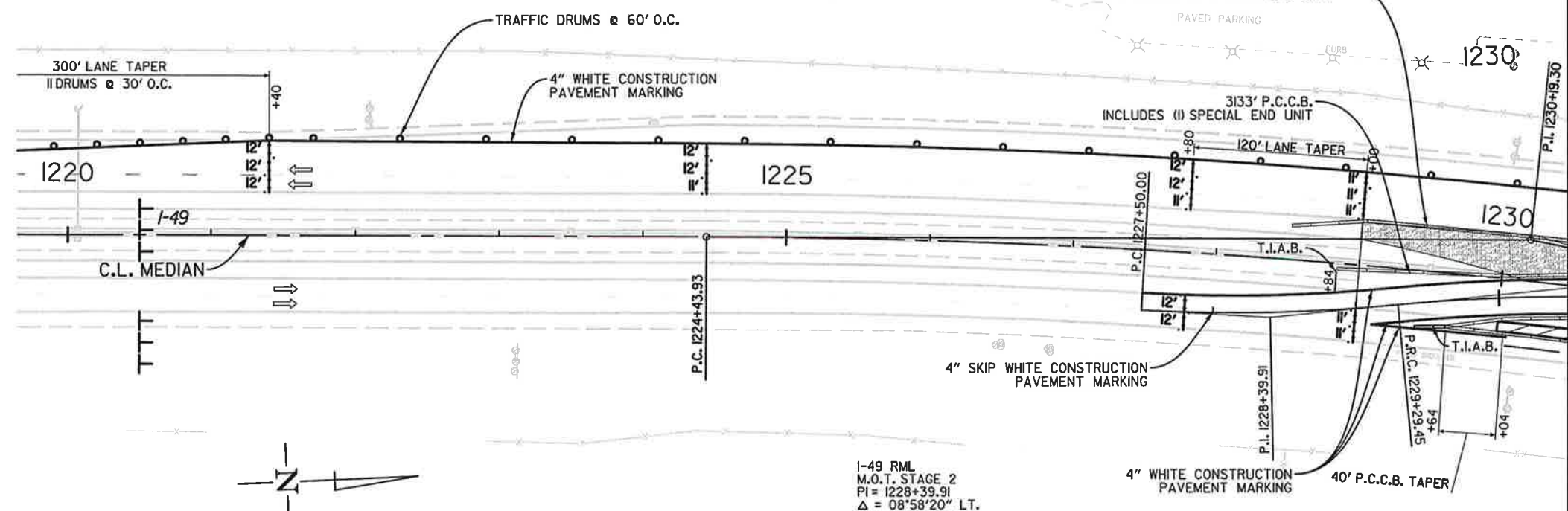
- INSTALL W21-5A, W5-1, & W1-4b SIGNS AS SHOWN.
- INSTALL CONSTRUCTION PAVEMENT MARKINGS AND PRECAST CONCRETE BARRIERS AS SHOWN.
- ROUTE I-49 N.B. TRAFFIC ONTO TEMPORARY PAVEMENT & NEW BRIDGE CONSTRUCTED IN STAGE 1.
- ROUTE RAMP 4 TRAFFIC ONTO TEMPORARY PAVEMENT CONSTRUCTED IN STAGE 1. REMOVE EXISTING NB BRIDGE AND CONSTRUCT NEW BRIDGE TO PROPOSED WIDTH FOR NB LANES.
- WIDEN PORTIONS OF RAMPS 3 AND 4.

ADDITIONAL STAGE 2 QUANTITIES:
 SIGNS = 116 SQ. FT.
 TRAFFIC DRUMS = 114 EACH
 FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 10045 LIN. FT.
 RELOCATING PRECAST CONCRETE BARRIER = 526 LIN. FT.
 REMOVABLE CONSTRUCTION PAVEMENT MARKINGS = 718 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS = 15650 LIN. FT.
 TEMPORARY IMPACT ATTENUATION BARRIERS = 2 EACH

NOTE:
 THE CONSTRUCTION PAVEMENT MARKING QUANTITY FOR STAGE 2 IS BASED ON A SINGLE APPLICATION OF THE STRIPING SHOWN ON THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR I-49 STAGE 2.



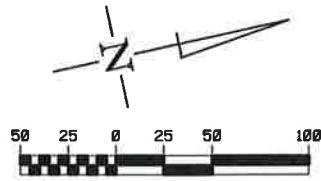
ADVANCE WARNING SIGNS
 I-49 R.M.L. - STA. 1222+50



I-49 RML
 M.O.T. STAGE 2
 PI = 1228+39.91
 Δ = 08°58'20" LT.
 D = 05°00'00"
 T = 89.91'
 L = 179.45'
 PC = 1227+50.00
 PRC = 1229+29.45
 NO SUPER

I-49 STAGE 2
 MAINTENANCE OF TRAFFIC DETAILS

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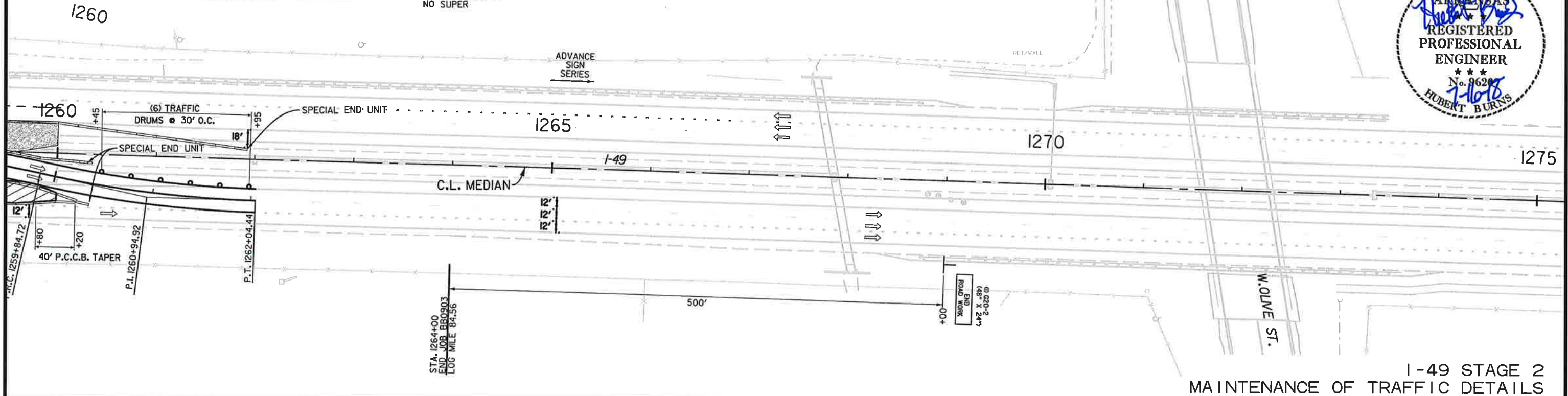


I-49 RML
 M.O.T. STAGE 2
 PI = 1260+94.92
 $\Delta = 10^{\circ}59'09''$ L.T.
 $D = 05^{\circ}00'00''$
 $T = 110.20'$
 $L = 219.72'$
 PC = 1259+84.72
 PT = 1262+04.44
 NO SUPER

 CONSTRUCTION STAGE 2
 TEMPORARY PAVEMENT
 CONSTRUCTED IN STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
				JOB NO.	BB0903		54	368

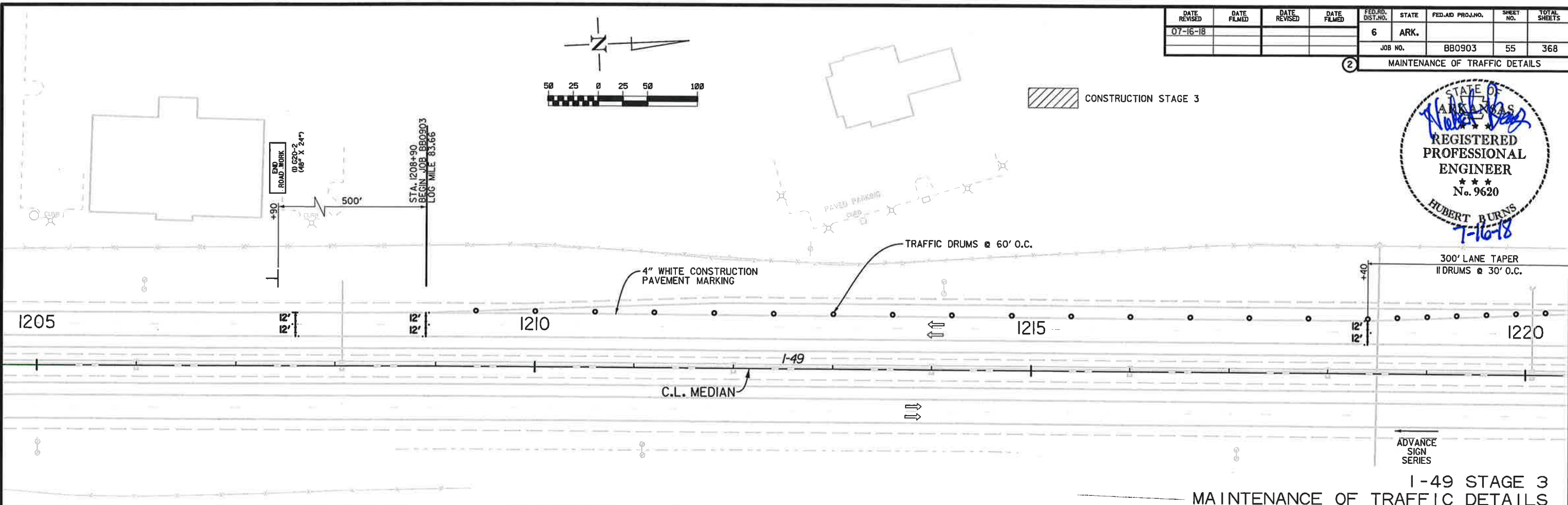
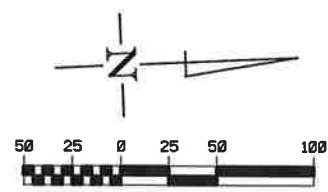
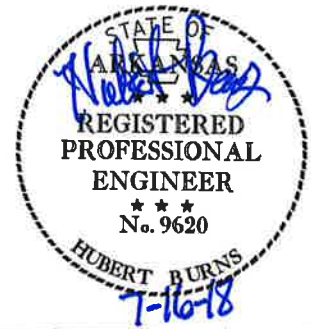
② MAINTENANCE OF TRAFFIC DETAILS



I-49 STAGE 2
 MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.		55	368

MAINTENANCE OF TRAFFIC DETAILS



I-49 STAGE 3 MAINTENANCE OF TRAFFIC DETAILS

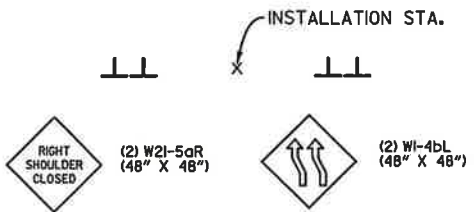
I-49 STAGE 3 - CONSTRUCTION SEQUENCE

- INSTALL W21-5A, & W1-4b SIGNS AS SHOWN.
- INSTALL CONSTRUCTION PAVEMENT MARKINGS AND PRECAST CONCRETE BARRIERS AS SHOWN.
- ROUTE I-49 N.B. TRAFFIC ONTO R.M.L. LANES AND NEW BRIDGE CONSTRUCTED IN STAGE 2 AND ROUTE I-49 S.B. TRAFFIC ONTO TEMPORARY PAVEMENT & NEW BRIDGE CONSTRUCTED IN STAGES 1B AND 2.
- REMOVE EXISTING SB BRIDGE AND CONSTRUCT NEW BRIDGE TO PROPOSED WIDTH FOR SB LANES.
- ROUTE RAMP 4 TRAFFIC ONTO PAVEMENT CONSTRUCTED IN STAGE 2 AND NOTCH AND WIDEN. CONTINUE TO WIDEN PORTIONS OF RAMPS 3 AND 4.

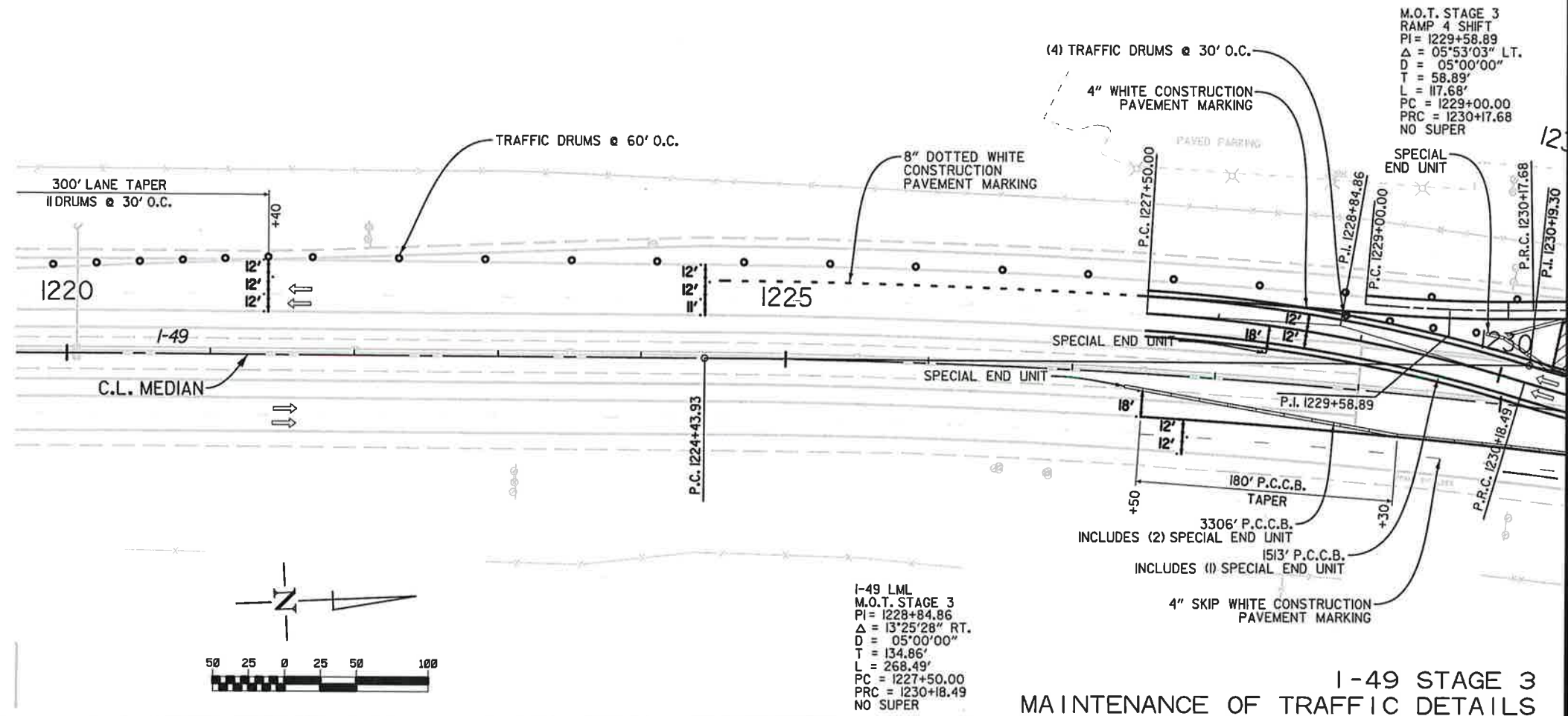
ADDITIONAL STAGE 3 QUANTITIES:

- SIGNS = 52 SQ. FT.
- FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 10045 LIN. FT.
- REMOVABLE CONSTRUCTION PAVEMENT MARKINGS = 1435 LIN. FT.
- RELOCATE TEMPORARY IMPACT ATTENUATION BARRIERS = 2 EACH

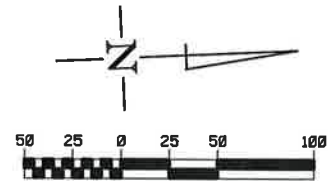
NOTE:
THE CONSTRUCTION PAVEMENT MARKING QUANTITY FOR STAGE 3 IS BASED ON A SINGLE APPLICATION OF THE STRIPING SHOWN ON THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR I-49 STAGE 3.



ADVANCE WARNING SIGNS
I-49 L.M.L. - STA. 1267+00



I-49 STAGE 3 MAINTENANCE OF TRAFFIC DETAILS



I-49 LML
M.O.T. STAGE 3
PI = 1228+84.86
Δ = 13°25'28" RT.
D = 05°00'00"
T = 134.86'
L = 268.49'
PC = 1227+50.00
PRC = 1230+18.49
NO SUPER

I-49 STAGE 3 MAINTENANCE OF TRAFFIC DETAILS

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SCALE: 1/80

M.O.T. STAGE 3
RAMP 4 SHIFT
PI = 1229+58.89
Δ = 05°53'03" LT.
D = 05°00'00"
T = 58.89'
L = 117.68'
PC = 1229+00.00
PRC = 1230+17.68
NO SUPER

M.O.T. STAGE 3
RAMP 4 SHIFT
PI = 1231+05.58
Δ = 08°46'23" RT.
D = 05°00'00"
T = 87.90'
L = 175.46'
PC = 1230+17.68
PCC = 1231+93.14
NO SUPER

M.O.T. STAGE 3
RAMP 4 SHIFT
PI = 1232+49.50
Δ = 01°06'43" RT.
D = 00°59'12"
T = 56.35'
L = 112.70'
PCC = 1231+93.14
PT = 1233+05.84
NO SUPER

M.O.T. STAGE 3
RAMP 4 SHIFT
PI = 1235+18.28
Δ = 07°33'48" LT.
D = 03°01'46"
T = 125.02'
L = 249.67'
PC = 1233+93.27
PT = 1236+42.94
NO SUPER

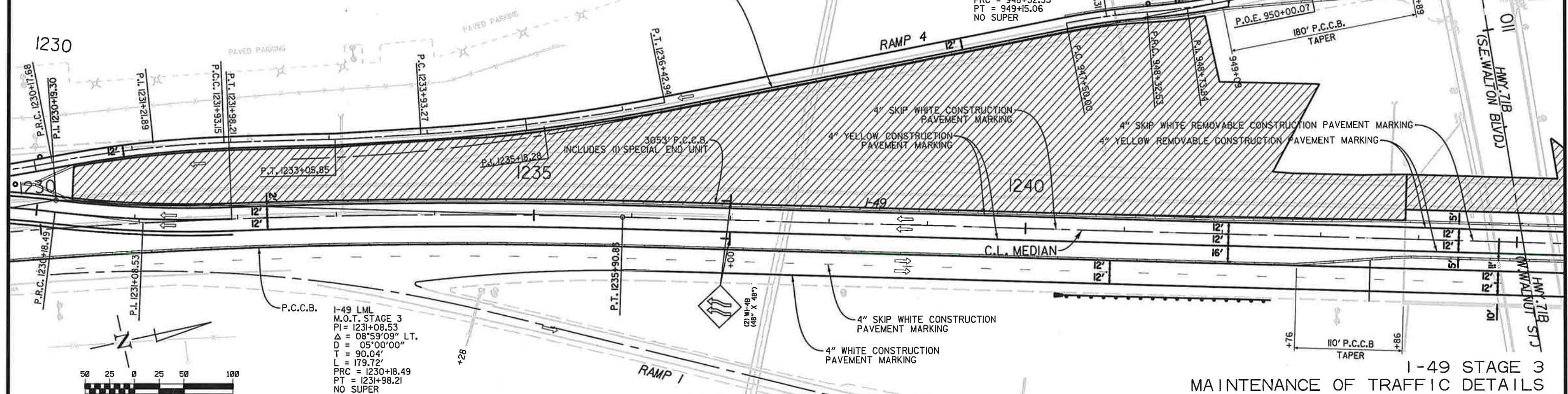
CONSTRUCTION STAGE 3

M.O.T. STAGE 3
RAMP 4 SHIFT
PI = 947+91.31
Δ = 06°36'09" RT.
D = 08°00'00"
T = 41.31'
L = 82.53'
PC = 947+50.00
PRC = 948+32.53
NO SUPER

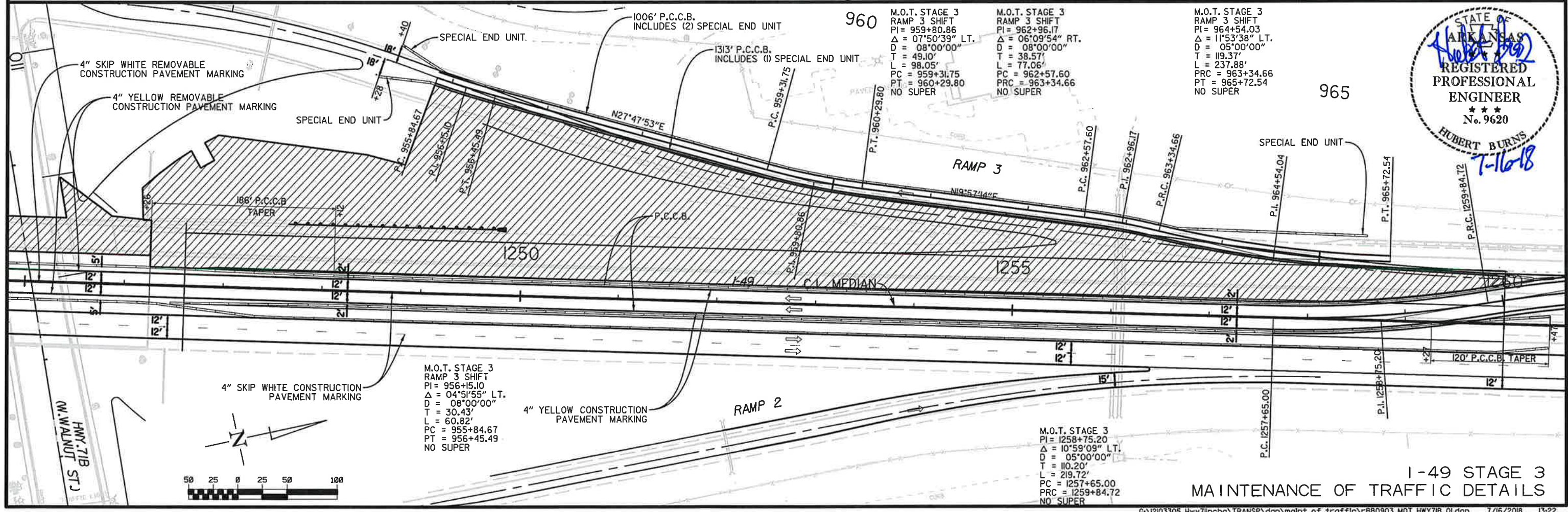
M.O.T. STAGE 3
RAMP 4 SHIFT
PI = 948+73.84
Δ = 06°36'09" LT.
D = 08°00'00"
T = 41.31'
L = 82.53'
PC = 948+32.53
PT = 949+15.06
NO SUPER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
						JOB NO.	BB0903	56
						TOTAL SHEETS		
						368		

MAINTENANCE OF TRAFFIC DETAILS



1-49 STAGE 3
MAINTENANCE OF TRAFFIC DETAILS



1-49 STAGE 3
MAINTENANCE OF TRAFFIC DETAILS



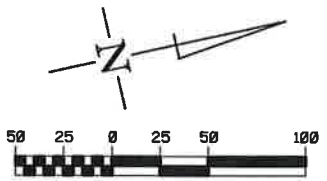
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07-16-18				6	ARK.			
				JOB NO.	BB0903		57	368

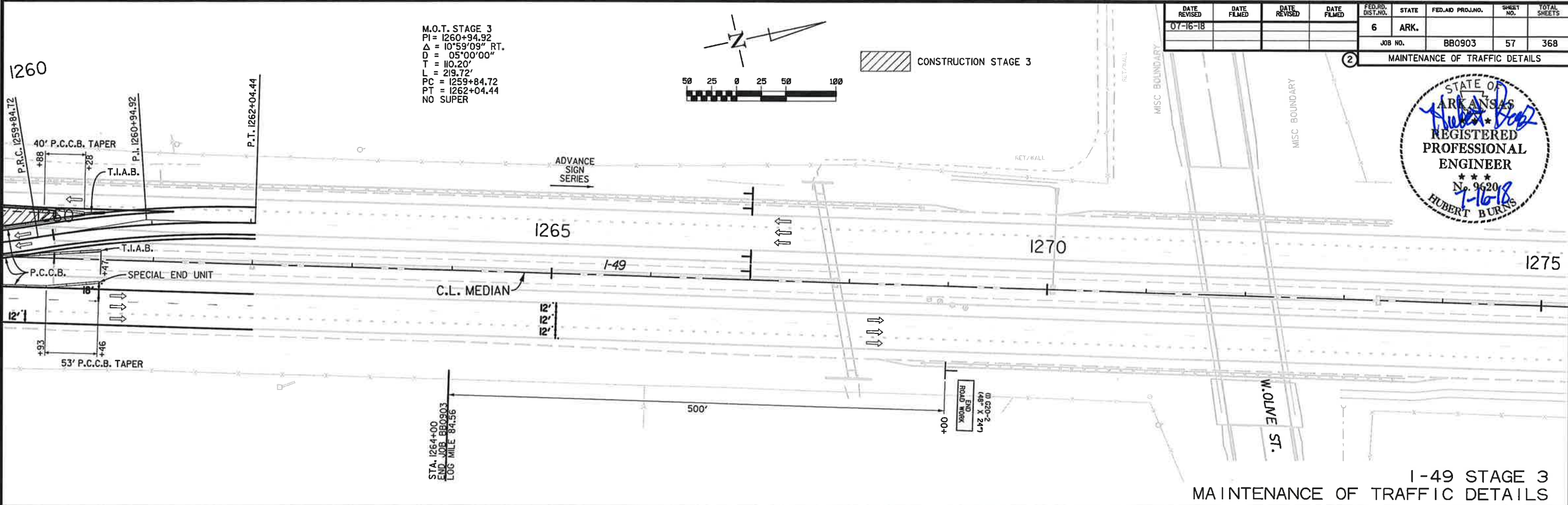
MAINTENANCE OF TRAFFIC DETAILS



M.O.T. STAGE 3
 PI = 1260+94.92
 $\Delta = 10^{\circ}59'09''$ RT.
 $D = 05^{\circ}00'00''$
 $T = 110.20'$
 $L = 219.72'$
 $PC = 1259+84.72$
 $PT = 1262+04.44$
 NO SUPER



CONSTRUCTION STAGE 3



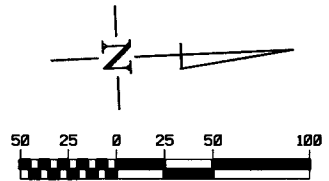
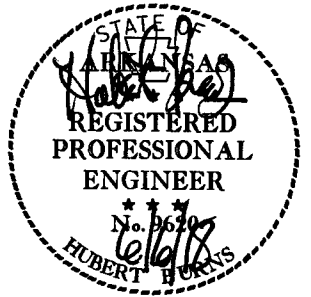
I-49 STAGE 3
 MAINTENANCE OF TRAFFIC DETAILS

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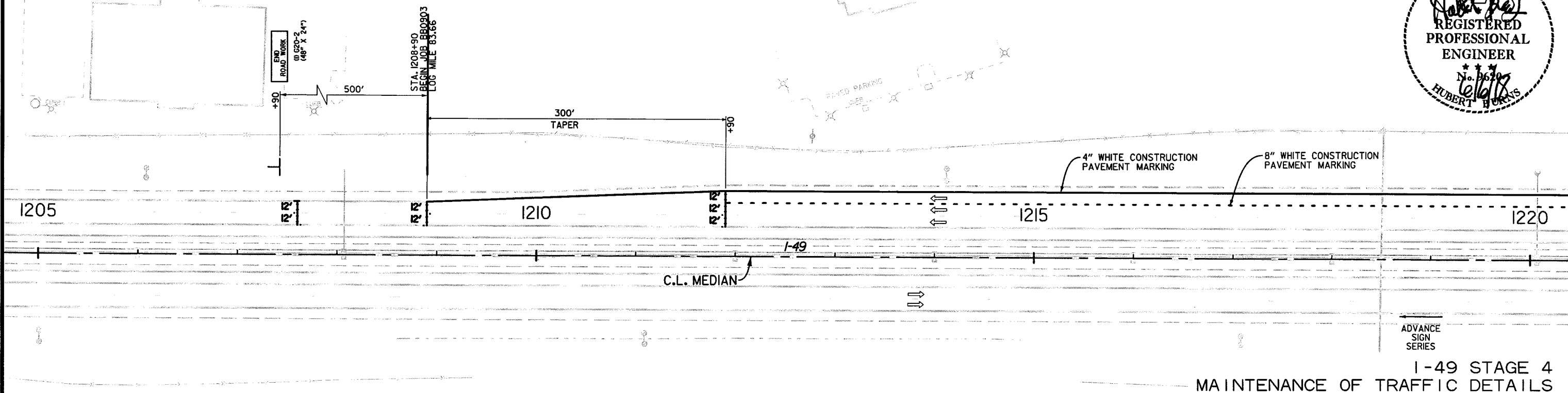
I-49 STAGE 3
 MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	58	368

② MAINTENANCE OF TRAFFIC DETAILS



CONSTRUCTION STAGE 4

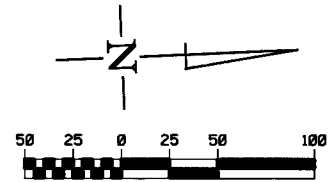
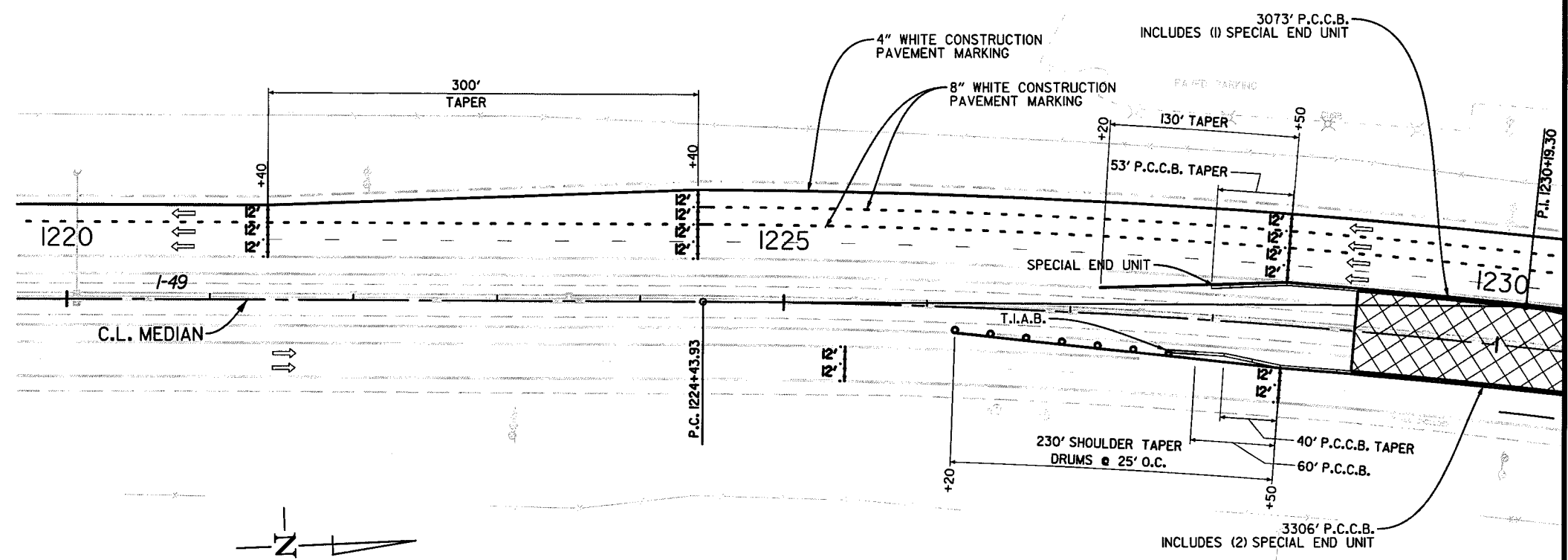


I-49 STAGE 4
MAINTENANCE OF TRAFFIC DETAILS

I-49 STAGE 4 - CONSTRUCTION SEQUENCE
 INSTALL CONSTRUCTION PAVEMENT MARKINGS AND PRECAST CONCRETE BARRIERS AS SHOWN.
 ROUTE I-49 S.B. TRAFFIC ONTO L.M.L. LANES & NEW BRIDGE CONSTRUCTED IN STAGE 3.
 CONSTRUCT THE I-49 CENTER LANES, MEDIAN BARRIER RAIL & REMAINDER OF RAMP 3 WIDENING AS SHOWN.

ADDITIONAL STAGE 3 QUANTITIES:
 TRAFFIC DRUMS = 37 EACH
 RELOCATING PRECAST CONCRETE BARRIER = 7285 LIN. FT.
 REMOVABLE CONSTRUCTION PAVEMENT MARKINGS = 957 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS = 13975 LIN. FT.
 RELOCATE TEMPORARY IMPACT ATTENUATION BARRIERS = 2 EACH

NOTE:
 THE CONSTRUCTION PAVEMENT MARKING QUANTITY FOR STAGE 4 IS BASED ON A SINGLE APPLICATION OF THE STRIPING SHOWN ON THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR I-49 STAGE 4.

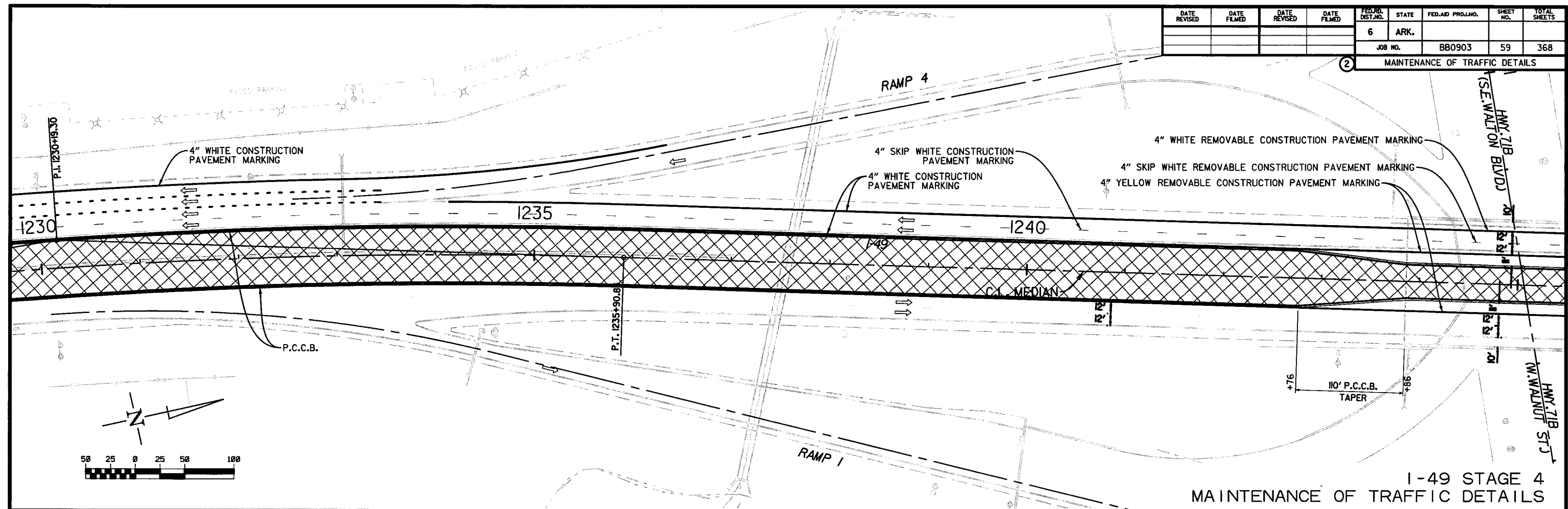


I-49 STAGE 4
MAINTENANCE OF TRAFFIC DETAILS

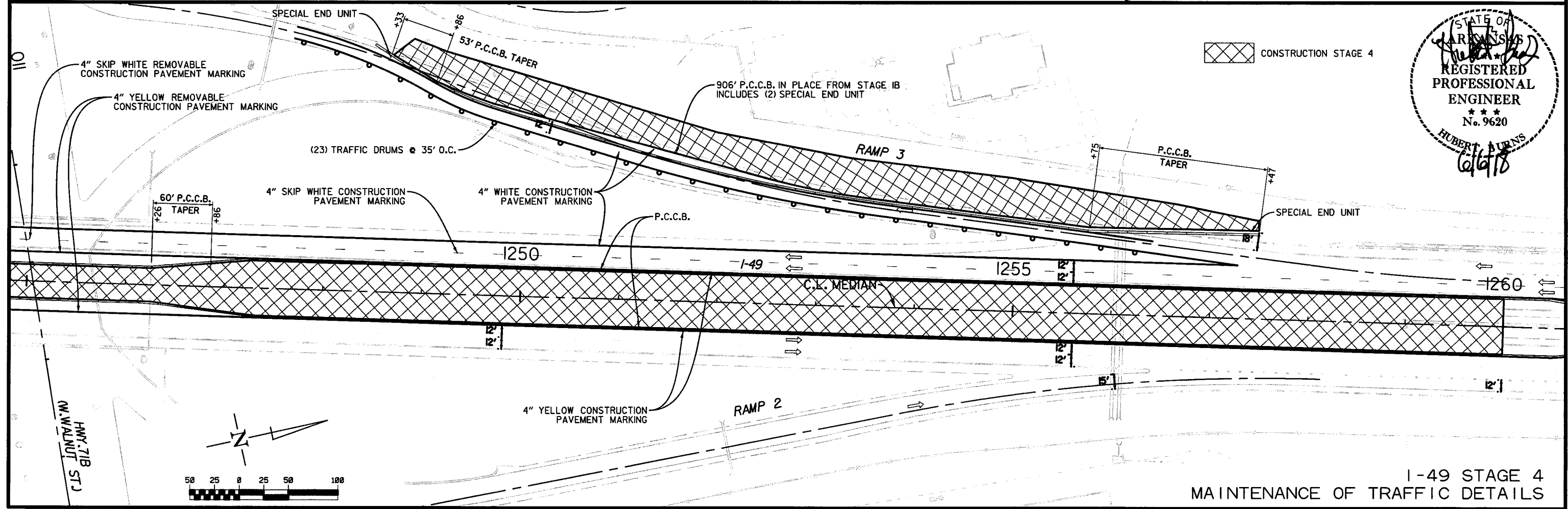
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	59	368

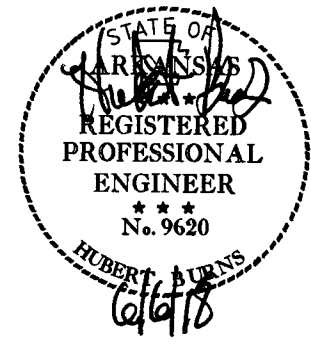
② MAINTENANCE OF TRAFFIC DETAILS



I-49 STAGE 4
MAINTENANCE OF TRAFFIC DETAILS



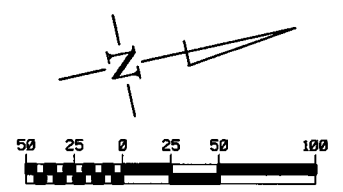
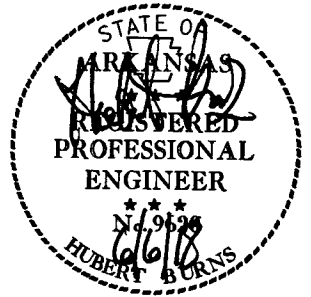
I-49 STAGE 4
MAINTENANCE OF TRAFFIC DETAILS



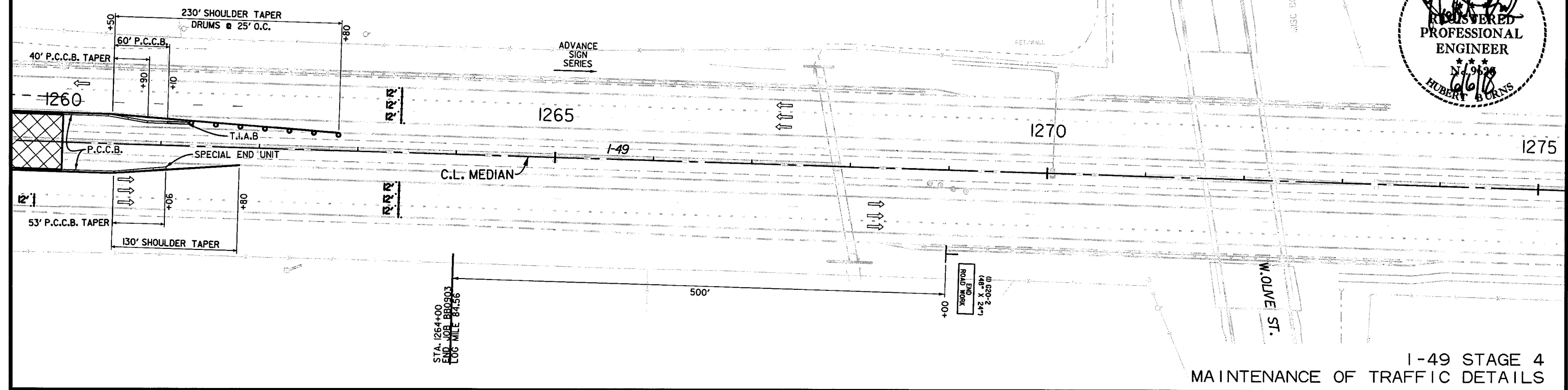
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	60	368

② MAINTENANCE OF TRAFFIC DETAILS



CONSTRUCTION STAGE 4



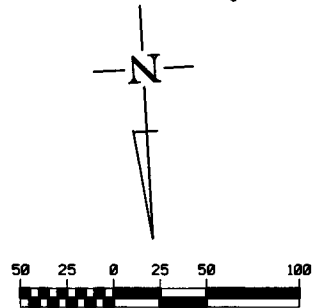
I-49 STAGE 4
MAINTENANCE OF TRAFFIC DETAILS

I-49 STAGE 4
MAINTENANCE OF TRAFFIC DETAILS

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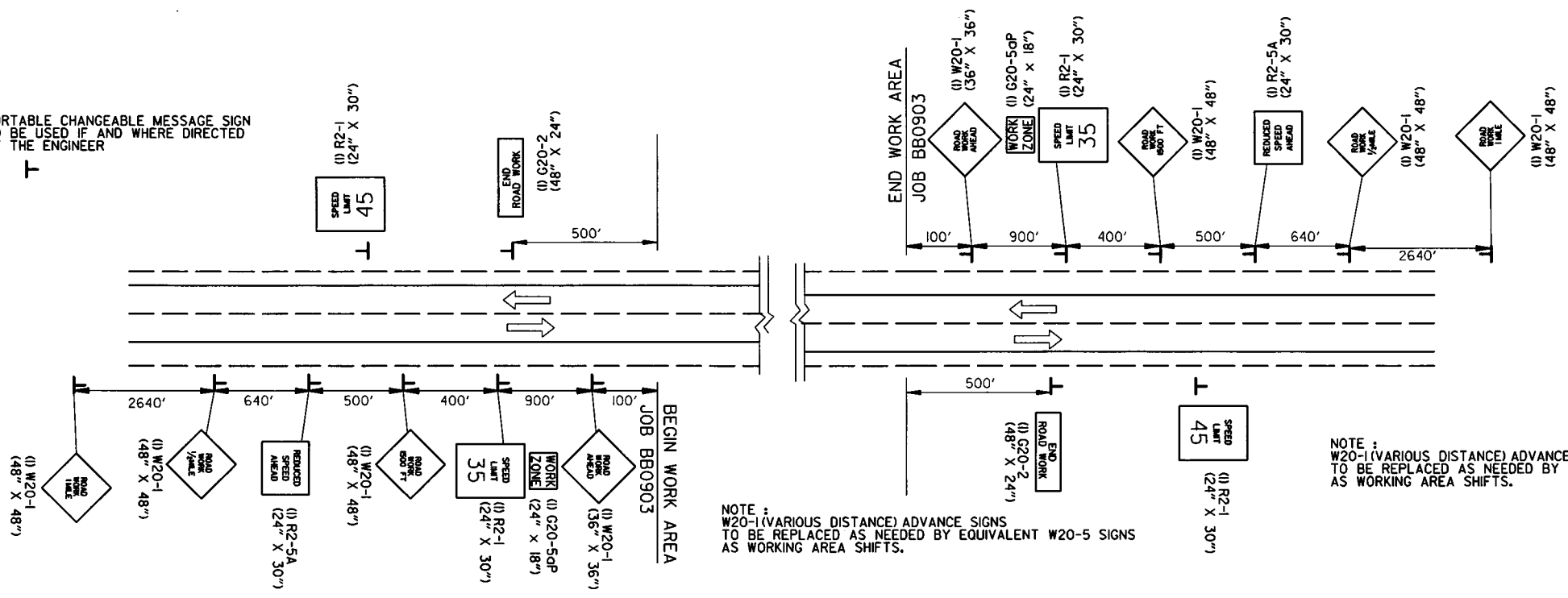
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				6	ARK.			
				JOB NO.	BB0903	61	368	

2 MAINTENANCE OF TRAFFIC DETAILS



PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

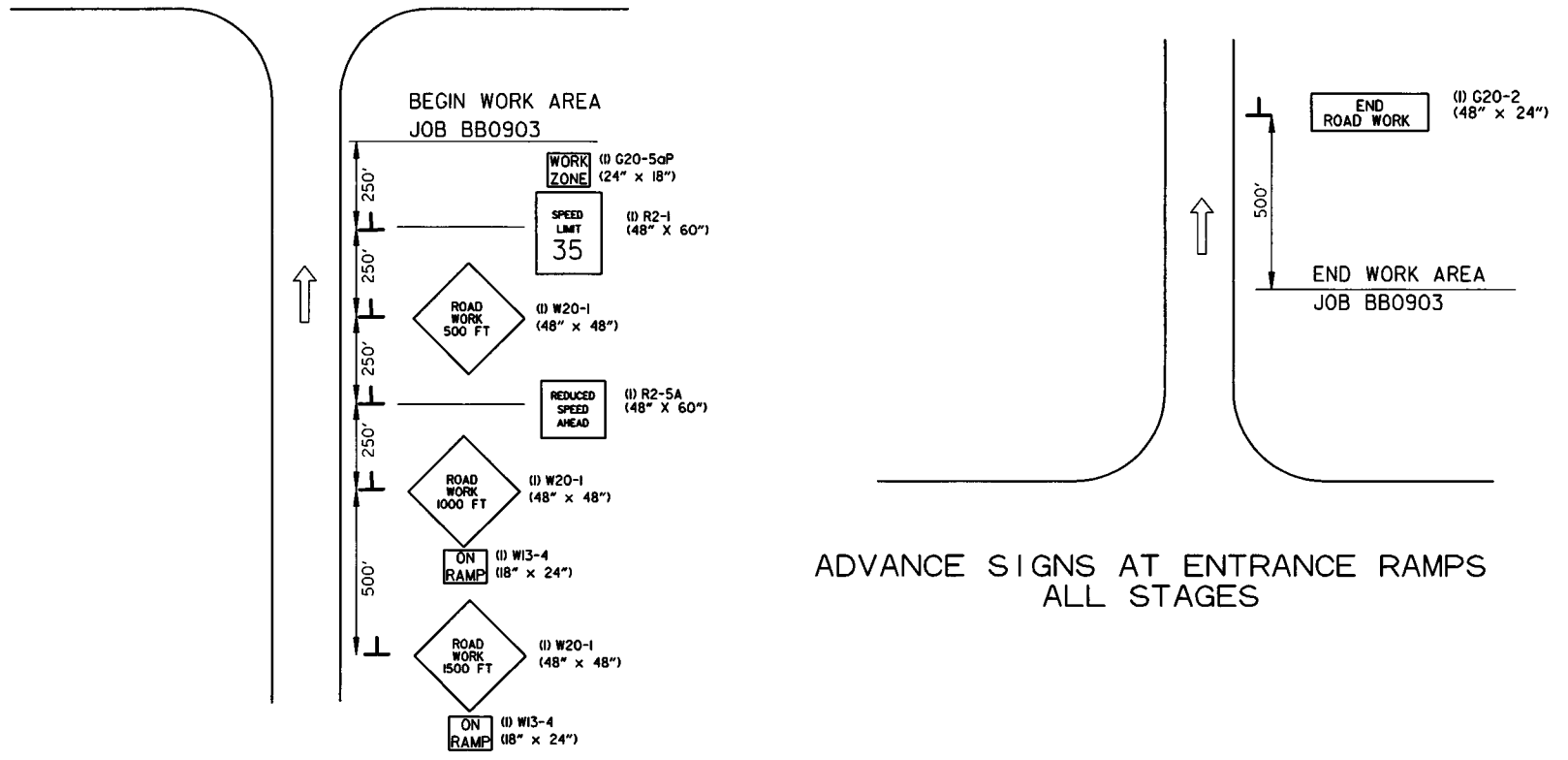
PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



NOTE: W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS AS WORKING AREA SHIFTS.

NOTE: W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS AS WORKING AREA SHIFTS.

ADVANCE SIGNS AT BEGINNING AND END OF JOB - HWY. 71B ALL STAGES



ADVANCE SIGNS AT ENTRANCE RAMPS ALL STAGES




ADVANCE SIGNS AT EXIT RAMPS ALL STAGES

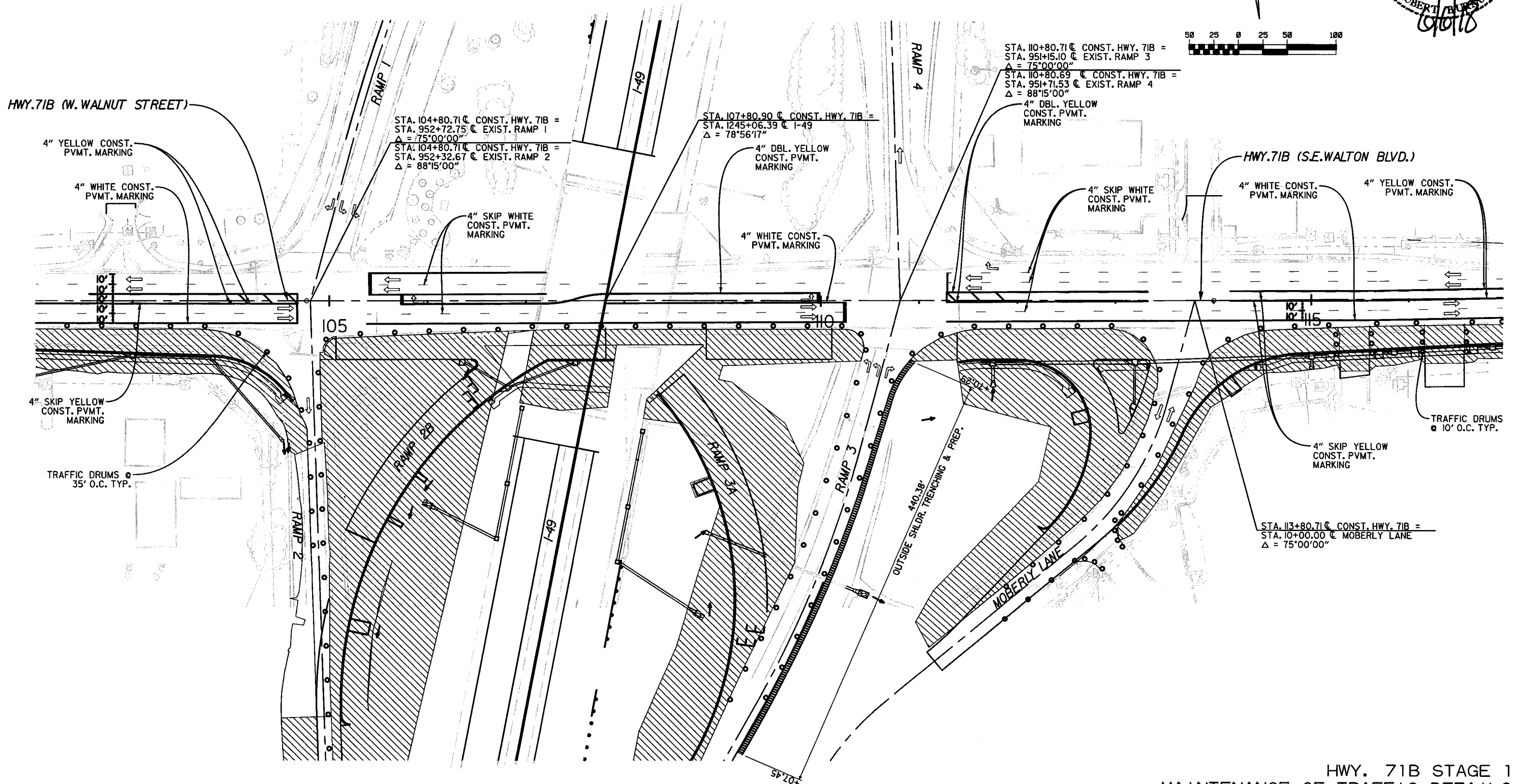
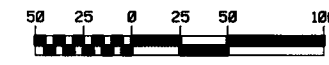
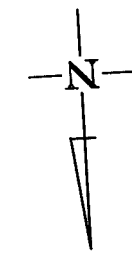
ADVANCE SIGNS AT JOB ENDS MAINTENANCE OF TRAFFIC DETAILS

USER: mh514
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	63	368	

2 MAINTENANCE OF TRAFFIC DETAILS

-  CONSTRUCTION STAGE I
-  TYPE III BARRICADES (16')
-  TRAFFIC DRUMS

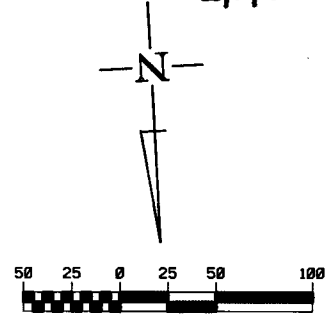
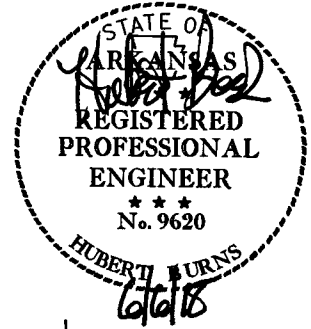


HWY. 71B STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

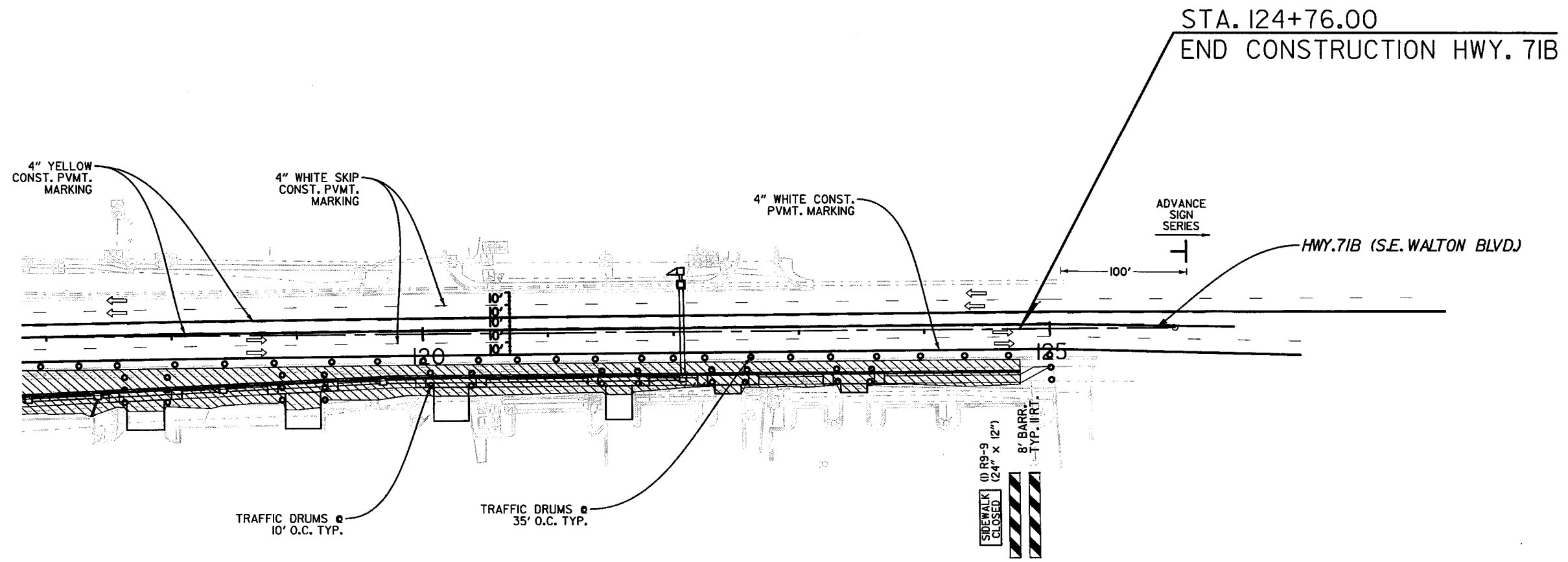
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		64	368

② MAINTENANCE OF TRAFFIC DETAILS



- CONSTRUCTION STAGE I
- TYPE II BARRICADES (8')
- TRAFFIC DRUMS



HWY. 71B STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

USER: mh514
DESIGN FILE: G:\2103305_Hwy71inchg\TRANSP\dn\maint.of.traffic\BB0903.MOT_HWY71B.dgn
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				6	ARK.			
						JOB NO.	BB0903	65
						2 MAINTENANCE OF TRAFFIC DETAILS		

STAGE 2:

RESTRIPE THE EXISTING LANES (4-11' LANES & 11' LEFT TURN LANE AT INTERSECTIONS) AS SHOWN TO MAINTAIN TRAFFIC.

CONSTRUCT SHOULDER TRENCHING FOR MOT TRAFFIC SHIFT FROM STA. 948+06.87 TO STA. 952+16.80 ON RAMP 1 REFER TO SPECIAL DETAILS FOR SHOULDER TRENCHING.

NOTCH AND WIDEN ON THE SOUTH SIDE OF HWY. 71B, ALSO NOTCH AND WIDEN RAMP 1, RAMP 4, AND CONNECTING STREETS (ONE SIDE AT A TIME). DELINEATING THE WORK ZONE USING TRAFFIC DRUMS AT 35' O.C. ON THE SIDE BEING WIDENED. CONSTRUCT STORM SEWER DRAINAGE AND SIDEWALKS IN AND ADJACENT TO WIDENED AREAS. DELINEATE CITY STREETS AND DRIVEWAYS THROUGHOUT THE PROJECT USING TRAFFIC DRUMS AT 10' O.C. ON THE SIDE BEING WIDENED.

CONSTRUCT NEW SIGNAL BASES AWAY FROM RAMP TRAFFIC.

STAGE 2B:

MAINTAIN TRAFFIC AS SHOWN IN HWY. 71B STAGE 2 ON EXISTING RAMPS UNTIL FINAL RAMP CONNECTIONS ARE MADE.




COMPLETE INSTALLATION AND TEST OPERATION OF PERMANENT TRAFFIC SIGNALS & LIGHTING BEFORE TRAFFIC IS SWITCHED TO SPUTI CONFIGURATION.

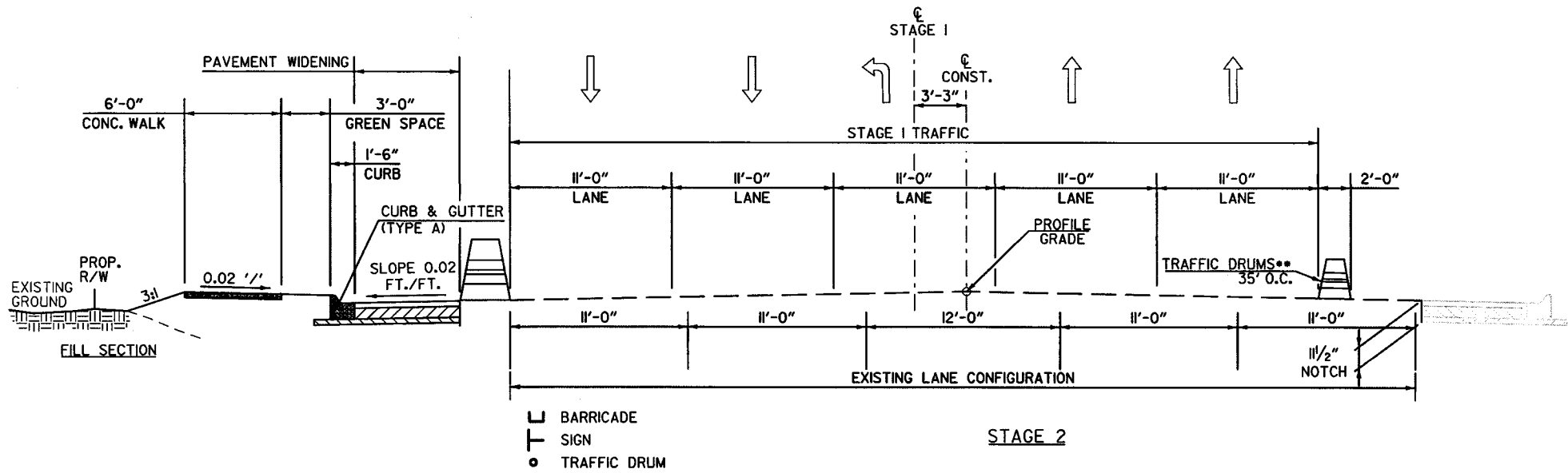
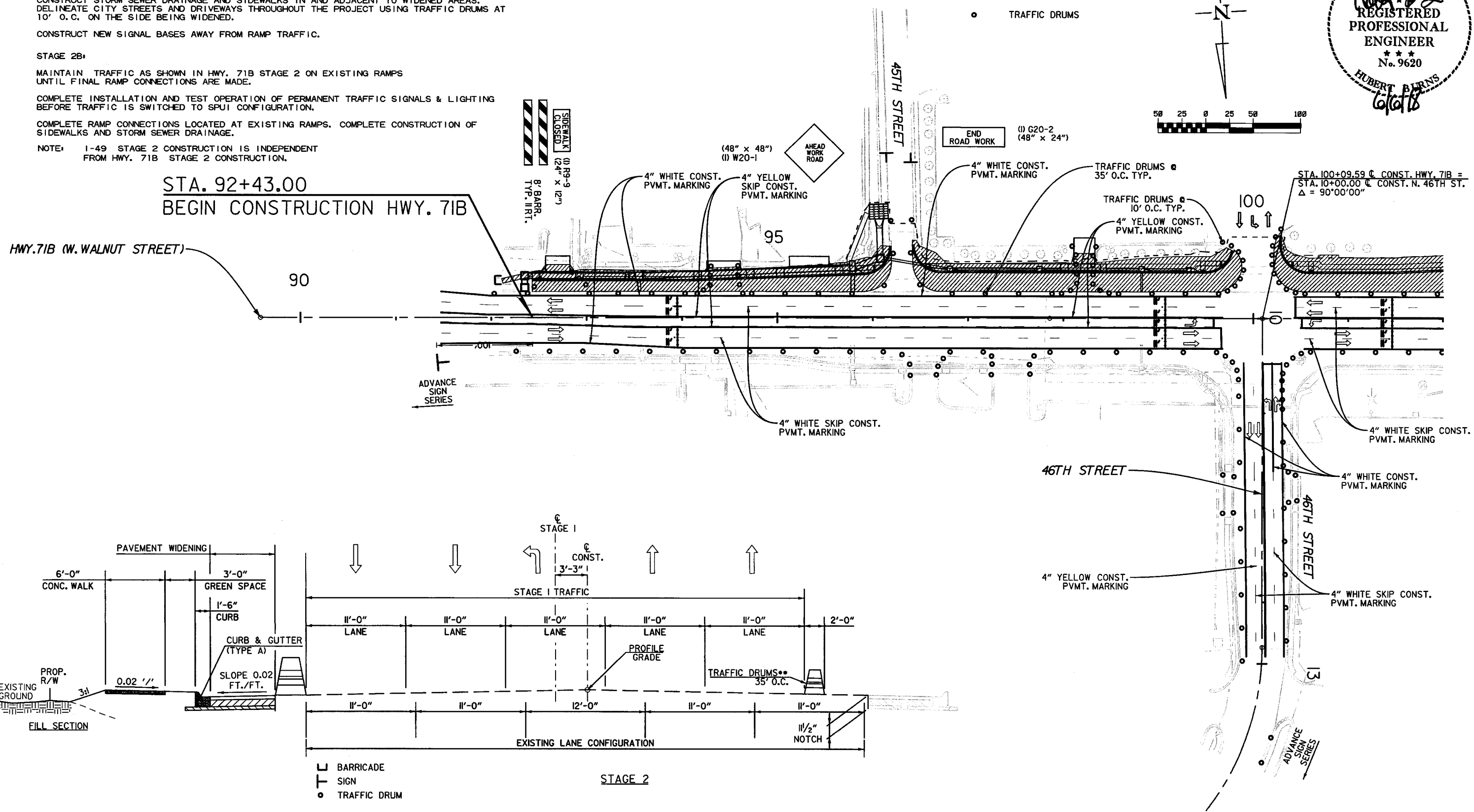
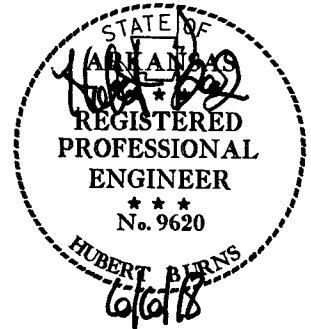
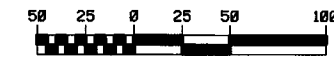
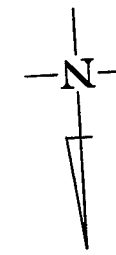
COMPLETE RAMP CONNECTIONS LOCATED AT EXISTING RAMPS. COMPLETE CONSTRUCTION OF SIDEWALKS AND STORM SEWER DRAINAGE.

NOTE: 1-49 STAGE 2 CONSTRUCTION IS INDEPENDENT FROM HWY. 71B STAGE 2 CONSTRUCTION.

STAGE 2 CONSTRUCTION PAVEMENT MARKINGS:

REMOVAL OF STAGE 1 CONSTRUCTION PAVEMENT MARKINGS = 17,935 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS = 18,377 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS (ARROWS) = 30

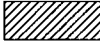


-  CONSTRUCTION STAGE 2
-  TYPE II BARRICADES (8')
-  TRAFFIC DRUMS

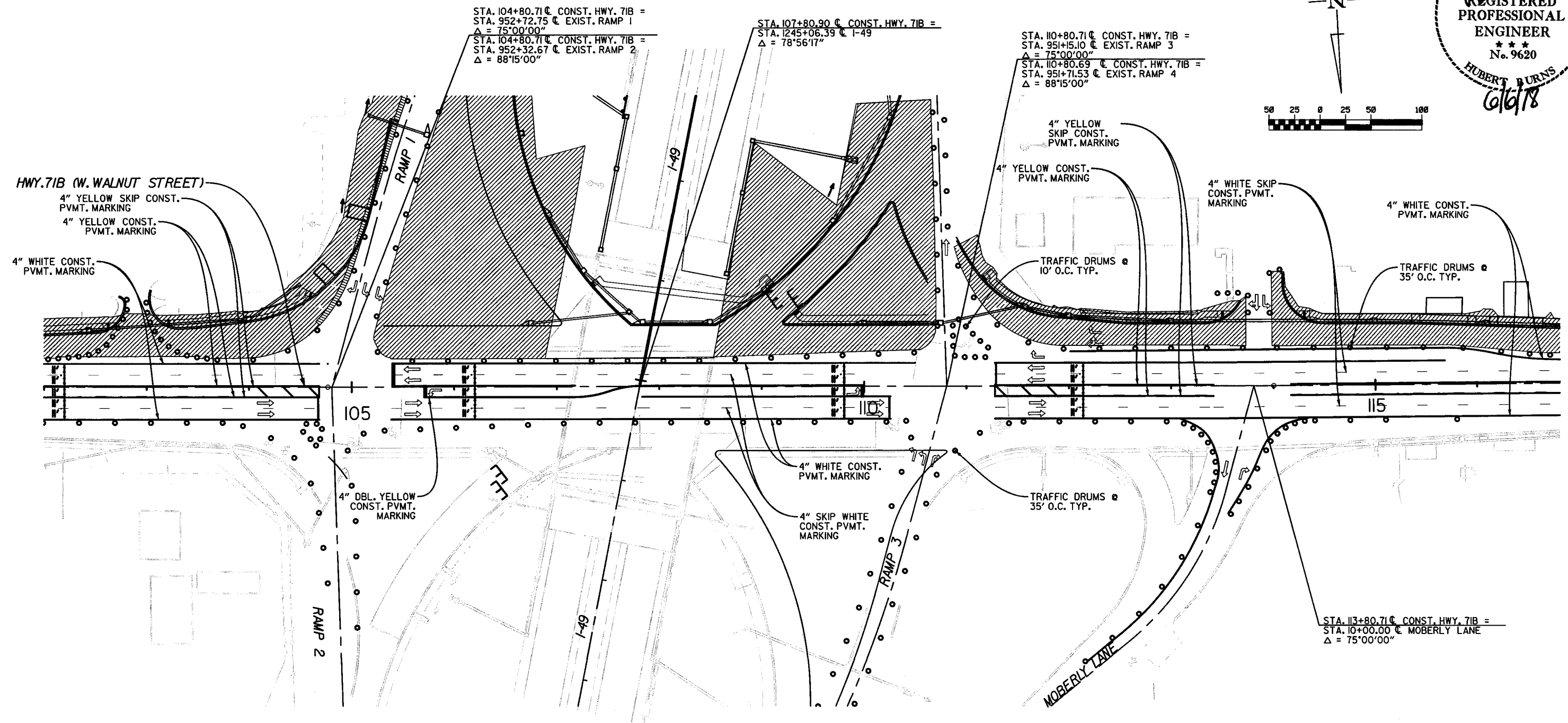
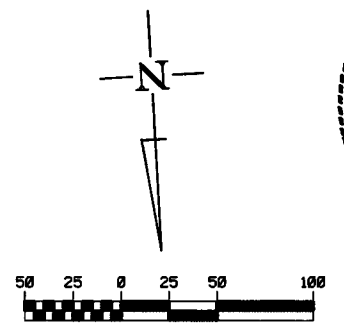
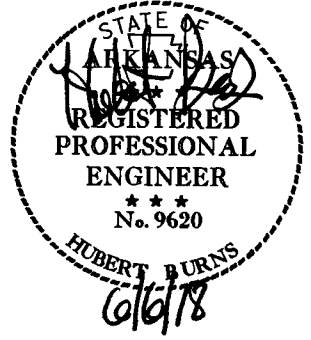


HWY. 71B STAGE 2 MAINTENANCE OF TRAFFIC DETAILS

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 PLOTTED: 6/6/2018 11:03
 SCALE: 1/800

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		66	368
				2 MAINTENANCE OF TRAFFIC DETAILS				

-  CONSTRUCTION STAGE 2
-  TYPE III BARRICADES (16')
-  TRAFFIC DRUMS

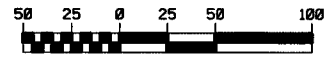
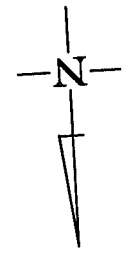
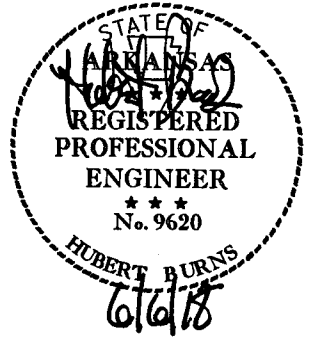


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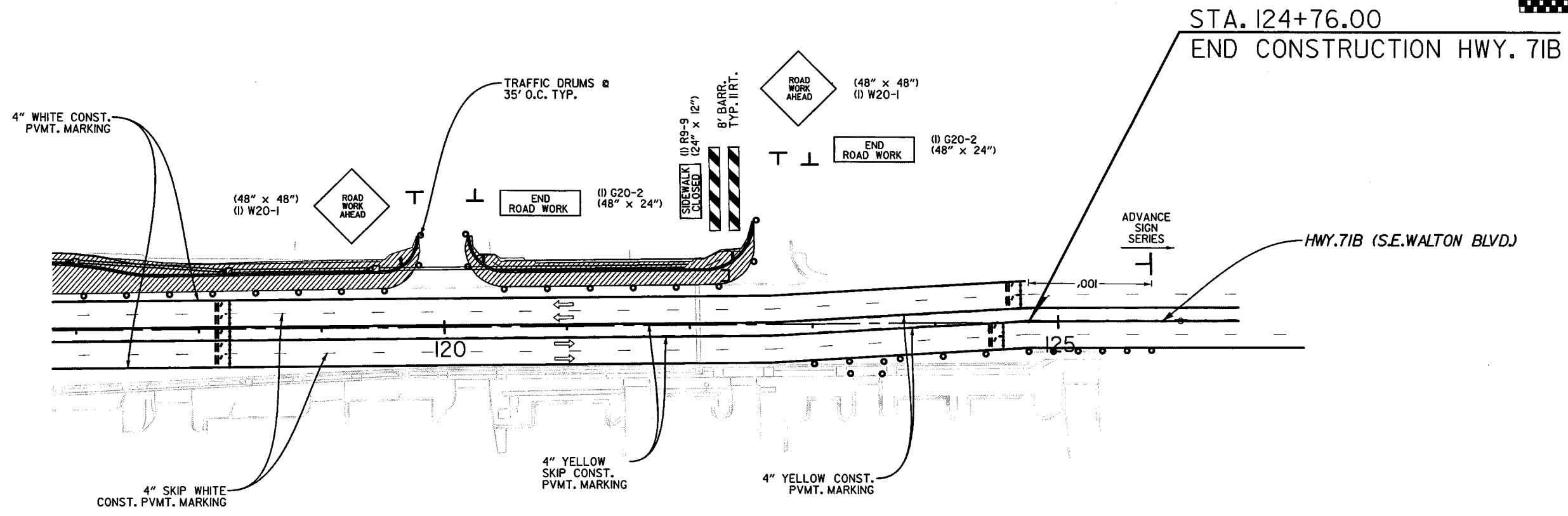
HWY. 71B STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		67	368

② MAINTENANCE OF TRAFFIC DETAILS



- CONSTRUCTION STAGE 2
- TYPE II BARRICADES (8')
- TRAFFIC DRUMS

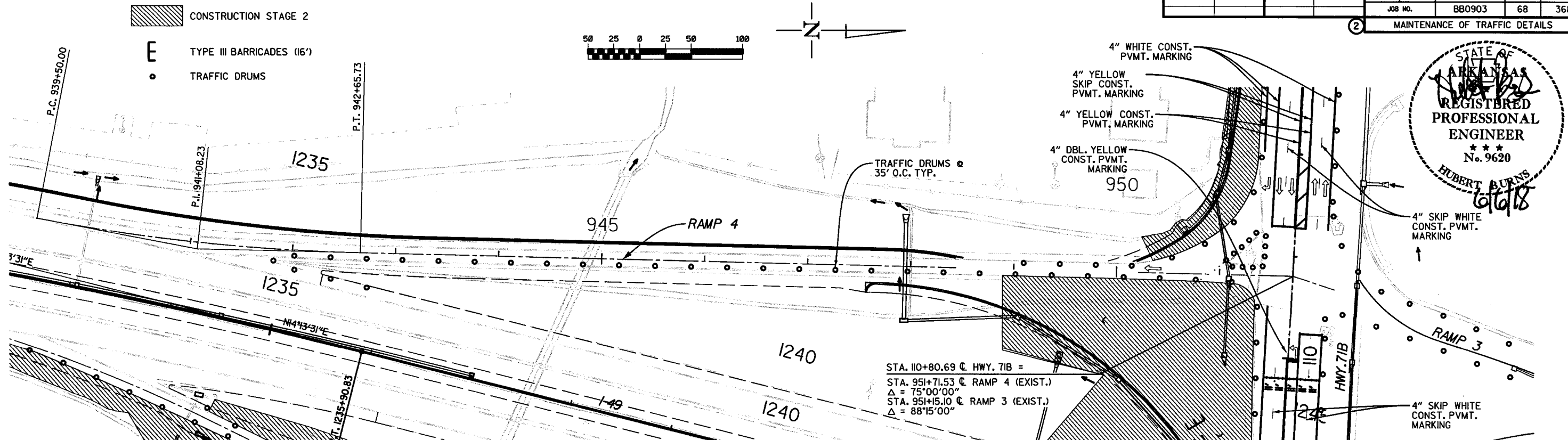
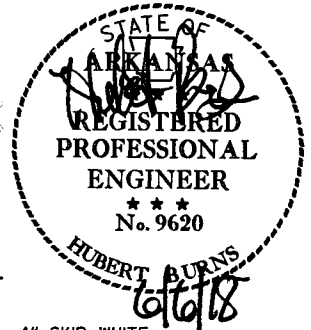


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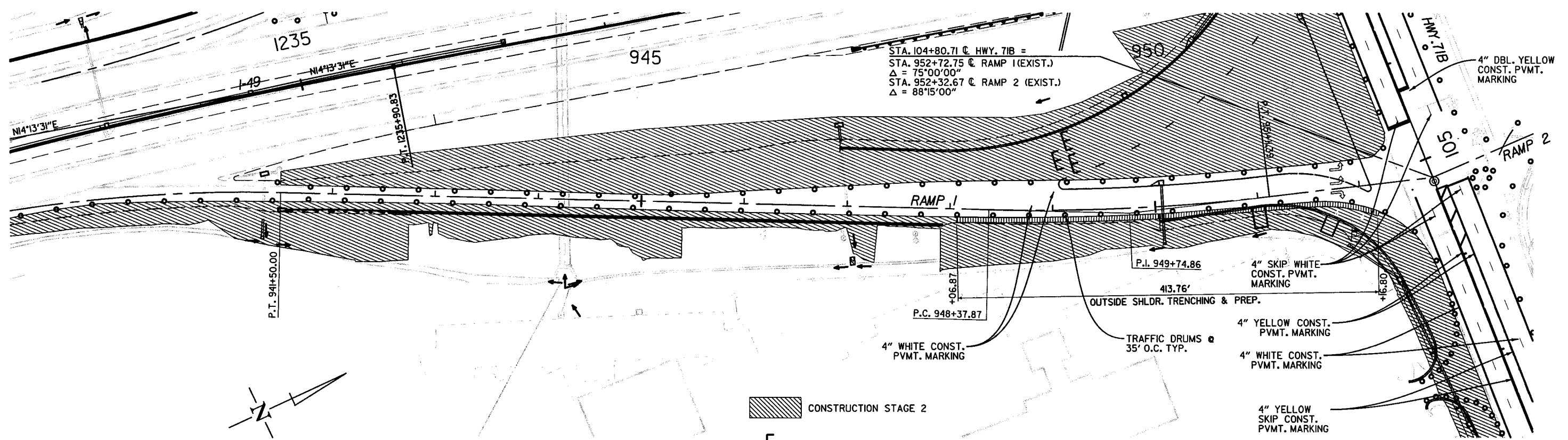
HWY. 71B STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. BB0903							68	368

2 MAINTENANCE OF TRAFFIC DETAILS



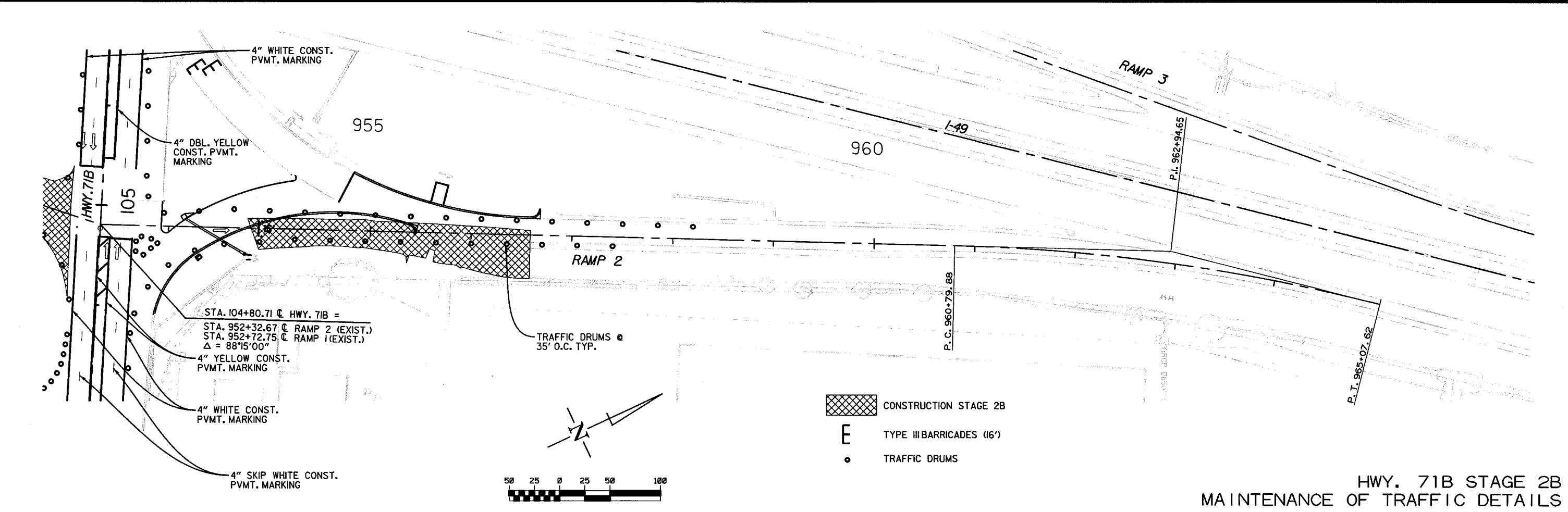
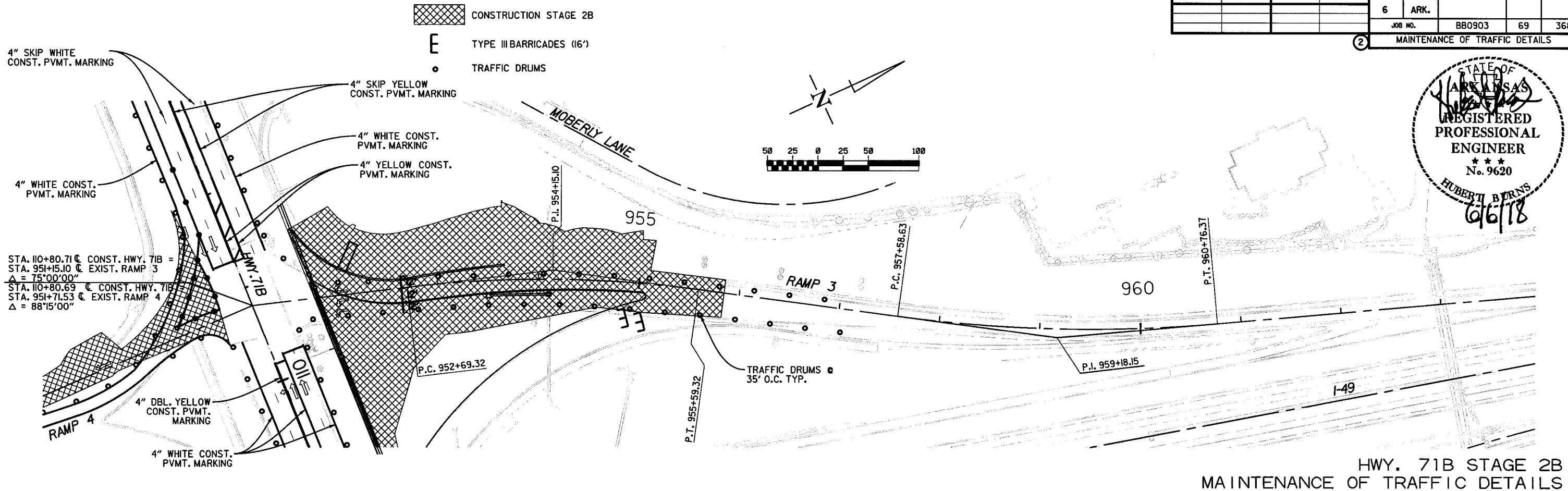
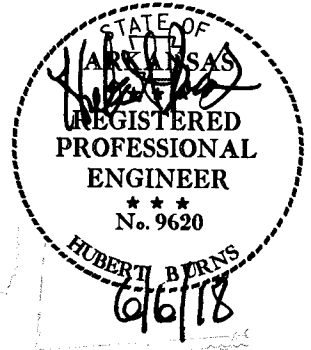
HWY. 71B STAGE 2 MAINTENANCE OF TRAFFIC DETAILS



HWY. 71B STAGE 2 MAINTENANCE OF TRAFFIC DETAILS

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DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		69	368
				2 MAINTENANCE OF TRAFFIC DETAILS				



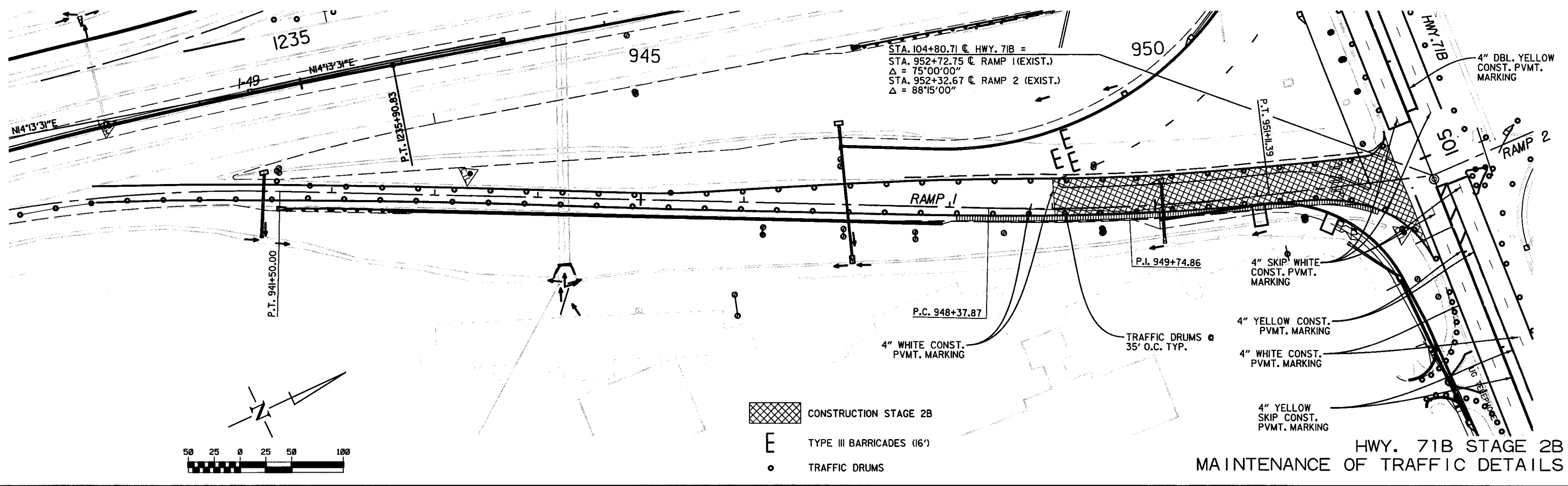
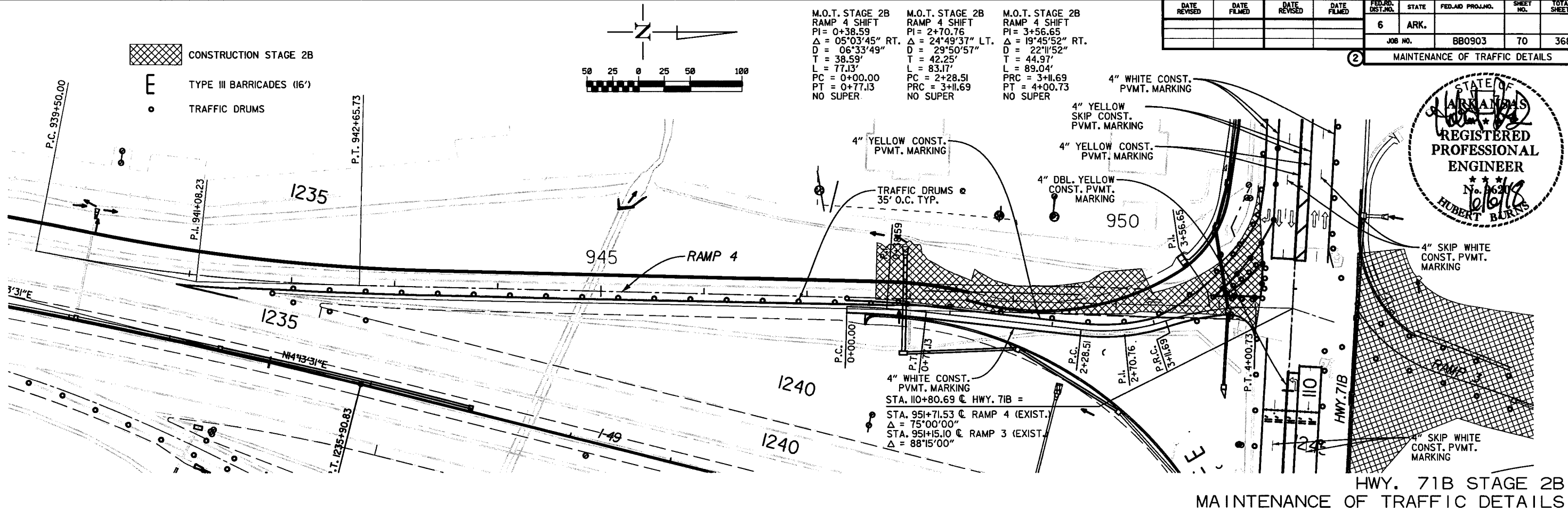
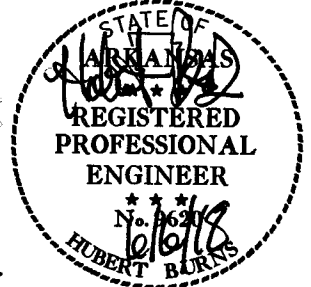
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				6	ARK.			
						JOB NO.	BB0903	70
						2 MAINTENANCE OF TRAFFIC DETAILS		

M.O.T. STAGE 2B
RAMP 4 SHIFT
PI = 0+38.59
 $\Delta = 05^{\circ}03'45''$ RT.
D = 06'33'49"
T = 38.59'
L = 77.13'
PC = 0+00.00
PT = 0+77.13
NO SUPER

M.O.T. STAGE 2B
RAMP 4 SHIFT
PI = 2+70.76
 $\Delta = 24^{\circ}49'37''$ LT.
D = 29'50'57"
T = 42.25'
L = 83.17'
PC = 2+28.51
PRC = 3+11.69
NO SUPER

M.O.T. STAGE 2B
RAMP 4 SHIFT
PI = 3+56.65
 $\Delta = 19^{\circ}45'52''$ RT.
D = 22'11'52"
T = 44.97'
L = 89.04'
PC = 3+11.69
PT = 4+00.73
NO SUPER



USER: mh514
DESIGN FILE: G:\2103305_Hwy71nhdg\TRANSP\dm\mnt_of_traffic\BB0903_MOT_Hwy71B_01.dgn
PLOTED: 6/6/2018 11:03

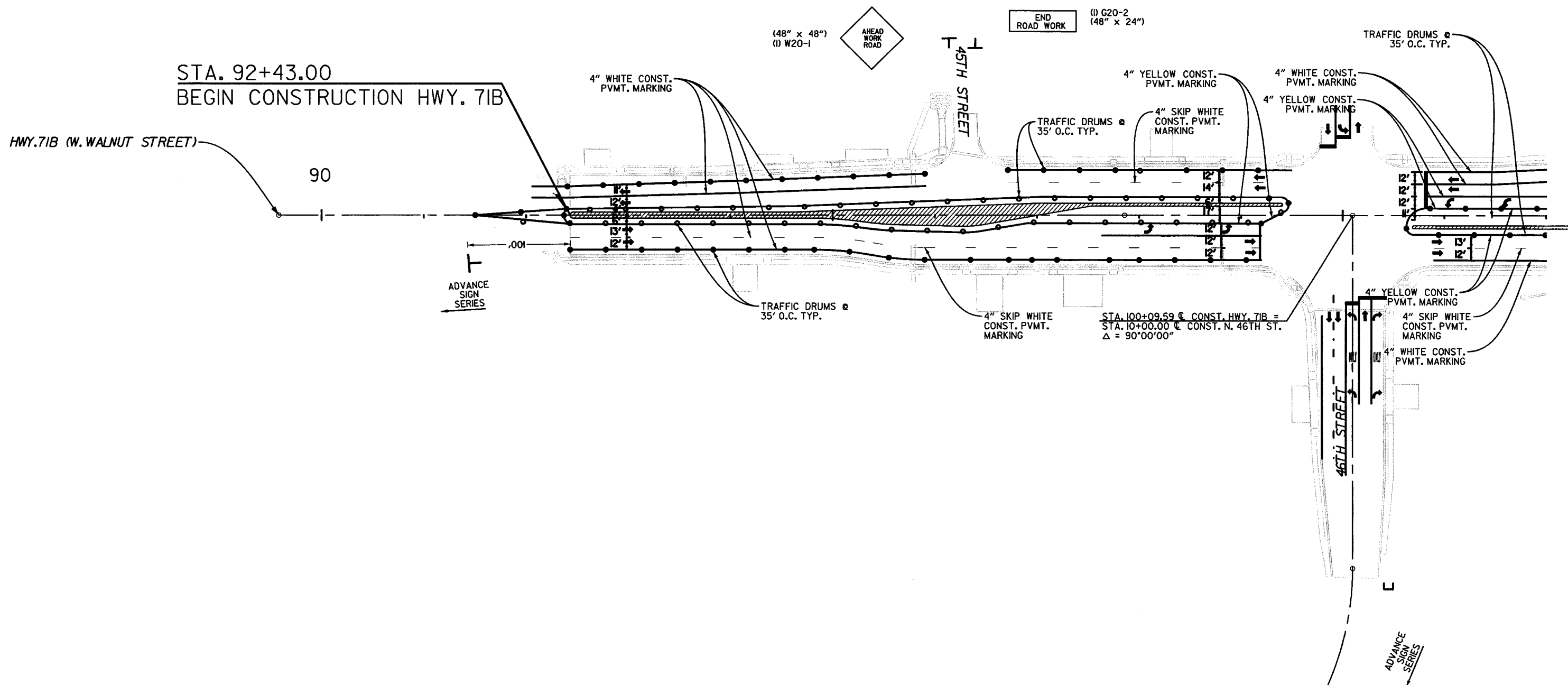
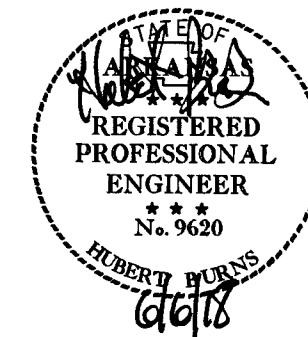
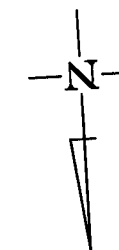
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. BB0903	71	368
2 MAINTENANCE OF TRAFFIC DETAILS									

STAGE 3:
 SWITCH TRAFFIC TO SPUI CONFIGURATION.
 USE CHANNELIZERS TO DELINEATE ISLANDS AS NECESSARY.
 CONSTRUCT MEDIAN ISLANDS FOR HWY. 71B AND COMPLETE CONSTRUCTION OF RAMP ISLANDS.
 PLACE FINAL LIFT OF 2" ACHM SURFACE COURSE, PLACE PERMANENT PAVEMENT MARKINGS, CLEANUP AND OPENING COMPLETED ROADWAY TO FULL TWO-WAY TRAFFIC UTILIZING ALL LANES.

NOTE: 1-49 STAGE 3 CONSTRUCTION IS INDEPENDENT FROM HWY. 71B STAGE 3 CONSTRUCTION.

STAGE 3 CONSTRUCTION PAVEMENT MARKINGS:
 REMOVAL OF STAGE 2 CONSTRUCTION PAVEMENT MARKINGS = 18,377 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS = 23,672 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS (ARROWS) = 25

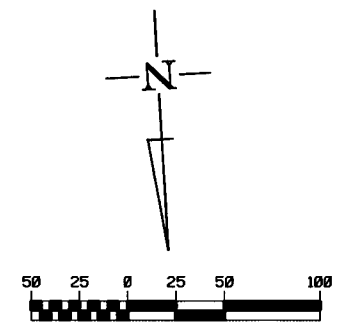
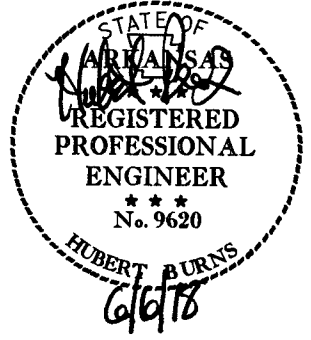
 CONSTRUCTION STAGE 3



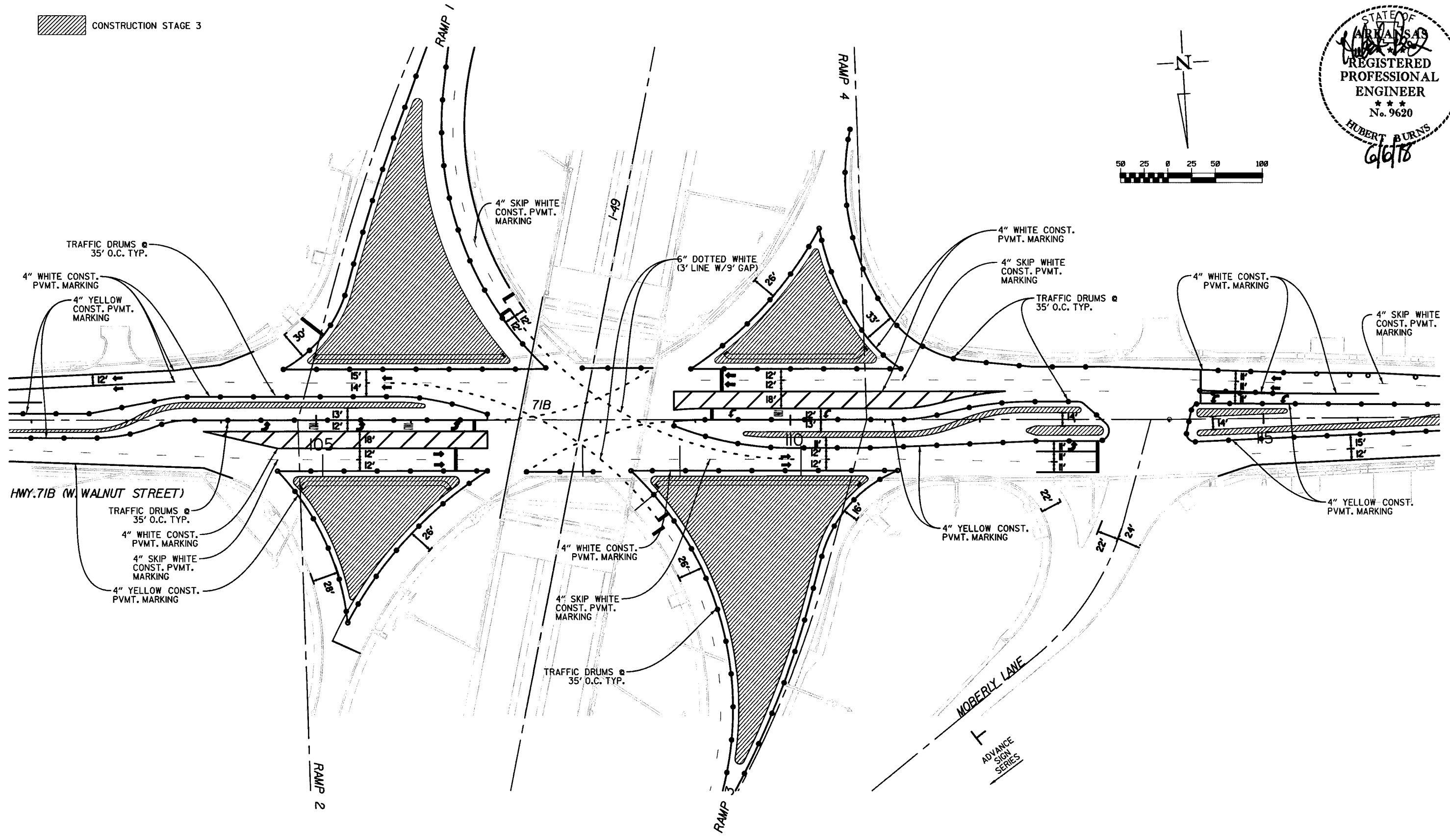
HWY. 71B STAGE 3
 MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903	72	368	

2 MAINTENANCE OF TRAFFIC DETAILS



CONSTRUCTION STAGE 3



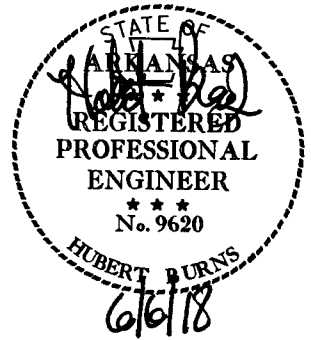
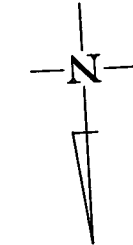
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HWY. 71B STAGE 3
 MAINTENANCE OF TRAFFIC DETAILS

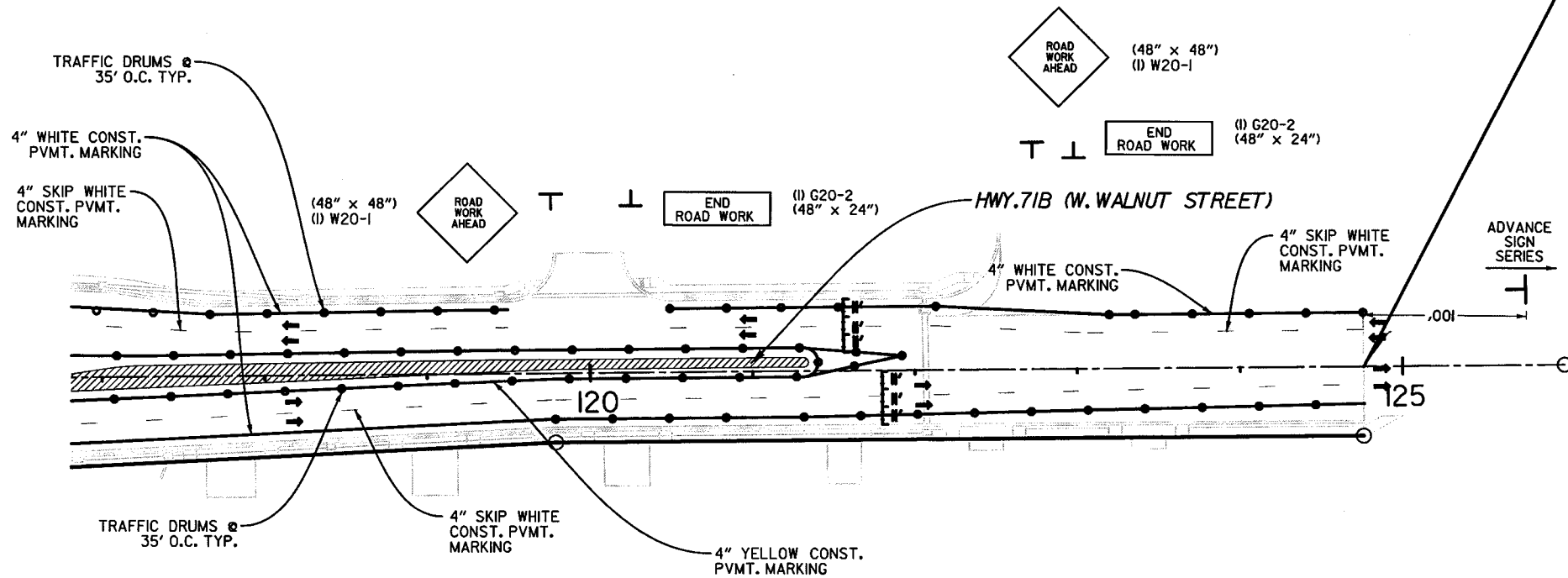
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	73	368	

② MAINTENANCE OF TRAFFIC DETAILS

CONSTRUCTION STAGE 3



STA. 124+76.00
END CONSTRUCTION HWY. 71B



USER: mh514
DESIGN FILE: G:\2103305_Hwy71inchg\TRANSP\ dgn\maint_of_traffic\BB0903.MOT_HWY71B_01.dgn
PLOTTED: 6/6/2018 11:03
SCALE: 1/100

HWY. 71B STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18								
						JOB NO. BB0903	73A	368

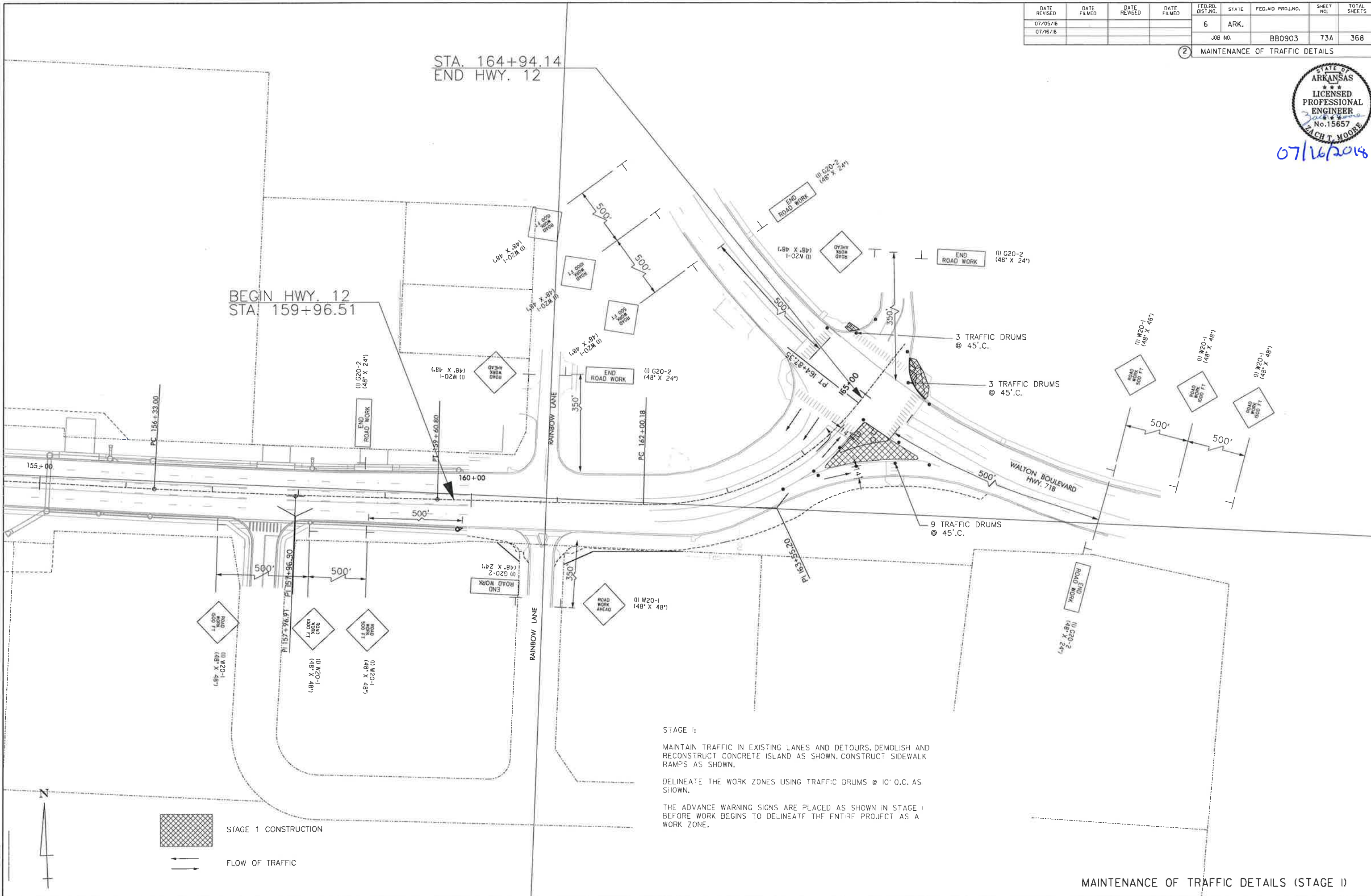
② MAINTENANCE OF TRAFFIC DETAILS



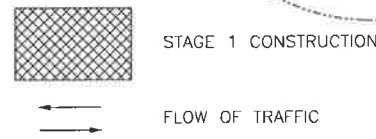
07/16/2018

STA. 164+94.14
END HWY. 12

BEGIN HWY. 12
STA. 159+96.51



STAGE I:
 MAINTAIN TRAFFIC IN EXISTING LANES AND DETOURS. DEMOLISH AND RECONSTRUCT CONCRETE ISLAND AS SHOWN. CONSTRUCT SIDEWALK RAMPS AS SHOWN.
 DELINEATE THE WORK ZONES USING TRAFFIC DRUMS @ 10' O.C. AS SHOWN.
 THE ADVANCE WARNING SIGNS ARE PLACED AS SHOWN IN STAGE I BEFORE WORK BEGINS TO DELINEATE THE ENTIRE PROJECT AS A WORK ZONE.



MAINTENANCE OF TRAFFIC DETAILS (STAGE I)

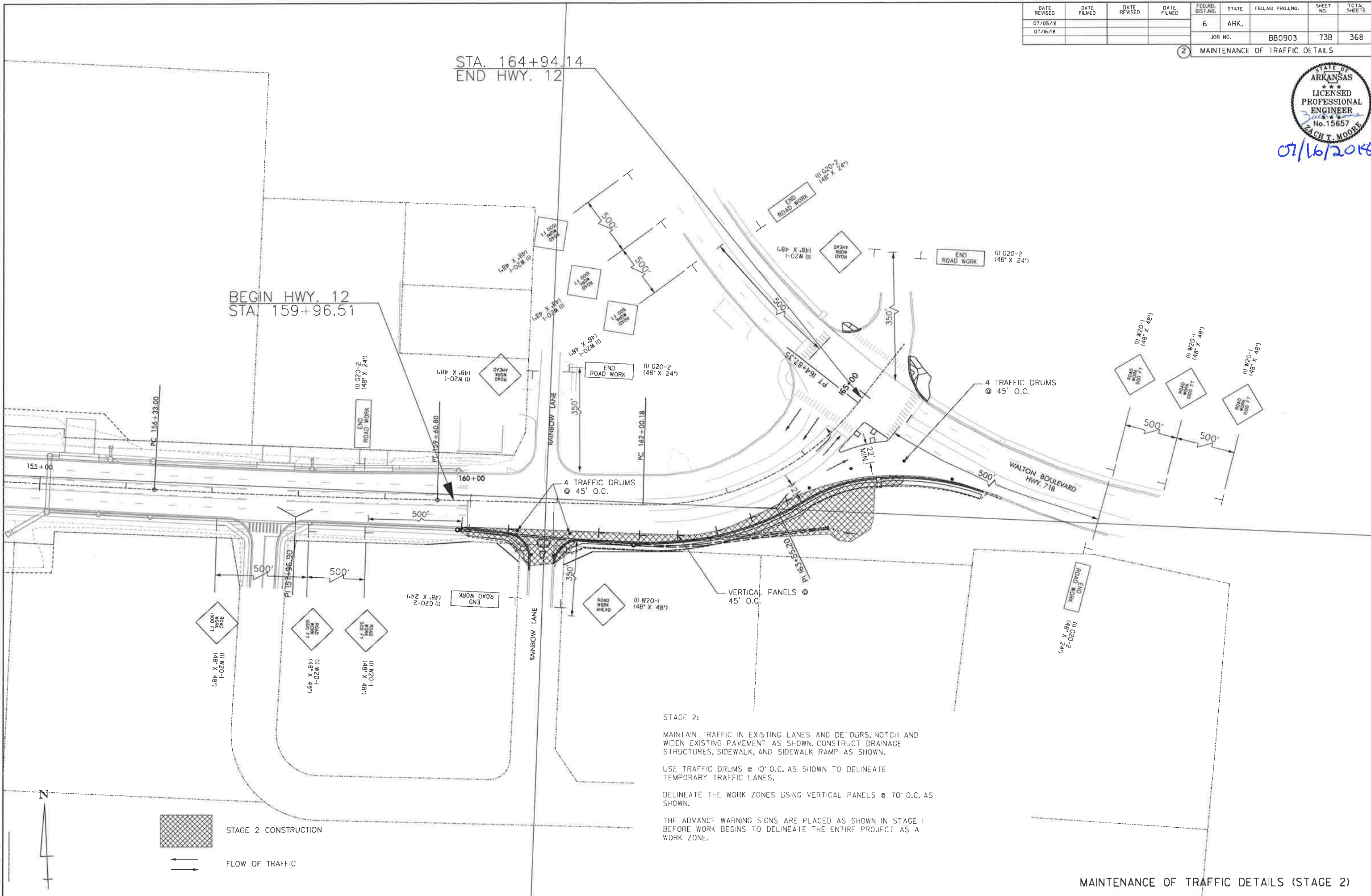
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18								

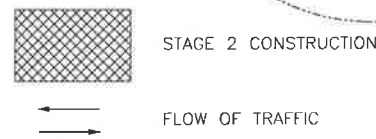
2 MAINTENANCE OF TRAFFIC DETAILS



07/16/2018



STAGE 2:
 MAINTAIN TRAFFIC IN EXISTING LANES AND DETOURS. NOTCH AND WIDEN EXISTING PAVEMENT AS SHOWN. CONSTRUCT DRAINAGE STRUCTURES, SIDEWALK, AND SIDEWALK RAMP AS SHOWN.
 USE TRAFFIC DRUMS @ 10' O.C. AS SHOWN TO DELINEATE TEMPORARY TRAFFIC LANES.
 DELINEATE THE WORK ZONES USING VERTICAL PANELS @ 70' O.C. AS SHOWN.
 THE ADVANCE WARNING SIGNS ARE PLACED AS SHOWN IN STAGE 1 BEFORE WORK BEGINS TO DELINEATE THE ENTIRE PROJECT AS A WORK ZONE.

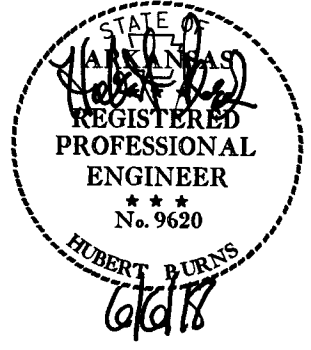


MAINTENANCE OF TRAFFIC DETAILS (STAGE 2)

twincorntick 7/16/2018 3:46:40 PM
 WORKSPACE 1551201
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	74	368	

2 PERMANENT PAVEMENT MARKING DETAILS



PERMANENT PAVEMENT MARKING

LEFT MAIN LANES

ENHANCED PAVEMENT MARKINGS

- 6" YELLOW = 8688 LIN. FT.
- 6" WHITE = 4899 LIN. FT.
- 6" SKIP WHITE = 3002 LIN. FT.
- 8" WHITE = 775 LIN. FT.
- 8" DOTTED WHITE = 828 LIN. FT.

ARROWS = 4 EACH

RAISED PAVEMENT MARKERS

TYPE II (WHITE/RED) = 296 EACH

RAMPS

ENHANCED PAVEMENT MARKINGS

- 6" YELLOW = 2389 LIN. FT.
- 6" DOTTED WHITE = 36 LIN. FT.
- 6" WHITE = 5371 LIN. FT.
- 6" SKIP WHITE = 1304 LIN. FT.
- 8" WHITE = 592 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS

12" WHITE = 749 LIN. FT.

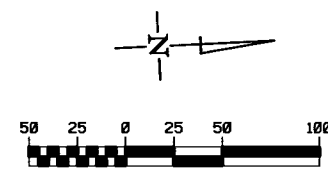
RIGHT MAIN LANES

ENHANCED PAVEMENT MARKINGS

- 6" YELLOW = 8705 LIN. FT.
- 6" WHITE = 3215 LIN. FT.
- 6" SKIP WHITE = 2925 LIN. FT.
- 8" WHITE = 775 LIN. FT.
- 8" DOTTED WHITE = 225 LIN. FT.

RAISED PAVEMENT MARKERS

TYPE II (WHITE/RED) = 247 EACH



1170

NEW HOPE RD.

1175

1180

6" YELLOW ENHANCED THERMOPLASTIC PAVEMENT MARKING

RAMP 3

N02°45'22"E

I-49

RAMP 2

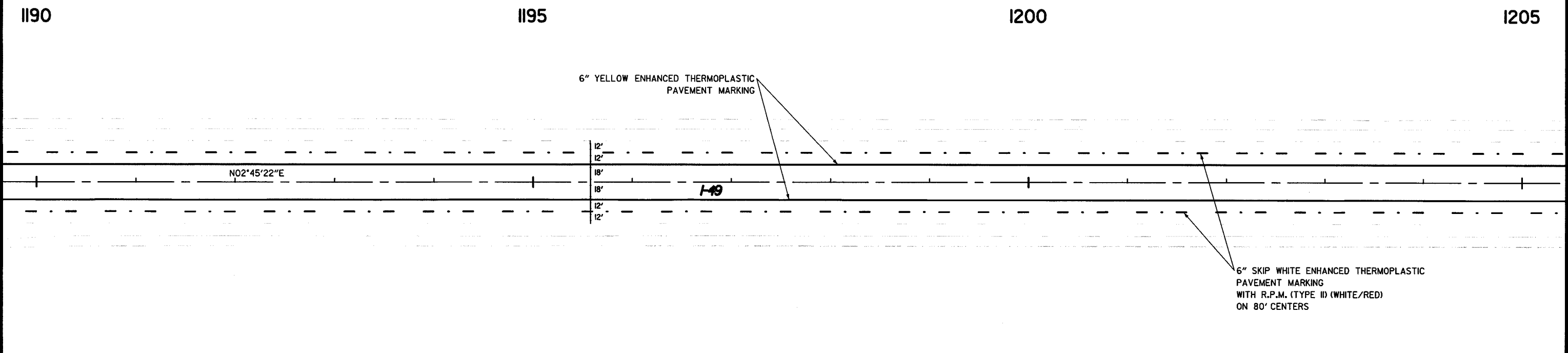
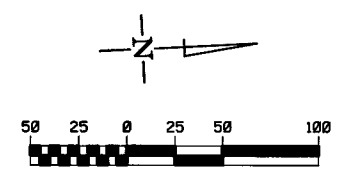
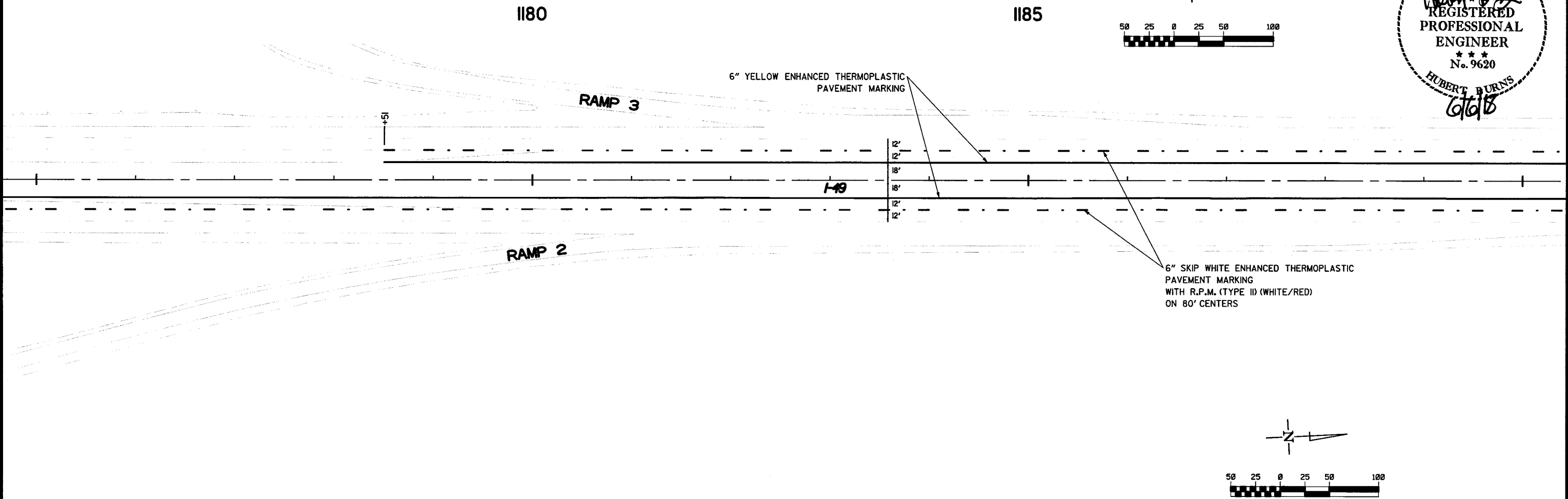
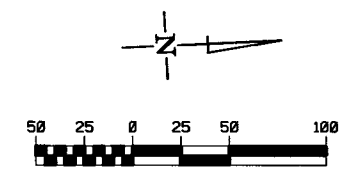
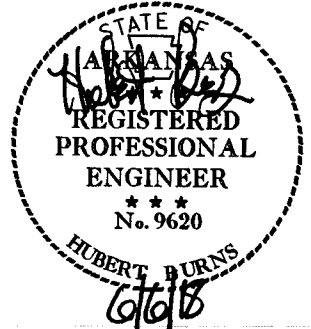
6" SKIP WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING WITH R.P.M. (TYPE II) (WHITE/RED) ON 80' CENTERS

PERMANENT PAVEMENT MARKING DETAILS

USER: mfs14
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903	75	368	

2 PERMANENT PAVEMENT MARKING DETAILS

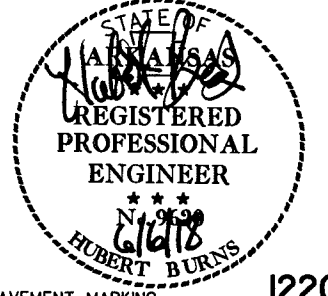


PERMANENT PAVEMENT MARKING DETAILS

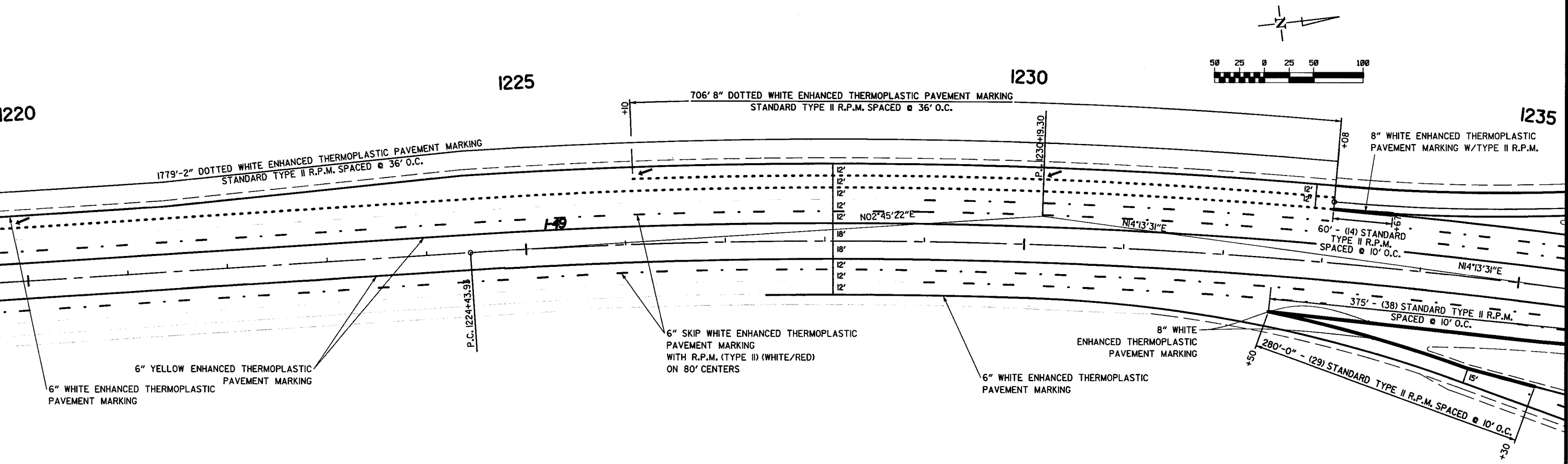
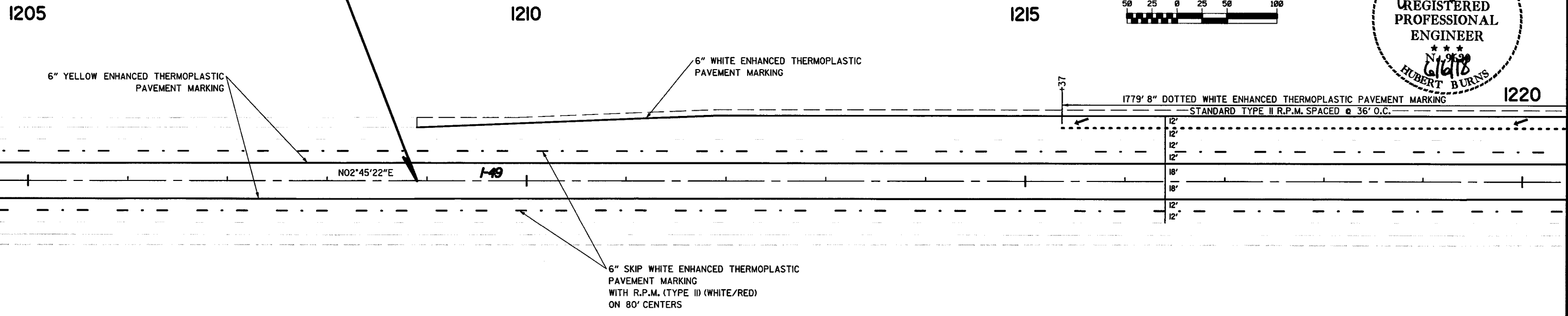
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 PLOTTED: 6/6/2018 11:03
 SCALE: 1/800

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	76	368	

2 PERMANENT PAVEMENT MARKING DETAILS



STA. 1208+90.00
BEGIN CONSTRUCTION I-49

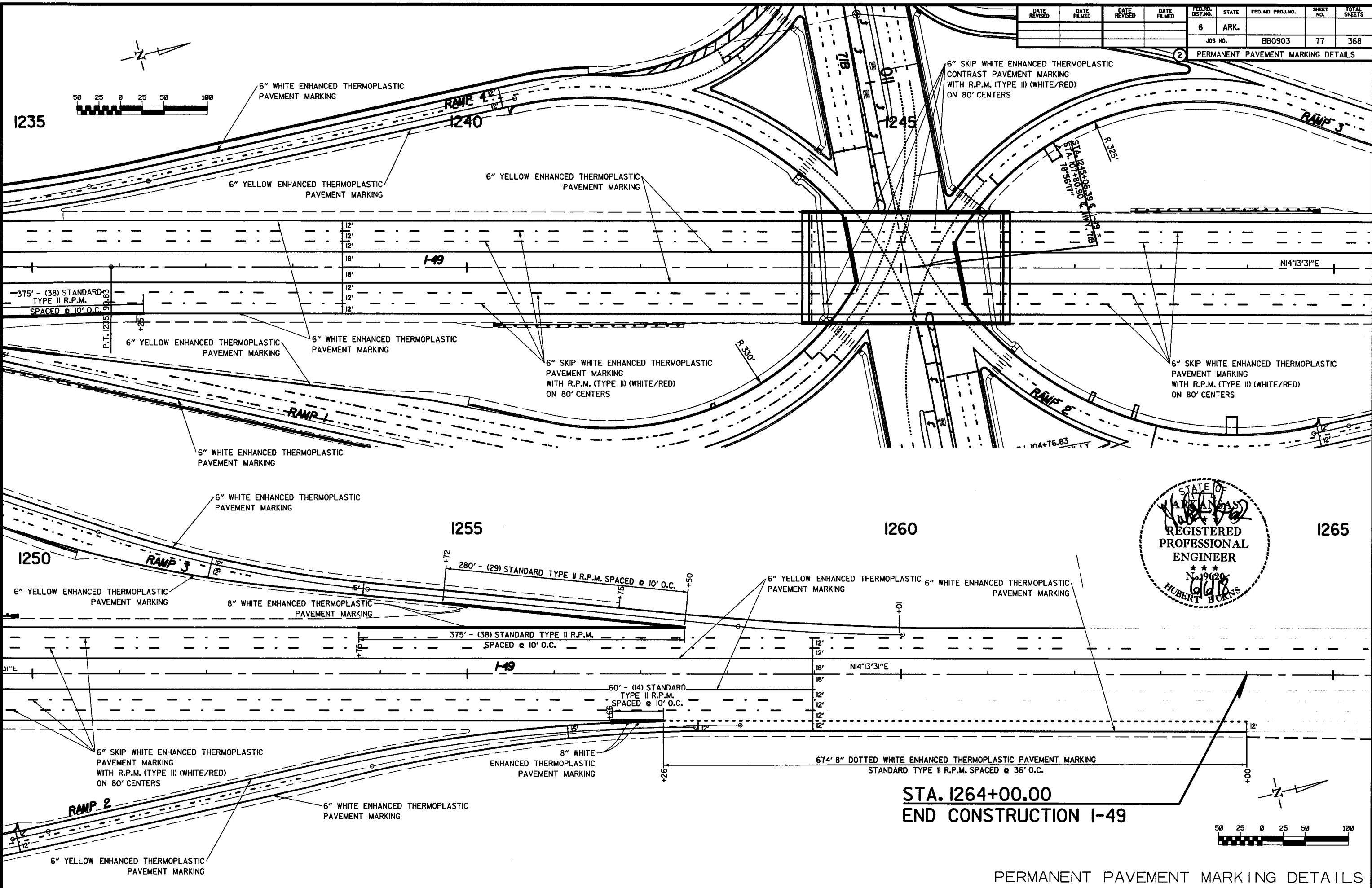


PERMANENT PAVEMENT MARKING DETAILS

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 SCALE: 1:100

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		77	368
				JOB NO.	BB0903			

PERMANENT PAVEMENT MARKING DETAILS



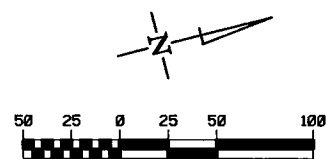
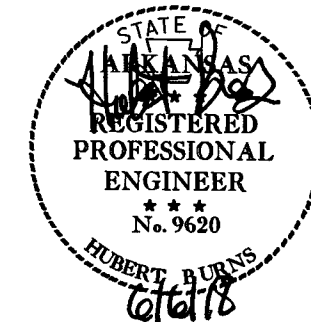
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END CONSTRUCTION I-49

PERMANENT PAVEMENT MARKING DETAILS

USER: mh514
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PLOTTED: 6/6/2018 11:03
SCALE: 1:100

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		78	368

② PERMANENT PAVEMENT MARKING DETAILS

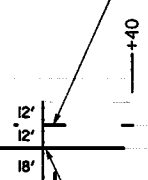


1265

1270

1275

6" SKIP WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING WITH R.P.M. (TYPE II) (WHITE/RED) ON 80' CENTERS



6" YELLOW ENHANCED THERMOPLASTIC PAVEMENT MARKING

1-19

USER: mh514
 DESIGN FILE: G:\12103305_Hwy7\lincg\TRANSP\dgn\misc\BB0903_PPM_HWY7IB_02.dgn
 PLOTTED: 6/6/2018 11:03 SCALE: 1:100

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	79	368	

2 PERMANENT PAVEMENT MARKING DETAILS

PERMANENT PAVEMENT MARKING

THERMOPLASTIC PAVEMENT MARKINGS

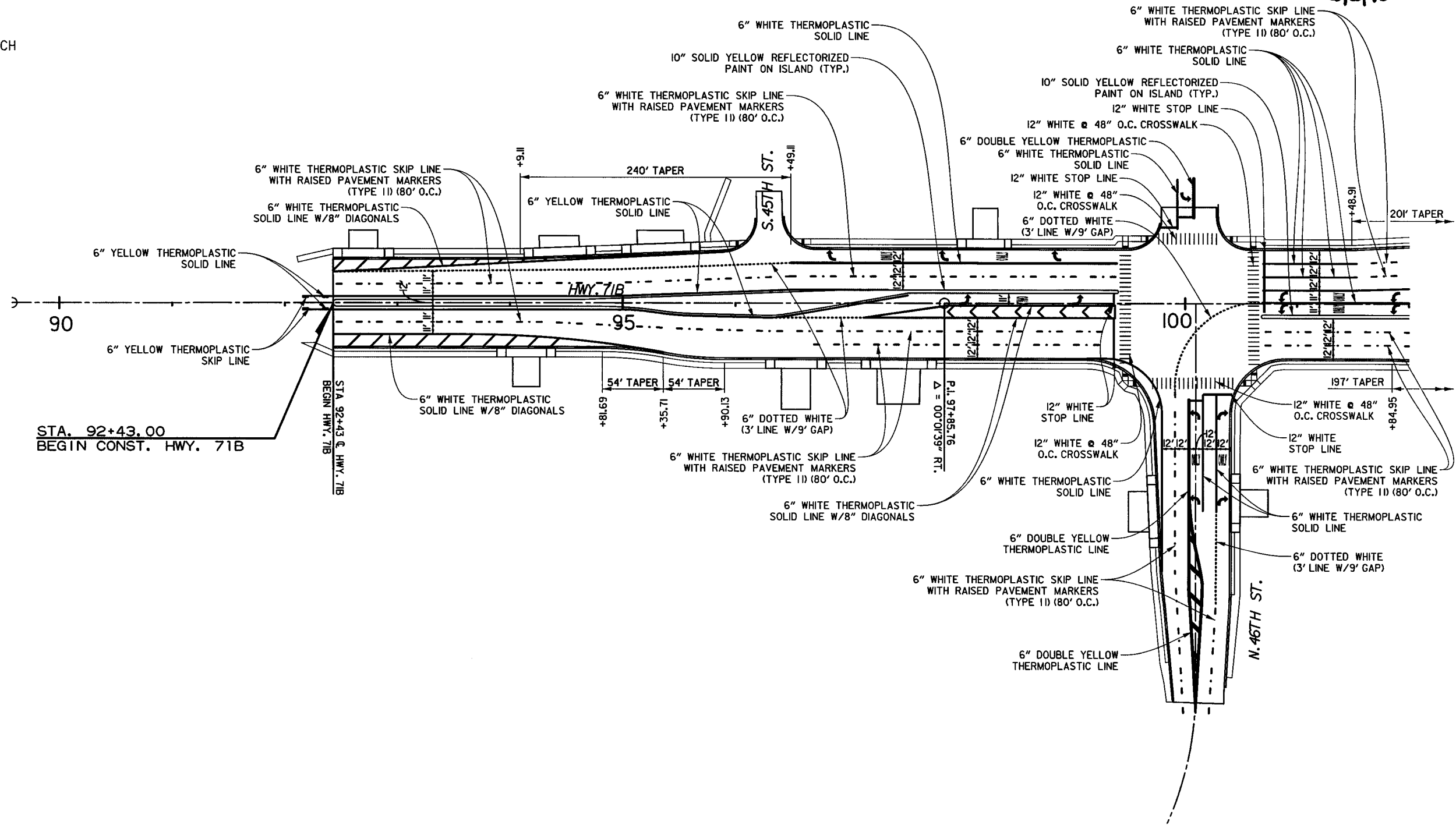
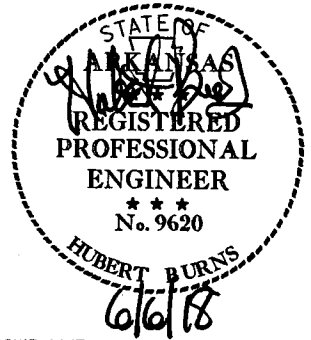
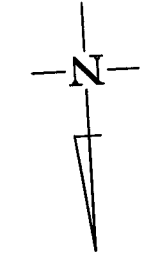
- 6" YELLOW = 3705 LIN. FT.
- 6" WHITE = 5259 LIN. FT.
- 6" SKIP WHITE = 2283 LIN. FT.
- 6" SKIP YELLOW = 187 LIN. FT.
- 6" DOUBLE YELLOW = 1083 LIN. FT.
- 6" DOTTED WHITE = 1166 LIN. FT.
- 8" WHITE = 4409 LIN. FT.
- YIELD LINE = 42 LIN. FT.
- ARROWS = 32 EACH
- WORDS = 14 EACH

REFLECTORIZED PAINT PAVEMENT MARKINGS

- 10" WHITE = 3284 LIN. FT.
- 10" YELLOW = 4653 LIN. FT.

RAISED PAVEMENT MARKERS

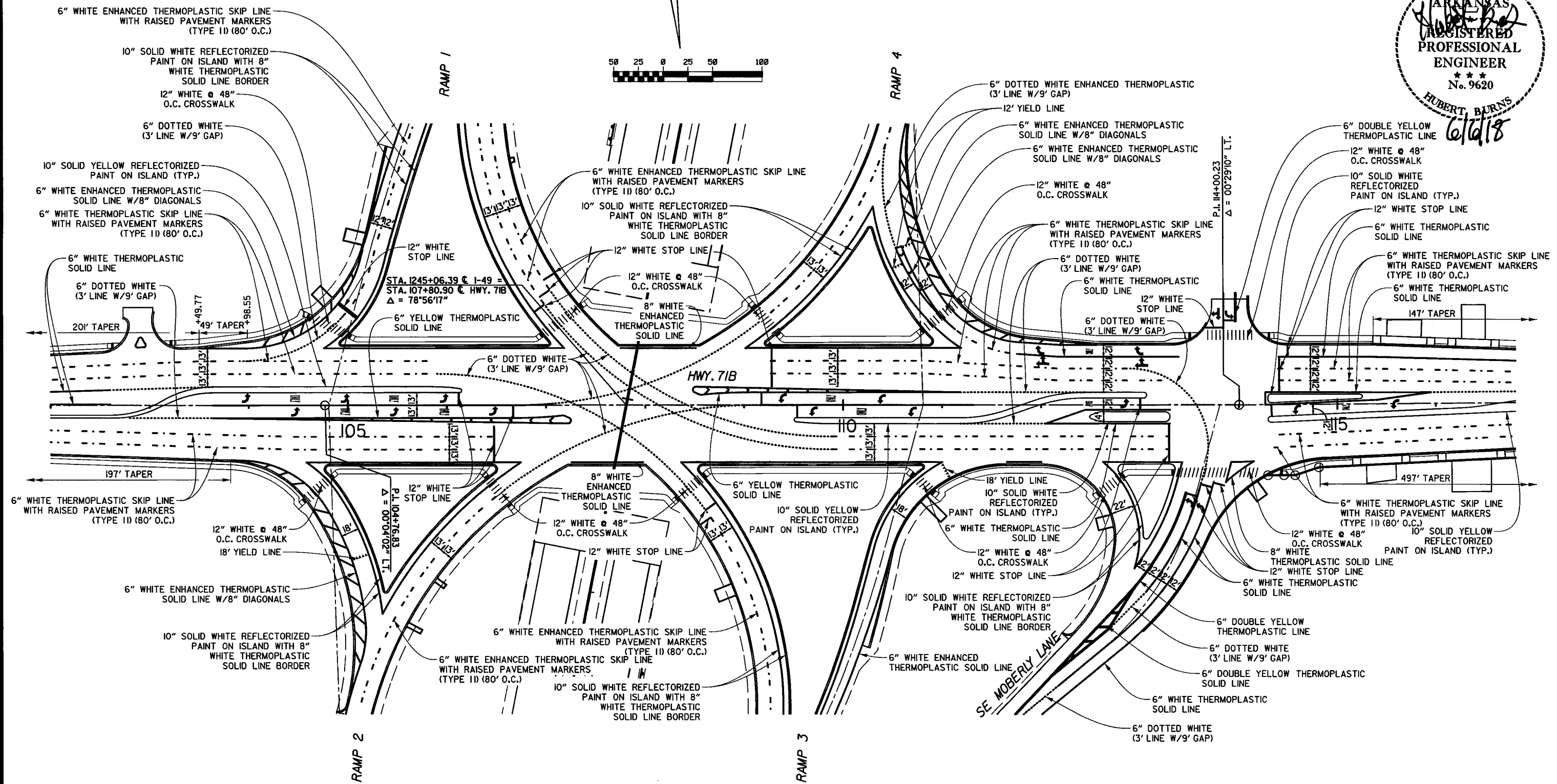
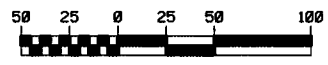
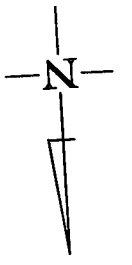
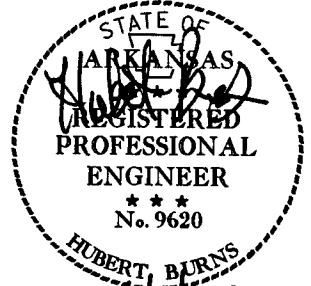
- TYPE II (WHITE/RED) = 113 EACH
- TYPE II (YELLOW/YELLOW) = 9 EACH



USER: mhs14
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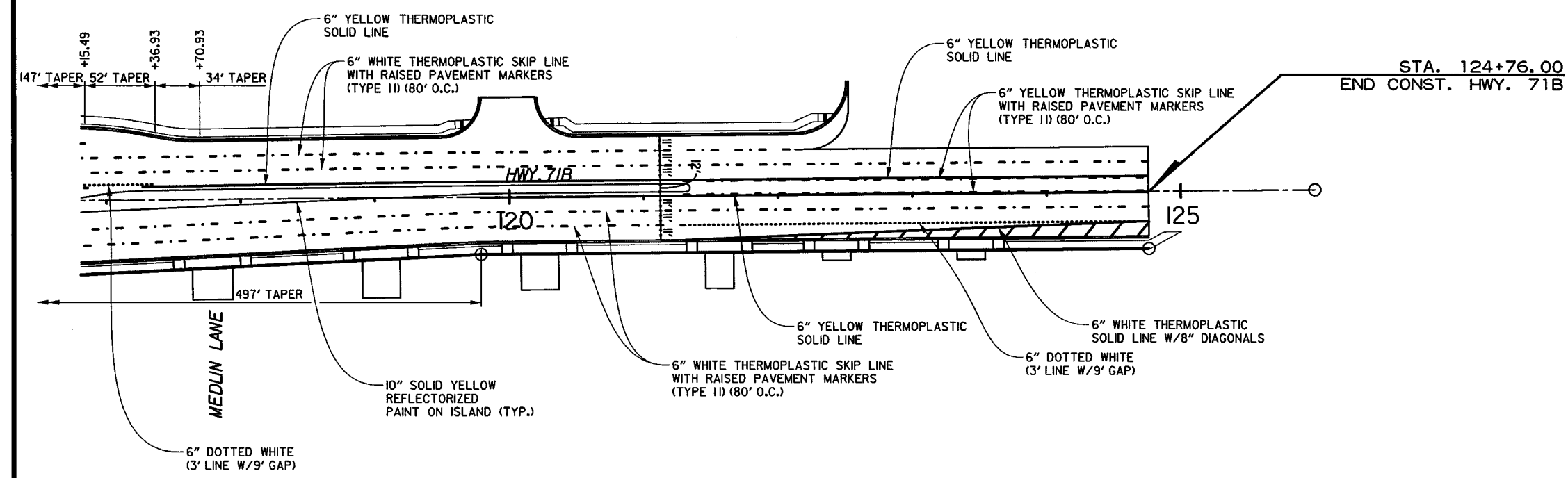
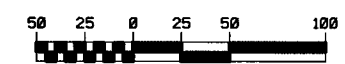
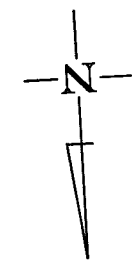
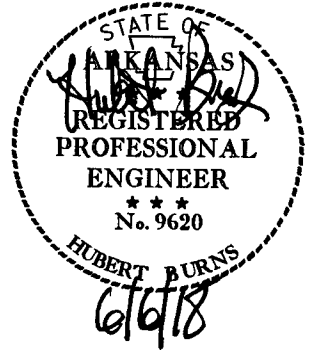
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				6	ARK.			
				JOB NO.	BB0903	80	368	

2 PERMANENT PAVEMENT MARKING DETAILS



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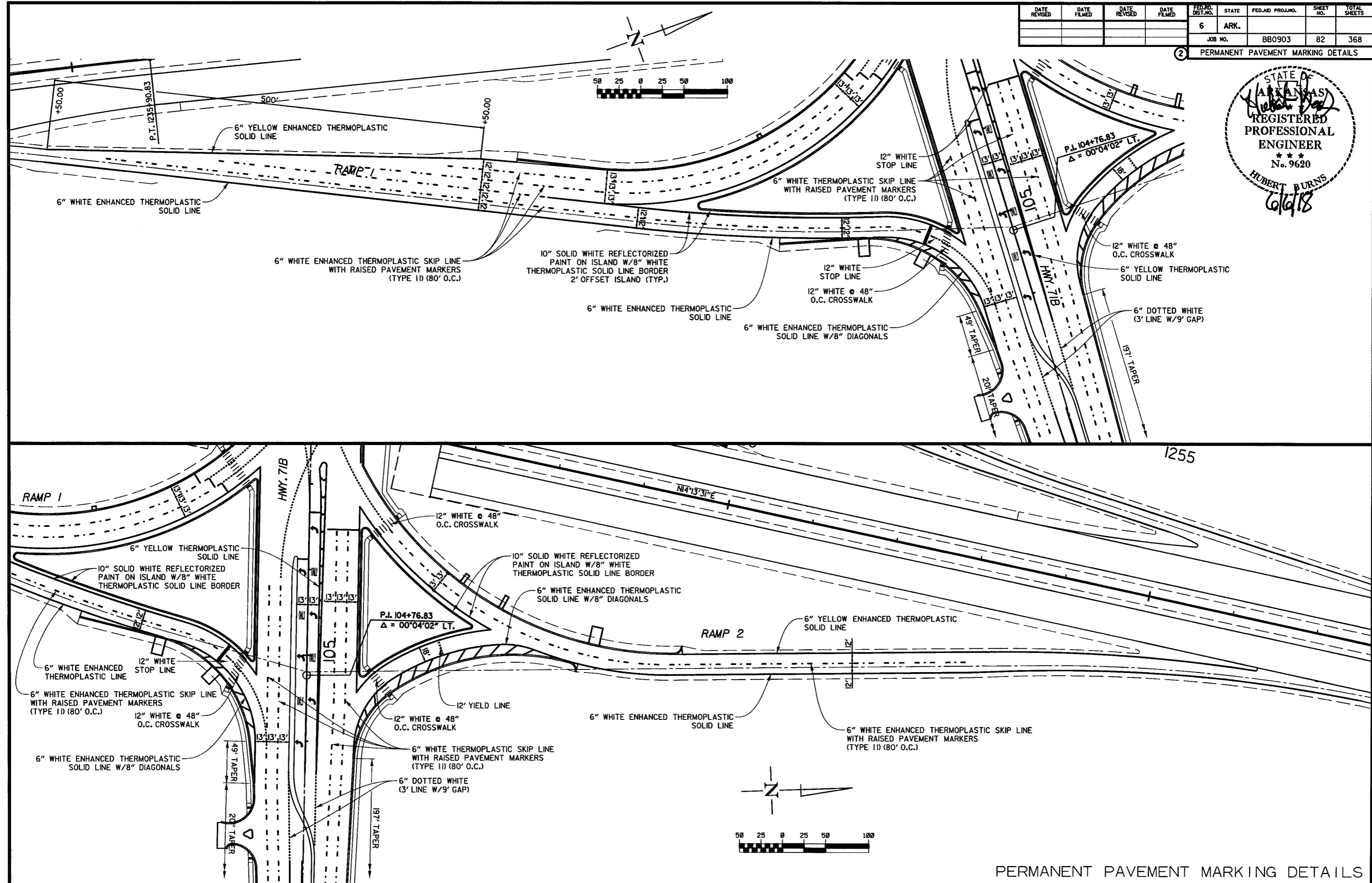
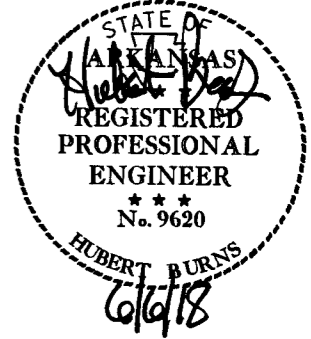
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	81	368	
								② PERMANENT PAVEMENT MARKING DETAILS



USER: mh514
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							BB0903	82	368

2 PERMANENT PAVEMENT MARKING DETAILS

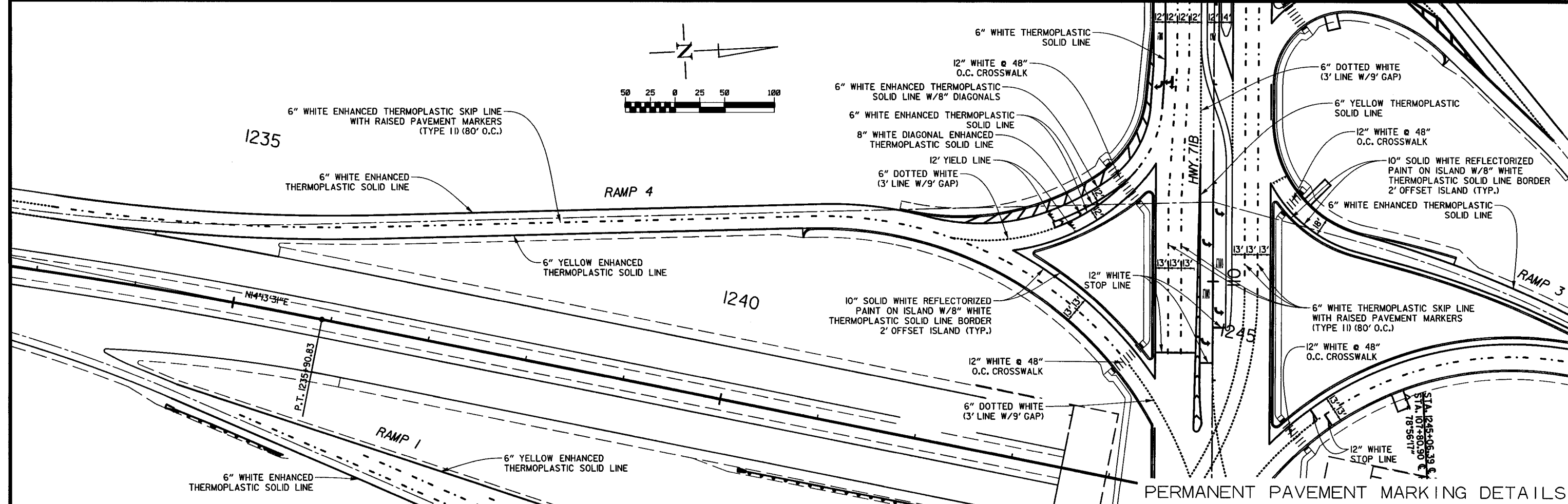
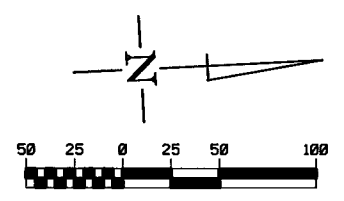
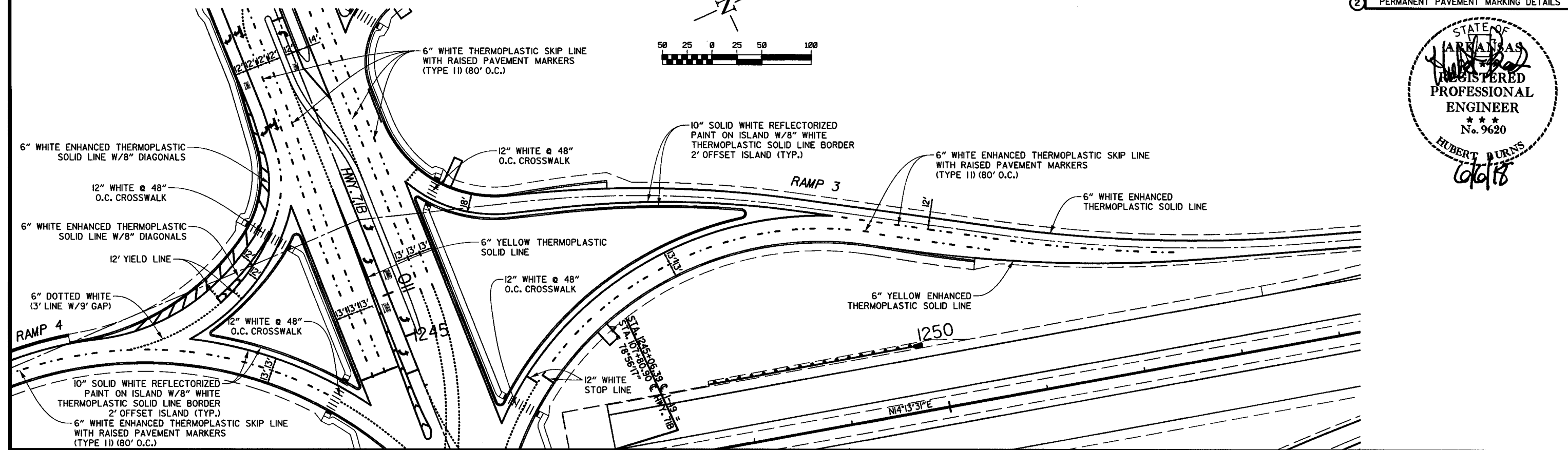
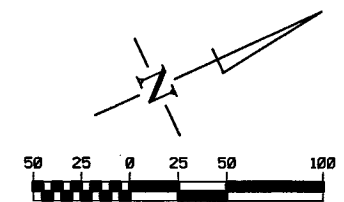
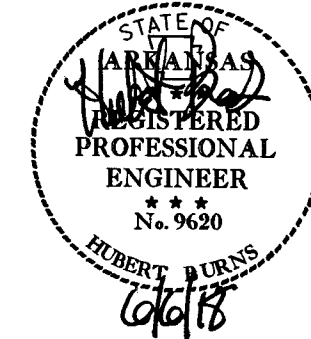


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PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	83	368	

2 PERMANENT PAVEMENT MARKING DETAILS



PERMANENT PAVEMENT MARKING DETAILS

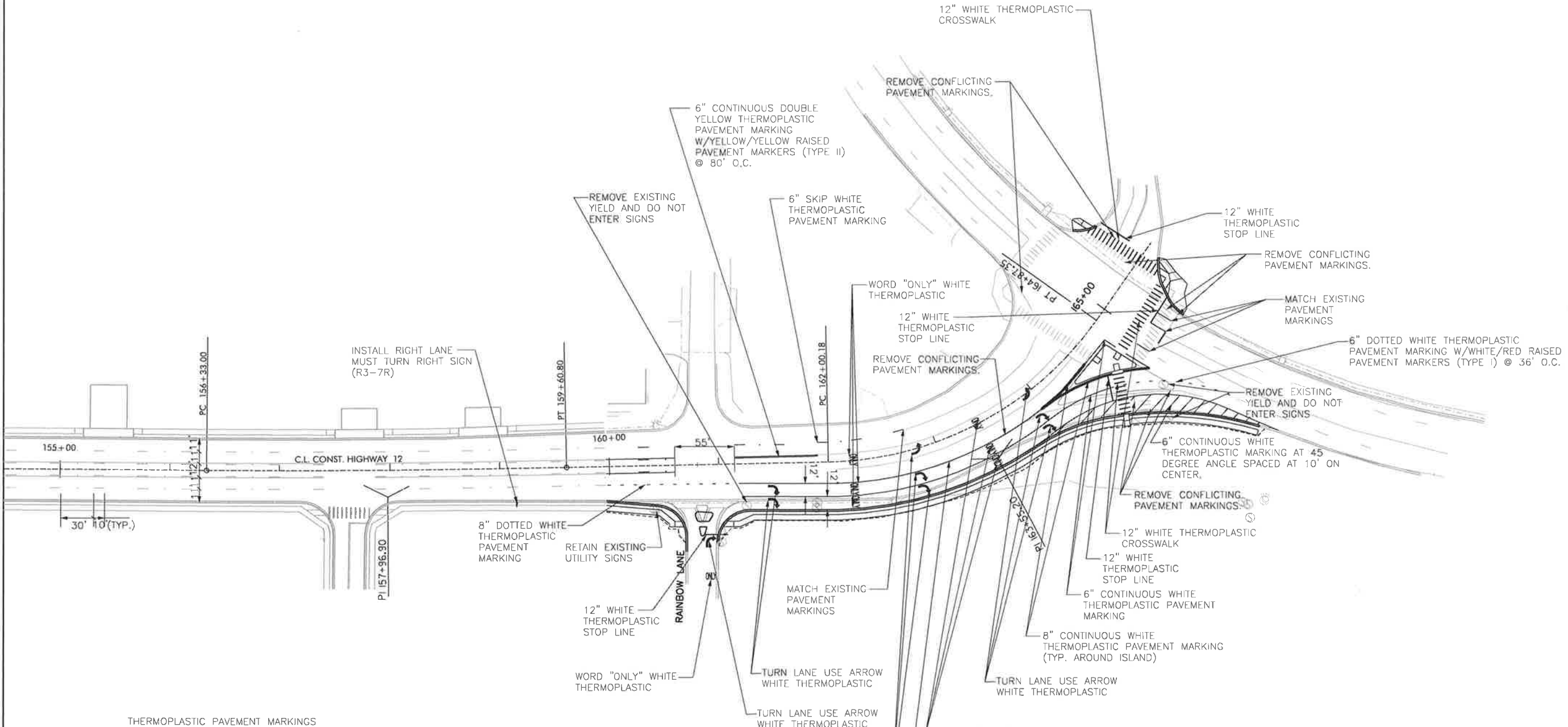
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18								
				JOB NO.	BB0903	83A	368	

PERMANENT PAVEMENT MARKINGS



07/16/2018



THERMOPLASTIC PAVEMENT MARKINGS
 STA. 160+00 TO 165+75
 SOLID LANE LINE = 979 LIN. FT. 6" WHITE
 DOTTED LANE LINE = 30 LIN. FT. 6" WHITE
 SOLID STRIPING = 199 LIN. FT. 6" WHITE
 SKIP LINE LANE DIVIDER = 86 LIN. FT. 6" WHITE
 DOUBLE SOLID CENTERLINE = 153 LIN. FT. 6" YELLOW
 CONTINUOUS LEFT TURN LANE = 147 LIN. FT. 6" YELLOW
 SOLID LINE (AROUND ISLAND) = 156 LIN. FT. 8" WHITE
 DOTTED LANE LINE (AT DOUBLE RIGHT TURN LANE) = 30 LIN. FT. 6" WHITE
 STOP LINE = 108 LIN. FT. 12" WHITE
 CROSSWALK = 440 LIN. FT. 12" WHITE

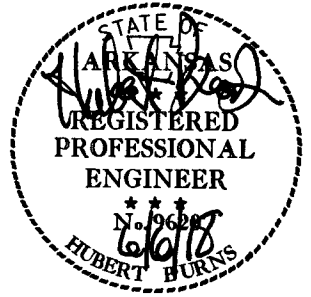
RAISED PAVEMENT MARKERS
 TYPE I (YEL/YEL) = 3 EACH
 TYPE II (RED/WHITE) = 4 EACH

REMOVAL OF PERMANENT PAVEMENT MARKINGS
 STA. 160+00 TO 165+75
 REMOVAL = 834 LIN. FT.

7/18/2018 3:49:03 PM
 WORKSPACE: 0401_2017
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	84	368	

2 QUANTITIES



ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 1B	STAGE 2	STAGE 2B	STAGE 3	STAGE 4	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	PORTABLE CHANGEABLE MESSAGE SIGN	ADVANCE WARNING ARROW PANEL	8' BARRICADES (TYPE II)	16' BARRICADES (TYPE III)	FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN. BARR. (REPAIR)
										NO.	SQ. FT.					EACH	WEEK				
I-49 MAIN LANES																					
W3-5	REDUCED SPEED AHEAD	48"x48"		2	2		2	2	2	2	32.0										
W20-1	ROAD WORK 1 MILE	48"x48"		2	2		2	2	2	2	32.0										
W20-1	ROAD WORK 1/2 MILE	48"x48"		2	2		2	2	2	2	32.0										
W20-1	ROAD WORK 1500 FT.	48"x48"		2	2		2	2	2	2	32.0										
W21-5AR	RIGHT SHOULDER CLOSED	48"x48"		2	2		2	2	2	2	32.0										
R55-1	FINES DOUBLE IN WORK ZONES	36"x60"		2	2		2	2	2	2	30.0										
R2-5A	REDUCED SPEED AHEAD	48"x48"		2	2		2	2	2	2	32.0										
R2-1	SPEED LIMIT 60	48"x60"		2	2		2	2	2	2	40.0										
R2-1	SPEED LIMIT 70	48"x60"		2	2		2	2	2	2	40.0										
G20-2	END ROAD WORK	48"x24"		2	2		2	2	2	2	16.0										
G20-1	ROAD WORK NEXT xx MILES	60"x24"		2	2		2	2	2	2	20.0										
	TRAFFIC DRUMS			30	114		48	37	114				114								
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER			9460	1148		3372		13980									13980			
	RELOCATING PRECAST CONCRETE BARRIER				6307		10608	11160	28075										28075		
	TEMPORARY IMPACT ATTENUATION BARRIER				2		2	2	6											6	
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)				2		2	2	6												6
	ADVANCE WARNING ARROW PANEL		2						2					260	200						
	PORTABLE CHANGEABLE MESSAGE SIGN		2						2												
RAMP 1																					
	TRAFFIC DRUMS				81	81	25		81				81								
RAMP 2																					
	TRAFFIC DRUMS		37	10	13	13	12		37				37								
RAMP 3																					
	TRAFFIC DRUMS		30		27	27	26		30				30								
RAMP 4																					
	TRAFFIC DRUMS			20	39	39	23		39				39								
HWY. 71B MAIN LANES																					
W20-1	ROAD WORK 1 MILE	48"x48"	4		4	4	4		4	4	64.0										
W20-1	ROAD WORK 1/2 MILE	48"x48"	4		4	4	4		4	4	64.0										
W20-1	ROAD WORK 1500 FT.	48"x48"	4		4	4	4		4	4	64.0										
W20-1	ROAD WORK AHEAD	48"x48"	7		7	7	7		7	7	112.0										
G20-5AP	WORK ZONE	24"x18"	4		4	4	4		4	4	12.0										
R2-5A	REDUCED SPEED AHEAD	48"x60"	4		4	4	4		4	4	80.0										
R2-1	SPEED LIMIT 35	24"x30"	4		4	4	4		4	4	20.0										
R2-1	SPEED LIMIT 45	48"x60"	4		4	4	4		4	4	80.0										
G20-2	END ROAD WORK	48"x24"	7		7	7	7		7	7	56.0										
R9-9	SIDEWALK CLOSED	24"x12"	4		3	3			4	4	8.0										
	BARRICADES TYPE II - RT. (8')			4	3	3			4							32					
	BARRICADES TYPE III - RT. (16')			17	9				17								272				
	VERTICAL PANELS			150					150			150									
	TRAFFIC DRUMS			275	494	519	415		519				519								
TOTALS:										898.0	150	820	260	200	32	272	13980	28075	6	6	

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR 1/2 MILE. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 3" OR LESS, AND THEN NOTCH ANOTHER 1/2 MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

QUANTITIES

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71Inhg\TRANSP\dgn\quantities\B80903_0BOXES.dgn
 PLOTTED: 6/6/2018 11:03 SCALE: 1/8"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	85	368

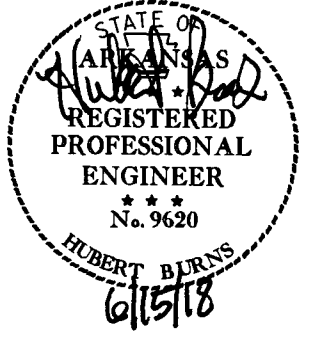
CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS I-49 AND RAMPS

QUANTITIES

DESCRIPTION	STAGE 1	STAGE 1B	STAGE 2	STAGE 3	STAGE 4	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS				THERMOPLASTIC PAVEMENT MARKING				ENHANCED THERMOPLASTIC PAVEMENT MARKING								
											TYPE II (WHITE/RED) EACH	12" WHITE LIN. FT.	YIELD LINE	ARROWS EACH	WHITE	WHITE (SKIP LINE)	WHITE (DOTTED)	YELLOW	WHITE	WHITE (DOTTED)	6"		8"				
																					LIN. FT.		LIN. FT.				
I-49 WIDENING																											
REMOVAL OF PERMANENT PAVEMENT MARKINGS	21084						21084	57608																			
CONSTRUCTION PAVEMENT MARKINGS		9549	14094	17476	16489																						
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS			9549	14094	17476				41119																		
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		1014	718	1435	957					4124																	
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)						296					296																
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")						8114																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (6")						5927																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")						17393																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING DOTTED WHITE (8")						1053																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")						1550																					
THERMOPLASTIC PAVEMENT MARKING ARROWS						4																					
RAMP 1																											
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")						1385																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (6")						631																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")						574																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")						61																					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")						273																					
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)						32					32																
RAMP 2																											
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")						1206																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (6")						179																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")						693																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")						178																					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")						150																					
THERMOPLASTIC PAVEMENT MARKING YIELD LINE						16																					
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)						9					9																
RAMP 3																											
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")						1333																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (6")						214																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")						425																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")						72																					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")						146																					
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)						11					11																
RAMP 4																											
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")						1447																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (6")						280																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING DOTTED WHITE (6")						36																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")						697																					
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")						281																					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")						180																					
THERMOPLASTIC PAVEMENT MARKING YIELD LINE						26																					
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)						14					14																
TOTALS:							21084	57608	41119	4124	362	749	42	4	13485	7231	36	19782	2142	1053							

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NOTE: NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED UNTIL A MINIMUM OF 3 DAYS AFTER ALL MAIN LANE PAVING HAS BEEN COMPLETED. IN ADDITION, NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED DURING THE TIME PERIOD FROM DECEMBER 21 TO MARCH 15, INCLUSIVE.



CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS HWY. 71B

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS										THERMOPLASTIC PAVEMENT MARKING										REFLECTORIZED PAINT PAVEMENT MARKING	
									TYPE II (WHITE/RED) EACH	TYPE II (YELLOW/YELLOW)	WHITE	WHITE (SKIP LINE)	WHITE (DOTTED)	YELLOW	YELLOW (SKIP LINE)	WHITE	YIELD LINE	WORDS	ARROWS	10" WHITE	10" YELLOW									
																						EACH		LIN. FT.		LIN. FT.		EACH		LIN. FT.
HWY. 71B WIDENING																														
REMOVAL OF PERMANENT PAVEMENT MARKINGS	9438				9438																									
CONSTRUCTION PAVEMENT MARKINGS	17935	18377	23672			59984																								
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	29	30	25				84																							
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		17935	18377					36312																						
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)					114						114																			
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)					9						9																			
THERMOPLASTIC PAVEMENT MARKING WHITE (6")					5259						5259																			
THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (6")					2283						2283																			
THERMOPLASTIC PAVEMENT MARKING WHITE (DOTTED) (6")					1166						1166																			
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")					3705						3705																			
THERMOPLASTIC PAVEMENT MARKING YELLOW (SKIP LINE) (6")					187						187																			
THERMOPLASTIC PAVEMENT MARKING DOUBLE YELLOW (6")					1236						1236																			
THERMOPLASTIC PAVEMENT MARKING WHITE (8")					4409						4409																			
THERMOPLASTIC PAVEMENT MARKING WHITE (12")					1684						1684																			
THERMOPLASTIC PAVEMENT MARKING YIELD LINE					60						60																			
THERMOPLASTIC PAVEMENT MARKING WORDS					14						14																			
THERMOPLASTIC PAVEMENT MARKING ARROWS					32						32																			
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")					3284						3284																			
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")					4653						4653																			
TOTALS:						9438	59984	84	36312	114	9	5259	2283	1166	4941	187	4409	1684	60	14	32	3284	4653							

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

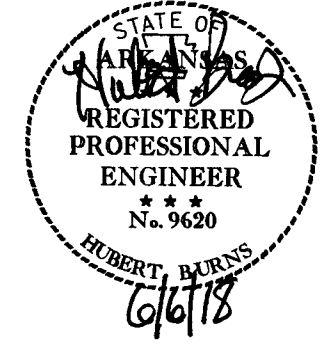
NOTE: NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED UNTIL A MINIMUM OF 3 DAYS AFTER ALL MAIN LANE PAVING HAS BEEN COMPLETED. IN ADDITION, NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED DURING THE TIME PERIOD FROM DECEMBER 21 TO MARCH 15, INCLUSIVE.

QUANTITIES

USER: m5M
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 SCALE: 1:10

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AD PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	86	368	

2 QUANTITIES



EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL								
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	FILTER SOCK (24")	SAND BAG DITCH CHECKS	ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	LIN. FT.	(E-5) BAG	(E-6) CU.YD.	(E-7) LIN. FT.	(E-11) LIN. FT.	CU. YD.
I-49																
ENTIRE PROJECT	STAGE 1B															
ENTIRE PROJECT	STAGE 1		3.60	7.20	3.60	367.2	3.60	3.60	73.4		220	27	54	1418	74	
ENTIRE PROJECT	STAGE 2		3.96	7.92	3.96	403.9	3.96	3.96	80.8		264	39	270	1700	98	
HWY. 71B																
ENTIRE PROJECT	STAGE 1		1.03	2.06	1.03	105.1	1.03	1.03	21.0		154	24	468	189	35	
ENTIRE PROJECT	STAGE 2		0.46	0.92	0.46	46.9	0.46	0.46	9.4		22	3	522	253	29	
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.															2	
															11	
TOTALS:			9.05	18.10	9.05	923.1	9.05	11.36	11.36	231.7	135	902	153	1314	4411	301

BASIS OF ESTIMATE:

- LIME 2 TONS / ACRE OF SEEDING
- WATER 102.0 M.G. / ACRE OF SEEDING
- WATER 20.4 M.G. / ACRE OF TEMPORARY SEEDING
- FILTER SOCK (24") 9 LIN. FT. / LOCATION
- SAND BAG DITCH CHECKS 22 BAGS / LOCATION
- ROCK DITCH CHECKS 3 CU.YD./LOCATION
- DROP INLET SILT FENCE 18 LIN.FT./LOCATION

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

*QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE LIN. FT.
950+06	950+74	RAMP 1 RT.	70
951+60	952+16	RAMP 1 RT.	57
11+32	14+71	MOBERLY LANE RT.	330
102+99	103+68	HWY. 71B RT.	74
104+45	104+70	HWY. 71B LT.	75
104+80	105+08	HWY. 71B LT.	125
111+78	113+00	HWY. 71B LT.	140
TOTAL:			871

SOIL LOG

STATION	LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
1242+75	99' RT.	2.5-3.5	20	4	A-2-4	RD & TN & RD/TN
1242+77	68' LT.	0.5-1.5	ND	NP	A-1-b	BR/LT GR
1242+77	68' LT.	9-10	51	29	A-7-6	RD & TN & RD/TN
1242+77	68' LT.	29-30	36	17	A-6	RD & RD/TN & GR
1243+77	106' RT.	0.5-1.5	31	15	A-6	BR & TN
1243+77	106' RT.	4.5-5.5	44	21	A-7-6	RD & GR & TN
1243+80	62' LT.	0.5-1.5	ND	NP	A-4	BR
1243+80	62' LT.	9-10	47	29	A-7-6	BR/RD
1243+80	62' LT.	29-30	32	12	A-7-6	RD/BR & RD/GR & GR
1243+97	2' RT.	4.5-5.5	65	37	A-7-6	RD
1243+97	2' RT.	14-15	55	33	A-7-6	RD
1244+72	1' LT.	2.5-3.5	25	7	A-4	BR
1244+72	1' LT.	6-7	28	12	A-6	RD/TN
1245+48	12' RT.	0.5-1.5	26	7	A-4	BR
1245+48	12' RT.	2.5-3.5	44	27	A-7-6	RD/TN
1245+48	12' RT.	6.5-7.5	49	31	A-7-6	RD
1246+11	CL	9-10	42	24	A-7-6	BR/RD & BR
1246+11	CL	19-20	31	14	A-6	RD & GR & BR
1246+11	CL	33.5-34.5	82	59	A-7-6	RD & TN
1246+21	64' RT.	9-10	43	24	A-7-6	RD/BR & RD/TN & TN
1246+21	64' RT.	19-20	34	16	A-7-6	RD/BR & RD/TN & GR
1246+21	64' RT.	24-25	34	14	A-7-6	TN & GR
1246+21	64' RT.	29-30	40	17	A-7-6	RD & TN & GR
1246+38	113' LT.	2.5-3.5	41	25	A-7-6	RD/TN & LT GR
1248+04	111' LT.	4.5-5.5	31	13	A-6	TN & GR
1248+04	64' RT.	0.5-1.5	ND	NP	A-1-b	DK BR
1248+04	64' RT.	6.5-7.5	31	16	A-7-6	RD/BR & RD/TN
1248+04	64' RT.	19-20	35	15	A-7-6	RD/BR & GR & BR

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
Z - AUGER REFUSAL
NP - NON-PLASTIC
ND - NOT DETERMINABLE

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		
1208+90	1264+00	I49-MAIN LANES	15991	49231	
92+43	124+76	HWY. 71B -MAIN LANES	12933	1716	
941+05	952+09	EXISTING RAMP 1	407	5380	
0+00	4+12	RAMP 1A	6620	1460	
0+00	2+64	RAMP 2A	20	782	
0+00	4+45	RAMP 2B	4254	750	
956+59	963+34	RAMP 2	345	1047	
0+00	4+46	RAMP 3A	9532	772	
951+80	962+00	EXISTING RAMP 3	403	4315	
0+00	2+56	RAMP 4B	91	726	
0+00	4+18	RAMP 4A	6210	1399	
941+10	947+66	RAMP 4	374	1882	
		RAMP 1 - ISLAND	340	1152	
		RAMP 2 - ISLAND	58	460	
		RAMP 3 - ISLAND	413	1867	
		RAMP 4 - ISLAND	49	376	
ENTIRE PROJECT	APPROACHES		330	125	
ENTIRE PROJECT	TEMPORARY APPROACHES		50		
10+49	1356	46TH STREET	463	42	
10+62	1471	MOBERLY LANE	737	486	
ENTIRE PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			3500	200
TOTALS:			59620	77468	200

*QUANTITY ESTIMATED.

FENCING

STATION	STATION	LOCATION	WIRE FENCE TYPE A LIN. FT.
11+23	14+72	MOBERLY LANE - RT.	370
TOTAL:			370

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
						JOB NO. BB0903	87	368

2 QUANTITIES



GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	
1240+31.00	1242+50.00	I-49 RML-RT.	150	1	1
1247+65.00	1249+84.00	I-49 LML-LT.	150	1	1
941+48.00	942+75.00	EXISTING RAMP 1 - RT.	75	1	1
TOTALS:			375	3	3

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
1228+00.00	1229+00.00	I-49 - RT. MAIN LANES	52.77	586.33
1228+00.00	1229+00.00	I-49 - LT. MAIN LANES	64.35	715.00
1260+00.00	1261+00.00	I-49 - RT. MAIN LANES	52.67	585.22
1260+00.00	1261+00.00	I-49 - LT. MAIN LANES	52.67	585.22
91+43.00	92+43.00	71B MAIN LANES	56.11	623.44
124+76.00	125+76.00	71B MAIN LANES	56.81	631.22
13+56.00	14+56.00	46TH STREET	46.62	518.00
14+71.30	15+71.30	MOBERLY LANE	23.97	266.33
TOTAL:				4510.76

NOTE: AVERAGE MILLING DEPTH 1".

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
122+07.22	CL HWY. 71B	9.67	55.75	43
10+93	N. 46TH ST.	7.92	45.06	28
950+07.44	RAMP 1	7.92	28.49	18
0+97.98	RAMP 2A	7.92	40.37	25
3+81	RAMP 4A	7.92	19.27	12
0+68	RAMP 4B	7.92	54.08	34
1+01	MOBERLY LANE	9.67	54	41
TOTAL:				201

AVG. DEPTH = 13"

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	CU.YD. 610
TOTAL:	610

NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	26	52
TOTALS:	26	52

BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YD.	SQ. YD.
96+05	OUTLET OF PIPE CULVERT-HWY 71B LT.	18	36
947+00	OUTLET OF PIPE CULVERT- RAMP 1 RT.	2	4
954+10	OUTLET OF PIPE CULVERT- RAMP 3 RT.	4	7
948+00	OUTLET OF PIPE CULVERT- RAMP 4 RT.	2	4
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			
TOTALS:		26	51

NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS

NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

BENCH MARKS

STATION	LOCATION	BENCH MARKS
1243+90	I-49 BRIDGE END - RT.	1
TOTAL:		1

NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	JUNCTION BOXES	DROP INLETS
		EACH		
I-49				
1231+50	DROP INLET WITH 18" X 20' R.C.P. - LT.	1		1
1234+50	DROP INLET WITH 18" X 17' R.C.P. - LT.	1		1
1259+00	DROP INLET WITH 18" X 19' R.C.P. - LT.	1		1
1259+00	DROP INLET WITH 18" X 20' R.C.P. - RT.	1		1
HWY. 71B				
92+47	48" X 110' R.C.P. - LT.	1		
93+57	DROP INLET WITH 30" X 123' R.C.P. & ARCH 26" X 20" X 40' C.M.P. - RT.	2		1
95+79	DROP INLET WITH 54" X 26' R.C.P. - LT.	1		1
95+79	DROP INLET - RT.			1
95+79	42" X 31' R.C. PIPE CULVERT - RT.	1		
96+10	CURB INLET WITH 54" X 12' R.C.P. & F.E.S. - LT.	1		1
96+81	CURB INLET WITH 18" X 68' R.C.P. - LT.	1		1
96+86	DROP INLET WITH 18" X 103' R.C.P. - RT.	1		1
98+82	DROP INLET - RT.			1
98+82	CURB INLET WITH 18" X 197' & 10" X 25' C.M.P. - LT.	2		1
101+72	18" X 52' C.M.P. - RT.	1		
102+38	24" X 73' R.C.P. & 2 F.E.S. - RT.	1		
103+87	CURB INLET WITH 18" X 10' R.C.P. & 18" X 63' R.C.P. - LT.	2		1
104+04	JUNCTION BOX WITH 24" X 41' R.C.P. & 18" X 7' R.C.P. WITH F.E.S. - RT.	2	1	
104+07	DROP INLET WITH 18" X 10' R.C.P. - RT.	1		1
110+20	DROP INLET WITH 18" X 6' R.C.P. WITH F.E.S. - RT.	1		1
115+04	DROP INLET WITH 18" X 209' R.C.P. - LT.	1		1
115+14	DROP INLET WITH 12" X 83' C.M.P. - RT.	1		1
115+75	DROP INLET WITH 12" X 61' C.M.P. - RT.	1		1
116+34	30" X 54' C.M.P. - RT.	1		
117+16	DROP INLET WITH 30" X 123' R.C.P. - RT.	1		1
117+17	DROP INLET WITH 18" X 233' R.C.P. - LT.	1		1
118+42	DROP INLET WITH 30" X 123' R.C.P. - RT.	1		1
119+52	DROP INLET WITH 18" X 252' R.C.P. - LT.	1		1
119+68	DROP INLET WITH 30" X 237' R.C.P. - RT.	1		1
122+07	DROP INLET - LT.			1
122+07	DROP INLET WITH 30" X 63' R.C.P. - RT.	1		1
TOTALS:		32	1	25

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.

APPROACH GUTTERS AND SLABS

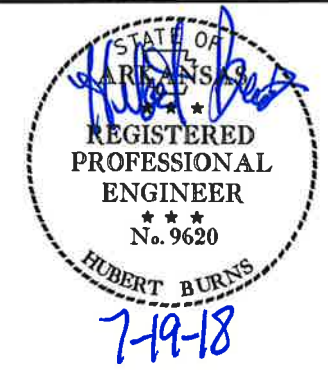
STATION	STATION	LOCATION	APPROACH GUTTER (TYPE SPECIAL)	APPROACH SLABS	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)
			CU.YD.	CU.YD.	POUND	TON
1243+51.33	1243+86.33	I-49 BEGIN BRIDGE	44.00	263.70	51345	200.40
1246+25.54	1246+60.54	I-49 END BRIDGE	44.00	263.70	51345	200.40
TOTALS:			88.00	527.40	102690	400.80

NOTE: USE T = 21" FOR 10' SHOULDER.

USER: mh514
DESIGN FILE: G:\2103305_Hwy71lnchg\TRANSP\dgn\quantities\BB0903_080XES.dgn
PLOTTED: 7/16/2018 13:23

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.		90	368
				JOB NO.	BB0903			

② QUANTITIES



STRUCTURES (BOX 2 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT.								FLARED END SECTIONS FOR R.C. PIPE CULVERT.S				DROP INLETS						JUNCTION BOXES (TYPE ST)	SOLID SODDING SQ.YD.				
		(CLASS III)				(CLASS IV)								TYPE			EXT.								
		12"	18"	24"	30"	36"	42"	65"X40"	30"	42"	65"X40"	18"	24"	30"	36"	65"X40"	MO	C	C SPECIAL			ST	RM	4'	8'
I-49		LIN. FT.																							
1229+50	MODIFY DROP INLET																								
1231+50	MODIFY DROP INLET																								
1233+07	MODIFY DROP INLET		14																						
1234+50	MODIFY DROP INLET																								
1237+00	MODIFY DROP INLET																								
1242+48	DROP INLET ON LT.					93																			
1242+48	DROP INLET ON RT.					78																			
1243+00	DROP INLET ON LT.					49																			
1243+00	DROP INLET ON RT.					49																			
1243+84	DROP INLET ON LT.					80																			
1243+84	DROP INLET ON RT.					80																			
1246+28	DROP INLET ON LT.					78																			
1246+28	DROP INLET ON RT.					78																			
1247+10	DROP INLET ON LT.					55																			
1247+10	DROP INLET ON RT.					55																			
1247+67	DROP INLET ON LT.					93																			
1247+67	DROP INLET ON RT.					72																			
1253+00	DROP INLET ON LT.					300																			
1253+00	DROP INLET ON RT.					2																			
1256+04	PIPE CULVERT						16						2												
1256+04	DROP INLET ON LT.					4																			
1256+04	DROP INLET ON RT.					6																			
1256+12	MODIFY DROP INLET																								
1259+00	MODIFY DROP INLET																								
1259+00	MODIFY DROP INLET																								
MOT STAGES 2 AND 3																									
1231+50	DROP INLET ON LT.					20																			
1234+50	DROP INLET ON LT.					17																			
1259+00	DROP INLET ON LT.					19																			
1259+00	DROP INLET ON RT.					20																			
SUBTOTALS (BOX 1 OF 2):		14	1874	2207	160	1068	11	62	22	40	334	1	1	2	1	54	2	1		4	4	48	8	74	
SUBTOTALS (BOX 2 OF 2):			90	1162		26						1		2						20					
TOTALS:		14	1964	3369	160	1094	11	62	22	40	334	2	1	2	2	54	2	1		20	4	4	48	8	74

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
NOTE: FOR R.C. PIPE CULVERT. INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

USER: mh5114
DESIGN FILE: G:\2103305_Hwy7\Inchg\TRANSP\dgn\quantities\BB0903_0BOXES.dgn
PLOTTED: 7/19/2018 17:37 SCALE: 1:0

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
						JOB NO.	BB0903	91	368

CONCRETE WALKS & HAND RAILING

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	CONCRETE WALKS (TYPE SPECIAL)	HAND RAILING	SOLID SODDING	WATER
			LIN. FT.	SQ. YD.	SQ. YD.	LIN. FT.	SQ. YD.	M. GAL.
92+11	92+43	HWY. 71B - LT.	32	18				
92+21	92+44	HWY. 71B - RT.	25	14				
92+44	93+88	HWY. 71B - RT.	144	80			48	0.60
92+97	94+12	HWY. 71B - LT.	116	65			39	0.49
94+40	96+27	HWY. 71B - RT.	187	104			62	0.78
94+76	94+99	HWY. 71B - LT.	23	13			8	0.10
95+69	95+95	HWY. 71B - LT.	26	15			10	0.13
95+76	95+94	HWY. 71B/45TH ST. - LT.	60	33			72	0.91
96+67	97+97	HWY. 71B - LT.	130	72			45	0.57
96+81	97+12	HWY. 71B - RT.	31	17			10	0.13
97+79	99+42	HWY. 71B - RT.	170	94			57	0.72
98+45	99+61	HWY. 71B - LT.	117	65			43	0.54
10+70	11+06	46TH STREET - LT.	43	24			20	0.25
11+06	11+52	46TH STREET - LT.	46		26	46	15	0.19
10+71	11+54	46TH STREET - RT.	94	52			31	0.39
12+04	12+60	46TH STREET - LT.	56		31	56	18	0.23
12+18	13+21	46TH STREET - RT.	104	58			34	0.43
12+60	13+00	46TH STREET - LT.	40		32	40		
13+00	13+34	46TH STREET - LT.	35	25				
13+21	13+57	46TH STREET - RT.	36	25				
100+47	102+58	HWY. 71B - LT.	213	118			75	0.95
100+66	104+52	HWY. 71B - RT.	408	226			140	1.76
103+27	104+55	HWY. 71B - LT.	137	76			46	0.58
104+88	106+37	HWY. 71B - RT.	150	83				
105+07	106+91	HWY. 71B - LT.	185	103				
106+66	108+28	HWY. 71B - RT.	176	106		162		
107+41	109+07	HWY. 71B - LT.	181	114		169		
108+64	110+65	HWY. 71B - RT.	202	135				
109+38	110+76	HWY. 71B - LT.	140	93				
110+95	112+53	HWY. 71B - RT.	184	122			40	0.50
111+22	113+45	HWY. 71B - LT.	240	160			58	0.73
114+36	115+37	HWY. 71B - LT.	101	67			25	0.32
114+47	115+15	HWY. 71B - RT.	69	46			22	0.28
115+73	116+02	HWY. 71B - RT.	29	19			6	0.08
115+99	116+13	HWY. 71B - LT.	13		9	13	3	0.04
116+65	117+50	HWY. 71B - LT.	86		57	86	19	0.24
117+50	119+60	HWY. 71B - LT.	211	141			50	0.63
116+70	117+50	HWY. 71B - RT.	80		53	80	18	0.23
118+08	118+76	HWY. 71B - RT.	69	46			15	0.19
119+32	119+75	HWY. 71B - RT.	43	29			10	0.13
119+75	119+94	HWY. 71B - RT.	19		11	19	4	0.05
120+37	120+50	HWY. 71B - LT.	14	9			7	0.09
120+50	122+00	HWY. 71B - LT.	150		100	150	33	0.42
120+50	120+75	HWY. 71B - RT.	25		14	25	6	0.08
120+75	121+31	HWY. 71B - RT.	56	38			13	0.16
121+80	122+19	HWY. 71B - RT.	38	26			9	0.11
122+00	122+31	HWY. 71B - LT.	32	21			13	0.16
122+68	123+19	HWY. 71B - RT.	51	34			11	0.14
123+68	124+94	HWY. 71B - RT.	128	85			24	0.30
TOTALS:				2671	333	846	1159	14.63

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH FEET	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY SQ. YD.	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7) TON
				STATION	STATION		SQ. YD.	TON	
92+70	LT.	HWY. 71B	26	92+43	92+97	48.00	47.81	5.26	19.52
94+14	RT.	HWY. 71B	24	93+88	94+40	46.22	70.88	7.80	28.94
94+44	LT.	HWY. 71B	35	94+13	94+76	94.73			
95+34	LT.	HWY. 71B	41	95+00	95+69	116.63			
96+30	LT.	HWY. 71B - 45TH STREET	24				200.81	22.09	82.00
96+54	RT.	HWY. 71B	26	96+27	96+81	48.00	105.94	11.65	43.26
97+45	RT.	HWY. 71B	39	97+12	97+79	59.56	136.98	15.07	55.93
98+22	LT.	HWY. 71B	22	97+97	98+47	44.44	67.47	7.42	27.55
100+04	LT.	HWY. 71B - 46TH STREET	49				234.27	25.77	95.66
102+93	LT.	HWY. 71B	22	102+52	103+34		130.00	14.30	53.08
11+78	LT.	46TH STREET	24	11+52	12+04	113.15			
11+86	RT.	46TH STREET	36	11+54	12+18	56.89	68.32	7.52	27.90
113+86	LT.	HWY. 71B - MOBERLY LANE	36				282.62	31.09	115.40
115+44	RT.	HWY. 71B	30	115+15	115+73	114.59			
115+68	LT.	HWY. 71B	35	115+37	116+00	56.00	67.28	7.40	27.47
116+36	RT.	HWY. 71B	36	116+04	116+68	189.61			
116+39	LT.	HWY. 71B	40	116+05	116+73	60.44	157.78	17.36	64.43
117+78	RT.	HWY. 71B - MEDLIN LANE	30	117+49	118+07	129.73			
119+04	RT.	HWY. 71B	28	118+76	119+32	139.22			
120+01	LT.	HWY. 71B - METRO PARKWAY	40				145.39	15.99	59.37
120+22	RT.	HWY. 71B	28	119+94	120+50	134.06			
121+56	RT.	HWY. 71B	21	121+32	121+81	43.56	63.12	6.94	25.77
122+43	RT.	HWY. 71B	21	122+19	122+68	43.56	16.36	1.80	6.68
122+62	LT.	HWY. 71B - RIVIERA ROAD	30				187.45	20.62	76.54
123+43	RT.	HWY. 71B	21	123+19	123+68	43.56	16.33	1.80	6.67
* ENTIRE PROJECT TEMPORARY DRIVES									500.00
TOTALS:						1581.95	1998.81	219.88	1316.17

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.4% MIN. AGGR.....5.6% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

* QUANTITY ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

** FOR INFORMATION ONLY

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.
THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

SOLID SODDING

STATION	STATION	LOCATION	SOLID SODDING SQ. YD.	WATER M. GAL.
104+76	106+50	HWY. 71B ISLAND - RT.	1000	12.6
104+91	107+05	HWY. 71B ISLAND - LT.	2369	29.8
108+53	110+81	HWY. 71B ISLAND - RT.	2708	34.1
109+21	110+91	HWY. 71B ISLAND - LT.	883	11.1
TOTALS:			6960	87.6

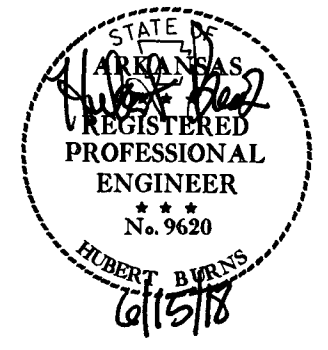
BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING

TRENCHING AND SHOULDER PREPARATION

STATION	STATION	LOCATION	STATION	TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				TOTAL PG 76-22 TON				
				AVG. WID. FEET	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 76-22 TON					
I-49 MAIN LANES																								
1240+69.17	1243+69.17	I49 - LT. MAIN LANES - LT.	3.00	15.00	500.00	0.05	25.00	5.00	166.67	440.00	36.67	5.00	166.67	440.00	36.67	5.00	166.67	220.00	18.33	5.00	166.67	220.00	18.33	36.66
1240+90.36	1243+90.36	I49 - RT. MAIN LANES - RT.	3.00	15.00	500.00	0.05	25.00	5.00	166.67	440.00	36.67	5.00	166.67	440.00	36.67	5.00	166.67	220.00	18.33	5.00	166.67	220.00	18.33	36.66
1246+22.71	1249+22.71	I49 - LT. MAIN LANES - LT.	3.00	15.00	500.00	0.05	25.00	5.00	166.67	440.00	36.67	5.00	166.67	440.00	36.67	5.00	166.67	220.00	18.33	5.00	166.67	220.00	18.33	36.66
1246+43.64	1249+43.64	I49 - RT. MAIN LANES - RT.	3.00	15.00	500.00	0.05	25.00	5.00	166.67	440.00	36.67	5.00	166.67	440.00	36.67	5.00	166.67	220.00	18.33	5.00	166.67	220.00	18.33	36.66
948+06.87	952+16.80	RAMP 1 - RT.	4.10	15.00	683.33	0.05	34.17	5.00	227.78	440.00	50.11	5.00	227.78	440.00	50.11	5.00	227.78	220.00	25.06	5.00	227.78	220.00	25.06	50.12
951+70.29	956+07.45	RAMP 3 - RT.	4.37	15.00	728.33	0.05	36.42	5.00	242.78	440.00	53.41	5.00	242.78	440.00	53.41	5.00	242.78	220.00	26.71	5.00	242.78	220.00	26.71	53.42
TOTALS:			20.47		3411.66		170.59		1137.24		250.20		1137.24		250.20		1137.24		125.09		1137.24		125.09	250.18

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.4% MIN. AGGR.....5.6% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.3% MIN. AGGR.....4.7% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

QUANTITIES



WHEELCHAIR RAMPS

STATION	LOCATION	TYPE	
		TYPE 2 SQ. YD.	TYPE 3 SQ. YD.
95+95	HWY. 71B - LT.		7
96+52	HWY. 71B - LT.		3
99+49	HWY. 71B - LT.		3
99+49	HWY. 71B - RT.	14	
99+61	HWY. 71B - LT.		5
100+36	HWY. 71B - LT.		5
100+61	HWY. 71B - LT.		3
100+62	HWY. 71B - RT.	14	
102+60	HWY. 71B - LT.		6
103+25	HWY. 71B - LT.		6
104+52	HWY. 71B - RT.		3
104+58	HWY. 71B - LT.		4
104+82	HWY. 71B - RT.		4
104+98	HWY. 71B - LT.		3
106+41	HWY. 71B - RT.		3
106+66	HWY. 71B - RT.		3
107+00	HWY. 71B - LT.		3
107+40	HWY. 71B - LT.		3
108+26	HWY. 71B - RT.		4
108+57	HWY. 71B - RT.		4
109+06	HWY. 71B - LT.		4
109+31	HWY. 71B - LT.		4
110+74	HWY. 71B - RT.		4
110+82	HWY. 71B - LT.		4
110+93	HWY. 71B - RT.		4
111+22	HWY. 71B - LT.		4
112+54	HWY. 71B - RT.		4
113+47	HWY. 71B - LT.		7
114+34	HWY. 71B - LT.		7
114+45	HWY. 71B - RT.		8
119+62	HWY. 71B - LT.		6
120+36	HWY. 71B - LT.		6
122+32	HWY. 71B - LT.		6
TOTALS:		28	140

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
				JOB NO.	BB0903	92	368	

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH LIN. FT.	"W" FEET	"B" FEET	CONC. DITCH PAVING		SOLID SODDING SQ. YD.	WATER M. GAL.	
						(TYPE SPECIAL) SQ. YD.	(TYPE B) SQ. YD.			
950+92	951+09	EXISTING RAMP 1 - RT.	20.00	13.00	12.00		29	9	0.11	
951+64	951+78	EXISTING RAMP 1 - RT.	17.00	13.00	12.00		25	8	0.10	
1+85	1+93	RAMP 1A - LT.	4.00	5.00	4.00		2	2	0.03	
1+76	1+84	RAMP 2B - LT.	12.00	5.00	4.00		7	5	0.06	
2+30	2+38	RAMP 2B - LT.	16.00	5.00	4.00		9	7	0.09	
3+42	3+59	RAMP 2B - LT.	17.00	13.00	12.00		25	8	0.10	
962+50	963+34	RAMP 2 - RT.	84.00	6.50		61	37	3	0.47	
952+02	952+13	EXISTING RAMP 3 - LT.	29.00	9.00	8.00		29	13	0.16	
954+08	954+80	EXISTING RAMP 3 - LT.	72.00	6.50			52	32	0.40	
2+81	2+97	RAMP 3A - LT.	18.00	13.00	12.00		26	8	0.10	
1+59	3+80	RAMP 3A - LT.	221.00	6.50			160	98	1.23	
3+00	3+80	RAMP 4A - LT.	80.00	6.50			58	36	0.45	
10+64	10+77	MOBERLY LANE - RT.	13.00	13.00	12.00		19	6	0.08	
11+45	11+62	MOBERLY LANE - LT.	17.00	13.00	12.00		25	8	0.10	
14+50	14+71	MOBERLY LANE	21.00	6.50				9	0.11	
TOTALS:							196	346	286	3.59

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6") LIN. FT.
92+43	99+13	HWY. 71B - RT.	671
92+43	96+19	HWY. 71B - LT.	393
96+42	99+78	HWY. 71B - LT.	364
10+49	13+57	46TH STREET - RT.	342
10+49	13+57	46TH STREET - LT.	322
100+28	103+99	HWY. 71B - LT.	397
102+61	102+73	HWY. 71B - DRIVEWAY LT.	46
103+03	103+24	HWY. 71B - DRIVEWAY LT.	48
100+90	103+82	HWY. 71B - RT.	292
0+00	3+10	BASE LINE RAMP 2A	325
950+04	952+32	EXISTING RAMP 1 - RT.	264
104+76	106+50	HWY. 71B ISLAND - RT.	494
104+91	107+05	HWY. 71B ISLAND - LT.	828
0+00	4+45	BASE LINE RAMP 2B	460
107+22	108+00	HWY. 71B - RT.	78
946+92	947+92	EXISTING RAMP 1 - LT.	100
0+00	4+12	BASE LINE RAMP 1A	412
107+73	108+55	HWY. 71B - LT.	82
0+00	4+46	BASE LINE RAMP 3A	445
956+32	957+43	EXISTING RAMP 3 - RT.	111
0+00	4+18	BASE LINE RAMP 4A	432
108+53	110+82	HWY. 71B ISLAND - RT.	898
109+21	110+91	HWY. 71B ISLAND - LT.	471
951+56	953+67	EXISTING RAMP 3 - LT.	256
0+00	2+98	BASE LINE RAMP 4B	305
111+64	112+00	HWY. 71B - RT.	36
111+88	113+68	HWY. 71B - LT.	189
11+05	13+02	MOBERLY LANE - RT.	240
10+24	12+40	MOBERLY LANE - LT.	268
114+09	119+80	HWY. 71B - LT.	622
114+88	124+76	HWY. 71B - RT.	989
120+20	122+53	HWY. 71B - LT.	273
TOTAL:			11453

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	*RUMBLE STRIPS IN ASPHALT SHOULDERS LIN. FT.
1180+00	1243+51	I-49 L.M.L. - RT.	6355
1180+00	1243+51	I-49 R.M.L. - LT.	6348
1186+90	1208+90	I-49 L.M.L. - LT.	2200
1234+50	1243+51	I-49 R.M.L. - RT.	901
1235+00	1243+51	I-49 L.M.L. - LT.	851
1190+53	1230+07	I-49 R.M.L. - RT.	3950
1246+61	1255+00	I-49 L.M.L. - LT.	839
1246+61	1255+00	I-49 R.M.L. - RT.	839
1246+61	1283+36	I-49 L.M.L. - RT.	3675
1246+61	1283+36	I-49 R.M.L. - LT.	3675
1257+63	1264+00	I-49 R.M.L. - RT.	637
TOTAL:			30270

* QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

CONCRETE BARRIER WALL

STATION	STATION	LOCATION	MEDIAN TYPE		SIDE TYPE E: MASH TL-4 LIN. FT.	PARAPET TYPE SPECIAL	
			B: MASH TL-4	C: MASH TL-4			
1228+50	1229+66	I-49 - C.L. MEDIAN		116			
1229+66	1229+91	I-49 - C.L. MEDIAN			25		
1230+09	1230+34	I-49 - C.L. MEDIAN			25		
1230+34	1237+15	I-49 - C.L. MEDIAN		681			
1237+15	1243+51	I-49 - C.L. MEDIAN	636				
1230+00	1233+08	I-49 L.M.L. - LT.			312		
1241+46	1242+50	I-49 R.M.L. - RT.					
1242+50	1243+51	I-49 L.M.L. - LT.				101	
1242+50	1243+51	I-49 R.M.L. - RT.				101	
1246+61	1247+65	I-49 L.M.L. - LT.				104	
1246+61	1247+65	I-49 R.M.L. - RT.				104	
1248+00	1248+68	I-49 L.M.L. - LT.					
1246+61	1260+00	I-49 - C.L. MEDIAN	1339				
942+75	947+92	EXIST. RAMP 1 - RT.			517		
940+00	947+66	RAMP 4 - LT.			766		
3+34	4+18	RAMP 4A - RT.			84		
TOTALS:			1975	797	50	1679	410

RETAINING WALLS

STATION	STATION	LOCATION	UNCL. EXC. FOR STR.-ROADWAY CU. YD.	SELECT GRANULAR BACKFILL CU. YD.	RETAINING WALL SQ. FT.	TEMPORARY RETAINING WALL SQ. FT.	*TEXTURED COATING FINISH SQ. YD.
BENT 1							
1242+50	1243+86	I-49 R.M.L. - RT.	1934	2769	3305	930	379
1243+86	1243+96	I-49 R.M.L. - RT.			155	178	17
1243+96	-	I-49	3146	3706	2430		296
1243+86	1243+96	I-49 L.M.L. - LT.			182	178	20
1242+50	1243+96	I-49 L.M.L. - LT.	1668	2652	3471	930	390
BENT 2							
1246+26	1247+65	I-49 L.M.L. - LT.	1717	2734	3538	1017	397
1246+16	1246+26	I-49 L.M.L. - LT.			181	176	20
1246+16	-	I-49	3118	3772	2409		296
1246+16	1246+26	I-49 R.M.L. - RT.			155	176	17
1246+26	1247+65	I-49 R.M.L. - RT.	2003	2888	3370	1017	387
TOTALS:			13586	18521	19196	4602	2219

*EXPOSED SURFACES OF COPING AND WALL.

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
1229+00	1239+06	I-49 R.M.L. - LT.	1006	
1229+00	1239+06	I-49 L.M.L. - RT.	1004	
1239+06	1243+51	I-49 R.M.L. - LT.	445	
1239+06	1243+51	I-49 L.M.L. - RT.	445	
1246+61	1260+00	I-49 R.M.L. - LT.	1339	
1246+61	1260+00	I-49 L.M.L. - RT.	1339	
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			500	5
TOTALS:			6078	5

*NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR 4" PIPE UNDERDRAIN.

OVERHEAD SIGN STRUCTURE FOUNDATION

STATION	LOCATION	EACH
1230+00	I-49 MEDIAN NORTHBOUND	1.00
TOTAL:		1.00

CONCRETE BASE

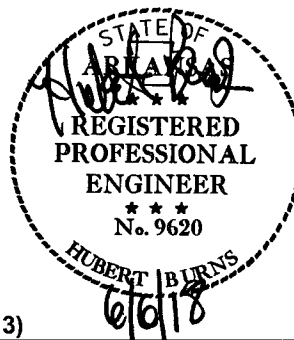
STATION	STATION	LOCATION	LENGTH FEET	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. PG76-22			TACK COAT 0.05 GAL. PER SQ. YD.			PORTLAND CEMENT CONCRETE BASE						
				AVG. WID. FEET	SQ. YD.	TON	AVG. WID. FEET	SQ. YD.	GAL.	AVG. WID. FEET	4" U.T. SQ. YD.	4.5" U.T. SQ. YD.	AVG. WID. FEET	5" U.T. SQ. YD.	8" U.T. SQ. YD.	
				I-49												
1208+90.00	1210+90.16	I-49 AUXILIARY LANE FOR RAMP 4 - LT.	200.16	3.87	86.07	9.47	3.87	86.07	4.30	3.87	86.07		6.37		141.67	
HWY. 71B																
96+12.64	96+19.09	HWY. 71B - DRIVEWAY LT.	21.87	2.78	6.76	0.74	2.78	6.76	0.34	2.78		6.76	5.28	12.83		
96+41.73	96+48.65	HWY. 71B - DRIVEWAY LT.	20.91	2.63	6.11	0.67	2.63	6.11	0.31	2.63		6.11	5.13	11.92		
10+92.93	11+68.79	46TH STREET - LT.	75.86	7.08	59.68	6.56	7.08	59.68	2.98	7.08		59.68	9.58	80.75		
11+89.71	13+42.58	46TH STREET - LT.	152.87	4.29	72.87	8.02	4.29	72.87	3.64	4.29		72.87	6.79	115.33		
12+65.69	13+56.53	46TH STREET - RT.	90.84	4.08	41.18	4.53	4.08	41.18	2.06	4.08		41.18	6.58	66.41		
99+77.50	99+85.06	HWY. 71B - DRIVEWAY LT.	7.11	3.24	2.56	0.28	3.24	2.56	0.13	3.24		2.56	5.74	4.53		
100+21.74	100+28.09	HWY. 71B - DRIVEWAY LT.	18.12	5.51	11.09	1.22	5.51	11.09	0.55	5.51		11.09	8.01	16.13		
113+66.25	113+73.02	HWY. 71B - DRIVEWAY LT.	29.91	2.31	7.68	0.84	2.31	7.68	0.38	2.31		7.68	4.81	15.99		
11+54.58	12+39.96	MOBERLY LANE - LT.	85.38	5.08	48.19	5.30	5.08	48.19	2.41	5.08		48.19	7.58	71.91		
13+62.32	14+27.68	MOBERLY LANE - RT.	65.36	4.04	29.34	3.23	4.04	29.34	1.47	4.04		29.34	6.54	47.49		
119+70.00	119+80.47	HWY. 71B - DRIVEWAY LT.	24.93	3.91	10.83	1.19	3.91	10.83	0.54	3.91		10.83	6.41	17.76		
120+17.72	120+28.64	HWY. 71B - DRIVEWAY LT.	24.27	4.80	12.94	1.42	4.80	12.94	0.65	4.80		12.94	7.30	19.69		
122+45.76	122+53.08	HWY. 71B - DRIVEWAY LT.	25.66	2.77	7.90	0.87	2.77	7.90	0.40	2.77		7.90	5.27	15.03		
RAMPS																
950+03.62	950+87.88	EXISTING RAMP 1 - RT.	84.26	3.08	28.84	3.17	3.08	28.84	1.44	3.08		28.84	5.58	52.24		
951+23.17	951+56.49	EXISTING RAMP 1 - RT.	33.32	3.40	12.59	1.38	3.40	12.59	0.63	3.40		12.59	5.90	21.84		
941+05.00	942+37.11	EXISTING RAMP 1 - LT.	132.11	3.44	50.50	5.56	3.44	50.50	2.53	3.44		50.50	5.94	87.19		
952+07.87	952+31.88	EXISTING RAMP 3 - LT.	24.01	3.44	9.18	1.01	3.44	9.18	0.46	3.44		9.18	5.94	15.85		
952+67.29	953+66.60	EXISTING RAMP 3 - LT.	99.31	1.02	11.26	1.24	1.02	11.26	0.56	1.02		11.26	3.52	38.84		
TOTALS:					515.57	56.70		515.57	25.78		86.07	429.50		711.73	141.67	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.4% MIN. AGGR.....5.6% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22
CEMENT STABILIZED CRUSHED STONE BASE COURSE = 94.0% AGGR. 6.0% CEMENT
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.



QUANTITIES

QUANTITIES



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		94	368
				JOB NO.		BB0903	94	368
2 QUANTITIES								

BASE AND SURFACING (BOX 2 OF 3)

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")									
				TON / STATION	TON	AVG. WID. FEET	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 76-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 76-22 TON	TOTAL PG 76-22 TON	
I-49 RAMPS																											
0+00.00	1+03.57	RAMP 1A - FULL DEPTH	103.57			150.04	1726.63	0.05	86.33	38.76	446.04	550.00	122.66	36.26	417.27	495.00	103.27	36.26	417.27	220.00	45.90	36.26	417.27	220.00	45.90	91.80	
1+03.57	3+62.60	RAMP 1A - FULL DEPTH	259.03			201.96	5812.63	0.05	290.63	52.99	1525.11	550.00	419.41	47.99	1381.21	495.00	341.85	47.99	1381.21	220.00	151.93	47.99	1381.21	220.00	151.93	303.86	
3+62.60	4+11.64	RAMP 1A - FULL DEPTH	49.04			106.08	578.02	0.05	28.90	27.77	151.32	550.00	41.61	25.27	137.69	495.00	34.08	25.27	137.69	220.00	15.15	25.27	137.69	220.00	15.15	30.30	
956+58.59	956+68.09	RAMP 2 - NOTCH & WIDEN - LT.	9.50			50.16	52.95	0.05	2.65	13.79	14.56	550.00	4.00	11.29	11.92	495.00	2.95	11.29	11.92	220.00	1.31	11.29	11.92	220.00	1.31	2.62	
956+68.09	956+93.09	RAMP 2 - NOTCH & WIDEN - LT.	25.00	66.13	16.53	38.31	106.42	0.05	5.32	9.71	26.97	550.00	7.42	9.51	26.42	495.00	6.54	9.38	26.06	220.00	2.87					2.87	
956+93.09	960+89.07	RAMP 2 - NOTCH & WIDEN - LT.	395.98	38.50	152.45	36.34	1598.88	0.05	79.94	9.22	405.66	550.00	111.56	9.02	396.86	495.00	98.22	8.88	390.70	220.00	42.98					42.98	
960+89.07	961+97.62	RAMP 2 - NOTCH & WIDEN - LT.	108.55	11.50	12.48	27.64	333.37	0.05	16.67	7.04	84.91	550.00	23.35	6.85	82.62	495.00	20.45	6.71	80.93	220.00	8.90					8.90	
961+97.62	963+33.65	RAMP 2 - NOTCH & WIDEN - LT.	136.03			48.38	731.24	0.05	36.56	12.23	184.85	550.00	50.83	12.03	181.83	495.00	45.00	11.89	179.71	220.00	19.77					19.77	
956+58.59	963+33.65	RAMP 2 - SHOULDER - RT.	675.06	72.25	487.73			0.05							495.00					220.00							
0+00.00	0+81.16	RAMP 2A - FULL DEPTH	81.16			60.88	549.00	0.05	27.45	16.47	148.52	550.00	40.84	13.97	125.98	495.00	31.18	13.97	125.98	220.00	13.86	13.97	125.98	220.00	13.86	27.72	
0+81.16	1+98.96	RAMP 2A - FULL DEPTH	117.80			153.64	2010.98	0.05	100.55	40.91	535.47	550.00	147.25	35.91	470.02	495.00	116.33	35.91	470.02	220.00	51.70	35.91	470.02	220.00	51.70	103.40	
1+98.96	2+64.13	RAMP 2A - FULL DEPTH	65.17			71.08	514.70	0.05	25.74	19.02	137.73	550.00	37.88	16.52	119.62	495.00	29.81	16.52	119.62	220.00	13.16	16.52	119.62	220.00	13.16	26.32	
0+00.00	0+63.97	RAMP 2B - FULL DEPTH	63.97			77.36	549.86	0.05	27.49	20.59	146.35	550.00	40.25	18.09	128.58	495.00	31.82	18.09	128.58	220.00	14.14	18.09	128.58	220.00	14.14	28.28	
0+63.97	2+15.06	RAMP 2B - FULL DEPTH	151.09			143.12	2402.67	0.05	120.13	38.28	642.64	550.00	176.73	33.28	558.70	495.00	138.28	33.28	558.70	220.00	61.46	33.28	558.70	220.00	61.46	122.92	
2+15.06	2+87.66	RAMP 2B - FULL DEPTH	72.60			139.44	1124.82	0.05	56.24	36.11	291.29	550.00	80.10	33.61	271.12	495.00	67.10	33.61	271.12	220.00	29.82	33.61	271.12	220.00	29.82	59.64	
2+87.66	3+38.38	RAMP 2B - FULL DEPTH	50.72			117.08	659.81	0.05	32.99	30.52	172.00	550.00	47.30	28.02	157.91	495.00	39.08	28.02	157.91	220.00	17.37	28.02	157.91	220.00	17.37	34.74	
3+38.38	3+61.76	RAMP 2B - FULL DEPTH	23.18	36.13	8.37	108.87	280.40	0.05	14.02	28.60	73.66	550.00	20.26	25.90	66.71	495.00	16.51	25.77	66.37	220.00	7.30	25.64	66.04	220.00	7.26	14.56	
3+61.76	4+44.68	RAMP 2B - FULL DEPTH	82.92	72.25	59.91	106.90	984.91	0.05	49.25	28.11	258.99	550.00	71.22	25.41	234.11	495.00	57.94	25.27	232.82	220.00	25.61	25.15	231.72	220.00	25.49	51.10	
951+79.53	952+07.87	EXISTING RAMP 3 - NOTCH & WIDEN - LT.	28.34			140.76	443.24	0.05	22.16	36.44	114.75	550.00	31.56	33.94	106.87	495.00	26.45	33.94	106.87	220.00	11.76	33.94	106.87	220.00	11.76	23.52	
953+66.60	953+91.27	EXISTING RAMP 3 - SHOULDER - LT.	24.67	36.13	8.91																						
953+91.27	955+20.00	EXISTING RAMP 3 - SHOULDER - LT.	128.73	62.25	80.13																						
955+20.00	956+32.18	EXISTING RAMP 3 - FULL DEPTH	112.18	133.00	149.20	68.96	859.55	0.05	42.98	17.37	216.51	550.00	59.54	17.18	214.14	495.00	53.00	17.04	212.39	220.00	23.36					23.36	
956+32.18	957+43.38	EXISTING RAMP 3 - FULL DEPTH	111.20	133.00	147.90	148.60	1836.04	0.05	91.80	38.53	476.06	550.00	130.92	35.84	442.82	495.00	109.60	35.70	441.09	220.00	48.52					48.52	
957+43.38	957+67.73	EXISTING RAMP 3 - FULL DEPTH	24.35	135.88	33.09	135.10	365.52	0.05	18.28	33.91	91.75	550.00	25.23	33.71	91.20	495.00	22.57	33.57	90.83	220.00	9.99					9.99	
957+67.73	961+82.52	EXISTING RAMP 3 - FULL DEPTH	144.79	271.75	1127.19	86.23	3974.15	0.05	198.71	21.69	999.64	550.00	274.90	21.49	990.43	495.00	245.13	21.36	984.43	220.00	108.29					108.29	
0+00.00	1+18.14	RAMP 3A - FULL DEPTH	118.14			113.80	1493.81	0.05	74.69	29.70	389.86	550.00	107.21	27.20	357.05	495.00	88.37	27.20	357.05	220.00	39.28	27.20	357.05	220.00	39.28	78.56	
1+18.14	4+04.30	RAMP 3A - FULL DEPTH	286.16			144.20	4584.92	0.05	229.25	38.55	1225.72	550.00	337.07	33.55	1066.74	495.00	264.02	33.55	1066.74	220.00	117.34	33.55	1066.74	220.00	117.34	234.68	
4+04.30	4+46.38	RAMP 3A - FULL DEPTH	42.08			88.28	412.76	0.05	20.64	23.32	109.03	550.00	29.98	20.82	97.35	495.00	24.09	20.82	97.35	220.00	10.71	20.82	97.35	220.00	10.71	21.42	
941+10.00	942+10.00	RAMP 4 - FULL DEPTH	100.00			118.15	1312.78	0.05	65.64	29.80	331.11	550.00	91.06	29.41	326.78	495.00	80.88	29.14	323.78	220.00	35.62					35.62	
942+10.00	946+85.00	RAMP 4 - NOTCH & WIDEN - RT.	475.00	27.00	128.25	35.35	1865.69	0.05	93.28	8.97	473.42	550.00	130.19	8.77	462.86	495.00	114.56	8.64	456.00	220.00	50.16					50.16	
942+10.00	946+85.00	EXISTING RAMP 4 - SHOULDER - LT.	475.00	78.25	371.69																						
946+85.00	947+31.73	RAMP 4 - FULL DEPTH	46.73	132.25	61.80	97.69	507.23	0.05	25.36	24.46	127.00	550.00	34.93	24.52	127.31	495.00	31.51	24.25	125.91	220.00	13.85					13.85	
947+31.73	947+56.73	RAMP 4 - FULL DEPTH	25.00	82.50	20.63	98.61	273.92	0.05	13.70	24.92	69.22	550.00	19.04	24.52	68.11	495.00	16.86	24.25	67.36	220.00	7.41					7.41	
947+56.73	947+66.23	RAMP 4 - FULL DEPTH	9.50	57.75	5.49	110.46	116.60	0.05	5.83	29.00	30.61	550.00	8.42	26.30	27.76	495.00	6.87	26.16	27.61	220.00	3.04					3.04	
0+00.00	0+56.56	RAMP 4A - FULL DEPTH	56.56			78.44	492.95	0.05	24.65	20.86	131.09	550.00	36.05	18.36	115.38	495.00	28.56	18.36	115.38	220.00	12.69	18.36	115.38	220.00	12.69	25.38	
0+56.56	1+99.71	RAMP 4A - FULL DEPTH	143.15			143.40	2280.86	0.05	114.04	38.35	609.98	550.00	167.74	33.35	530.45	495.00	131.29	33.35	530.45	220.00	58.35	33.35	530.45	220.00	58.35	116.70	
1+99.71	3+33.83	RAMP 4A - FULL DEPTH	134.12			133.96	1996.30	0.05	99.82	34.74	517.70	550.00	142.37	32.24	480.45	495.00	118.91	32.24	480.45	220.00	52.85	32.24	480.45	220.00	52.85	105.70	
3+33.83	4+17.51	RAMP 4A - FULL DEPTH	83.68	61.00	51.04	109.11	1014.48	0.05	50.72	28.66	286.47	550.00	73.28	25.96	241.37	495.00	59.74	25.83	240.16	220.00	26.42	25.70	238.95	220.00	26.28	52.70	
0+00.00	0+76.31	RAMP 4B - FULL DEPTH	76.31			89.20	756.32	0.05	37.82	23.55	199.68	550.00	54.91	21.05	178.48	495.00	44.17	21.05	178.48								

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18						JOB NO. BB0903	95A	368

QUANTITIES



07/16/20K

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAX. NUMBER REQ'D.	TOTAL REQUIRED SQ. FT.	TRAFFIC DRUMS EACH	VERTICAL PANELS EACH
			IN	EACH				
G20-2	END ROAD WORK	48" X 24"	6	6	6	48.00		
W20-1	ROAD WORK AHEAD	48" X 48"	3	3	3	48.00		
W20-1	ROAD WORK 500 FT	48" X 48"	3	3	3	48.00		
W20-1	ROAD WORK 1000 FT	48" X 48"	3	3	3	48.00		
W20-1	ROAD WORK 1500 FT	48" X 48"	3	3	3	48.00		
	TRAFFIC DRUMS		15	8	15		15	
	VERTICAL PANELS			8	8			8
TOTALS						240.00	15	8

NOTE: THIS IS A HIGH VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

DESCRIPTION	UNIT	HWY. 12	RAINBOW LANE	TOTAL
THERMOPLASTIC PAVEMENT MARKING WHITE (6")	L.F.	1324	0	1324
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	L.F.	156	0	156
THERMOPLASTIC PAVEMENT MARKING WHITE (12")	L.F.	548	12	560
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	L.F.	300	0	300
THERMOPLASTIC PAVEMENT MARKING (WORDS)	EACH	6	1	7
THERMOPLASTIC PAVEMENT MARKING (ARROWS)	EACH	8	1	9
RAISED PAVEMENT MARKERS (TYPE II)(YELLOW/YELLOW)	EACH	3	0	3
RAISED PAVEMENT MARKERS (TYPE II)(RED/WHITE)	EACH	4	0	4

NOTE: THIS IS A HIGH VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

STATION	STATION	LOCATION	CONCRETE WALKS S.Y.
159+96.00	160+55.57	HWY 12 - RT.	38.00
161+15.94	164+91.30	HWY 12 - RT.	270.00
165+42.53	165+50.22	HWY 12 - LT.	7.00
TOTAL			315.00

STATION	STATION	LOCATION	REMOVAL OF PERMANENT PAVEMENT MARKINGS L.F.
162+13	164+86	HWY. 12 - 4" WHITE PAVEMENT MARKING	429
164+60		HWY. 12 - 12" STOP LINE AND CROSSWALK MARKINGS	60
164+80	165+30	HWY. 12 - 12" STOP LINE AND CROSSWALK MARKINGS	175
165+40		HWY. 12 - 12" STOP LINE AND CROSSWALK MARKINGS	170
TOTAL			834

NOTE: THIS IS A HIGH VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

STATION	LOCATION	DESCRIPTION	REINFORCED CONCRETE PIPE	FLARED END SECTIONS	DROP INLETS	EXTENSIONS	STANDARD DRAWINGS
			CLASS III	(TYPE MO)	4'		
159+85	HWY. 12	DROP INLET ON RT.	18 IN	16 IN			FPC-9M, PCC-1
161+90	HWY. 12	DROP INLET ON RT.	L.F.	EACH	EACH	EACH	FES-1, FES-2, FPC-9M, PCC-1
TOTALS FOR STRUCTURES			221	1	1	1	

FOR R.C. PIPE CULVERT INSTALLATIONS, USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

LOCATION	CU. YD.
ENTIRE PROJECT	350
TOTAL	350

QUANTITY ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATION	STATION	LOCATION	LENGTH	ACHM SURFACE COURSE (1/2") - FINAL				ACHM BINDER COURSE (1") - FINAL				AGGREGATE BASE COURSE (CLASS 7)	
				AVG. WIDTH	SQUARE YARDS	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQUARE YARDS	LBS. PER SQ. YD.	TON	TONS PER STATION	TON
				FT.	FT.			FT.	YARDS	SQ. YD.			
159+96.68	160+38.72	HWY. 12 (WIDENING)	42.04	2.14	10	220	1	0.00	0	440	0	35.68	15
160+38.72	160+70.76	HWY. 12 (WIDENING)	32.04	10.67	38	440	8	10.67	38	440	8	109.24	35
160+70.76	160+98.00	RAINBOW LANE	27.24	29.07	88	440	19	34.69	105	440	23	271.66	74
160+98.00	164+01.07	HWY. 12 (WIDENING)	303.07	9.86	332	440	73	9.86	332	440	73	96.99	300
164+01.07	165+03.44	HWY. 12 (WIDENING)	102.37	2.90	33	220	4	0.00	0	440	0	61.54	63
164+10.09	164+81.52	HWY. 12 (ISLAND RECONSTRUCTION)	71.43	23.81	189	440	42	23.81	189	440	42		
TOTALS					690		147		664		146		487

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2"): 5.4% ASPHALT BINDER, 94.6% MINERAL AGGREGATE (PG 70-22), N_{max} = 160
 ACHM BINDER COURSE (1"): 4.4% ASPHALT BINDER, 95.6% MINERAL AGGREGATE (PG 64-22), N_{max} = 115

STATION	STATION	LOCATION	CONCRETE CURB AND GUTTER (TYPE A)(1'-6") LIN. FT.
159+96.00	165+02.27	HWY. 12 - RT.	654
165+37.08	165+66.56	HWY. 12 - RT.	60
165+41.27	165+56.91	HWY. 12 - LT.	22
TOTAL			736

STATION	LOCATION	WHEELCHAIR RAMPS (TYPE 1) (TYPE 3)	
		S.Y.	S.Y.
160+65.35	HWY. 12 - RT.		3.9
161+04.94	HWY. 12 - RT.		6.3
164+43.83	HWY. 12 - RT.		8.6
164+59.79	HWY. 12 - RT.		3.4
164+84.45	HWY. 12 - RT.		3.3
164+78.21	HWY. 12 - RT.		3.3
165+56.20	HWY. 12 - RT.	77.9	
165+56.20	HWY. 12 - LT.		8.5
TOTALS		77.9	39.3

STATION	STATION	LOCATION	6" U.T. S.Y.
159+96.68	160+38.72	HWY 12 (WIDENING)	10
164+01.07	165+03.44	HWY 12 (WIDENING)	33
TOTAL			43

LOCATION	LIME	SEEDING	MULCH COVER	SECOND SEEDING	WATER
	TON	ACRE	ACRE	ACRE	M.G.
STA. 160+00 TO 165+00	2	1.00	1.00	1.00	102.0
TOTALS	2	1.00	1.00	1.00	102.0

BASIS OF ESTIMATE:
 LIME = 2 TONS PER ACRE SEEDING
 WATER = 102.0 M.G. PER ACRE SEEDING
 * QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATION	STATION	LOCATION	SIGNS	CURB & GUTTER	WALKS	CONCRETE ISLANDS	DESCRIPTION
			EACH	L.F.	S.Y.	S.Y.	
159+96	165+02	HWY. 12 - RT.		660			EXISTING CURB AND GUTTER
160+62	161+05	RAINBOW LANE			16		EXISTING SIDEWALK
160+85		RAINBOW LANE				10	EXISTING CONCRETE ISLAND
161+23	164+80	HWY. 12 - RT.	3				EXISTING SIGNS
164+48	164+61	HWY. 12 - RT.			22		EXISTING SIDEWALK
164+60		HWY. 12 - RT.				282	EXISTING CONCRETE ISLAND
165+37	165+66	HWY. 12 - RT.		60	64		EXISTING CURB AND GUTTER & SIDEWALK
165+41	165+57	HWY. 12 - LT.		22	10		EXISTING CURB AND GUTTER & SIDEWALK
TOTALS			3	742	112	282	

STATION	STATION	LOCATION	PIPE CULVERTS	DROP INLETS	DESCRIPTION
			EACH	EACH	
162+53		HWY. 12 - RT.	1	1	EXISTING CURB INLET/278' EXISTING 16" RCP
163+78		HWY. 12 - RT.	1		156' EXISTING 18" RCP
TOTALS			2	1	

STATION	STATION	ROCK DITCH CHECK (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)
		CU. YD.	L.F.	L.F.
STAGE 1				
165+40	165+75			134
STAGE 2				
150+70	160+65			127
161+00	165+05			561
161+90		20		
163+84		3		
ADDITIONAL*		1	5	200
TOTALS		4	25	1022

* QUANTITIES ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.
 BASIS OF ESTIMATE:
 SAND BAG DITCH CHECKS = 28 BAGS / LOCATION
 ROCK DITCH CHECKS = 3 CU. YD. / LOCATION
 WATER = 20.4 M.G. PER ACRE TEMPORARY SEEDING

LOCATION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
	CU. YD.	CU. YD.
HWY. 12	320	30
TOTALS	320	30

EARTHWORK NOTES:
 1. ESTIMATES FOR QUANTITIES OF EXCAVATION AND EMBANKMENT ARE TAKEN DIRECTLY FROM THE CROSS SECTIONS, DETAILED IN ACCORDANCE WITH THE PLANS.

LOCATION	SELECTED BEDDING CU. YD.
ENTIRE PROJECT	20

QUANTITIES ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

LOCATION	TON
ENTIRE PROJECT	50

QUANTITY ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATION	STATION	LOCATION	AVG WIDTH FEET	COLD MILLING ASPHALT PAVEMENT SQ. YD.
HWY. 12				
160+38.72	160+70.76	RAINBOW LANE TURN RADIUS	VAR.	15
160+98.00	161+20.00	RAINBOW LANE TURN RADIUS	VAR.	19
SIDE ROAD				
		RAINBOW LN	VAR.	99
TOTAL				133

STATION	STATION	LOCATION	CONCRETE ISLAND S.Y.
164+32.89	164+77.71	HWY. 12	82
		RAINBOW LANE	18
TOTAL			110

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 LA 2008 0005550 - Brivar Hwy 12 Drawings Station Intersections Drawings H12_011_S1.W.dgn
 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	96	368	

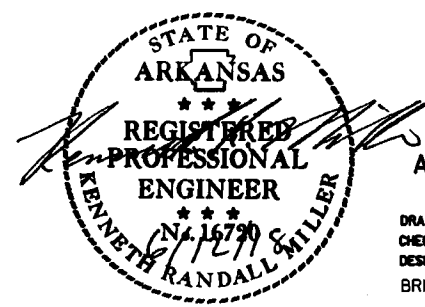
① 07405 BRIDGE QUANTITIES 59345

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. BB0903

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	801	SP & 802	SP & 802	803	804	804	① 805	805	SP & 807	SP & 807	② 807	808	809	812	816	SP JOB BB0903	③ SP JOB BB0903	SP JOB BB0903
				ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. ...)	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE -BRIDGE	CLASS S (AE) CONCRETE -BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL - BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	STEEL PILING (HP 14x89)	PREBORING	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M 270, GRADE 50)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M 270, GRADE HPS 70W)	PAINTING STRUCTURAL STEEL	ELASTOMERIC BEARINGS	ARMORED JOINT WITH NEOPRENE STRIP SEAL	BRIDGE NAME PLATE (TYPE D)	CONCRETE RIPRAP	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
			LUMP SUM	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LB.	LB.	LIN. FT.	LIN. FT.	LB.	LB.	TON	CU. IN.	LIN. FT.	EACH	CU. YD.	SQ. FT.	SQ. YD.	LUMP SUM	
07405	U.S. HWY. 71B	BENT NO. 1		6749	142.40		15.7	11375		880	592	7194		3.6	35964	131		78		67		
		BENT NO. 2		6838	142.40		15.7	11375		880	592	7194		3.6	35964	131		81		67		
		237'-0" SIMPLE COMP. PLATE GIRDER SPAN				891.90	3720.3		215700				1535022	598890	1067.0			1		1373	311	
		SITE NO. 1 (EXIST. BR. NO. A&B5977)		1																		1
TOTALS FOR JOB BB0903				13587	284.80	891.90	3751.7	22750	215700	1760	1184	1549410	598890	1074.2	71928	262	1	159	1373	445		

- ① All piling shall be AASHTO M 270, Grade 50. Steel piling (Gr. 50) shall have special driving points which shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling (HP 14x89)."
- ② The color of paint for Structural Steel shall conform to Federal Std. 595B, Color Chip No. 26122 (Dark Gray).
- ③ The color of paint for Textured Coating Finish shall conform to Federal Std. 595B, Color Chip No. 37150 (Gray).

USER: CTAUSER
 DESIGN FILE: G:\12103305_Hwy7\inchg\TRANSP\dgn\bridge\bb0903.qldgn
 PLOTTED: 6/12/2018 9:09:32 AM SCALE: 2.0000 ' / ' in.



SCHEDULE OF BRIDGE QUANTITIES
 FOR BRIDGE OVER HWY. 71B
 HWY. 71B INTCHNG. IMPVTS. (S)
 BENTON COUNTY
 ROUTE 49 SEC. 29
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 11-08-16 FILENAME: bbb0903.qldgn
 CHECKED BY: CAW DATE: 11-17-16 SCALE: NO SCALE
 DESIGNED BY: KRM DATE: 11-01-16
 BRIDGE NO. 07405 DRAWING NO. 59345

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM	QUANTITIES	UNIT
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER	8703	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE	871	LIN. FT.
202	REMOVAL AND DISPOSAL OF WALLS	111	LIN. FT.
202	REMOVAL AND DISPOSAL OF ASPHALT PAVEMENT	192	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	446	SQ. YD.
202	REMOVAL AND DISPOSAL OF APPROACH SLAB AND GUTTERS	4	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	1649	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS	3828	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	28	EACH
202	REMOVAL AND DISPOSAL OF JUNCTION BOXES	1	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS	26	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	34	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING	681	SQ. YD.
SP & 202	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE	1534	LIN. FT.
202	REMOVAL AND DISPOSAL OF GUARDRAIL	1102	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER	1050	LIN. FT.
202	REMOVAL AND DISPOSAL OF SIGNS	25	EACH
202	REMOVAL AND DISPOSAL OF PLANTERS	1	EACH
202	REMOVAL AND DISPOSAL OF SPRINKLER SYSTEM	1	EACH
210	UNCLASSIFIED EXCAVATION	59940	CU. YD.
SP	SELECT GRANULAR BACKFILL	18521	CU. YD.
210	COMPACTED EMBANKMENT	77498	CU. YD.
SP & 210	SOIL STABILIZATION	250	TON
SP & 215	TRENCHING AND SHOULDER PREPARATION	20	STATION
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	41204	TON
309	PORTLAND CEMENT CONCRETE BASE (4" UNIFORM THICKNESS)	86	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)	712	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (6" UNIFORM THICKNESS)	43	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (8" UNIFORM THICKNESS)	142	SQ. YD.
SS & 401	TACK COAT	430	SQ. YD.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	20875	GAL.
SP, SS, & 405	ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2")	20315	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	913	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	24116	TON
SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	6	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	1182	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	22448	TON
SP, SS, & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")	12	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	8	TON
412	COLD MILLING ASPHALT PAVEMENT	1311	TON
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	4644	SQ. YD.
504	APPROACH SLABS	26	TON
504	APPROACH GUTTERS	527.40	CU. YD.
SS & 505	PORTLAND CEMENT CONCRETE DRIVEWAY	88.00	CU. YD.
601	MOBILIZATION	1581.95	SQ. YD.
SP & 603	FURNISHING FIELD OFFICE	1.00	LUMP SUM
SS & 604	MAINTENANCE OF TRAFFIC	1.00	EACH
SS & 604	SIGNS	1138	SQ. FT.
SS & 604	BARRICADES	304	LIN. FT.
SS & 604	TRAFFIC DRUMS	835	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	13980	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	28075	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	117592	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	84	EACH
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	4124	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	77431	LIN. FT.
604	ADVANCE WARNING ARROW PANEL	31356	LIN. FT.
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN	200	DAY
SS & 604	VERTICAL PANELS	260	WEEK
SS & 605	CONCRETE DITCH PAVING (TYPE B)	158	EACH
SS & 605	CONCRETE DITCH PAVING (TYPE SPECIAL)	346	SQ. YD.
606	12" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	196	SQ. YD.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	14	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	2386	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	3369	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	160	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	1094	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	11	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	62	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	22	LIN. FT.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	40	LIN. FT.
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	334	LIN. FT.
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	3	EACH
606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1	EACH
606	65" X 40" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	SELECTED PIPE BEDDING	1	EACH
609	DROP INLETS (TYPE C)	520	CU. YD.
609	DROP INLETS (TYPE C SPECIAL)	2	EACH
609	DROP INLETS (TYPE MO)	1	EACH
609	DROP INLETS (TYPE RM)	54	EACH
609	DROP INLETS (TYPE ST)	4	EACH
609	JUNCTION BOXES (TYPE ST)	20	EACH
609	DROP INLET EXTENSIONS (4')	8	EACH
609	DROP INLET EXTENSIONS (6')	5	EACH
611	UNDERDRAIN OUTLET PROTECTORS	48	EACH
611	4" PIPE UNDERDRAINS	5	EACH
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	6078	LIN. FT.
617	GUARDRAIL (TYPE A)	201	TON
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	375	LIN. FT.
619	THREE BEAM GUARDRAIL TERMINAL	3	EACH
620	WIRE FENCE (TYPE A)	3	EACH
620	LIME	370	LIN. FT.
620	SEEDING	20	TON
SS & 620	MULCH COVER	10.05	ACRE
620	WATER	21.41	ACRE
621	TEMPORARY SEEDING	1363.5	M.GAL.
621	SILT FENCE	11.36	ACRE
621	SAND BAG DITCH CHECKS	5433	LIN. FT.
621	DROP INLET SILT FENCE	902	BAG
621	SEDIMENT REMOVAL AND DISPOSAL	1339	LIN. FT.
621	ROCK DITCH CHECKS	301	CU. YD.
SS & 621	FILTER SOCK (24")	157	CU. YD.
624	SOLID SODDING	135	LIN. FT.
628	TOPSOIL FURNISHED AND PLACED	10.05	ACRE
631	CONCRETE BARRIER WALL (MEDIAN TYPE SP-1)	8479	SQ. YD.
631	CONCRETE BARRIER WALL (PARAPET TYPE SPECIAL)	350	CU. YD.
631	CONCRETE BARRIER WALL (MEDIAN TYPE B; MASH TL-4)	50	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE C; MASH TL-4)	410	LIN. FT.
SP & 631	CONCRETE BARRIER WALL (SIDE TYPE E; MASH TL-4)	1975	LIN. FT.
SS & 632	CONCRETE ISLAND	797	LIN. FT.
SS & 633	CONCRETE WALKS (TYPE SPECIAL)	1679	LIN. FT.
SS & 633	HAND RAILING	2279	SQ. YD.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	2984	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	846	LIN. FT.
640	MODIFYING DROP INLETS	12239	LIN. FT.
641	WHEELCHAIR RAMPS (TYPE 1)	1.00	LUMP SUM
641	WHEELCHAIR RAMPS (TYPE 2)	7	EACH
641	WHEELCHAIR RAMPS (TYPE 3)	78	SQ. YD.
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	28	SQ. YD.
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	179	SQ. YD.
SP & 701	SYSTEM LOCAL CONTROLLER-FIBER (8 PHASES)	30270	LIN. FT.
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)	3	EACH
SP & 701	SPLICE CABINET INSTALLATION	2	EACH
SP & 701		2	EACH



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-05-18				6	ARK.			
07-16-18						BB0903	97	368

2 SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITIES	UNIT
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	7	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	6557	LIN. FT.
SP	BATTERY BACKUP SYSTEM	1	EACH
SP	WIC FIBER ENCLOSURE	2	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	75	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	11	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)	1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	40	EACH
SP & 707	CENTRAL CONTROL UNIT	4	EACH
SP & 707	POLE MOUNTED ASSEMBLY	32	EACH
SP & 707	INFRARED PROGRAMMING DEVICE	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	32	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	17903	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1590	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	782	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	1544	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	2622	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	1640	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	190	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	5492	LIN. FT.
SP	COMMUNICATION CABLE, FIBER (6 CHANNEL)	1320	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	140	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	135	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	388	LIN. FT.
SP	FIBERGLASS CONDUIT H.D. (1")	420	LIN. FT.
SP	FIBERGLASS CONDUIT H.D. (3")	576	LIN. FT.
710	NON-METALLIC CONDUIT (2")	47	LIN. FT.
710	NON-METALLIC CONDUIT (3")	3689	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	2	EACH
711	CONCRETE PULL BOX (TYPE 2)	3	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	6	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	32	EACH
711	CONCRETE PULL BOX (TYPE 3 HD)	1	EACH
713	SPAN WIRE ASSEMBLY	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')	5	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (6')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (10')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (58')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (68')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	20	EACH
SP	UNDERPASS LUMINAIRE (90-WAIT, LED)	8	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	13	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	6	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	12	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	3284	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	4653	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	10032	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	4565	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	2993	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	5428	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	102	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	21	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	45	EACH
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")	20752	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")	3195	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	19782	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	492	EACH
SP & 724	OVERHEAD SIGN STRUCTURE FOUNDATION	1	EACH
725	GUIDE SIGNROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	888	SQ. FT.
726	STANDARD SIGN	904	SQ. FT.
SP	18" STREET NAME SIGN	8	EACH
729	CHANNEL POST SIGN SUPPORT (TYPE U-1)	10	EACH
729	CHANNEL POST SIGN SUPPORT (TYPE U-2)	6	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	11297	POUND
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	37	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	7	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	6	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	6	EACH
SP	VIDEO DETECTOR (CLR)	22	EACH
SP & 733	VIDEO DETECTOR (IP)	21	EACH
SP & 733	VIDEO DETECTOR (IP)	30	EACH
733	VIDEO CABLE	4875	LIN. FT.
733	VIDEO MONITOR (CLR)	7	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	15	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	3	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	3	EACH
SP & 733	VEHICLE DETECTOR RACK (32 CHANNEL)	1	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)	7	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD IP (2 CAMERA)	22	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	13586	CU. YD.
SP	RETAINING WALL	19196	SQ. FT.
SP	TEMPORARY RETAINING WALL	4602	SQ. FT.
SP	TEXTURED COATING FINISH	2219	SQ. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	102690	POUND
816	FILTER BLANKET	51	SQ. YD.
816	DUMPED RIPRAP	26	CU. YD.
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)	2	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)	5	EACH

STRUCTURES OVER 20'-0" SPAN

ITEM NUMBER	ITEM	QUANTITIES	UNIT
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	13587	CU. YD.
SP & 802	CLASS S CONCRETE-BRIDGE	284.80	CU. YD.
SP & 802	CLASS S(AE) CONCRETE-BRIDGE	891.90	CU. YD.
SP	ARCHITECTURAL FINISH	1373	SQ. FT.
SP	TEXTURED COATING FINISH	445	SQ. YD.
803	CLASS 2 PROTECTIVE SURFACE TREATMENT	3751.7	SQ. YD.
804	REINFORCING STEEL-BRIDGE (GRADE 60)	22750	POUND
804	EPOXY COATED REINFORCING STEEL (GRADE 60)	215700	POUND
805	STEEL PILING (HP 14X89)	1760	LIN. FT.
805	PREBORING	1184	LIN. FT.
SP & 807	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M270-GR50)	15494.10	POUND
SP & 807	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M270-GRHP570W)	596890	POUND
807	PAINTING STRUCTURAL STEEL	1074.2	TON
808	ELASTOMERIC BEARINGS	71928	CU. IN.
809	ARMORED JOINT WITH NEOPRENE STRIP SEAL	262	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)	1	EACH
816	CONCRETE RIPRAP	159	CU. YD.
SP	SHORING (SITE NO. 1)	1.00	LUMP SUM

REVISIONS

DATE	REVISION	SHEET NUMBER
6/20/2018	REVISED DEPARTMENT NAME, ADDED DELAY IN RIGHT OF WAY OCCUPANCY SP, AND REVISED STATION & OFFSETS ON RIGHT OF WAY.	1,3,98,115,117,121
7/05/2018	ADDED SS 617-1 & SP FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT. REVISED SPECIAL DETAIL OF APPROACH SLAB. REVISED MAINTENANCE OF TRAFFIC NOTE SHEET 46. REVISED SUMMARY OF TRAFFIC SIGNAL QUANTITIES & SUMMARY OF QUANTITIES, ADD PLAN SHEETS FOR ADDITIONAL WORK AT HWY. 112/71B INTERSECTION.	3, 18A, 25, 32A, 45A, 45B, 46, 73A, 73B, 83A, 95A, 97, 98, 105A, 105B, 122A, 125, 126, 137, 153, 158A, 158B, 158C, 158D, 158E, 359A, 359B
7/05/2018	ADDED SS 617-1 & SP FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT. REVISED SPECIAL DETAIL OF APPROACH SLAB, REVISED MAINTENANCE OF TRAFFIC NOTE SHEET 46. REVISED SUMMARY OF TRAFFIC SIGNAL QUANTITIES & SUMMARY OF QUANTITIES, ADD PLAN SHEETS FOR ADDITIONAL WORK AT HWY. 112/71B INTERSECTION.	3, 18A, 25, 32A, 45A, 45B, 46, 73A, 73B, 83A, 95A, 97, 98, 105A, 105B, 122A, 125, 126, 137, 153, 158A, 158B, 158C, 158D, 158E, 359A, 359B
7/16/2018	REVISED FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT SPECIAL PROVISION, ADDED SP LIQUID ANTI-STRIPPING ADDITIVE, REVISED CONCRETE BARRIER WALL TYPES, REVISED CONCRETE BARRIER WALL NAMES, REVISED MOT DETAILS, ADDED TYPICAL FOR TEMP. PAVEMENT AND REVISED TEMP. PAVING QUANTITIES, MODIFIED SITE USE (A+B+C) SPECIAL PROVISION, AND QUANTITY & SUMMARY OF QUANTITIES. REVISED QUANTITIES FOR REMOVAL & DISPOSAL OF DROP INLETS, PIPE CULVERTS, 18" R.C. PIPE CULVERTS (CLASS III), ADDED CLASS IV PIPE, MODIFIED CLASS III PIPE QUANTITIES, & SELECTED PIPE BEDDING. REVISED THE SHEET NUMBERS & THE NUMBER OF TOTAL SHEETS ON VARIOUS SHEETS. REVISED 54" R.C.P. TO 42" R.C.P. ON PLAN SHEET 115 AND CROSS SECTION SHEET 232.	3, 7, 18A, 27, 28, 29, 32A, 45A, 45B, 49 - 57, 73A, 73B, 83A, 87, 89, 90, 92, 95, 95A, 97, 98, 105A, 105B, 115, 122A, 158A, 158B, 158C, 158D, 158E, 232, 368A, 368B

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
06-20-18				6	ARK.			
07-05-18						BB0903	98	368
07-16-18								

2 SUMMARY OF QUANTITIES & REVISIONS



MID POINT LAT N 36-20-57
MID POINT LON W094-10-46

SURVEY CONTROL COORDINATES

Project Name: #090305
Date: 9/7/2011
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL,
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Table with columns: Point Name, Northing, Easting, Elev, Feature, Description. Contains a long list of survey points and their coordinates and features.

CL 46TH STREET
CL CONSTRUCTION I-49
CL CONSTRUCTION HWY 71B
CL MOBERLY
R1A
R2A
R2B
R3A
R4A
R4B
Table with columns: POINT, TYPE, STATION, NORTHING (Y), EASTING (X). Contains data for various construction and road points.

RAMP 1
RAMP 2
RAMP 2 (EXIST.)
RAMP 3
RAMP 4
RAMP 4 (EXIST.)
CL I-49 MOT LML STAGE 3
CL I-49 MOT LML STAGE 3
CL I-49 MOT LML STAGE 3
Table with columns: POINT, TYPE, STATION, NORTHING (Y), EASTING (X). Contains data for ramp and stage points.

CL I-49 MOT RML STAGE 2
CL I-49 MOT RML STAGE 2
CL I-49 RAMP 3 MOT STAGE 3
CL I-49 RAMP 4 MOT STAGE 3
CL I-49 RAMP 4 MOT STAGE 2
CL I-49 RAMP 4 MOT STAGE 2B
Table with columns: POINT, TYPE, STATION, NORTHING (Y), EASTING (X). Contains data for RML and RAMP stage points.

REGISTRATION stamp for Hubert Burns, Registered Professional Engineer, No. 9620. Includes a circular seal with the engineer's name and number. Below the stamp is the title 'SURVEY CONTROL DETAILS'.

*Note - Rebar and Cap Standard - 5/8" Rebar with 2" Aluminum Cap stamped
(if standard markings common to all caps) or as indicated
(other markings indicated in the point description of the individual point).
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECTIONS OF 0.999709445 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME: #090305.gi.ctb
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
AT A SPECIFIC POINT.
REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL
IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL.

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE DETERMINED GPS CONTROL POINTS: 040018, 04009, 040044
CONVERGENCE ANGLE: 01 16 05 LEFT AT L 36-20-57.8 LG 094-10-45.7
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

USER: mhs44
DESIGN FILE: G:\2103305.Hwy71nch\TRANS\dgn\survey.ctb\BBO903.SC.HWY71B.01.dgn
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DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	100	368	

2 SURVEY CONTROL DETAILS

I-49 RAMP 4
M.O.T. STAGE 3
PI = 1229+58.89
Δ = 05°53'03" RT.
D = 05°00'00"
T = 58.89'
L = 117.68'
PC = 1229+00.00
PRC = 1230+17.68
NO SUPER

I-49 RAMP 4
M.O.T. STAGE 3
PI = 1231+05.58
Δ = 08°46'23" RT.
D = 05°00'00"
T = 87.90'
L = 175.46'
PC = 1230+17.68
PCC = 1231+93.14
NO SUPER

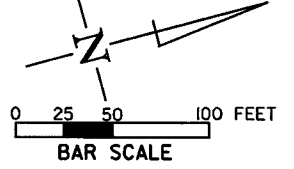
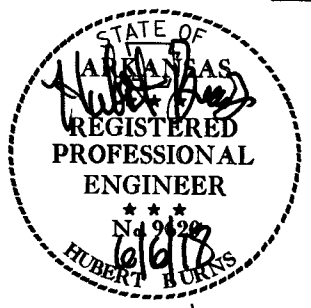
I-49 RAMP 4
M.O.T. STAGE 3
PI = 1232+49.50
Δ = 01°06'43" RT.
D = 00°59'12"
T = 56.35'
L = 112.70'
PCC = 1231+93.14
PT = 1233+05.84
NO SUPER

I-49 RAMP 4
M.O.T. STAGE 3
PI = 1235+18.28
Δ = 07°33'48" LT.
D = 03°01'46"
T = 125.02'
L = 249.67'
PC = 1233+93.27
PT = 1236+42.94
NO SUPER

I-49 RAMP 4
M.O.T. STAGE 2
PI = 941+09.23
Δ = 02°36'39" RT.
D = 05°00'00"
T = 26.11'
L = 52.22'
PC = 940+83.12
PRC = 941+35.34
NO SUPER

I-49 RAMP 4
M.O.T. STAGE 2
PI = 942+10.60
Δ = 07°30'57" LT.
D = 05°00'00"
T = 75.27'
L = 150.32'
PRC = 941+35.34
PT = 942+85.66
NO SUPER

I-49 RAMP 4
M.O.T. STAGE 2
PI = 949+16.59
Δ = 08°45'29" LT.
D = 08°00'00"
T = 54.85'
L = 109.48'
PC = 948+61.75
PRC = 949+71.23
NO SUPER



RAMP 4 (EXISTING)
PI = 941+08.23
Δ = 09°28'20" LT.
D = 03°00'00"
T = 158.23'
L = 315.73'
PC = 939+50.00
PT = 942+65.73

RAMP 4 (NEW ALIGNMENT)
PI = 941+67.73
Δ = 09°58'47" LT.
D = 03°00'00"
T = 166.75'
L = 332.66'
PC = 940+00.98
PT = 943+33.64
e = 0.057'/'
Ls = 300'

I-49 RAMP 4
M.O.T. STAGE 3
PI = 947+91.31
Δ = 06°36'09" RT.
D = 08°00'00"
T = 41.31'
L = 82.53'
PC = 947+50.00
PRC = 949+32.53
NO SUPER

I-49 RAMP 4
M.O.T. STAGE 3
PI = 948+73.84
Δ = 06°36'09" RT.
D = 08°00'00"
T = 41.31'
L = 82.53'
PRC = 948+32.53
PT = 949+15.06
NO SUPER

RAMP 4B
PI = 2+02.91
Δ = 46°30'06" RT.
D = 22°55'06"
T = 107.42'
L = 202.90'
PCC = 0+95.50
PT = 2+98.40
e = 0.099'/'
Ls = 300'

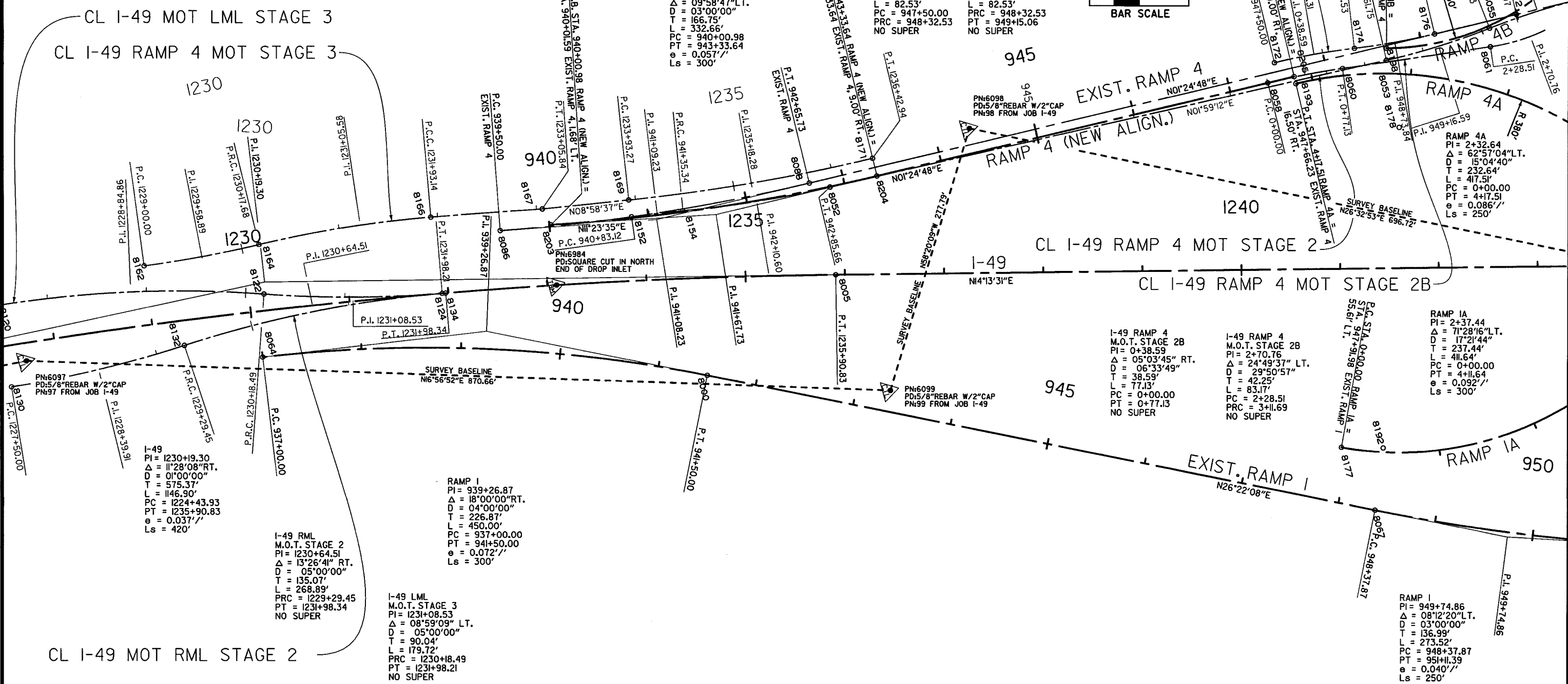
RAMP 4A
PI = 2+32.64
Δ = 62°57'04" LT.
D = 15°04'40"
T = 232.64'
L = 417.51'
PC = 0+00.00
PT = 4+17.51
e = 0.086'/'
Ls = 250'

I-49 RAMP 4
M.O.T. STAGE 2B
PI = 0+38.59
Δ = 05°03'45" RT.
D = 06°33'49"
T = 38.59'
L = 77.13'
PC = 0+00.00
PT = 0+77.13
NO SUPER

I-49 RAMP 4
M.O.T. STAGE 2B
PI = 2+70.76
Δ = 24°49'37" LT.
D = 29°50'57"
T = 42.25'
L = 83.17'
PC = 2+28.51
PRC = 3+11.69
NO SUPER

RAMP 1A
PI = 2+37.44
Δ = 71°28'16" LT.
D = 17°21'44"
T = 237.44'
L = 411.64'
PC = 0+00.00
PT = 4+11.64
e = 0.092'/'
Ls = 300'

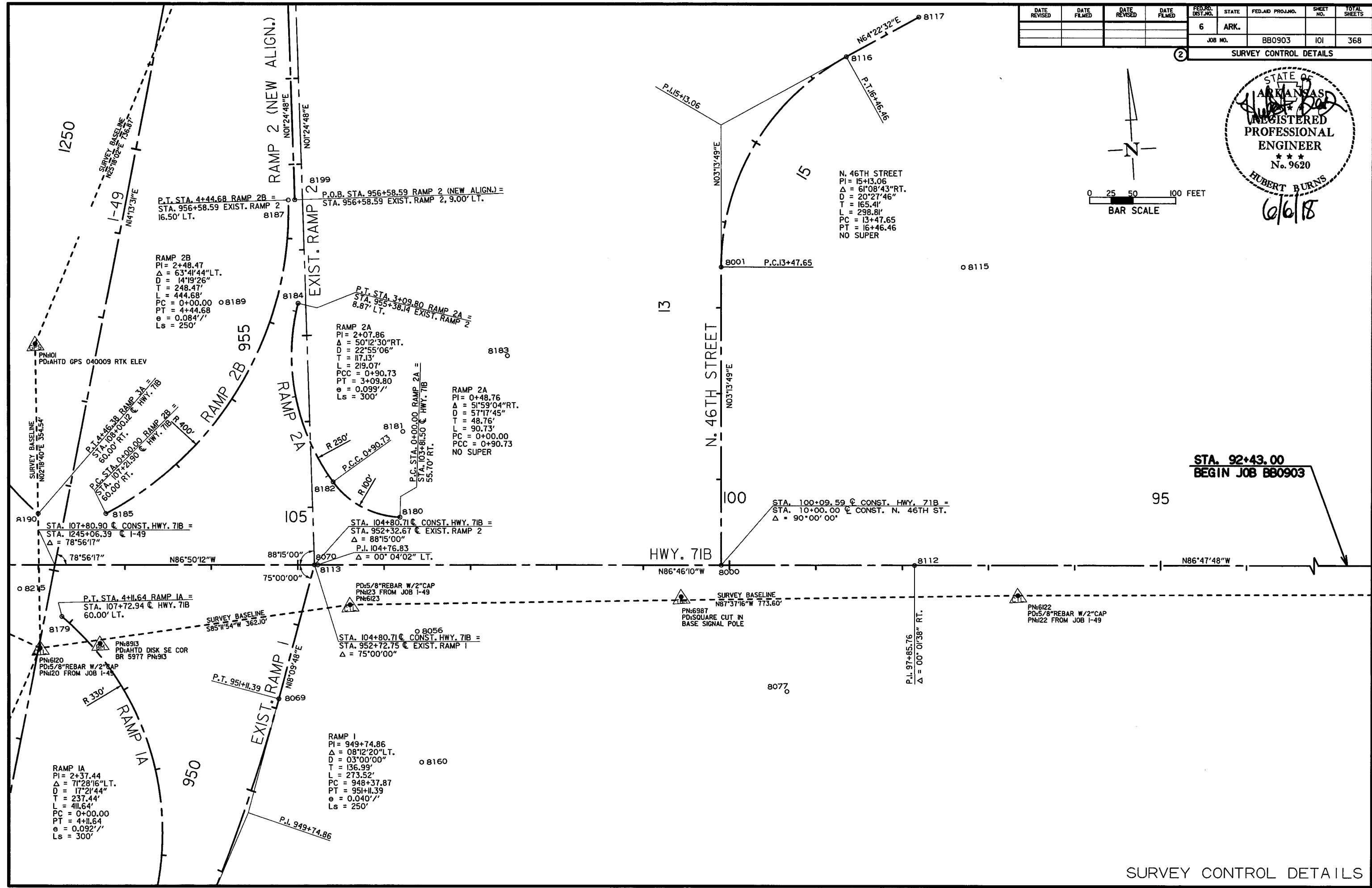
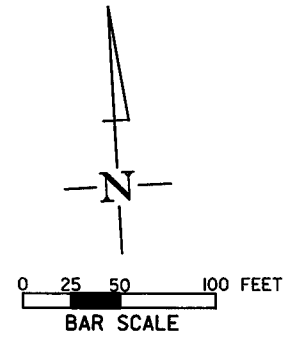
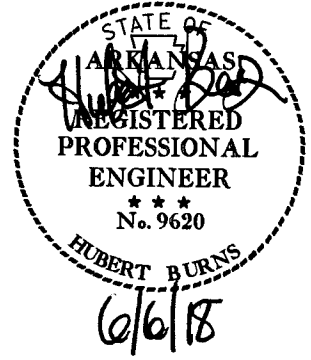
RAMP 1
PI = 949+74.86
Δ = 08°12'20" LT.
D = 03°00'00"
T = 136.99'
L = 273.52'
PC = 948+37.87
PT = 951+11.39
e = 0.040'/'
Ls = 250'



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DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	101	368	

2 SURVEY CONTROL DETAILS

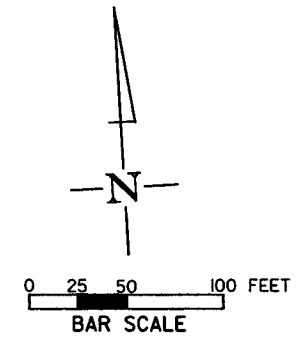
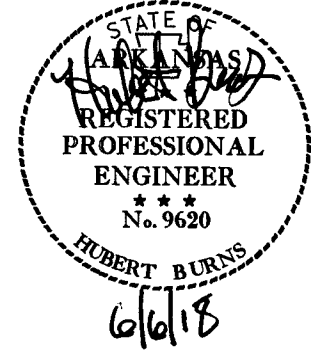


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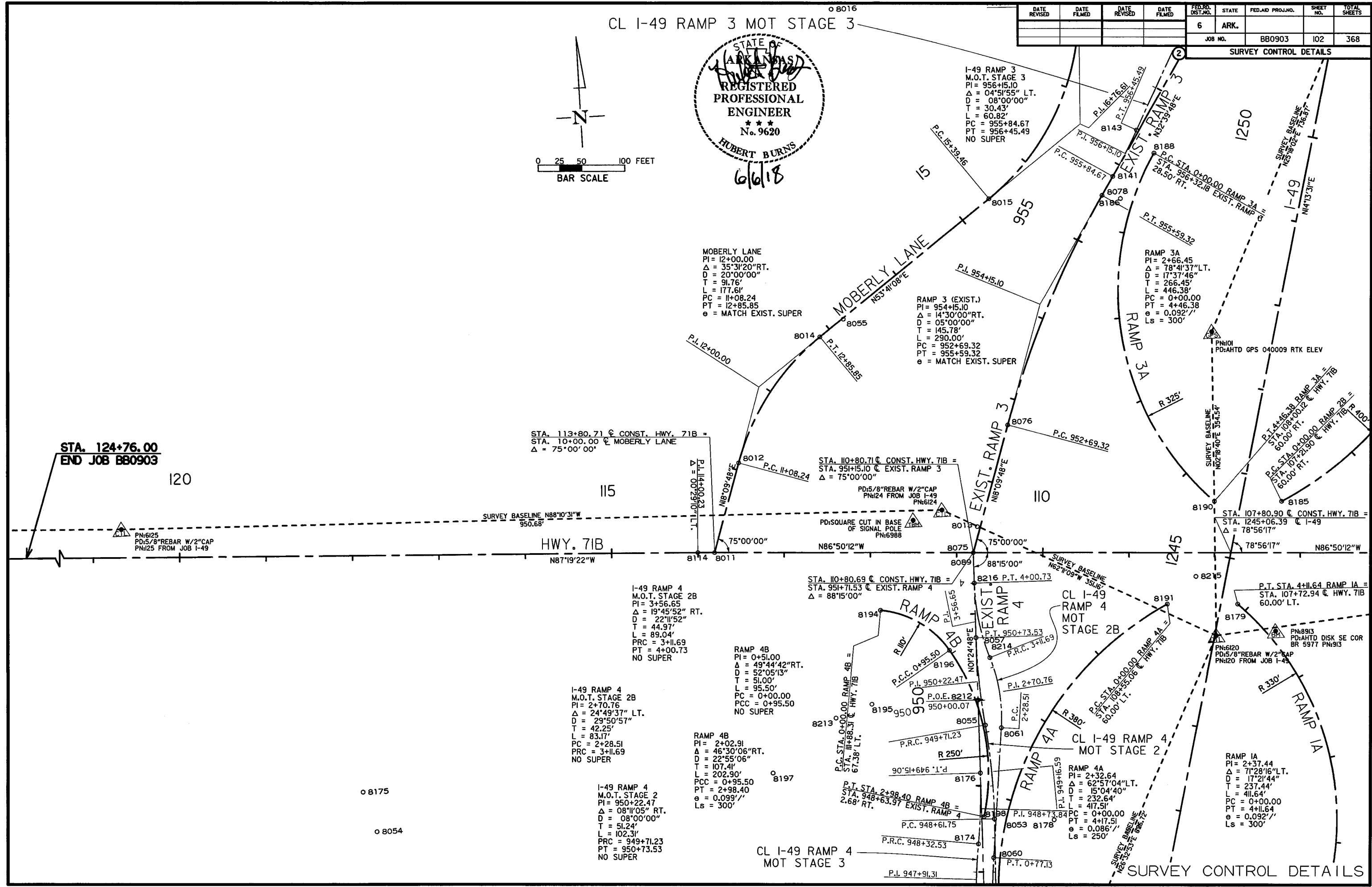
SURVEY CONTROL DETAILS

CL I-49 RAMP 3 MOT STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AD PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		102	368



SURVEY CONTROL DETAILS



MOBERLY LANE
 PI = 12+00.00
 $\Delta = 35^{\circ}31'20''$ RT.
 D = 20'00'00"
 T = 91.76'
 L = 177.61'
 PC = 11+08.24
 PT = 12+85.85
 e = MATCH EXIST. SUPER

RAMP 3 (EXIST.)
 PI = 954+15.10
 $\Delta = 14^{\circ}30'00''$ RT.
 D = 05'00'00"
 T = 145.78'
 L = 290.00'
 PC = 952+69.32
 PT = 955+59.32
 e = MATCH EXIST. SUPER

RAMP 3A
 PI = 2+66.45
 $\Delta = 78^{\circ}41'37''$ LT.
 D = 17'37'46"
 T = 266.45'
 L = 446.38'
 PC = 0+00.00
 PT = 4+46.38
 $e = 0.092''$
 Ls = 300'

STA. 113+80.71 ϕ CONST. HWY. 71B =
 STA. 10+00.00 ϕ MOBERLY LANE
 $\Delta = 75^{\circ}00'00''$

STA. 110+80.71 ϕ CONST. HWY. 71B =
 STA. 95+15.10 ϕ EXIST. RAMP 3
 $\Delta = 75^{\circ}00'00''$

STA. 107+80.90 ϕ CONST. HWY. 71B =
 STA. 1245+06.39 ϕ I-49
 $\Delta = 78^{\circ}56'17''$

I-49 RAMP 4
 M.O.T. STAGE 2B
 PI = 3+56.65
 $\Delta = 19^{\circ}45'52''$ RT.
 D = 22'11'52"
 T = 44.97'
 L = 89.04'
 PRC = 3+11.69
 PT = 4+00.73
 NO SUPER

RAMP 4B
 PI = 0+51.00
 $\Delta = 49^{\circ}44'42''$ RT.
 D = 52'05'13"
 T = 51.00'
 L = 95.50'
 PC = 0+00.00
 PCC = 0+95.50
 NO SUPER

I-49 RAMP 4
 M.O.T. STAGE 2B
 PI = 2+70.76
 $\Delta = 24^{\circ}49'37''$ LT.
 D = 29'50'57"
 T = 42.25'
 L = 83.17'
 PC = 2+28.51
 PRC = 3+11.69
 NO SUPER

RAMP 4B
 PI = 2+02.91
 $\Delta = 46^{\circ}30'06''$ RT.
 D = 22'55'06"
 T = 107.41'
 L = 202.90'
 PCC = 0+95.50
 PT = 2+98.40
 $e = 0.099''$
 Ls = 300'

I-49 RAMP 4
 M.O.T. STAGE 2
 PI = 950+22.47
 $\Delta = 08^{\circ}11'05''$ RT.
 D = 08'00'00"
 T = 51.24'
 L = 102.31'
 PRC = 949+71.23
 PT = 950+73.53
 NO SUPER

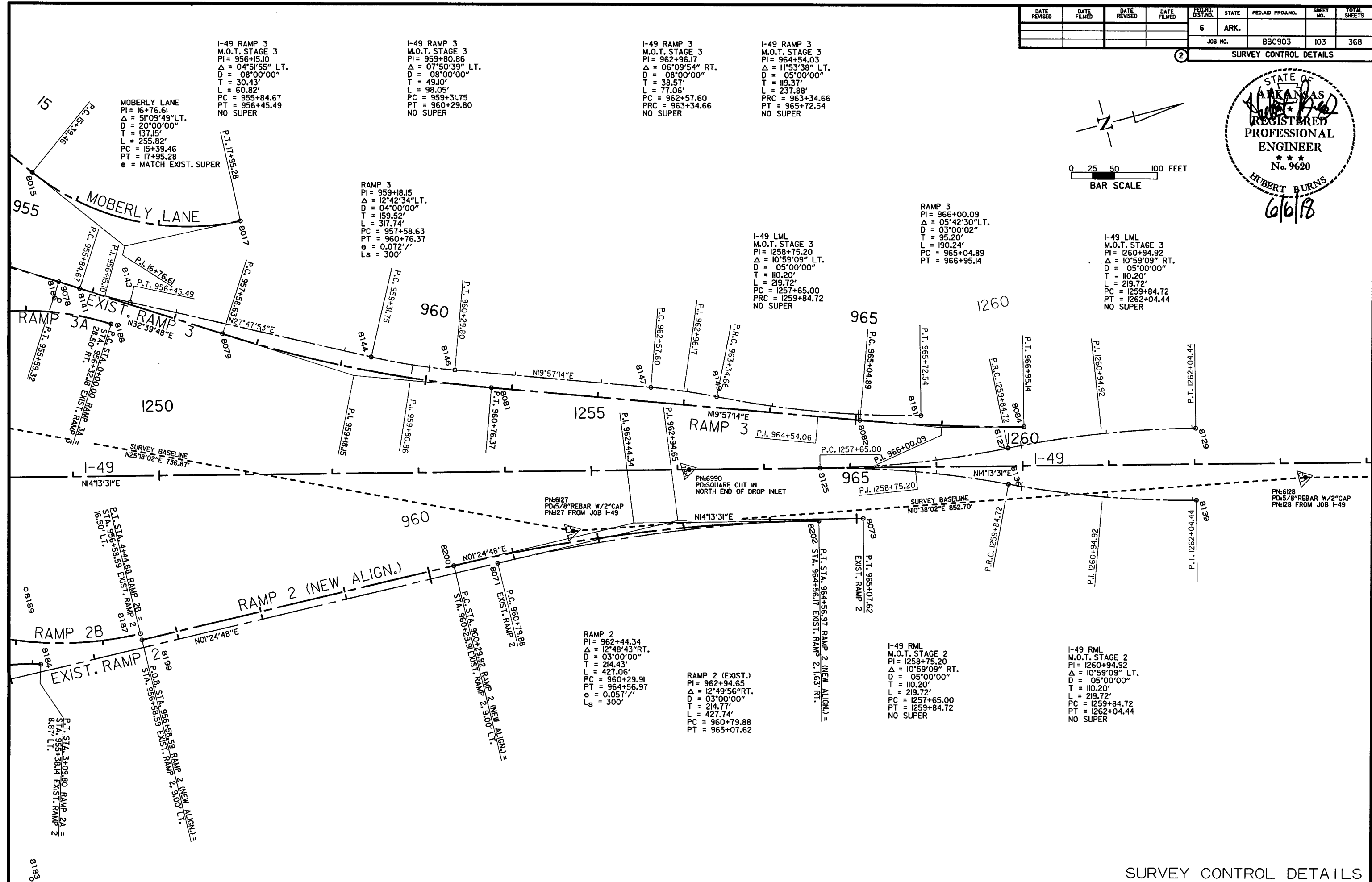
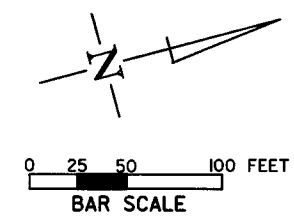
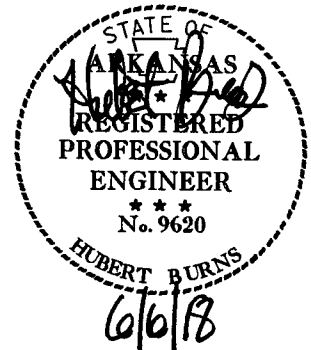
RAMP IA
 PI = 2+37.44
 $\Delta = 71^{\circ}28'16''$ LT.
 D = 17'21'44"
 T = 237.44'
 L = 411.64'
 PC = 0+00.00
 PT = 4+11.64
 $e = 0.092''$
 Ls = 300'

SURVEY CONTROL DETAILS

USER: mns114
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 PLOTTED: 6/6/2018 11:42
 SCALE: 1/400

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	103	368	

2 SURVEY CONTROL DETAILS

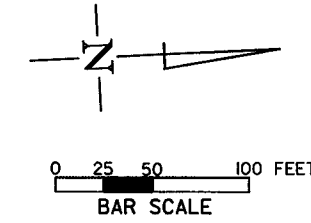
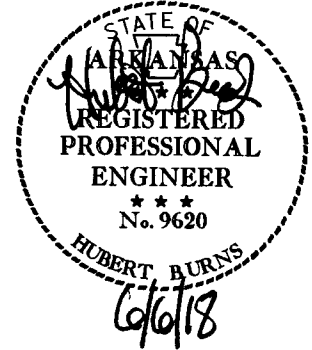


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 SCALE: 1/400

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	104	368	

2 SURVEY CONTROL DETAILS



1200

1205

1210

1215

I-49

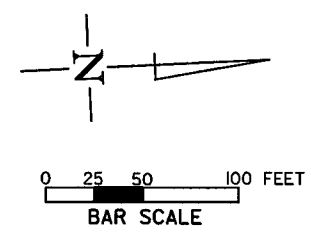
PN:6982
PD: SQUARE CUT IN NORTH
END OF DROP INLET

SURVEY BASELINE
N02°28'53"E 918.63'

SURVEY BASELINE
N02°44'16"E 986.45'

PN:8541
PD: 5/8" REBAR W/2" CAP
5' WEST OF W I-49

PN:6095
PD: 5/8" REBAR W/2" CAP
PN:95 FROM JOB I-49



1215

1220

1225

I-49

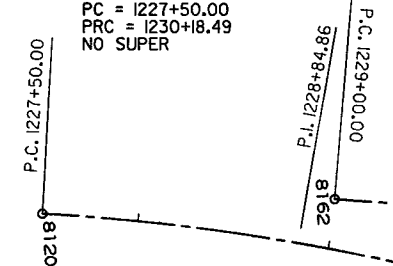
PN:6983
PD: SQUARE CUT IN NORTH
END OF DROP INLET

SURVEY BASELINE
N02°44'16"E 986.45'

SURVEY BASELINE
N03°32'04"E 831.97'

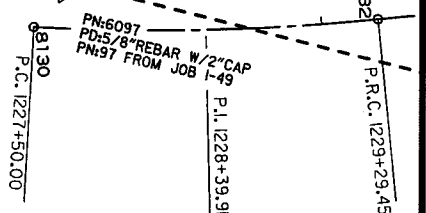
PN:6096
PD: 5/8" REBAR W/2" CAP
PN:96 FROM JOB I-49

I-49 LML
M.O.T. STAGE 3
PI = 1228+84.86
Δ = 13°25'28" RT.
D = 05°00'00"
T = 134.86'
L = 268.49'
PC = 1227+50.00
PRC = 1230+18.49
NO SUPER



I-49
PI = 1230+19.30
Δ = 11°28'08" RT.
D = 01°00'00"
T = 575.37'
L = 1146.90'
PC = 1224+43.93
PT = 1235+90.83
e = 0.037'/'
Ls = 420'

I-49 RML
M.O.T. STAGE 2
PI = 1228+39.91
Δ = 08°58'20" LT.
D = 05°00'00"
T = 89.91'
L = 179.45'
PC = 1227+50.00
PRC = 1229+29.45
NO SUPER

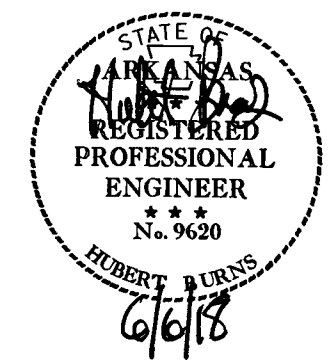
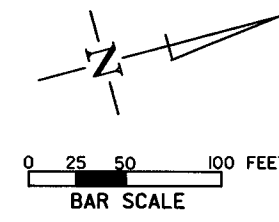


USER: mh5114
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SCALE: 1:100

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	105	368	

2 SURVEY CONTROL DETAILS



1265

1270

1275

PN:6128
PD:5/8"REBAR W/2"CAP
PNI28 FROM JOB I-49

SURVEY BASELINE
N14°07'07"E 806.96'

PN:6991
PD:SQUARE CUT IN NORTH
END OF DROP INLET

PN:8553
PD:5/8"REBAR W/2"CAP
REPLACES PNI I-49

SURVEY BASELINE
N14°17'28"E 953.76'

USER: mhs14
DESIGN FILE: G:\2103305.Hwy7\Inchp\TRANSP\dgn\survey_ct1\BB0903.SC.HWY7IB.01.dgn
PLOTTED: 6/6/2018 11:42 SCALE: 1:100

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18								
				JOB NO.		BB0903	105A	368

2 SURVEY CONTROL DETAILS

APPROX. JOB MID-POINT
 LT: 36.200883598
 LG: 94.135750274

CENTERLINE CONSTRUCTION CONTROL
 Highway 12

Point Name	Type	Station	Northing	Easting
8000	POB	8+14.59	735145.4082	647075.3679
8001	PC	16+95.28	736025.3134	647112.6523
8025	PI	24+13.10	736742.4869	647143.0412
8002	CC		735994.9930	647828.2074
8003	PT	28+21.90	736710.4778	647860.1443
8004	PI	49+67.19	736614.8144	650003.2975
8005	PI	66+83.55	736541.9008	651718.1117
8006	PI	77+22.43	736497.3951	652756.0349
8007	PI	82+72.23	736471.2935	653305.2111
8008	PI	114+03.30	736311.6730	656432.2157
8018	PC	142+59.92	736222.4776	659287.0114
8028	PI	143+63.18	736219.0268	659390.2202
8019	CC		726228.0624	658952.8495
8020	PT	144+66.44	736213.4454	659493.3357
8021	PC	156+33.00	736150.3946	660658.1880
8029	PI	157+96.91	736141.5355	660821.8573
8022	CC		747592.8048	661277.5397
8023	PT	159+60.80	736137.3613	660985.7131
8024	PC	162+00.18	736131.2650	661225.0213
8026	PI	163+55.20	736127.3172	661379.9665
8027	CC		736438.6652	661232.8523
8030	PT	164+87.35	736249.5501	661475.3224
8031	POE	165+75.00	736318.6672	661529.2304



07/16/2018

SURVEY CONTROL COORDINATES

PROJECT NAME: S090251
 DATE: 12/12/2008
 COORDINATE SYSTEM: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
 UNITS: U.S. SURVEY FOOT

POINT NAME	NORTHING	EASTING	ELEV	FEATURE	DESCRIPTION
1	736050.7562	662265.8478	1292.80	CTL	5/8" REBAR W/ 2" ALUM CAP
2	736147.2854	661520.1975	1291.16	CTL	5/8" REBAR W/ 2" ALUM CAP
3	736098.8488	661049.3451	1280.73	CTL	5/8" REBAR W/ 2" ALUM CAP
4	736200.6848	660120.5561	1281.09	CTL	5/8" REBAR W/ 2" ALUM CAP
5	736261.9518	659200.1640	1298.19	CTL	5/8" REBAR W/ 2" ALUM CAP
6	736266.0011	658603.5494	1293.18	CTL	5/8" REBAR W/ 2" ALUM CAP
7	736280.4150	657953.3198	1293.25	CTL	5/8" REBAR W/ 2" ALUM CAP
8	736276.7407	657504.0452	1293.88	CTL	5/8" REBAR W/ 2" ALUM CAP
9	736302.6078	656973.3523	1290.60	CTL	5/8" REBAR W/ 2" ALUM CAP
10	736337.8658	656254.8412	1281.53	CTL	5/8" REBAR W/ 2" ALUM CAP
11	736381.3033	655541.5225	1276.96	CTL	5/8" REBAR W/ 2" ALUM CAP
12	736370.2244	654770.1647	1281.51	CTL	5/8" REBAR W/ 2" ALUM CAP
13	736444.5163	654141.3911	1277.73	CTL	5/8" REBAR W/ 2" ALUM CAP
14	736483.0745	653391.0464	1263.36	CTL	5/8" REBAR W/ 2" ALUM CAP
15	736518.5397	652680.1709	1263.15	CTL	5/8" REBAR W/ 2" ALUM CAP
16	736561.1446	651983.4022	1271.45	CTL	5/8" REBAR W/ 2" ALUM CAP
17	736588.3518	651400.2229	1274.47	CTL	5/8" REBAR W/ 2" ALUM CAP
18	736598.5791	650818.9160	1266.53	CTL	5/8" REBAR W/ 2" ALUM CAP
19	736642.6940	649878.5921	1270.87	CTL	5/8" REBAR W/ 2" ALUM CAP
20	736671.2460	649191.6553	1261.12	CTL	5/8" REBAR W/ 2" ALUM CAP
21	736710.5660	648421.9654	1249.10	CTL	5/8" REBAR W/ 2" ALUM CAP
22	736727.9890	647907.6344	1252.02	CTL	5/8" REBAR W/ 2" ALUM CAP
23	736728.1718	647243.3689	1248.11	CTL	5/8" REBAR W/ 2" ALUM CAP
24	736757.6643	646230.9642	1214.70	CTL	5/8" REBAR W/ 2" ALUM CAP
25	736770.6973	645988.8933	1210.71	CTL	5/8" REBAR W/ 2" ALUM CAP
26	736796.8019	645576.0032	1206.85	CTL	5/8" REBAR W/ 2" ALUM CAP
27	736309.3904	647103.9032	1251.80	CTL	5/8" REBAR W/ 2" ALUM CAP
28	735798.4105	647141.4743	1239.09	CTL	5/8" REBAR W/ 2" ALUM CAP
100	736032.6376	669238.5584	1305.45	GPS	5/8" REBAR W/ 2" ALUM CAP STAMPED: AR STATE HWY TRANS. DEPT., 1998, POINT NO. 040009
101	736599.2365	649561.7526	1267.72	GPS	5/8" REBAR W/ 2" ALUM CAP STAMPED: AR STATE HWY TRANS. DEPT., 1998, POINT NO. 040021
900	735907.3790	667268.7963	1261.58	BM	AHTD CAP ON EAST END OF 5 BARREL BOX CULVERT ON NORTH SIDE OF HY. 71B
901	736006.3307	665183.5471	1275.14	BM	CHISELED SQ CENTER OF HEADWALL AT INTERSECTION OF HIGHWAY 71B AND J STREET ON NE CORNER
902	736040.6541	664187.0383	1288.29	BM	300' EAST OF HIGHWAY 71B AND FOUNTAIN DRIVE
903	736057.8484	663815.6108	1293.22	BM	AHTD CAP ON TOP OF CATCH BASIN NORTH OF HIGHWAY 71B
904	736194.7998	661478.7553	1291.84	BM	CHISELED SQUARE IN CONCRETE ISLAND AT INTERSEC. OF 71B AND HWY 112
905	736275.1453	659110.8314	1298.63	BM	CHISELED SQUARE IN CONCRETE SIDEWALK ON NORTH SIDE OF HIGHWAY 12
906	736232.7379	657091.2287	1292.61	BM	CHISELED SQUARE ON TOP OF CURB SOUTH SIDE HIGHWAY 12 AT INTERSECTION OF EDEN BROOKE
907	736366.3224	654673.8461	1281.57	BM	CHISELED SQUARE AT BACK OF SIDE SIDEWALK 200' EAST OF HY. 12 AND MAPLE INTERSECTION
908	736411.8403	653343.2713	1261.51	BM	CHISELED SQUARE ON TOP OF HEADWALL IN FRONT OF BRIGHT GRILL ON HY. 112
909	736526.8398	651080.4338	1271.12	BM	CHISELED SQUARE ON TOP OF CONCRETE MANHOLE NEXT TO INTERSECTION OF FEATHERSTON AND HY 12
910	736639.9116	648452.3626	1251.54	BM	CHISELED SQUARE ON TOP OF CATCH CORNERSTONE AND HIGHWAY 12
911	736765.3984	646153.1856	1213.36	BM	CHISELED SQUARE ON TOP OF CATCH BASIN AT INTERSECTION OF SHELL AND BLOSSOM SOUTH OF CO. RD
912	735785.6285	647163.2122	1240.66	BM	CHISELED SQUARE ON TOP OF CONCRETE PUMP STATION EAST OF HY. 12

*NOTE - REBAR AND CAP - STANDARD - 5/8" REBAR WITH 2" ALUMINUM CAP STAMPED: ARKANSAS HWY. TRANS. DEPT., JOB#090251, PN *
 *(STANDARD MARKINGS COMMON TO ALL CAPS), OR AS INDICATED
 (OTHER MARKINGS INDICATED IN THE POINT DESCRIPTION OF THE INDIVIDUAL POINT).
 USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
 A PROJECT CAF OF 0.9999612441 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
 THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
 GRID DISTANCE = GROUND DISTANCE X CAF.
 GRID COORDINATES ARE STORED UNDER FILE NAME 090251G1.CTL
 HORIZONTAL DATUM: NAD 83 (1997)
 VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
 AT A SPECIFIC POINT.
 ELEVATION FOR POINTS 1-28, 100-101 & 900-912 ESTABLISHED BY 3 WIRE LEVEL RUNS BASED
 ON NGS BM R26 VIA AHTD GPS 040009 FROM AHTD JOB 090236.

BASIS OF BEARING:
 ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
 DETERMINED FROM GPS CONTROL POINTS: 040009 - 040021
 CONVERGENCE ANGLE: 01:18:34.08295 LEFT AT LT:36-20-08.8 LG:94-13-39.4
 GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

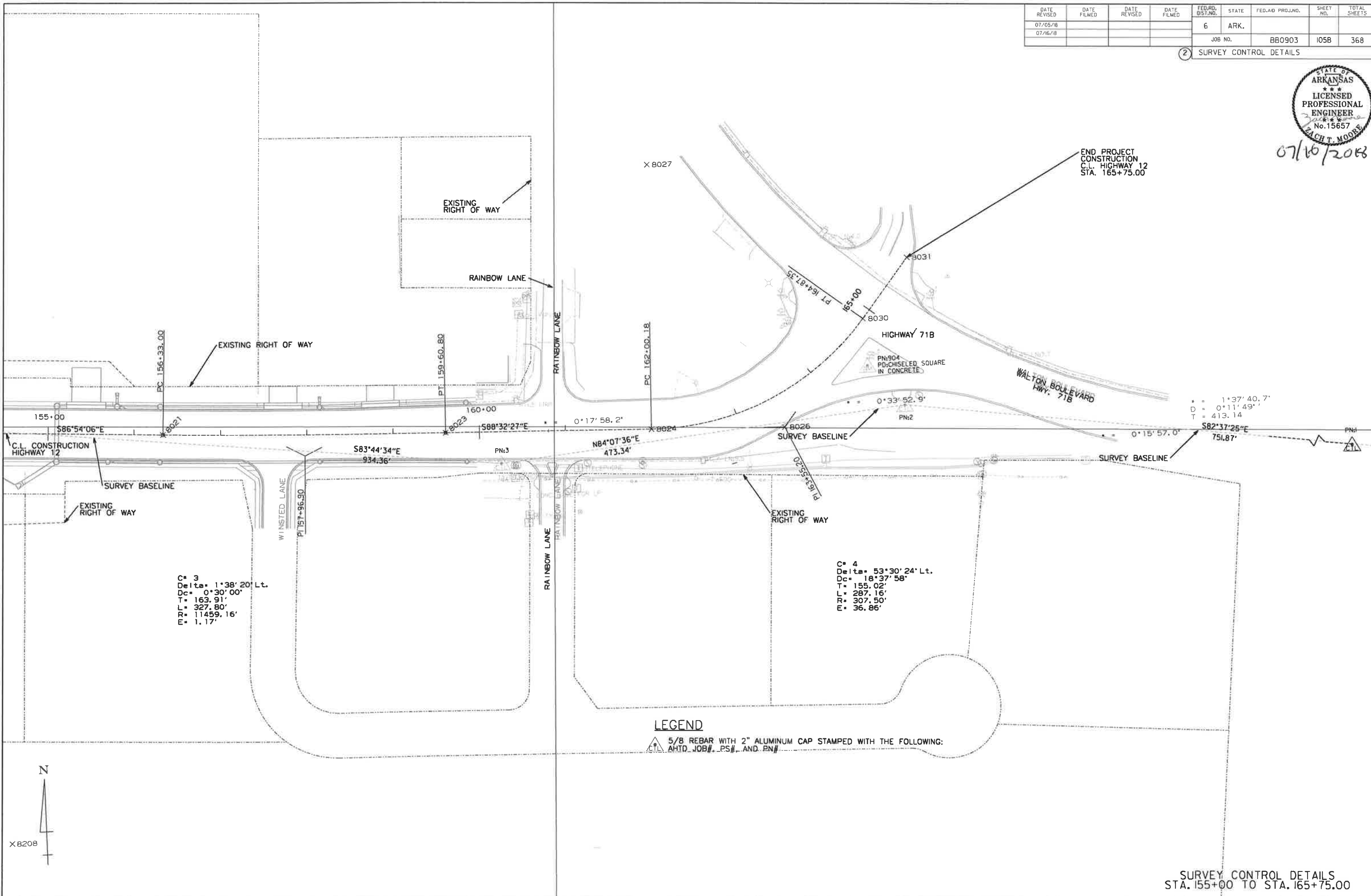
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 WORKSPACE: AHTD
 LA:2008\08053550 - Brivar Hwy I2\Drawings\Walton Intersection Drawings\112_SCD_H12_01.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/16				6	ARK.			
07/16/18						JOB NO. BB0903	105B	368

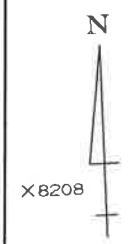
2 SURVEY CONTROL DETAILS



07/16/2018



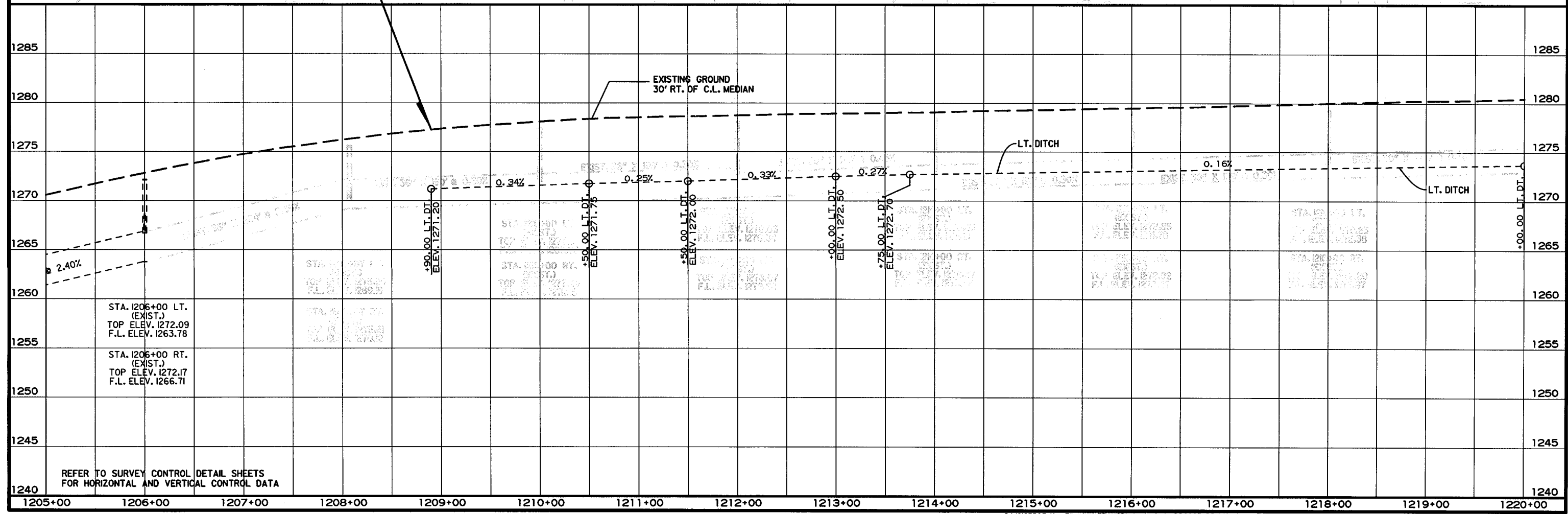
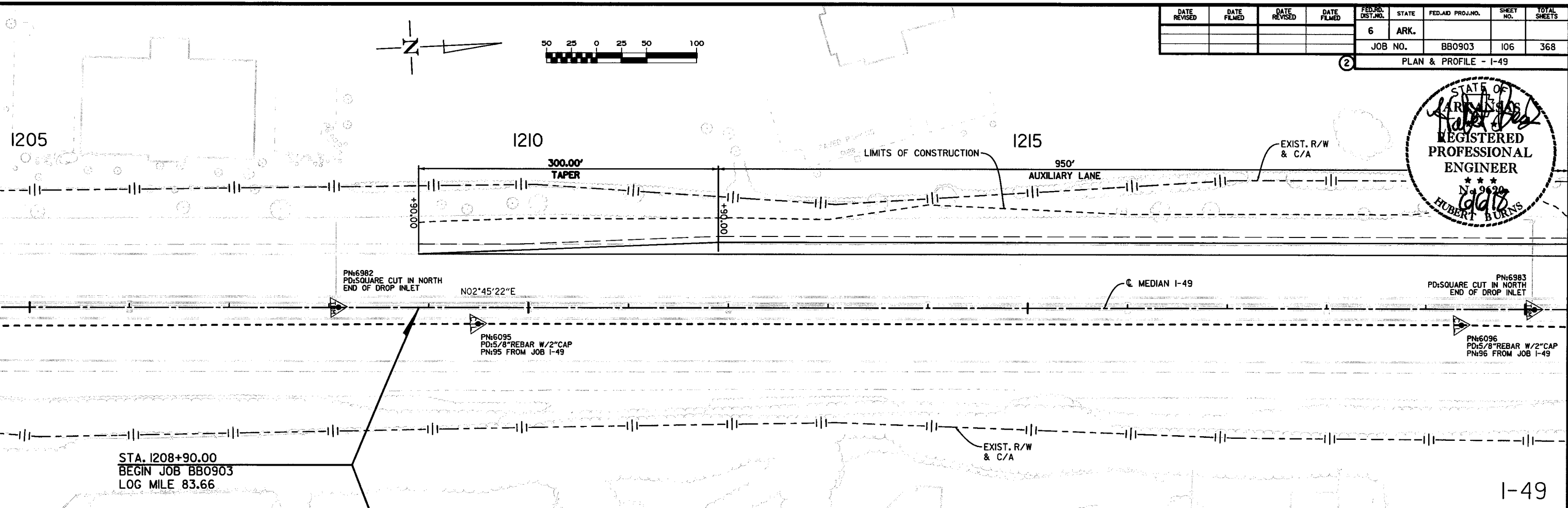
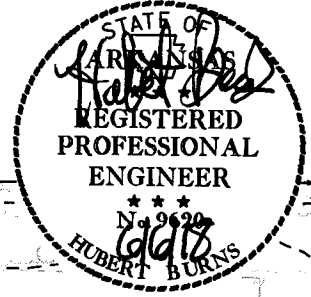
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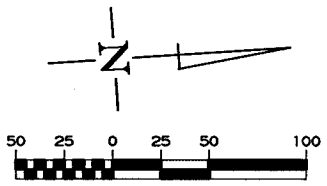
SURVEY CONTROL DETAILS
 STA. 155+00 TO STA. 165+75.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	106	368	

2 PLAN & PROFILE - I-49



USER: m514
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 PLOTTED: 6/6/2018 11:42
 MODEL: PLAN AND PROFILE SHEETS
 SCALE: 1/80



CONCRETE MEDIAN BARRIER

TYPE C	STA. 1228+50	TO	STA. 1229+66
SP-1	STA. 1229+66	TO	STA. 1229+91
SP-1	STA. 1230+09	TO	STA. 1230+34
TYPE C	STA. 1230+34	TO	STA. 1237+15
TYPE B	STA. 1237+15	TO	STA. 1243+51

CONCRETE SIDE BARRIER

STA.	STA.	SIDE	TYPE	LIN.FT.
1230+00	1234+15	LT.	E	415'

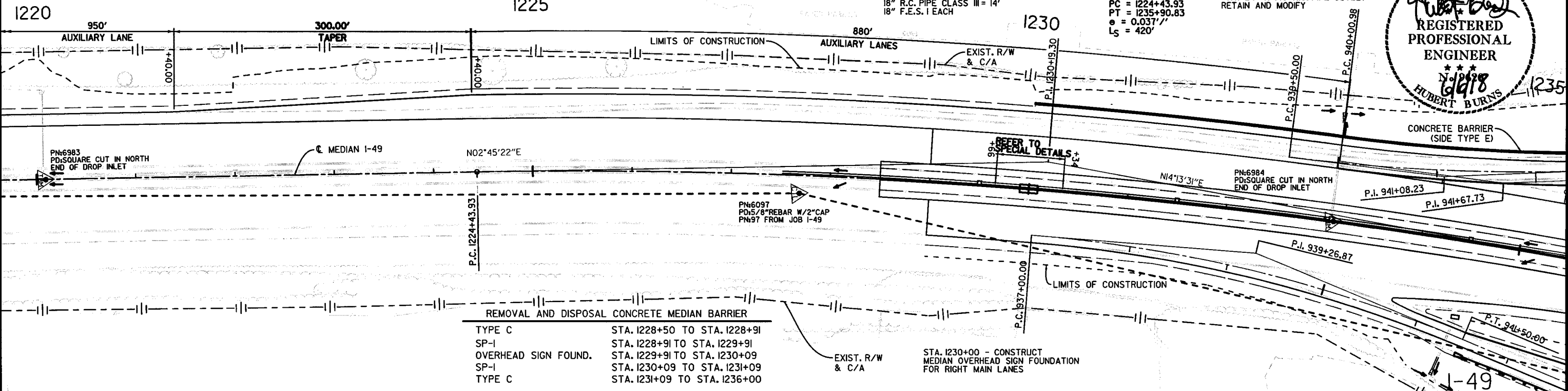
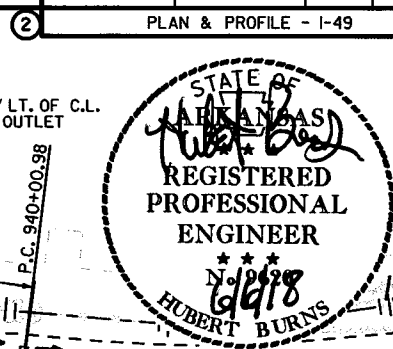
STA. 1231+50 - IN PLACE
TYPE ST DROP INLET 2.5' LT. OF C.L.
WITH 24" X 198" R.C. PIPE OUTLET
RETAIN AND MODIFY

STA. 1233+07 - IN PLACE
TYPE ST DROP INLET 2.5' LT. OF C.L.
WITH 18" X 97" R.C. PIPE OUTLET W/F.E.S.
& 24" X 154" R.C. PIPE OUTLET
RETAIN AND MODIFY INLET
REMOVE F.E.S. LT. & EXTEND
18" R.C. PIPE CULV'T. 14' LT. W/F.E.S.
18" R.C. PIPE CLASS III = 14'
18" F.E.S. 1 EACH

I-49
PI = 1230+19.30
Δ = 11°28'08" RT.
D = 0°00'00"
T = 575.37'
L = 1146.90'
PC = 1224+43.93
PT = 1235+90.83
e = 0.037'/'
Ls = 420'

STA. 1234+50 - IN PLACE
TYPE ST DROP INLET 2.5' LT. OF C.L.
WITH 24" X 140" R.C. PIPE OUTLET
RETAIN AND MODIFY

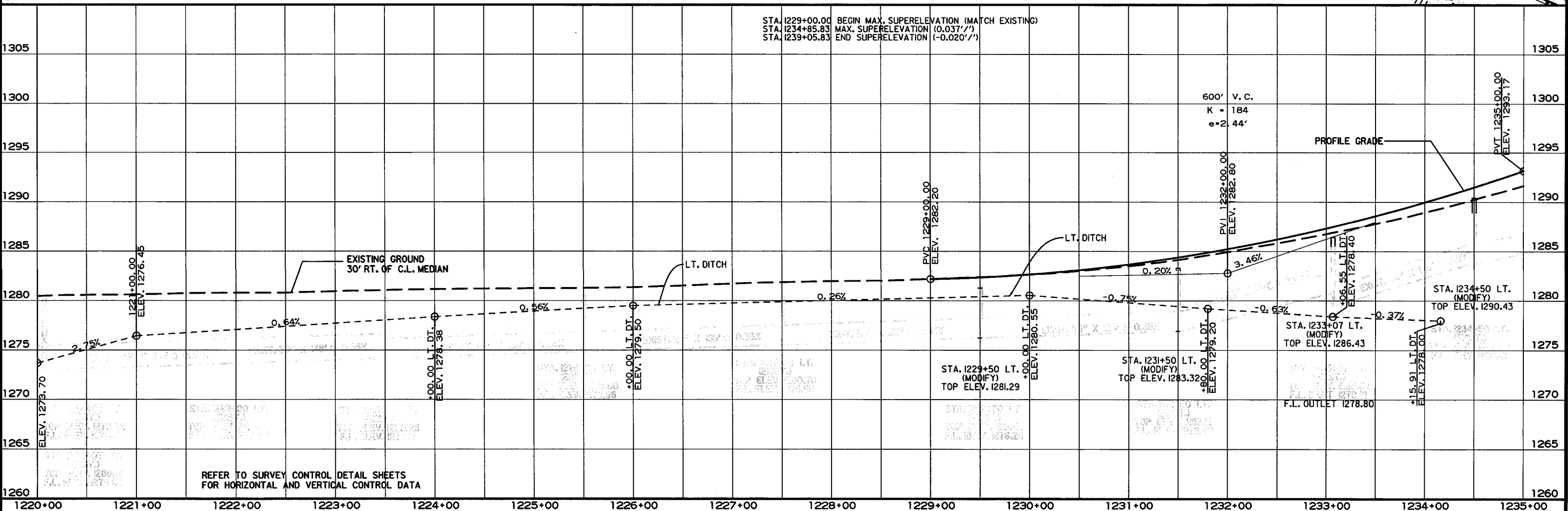
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AD PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. BB0903							107	368



REMOVAL AND DISPOSAL CONCRETE MEDIAN BARRIER

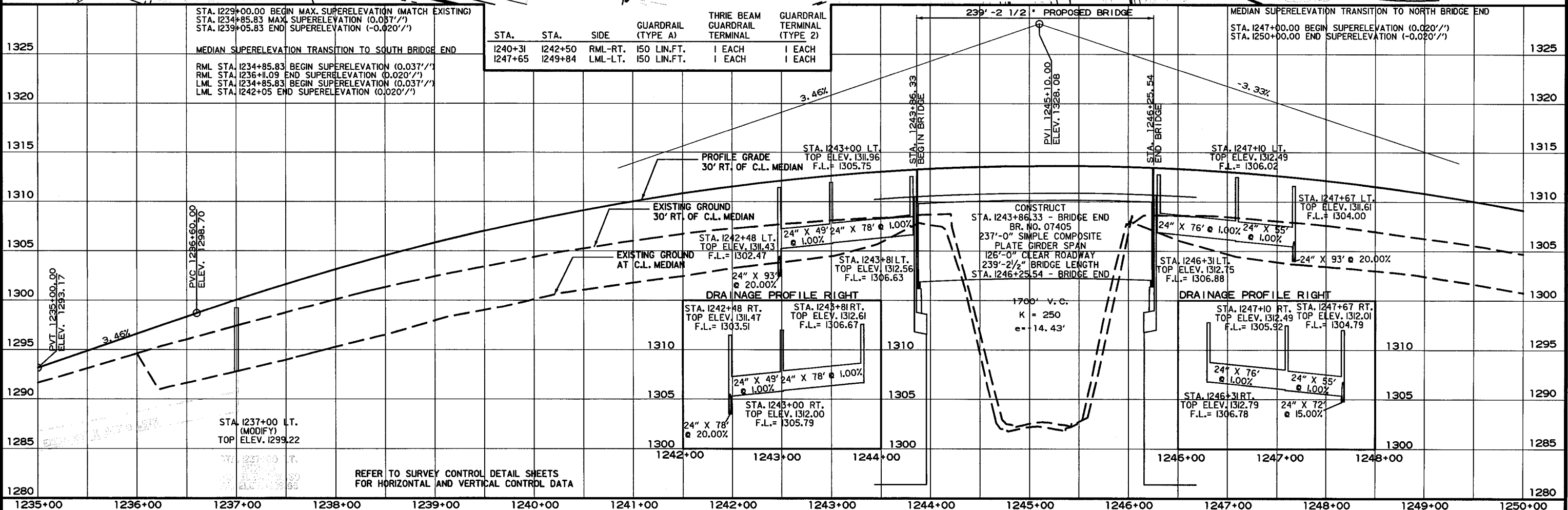
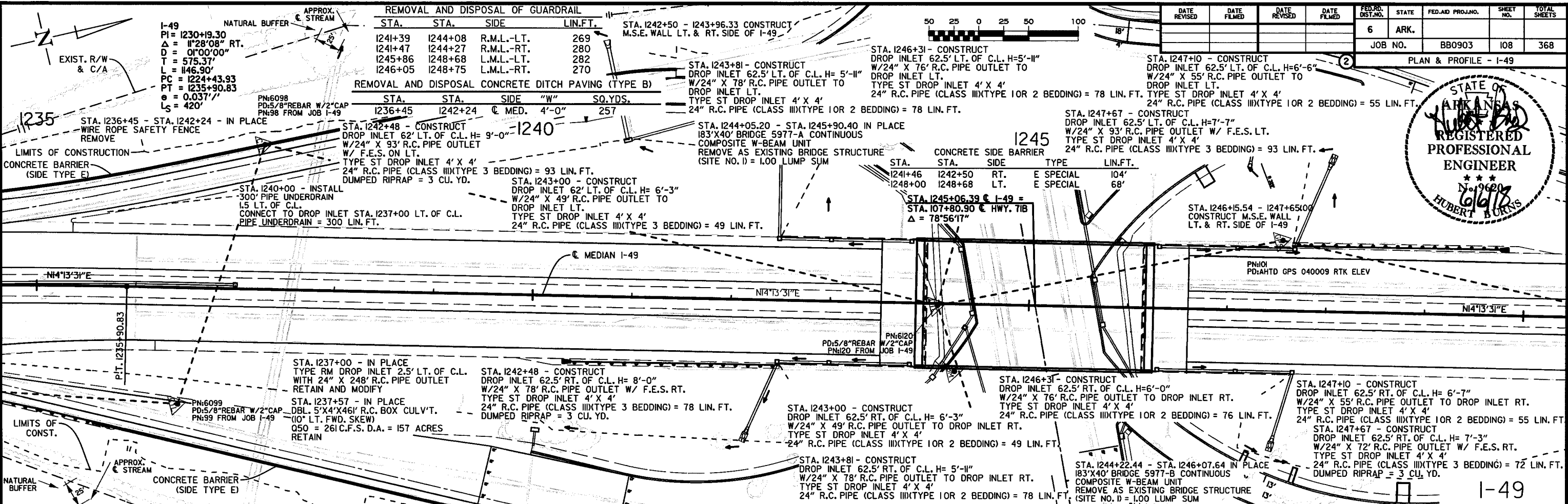
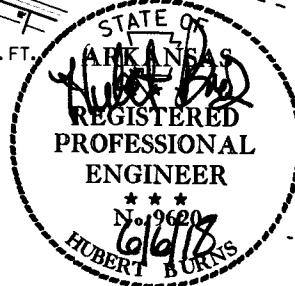
TYPE C	STA. 1228+50 TO STA. 1228+91
SP-1	STA. 1228+91 TO STA. 1229+91
OVERHEAD SIGN FOUND.	STA. 1229+91 TO STA. 1230+09
SP-1	STA. 1230+09 TO STA. 1231+09
TYPE C	STA. 1231+09 TO STA. 1236+00

STA. 1229+00.00 BEGIN MAX. SUPERELEVATION (MATCH EXISTING)
STA. 1234+85.83 MAX. SUPERELEVATION (0.037'/'')
STA. 1239+05.83 END SUPERELEVATION (-0.020'/'')



REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL DATA

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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

REMOVAL AND DISPOSAL CONCRETE MEDIAN BARRIER
TYPE B STA. 1257+00 TO STA. 1260+00

CONCRETE MEDIAN BARRIER
TYPE B STA. 1246+61 TO STA. 1260+00

STA. 1256+12 - IN PLACE
TYPE R DROP INLET IN
MEDIAN ON TOP OF NORTHERN MOST
STRING OF DBL. 36" R.C. PIPE
MODIFY

STA. 1256+04 - IN PLACE
DBL. 36" X 218' R.C. PIPE CULV.T.
W/F.E.S. LT. & RT.
050 = 75 C.F.S.D.A. = 51 ACRES
REMOVE F.E.S. LT. &
EXTEND 8' LT. W/F.E.S. LT.
36" R.C. PIPE CLASS III = 16'
36" F.E.S. = 2 EACH

STA. 1253+00 - CONSTRUCT
DROP INLET 2.5' LT. OF C.L. H= 8'-3"
WITH 24" X 300' R.C. PIPE OUTLET
CONNECT TO DROP INLET STA. 1256+04 LT. OF C.L.
TYPE ST DROP INLET 4' X 4'
24" R.C. PIPE (CLASS III) TYPE 3 BEDDING) = 300 LIN. FT.

STA. 1253+00 - CONSTRUCT
DROP INLET 2.5' RT. OF C.L. H= 8'-3"
WITH 24" X 2' R.C. PIPE OUTLET
CONNECT TO DROP INLET STA. 1253+00 LT. OF C.L.
TYPE ST DROP INLET 4' X 4'
24" R.C. PIPE (CLASS III) TYPE 3 BEDDING) = 2 LIN. FT.

STA. 1256+04 - CONSTRUCT
DROP INLET 2.5' LT. OF C.L. H= 11'-11"
WITH 36" X 4' R.C. PIPE OUTLET
CONNECT TO EXIST. R.C. PIPE OUTLET STA. 1256+04
TYPE ST DROP INLET 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 4 LIN. FT.

STA. 1256+04 - CONSTRUCT
DROP INLET 2.5' RT. OF C.L. H= 11'-11"
WITH CONCRETE COLLAR
& 36" X 4' R.C. PIPE INLET
& WITH 36" X 2' R.C. PIPE OUTLET
CONNECT TO EXIST. R.C. PIPE INLET STA. 1256+04
TYPE ST DROP INLET 4' X 4'
36" R.C. PIPE (CLASS III) TYPE 3 BEDDING) = 6 LIN. FT.

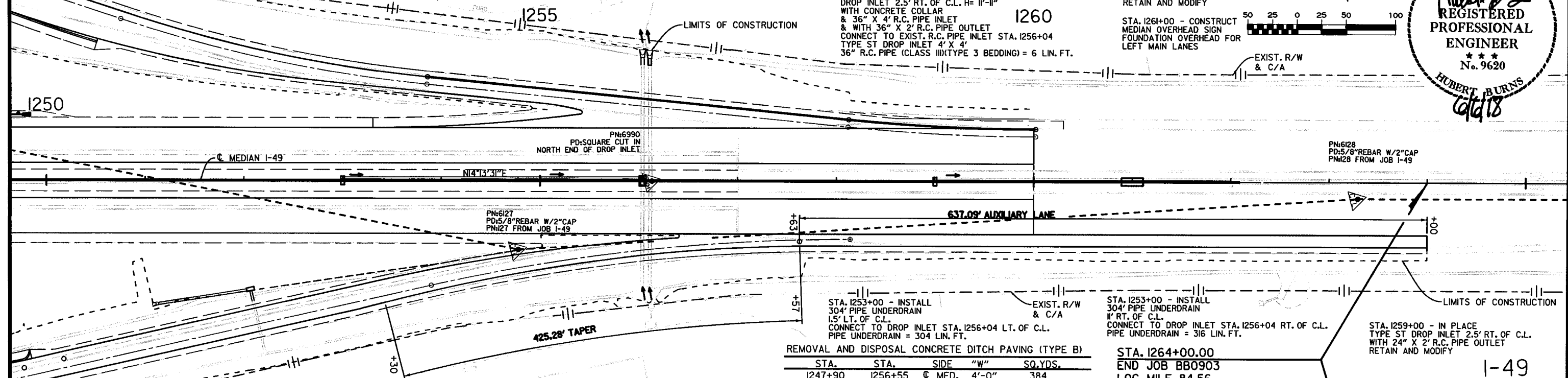
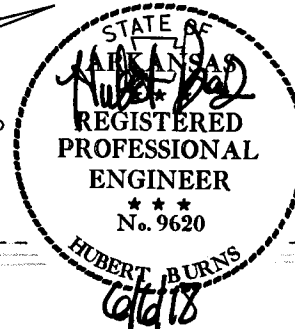
STA. 1247+90 - STA. 1256+55 - IN PLACE
WIRE ROPE SAFETY FENCE
REMOVE

STA. 1259+00 - IN PLACE
TYPE ST DROP INLET 2.5' LT. OF C.L.
WITH 24" X 298' R.C. PIPE OUTLET
RETAIN AND MODIFY

STA. 1261+00 - CONSTRUCT
MEDIAN OVERHEAD SIGN
FOUNDATION OVERHEAD FOR
LEFT MAIN LANES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903		109	368

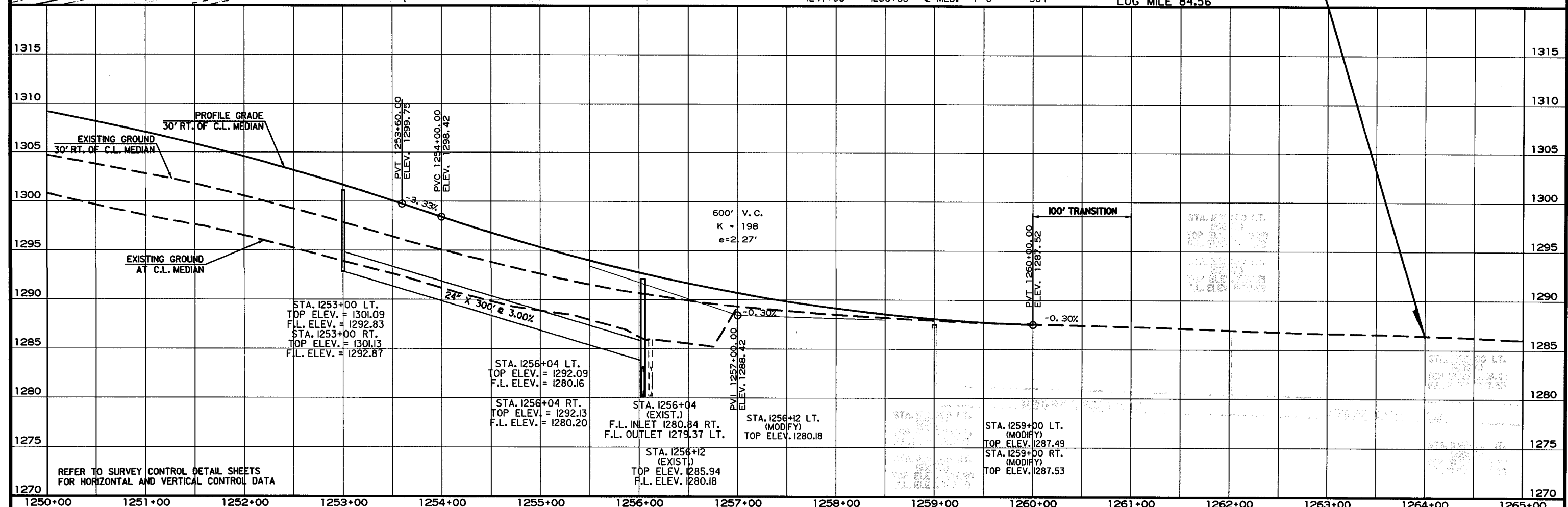
PLAN & PROFILE - 1-49



REMOVAL AND DISPOSAL CONCRETE DITCH PAVING (TYPE B)

STA.	STA.	SIDE	"W"	SQ. YDS.
1247+90	1256+55	☉ MED.	4'-0"	384

STA. 1264+00.00
END JOB BB0903
LOG MILE 84.56

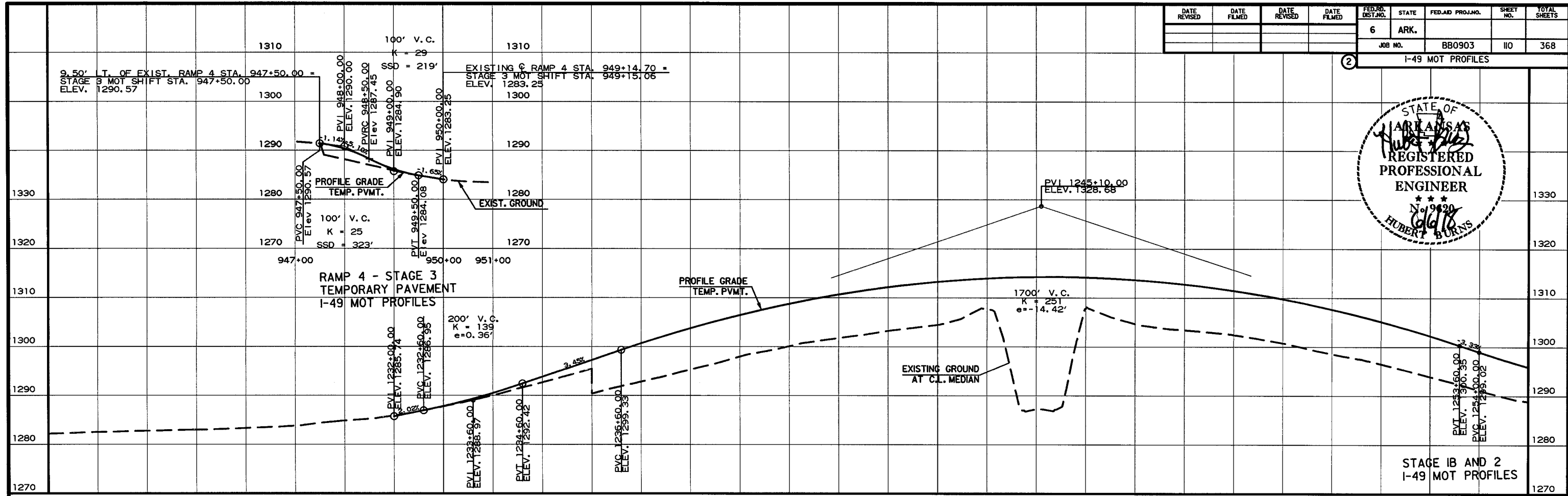
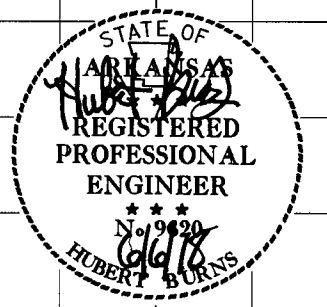


REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL DATA

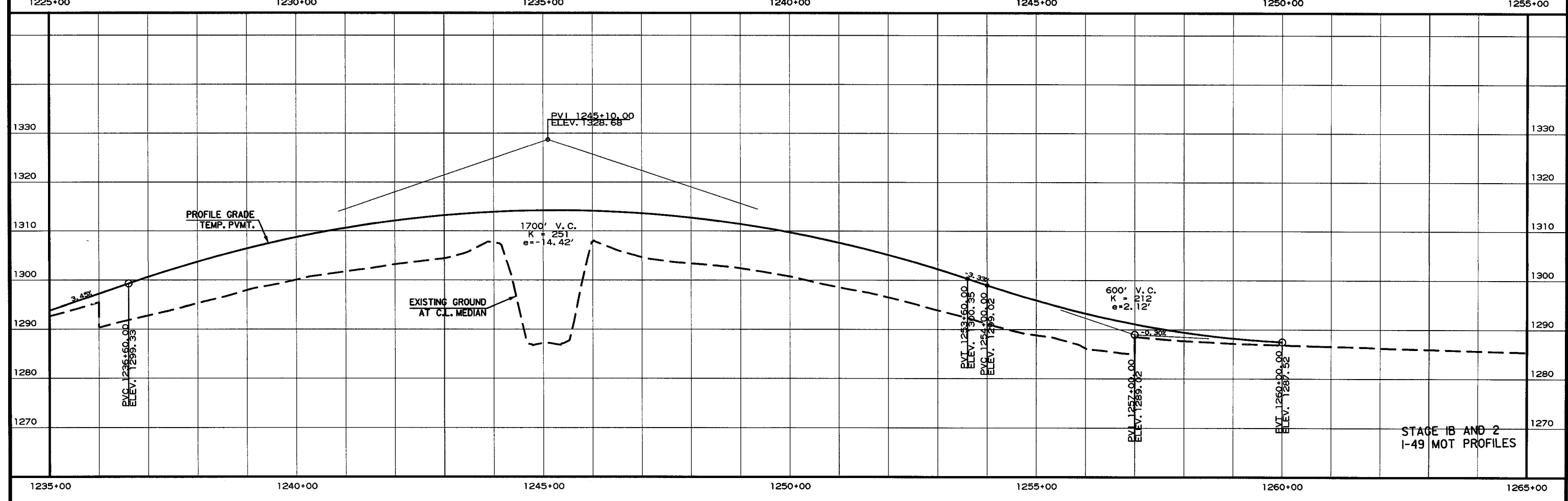
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				JOB NO.	BB0903	II0	368	

② I-49 MOT PROFILES



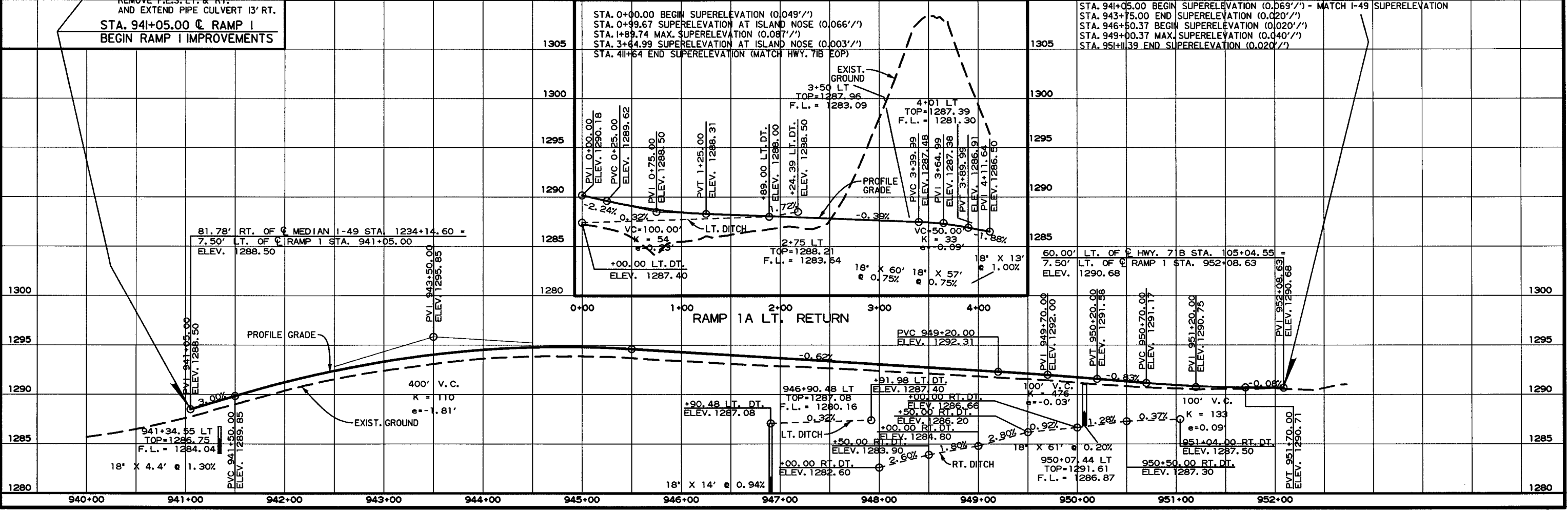
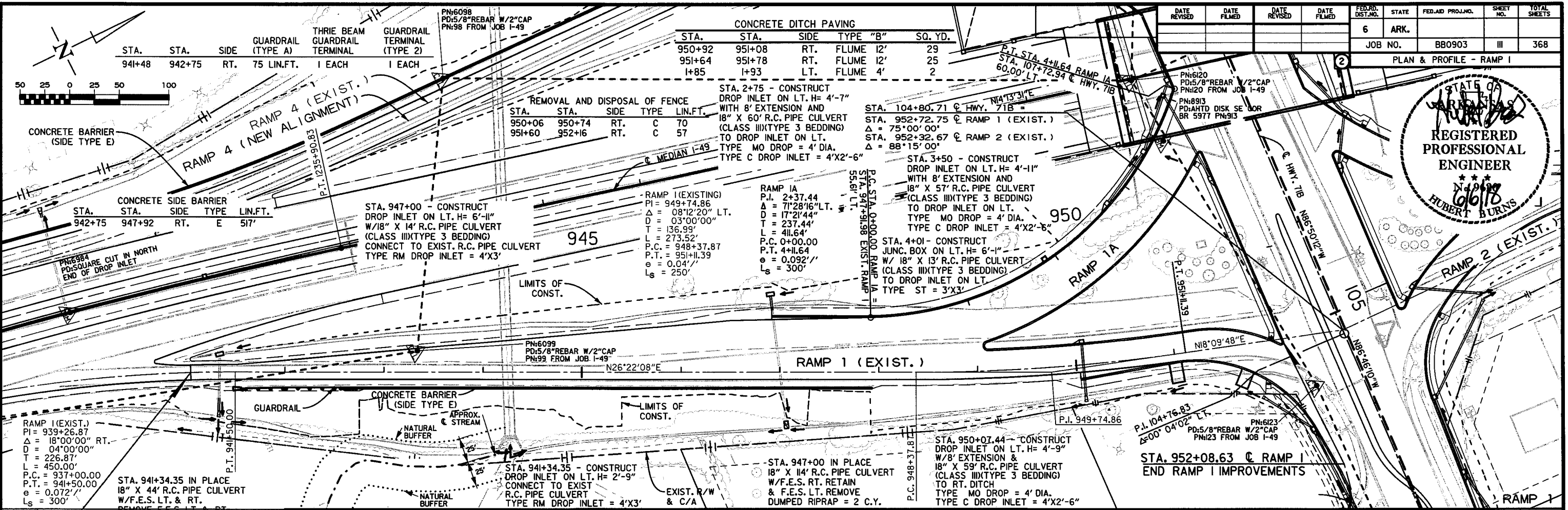
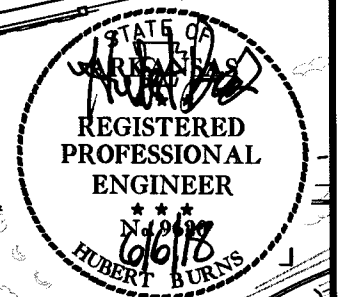
STAGE 1B AND 2 I-49 MOT PROFILES



STAGE 1B AND 2 I-49 MOT PROFILES

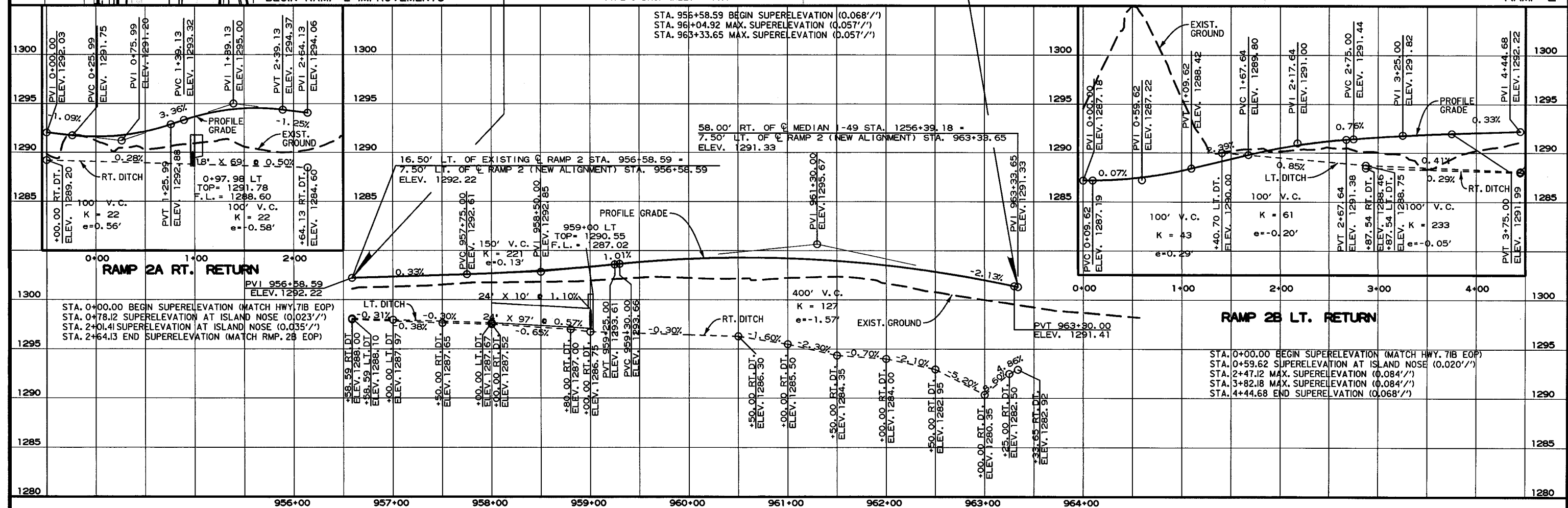
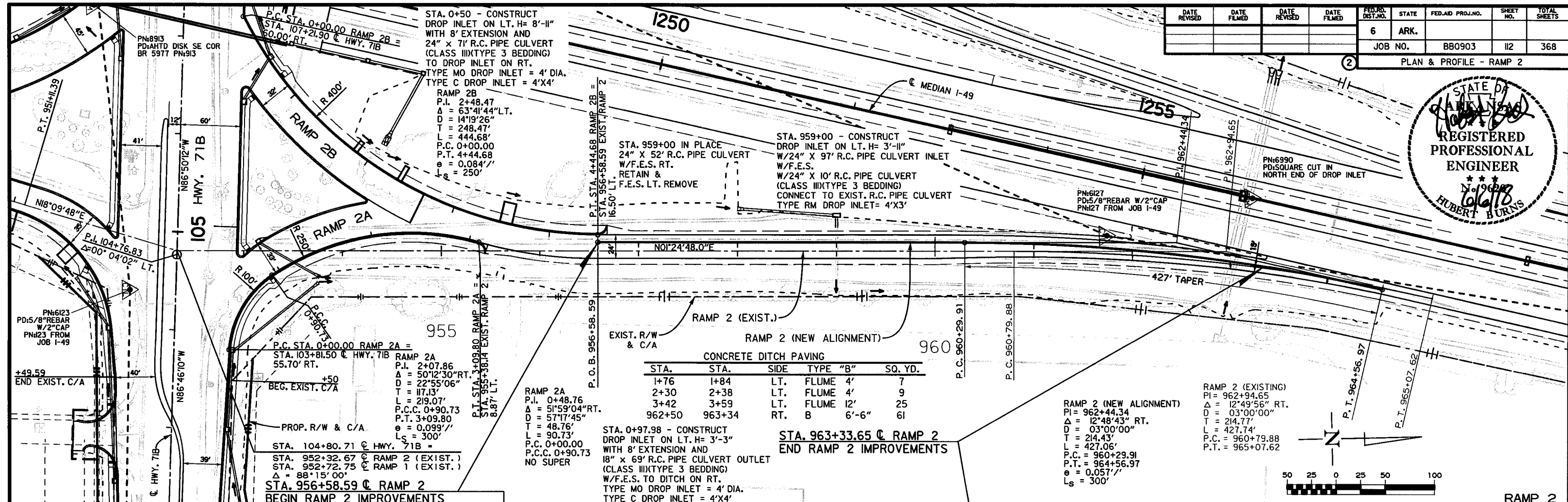
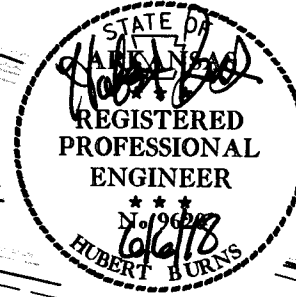
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PLAN & PROFILE - RAMP I



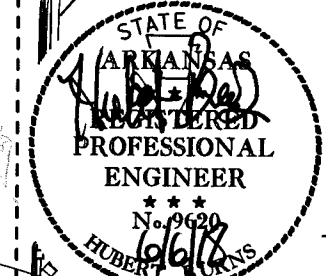
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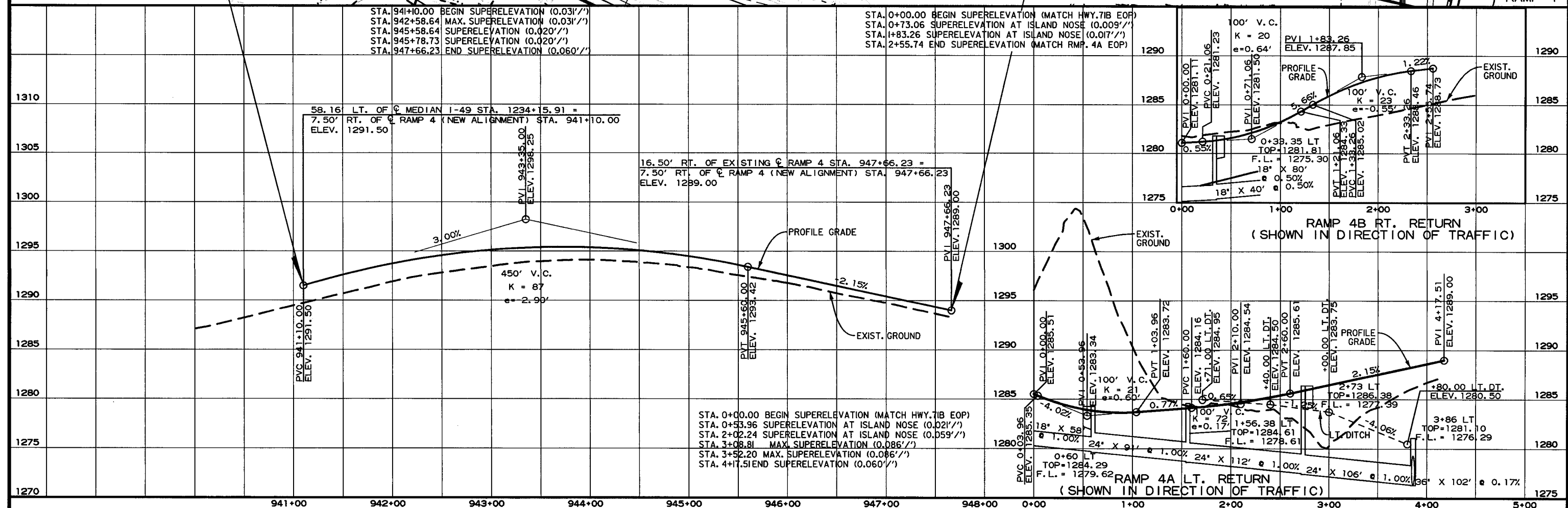
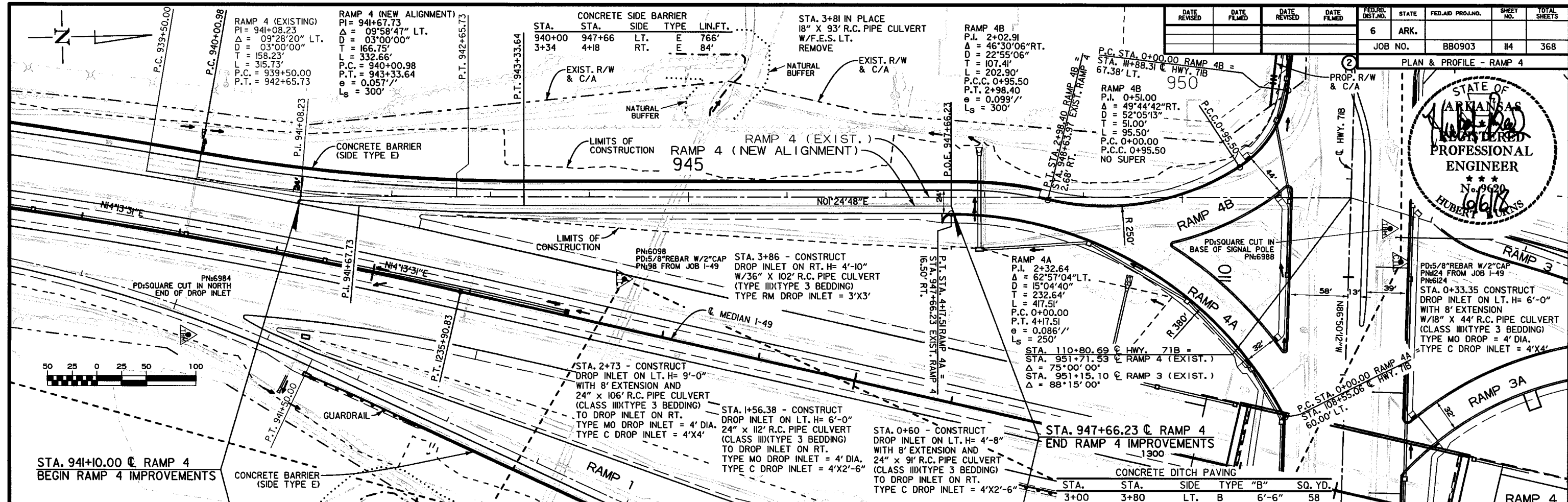


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PLAN & PROFILE - RAMP 4



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06-20-18				6	ARK.			
07-16-18								

PLAN - HWY. 71B



STA. 92+35 - CONSTRUCT JUNC. BOX ON LT. OVER EXIST. 48" X 193' R.C. PIPE CULVERT INLET REMOVE 122' OF R.C. PIPE CULVERT CONSTRUCT 65" X 40" X 6' ARCH R.C. PIPE CULVERT OUTLET (CLASS IV)(TYPE 3 BEDDING) TO JUNC. BOX ON LT. TYPE ST = 7'X7' H= 5'-4"

STA. 92+35 - CONSTRUCT JUNC. BOX ON LT. H= 5'-8" W/65" X 40" X 103' ARCH R.C. PIPE CULVERT (CLASS IV)(TYPE 3 BEDDING) TO JUNC. BOX ON LT. TYPE ST = 7'X7'

STA. 93+42.63 - CONSTRUCT JUNC. BOX ON LT. H= 5'-0" W/65" X 40" X 8' ARCH R.C. PIPE CULVERT (CLASS IV)(TYPE 3 BEDDING) TO DROP INLET ON LT. CONNECT EXIST. 18" PIPE LT. TYPE ST = 7'X7'

STA. 93+57 IN PLACE DROP INLET ON LT. REMOVE W/18" X 56' R.C. PIPE CULVERT INLET RETAIN R.C. PIPE CULVERT AND CONNECT TO JUNC. BOX ON LT.

STA. 93+55.18 - CONSTRUCT DROP INLET ON LT. H= 5'-4" WITH 2-4' EXTENSION & 30" X 11' R.C. PIPE CULVERT INLET (CLASS IV)(TYPE 3 BEDDING) TO EXIST. R.C. PIPE CULVERT RT. & 65" X 40" X 21' ARCH R.C. PIPE CULVERT OUTLET (CLASS IV)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 6'-0" DIA. TYPE C DROP INLET = 5'X7'

STA. 95+79 IN PLACE DROP INLET ON LT. W/54" X 26' R.C. PIPE CULVERT REMOVE & CONSTRUCT 42" X 19' R.C. PIPE CULVERT (CLASS IV)(TYPE 3 BEDDING) TO DROP INLET ON LT.

STA. 95+78.96 - CONSTRUCT TYPE C SPECIAL INLET W/ INTERNAL WEIR ON LT. H= 6'-3" WITH 8' EXTENSION & ARCH 65" X 40" X 24' R.C. PIPE CULVERT TO JCT. ON LT. (CLASS III)(TYPE 3 BEDDING)

STA. 96+05 - CONSTRUCT JCT. BOX ON LT. H= 4'-1" W/ARCH 65" X 40" X 38' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) STUB OUTLET W/F.E.S. TYPE ST INLET 7'X7' DUMPED RIPRAP = 18 C.Y.

STA.	STA.	SIDE	SO.YD.
92+43	97+00	C	525.5
97+00	99+40	LT.	107.4

STA. 96+10 IN PLACE CURB INLET ON LT. W/54" X 12' R.C. PIPE CULVERT W/F.E.S. REMOVE

STA. 96+81 IN PLACE CURB INLET ON LT. W/18" X 66' R.C. PIPE CULVERT TO CURB INLET ON LT. REMOVE

STA. 96+80.92 - CONSTRUCT DROP INLET ON LT. H= 4'-5" WITH 8' EXTENSION & 24" X 68' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 97+75 - CONSTRUCT DROP INLET ON LT. H= 5'-1" WITH 8' EXTENSION & 24" X 89' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO CURB INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 98+82 IN PLACE CURB INLET ON LT. W/18" X 197' R.C. PIPE CULVERT TO CURB INLET ON LT. PLUG AND ABANDON & 10" X 25' C.M. PIPE CULVERT SOUTH REMOVE

STA. 96+30 CONSTRUCT S.R. APPROACH ON LT. = 20 CU. YDS.

STA. 95+34 CONSTRUCT APPROACH ON LT. = 10 CU. YDS. UNCLASSIFIED EXC.

STA. 94+44 CONSTRUCT APPROACH ON LT. = 10 CU. YDS. UNCLASSIFIED EXC.

STA. 95+95 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 7 SQ. YDS

STA. 96+52 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ. YDS

STA. 99+49 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ. YDS

STA. 99+61 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5 SQ. YDS

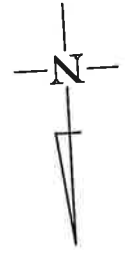
STA. 98+82.45 - CONSTRUCT DROP INLET ON LT. H= 5'-6" WITH 8' EXTENSION & 24" X 103' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO CURB INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 99+32 - CONSTRUCT DROP INLET ON LT. H= 4'-6" W/8' EXTENSION & 18" X 45' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO CURB INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

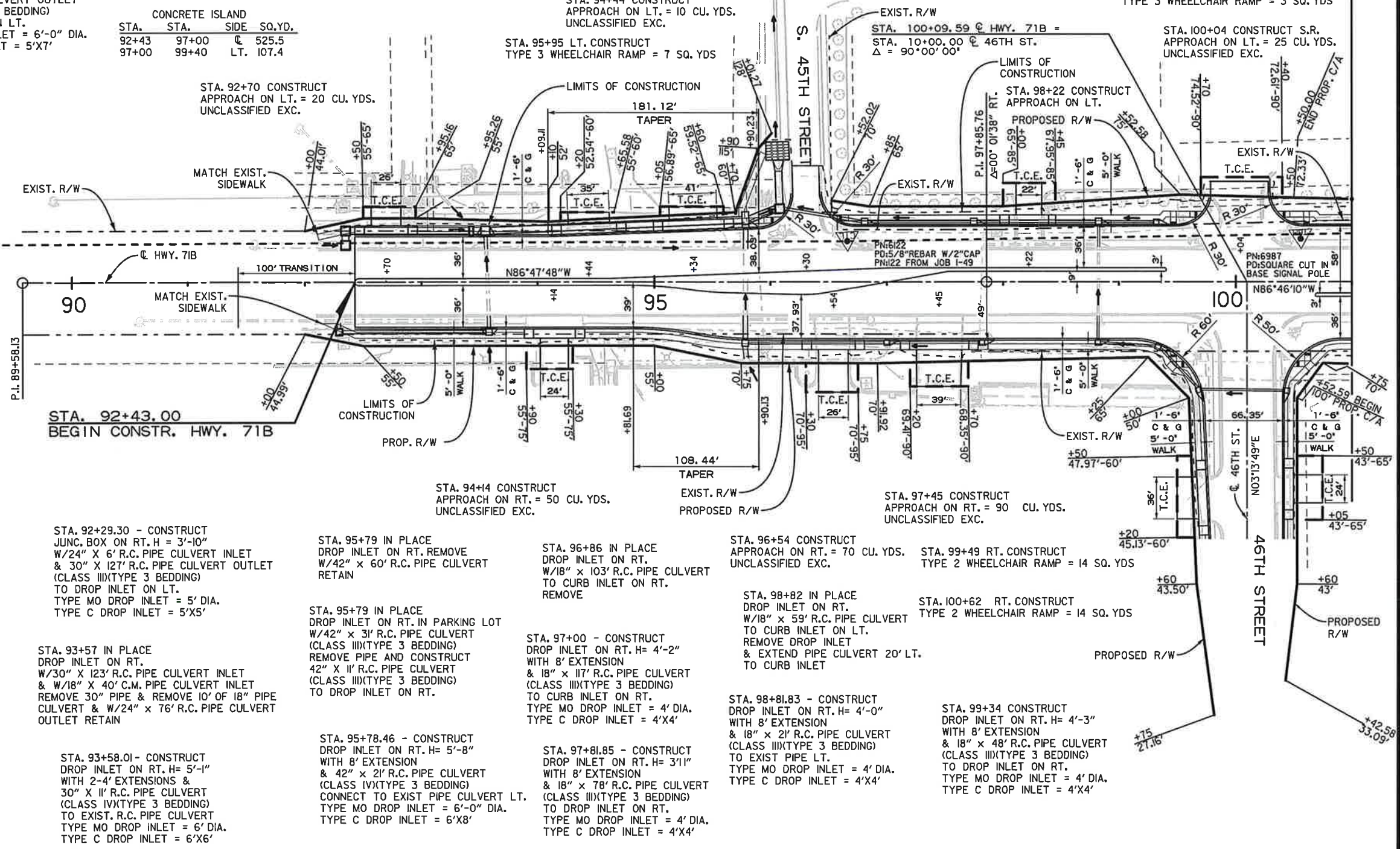
STA. 100+36 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5 SQ. YDS

STA. 100+61 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ. YDS

STA. 100+04 CONSTRUCT S.R. APPROACH ON LT. = 25 CU. YDS. UNCLASSIFIED EXC.



PN#6121 PD:5/8" REBAR W/2" CAP PN#121 FROM JOB I-49



STA. 92+29.30 - CONSTRUCT JUNC. BOX ON RT. H= 3'-10" W/24" X 6' R.C. PIPE CULVERT INLET & 30" X 127' R.C. PIPE CULVERT OUTLET (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X5'

STA. 93+57 IN PLACE DROP INLET ON RT. W/30" X 123' R.C. PIPE CULVERT INLET & W/18" X 40' C.M. PIPE CULVERT INLET REMOVE 30" PIPE & REMOVE 10' OF 18" PIPE CULVERT & W/24" X 76' R.C. PIPE CULVERT OUTLET RETAIN

STA. 93+58.01 - CONSTRUCT DROP INLET ON RT. H= 5'-1" WITH 2-4' EXTENSIONS & 30" X 11' R.C. PIPE CULVERT (CLASS IV)(TYPE 3 BEDDING) TO EXIST. R.C. PIPE CULVERT TYPE MO DROP INLET = 6' DIA. TYPE C DROP INLET = 6'X6'

STA. 95+79 IN PLACE DROP INLET ON RT. REMOVE W/42" X 60' R.C. PIPE CULVERT RETAIN

STA. 95+79 IN PLACE DROP INLET ON RT. IN PARKING LOT W/42" X 31' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) REMOVE PIPE AND CONSTRUCT 42" X 11' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT.

STA. 95+78.46 - CONSTRUCT DROP INLET ON RT. H= 5'-8" WITH 8' EXTENSION & 42" X 21' R.C. PIPE CULVERT (CLASS IV)(TYPE 3 BEDDING) CONNECT TO EXIST PIPE CULVERT LT. TYPE MO DROP INLET = 6'-0" DIA. TYPE C DROP INLET = 6'X8'

STA. 96+86 IN PLACE DROP INLET ON RT. REMOVE W/18" X 103' R.C. PIPE CULVERT TO CURB INLET ON RT. REMOVE

STA. 97+00 - CONSTRUCT DROP INLET ON RT. H= 4'-2" WITH 8' EXTENSION & 18" X 117' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO CURB INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 97+81.85 - CONSTRUCT DROP INLET ON RT. H= 3'11" WITH 8' EXTENSION & 18" X 78' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 96+54 CONSTRUCT APPROACH ON RT. = 70 CU. YDS. UNCLASSIFIED EXC.

STA. 98+82 IN PLACE DROP INLET ON RT. W/18" X 59' R.C. PIPE CULVERT TO CURB INLET ON LT. REMOVE DROP INLET & EXTEND PIPE CULVERT 20' LT. TO CURB INLET

STA. 98+81.83 - CONSTRUCT DROP INLET ON RT. H= 4'-0" WITH 8' EXTENSION & 18" X 21' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO EXIST PIPE LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 99+49 RT. CONSTRUCT TYPE 2 WHEELCHAIR RAMP = 14 SQ. YDS

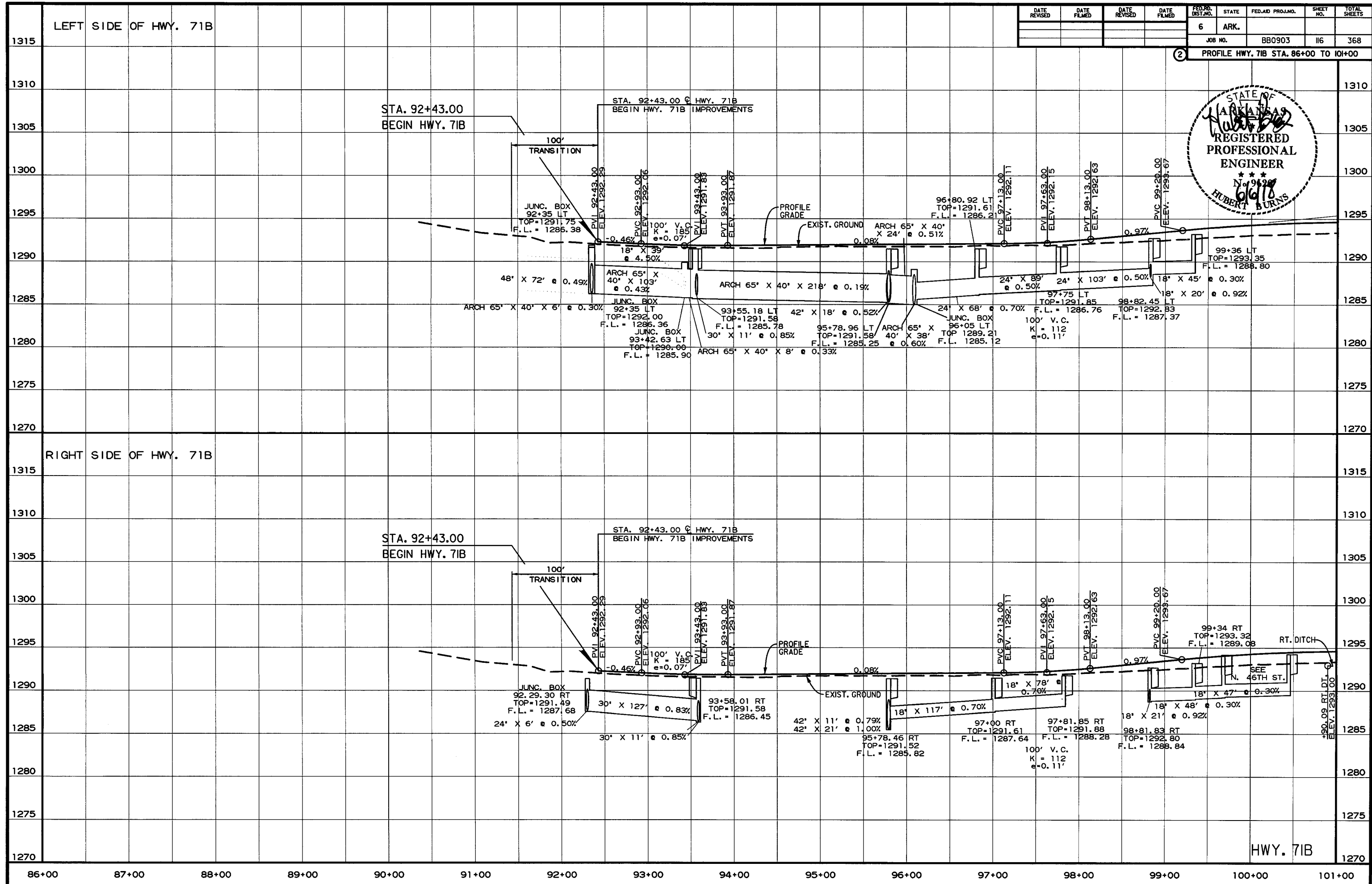
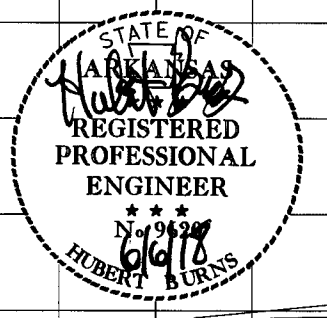
STA. 100+62 RT. CONSTRUCT TYPE 2 WHEELCHAIR RAMP = 14 SQ. YDS

STA. 99+34 CONSTRUCT DROP INLET ON RT. H= 4'-3" WITH 8' EXTENSION & 18" X 48' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

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				JOB NO.	BB0903	II6	368	

2 PROFILE HWY. 71B STA. 86+00 TO 101+00



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STA. 103+87 IN PLACE CURB INLET ON LT. W/18" x 10' R.C. PIPE CULVERT INLET & 18" x 63' R.C. PIPE CULVERT OUTLET REMOVE

STA. 102+44 - CONSTRUCT DROP INLET ON LT. H= 5'-1" WITH 8' EXTENSION AND 18" x 153' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 104+00 - CONSTRUCT DROP INLET ON LT. H= 3'-11" WITH 8' EXTENSION AND 18" x 59' R.C. PIPE CULVERT OUTLET (CLASS III)(TYPE 3 BEDDING) W/F.E.S. TYPE C DROP INLET = 4'X5'-0"

STA. 106+75 - CONSTRUCT DROP INLET ON LT. H= 4'-8" WITH 8' EXTENSION AND 18" x 94' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO JUNC. BOX ON RAMP 1A TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 104+69 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 104+98 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 107+00 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4 SQ.YDS.

STA. 102+60 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 6 SQ.YDS.

STA. 102+93 CONSTRUCT APPROACH ON LT. = 10 CU. YDS.

LIMITS OF CONSTRUCTION

STA. 107+84 - CONSTRUCT DROP INLET ON LT. H= 5'-9" WITH 8' EXTENSION AND 18" x 62' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 108+50 - CONSTRUCT DROP INLET ON LT. H= 5'-7" WITH 8' EXTENSION AND 18" x 59' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RAMP 4A TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 103+25 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 6 SQ.YDS.

STA. 107+80.90 C HWY. 71B = STA. 1245+06.39 C I-49 Δ = 78°56'17"

STA. 110+75 - CONSTRUCT DROP INLET ON LT. H= 7'-7" WITH 8' EXTENSION AND 18" x 80' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RAMP 4B TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 107+40 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 109+06 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

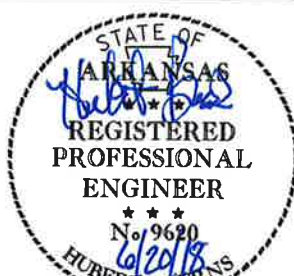
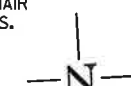
STA. 109+31 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5 SQ.YDS.

STA. 112+00 - CONSTRUCT DROP INLET ON LT. H= 6'-5" WITH 8' EXTENSION AND 18" x 7' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

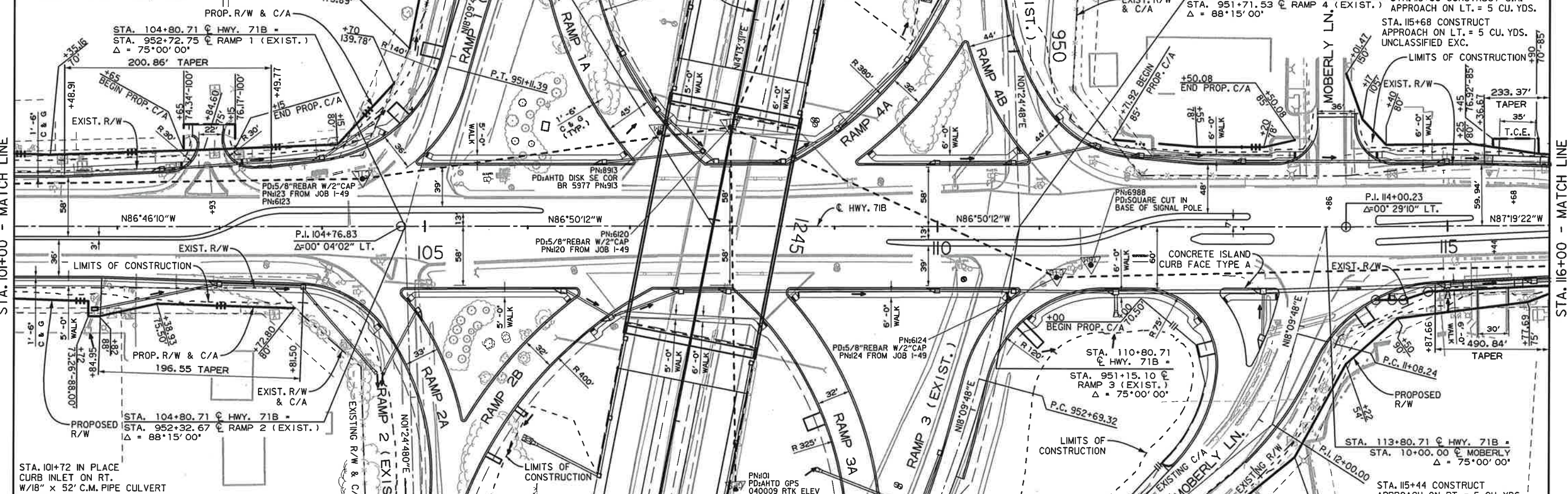
STA. 113+00 - CONSTRUCT DROP INLET ON LT. H= 5'-9" WITH 8' EXTENSION AND 24" x 195' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 115+00 - CONSTRUCT DROP INLET ON LT. H= 5'-8" WITH 8' EXTENSION AND 24" x 106' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
06-20-18				6	ARK.			
						JOB NO.	BBO903	117
						PLAN - HWY. 71B		



STA.	STA.	SIDE	SQ.YD.
100+68	103+08	RT.	84.2
103+08	106+15	LT.	201.3
109+50	113+89	RT.	154.8
113+89	113+07	LT.	78.8



STA. 101+72 IN PLACE CURB INLET ON RT. W/18" x 52' C.M. PIPE CULVERT REMOVE PIPE, RETAIN INLET AND CONNECT TO JUNC. BOX ON RT. W/18" x 19' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)

STA. 102+38 IN PLACE 24" x 73' R.C. PIPE CULVERT W/2 F.E.S. RT. SIDE DRAIN REMOVE

STA. 103+00 - CONSTRUCT DROP INLET ON RT. H= 4'-3" WITH 8' EXTENSION AND 18" x 78' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 104+52 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 103+81.50 CONSTRUCT DROP INLET ON RT. H= 3'-4" W/18" x 109' R.C. PIPE CULVERT OUTLET (CLASS III)(TYPE 3 BEDDING) W/F.E.S. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 104+07 IN PLACE DROP INLET ON RT. W/18" x 10' R.C. PIPE CULVERT TO DROP INLET ON RT. REMOVE

STA. 104+04 IN PLACE JUNC. BOX ON RT. W/24" x 41' R.C. PIPE CULVERT W/F.E.S. & 18" x 7' R.C. PIPE CULVERT W/F.E.S. REMOVE

STA. 104+82 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 106+66 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 106+35 - CONSTRUCT DROP INLET ON RT. H= 9'-8" WITH 8' EXTENSION AND 18" x 49' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RAMP 2B TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 107+50 - CONSTRUCT DROP INLET ON RT. H= 8'-9" WITH 8' EXTENSION AND 18" x 42' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 107+96 - CONSTRUCT DROP INLET ON RT. H= 8'-11" WITH 8' EXTENSION AND 24" x 200' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 110+00 - CONSTRUCT DROP INLET ON RT. H= 7'-8" W/24" x 71' R.C. PIPE CULVERT TO DROP INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 110+20 IN PLACE DROP INLET ON RT. W/18" x 6' R.C. PIPE CULVERT W/F.E.S. REMOVE

STA. 108+26 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 110+74 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4 SQ.YDS.

STA. 110+75 - CONSTRUCT DROP INLET ON RT. H= 7'-1" WITH 8' EXTENSION AND 24" x 96' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 113+75 - CONSTRUCT DROP INLET ON RT. H= 7'-2" WITH 8' EXTENSION AND 36" x 150' R.C. PIPE CULVERT & 30" x 22' R.C. PIPE CULVERT STUB INLET (CLASS III)(TYPE 3 BEDDING) WITH F.E.S. TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X3'-2"

STA. 110+93 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 112+54 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3 SQ.YDS.

STA. 113+30 - CONSTRUCT DROP INLET ON RT. H= 6'-4" WITH 8' EXTENSION AND 36" x 166' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X3'-2"

STA. 115+00 - CONSTRUCT DROP INLET ON RT. H= 6'-6" WITH 8' EXTENSION AND 36" x 80' R.C. PIPE CULVERT & 30" x 11' STUB INLET (CLASS III)(TYPE 3 BEDDING) W/F.E.S. TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X3'-2"

STA. 112+82 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4 SQ.YDS.

STA. 113+34 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4 SQ.YDS.

STA. 114+45 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 6 SQ.YDS.

STA. 115+14 IN PLACE DROP INLET ON RT. W/12" x 83' C.P. PIPE CULVERT REMOVE

STA. 115+75 IN PLACE DROP INLET ON RT. W/12" x 61' C.P. PIPE CULVERT REMOVE

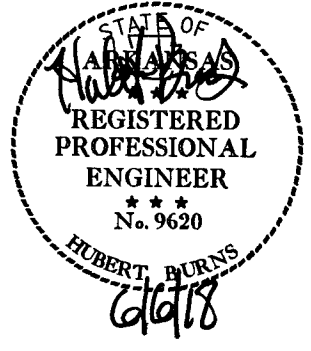
MOBERLY LANE P.I. = 12+00.00 Δ = 35°31'20" RT. D = 20°00'00" T = 91.76' L = 177.61' P.C. = 11+08.24 P.T. = 12+85.85 e = MATCH EXIST. SUPER

STA. 115+85 - CONSTRUCT DROP INLET ON RT. H= 4'-3" W/36" x 96' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X3'-2"

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903		119	368

PLAN - HWY. 71B



STA. 116+10 - CONSTRUCT DROP INLET ON LT. H= 6'-4" WITH 8' EXTENSION AND 24" x 86' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 117+00 - CONSTRUCT DROP INLET ON LT. H= 7'-1" WITH 8' EXTENSION AND 24" x 121' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 118+25 - CONSTRUCT DROP INLET ON LT. H= 8'-1" WITH 8' EXTENSION AND 24" x 116' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

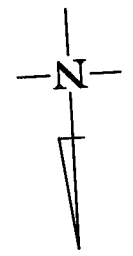
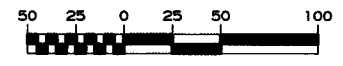
STA. 119+52 IN PLACE DROP INLET ON LT. W/18" X 252' R.C. PIPE CULVERT REMOVE

STA. 119+45 - CONSTRUCT DROP INLET ON LT. H= 9'-3" WITH 8' EXTENSION AND 24" x 256' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

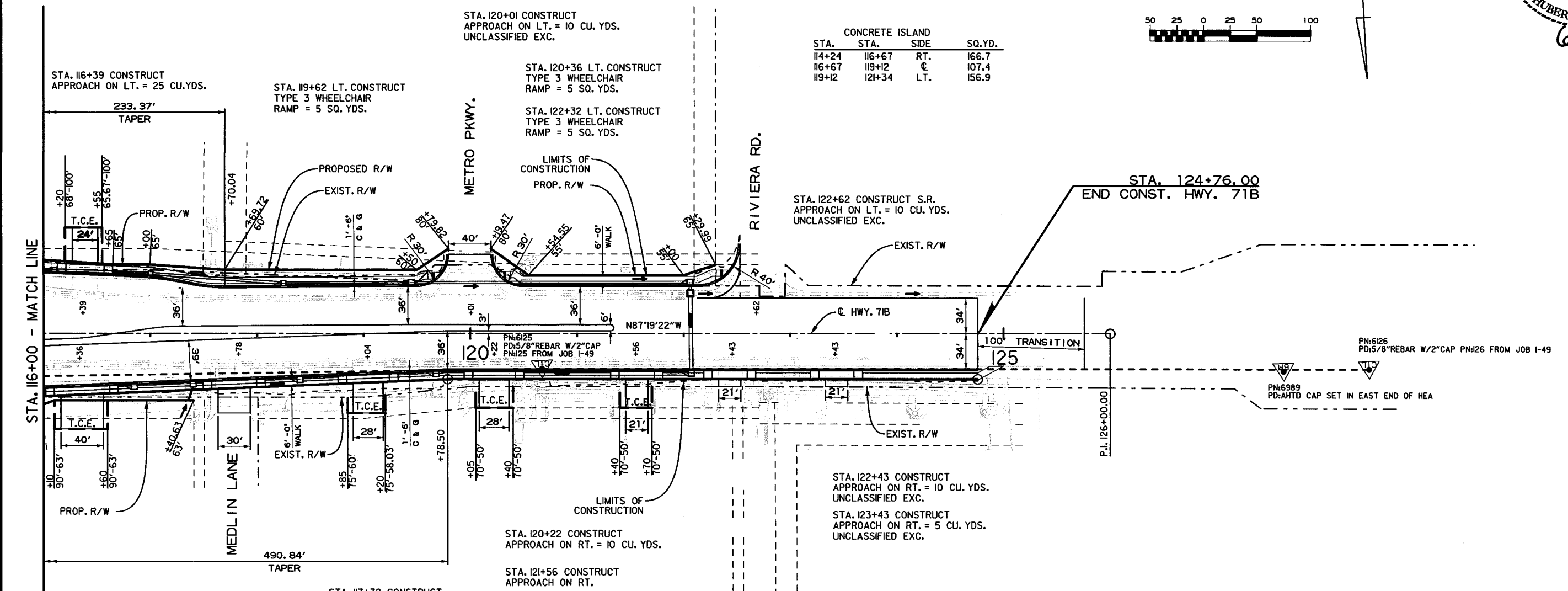
STA. 122+07 IN PLACE DROP INLET ON LT. W/36" X 418' R.C. PIPE CULVERT REMOVE INLET

STA. 122+06 - CONSTRUCT DROP INLET ON LT. H= 8'-2" WITH 8' EXTENSION AND 24" x 6' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO JUNC. BOX ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X2'-6"

STA. 122+07 - CONSTRUCT JUNCTION BOX ON LT. H= 7'-0" WITH 36" x 4' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO EXISTING R.C. PIPE CULVERT LT. TYPE ST JUNCTION BOX = 4'X4'



CONCRETE ISLAND			
STA.	STA.	SIDE	SQ. YD.
114+24	116+67	RT.	166.7
116+67	119+12	CL.	107.4
119+12	121+34	LT.	156.9



STA. 116+39 CONSTRUCT APPROACH ON LT. = 25 CU. YDS.

STA. 119+62 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5 SQ. YDS.

STA. 120+01 CONSTRUCT APPROACH ON LT. = 10 CU. YDS. UNCLASSIFIED EXC.

STA. 120+36 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5 SQ. YDS.

STA. 122+32 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5 SQ. YDS.

STA. 122+62 CONSTRUCT S.R. APPROACH ON LT. = 10 CU. YDS. UNCLASSIFIED EXC.

STA. 122+43 CONSTRUCT APPROACH ON RT. = 10 CU. YDS. UNCLASSIFIED EXC.

STA. 123+43 CONSTRUCT APPROACH ON RT. = 5 CU. YDS. UNCLASSIFIED EXC.

STA. 120+22 CONSTRUCT APPROACH ON RT. = 10 CU. YDS.

STA. 121+56 CONSTRUCT APPROACH ON RT.

STA. 116+36 CONSTRUCT APPROACH ON RT. = 15 CU. YDS.

STA. 119+04 CONSTRUCT APPROACH ON RT. = 15 CU. YDS.

STA. 117+78 CONSTRUCT APPROACH ON RT. = 5 CU. YDS.

STA. 116+85 - CONSTRUCT DROP INLET ON RT. H= 7'-9" WITH 8' EXTENSION AND 36" x 50' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X4'

STA. 117+40 - CONSTRUCT DROP INLET ON RT. H= 8'-3" WITH 12" X 14' R.C. PIPE CULVERT INLET 36" x 95' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X4'

STA. 118+42 IN PLACE DROP INLET ON RT. W/30" x 123' R.C. PIPE CULVERT REMOVE

STA. 118+40 - CONSTRUCT DROP INLET ON RT. H= 9'-0" WITH 8' EXTENSION AND 36" X 123' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X4'

STA. 119+68 IN PLACE DROP INLET ON RT. W/30" x 237' R.C. PIPE CULVERT REMOVE

STA. 119+68 - CONSTRUCT DROP INLET ON RT. H= 10'-0" WITH 8' EXTENSION AND 36" X 234' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO DROP INLET ON RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X4'

STA. 122+07 IN PLACE DROP INLET ON RT. W/30" x 63' R.C. PIPE CULVERT REMOVE

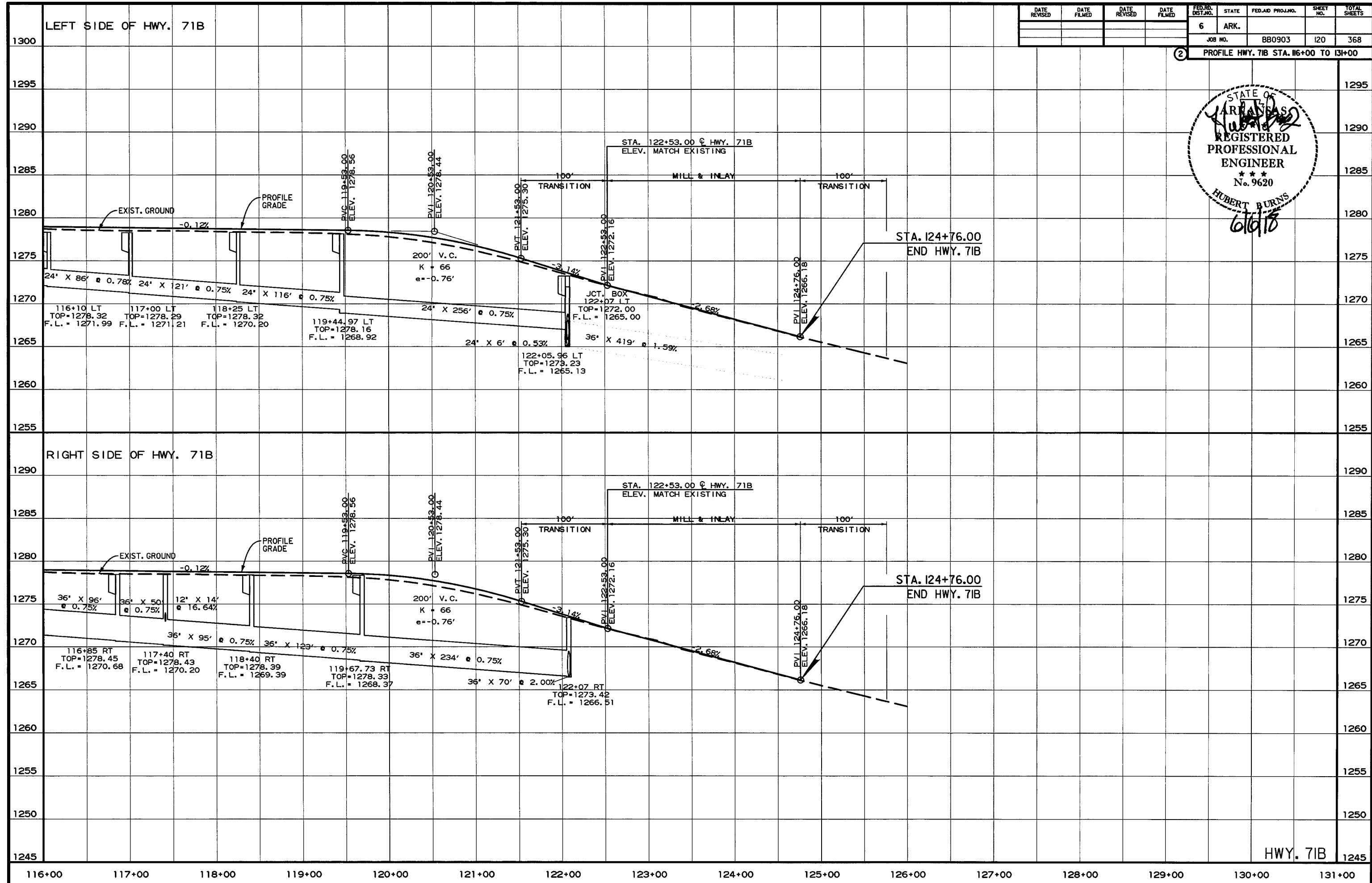
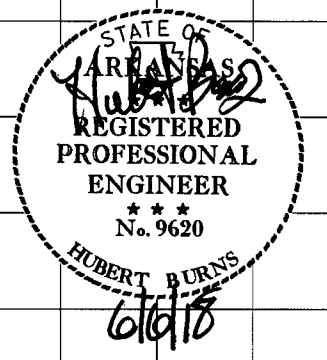
STA. 122+07 - CONSTRUCT DROP INLET ON RT. H= 6'-11" WITH 8' EXTENSION AND 36" X 70' R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING) TO JUNC. BOX ON LT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 5'X4'

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HWY. 71B

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	120	368	

2 PROFILE HWY. 71B STA. 116+00 TO 131+00

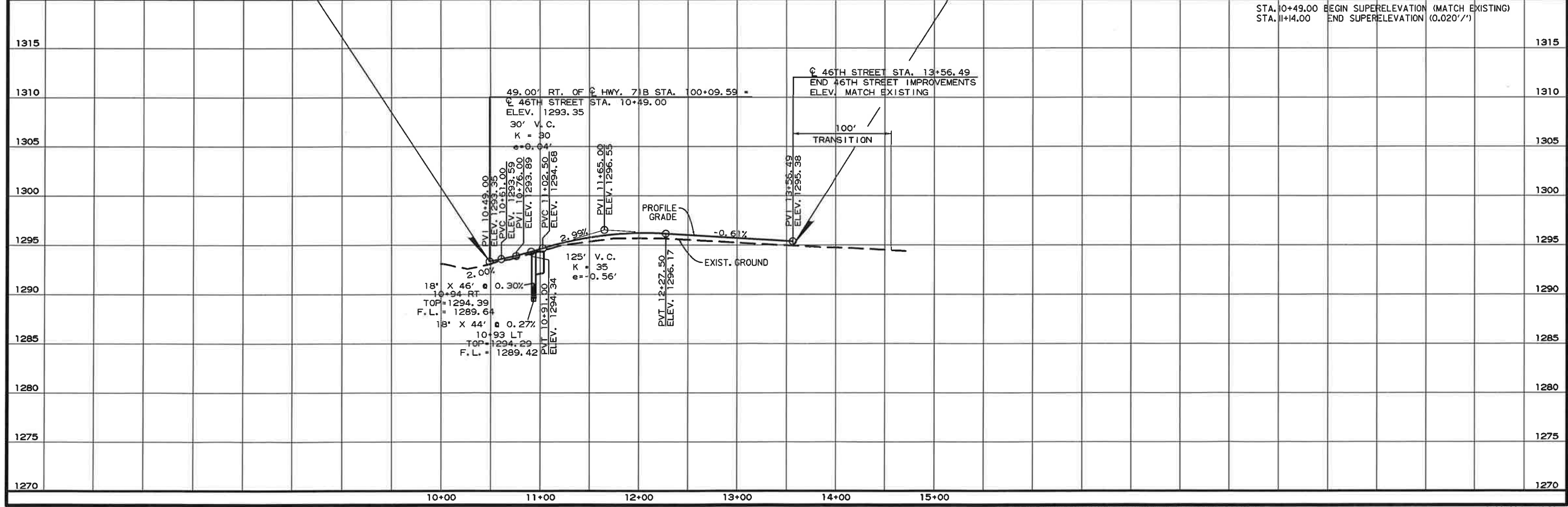
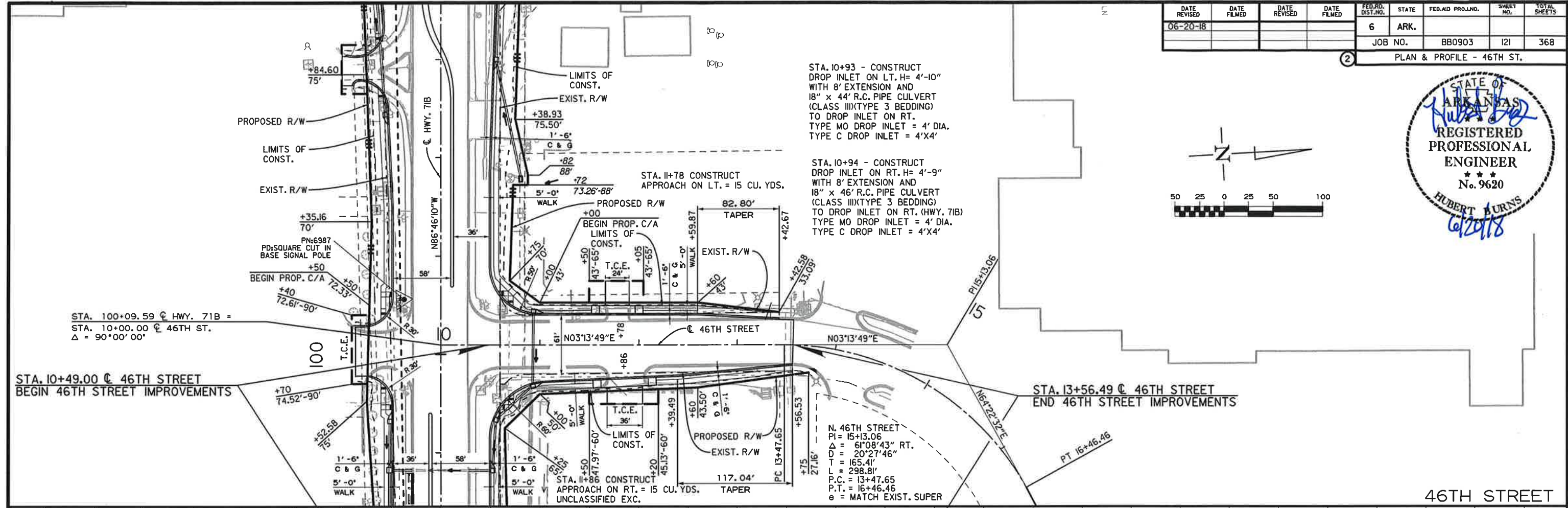
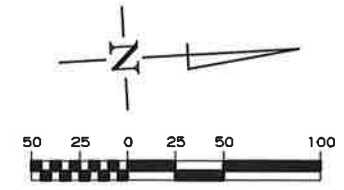


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HWY. 71B

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
06-20-18				6	ARK.			
				JOB NO. BB0903		I21		368

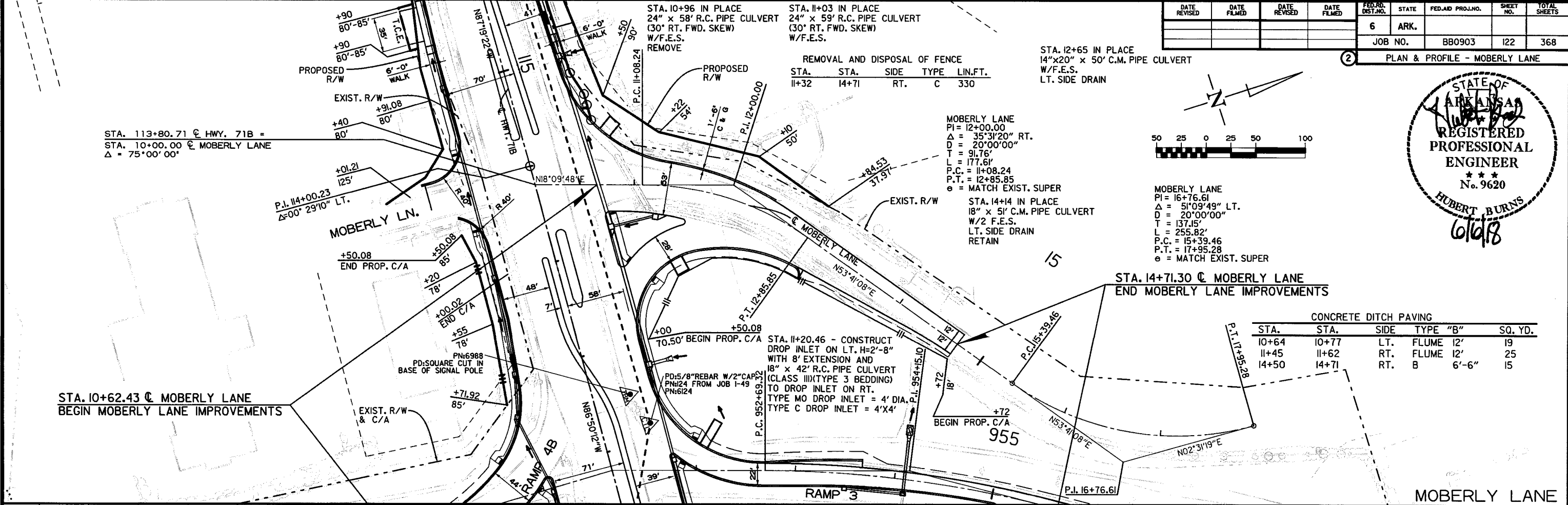
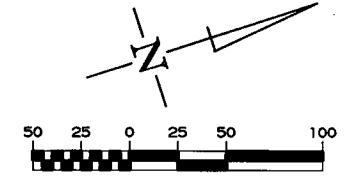
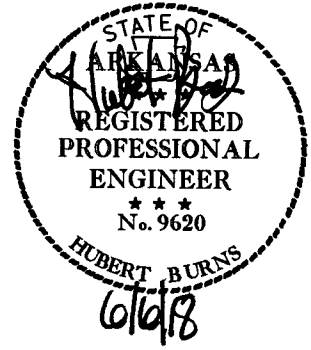
PLAN & PROFILE - 46TH ST.



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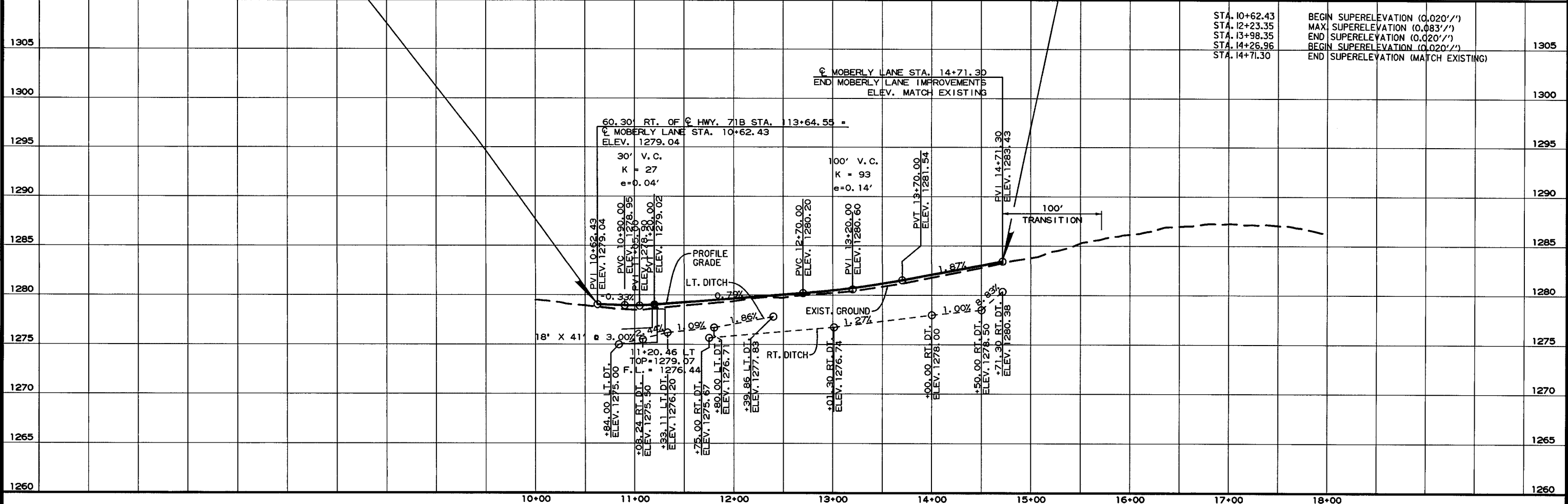
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				6	ARK.			
				JOB NO.	BB0903	122	368	

PLAN & PROFILE - MOBERLY LANE



CONCRETE DITCH PAVING

STA.	STA.	SIDE	TYPE	"B"	SQ. YD.
10+64	10+77	LT.	FLUME	12"	19
11+45	11+62	RT.	FLUME	12"	25
14+50	14+71	RT.	B	6'-6"	15



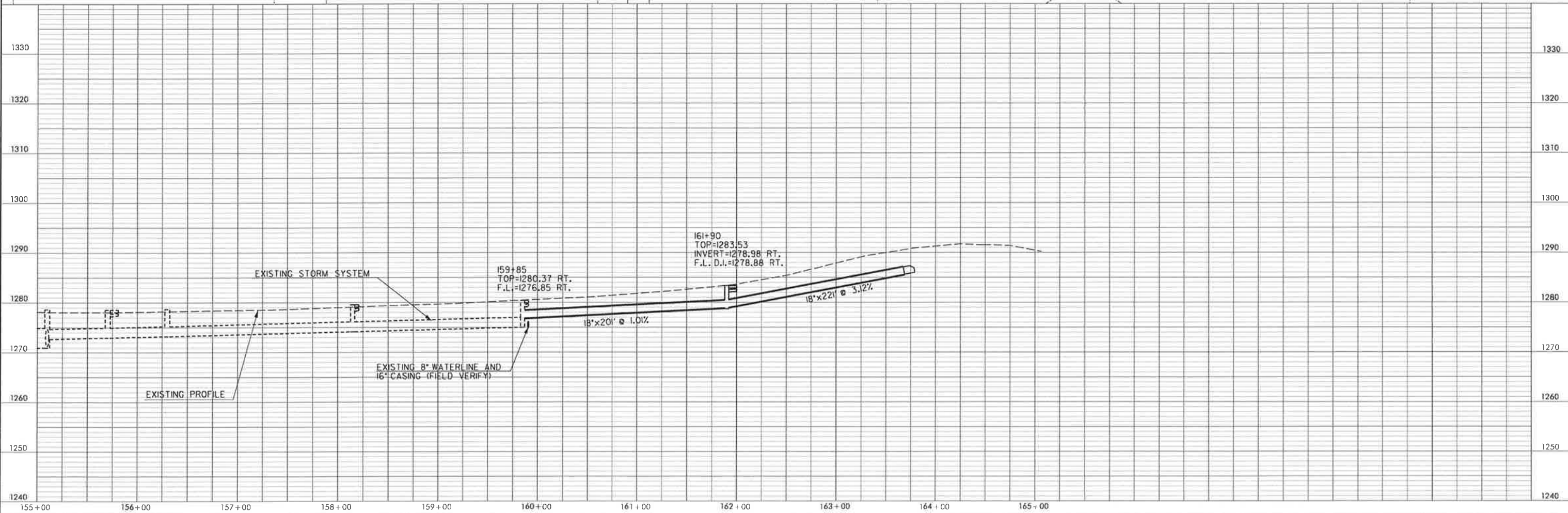
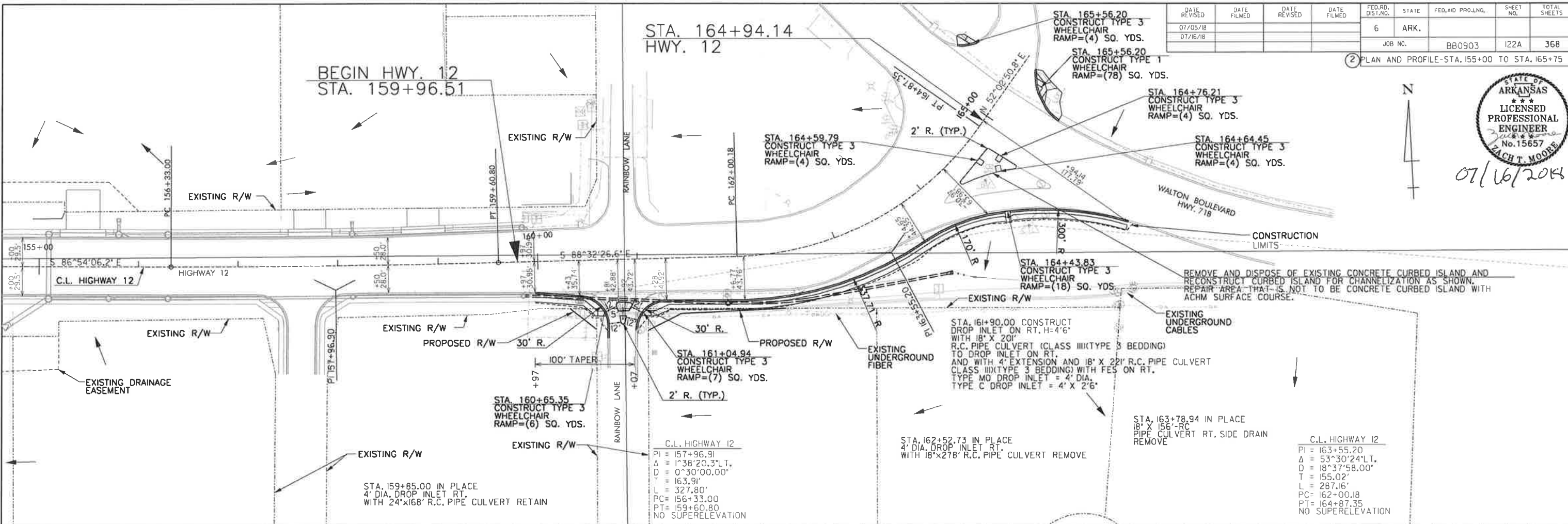
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18								

2 PLAN AND PROFILE-STA. 155+00 TO STA. 165+75



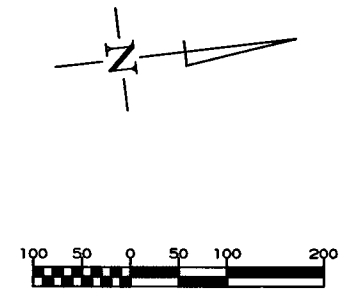
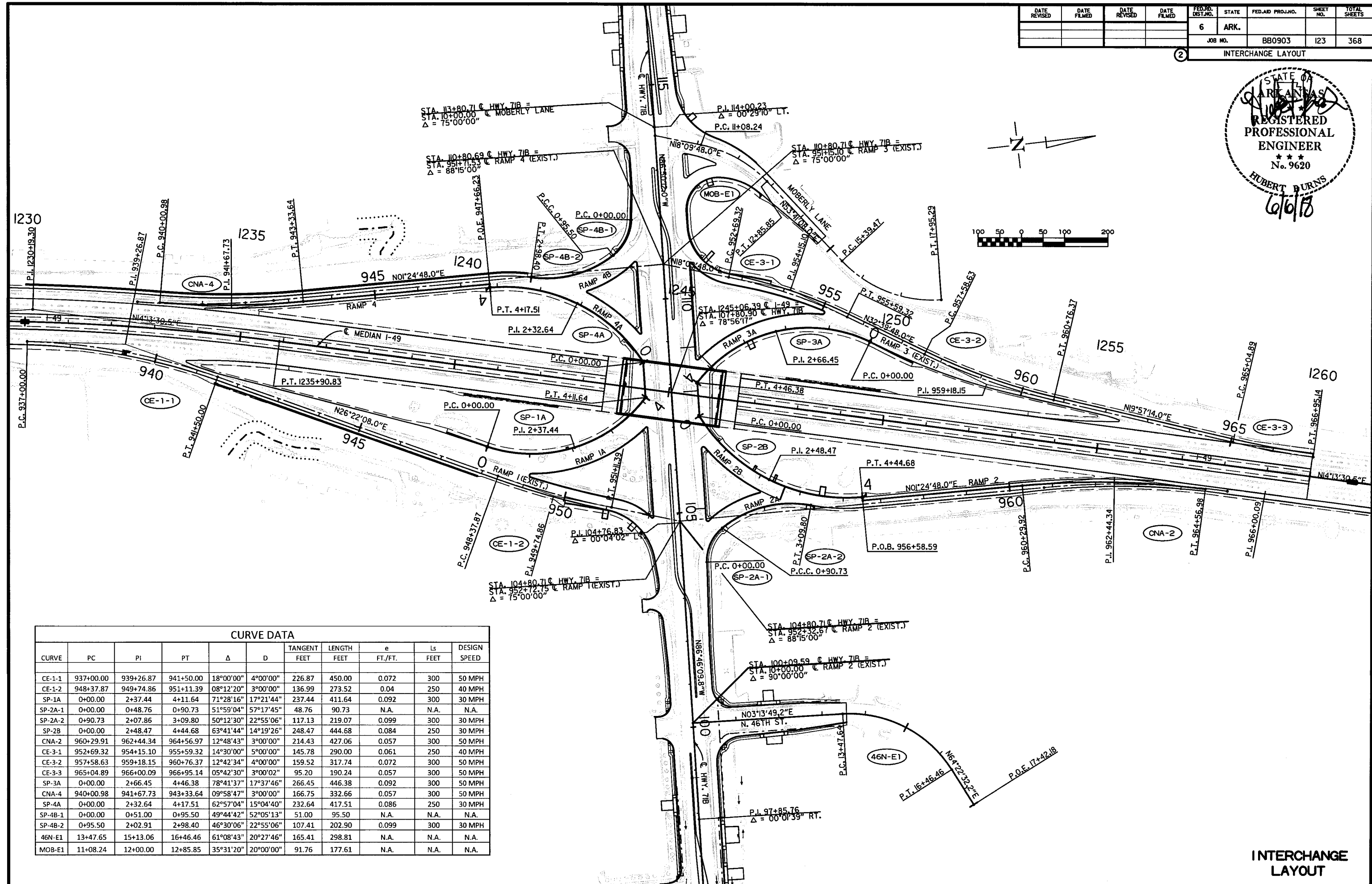
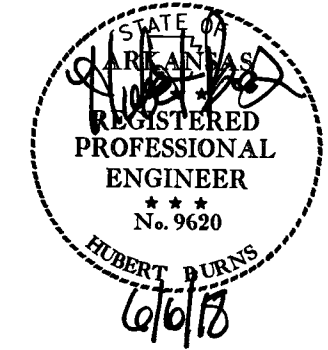
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DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	123	368	

2 INTERCHANGE LAYOUT



CURVE DATA										
CURVE	PC	PI	PT	Δ	D	TANGENT FEET	LENGTH FEET	e FT./FT.	Ls FEET	DESIGN SPEED
CE-1-1	937+00.00	939+26.87	941+50.00	18°00'00"	4°00'00"	226.87	450.00	0.072	300	50 MPH
CE-1-2	948+37.87	949+74.86	951+11.39	08°12'20"	3°00'00"	136.99	273.52	0.04	250	40 MPH
SP-1A	0+00.00	2+37.44	4+11.64	71°28'16"	17°21'44"	237.44	411.64	0.092	300	30 MPH
SP-2A-1	0+00.00	0+48.76	0+90.73	51°59'04"	57°17'45"	48.76	90.73	N.A.	N.A.	N.A.
SP-2A-2	0+90.73	2+07.86	3+09.80	50°12'30"	22°55'06"	117.13	219.07	0.099	300	30 MPH
SP-2B	0+00.00	2+48.47	4+44.68	63°41'44"	14°19'26"	248.47	444.68	0.084	250	30 MPH
CNA-2	960+29.91	962+44.34	964+56.97	12°48'43"	3°00'00"	214.43	427.06	0.057	300	50 MPH
CE-3-1	952+69.32	954+15.10	955+59.32	14°30'00"	5°00'00"	145.78	290.00	0.061	250	40 MPH
CE-3-2	957+58.63	959+18.15	960+76.37	12°42'34"	4°00'00"	159.52	317.74	0.072	300	50 MPH
CE-3-3	965+04.89	966+00.09	966+95.14	05°42'30"	3°00'02"	95.20	190.24	0.057	300	50 MPH
SP-3A	0+00.00	2+66.45	4+46.38	78°41'37"	17°37'46"	266.45	446.38	0.092	300	50 MPH
CNA-4	940+00.98	941+67.73	943+33.64	09°58'47"	3°00'00"	166.75	332.66	0.057	300	50 MPH
SP-4A	0+00.00	2+32.64	4+17.51	62°57'04"	15°04'40"	232.64	417.51	0.086	250	30 MPH
SP-4B-1	0+00.00	0+51.00	0+95.50	49°44'42"	52°05'13"	51.00	95.50	N.A.	N.A.	N.A.
SP-4B-2	0+95.50	2+02.91	2+98.40	46°30'06"	22°55'06"	107.41	202.90	0.099	300	30 MPH
46N-E1	13+47.65	15+13.06	16+46.46	61°08'43"	20°27'46"	165.41	298.81	N.A.	N.A.	N.A.
MOB-E1	11+08.24	12+00.00	12+85.85	35°31'20"	20°00'00"	91.76	177.61	N.A.	N.A.	N.A.

INTERCHANGE LAYOUT

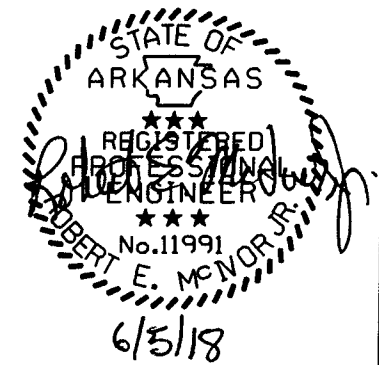
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	124	368

2 TRAFFIC SIGNAL NOTES

TRAFFIC SIGNAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2017) NATIONAL ELECTRICAL CODE, NFPA 70E (CURRENT EDITION) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/16 A.W.G. USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S/COUNTY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
12. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE THREE INCH (3") DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY/COUNTY.
17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY-EIGHT (38') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY-ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
19. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO MSA STANDARDS.
22. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
23. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4th EDITION (2001) WITH 2003 AND 2006 INTERIMS.
25. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.
26. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.
27. IN PULL BOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS, THE DIRECTION OF EACH CABLE RUN SHALL BE INDICATED BY ATTACHING A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO THE CONDUIT. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/4" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. IN INSTANCES WHERE THE CONDUIT OR CONDUIT ENTRANCES ARE NOT VISIBLE OR ACCESSIBLE, A DIRECTION TAG SHALL BE ATTACHED TO EACH CABLE.
28. THE CONTRACTOR SHALL PERFORM ALL WORK POSSIBLE THAT WILL MINIMIZE THE TIME THAT THE TRAFFIC SIGNAL IS OUT OF OPERATION. IF, IN THE OPINION OF THE ENGINEER, TRAFFIC CONDITIONS WARRANT THE CONTRACTOR SHALL PROVIDE FLAGMEN TO DIRECT TRAFFIC WHILE THE TRAFFIC SIGNAL IS OUT OF OPERATION.



SIGNAL NOTES

LOCATION: I-49 SPU RAMP/ HWY. 71B
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DR

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
7-5-18				6	ARK.			
				JOB NO.	BBO903	125	368	

2 SUMMARY OF TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	STAGE 1 SIGNALS	STAGE 2 SIGNALS	STAGE 3 SIGNALS	HWY 71B/ MOBERLY LN	I-49/ HWY 71B SPUI	HWY 71B/ 46TH ST	HWY 71B/ HWY 12	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2 -TYPE 2 (8 PHASES)	3							3	EACH
SP & 701	SYSTEM LOCAL CONTROLLER-FIBER (8 PHASES)				1		1		2	EACH
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)					1	1		2	EACH
SP & 701	SPLICE CABINET INSTALLATION					2			2	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)					1			1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	3			1	1	1	1	7	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	135			1787	3000	1635		6557	LIN. FT.
SP	BATTERY BACKUP SYSTEM					1			1	EACH
SP	WIC FIBER ENCLOSURE				1		1		2	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	22			16	20	13	4	75	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	6					2	3	11	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)						1		1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD		28	12					40	EACH
SP & 707	CENTRAL CONTROL UNIT				1	1	1	1	4	EACH
SP & 707	POLE MOUNTED ASSEMBLY				4	10	8	10	32	EACH
SP & 707	INFRARED PROGRAMMING DEVICE				1	1	1	1	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED				4	10	8	10	32	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	3734			2482	6893	2535	2259	17903	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1390					200		1590	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)					543		239	782	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)				616	342	586		1544	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	90			576	1216	616	324	2822	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)				495	275	360	50	1180	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	90			20	50	30		190	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES				1819	1835	1089	289	5032	LIN. FT.
SP	COMMUNICATION CABLE, FIBER (6 CHANNEL)				540	530		250	1320	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	90			20		30		140	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	135							135	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	270				118			388	LIN. FT.
SP	FIBERGLASS CONDUIT H.D. (3")					576			576	LIN. FT.
710	NON-METALLIC CONDUIT (2")							47	47	LIN. FT.
710	NON-METALLIC CONDUIT (3")				1176	1333	688	492	3689	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)							2	2	EACH
711	CONCRETE PULL BOX (TYPE 2)				2	1			3	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	3			1	1	1		6	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)				10	14	5	3	32	EACH
711	CONCRETE PULL BOX (TYPE 3 HD)					1			1	EACH
713	SPAN WIRE ASSEMBLY	3							3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')					5			5	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (6')				1				1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (10')				1				1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')				1				1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')					1			1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')							1	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')				1				1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (58')						1		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')				1		1		2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')						1		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')				2				2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (68')						1		1	EACH
SP	LED LUMINAIRE ASSEMBLY				9	5	5	1	20	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION					5	5	3	13	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	3			1	1	1		6	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.50		0.17			0.17	0.16	1.00	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	12							12	EACH
726	STANDARD SIGN				15				15	SQ. FT.
SP	18" STREET NAME SIGN				4		4		8	EACH
SP	VIDEO DETECTOR ROTATION		16	6					22	EACH
SP & 733	VIDEO DETECTOR (CLR)	16						5	21	EACH
* SP & 733	VIDEO DETECTOR (IP)				10	11	9		30	EACH
733	VIDEO CABLE	3973						902	4875	LIN. FT.
733	VIDEO MONITOR (CLR)	3			1	1	1		7	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	9						6	15	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	3							3	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)				1		1	1	3	EACH
SP & 733	VEHICLE DETECTOR RACK (32 CHANNEL)					1			1	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)				2	3	2		7	EACH
* SP & 733	VIDEO PROCESSOR, EDGE CARD IP (2 CAMERA)				7	8	7		22	EACH
SP	NET-ACCESS RADIO (5.8 GHZ, 32 MBPS)	1				1			2	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)	3				1	1		5	EACH

* ONE SPARE VIDEO DETECTOR (IP) AND ONE SPARE PROCESSOR (IP) SHALL BE SUPPLIED FOR EACH INTERSECTION.



LOCATION: HWY. 71B/I-49 SPUI RAMP
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: JC

USER: i656
 DESIGN FILE: R:\Traffic Signals\Hwy 71B Stge Permanent\Hwy 71B_Quantity Table.dgn
 PLOTTED: 7/6/2018 2:33:01PM SCALE: 2.00' / in. MODEL: PROPOSED DESIGN

STAGE 1- SOUTHBOUND RAMPS 3 AND 4 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	45	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	7	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1408	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	206	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	30	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	30	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	30	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	45	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	90	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.17	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	4	EACH
SP & 733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO CABLE	1481	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VECHILE DETECTOR RACK (16 CHANNEL)	1	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32MBPS)	1	EACH

STAGE 1:

THE EXISTING TRAFFIC SIGNAL INSTALLTION SHALL REMAIN IN OPERATION UNTIL STAGE 1 TRAFFIC SIGNAL IS OPERATIONAL. SUFFICIENT LENGTH OF TRAFFIC SIGNAL CABLE AND VIDEO CABLE SHALL BE PROVIDED TO ACCOMMODATE ALL STAGES OF THE TEMPORARY TRAFFIC SIGNAL OPERATION. MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS. (REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

STAGE 1- NORTHBOUND RAMPS 1 AND 2 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	45	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	7	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1442	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	320	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	30	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	30	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	30	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	45	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	90	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.17	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	4	EACH
SP & 733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO CABLE	1283	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VECHILE DETECTOR RACK (16 CHANNEL)	1	EACH
SP	NET-ACCESS RADIO (5.8 GHZ, 32MBPS)	1	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32MBPS)	1	EACH

STAGE 1:

THE EXISTING TRAFFIC SIGNAL INSTALLTION SHALL REMAIN IN OPERATION UNTIL STAGE 1 TRAFFIC SIGNAL IS OPERATIONAL. SUFFICIENT LENGTH OF TRAFFIC SIGNAL CABLE AND VIDEO CABLE SHALL BE PROVIDED TO ACCOMMODATE ALL STAGES OF THE TEMPORARY TRAFFIC SIGNAL OPERATION. MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS. (REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
7-5-18				6	ARK.			
				JOB NO.		BB0903	126	368

2 SIGNALIZATION PLAN



STAGE 1- 46TH STREET TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	45	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	884	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	864	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	30	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	30	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	30	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	45	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	90	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.16	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	4	EACH
SP & 733	VIDEO DETECTOR (CLR)	6	EACH
733	VIDEO CABLE	1209	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VECHILE DETECTOR RACK (16 CHANNEL)	1	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32MBPS)	1	EACH

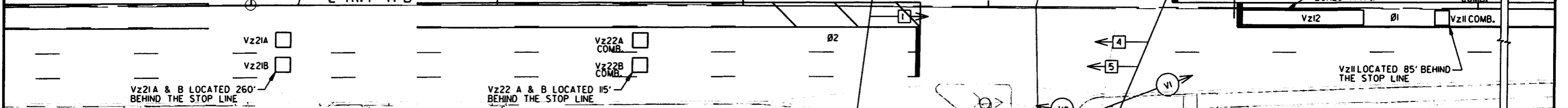
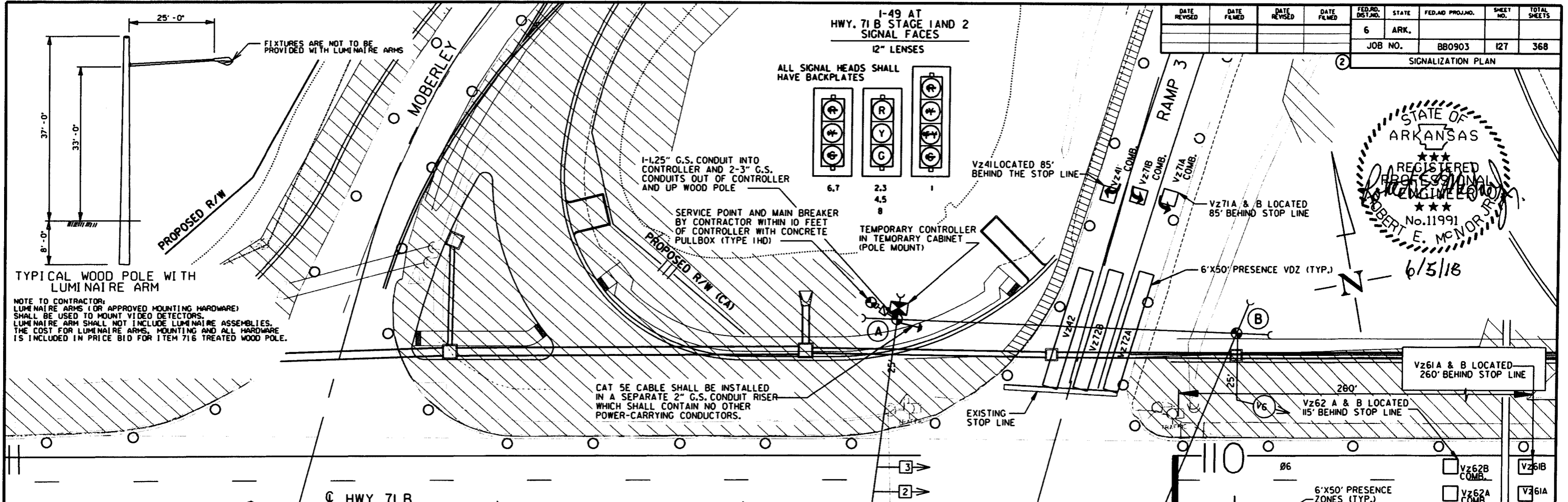
STAGE 1:

THE EXISTING TRAFFIC SIGNAL INSTALLTION SHALL REMAIN IN OPERATION UNTIL STAGE 1 TRAFFIC SIGNAL IS OPERATIONAL. SUFFICIENT LENGTH OF TRAFFIC SIGNAL CABLE AND VIDEO CABLE SHALL BE PROVIDED TO ACCOMMODATE ALL STAGES OF THE TEMPORARY TRAFFIC SIGNAL OPERATION. MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS. (REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

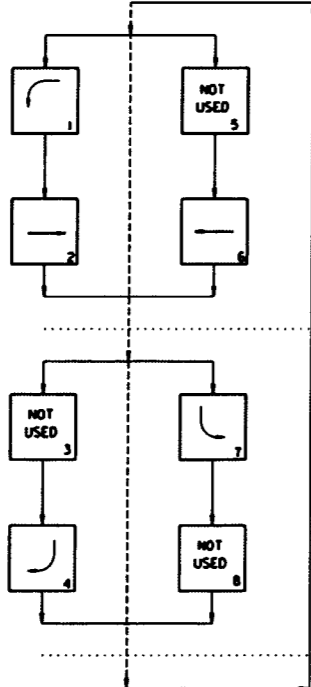
CONST. STAGE 1

LOCATION: HWY. 71B
 CITY: BENTONVILLE AND ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: JC

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	127	368	



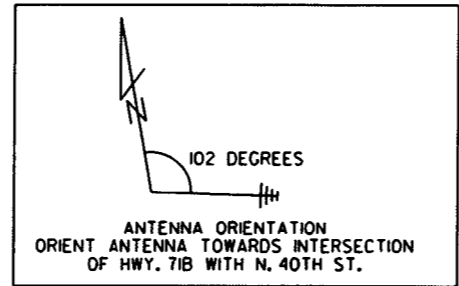
STAGES 1 & 2 PHASING DIAGRAM



NOTE: ALL PULSE DETECTION ZONE DIMENSIONS (6'x6') ARE MEASURED TO THE BACK OF THE ZONE.

HWY. 71B / SOUTHBOUND RAMP 3 & 4 POLE LOCATIONS

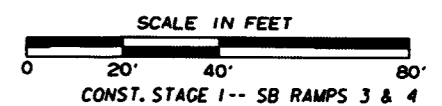
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 109+38.19	76.80' RT.	668887.63, 735863.31
B	HWY. 71B - STA. 109+99.95	71.74' RT.	669025.37, 735850.63
C	HWY. 71B - STA. 110+57.92	70.00' LT.	668959.66, 735712.21
D	HWY. 71B - STA. 110+58.30	83.61' LT.	668858.69, 735704.26



DETECTOR SPACING CHART
ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
SOUTHBOUND RAMP 3 VIRTUAL LOOPS		
POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A

NOTE TO CONTRACTOR: TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES.



LOCATION: HWY. 71B/I-49 RAMP 3 & 4
CITY: BENTONVILLE
COUNTY: BENTON
DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR: LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. THE COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

DESIGN PARAMETERS

POSTED SPEED LIMITS:
45 MPH EAST AND WEST APPROACH
35 MPH NORTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
EXISTING FIBER AND RADIO INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF CONSTRUCTION PAVEMENT MARKINGS SHOWN ON MOT DETAILS. (SEE SEPARATE SHEET.)

MINIMUM CLEAR ZONE DISTANCE
4' FEET BEHIND BACK OF CURB

USER: 1656
DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage 1\Hwy71B_Southbound Stage Ldgn
PLOTTED: 6/4/2018 2:40:49 PM SCALE: 40.00' / 1" MODEL: PROPOSED DESIGN

STAGE 1 AND 2 TEMPORARY DETECTOR SYSTEM DESCRIPTION: JOB BB0903											
I-49 RAMPS 3 & 4 / HWY 71B DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS		COMMENTS	TUBE LENGTHS	
DET. ID*	LOCATION DIRECTION	TYPE	DET.#	CAB. TRM.	AMP. CHN.	CON. INP.	PHS	SYSTEM DET.#			MASTER SYSTEM DETECTOR NUMBERS
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	23"
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23"
Vz21 A&B	EB FAR	LOCAL			5	V2	2			CAMERA V2	23"
Vz22 A&B	EB NEAR	COMB.			6	V10	2	2		CAMERA V5	23"
Vz41	SB RIGHT TURN FAR	COMB.			7	V12	4	4		CAMERA V7	23"
Vz42	SB RIGHT TURN	LOCAL			8	V4	4			CAMERA V7	23"
Vz61A&B	WB FAR	LOCAL			3	V6	6			CAMERA V6	23"
Vz62 A&B	WB NEAR	COMB.			4	V14	6	6		CAMERA V1	23"
Vz71A&B	SB LEFT TURN FAR	COMB.			9	V15	7	7		CAMERA V7	23"
Vz72 A&B	SB LEFT TURN	LOCAL			10	V7	7			CAMERA V7	23"
SPARE #16											

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		128	368



I-49 SB RAMPS AT HWY 71B INTERVAL CHART

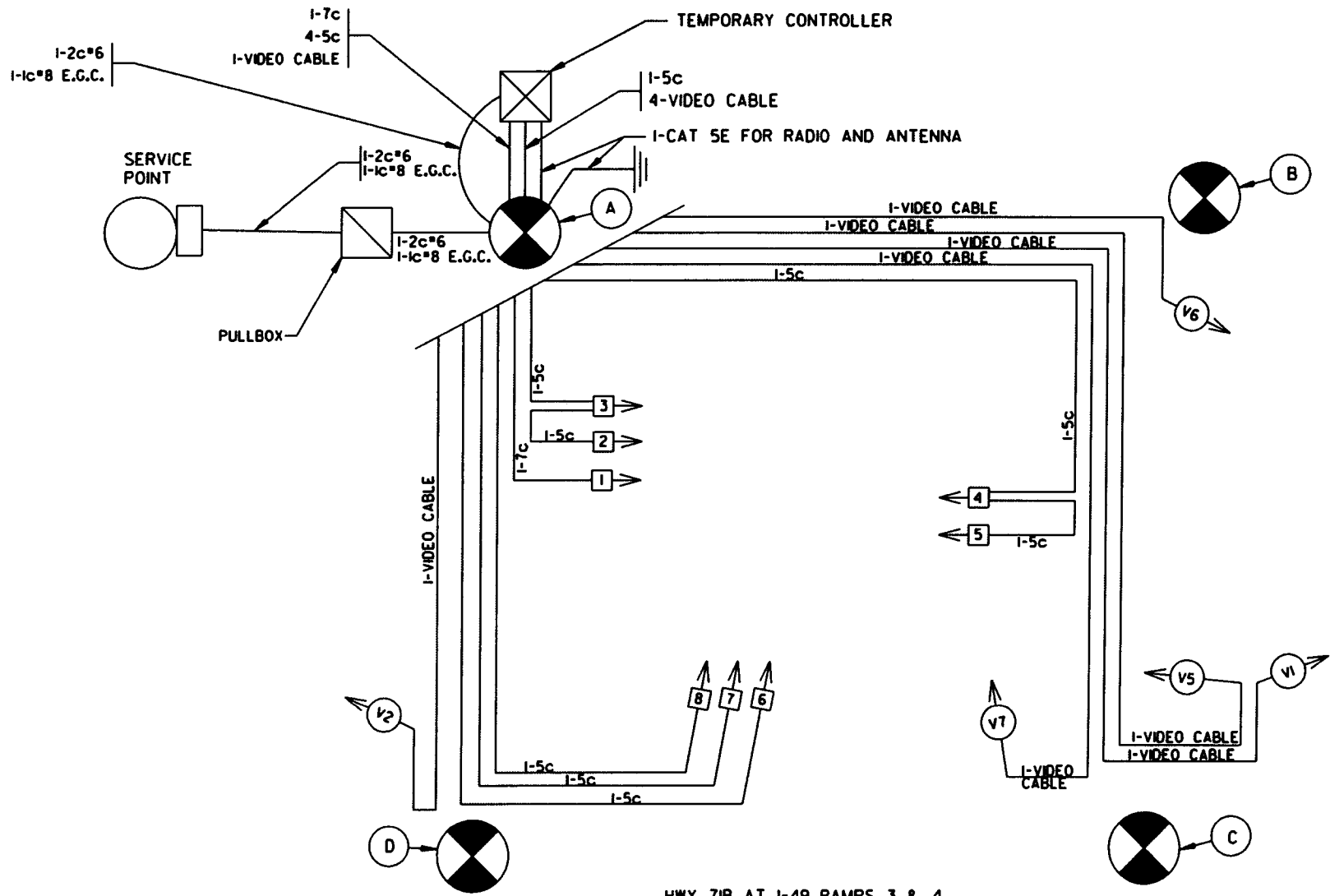
SIGNAL FACES	SB INTERVALS						FLASH SEQ.
	1 + 6	CLR.	2 + 6	CLR.	4 + 7	CLR.	
1	<G	..	<FY	...	<R	<R	<R
2 & 3	G	..	G	..	R	R	R
4 & 5	R	R	G	..	R	R	R
6 & 7	<R	<R	<R	<R	<G	..	<R
8	R	R	R	R	G	..	R

- DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE.
- DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE.
- DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE.

6/5/18

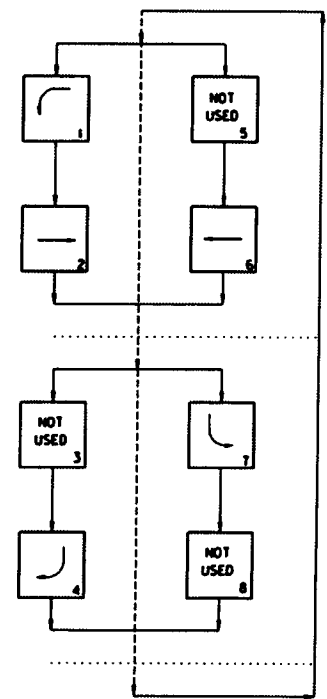
CONTROLLER INPUT ABBREVIATIONS:
V = VEHICULAR INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE:
"AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

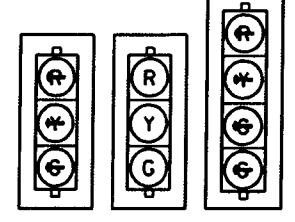


HWY 71B AT I-49 RAMPS 3 & 4 (SOUTHBOUND RAMPS) WIRING DIAGRAM

STAGES 1 & 2 PHASING DIAGRAM



STAGE 1 AND 2 HWY 71B AT I-49 RAMPS SIGNAL FACES 12" LENSES



ALL SIGNAL HEADS SHALL HAVE BACKPLATES

NOTES TO CONTRACTOR:

- ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
- THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

CONST. STAGE 1 & 2 -- SB RAMPS 3 & 4

LOCATION: HWY. 71B/I-49 SB RAMPS
CITY: BENTONVILLE
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: DR

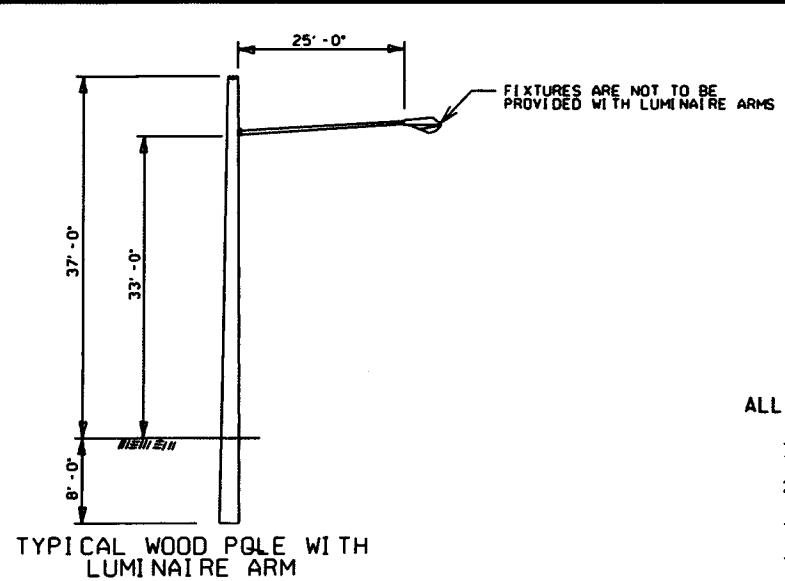
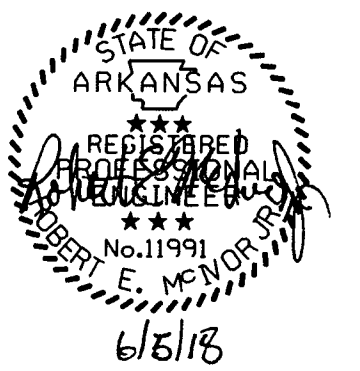
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		129	368
JOB NO. BB0903						SIGNALIZATION PLAN		

DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST APPROACH
 35 MPH SOUTH APPROACH
 NO BUS STOPS
 NO RAILROAD TRACKS
 EXISTING FIBER AND RADIO INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

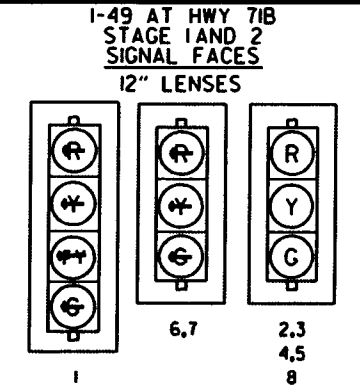
LOCATION OF CONSTRUCTION PAVEMENT MARKINGS SHOWN ON NOT DETAILS. (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
 4' FEET BEHIND BACK OF CURB

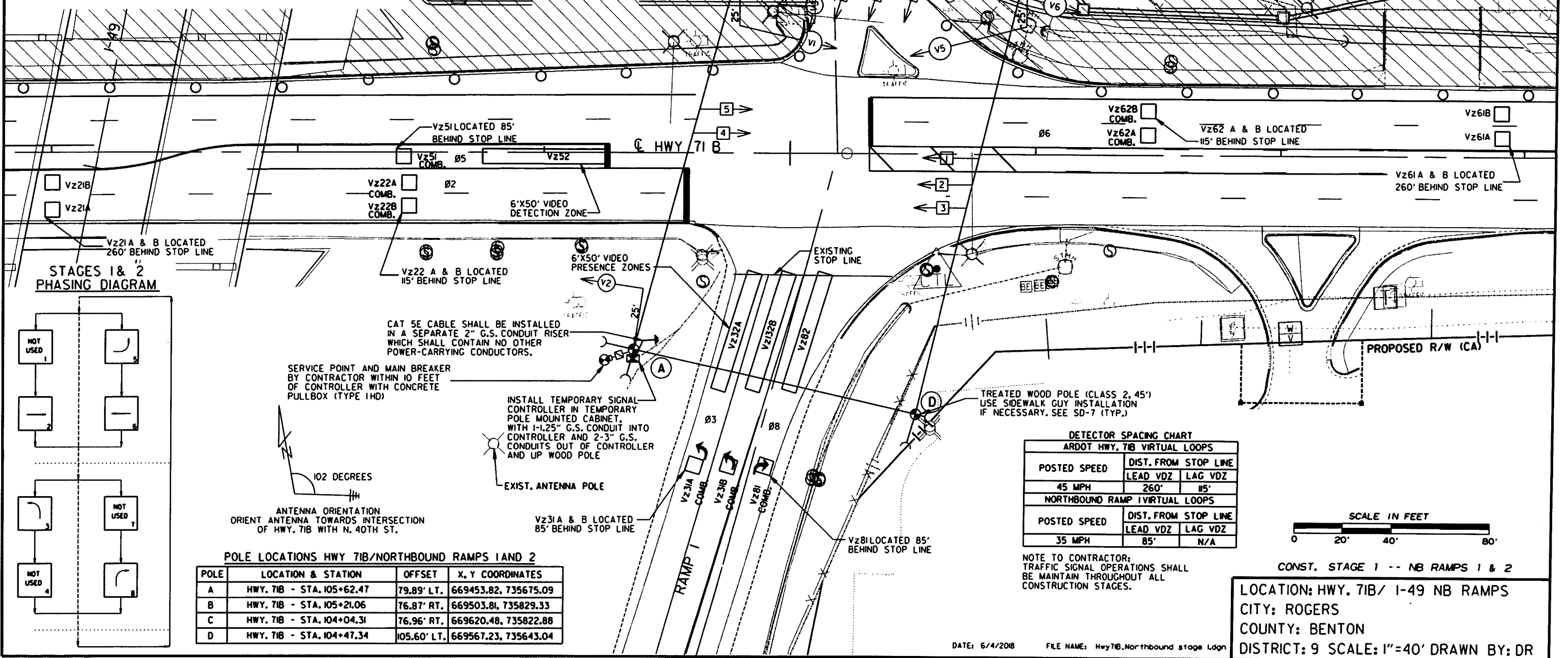


TYPICAL WOOD POLE WITH LUMINAIRE ARM

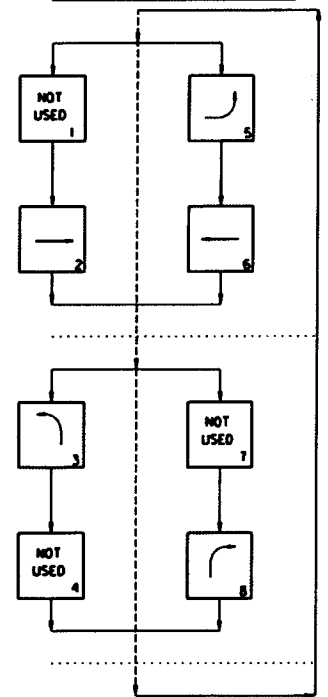
NOTE TO CONTRACTOR:
 LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. THE COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



ALL SIGNAL HEADS SHALL HAVE BACKPLATES



STAGES 1 & 2 PHASING DIAGRAM

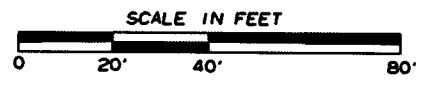


POLE LOCATIONS HWY 71B/NORTHBOUND RAMPS 1 AND 2

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 105+62.47	79.89' LT.	669453.82, 735675.09
B	HWY. 71B - STA. 105+21.06	76.87' RT.	669503.81, 735829.33
C	HWY. 71B - STA. 104+04.31	76.96' RT.	669620.48, 735822.88
D	HWY. 71B - STA. 104+47.34	105.60' LT.	669567.23, 735643.04

**DETECTOR SPACING CHART
 ARDOT HWY. 71B VIRTUAL LOOPS**

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
NORTHBOUND RAMP 1 VIRTUAL LOOPS		
POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A



NOTE TO CONTRACTOR:
 TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES.

CONST. STAGE 1 -- NB RAMPS 1 & 2

LOCATION: HWY. 71B/ I-49 NB RAMPS
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: 1656
 DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage 1\Hwy71B_Northbound stage 1.dgn
 PLOTTED: 6/4/2018 8:24:31 AM SCALE: 40,0000000 / in. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	130	368	

2 SIGNALIZATION PLAN

DETECTOR CHART
STAGE 1 AND 2 TEMPORARY DETECTOR SYSTEM DESCRIPTION JOB BB0903

HWY 718 / I-49 NORTHBOUND RAMP 1 & 2 DETECTOR ASSIGNMENTS			HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS		COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP. CHN. #	CON. INP. #	LOCAL PHASE		
Vz21A&B	EB THROUGH FAR	LOCAL			5	V2	2		CAMERA V2 23"
Vz22A&B	EB THROUGH NEAR	COMB.			6	V10	2		CAMERA V5 23" COMMENTS
Vz31A&B	NB LEFT TURN FAR	COMB.			9	V11	3	3	CAMERA V3 23"
Vz32A&B	NB LEFT TURN	LOCAL			10	V3	3		CAMERA V3 23"
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5	CAMERA V5 23"
Vz52	EB LEFT TURN	LOCAL			8	V5	5		CAMERA V5 23"
Vz61A&B	WB THROUGH FAR	LOCAL			3	V6	6		CAMERA V6 23"
Vz62A&B	WB THROUGH NEAR	COMB.			4	V14	6	6	CAMERA V1 23"
Vz81	NB RIGHT TURN FAR	COMB.			11	V15	7	7	CAMERA V7 23"
Vz82	NB RIGHT TURN	LOCAL			12	V7	7		CAMERA V7 23"
SPARE: 1, 2, & 13-16									

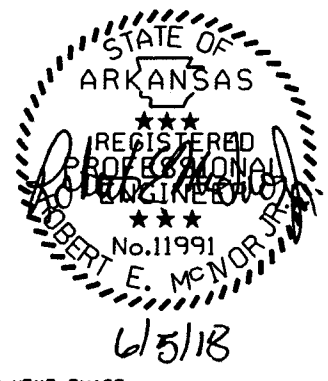
CONTROLLER INPUT ABBREVIATIONS:
V = VEHICULAR INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE:
"AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

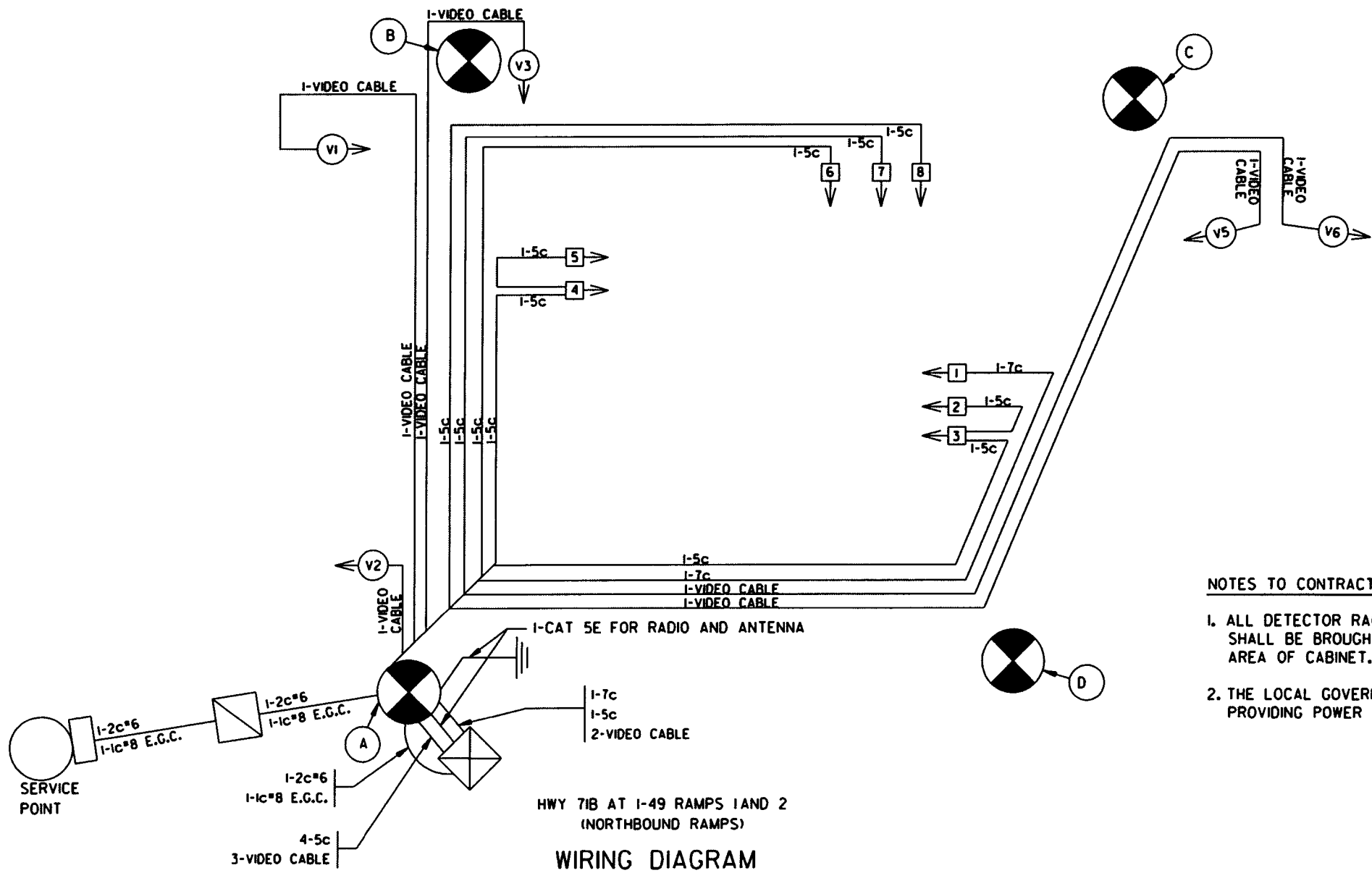
I-49 NB RAMPS AT HWY 718 INTERVAL CHART

SIGNAL FACES	NB INTERVALS						FLASH SEQ.
	2+5	CLR.	2+6	CLR.	3+8	CLR.	
1	←	.	←	...	←	←	←
2 & 3	G	..	G	..	R	R	R
4 & 5	R	R	G	..	R	R	R
6 & 7	←	←	←	←	.	.	←
8	R	R	R	R	G	..	R

• DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE.
.. DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE.
... DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE.

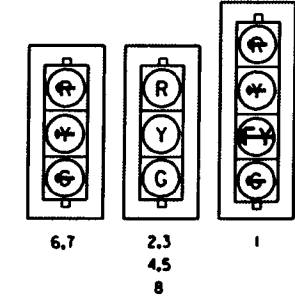


USER: H656
DESIGN FILE: R:\Traffic Signals\Hwy 718 Stage 1\Hwy 718 I49Ramps_WiringandCharts NB Ramps.dgn
PLOTTED: 6/4/2018 7:34:40 AM SCALE: 40.000000 / in. MODEL: PROPOSED DESIGN



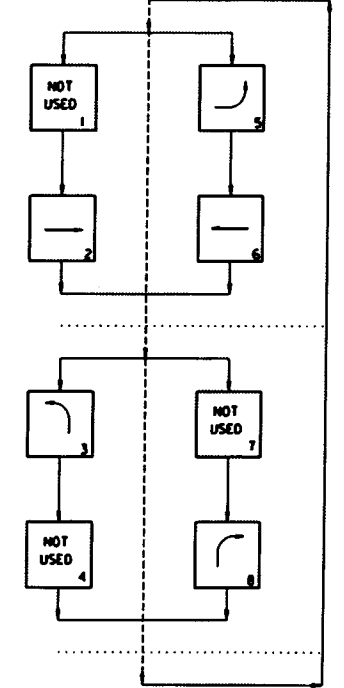
HWY 718 AT I-49 RAMPS 1 AND 2
(NORTHBOUND RAMPS)
WIRING DIAGRAM

**STAGES 1 AND 2
HWY 718 AT I-49 RAMPS 1 & 2
SIGNAL FACES
12" LENSES**



ALL SIGNAL HEADS SHALL HAVE BACKPLATES

**STAGES 1 & 2
PHASING DIAGRAM**



CONST. STAGES 1 & 2

NOTES TO CONTRACTOR:

- ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
- THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

LOCATION: HWY. 718 / I-49 NB RAMPS
CITY: ROGERS
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: DR

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	131	368	

2 SIGNALIZATION PLAN

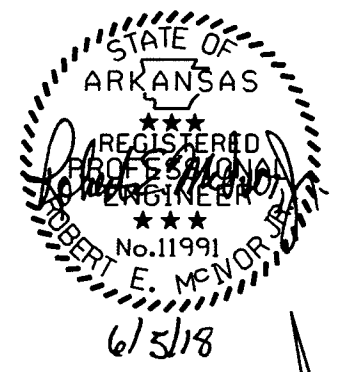
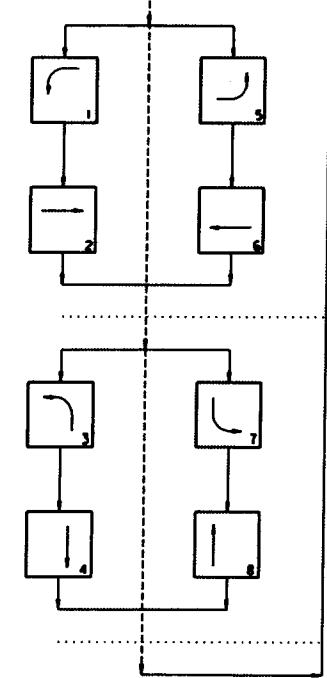
DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST APPROACH
 35 MPH SOUTH APPROACH
 NO BUS STOPS
 NO RAILROAD TRACKS
 EXISTING RADIO INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF CONSTRUCTION PAVEMENT MARKINGS SHOWN ON MOT DETAILS (SEE SEPARATE SHEET.)

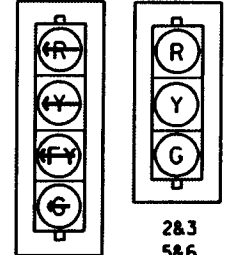
MINIMUM CLEAR ZONE DISTANCE
 4' FEET BEHIND CURB

STAGES 1-3 PHASING DIAGRAM

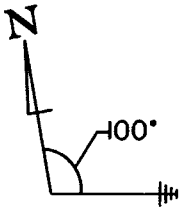


STAGES 1-3 HWY 71B/46TH ST. SIGNAL FACES

12" LENSES



1, 4, 7, 10
 NOTE: ALL SIGNAL HEADS SHALL HAVE BACKPLATES.



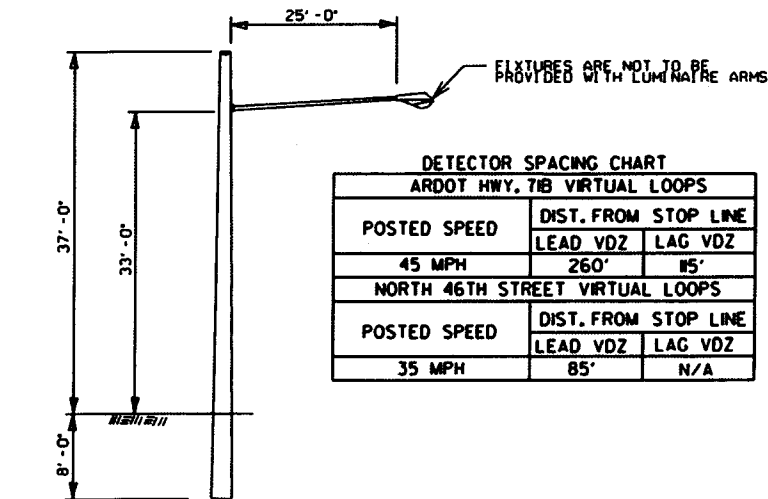
ANTENNA ORIENTATION
 ORIENTED TOWARDS INTERSECTIONS OF HWY 71B WITH N. 40TH ST.

DETECTOR SPACING CHART
 ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	LEAD VDZ	LAG VDZ
45 MPH	260'	115'	

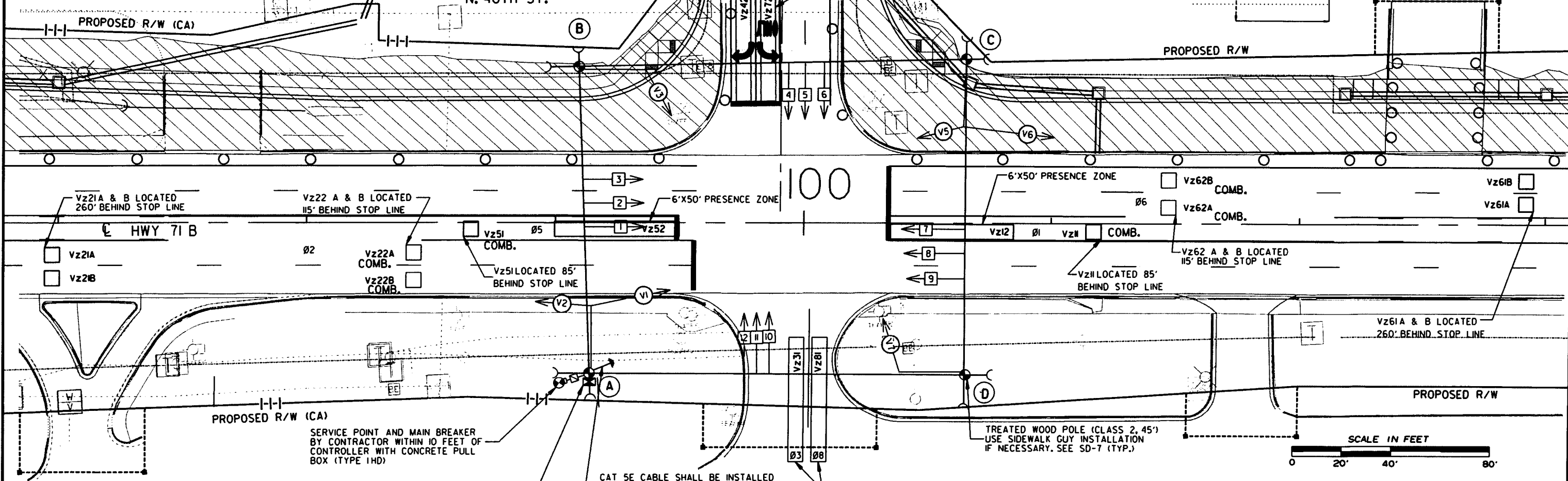
NORTH 46TH STREET VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A	



TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
 LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. THE COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



HWY. 71B / 46TH ST. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 100+86.02	60.29' LT.	669,930.53, 735,667.91
B	HWY. 71B - STA. 100+90.91	62.73' RT.	669,932.58, 735,791.02
C	HWY. 71B - STA. 99+34.00	64.50' RT.	670,089.35, 735,783.94
D	HWY. 71B - STA. 99+34.30	60.73' LT.	670,084.99, 735,658.92

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER WITH CONCRETE PULL BOX (TYPE 1HD)

CAT 5E CABLE SHALL BE INSTALLED IN A SEPARATE 2" G.S. CONDUIT WHICH SHALL CONTAIN NO OTHER POWER-CARRYING CONDUCTORS.

(FOR POLE-MOUNTED CONTROLLER) 1-1.25" G.S. CONDUIT INTO CONTROLLER AND 2-3" G.S. CONDUITS OUT OF CONTROLLER AND UP WOOD POLE.

NOTE TO CONTRACTOR:
 TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES. DATE: 6/4/2018 FILE NAME: Hwy71B_N46th Stage 1.dgn

LOCATION: HWY. 71B / 46th ST.
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: H656
 DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage 1\Hwy71B_N46th Stage 1.dgn
 PLOTTED: 6/4/2018 8:27:08 AM SCALE: 40.00' / 1" MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						BBO903	133	368

② SIGNALIZATION PLAN

STAGE 2 - SOUTHBOUND RAMPS 3 AND 4 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	8	EACH
SP	VIDEO DETECTOR ROTATION	5	EACH

STAGE 2:

ROTATE VIDEO DETECTORS V1, V2, V3, V5, V6 AND V7.
RELOCATE TRAFFIC SIGNAL HEADS 1, 2, 3, 4, 5, 6, 7 AND 8.

MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

STAGE 2 - NORTHBOUND RAMPS 1 AND 2 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	8	EACH
SP	VIDEO DETECTOR ROTATION	5	EACH

STAGE 2:

ROTATE VIDEO DETECTORS V1, V2, V3, V5 AND V6.
RELOCATE TRAFFIC SIGNAL HEADS 1, 2, 3, 4, 5, 6, 7 AND 8.

MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

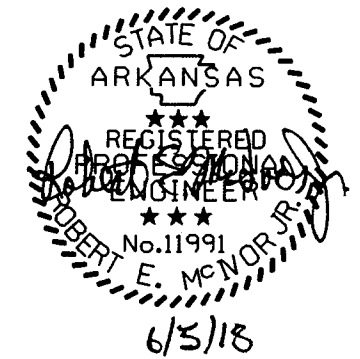
STAGE 2 - 46TH STREET TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	12	EACH
SP	VIDEO DETECTOR ROTATION	6	EACH

STAGE 2:

ROTATE VIDEO DETECTORS V1, V2, V3, V5, V6 AND V7.
RELOCATE TRAFFIC SIGNAL HEADS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 AND 12.

MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

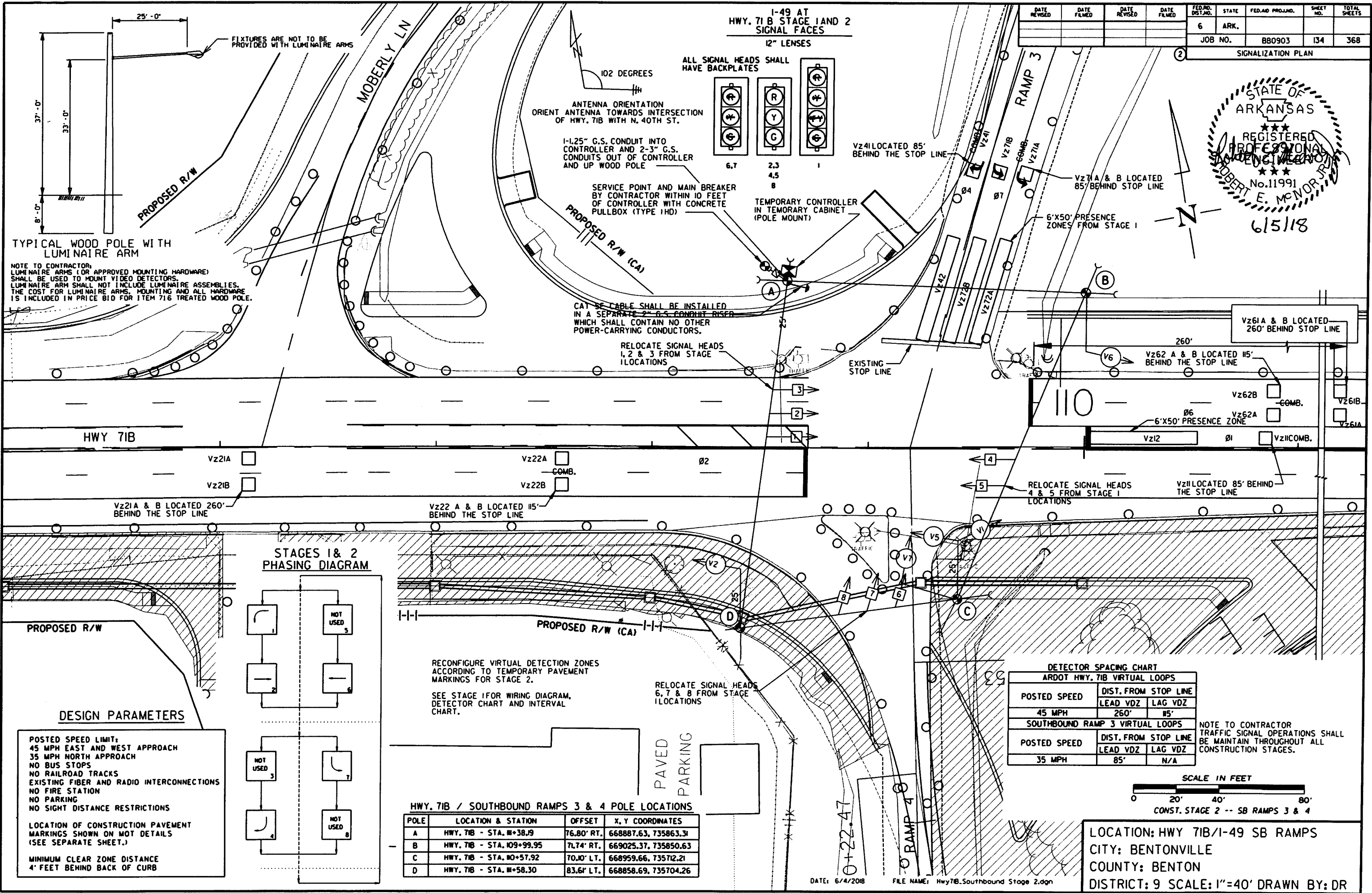
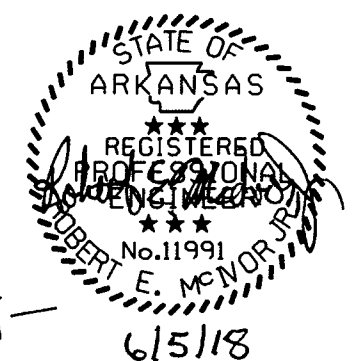


CONST. STAGE 2

LOCATION: HWY. 71B
CITY: BENTONVILLE AND RODGERS
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: JC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		134	368
				JOB NO.	BB0903		134	368

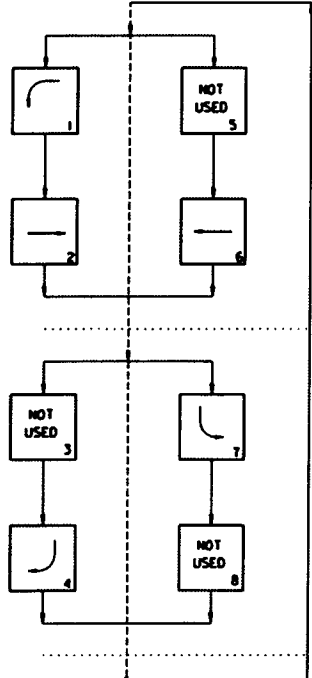
SIGNALIZATION PLAN



TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR: LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. THE COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STAGES 1 & 2 PHASING DIAGRAM



DESIGN PARAMETERS

POSTED SPEED LIMIT:
45 MPH EAST AND WEST APPROACH
35 MPH NORTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
EXISTING FIBER AND RADIO INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

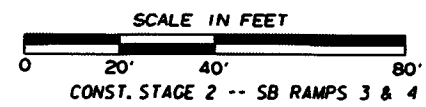
LOCATION OF CONSTRUCTION PAVEMENT MARKINGS SHOWN ON MOT DETAILS (SEE SEPARATE SHEET.)

MINIMUM CLEAR ZONE DISTANCE
4' FEET BEHIND BACK OF CURB

DETECTOR SPACING CHART
ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	85'
SOUTHBOUND RAMP 3 VIRTUAL LOOPS		
POSTED SPEED	DIST. FROM STOP LINE	
35 MPH	85'	N/A

NOTE TO CONTRACTOR
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES.

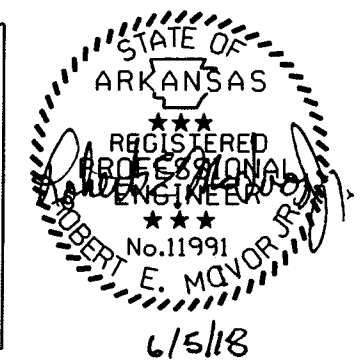


HWY. 71B / SOUTHBOUND RAMPS 3 & 4 POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 109+38.9	76.80' RT.	668887.63, 735863.31
B	HWY. 71B - STA. 109+99.95	74.74' RT.	669025.37, 735850.63
C	HWY. 71B - STA. 109+57.92	70.10' LT.	668959.66, 735712.21
D	HWY. 71B - STA. 109+58.30	83.61' LT.	668858.69, 735704.26

USER: 1656
DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage 2\Hwy71B.Southbound Stage 2.dgn
PLOTTED: 6/4/2018 4:03:30 PM SCALE: 40.00' / 1" MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	135	368	



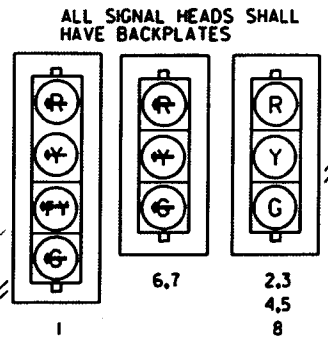
DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST APPROACH
 35 MPH SOUTH APPROACH
 NO BUS STOPS
 NO RAILROAD TRACKS
 EXISTING FIBER AND RADIO INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

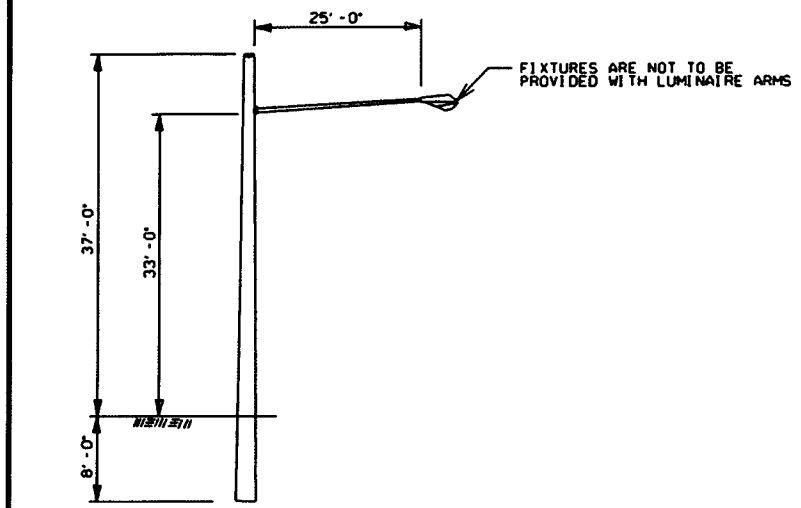
LOCATION OF CONSTRUCTION PAVEMENT MARKINGS SHOWN ON MOT DETAILS (SEE SEPARATE SHEET.)

MINIMUM CLEAR ZONE DISTANCE
 4' FEET BEHIND BACK OF CURB

1-49 AT
 HWY. 71 B STAGE 1 AND 2
 SIGNAL FACES
 12" LENSES



ALL SIGNAL HEADS SHALL HAVE BACKPLATES

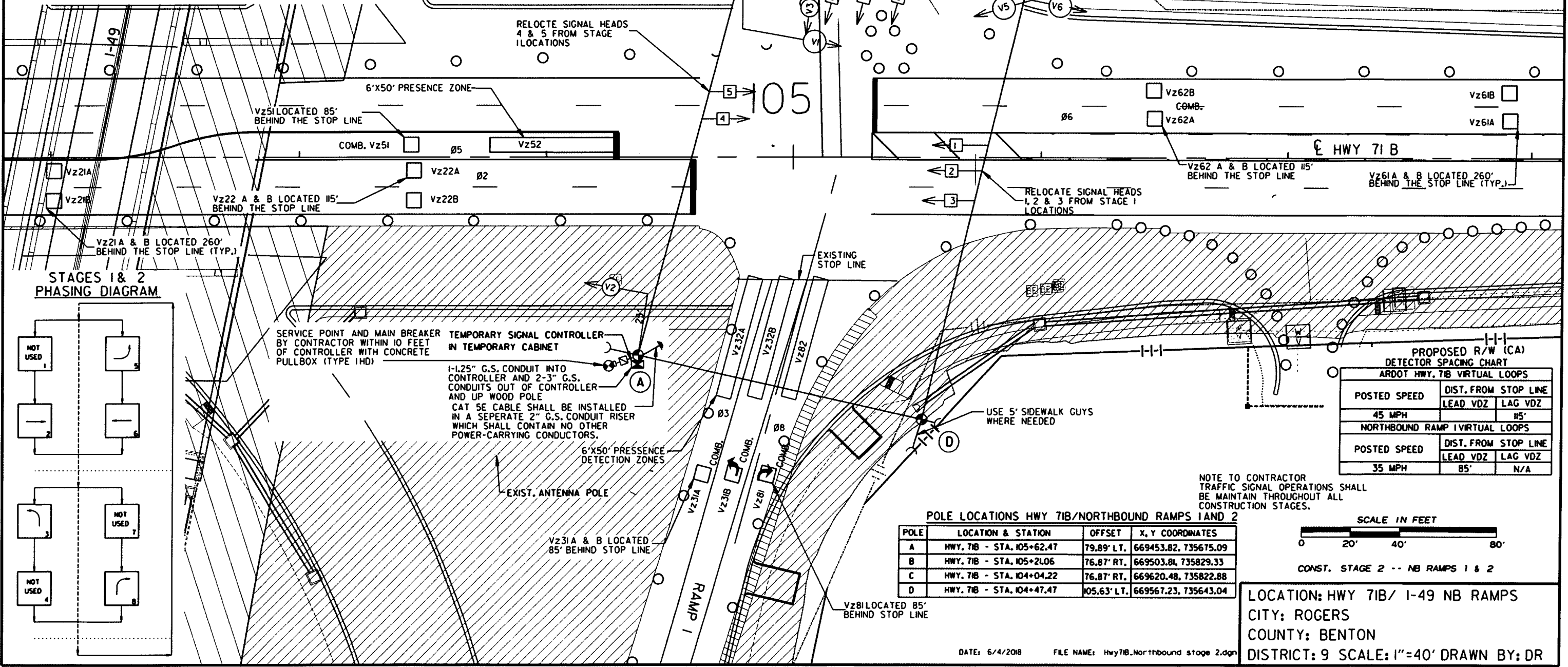


TYPICAL WOOD POLE WITH LUMINAIRE ARM

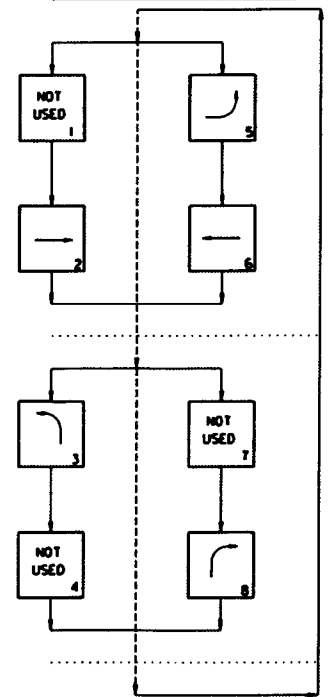
NOTE TO CONTRACTOR:
 LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. THE COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

RELOCATE SIGNAL HEADS 6, 7 & 8 FROM STAGE 1 LOCATIONS

RELOCATE SIGNAL HEADS 4 & 5 FROM STAGE 1 LOCATIONS



STAGES 1 & 2 PHASING DIAGRAM



SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER WITH CONCRETE PULLBOX (TYPE 1HD)

TEMPORARY SIGNAL CONTROLLER IN TEMPORARY CABINET

1-1.25" G.S. CONDUIT INTO CONTROLLER AND 2-3" G.S. CONDUITS OUT OF CONTROLLER AND UP WOOD POLE
 CAT 5E CABLE SHALL BE INSTALLED IN A SEPARATE 2" G.S. CONDUIT RISER WHICH SHALL CONTAIN NO OTHER POWER-CARRYING CONDUCTORS.

6'x50' PRESENCE DETECTION ZONES

EXIST. ANTENNA POLE

Vz31A & B LOCATED 85' BEHIND STOP LINE

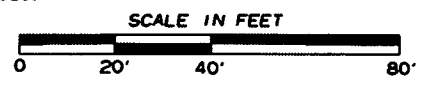
POLE LOCATIONS HWY 71B/NORTHBOUND RAMP 1 AND 2

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 105+62.47	79.89' LT.	669453.82, 735675.09
B	HWY. 71B - STA. 105+21.06	76.87' RT.	669503.81, 735829.33
C	HWY. 71B - STA. 104+04.22	76.87' RT.	669620.48, 735822.88
D	HWY. 71B - STA. 104+47.47	105.63' LT.	669567.23, 735643.04

PROPOSED R/W (CA) DETECTOR SPACING CHART

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	115'	
NORTHBOUND RAMP 1 VIRTUAL LOOPS		
POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A

NOTE TO CONTRACTOR
 TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES.

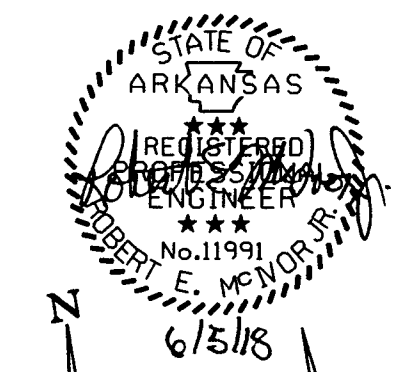


CONST. STAGE 2 -- NB RAMP 1 & 2

LOCATION: HWY 71B/ 1-49 NB RAMP
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: M56
 DESIGN FILE: R:\Traffic Signals\Hwy 71B\Hwy 71B Stage 2\Hwy71B_Northbound stage 2.dgn
 PLOTTED: 6/4/2018 8:37:27 AM SCALE: 40,0000000 / in. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	136	368	



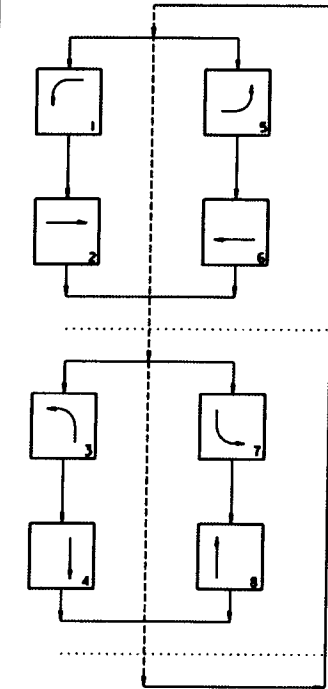
DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST APPROACH
 35 MPH SOUTH APPROACH
 NO BUS STOPS
 NO RAILROAD TRACKS
 EXISTING RADIO INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF CONSTRUCTION PAVEMENT MARKINGS SHOWN ON MOT DETAILS (SEE SEPARATE SHEET.)

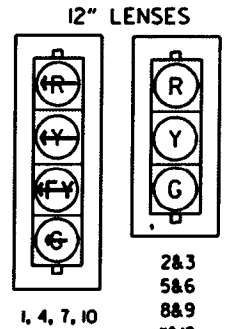
MINIMUM CLEAR ZONE DISTANCE
 4' FEET BEHIND CURB

STAGES 1-3 PHASING DIAGRAM



ANTENNA ORIENTATION
 ORIENTED TOWARDS INTERSECTIONS OF HWY 71B WITH N. 40TH ST.

STAGES 1-3 HWY 71B/46TH ST. SIGNAL FACES



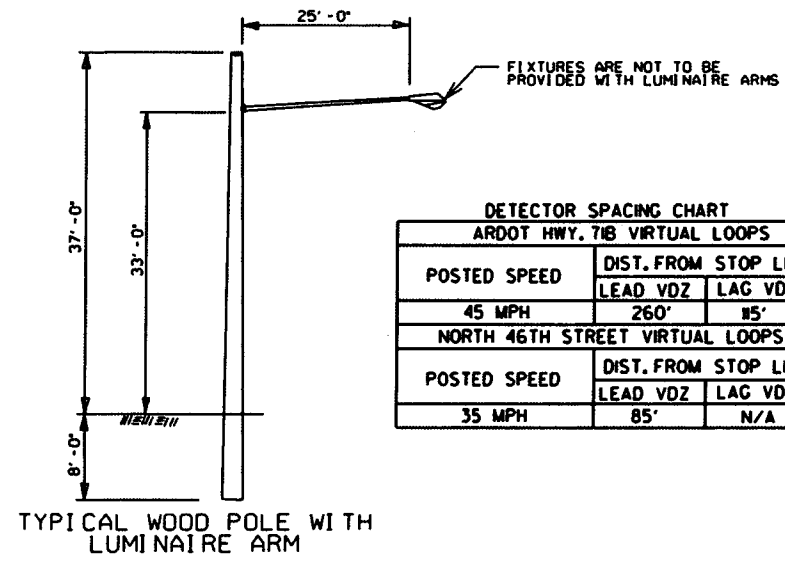
NOTE: ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

DETECTOR SPACING CHART
 ARDOT HWY. 71B VIRTUAL LOOPS

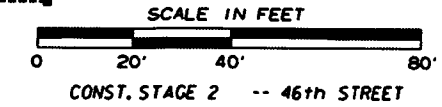
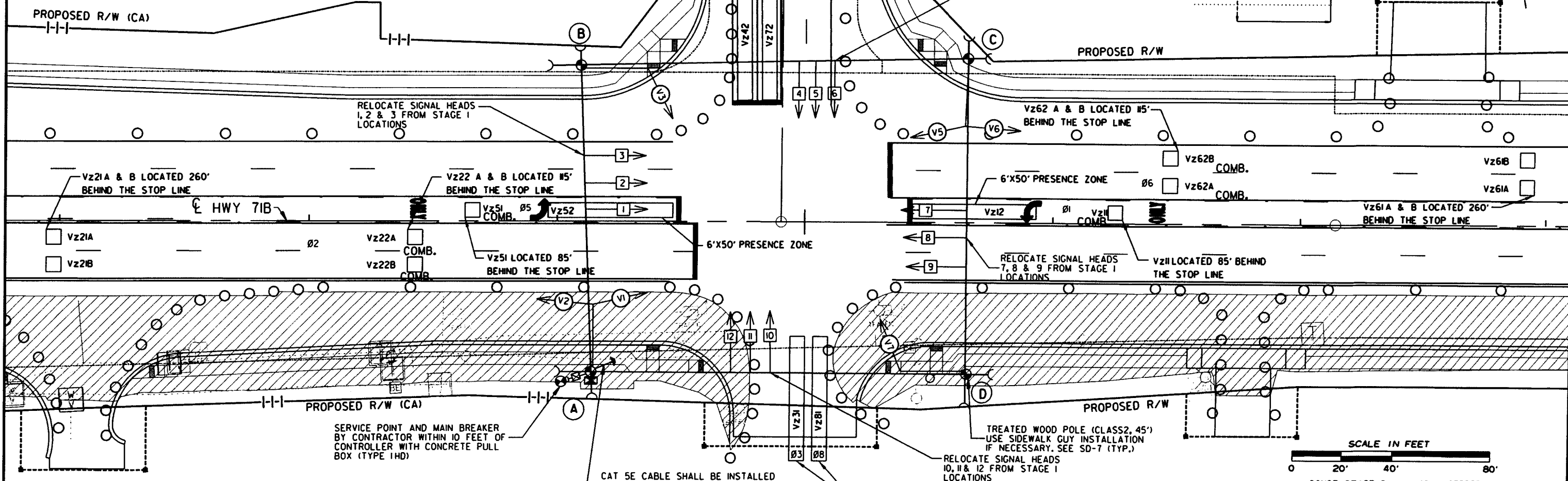
POSTED SPEED	DIST. FROM STOP LINE	LEAD VDZ	LAG VDZ
45 MPH	260'	85'	

NORTH 46TH STREET VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	LEAD VDZ	LAG VDZ
35 MPH	85'		N/A



NOTE TO CONTRACTOR:
 LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. THE COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



HWY. 71B/ 46TH ST. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 100+86.02	60.29' LT.	669,930.53, 735,667.91
B	HWY. 71B - STA. 100+90.91	62.73' RT.	669,932.58, 735,791.02
C	HWY. 71B - STA. 99+34.00	64.50' RT.	670,089.35, 735,783.94
D	HWY. 71B - STA. 99+34.30	60.73' LT.	670,081.99, 735,658.92

NOTE TO CONTRACTOR:
 TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES.

LOCATION: HWY. 71B / 46th ST.
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: M556
 DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage 2\Hwy71B_N46th Stage 2.dgn
 PLOTTED: 6/4/2018 8:39:25 AM SCALE: 40.00' / 1" MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
7-5-18				6	ARK.			
				JOB NO.	BBO903	137	368	
				2 SIGNALIZATION PLAN				

STAGE 3 - HWY. 71B/I-49 SPUI TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.17	LUMP SUM

STAGE 3:

THE TEMPORARY TRAFFIC SIGNAL INSTALLATION AT SOUTHBOUND RAMPS AND AT NORTHBOUND RAMPS SHALL REMAIN IN OPERATION UNTIL THE SPUI PERMANENT TRAFFIC SIGNAL IS OPERATIONAL FOR STAGE 3 CONFIGURATION AS SHOWN ON STAGE 3 SIGNAL PLANS. COVER SIGNAL HEADS 3, 5, 6, 11 AND 13 AND ALL PEDESTRIAN SIGNAL HEADS AS SHOWN ON STAGE 3 SIGNAL PLANS. REFER TO I-49/HWY. 71B SPUI PERMANENT TRAFFIC SIGNAL QUANTITIES AND PERMANENT SIGNAL PLANS.

MAINTAIN THIS SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)



STAGE 3 - HWY 71B/46TH STREET TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	12	EACH
SP	VIDEO DETECTOR RELOCATION	6	EACH

STAGE 3:

ROTATE VIDEO DETECTORS V1, V2, V3, V5, V6 AND V7.
RELOCATE TRAFFIC SIGNAL HEADS 1, 2, 3, 7, 8, 9, 10, 11 AND 12.

MAINTAIN THIS SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

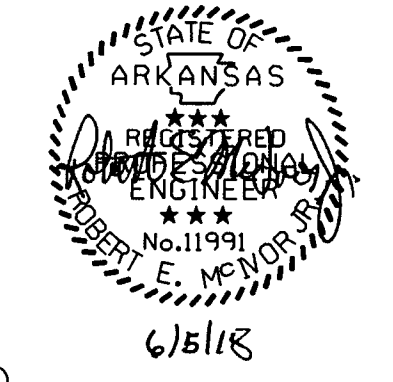
CONST. STAGE 3

LOCATION: HWY. 71B/I-49 SPUI RAMPS
CITY: BENTONVILLE AND ROGERS
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: JC

USER: 1656
DESIGN FILE: R:\Traffic Signals\hwy 71b\hwy 71b Stage 3 SUB QUANTITIES.dgn
PLOTTED: 7/6/2018 2:44:11 PM SCALE: 40,000000 / 1in. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		138	368
				JOB NO.		BB0903	138	368

2 SIGNALIZATION PLAN

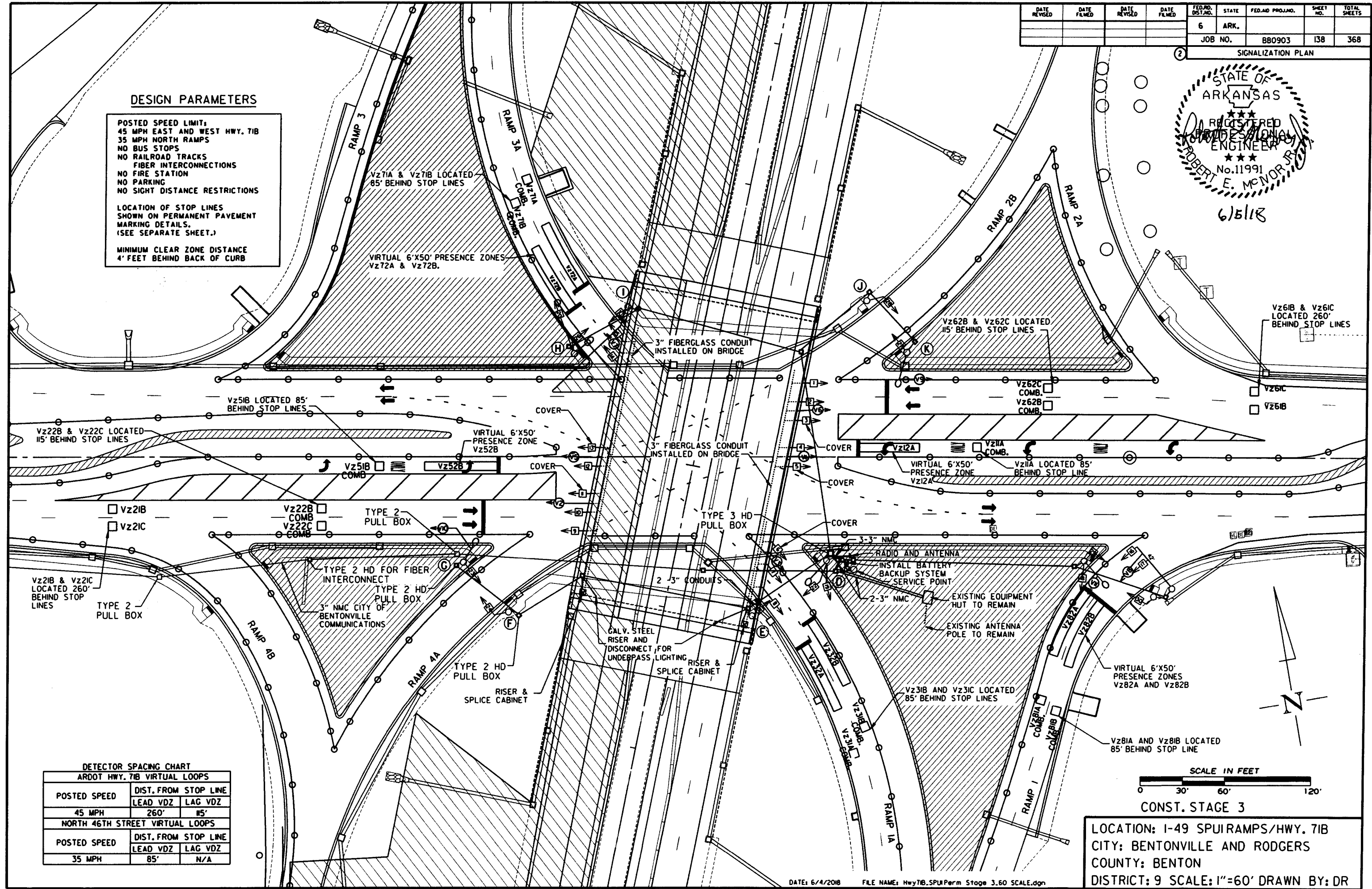


DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST HWY. 71B
 35 MPH NORTH RAMP
 NO BUS STOPS
 NO RAILROAD TRACKS
 FIBER INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES
 SHOWN ON PERMANENT PAYMENT
 MARKING DETAILS.
 (SEE SEPARATE SHEET.)

MINIMUM CLEAR ZONE DISTANCE
 4' FEET BEHIND BACK OF CURB



DETECTOR SPACING CHART
 ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	15'
NORTH 46TH STREET VIRTUAL LOOPS		
POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A



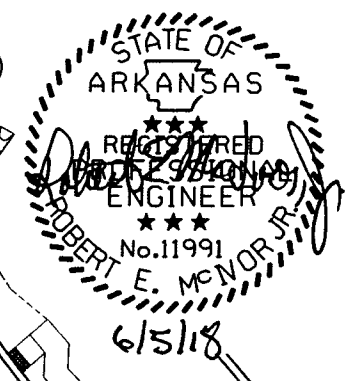
CONST. STAGE 3

LOCATION: I-49 SPU RAMP/ HWY. 71B
 CITY: BENTONVILLE AND RODGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=60' DRAWN BY: DR

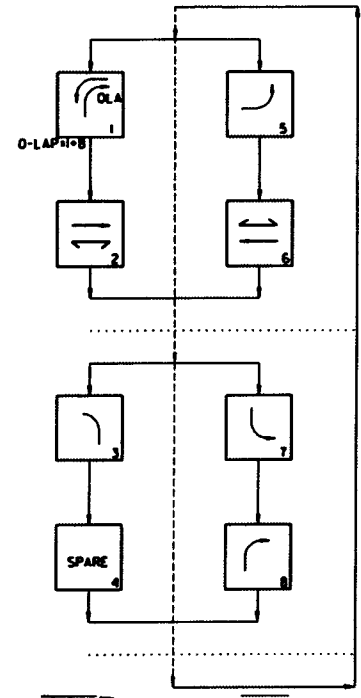
USER: 1656
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 PLOTTED: 6/4/2018 10:45:57 AM SCALE: 60.00 / in. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903	139	368	

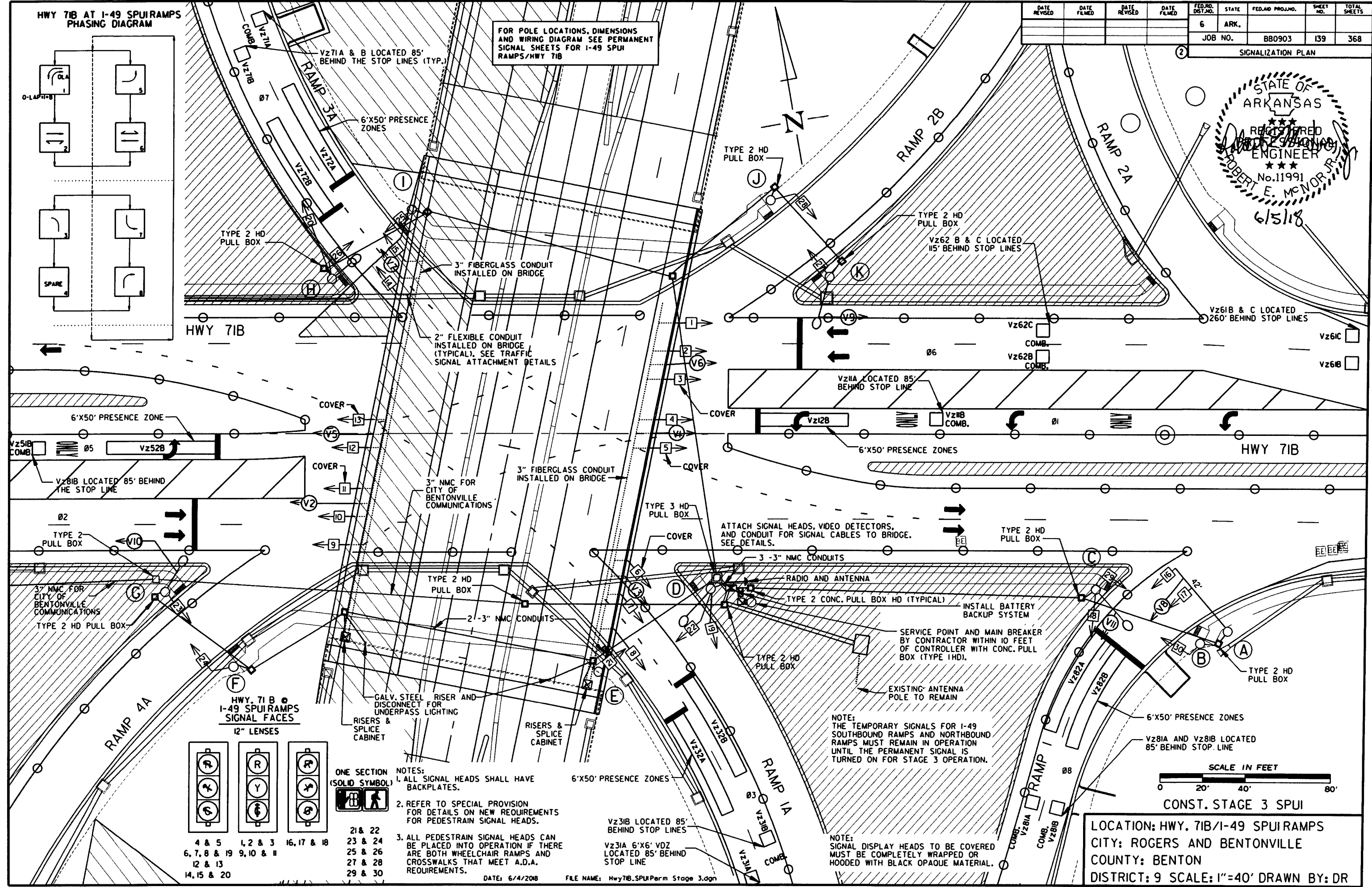
SIGNALIZATION PLAN



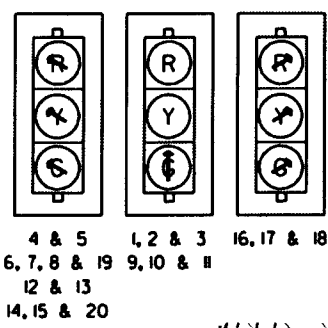
HWY 71B AT I-49 SPU/RAMPS PHASING DIAGRAM



FOR POLE LOCATIONS, DIMENSIONS AND WIRING DIAGRAM SEE PERMANENT SIGNAL SHEETS FOR I-49 SPU/RAMPS/HWY 71B



HWY 71B @ I-49 SPU/RAMPS SIGNAL FACES



ONE SECTION (SOLID SYMBOL)

- NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 2. REFER TO SPECIAL PROVISION FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRAIN SIGNAL HEADS.
 3. ALL PEDESTRAIN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND CROSSWALKS THAT MEET A.D.A. REQUIREMENTS.

- 21 & 22
- 23 & 24
- 25 & 26
- 27 & 28
- 29 & 30

- 4 & 5
- 6, 7, 8 & 19
- 9, 10 & 11
- 12 & 13
- 14, 15 & 20

DATE: 6/4/2018 FILE NAME: Hwy71B.SPUPerm Stage 3.dgn



CONST. STAGE 3 SPU

LOCATION: HWY. 71B/I-49 SPU/RAMPS
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: 1656
 DESIGN FILE: R:\T-office\Signals\Hwy 71B Stage 3\Hwy71B_SPUPerm Stage 3.dgn
 PLOTTED: 6/4/2018 09:17:32 AM SCALE: 40.00' / in. MODEL: PROPOSED DESIGN

STAGE 3 TEMPORARY DETECTOR SYSTEM DESCRIPTION: JOB BB0903

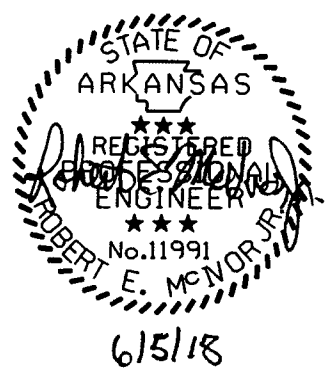
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	140	368	

I-49 / HWY 71B INTERCHANGE "SPUI" DETECTOR ASSIGNMENTS			HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS		COMMENTS	TUBE LENGTHS	
DET. ID#	LOCATION DIRECTION	TYPE	CAB. TRM #	AMP. CHN. #	CON. INP. #	PHS	SYSTEM DET. #			MASTER SYSTEM DETECTOR NUMBERS
Vz11B	WB LEFT TURN FAR	COMB.		1	V9	1	1		CAMERA V1	23"
Vz12 B	WB LEFT TURN	LOCAL		2	V1	1			CAMERA V1	23"
Vz21B&C	EB THROUGH FAR	LOCAL		9	V2	2			CAMERA V10	23"
Vz22 B&C	EB THROUGH NEAR	COMB.		10	V10	2	2		CAMERA V2	23"
Vz31A&B	NB LEFT FAR	COMB.		17	V11	3	3		CAMERA V3	23"
Vz32 A&B	NB LEFT NEAR	LOCAL		18	V3	3			CAMERA V3	23"
Vz51B	EB LEFT TURN FAR	COMB.		13	V13	5	5		CAMERA V5	23"
Vz52 B	EB LEFT TURN	LOCAL		14	V5	5			CAMERA V5	23"
Vz61B&C	WB THROUGH FAR	LOCAL		5	V6	6			CAMERA V9	23"
Vz62 B&C	WB THROUGH NEAR	COMB.		6	V14	6	6		CAMERA V6	23"
Vz71A&B	SB LEFT FAR	COMB.		29	V15	7	7		CAMERA V7	23"
Vz72 A&B	SB LEFT NEAR	LOCAL		30	V7	7			CAMERA V7	23"
Vz81A&B	NB RIGHT FAR	COMB.		21	V8	8			CAMERA V11	23"
Vz82 A&B	NB RIGHT NEAR	LOCAL		22	V16	8	8		CAMERA V8	23"
PB 21 & 22	RAMP 1A WEST TO EAST	PED.			P2	2				
PB 23 & 24	RAMP 4A WEST TO EAST	PED.			P2	2				
PB 25 & 26	RAMP 3A EAST TO WEST	PED.			P6	6				
PB 27 & 28	RAMP 2B EAST TO WEST	PED.			P6	6				
PB 29 & 30	RAMP 1 WEST TO EAST	PED.			P2	2				
SPARE: 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23-28, 31 & 32										

INTERVAL CHART

SIGNAL FACES	I-49 RAMPS AT HWY 71B											FLASH SEQUENCE	
	1 + 5	CLR.	1 + 6	CLR.	2 + 5	CLR.	2 + 6	CLR.	3 + 7	CLR.	3 + 8		CLR.
1 & 2	R	R	⊙	⊙	R	R	⊙	⊙	R	R	R	R	R
4	←G	•	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R
7, 8 & 19	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←G	•	←R
9 & 10	R	R	R	R	⊙	⊙	⊙	⊙	R	R	R	R	R
12	←G	•	←R	←R	←G	•	←R	←R	←R	←R	←R	←R	←R
14, 15 & 20	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←R	←R	←R
16, 17 & 18	←G	•	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R
21 & 22	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLK
23 & 24	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLK
25 & 26	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	BLK
27 & 28	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	BLK
29 & 30	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLK

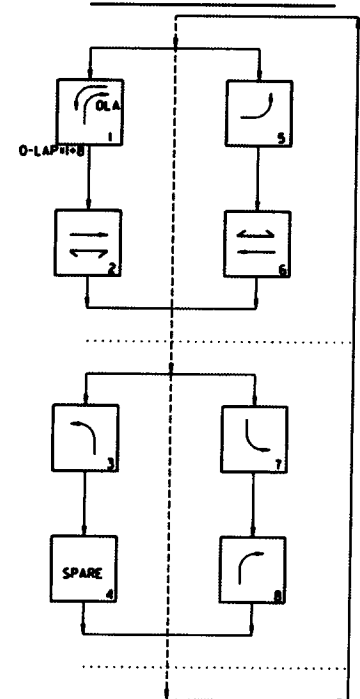
- DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE.
- DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE.
- DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE.



CONTROLLER INPUT ABBREVIATIONS:
 V = VEHICULAR INPUT
 D = SYSTEM OR AUXILIARY INPUT
 P = PEDESTRIAN INPUT

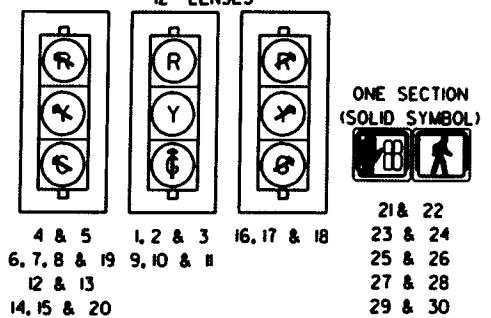
NOTE: "AMP CHN=" REFERS TO THE RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE. EXAMOLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

HWY 71B AT I-49 SPUI RAMPS PHASING DIAGRAM



NOTE: FOR POLE LOCATIONS, POLE DIMENSIONS, AND WIRING DIAGRAM SEE PERMANENT SIGNAL PLANS.

HWY. 71B @ I-49 SPUI RAMPS SIGNAL FACES



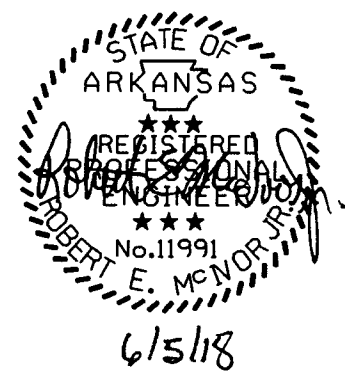
- NOTE:
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 - REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 - ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.
 - SIGNAL HEADS 3, 5, 6, 11 & 13 TO BE COVERED DURING STAGE 3.

CONST. STAGE 3

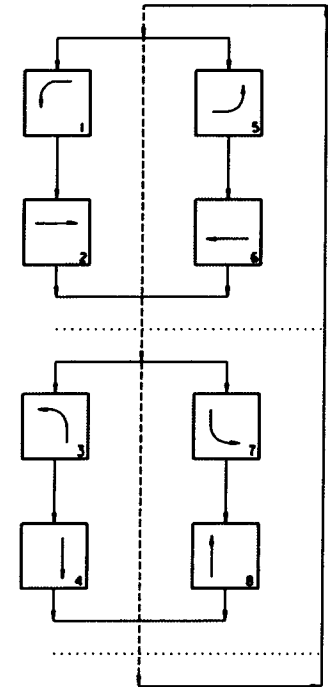
LOCATION: I-49 SPUI RAMPS/HWY. 71B
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DR

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	141	368	

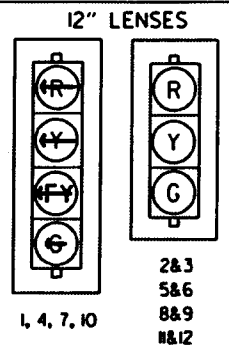
2 SIGNALIZATION PLAN



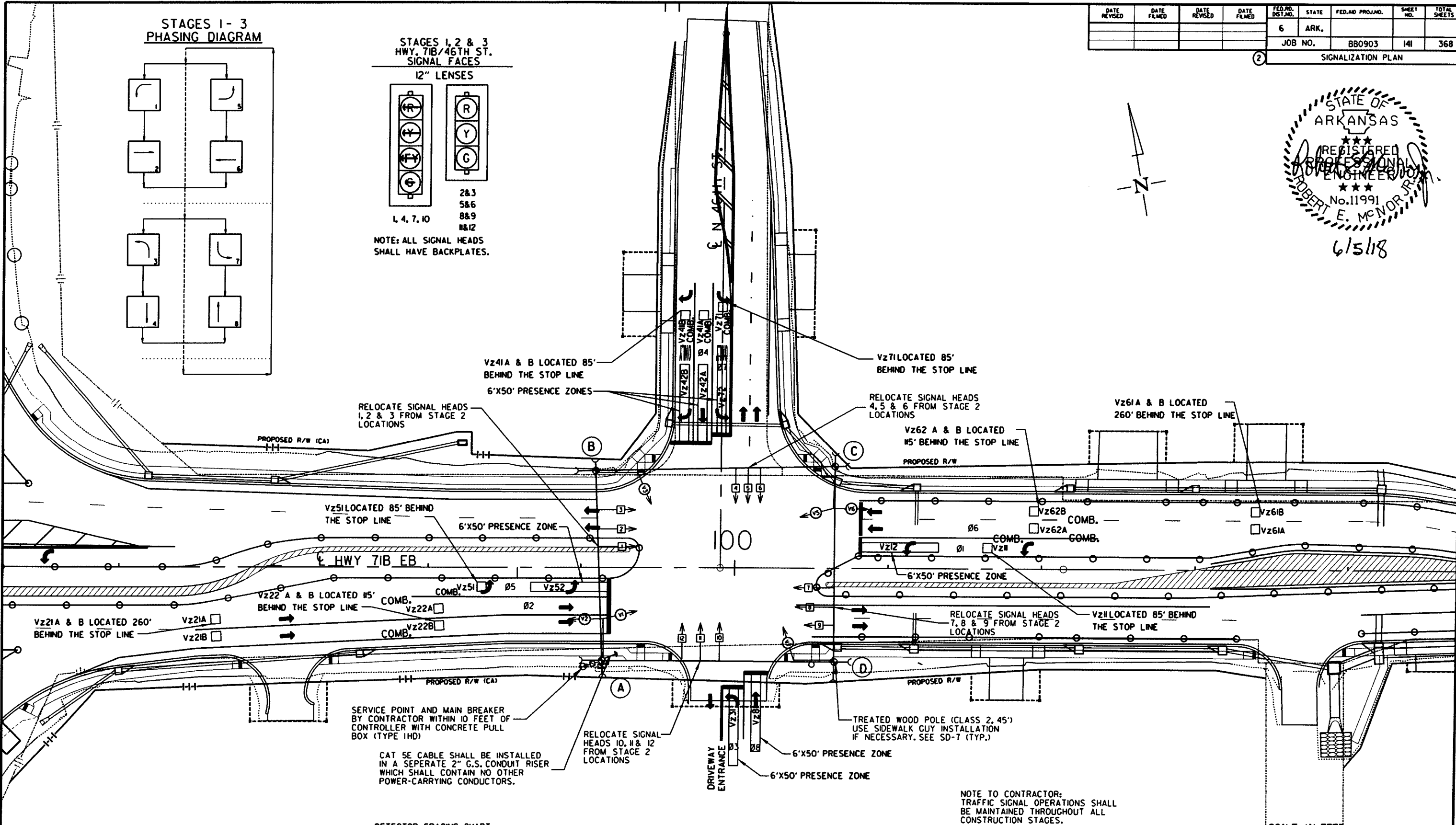
STAGES 1-3 PHASING DIAGRAM



STAGES 1, 2 & 3 HWY. 71B/46TH ST. SIGNAL FACES



NOTE: ALL SIGNAL HEADS SHALL HAVE BACKPLATES.



DETECTOR SPACING CHART
ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
46TH STREET VIRTUAL LOOPS		
POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A

NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES.

STAGE 3:
ROTATE VIDEO DETECTORS V1 AND V5.
RECONFIGURE ALL DETECTION ZONES.



CONST. STAGE 3 -- 46TH STREET
LOCATION: HWY. 71B/46TH ST.
CITY: ROGERS
COUNTY: BENTON
DISTRICT: 9 SCALE: 1"=60' DRAWN BY: DR

USER: 11656
DESIGN FILE: R:\Traffic Signals\Hwy 71B\Hwy 71B Stage 3\Hwy71B_M46th Stage 3.60 SCALE.dgn
PLOTTED: 6/4/2018 9:07:58 AM SCALE: 60.00' / in. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	142	368	

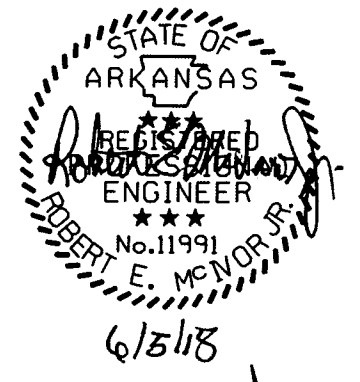
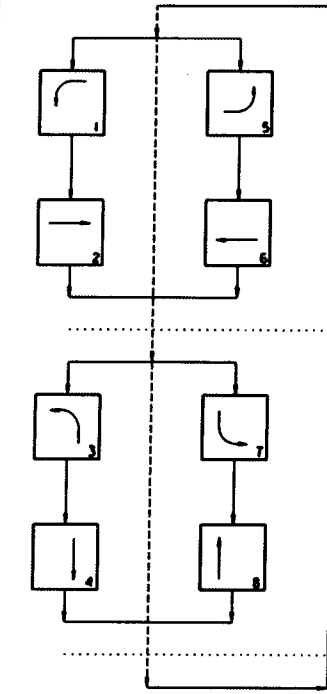
DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST APPROACH
 35 MPH SOUTH APPROACH
 NO BUS STOPS
 NO RAILROAD TRACKS
 EXISTING RADIO INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

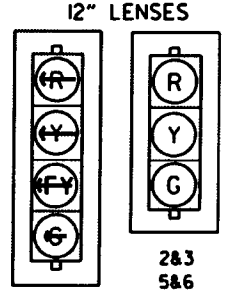
LOCATION OF CONSTRUCTION PAYMENT MARKINGS SHOWN ON MOT DETAILS (SEE SEPARATE SHEET.)

MINIMUM CLEAR ZONE DISTANCE 4' FEET BEHIND CURB

STAGES 1-3 PHASING DIAGRAM



STAGES 1, 2 & 3 HWY. 71B/46TH ST. SIGNAL FACES



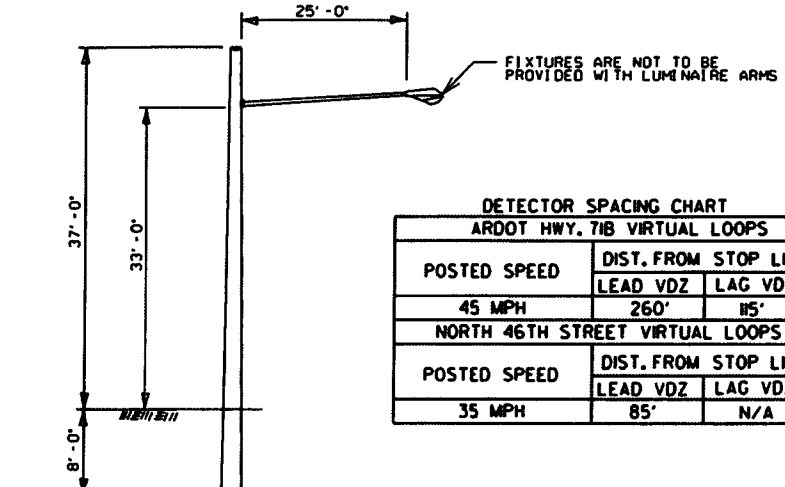
NOTE: ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

DETECTOR SPACING CHART
 ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'

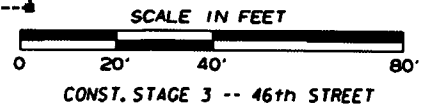
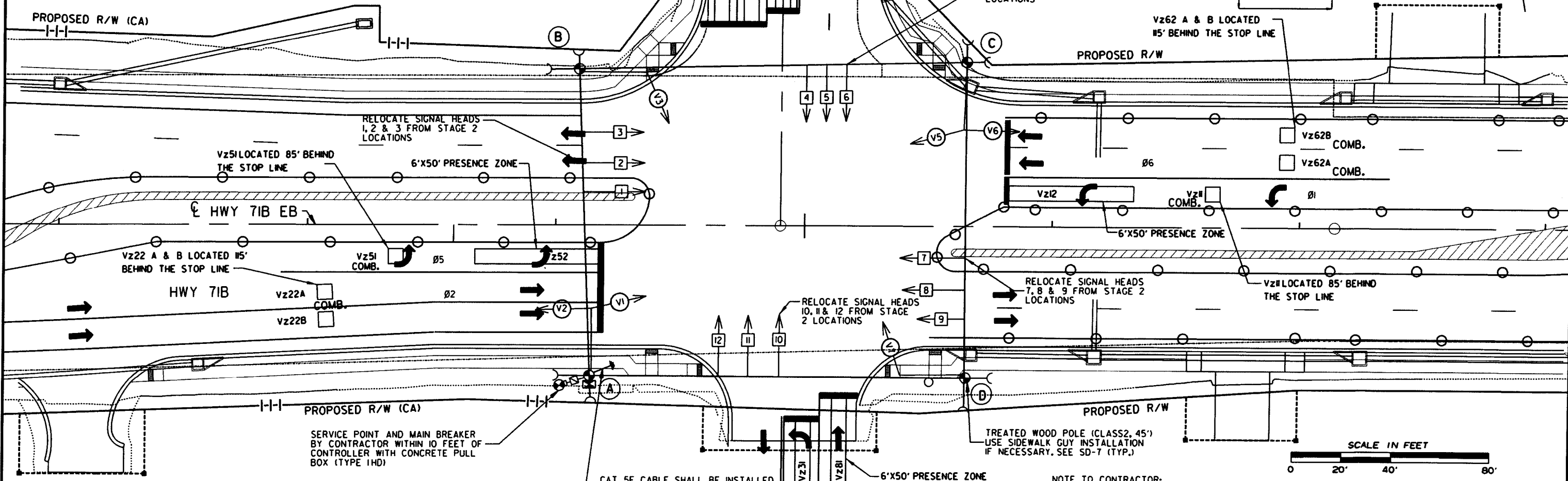
NORTH 46TH STREET VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A



TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
 LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. THE COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



HWY. 71B/ 46TH ST. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 100+86.02	60.29' LT.	669,930.53, 735,667.91
B	HWY. 71B - STA. 100+90.91	62.73' RT.	669,932.58, 735,791.02
C	HWY. 71B - STA. 99+34.00	64.50' RT.	670,089.35, 735,783.94
D	HWY. 71B - STA. 99+34.30	60.73' LT.	670,081.99, 735,658.92

NOTE TO CONTRACTOR:
 TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION STAGES.

STAGE 3:
 ROTATE VIDEO DETECTORS VI AND V5. RECONFIGURE ALL DETECTION ZONES.

LOCATION: HWY. 71B / 46th ST.
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: 11656
 DESIGN FILE: R:\Tr-office\Signals\Hwy 71B Stage 3\Hwy71B_N46th Stage 3.dgn
 PLOTTED: 6/4/2018 9:20:30 AM SCALE: 40.00' / 1" MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	143	368

② SIGNALIZATION PLAN

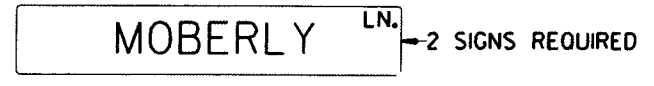
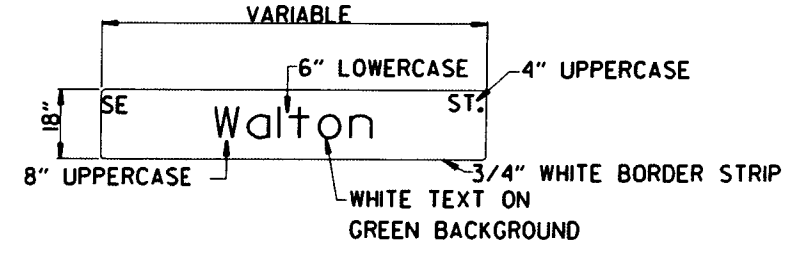


HWY. 71B/MOBERLY LANE - TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER-FIBER (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	1787	LIN. FT.
SP	WIC FIBER ENCLOSURE	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	16	EACH
SP & 707	CENTRAL CONTROL UNIT	1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	4	EACH
SP & 707	INFRARED PROGRAMMING DEVICE	1	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2482	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	616	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	576	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	495	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1819	LIN. FT.
SP	COMMUNICATION CABLE, FIBER (6 CHANNEL)	540	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	1056	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	2	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	10	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (6')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (10')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	2	EACH
SP	LED LUMINAIRE ASSEMBLY	9	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
726	STANDARD SIGN	15	SQ. FT.
SP	18" STREET NAME SIGN	4	EACH
SP & 733	VIDEO DETECTOR (IP)	10	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)	2	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD IP (2 CAMERA)	7	EACH

• ONE SPARE VIDEO DETECTOR (IP) AND ONE SPARE VIDEO PROCESSOR (IP) SHALL BE SUPPLIED.
PERMANENT SIGNAL:
 (REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

**OVERHEAD STREET NAME
 MARKER STANDARD
 MAST ARM MOUNTED**



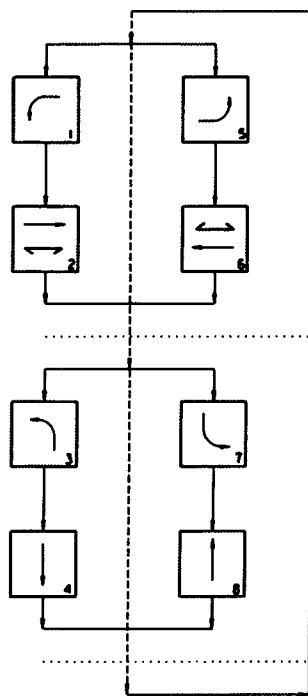
- NOTES:**
- REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
 - ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.
 - WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEAR SIDE LEFT POLE. SEE STD. DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
 - THE SERIES C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS.

PERMANENT

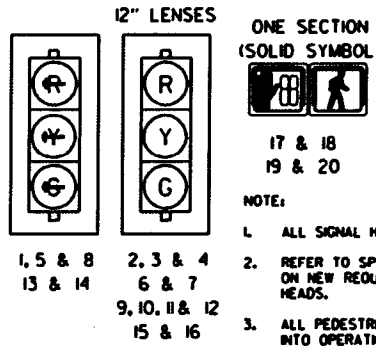
LOCATION: HWY. 71B/MOBERLY LANE
 CITY: BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DR

USER: R656
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HWY. 71B AT MOBERLY LANE
PHASING DIAGRAM



HWY. 71B AT MOBERLY LANE
SIGNAL FACES



17 & 18
19 & 20

NOTE:

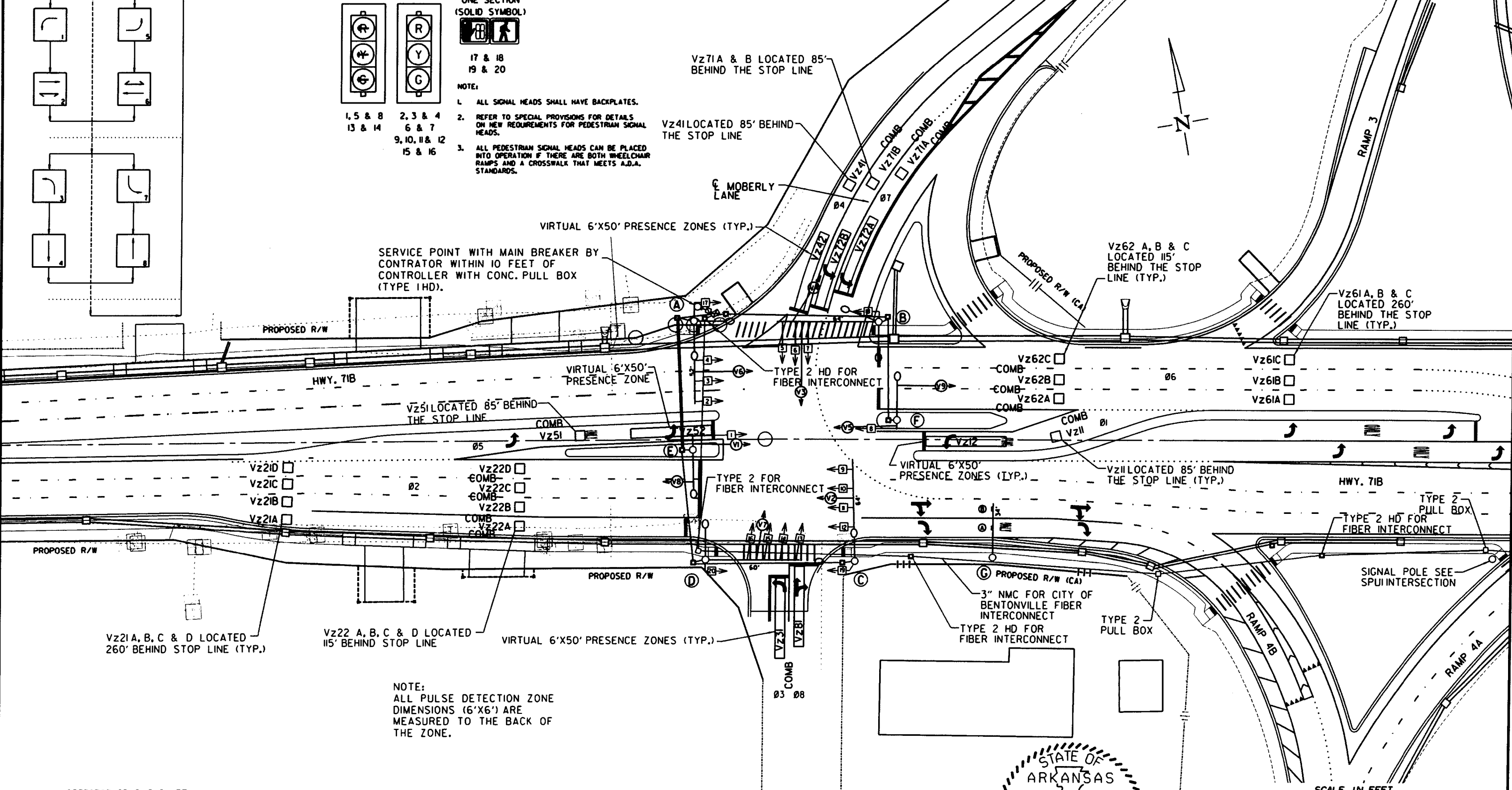
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMP AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

1, 5 & 8
13 & 14

2, 3 & 4
6 & 7
9, 10, 11 & 12
15 & 16

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		144	368
				JOB NO.	BB0903			

SIGNALIZATION PLAN



SERVICE POINT WITH MAIN BREAKER BY CONTRATOR WITHIN 10 FEET OF CONTROLLER WITH CONC. PULL BOX (TYPE 1HD).

VIRTUAL 6'X50' PRESENCE ZONES (TYP.)

Vz71A & B LOCATED 85' BEHIND THE STOP LINE

Vz41 LOCATED 85' BEHIND THE STOP LINE

Vz62 A, B & C LOCATED 115' BEHIND THE STOP LINE (TYP.)

Vz61 A, B & C LOCATED 260' BEHIND THE STOP LINE (TYP.)

Vz21 A, B, C & D LOCATED 260' BEHIND STOP LINE (TYP.)

Vz22 A, B, C & D LOCATED 115' BEHIND STOP LINE

VIRTUAL 6'X50' PRESENCE ZONES (TYP.)

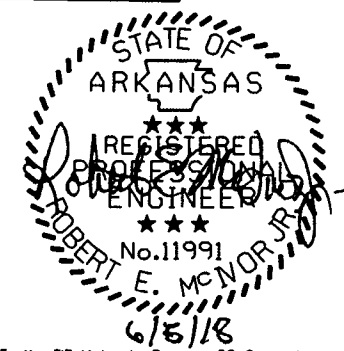
NOTE:
ALL PULSE DETECTION ZONE DIMENSIONS (6'X6') ARE MEASURED TO THE BACK OF THE ZONE.

DETECTOR SPACING CHART
ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'

MOBERLY LANE VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A

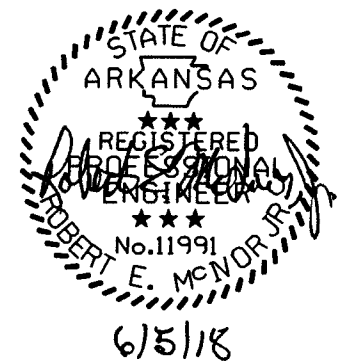


PERMANENT SIGNAL
LOCATION: HWY. 71B/MOBERLY LANE
CITY: BENTONVILLE
COUNTY: BENTON
DISTRICT: 9 SCALE: 1"=60' DRAWN BY: DR

USER: 1656
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 PLOTTED: 6/4/2018 10:34:33 AM SCALE: 1/60.00' / In. MODEL: PROPOSED DESIGN

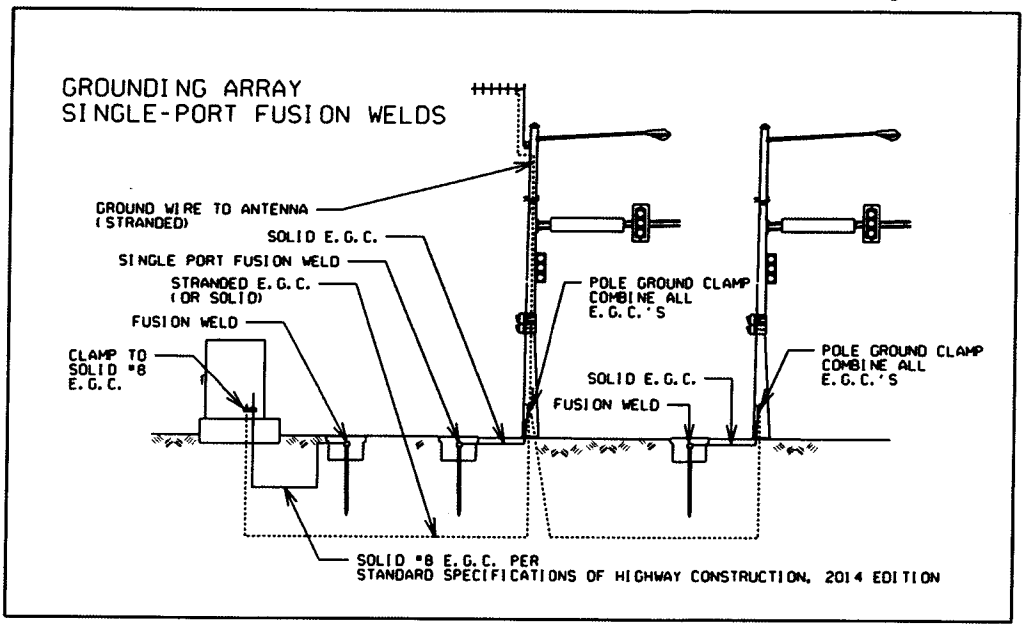
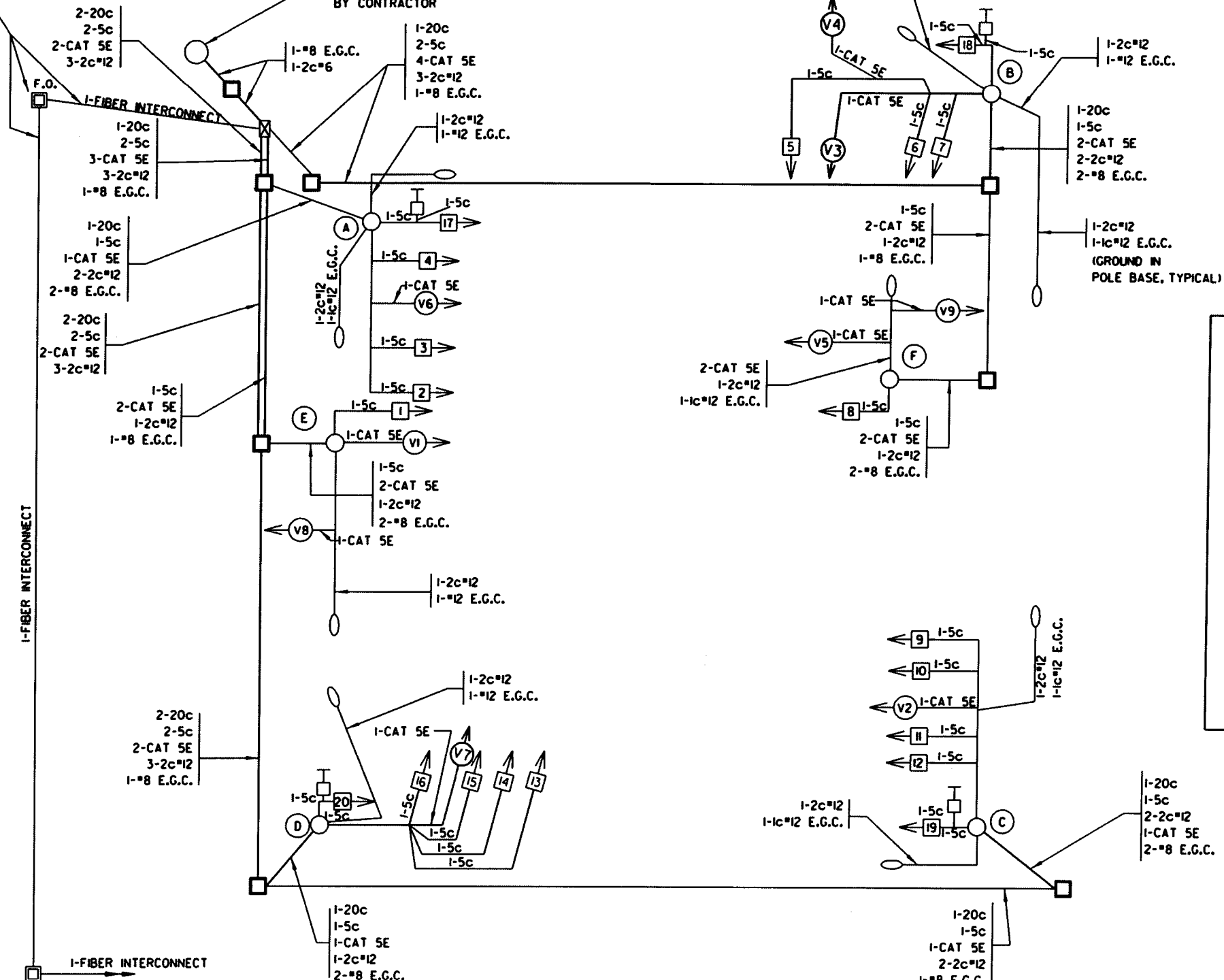
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		146	368

2 SIGNALIZATION PLAN
WIRING



TYPE 2 HD PULL BOX AND 3" NMC CONDUIT FOR FIBER INTERCONNECT BY CITY OF BENTONVILLE.

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR



WIRING DIAGRAM
HWY 71B/MOBERLY LANE

NOTES TO CONTRACTOR:

- ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
- ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
- THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

TYPE 2 HD PULL BOX AND 3" NMC CONDUIT FOR FIBER INTERCONNECT BY CITY OF BENTONVILLE.

PERMANENT SIGNAL
LOCATION: HWY. 71B /MOBERLY LANE
CITY: BENTONVILLE
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: DR

USER: 1656
DESIGN FILE: R:\Traffic Signals\Hwy 71B Stoope Permanent\Hwy71B_signal_Moberly_WiringandChartsSht2.dgn
PLOTTED: 6/4/2018 9:39:39 AM SCALE: 40.000000" / in. MODEL: PROPOSED DESIGN

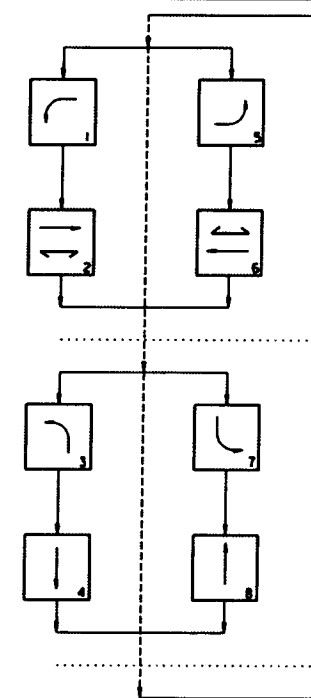
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903	147	368	

DETECTOR CHART

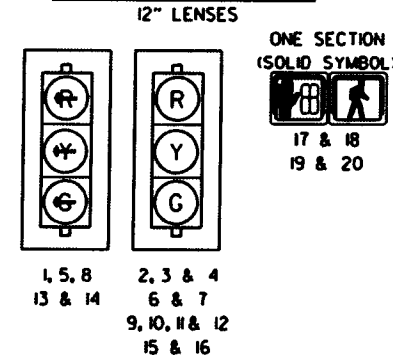
DETECTOR SYSTEM DESCRIPTION: JOB BBO903

HWY 71B/MOBERLY LANE DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS		COMMENTS	TUBE LENGTHS	
DET. ID*	LOCATION DIRECTION	TYPE	DET.*	CAB. TRM. #	AMP. CHN. #	CON. INP. #	PHS	SYSTEM DET.*			MASTER SYSTEM DETECTOR NUMBERS
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	23"
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23"
Vz21 A,B,C&D	EB THROUGH FAR	LOCAL			9	V2	2			CAMERA V8	74"
Vz22 A,B,C&D	EB THROUGH NEAR	COMB.			10	V10	2	2		CAMERA V2	37"
Vz31	NB LEFT	LOCAL			17	V3	3	3		CAMERA V3	23"
Vz41	SB THROUGH FAR	COMB.			21	V12	4	4		CAMERA V4	23"
Vz42	SB THROUGH NEAR	LOCAL			22	V4	4			CAMERA V7	23"
Vz51	EB LEFT TURN FAR	COMB.			13	V13	5	5		CAMERA V5	23"
Vz52	EB LEFT TURN	LOCAL			14	V5	5			CAMERA V5	23"
Vz61 A,B&C	WB THROUGH FAR	LOCAL			5	V6	6			CAMERA V9	74"
Vz62 A,B&C	WB THROUGH NEAR	COMB.			6	V14	6	6		CAMERA V6	58"
Vz71 A&B	SB LEFT FAR	COMB.			23	V15	7	7		CAMERA V4	23"
Vz72 A&B	SB LEFT NEAR	LOCAL			24	V7	7			CAMERA V7	23"
Vz81	NB THROUGH	LOCAL			18	V8	8	8		CAMERA V3	23"
PB 17 & 18	NORTH LEG	PED.				P6	6				
PB 19 & 20	SOUTH LEG	PED.				P2	2				
SPARE: 3, 4, 7, 8, 11, 12, 15, 16, 19, 20											

HWY. 71B AT MOBERLY LANE
PHASING DIAGRAM

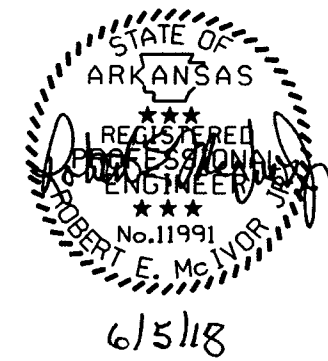


SIGNAL FACES



NOTE:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.



CONTROLLER INPUT ABBREVIATIONS:
V = VEHICULAR INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE: "AMP CHN=" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

INTERVAL CHART

SIGNAL FACES	HWY. 71B/MOBERLY LANE															FLASH SEQUENCE	
	1 + 5	CLR.	1 + 6	CLR.	2 + 5	CLR.	2 + 6	CLR.	3 + 7	CLR.	3 + 8	CLR.	4 + 7	CLR.	4 + 8		CLR.
1	←G	•	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
2, 3 & 4	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
5	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←G	•	←R	←R	←R	←R	←R
6 & 7	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
8	←G	•	←R	←R	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
9, 10, 11 & 12	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
13 & 14	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←R	←R	←G	•	←R	←R	←R
15 & 16	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
17 & 18	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW
19 & 20	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW

- DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE.
- DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE.
- DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE.

PERMANENT SIGNAL
LOCATION: HWY. 71B / MOBERLY LANE
CITY: BENTONVILLE
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: DR

USER: H656
DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage Permanent\Hwy71B_signal_Moberly_WiringandCharts.dgn
PLOTTED: 6/4/2008 9:40:46 AM SCALE: 40.000000' / In. MODEL: PROPOSED DESIGN

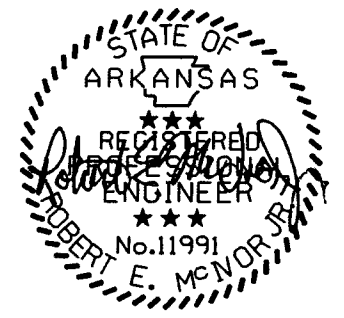
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	148	368

2 SIGNALIZATION PLAN

HWY. 71B/I-49 SPU RAMPS - TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTRLLER TS2-TYPE 2, E-NET (8 PHASES)	1	EACH
SP & 701	SPLICE CABINET INSTALLATION	2	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	3000	LIN. FT.
SP	BATTERY BACKUP SYSTEM	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	20	EACH
SP & 707	CENTRAL CONTROL UNIT	1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	10	EACH
SP & 707	INFRARED PROGRAMMING DEVICE	1	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	10	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	6893	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	543	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	342	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	1216	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	275	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	50	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1835	LIN. FT.
SP	COMMUNICATIONS CABLE, FIBER (6 CHANNEL)	530	LIN. FT.
709	GALAVANIZED STEEL CONDUIT (3")	118	LIN. FT.
SP	FIBERGLASS CONDUIT H.D. (3")	576	LIN. FT.
710	NON-METALLIC CONDUIT (3")	1333	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	1	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	14	EACH
711	CONCRETE PULL BOX (TYPE 3 HD)	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')	5	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	5	EACH
SP & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	5	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
• SP & 733	VIDEO DETECTOR (IP)	11	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VEHICLE DETECTOR RACK (32 CHANNEL)	1	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)	3	EACH
• SP & 733	VIDEO PROCESSOR, EDGE CARD IP (2 CAMERA)	8	EACH
SP	NET-ACCESS RADIO (5.8 GHZ, 32 MBPS)	1	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)	1	EACH

• ONE SPARE VIDEO DETECTOR (IP) AND ONE SPARE VIDEO PROCESSOR (IP) SHALL BE SUPPLIED.
PERMANENT SIGNAL:
 UNCOVER SIGNAL HEADS 3, 5, 6, 11, 13 AND ALL PEDESTRIAN SIGNAL HEADS FROM STAGE 3. MODIFY TRAFFIC SIGNAL CONTROLLER TO OPERATE AS SHOWN ON THE PERMANENT SIGNAL PLANS.
 (REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)



6/5/18

PERMANENT

LOCATION: HWY. 71B/I-49 SPU RAMPS
 CITY: BENTONVILLE AND RODGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: JC

USER: H656
 DESIGN FILE: R:\Traffic Signals\Hwy 71B\Hwy 71B Stage Permanent\I-49 HWY 71B SPU SUB QUANTITIES.dgn
 PLOTTED: 6/4/2018 12:43:19 PM SCALE: 40.000000' / in. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	149	368	

② SIGNALIZATION PLAN

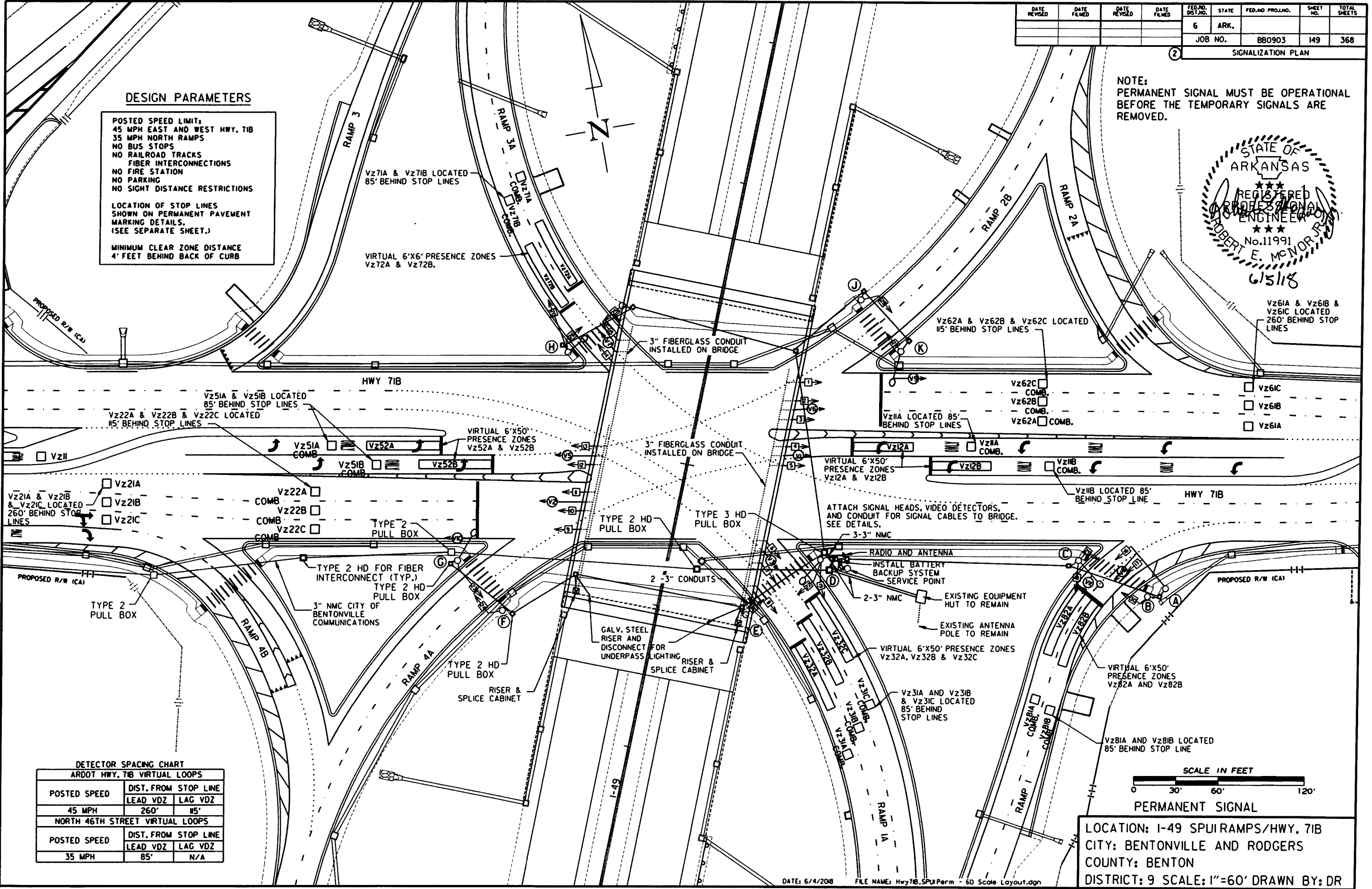
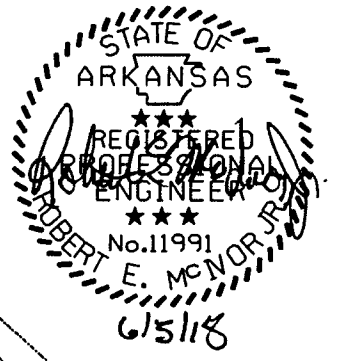
DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST HWY. 71B
 35 MPH NORTH RAMPS
 NO BUS STOPS
 NO RAILROAD TRACKS
 FIBER INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES
 SHOWN ON PERMANENT PAVEMENT
 MARKING DETAILS.
 (SEE SEPARATE SHEET.)

MINIMUM CLEAR ZONE DISTANCE
 4' FEET BEHIND BACK OF CURB

NOTE:
 PERMANENT SIGNAL MUST BE OPERATIONAL
 BEFORE THE TEMPORARY SIGNALS ARE
 REMOVED.



USER: 16556
 DESIGN FILE: R:\Tr-office\Signos\Hwy 71B\Hwy 71B Stage Permanent\Hwy71B_SPU\Per - 60 Scale Layout.dgn
 PLOTTED: 6/4/2008 10:48:59 AM SCALE: 1/60' MODEL: PROPOSED DESIGN

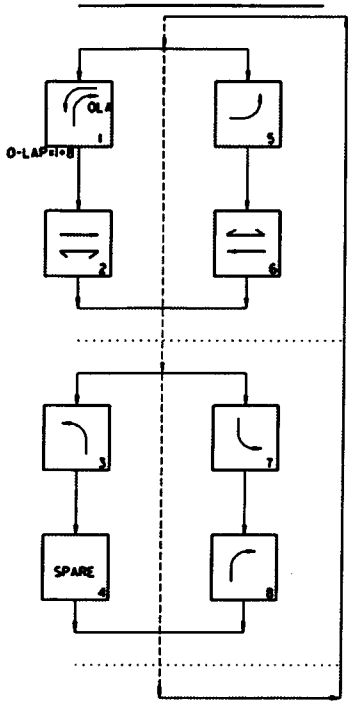
DETECTOR SPACING CHART
 ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	15'
NORTH 46TH STREET VIRTUAL LOOPS		
POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A

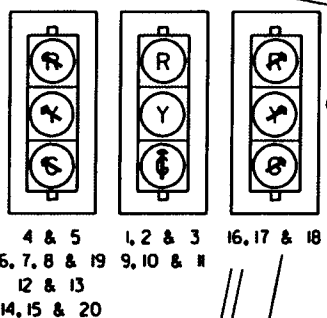
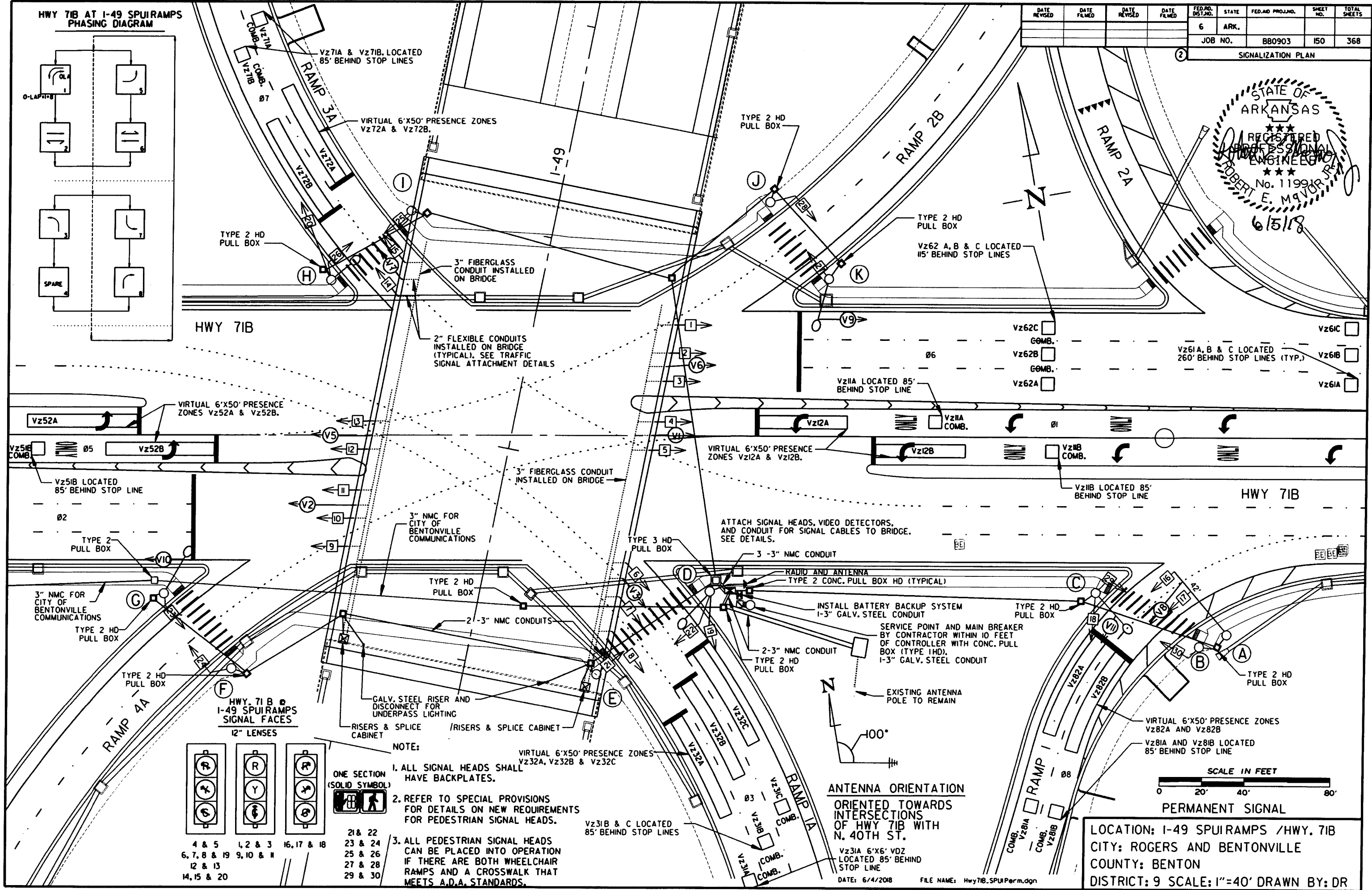
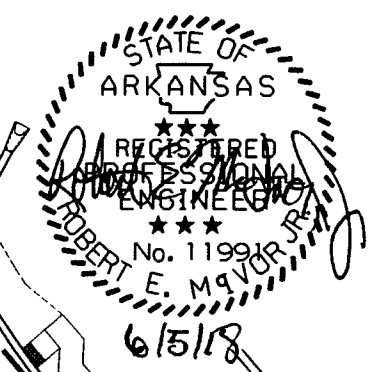


LOCATION: I-49 SPU RAMPS/HWY. 71B
 CITY: BENTONVILLE AND RODGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=60' DRAWN BY: DR

HWY 71B AT I-49 SPUIRAMPS PHASING DIAGRAM

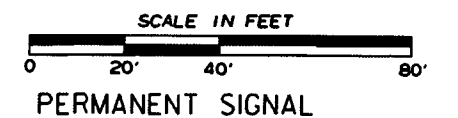


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		150	368
(2) SIGNALIZATION PLAN								



- NOTE:**
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

ANTENNA ORIENTATION
ORIENTED TOWARDS INTERSECTIONS OF HWY 71B WITH N. 40TH ST.



LOCATION: I-49 SPUIRAMPS / HWY. 71B
CITY: ROGERS AND BENTONVILLE
COUNTY: BENTON
DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: 1856
DESIGN FILE: R:\Traffic Signals\Hwy 71B\Hwy 71B Stage Permanent\Hwy71B_SPUIPerm.dgn
PLOTTED: 6/4/2018 10:46:04 AM SCALE: 40.00' / 1". MODEL: PROPOSED DESIGN

DATE: 6/4/2018 FILE NAME: Hwy71B_SPUIPerm.dgn

RISER AND SPLICE CABINET NOTES:

EACH RISER FOR TRAFFIC SIGNAL DISPLAYS IS TO BE EQUIPPED WITH A SPLICE CABINET EQUIPPED WITH A TERMINAL STRIP SUITABLE FOR TWELVE SIGNAL CABLE SPLICES. PROVIDE A GROUND ROD FOR EACH RISER AND CONNECT TO THE TERMINAL STRIP AND THE ELECTRICAL GROUND CIRCUIT.

RISERS FOR LUMINAIRES ARE TO BE EQUIPPED WITH A DISCONNECT SWITCH. SEE UNDERPASS LIGHTING DETAILS.

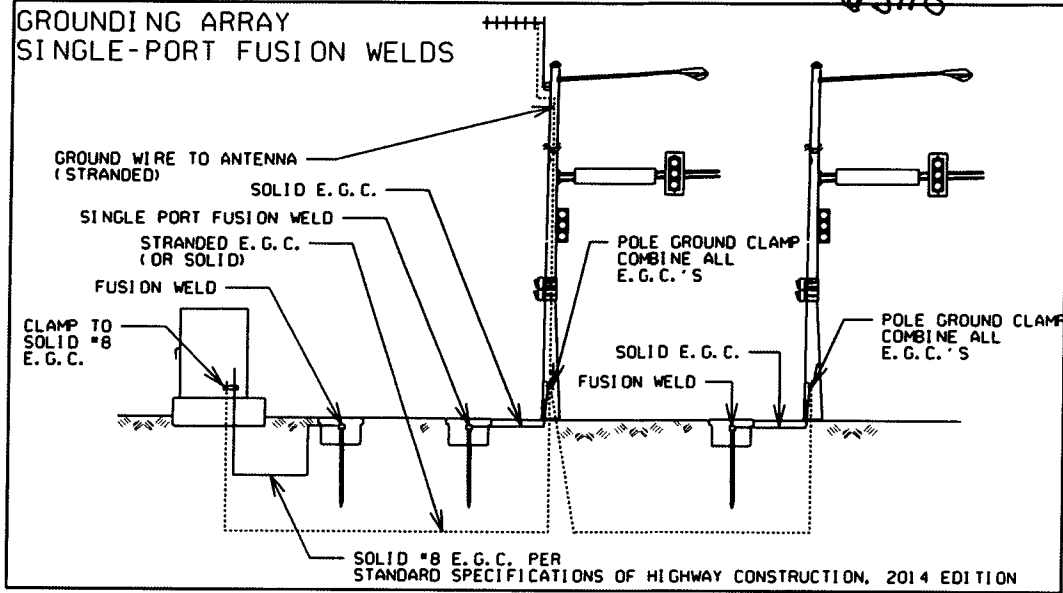
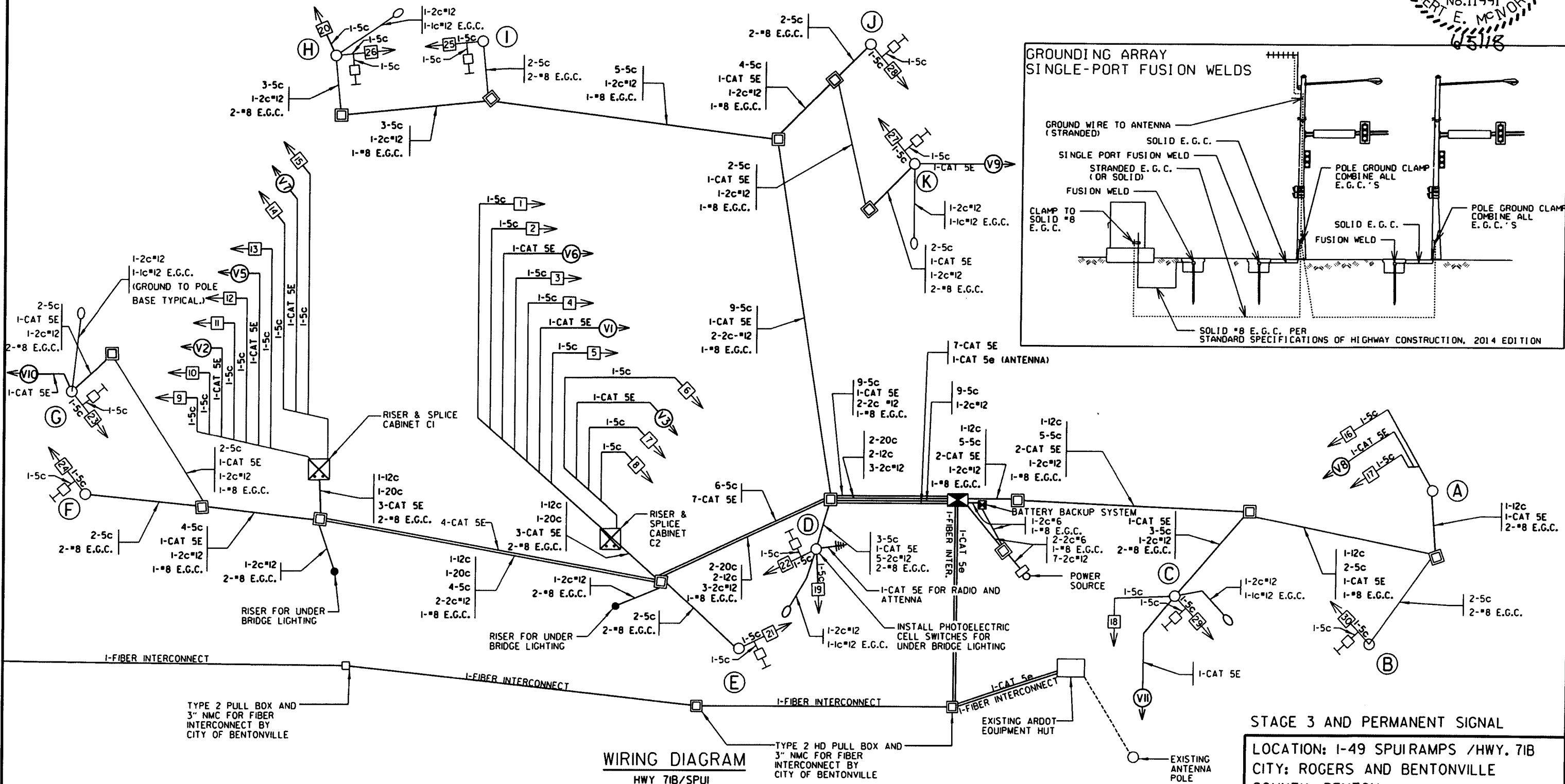
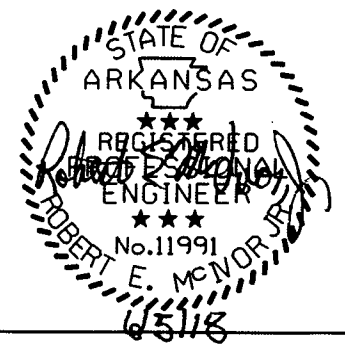
SEE SPECIAL PROVISION FOR SPLICE CABINET INSTALLATION.

NOTES TO CONTRACTOR:

- ONE SEPARATE 1-5c IS RUN TO EACH PEDESTRIAN PUSH BUTTON.
- ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
- THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	ISI	368	

② SIGNALIZATION PLAN
WIRING



WIRING DIAGRAM
HWY 71B/SPUI

STAGE 3 AND PERMANENT SIGNAL
 LOCATION: I-49 SPUI RAMPS / HWY. 71B
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 4 SCALE: N/A DRAWN BY: DR

USER: H656
 DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage Permanent\Hwy 71B_SPU signal_East_West_Wiring Diagram.dgn
 PLOTTED: 6/4/2018 11:42:14 AM
 SCALE: 40.00 / in.
 MODEL: PROPOSED DESIGN

DETECTOR SYSTEM DESCRIPTION: JOB BB0903												
I-49 / HWY 71B INTERCHANGE "SPUI" DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS	
DET. ID#	LOCATION DIRECTION	TYPE	DET.#	CAB. TRM.#	AMP. CHN.#	CON. INP.#	PHS	SYSTEM DET.#	MASTER SYSTEM DETECTOR NUMBERS			
Vz11 A&B	WB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	23"	
Vz12 A&B	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23"	
Vz21 A,B&C	EB THROUGH FAR	LOCAL			9	V2	2			CAMERA V10	23"	
Vz22 A,B&C	EB THROUGH NEAR	COMB.			10	V10	2	2		CAMERA V2	23"	
Vz31 A,B&C	NB LEFT FAR	COMB.			17	V11	3	3		CAMERA V3	23"	
Vz32 A,B&C	NB LEFT NEAR	LOCAL			18	V3	3			CAMERA V3	23"	
Vz51 A&B	EB LEFT TURN FAR	COMB.			13	V13	5	5		CAMERA V5	23"	
Vz52 A&B	EB LEFT TURN	LOCAL			14	V5	5			CAMERA V5	23"	
Vz61 A,B&C	WB THROUGH FAR	LOCAL			5	V6	6			CAMERA V9	23"	
Vz62 A,B&C	WB THROUGH NEAR	COMB.			6	V14	6	6		CAMERA V6	23"	
Vz71 A&B	SB LEFT FAR	COMB.			29	V15	7	7		CAMERA V7	23"	
Vz72 A&B	SB LEFT NEAR	LOCAL			30	V7	7			CAMERA V7	23"	
Vz81 A&B	NB RIGHT FAR	COMB.			21	V8	8			CAMERA V11	23"	
Vz82 A&B	NB RIGHT NEAR	LOCAL			22	V16	8	8		CAMERA V8	23"	
PB 21 & 22	RAMP 1A WEST TO EAST	PED.				P2	2					
PB 23 & 24	RAMP 4A WEST TO EAST	PED.				P2	2					
PB 25 & 26	RAMP 3A EAST TO WEST	PED.				P6	6					
PB 27 & 28	RAMP 2B EAST TO WEST	PED.				P6	6					
PB 29 & 30	RAMP 1 WEST TO EAST	PED.				P2	2					
SPARE: 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23-28, 31 & 32												

CONTROLLER INPUT ABBREVIATIONS:
 V = VEHICULAR INPUT
 D = SYSTEM OR AUXILIARY INPUT
 P = PEDESTRIAN INPUT

NOTE: "AMP CHN=" REFERS TO THE RACK OUTPUT POSITION.
 THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
 EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

HWY. 71B POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 71B - STA. 104+46.14	91.27' LT	669569.24, 735657.28
B	HWY. 71B - STA. 104+59.01	96.90' LT	669556.07, 735652.39
C	HWY. 71B - STA. 105+08.09	71.97' LT	669508.55, 735680.00
D	HWY. 71B - STA. 106+87.95	72.10' LT	669328.96, 735689.79
E	HWY. 71B - STA. 107+39.88	110.48' LT	669275.00, 735654.34
F	HWY. 71B - STA. 109+09.86	108.03' LT	669105.41, 735666.16
G	HWY. 71B - STA. 109+41.55	73.43' LT	669075.67, 735702.46
H	HWY. 71B - STA. 108+65.19	71.93' RT	669159.94, 735843.38
I	HWY. 71B - STA. 108+28.16	104.37' RT	669198.70, 735873.73
J	HWY. 71B - STA. 106+61.91	108.87' RT	669364.95, 735869.05
K	HWY. 71B - STA. 106+33.77	73.11' RT	669391.07, 735831.79

HWY. 71B POLE DIMENSIONS

POLE	MAST ARM	MAST ARM ANGLE	VERT. SHAFT	LUM. ARMS	LUM. ANGLE
A	42'	180°	21'	N/A	N/A
B	N/A	N/A	15'	N/A	N/A
C	N/A	N/A	35'	20'	240°
D	N/A	N/A	35'	25'	90°
E	N/A	N/A	15'	N/A	N/A
F	N/A	N/A <td 15'	N/A	N/A	
G	N/A	N/A	35'	25'	120°
H	N/A	N/A	35'	25'	180°
I	N/A	N/A	15'	N/A	N/A
J	N/A	N/A	15'	N/A	N/A
K	N/A	N/A	35'	25'	105°

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

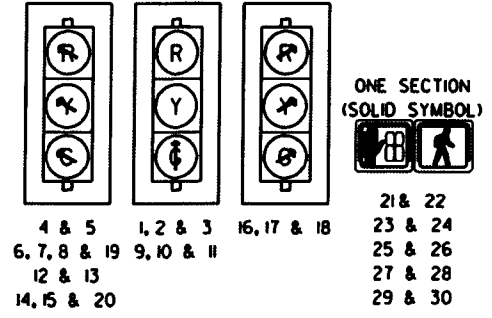
INTERVAL CHART

SIGNAL FACES	I-49 RAMPS AT HWY 71B												FLASH SEQUENCE
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	
1, 2 & 3	R	R	•	••	R	R	•	••	R	R	R	R	R
4 & 5	←G	•	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R
6, 7, 8 & 19	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←G	•	←R
9, 10 & 11	R	R	R	R	•	••	•	••	R	R	R	R	R
12 & 13	←G	•	←R	←R	←G	•	←R	←R	←R	←R	←R	←R	←R
14, 15 & 20	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←R	←R	←R
16, 17 & 18	←G	•	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R
21 & 22	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLK
23 & 24	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLK
25 & 26	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	BLK
27 & 28	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	BLK
29 & 30	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLK

- DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE.
- DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE.
- DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE.

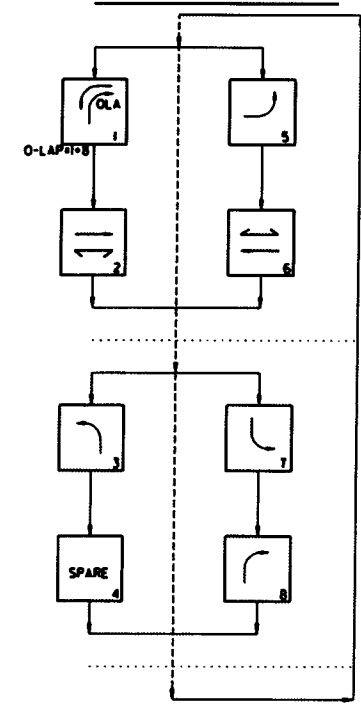


HWY 71B AT I-49 SPUI RAMPS SIGNAL FACES 12" LENSES



- NOTE:
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 - REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 - ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

HWY 71B AT I-49 SPUI RAMPS PHASING DIAGRAM



PERMANENT SIGNAL
 LOCATION: I-49 SPUI RAMPS/HWY. 71B
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DR

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
7-5-18				6	ARK.			
				JOB NO.		BB0903	153	368

② SIGNALIZATION PLAN



HWY. 71B/46TH STREET - TRAFFIC SIGNAL QUANTITIES

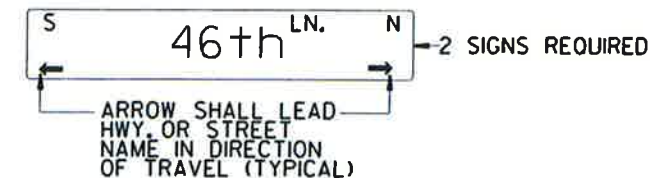
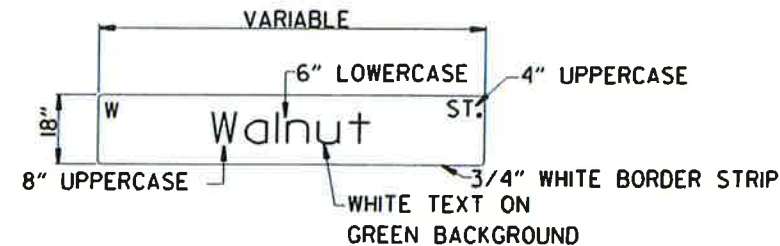
ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTRLLER TS2-TYPE 2, E-NET (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	1635	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	13	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)	1	EACH
SP & 707	CENTRAL CONTROL UNIT	1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	8	EACH
SP & 707	INFRARED PROGRAMMINGDEVICE	1	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2535	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	200	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	586	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	616	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	360	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	30	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1089	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	30	LIN. FT.
710	NON-METALLIC CONDUIT (3")	688	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	5	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (58')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (68')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	5	EACH
SP & 715	TRAFFIC SIGNAL PEDSTAL POLE WITH FOUNDATION	5	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.17	LUMP SUM
SP	18" STREET NAME SIGN	4	EACH
SP & 733	VIDEO DETECTOR (IP)	9	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)	2	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD IP (2 CAMERA)	7	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32MBPS)	1	EACH

• ONE SPARE VIDEO DETECTOR (IP) AND ONE SPARE VIDEO PROCESSOR (IP) SHALL BE SUPPLIED.

PERMANENT SIGNAL:

THE TEMPORARY SIGNAL INSTALLTION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL. (REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADI. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.
3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE. SEE STD. DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE SERIES C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS.

PERMANENT

LOCATION: HWY. 71B/46TH STREET
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DR

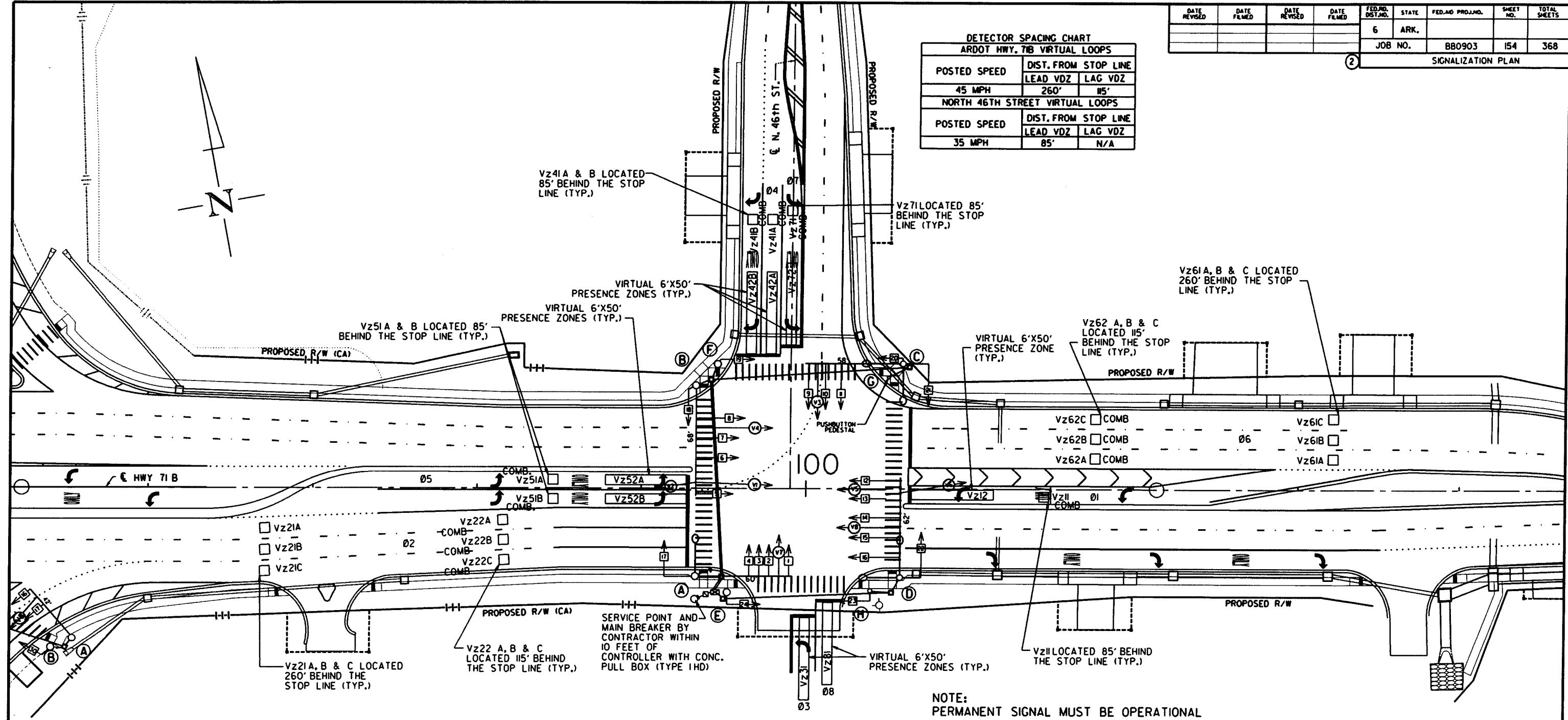
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	154	368	
② SIGNALIZATION PLAN								

DETECTOR SPACING CHART
ARDOT HWY. 71B VIRTUAL LOOPS

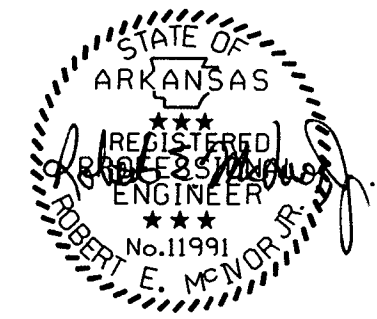
POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'

NORTH 46TH STREET VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	85'	N/A



NOTE:
PERMANENT SIGNAL MUST BE OPERATIONAL BEFORE THE TEMPORARY SIGNAL IS REMOVED.



6/5/18



PERMANENT SIGNAL
 LOCATION: HWY. 71B/46TH STREET
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=60' DRAWN BY: DR

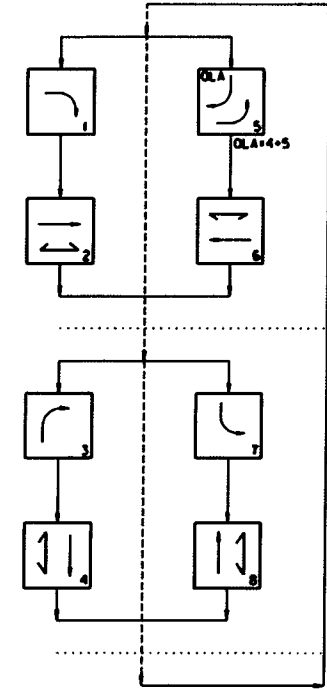
USER: m656
 DESIGN FILE: R:\Traffic Signals\Hwy 71B Stage Permanent\60 SCALE.N46th.Perm.dgn
 PLOTTED: 6/5/2018 7:45:14 AM SCALE: 60.000000 "/>

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	ISS	368	

2 SIGNALIZATION PLAN



N. 46TH STREET PHASING DIAGRAM



HWY. 71B/46TH STREET POLE LOCATIONS

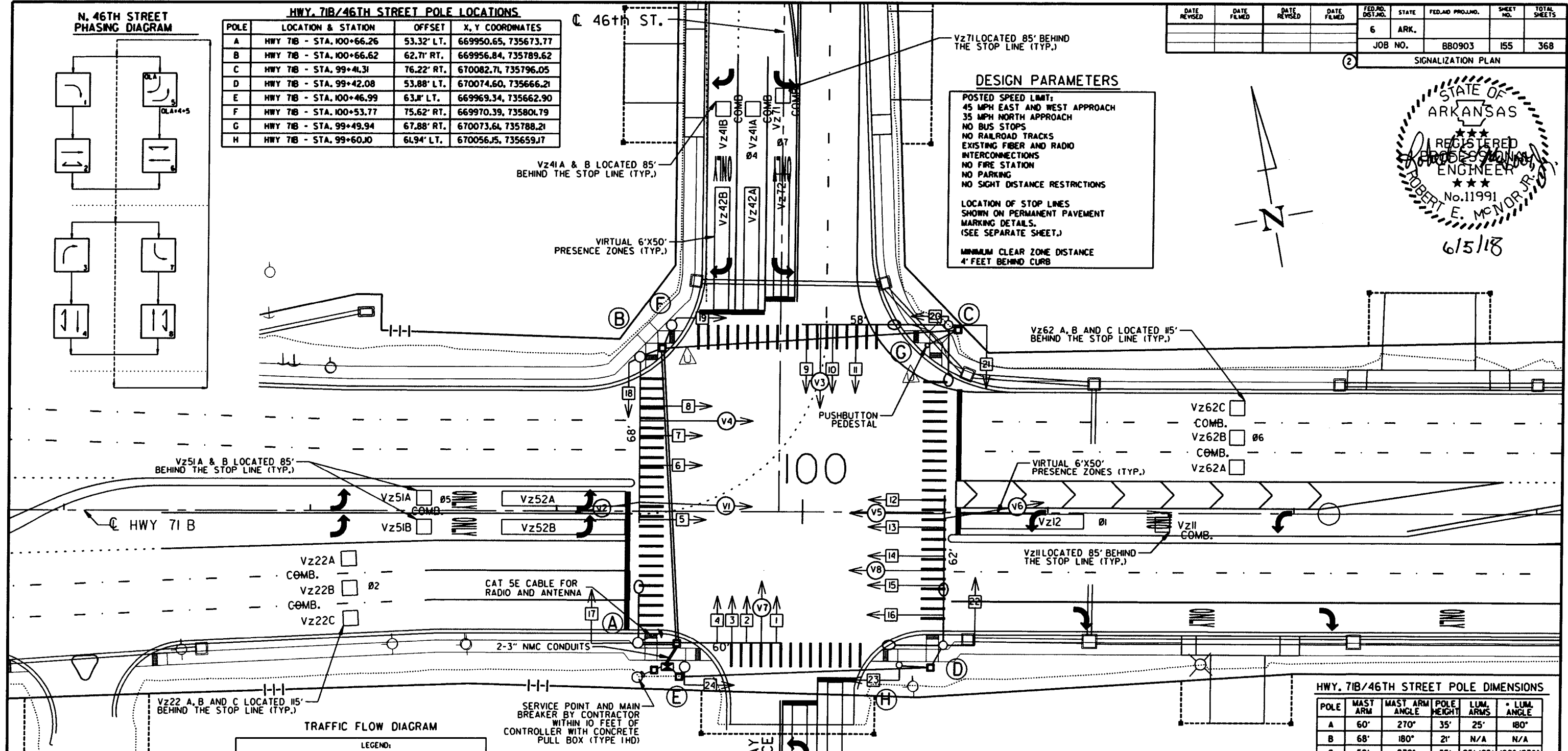
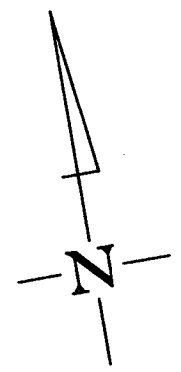
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY 71B - STA. 100+66.26	53.32' LT.	669950.65, 735673.77
B	HWY 71B - STA. 100+66.62	62.71' RT.	669956.84, 735789.62
C	HWY 71B - STA. 99+41.31	76.22' RT.	670082.71, 735796.05
D	HWY 71B - STA. 99+42.08	53.88' LT.	670074.60, 735666.21
E	HWY 71B - STA. 100+46.99	63.11' LT.	669970.39, 735801.79
F	HWY 71B - STA. 100+53.77	75.62' RT.	669970.39, 735801.79
G	HWY 71B - STA. 99+49.94	67.88' RT.	670073.61, 735788.21
H	HWY 71B - STA. 99+60.10	61.94' LT.	670056.55, 735659.17

DESIGN PARAMETERS

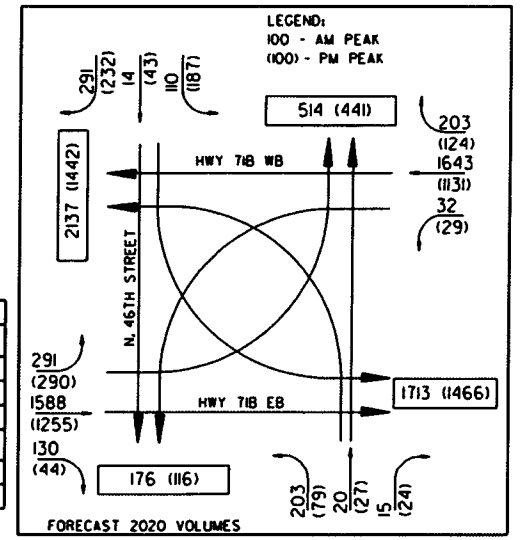
POSTED SPEED LIMIT:
 45 MPH EAST AND WEST APPROACH
 35 MPH NORTH APPROACH
 NO BUS STOPS
 NO RAILROAD TRACKS
 EXISTING FIBER AND RADIO INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS. (SEE SEPARATE SHEET.)

MINIMUM CLEAR ZONE DISTANCE 4' FEET BEHIND CURB



TRAFFIC FLOW DIAGRAM



HWY. 71B/46TH STREET POLE DIMENSIONS

POLE	MAST ARM	MAST ANGLE	POLE HEIGHT	LUM. ARMS	LUM. ANGLE
A	60'	270°	35'	25'	180°
B	68'	180°	21'	N/A	N/A
C	58'	270°	35'	25'/25'	180°/270°
D	62'	180°	35'	25'/25'	90°/180°
E	N/A	N/A	15'	N/A	N/A
F	N/A	N/A	15'	N/A	N/A
G	N/A	N/A	6'	N/A	N/A
H	N/A	N/A	15'	N/A	N/A

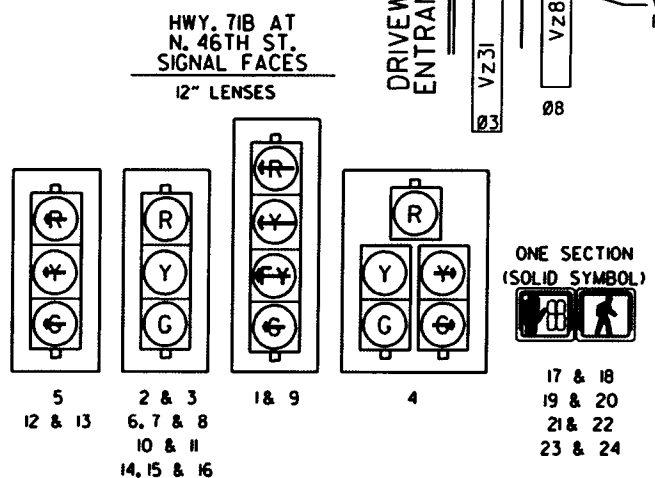
ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

DETECTOR SPACING CHART
 ARDOT HWY. 71B VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	LEAD VDZ	LAG VDZ
45 MPH	260'	15'	

NORTH 46TH STREET VIRTUAL LOOPS

POSTED SPEED	DIST. FROM STOP LINE	LEAD VDZ	LAG VDZ
35 MPH	85'		N/A



- NOTE:
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 - REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 - ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

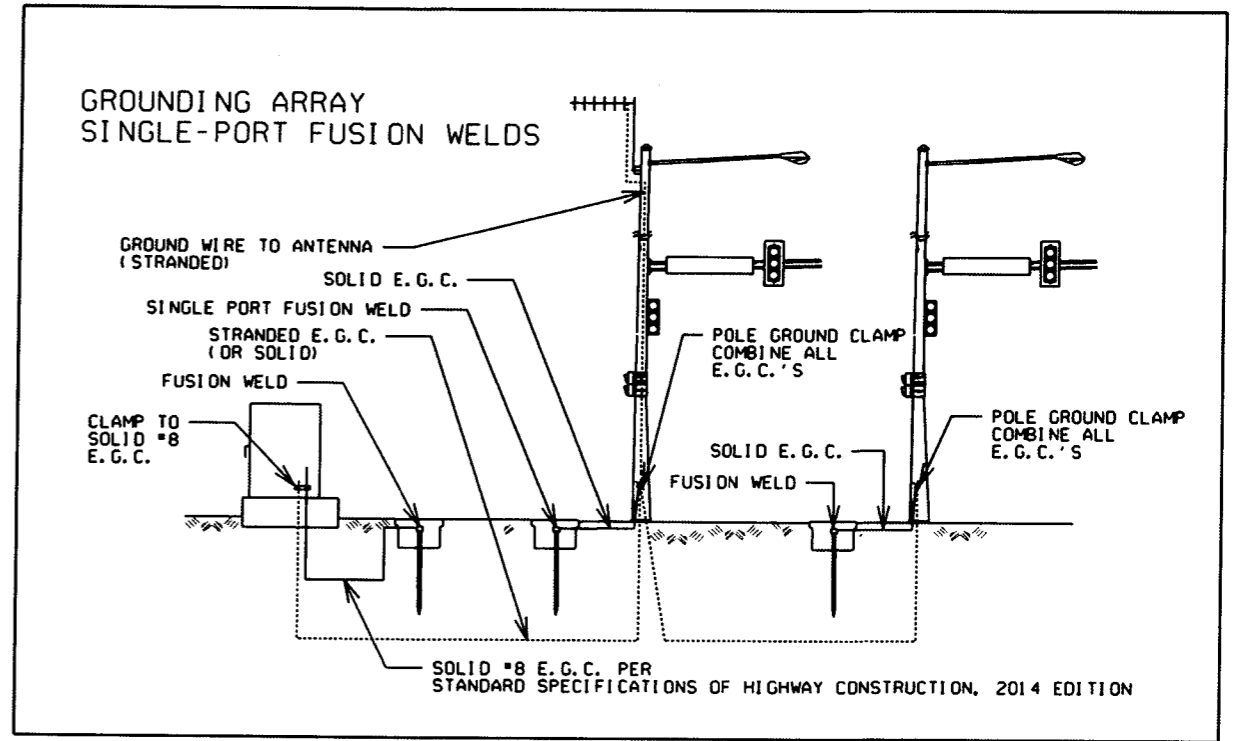
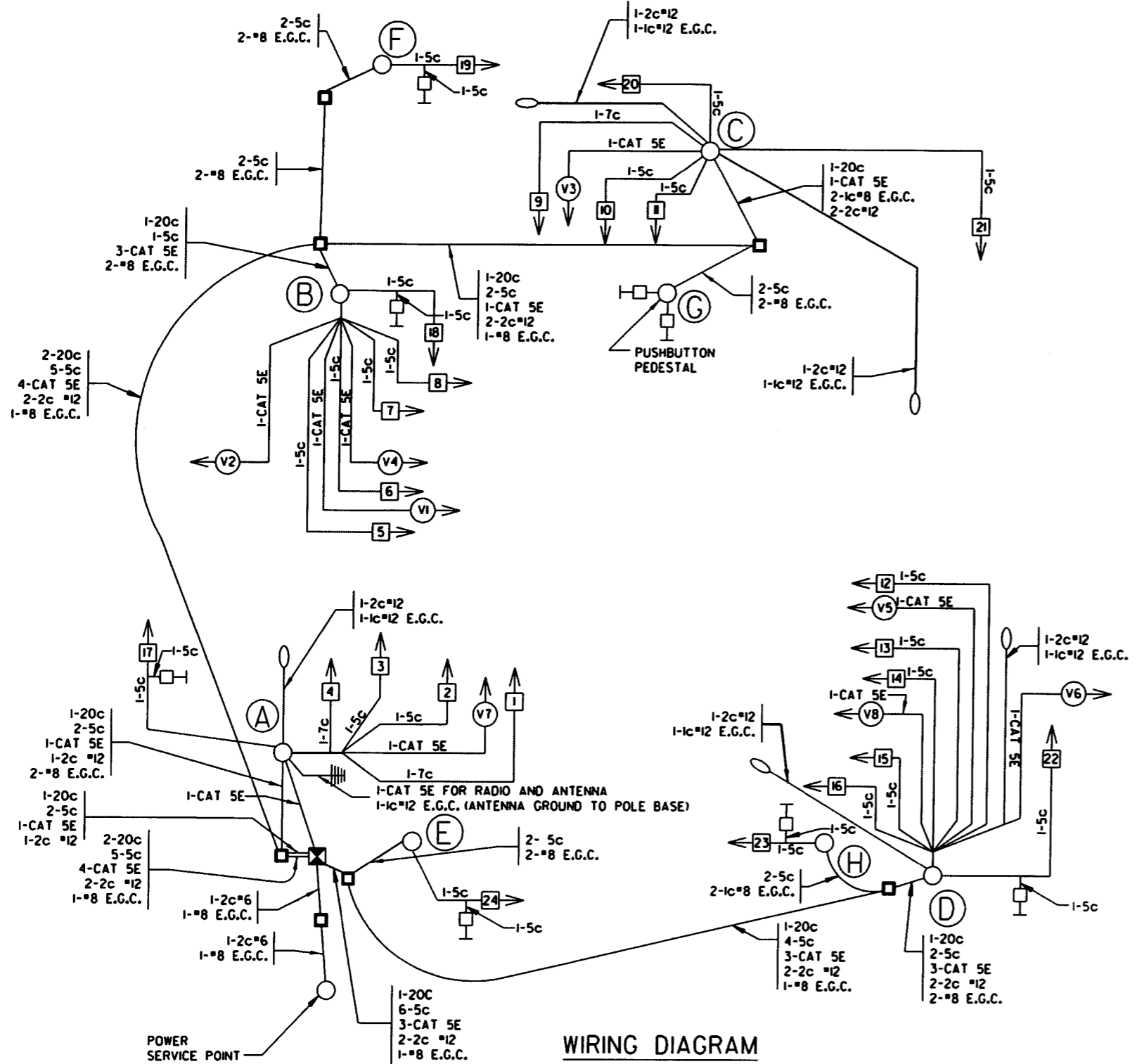


PERMANENT SIGNAL

LOCATION: HWY. 71B/46th ST.
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=40' DRAWN BY: DR

USER: R656
 DESIGN FILE: R:\Traffic Signals Hwy 71B\Hwy 71B Stage Permanent\Hwy71B_N46th_Perm.dgn
 PLOTTED: 6/4/2018 11:32:52 AM SCALE: 40.00' / In. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	156	368	



WIRING DIAGRAM

NOTES TO CONTRACTOR:

- ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
- ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
- THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

POWER SERVICE POINT AND MAIN BREAKER BY CONTRACTOR

PERMANENT SIGNAL

LOCATION: HWY. 71B/46th ST.
 CITY: ROGERS
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DR

USER: #656
 DESIGN FILE: R:\Traffic Signals\Hwy 71B\Stage Permanent\Hwy71B_N46th_WiringandCharts.dgn
 PLOTTED: 6/5/2018 2:36:34 PM SCALE: 40.00' / 1" MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	157	368	

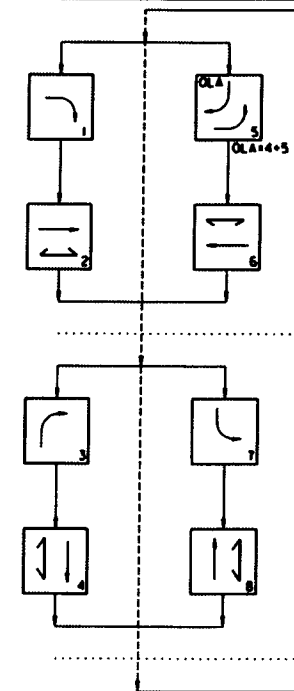
② SIGNALIZATION PLAN

DETECTOR CHART											
DETECTOR SYSTEM DESCRIPTION JOB BB0903											
HWY 71B / 46TH STREET DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS		COMMENTS	TUBE LENGTHS	
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. INP. #	LOCAL PHASE	MASTER SYSTEM DET. #			
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1	CAMERA V1	23"	
Vz12	WB LEFT TURN	LOCAL			2	V1	1		CAMERA V1	23"	
Vz21A, B & C	EB THROUGH FAR	LOCAL			9	V2	2		CAMERA V2	74"	
Vz22A, B & C	EB THROUGH NEAR	COMB.			10	V10	2	2	CAMERA V8	58"	
Vz31	NB LEFT	LOCAL			17	V3	3	3	CAMERA V3	23"	
Vz41A&B	SB THROUGH FAR	COMB.			21	V12	4	4	CAMERA V7	46"	
Vz42A&B	SB THROUGH NEAR	LOCAL			22	V4	4		CAMERA V7	46"	
Vz51A&B	EB LEFT FAR	COMB.			13	V13	5	5	CAMERA V5	23"	
Vz52A&B	EB LEFT TURN	LOCAL			14	V5	5		CAMERA V5	23"	
Vz61A, B & C	WB THROUGH FAR	LOCAL			5	V6	6		CAMERA V6	74"	
Vz62A, B & C	WB THROUGH NEAR	COMB.			6	V14	6	6	CAMERA V4	74"	
Vz71	SB LEFT FAR	COMB.			23	V15	7	7	CAMERA V7	46"	
Vz72	SB LEFT NEAR	LOCAL			24	V7	7		CAMERA V7	46"	
Vz81	NB THROUGH	LOCAL			18	V8	8	8	CAMERA V3	23"	
PB 17 & 18	WEST LEG	PED.				P4	4				
PB 19 & 20	NORTH LEG	PED.				P6	6				
PB 21 & 22	EAST LEG	PED.				P8	8				
PB 23 & 24	SOUTH LEG	PED.				P2	2				
				SPARE: 3, 4, 7, 8, 11, 12, 15, 16, 19, 20							

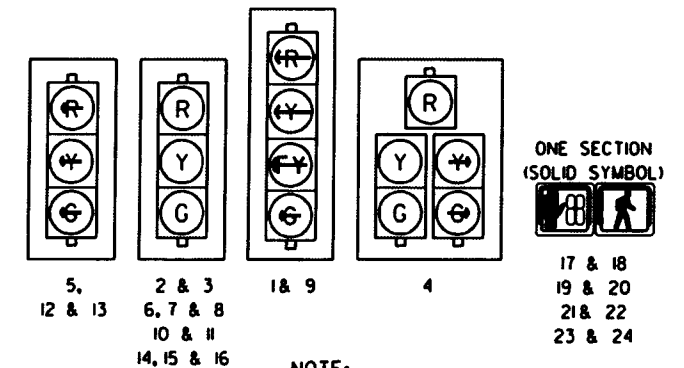
CONTROLLER INPUT ABBREVIATIONS:
V = VEHICULAR INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE:
"AMP CHN=" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER
WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

N. 46TH STREET
PHASING DIAGRAM



HWY. 71B/46TH STREET
SIGNAL FACES
12" LENSES



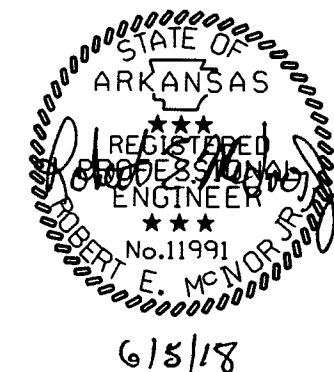
NOTE:

- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
- REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
- ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

INTERVAL CHART

SIGNAL FACES	HWY. 71B/ 46th STREET														FLASH SEQ.			
	1 + 5	CLR.	1 + 6	CLR.	2 + 5	CLR.	2 + 6	CLR.	3 + 7	CLR.	3 + 8	CLR.	4 + 7	CLR.		4 + 8	CLR.	
1	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←Y	•••	←G	•	←Y	•••	←R	
2 & 3	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R	
4	R/←	R/•	R	R	R/←	R/•	R	R	R	R	R	R	G	••	G	••	R	
5	←G	•	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	
6, 7 & 8	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R	
9	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←G	•	←Y	•••	←Y	•••	←R	
10 & 11	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R	
12 & 13	←G	•	←R	←R	←G	•	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	
14, 15 & 16	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R	
17 & 18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
19 & 20	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
21 & 22	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK	
23 & 24	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	BLK

- DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE.
- DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE.
- DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE.

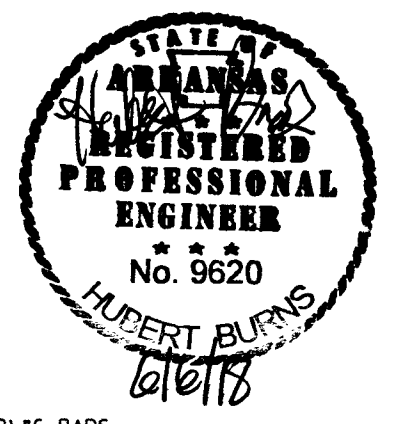
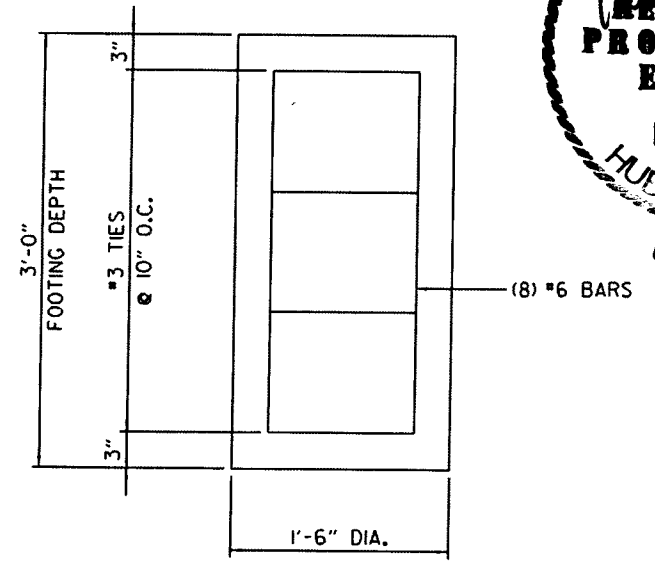
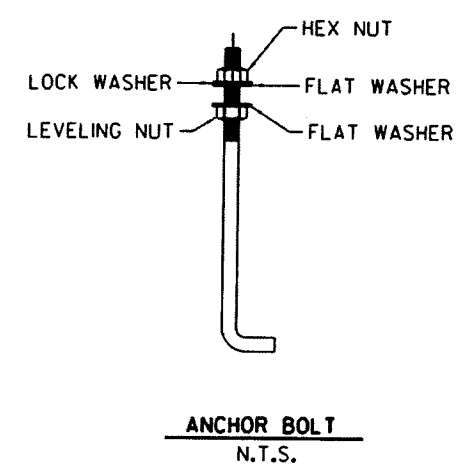
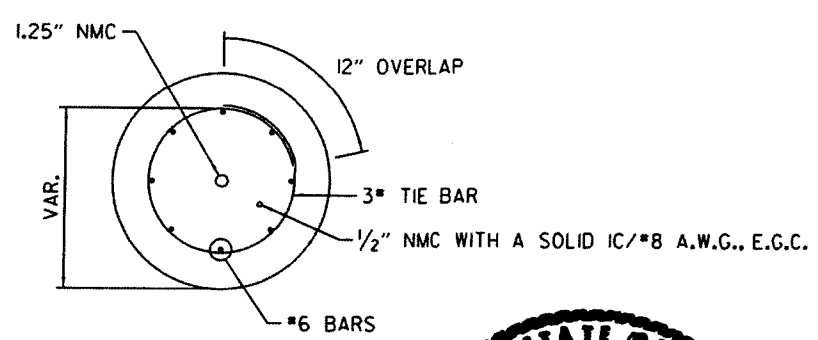
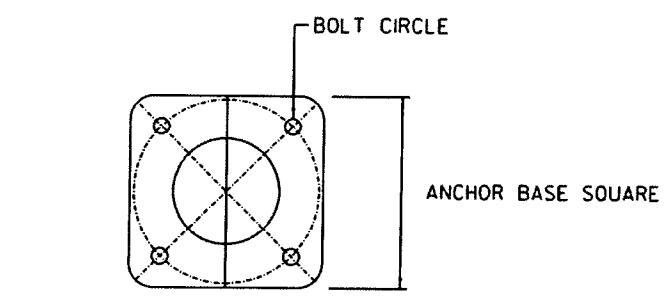
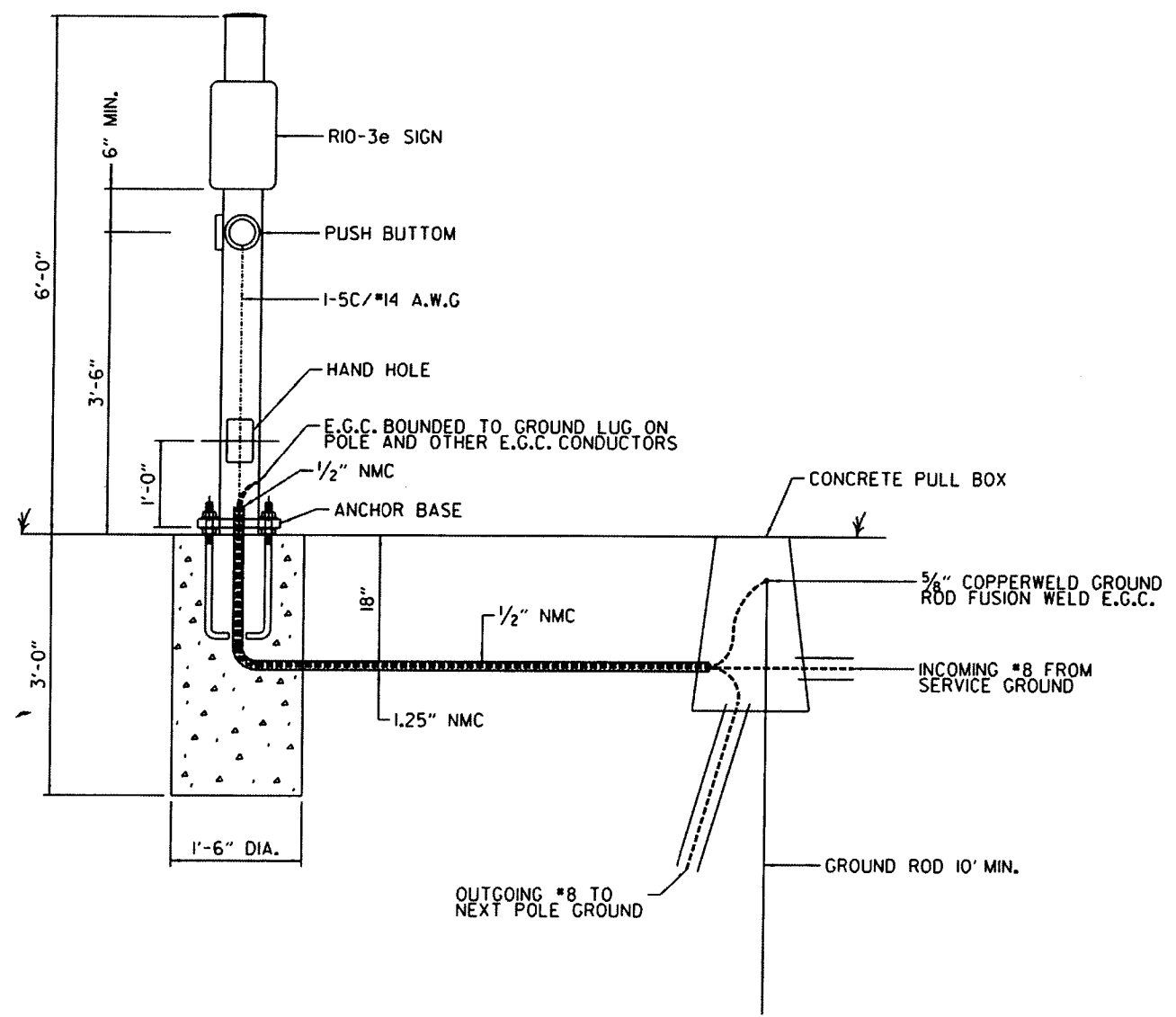


PERMANENT SIGNAL

LOCATION: HWY. 71B/46th ST.
CITY: ROGERS
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: DR

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	158	368	

2 SIGNALIZATION PLAN



PEDESTRIAN PUSHBUTTON PEDESTAL DETAIL

NOTES:

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE RIO-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001 WITH 2003 AND 2006 INTERIMS).

CONSTRUCTION SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

POLE CAP - POLE CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

HAND HOLE - HAND HOLES SHALL BE 3 IN. X 5 IN. FOR PED POLES, MINIMUM, PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL.

NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.

GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPARATELY.

POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

CONCRETE - ALL CONCRETE POLE FOUNDATION SHALL BE CLASS "S" OR GREATER.

PERMANENT SIGNAL

LOCATION: I-49 SUI RAMPS/HWY. 71B
CITY: ROGERS AND BENTONVILLE
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: DR

USER: H656
DESIGN FILE: R:\Traffic Signs\Hwy 71B\Hwy71B PEDESTRIAN PUSHBUTTON PEDESTAL DETAIL.dgn
PLOTTED: 6/4/2018 11:36:48 AM SCALE: 2.000000 / in. MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18								
				JOB NO.		BB0903	158A	368

2 SIGNALIZATION PLANS



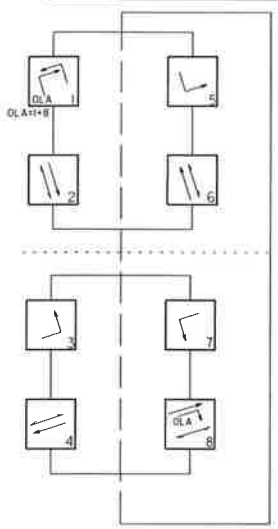
SUMMARY OF TRAFFIC SIGNAL QUANTITIES HWY 12/HWY 71B			
ITEM NO.	ITEM	TOTAL	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER - FIBER (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	WIC FIBER ENCLOSURE	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	4	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	3	EACH
SP & 707	CENTRAL CONTROL UNIT	1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	10	EACH
SP & 707	INFRARED PROGRAMMING DEVICE	1	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	10	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2259	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	239	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	324	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	50	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	289	LIN. FT.
SP	COMMUNICATION CABLE, FIBER (6 CHANNEL)	250	LIN. FT.
710	NON-METALLIC CONDUIT (2")	47	LIN. FT.
710	NON-METALLIC CONDUIT (3")	492	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	2	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
714	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
SP	LED LUMINAIRE ASSEMBLY	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.16	LUMP SUM
733	VIDEO CABLE	902	LIN. FT.
* SP & 733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO MONITOR (CLR)	1	EACH
* SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	6	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH

*ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

7/16/2018 3:30:19 PM
 CEMckinney
 WORKSPACE: AHTD
 L:\2008\08053550 - BnVAP Hwy 12\Drawings\Walton Intersection Drawings\H12_QTY_SUMMSG.dgn
 REVISED DATE:

LOCATION: HWY. 12 AT WALTON BLVD.
 CITY: BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 09 SCALE: 1" = 60' DRAWN BY: CEM

PHASING DIAGRAM



- NOTES:**
- 0.50" NMC FOR CONTROLLER OR POLE GROUND ROD CONNECTION. THE COST OF 0.50" NMC IS INCLUDED IN ITEM NO. 701, 714 OR 715, RESPECTIVELY.
 - EXISTING VIDEO ZONES SHALL REMAIN.
 - RELOCATE EXISTING VIDEO DETECTORS VD5 AND VD6 TO MAST ARMS AS SHOWN.
 - EXISTING PUSH BUTTONS SHALL BE REPLACED WITH PUSH BUTTONS CONSISTENT WITH THOSE USED BY THE CITY OF BENTONVILLE.
 - THE EXISTING CONTROLLER CABINET SHALL BE REMOVED AND A NEW CABINET PLACED ON THE EXISTING CONCRETE BASE. EXTREME CARE SHOULD BE TAKEN TO NOT DISTURB ANY EXISTING WIRING, CABLES AND FIBER.

(Hwy. 12/SW REGIONAL AIRPORT BLVD.)/(US 70/WALTON BLVD.)

POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
**A	46 FT.	180 DEGREES	35'-0"	15'-0"	180 DEGREES
**B	42 FT.	180 DEGREES	35'-0"	15'-0"	180 DEGREES
**C	50 FT.	180 DEGREES	35'-0"	15'-0"	180 DEGREES
**D	-	-	15'-0"	-	-
**E	48 FT.	180 DEGREES	35'-0"	15'-0"	180 DEGREES
F	-	-	15'-0"	-	-
G	-	-	15'-0"	-	-
H	48 FT.	180 DEGREES	35'-0"	15'-0"	180 DEGREES
I	-	-	15'-0"	-	-

* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.
 ** EXISTING SIGNAL POLE TO REMAIN

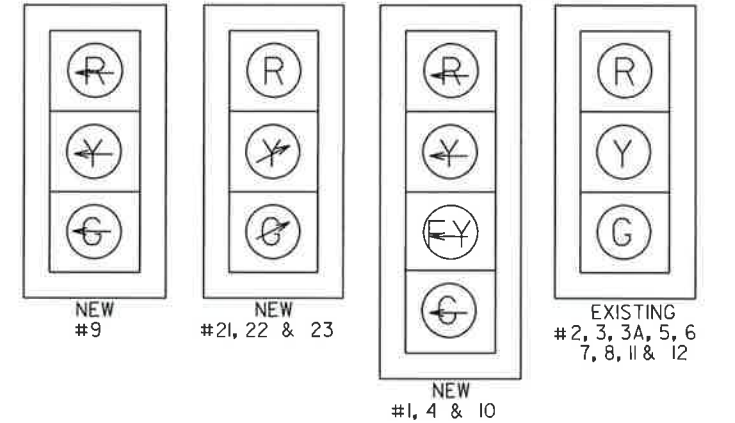
ONE SECTION (SOLID SYMBOL)



SIGNAL FACES

NEW #13, 14, 15, 16, 17, 18, 19, 20, 24 & 25

12" LENSES



- NOTES:**
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 - REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 - ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

DETECTOR SPACING CHART

WALTON BLVD. (US HWY. 171) VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
SW REGIONAL AIRPORT BLVD. (AR HWY. 12) VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	85'	0'
SE MACY RD. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
25 MPH	85'	0'

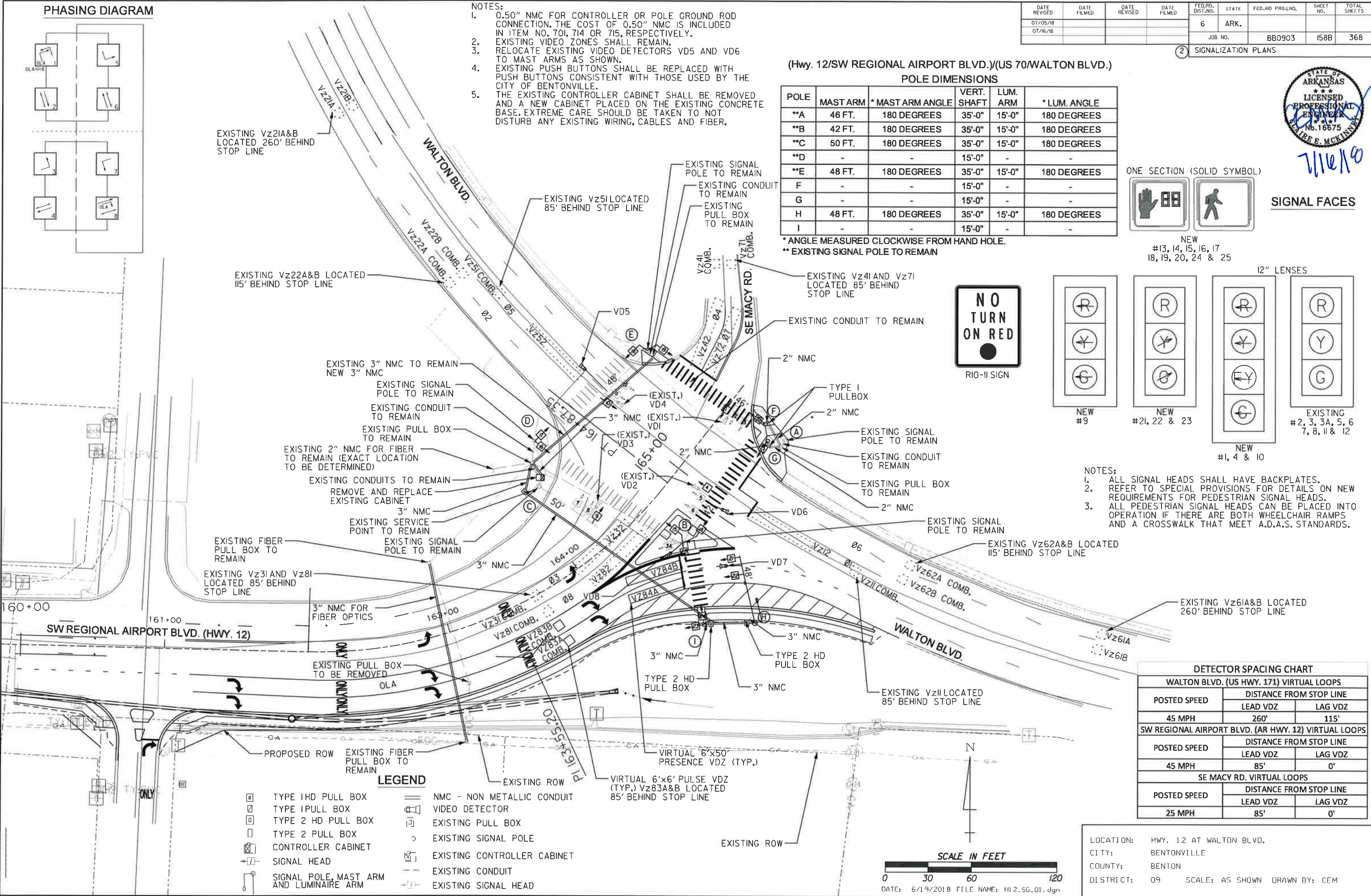
LOCATION: HWY. 12 AT WALTON BLVD.
 CITY: BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 09 SCALE: AS SHOWN DRAWN BY: CEM



DATE: 6/19/2018 FILE NAME: H12.SG.01.dgn

7/18/2018 3:34:27 PM
 CEM@inney
 WORKSPACE: AHTD
 L:\2008\08053550 - BnVAR Hwy 12\Drawings\Walton Intersection Drawings\H12_SG.dgn
 REVISED DATE:

- LEGEND**
- [Symbol] TYPE 1 HD PULL BOX
 - [Symbol] TYPE 1 PULL BOX
 - [Symbol] TYPE 2 HD PULL BOX
 - [Symbol] TYPE 2 PULL BOX
 - [Symbol] CONTROLLER CABINET
 - [Symbol] SIGNAL HEAD
 - [Symbol] SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
 - [Symbol] NMC - NON METALLIC CONDUIT
 - [Symbol] VIDEO DETECTOR
 - [Symbol] EXISTING PULL BOX
 - [Symbol] EXISTING SIGNAL POLE
 - [Symbol] EXISTING CONTROLLER CABINET
 - [Symbol] EXISTING CONDUIT
 - [Symbol] EXISTING SIGNAL HEAD



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18						BB0903	I58C	368

2 SIGNALIZATION PLANS



DESIGN PARAMETERS

POSTED SPEED LIMIT:
 45 MPH EAST AND WEST APPROACH
 25 MPH NORTH APPROACH
 45 MPH SOUTH APPROACH

NO BUS STOPS
 NO RAILROAD TRACKS
 YES EXISTING INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON
 PERMANENT PAVEMENT MARKING
 DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
 4 FEET BEHIND CURB

(HWY. 12/SW REGIONAL AIRPORT BLVD.) / (US 70/WALTON BLVD.)
POLE LOCATIONS

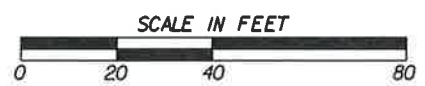
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
*A	-	-	-
*B	-	-	-
*C	-	-	-
*D	-	-	-
*E	-	-	-
F	HWY. 12 - STA. 165+61.86	29' RT.	661543.75, 736290.68
G	HWY. 12 - STA. 165+53.49	37' RT.	661545.44, 736278.83
H	HWY. 12 STA. 165+58.33	110' RT.	661536.57, 736151.85
I	HWY. 12 STA. 164+38.56	86' RT.	661501.12, 736150.63

*EXISTING SIGNAL POLES TO REMAIN

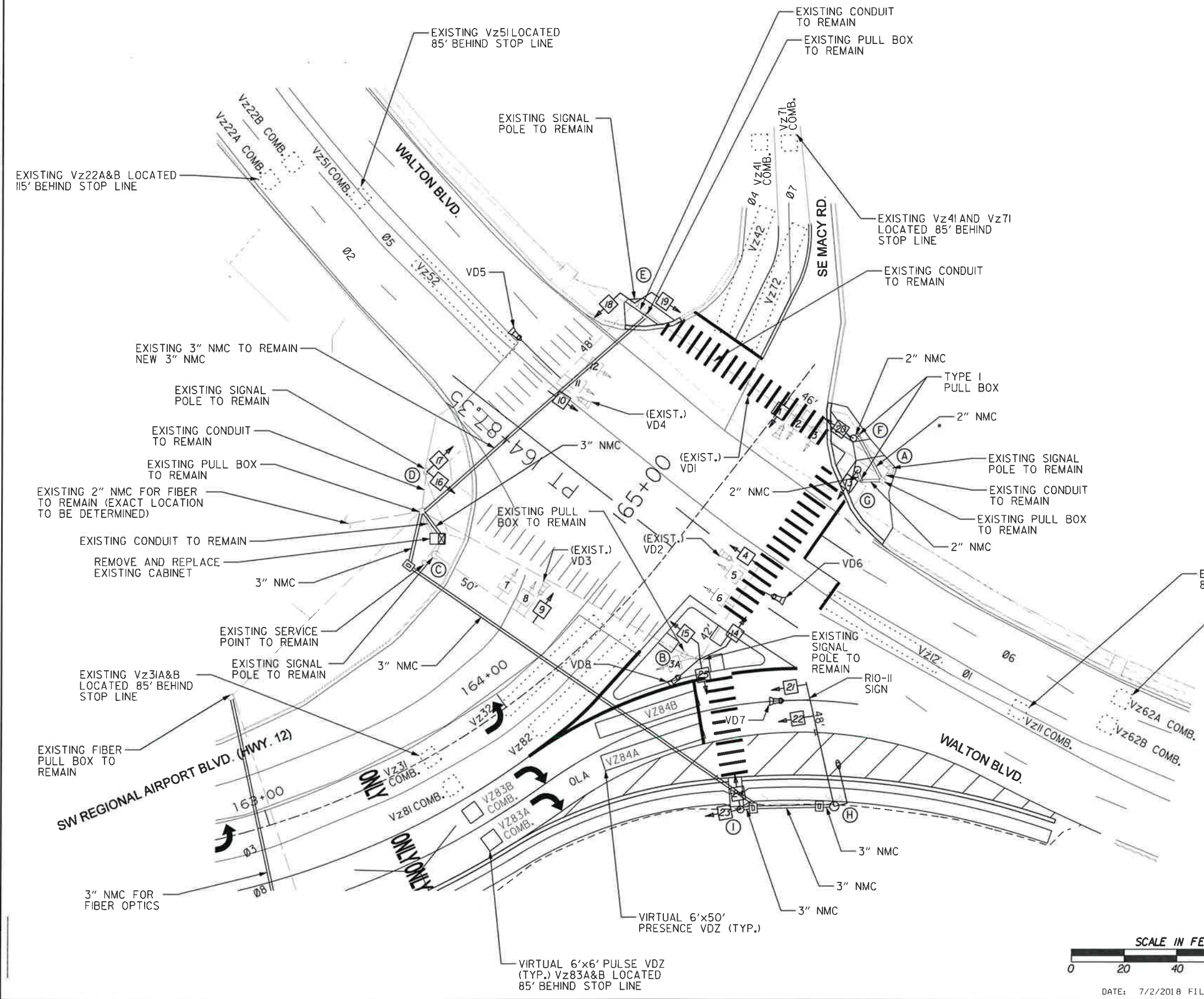
LEGEND

- TYPE 1 HD PULL BOX
- TYPE 1 PULL BOX
- TYPE 2 HD PULL BOX
- TYPE 2 PULL BOX
- CONTROLLER CABINET
- SIGNAL HEAD
- SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- NMC - NON METALLIC CONDUIT
- VIDEO DETECTOR
- EXISTING PULL BOX
- EXISTING SIGNAL POLE
- EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- EXISTING SIGNAL HEAD

LOCATION: HWY. 12 AT WALTON BLVD.
 CITY: BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 09 SCALE: AS SHOWN DRAWN BY: CEM



DATE: 7/2/2018 FILE NAME: HI 2_SG_02.dgn



7/18/2018 3:32:40 PM
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 REVISION DATE:

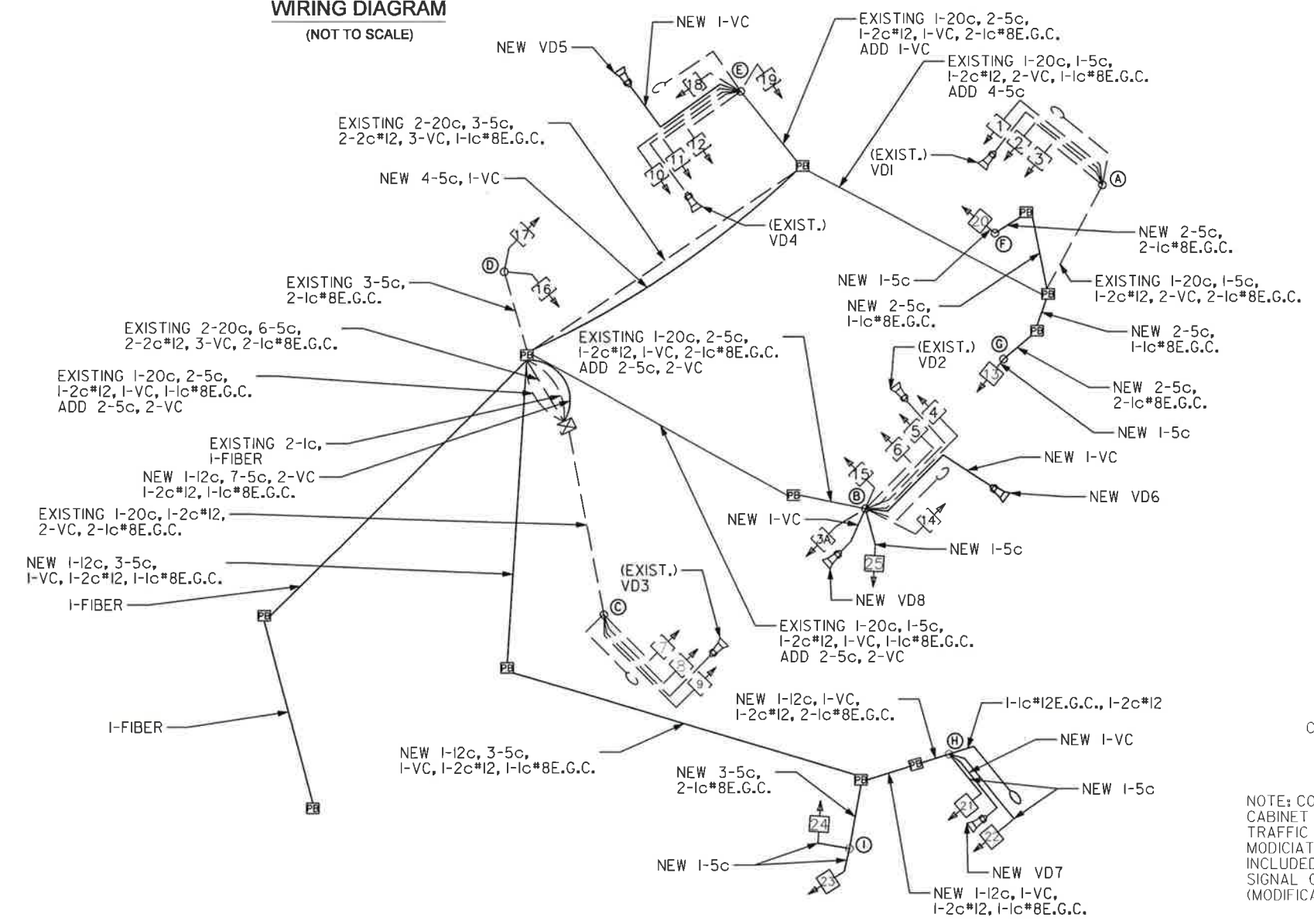
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
07/16/18						BB0903	I58D	368

2 SIGNALIZATION PLANS



7/16/18

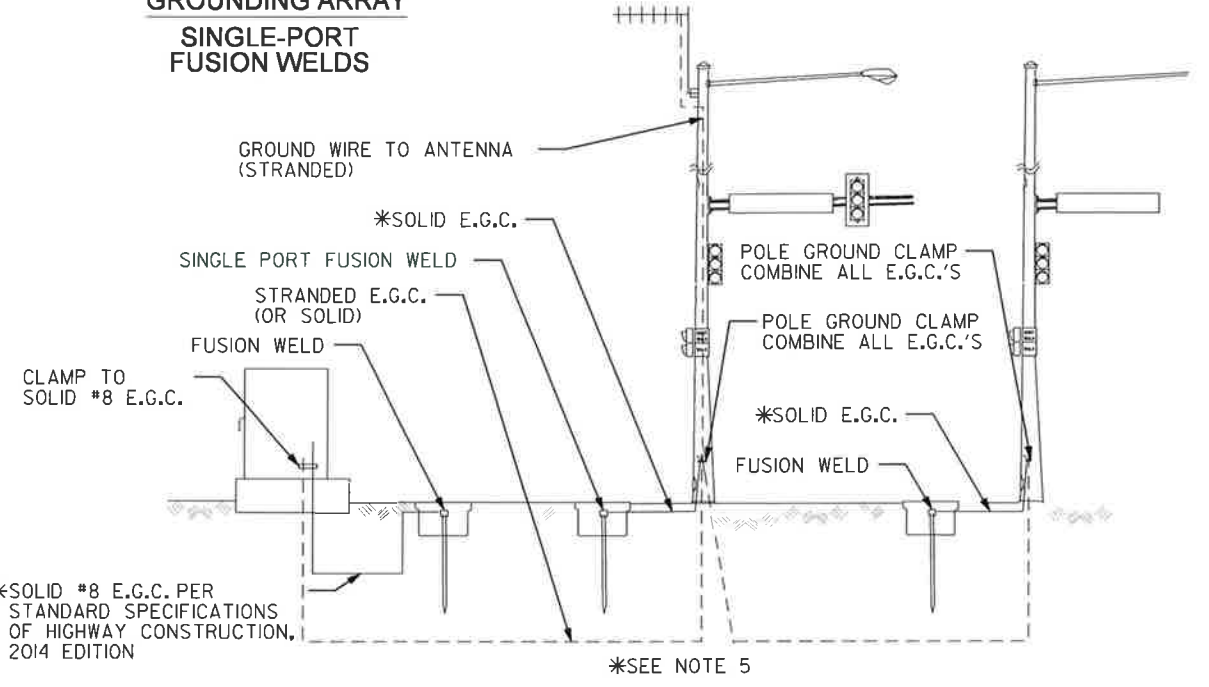
WIRING DIAGRAM
(NOT TO SCALE)



NOTES TO CONTRACTOR:

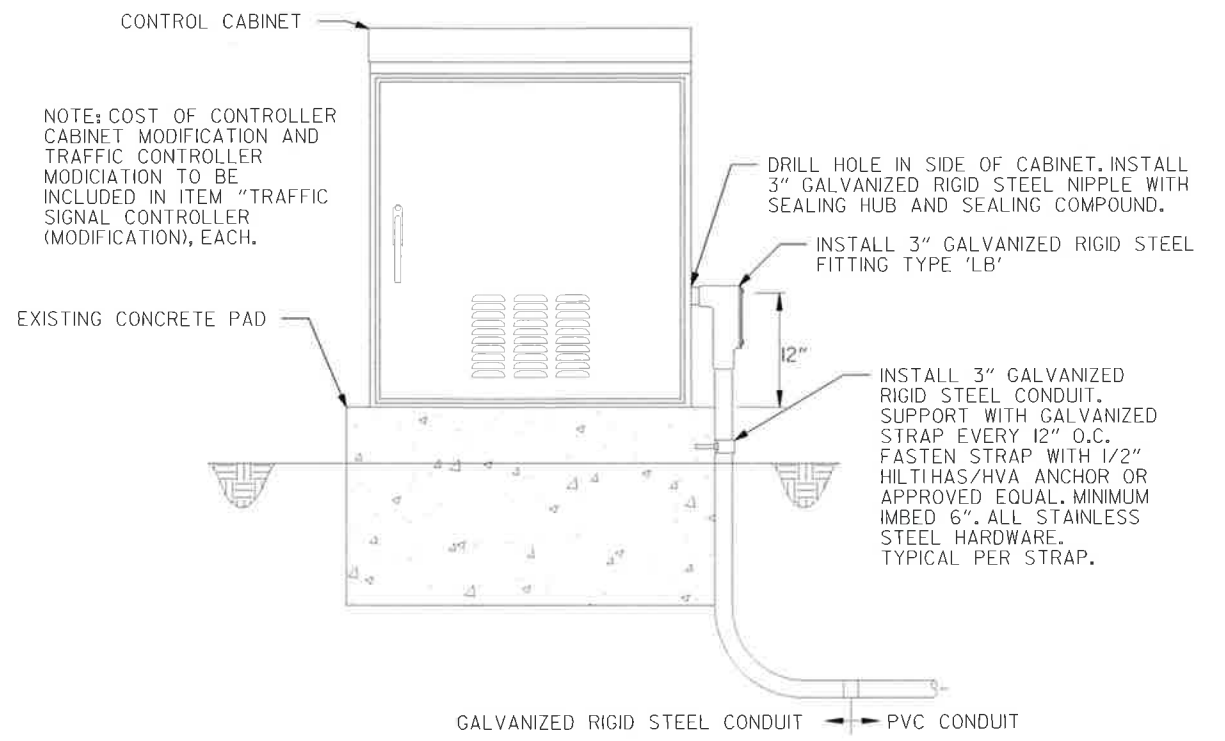
1. SEPARATE 5c/#14 A.W.G. FROM EACH 3 SEC SIGNAL HEAD TO BASE OF POLE.
2. SEPARATE 7c/#14 A.W.G. FROM EACH 4 SEC SIGNAL HEAD TO BASE OF POLE.
3. SEPARATE 5c/#14 A.W.G. TO EACH POLE WITH PEDESTRIAN PUSH BUTTONS.
4. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
5. ADDITIONAL 1-1c*8E.G.C. IN SEPARATE CONDUIT REQUIRED FROM POLE AND CONTROLLER TO NEAREST PULL BOX. REFER TO STANDARD DRAWING SD-6, HEAVY DUTY PULL BOX. COST OF ADDITIONAL 1-1c*8E.G.C. INCLUDED IN ITEMS 701, 714, & 715.
6. THE EXISTING FIBER COMMUNICATIONS EQUIPMENT SHALL BE REMOVED FROM THE EXISTING CABINET AND REPLACED IN THE NEW CABINET. EXTREME CARE SHOULD BE TAKEN TO NOT DISTURB ANY EXISTING WIRING, CABLES AND FIBER.

GROUNDING ARRAY
SINGLE-PORT FUSION WELDS



*SOLID #8 E.G.C. PER STANDARD SPECIFICATIONS OF HIGHWAY CONSTRUCTION, 2014 EDITION

*SEE NOTE 5



NOTE: COST OF CONTROLLER CABINET MODIFICATION AND TRAFFIC CONTROLLER MODIFICATION TO BE INCLUDED IN ITEM "TRAFFIC SIGNAL CONTROLLER (MODIFICATION), EACH.

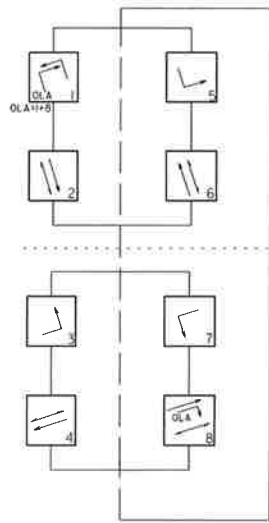
GALVANIZED RIGID STEEL CONDUIT ← PVC CONDUIT

LOCATION: HWY. 12 AT WALTON BLVD.
CITY: BENTONVILLE
COUNTY: BENTON
DISTRICT: 09 SCALE: AS SHOWN DRAWN BY: CEM

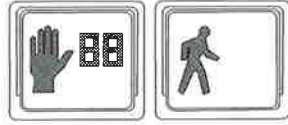
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PHASING DIAGRAM



ONE SECTION (SOLID SYMBOL)

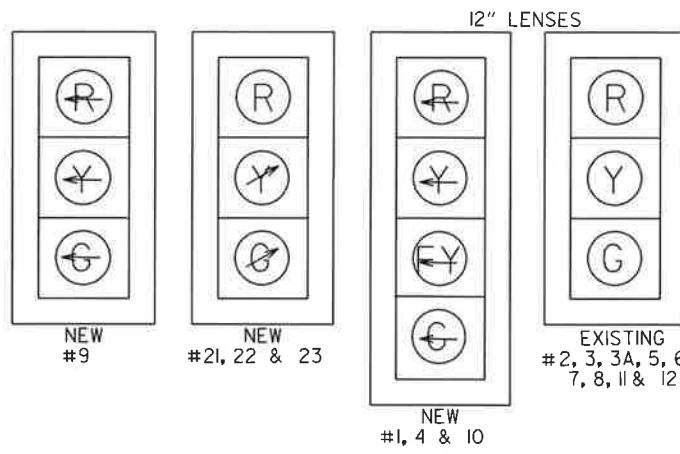


NEW
#13, 14, 15, 16, 17
18, 19, 20, 24 & 25



RIO-II SIGN

SIGNAL FACES



- NOTES:
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 - REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 - ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMP AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

INTERVAL CHART

SIGNAL FACES	INTERSECTION INTERVALS																FLASH SEQ.
	I+5	CLR.	I+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	
1	R	R	R	R	R	R	R	R	R	*	R	*	R	***	R	***	R
2, 3 & 3A	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
4	R	*	R	***	R	*	R	***	R	R	R	R	R	R	R	R	R
5 & 6	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
7 & 8	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
9	R	R	R	R	R	R	R	R	R	*	R	R	R	*	R	R	R
10	R	*	R	*	R	***	R	***	R	R	R	R	R	R	R	R	R
11 & 12	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
13 & 14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	B
15 & 16	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	B
17 & 18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	B
19 & 20	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	B
21, 22 & 23	R	*	R	*	R	R	R	R	R	R	R	*	R	R	R	*	R
24 & 25	DW	DW	DW	DW	W	FDW	W	FDW	W	FDW	DW	DW	W	FDW	DW	DW	B

- * DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
- ** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
- *** DENOTES YELLOW OR FLASHING YELLOW ARROW DEPENDING ON NEXT PHASE

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB BB0903											
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS		COMMENTS	TUBE LENGTHS	
				CAB. TRM. #	AMP CHN. #	CON. IMP. #	LOCAL	SYSTEM DET. #			MASTER SYSTEM DETECTOR NUMBERS
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1	EX. VD4	EXISTING	
Vz12	WB LEFT TURN	LOCAL			2	V1	1		EX. VD4	EXISTING	
Vz21 A&B	EB ADVANCE	LOCAL			5	V2	2		VD5	74"	
Vz22 A&B	EB NEAR	COMB.			6	V10	2	2	EX. VD2	EXISTING	
Vz31	NB LEFT TURN FAR	COMB.			9	V11	3	3	EX. VD1	EXISTING	
Vz32	NB LEFT TURN	LOCAL			10	V3	3		EX. VD1	EXISTING	
Vz41	SB ADVANCE	LOCAL			13	V12	4		EX. VD3	EXISTING	
Vz42	SB NEAR	COMB.			14	V4	4	4	EX. VD3	EXISTING	
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5	EX. VD2	EXISTING	
Vz52	EB LEFT TURN	LOCAL			8	V5	5		EX. VD2	EXISTING	
Vz61 A&B	WB ADVANCE	LOCAL			3	V6	6		VD6	74"	
Vz62 A&B	WB NEAR	COMB.			4	V14	6	6	EX. VD4	EXISTING	
Vz71	SB LEFT TURN FAR	COMB.			15	V15	7	7	EX. VD3	EXISTING	
Vz72	SB LEFT TURN	LOCAL			16	V7	7		EX. VD3	EXISTING	
Vz81	NB ADVANCE	LOCAL			11	V8	8		EX. VD1	EXISTING	
Vz82	NB NEAR	COMB.			12	V16	8	8	EX. VD1	EXISTING	
Vz83 A&B	NB RIGHT TURN FAR	LOCAL			17	P1	8		VD8	23"	
Vz84 A&B	NB RIGHT TURN	COMB.			18	P3	8		VD7	23"	
PB2 A&B	(HWY. 12) S. LEG	PED.				P2	2				
PB4 A&B	(WALTON) W. LEG	PED.				P4	4				
PB6 A&B	(MACYRD.) N. LEG	PED.				P6	6				
PB8 A&B	(WALTON) E. LEG	PED.				P8	8				
SPARE: 19, 20, 21, 22, 23, & 24											

CONTROLLER INPUT ABBREVIATIONS:

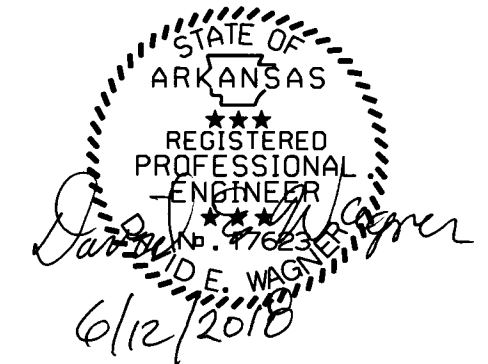
- V = VEHICLE INPUT
- D = SYSTEM OR AUXILIARY INPUT
- P = PEDESTRIAN INPUT

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE. EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

LOCATION: HWY. 12 AT WALTON BLVD.
CITY: BENTONVILLE
COUNTY: BENTON
DISTRICT: 09 SCALE: AS SHOWN DRAWN BY: CEM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						BB0903	159	368
② UNDERPASS LIGHTING PLAN								

ITEM NO.	ITEM	QUANTITY	UNIT
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	460	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	460	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1")	20	LIN. FT.
SP	FIBERGLASS CONDUIT H.D. (1")	420	LIN. FT.
SP	UNDERPASS LUMINAIRE (90-WATT, LED)	8	EACH



GENERAL NOTES

1. THE LOCATIONS OF THE CONDUCTORS, CONDUITS, AND JUNCTION BOXES ARE APPROXIMATE AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS.
2. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST ADOPTED EDITIONS OF THE NATIONAL ELECTRICAL CODE (N.E.C.) AND THE NATIONAL ELECTRICAL SAFETY CODE (N.E.S.C.). ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS.
3. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS".
4. ALL MATERIAL ARE UNDERWRITERS LABORATORY APPROVED, UNLESS OTHERWISE SPECIFIED.
5. NEUTRAL WIRES TO HAVE WHITE INSULATION. DO NOT USE WHITE OR GREEN INSULATED WIRES FOR UNGROUNDED CONDUCTORS.
6. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY N.E.C. OR N.E.S.C. FOR CABLE USED. PULL CABLE SHALL BE POLYESTER OR NYLON ROPE. STEEL CABLE OR FISH TAPE SHALL NOT BE USED.
7. THE CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS AND COORDINATE WITH THE STRUCTURAL CONTRACTOR REGARDING LOCATIONS OF CONDUIT AND PULL BOXES WITHIN THE BRIDGE STRUCTURES AND WALLS AND TO VERIFY LOCATIONS OF TIE-INS.
8. PROVIDE SURFACE MOUNTED OR EXPOSED RUNS OF CONDUIT WITH EITHER EXPANSION JOINTS OR FLEXIBLE CONDUIT SECTIONS ADEQUATE TO TAKE CARE OF VIBRATIONS AND THERMAL EXPANSIONS. GROUND ALL METAL CONDUIT. HOT-DIP ALL STEEL CONDUIT.

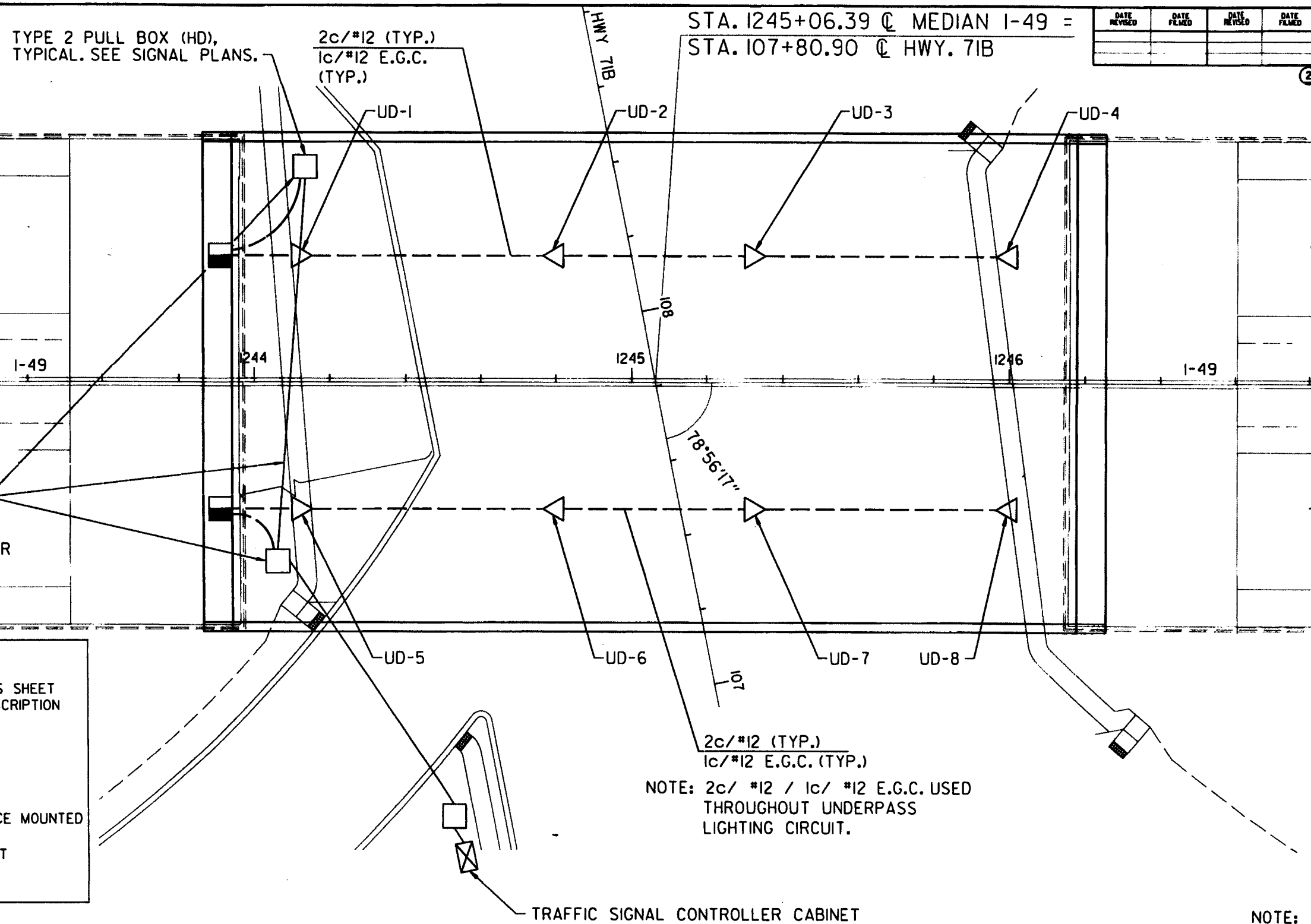
UNDERPASS LIGHTING GENERAL NOTES AND QUANTITIES

LOCATION: I-49/HWY. 71B
CITY: ROGERS
COUNTY: BENTON
DISTRICT: 9 SCALE: N/A DRAWN BY: DW

DESIGN FILE: R:\647673\TRAFFIC SIGNALS\HWY78\LIGHTING\Underpass.Lighting_Plan.dgn
 PLOTTED: 05/07/08 14:25
 MODEL: PROPOSED DESIGN
 SCALE: 1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	160	368	

2 UNDERPASS LIGHTING PLAN



STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 DAVID E. WAGNER
 No. 17623-R
 5/11/2018

UNDERGROUND CONDUIT AND PULL BOXES TO BE INSTALLED AS PART OF THE SIGNAL PLANS. (REFER TO SIGNAL PLANS FOR FURTHER INFORMATION).

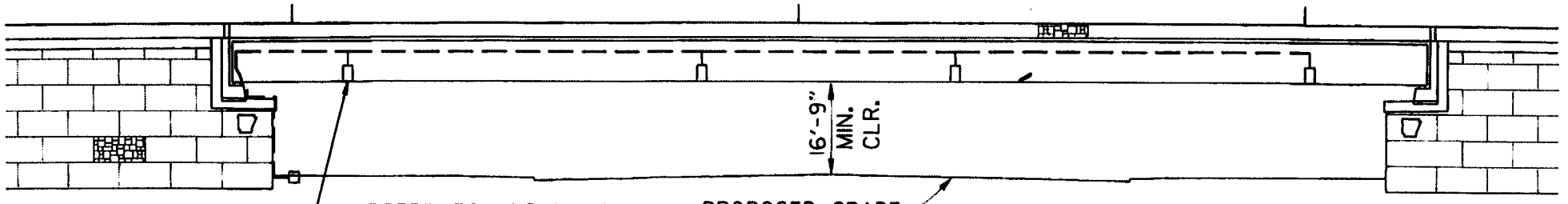
PLAN VIEW LEGEND

SEE UNDERPASS LIGHTING DETAILS SHEET 2 OF 2 FOR A FULL LEGEND DESCRIPTION

- △ UNDERPASS LUMINAIRE
- PULL BOX (UNDERGROUND)
- PULL/JUNCTION BOX SURFACE MOUNTED
- - - SURFACE MOUNTED CONDUIT
- UNDERGROUND CONDUIT

NOTE: 2c/ #12 / 1c/ #12 E.G.C. USED THROUGHOUT UNDERPASS LIGHTING CIRCUIT.

NOTE: STATIONING ON HWY. 7B INCREASES FROM EAST TO WEST.



ELEVATION VIEW OF UNDERPASS LUMINAIRES (TYP.)

REFER TO UNDERPASS LIGHTING DETAILS SHEET FOR FURTHER INFORMATION

PROPOSED GRADE LINE HWY. 71B @ BRIDGE ELEVATION

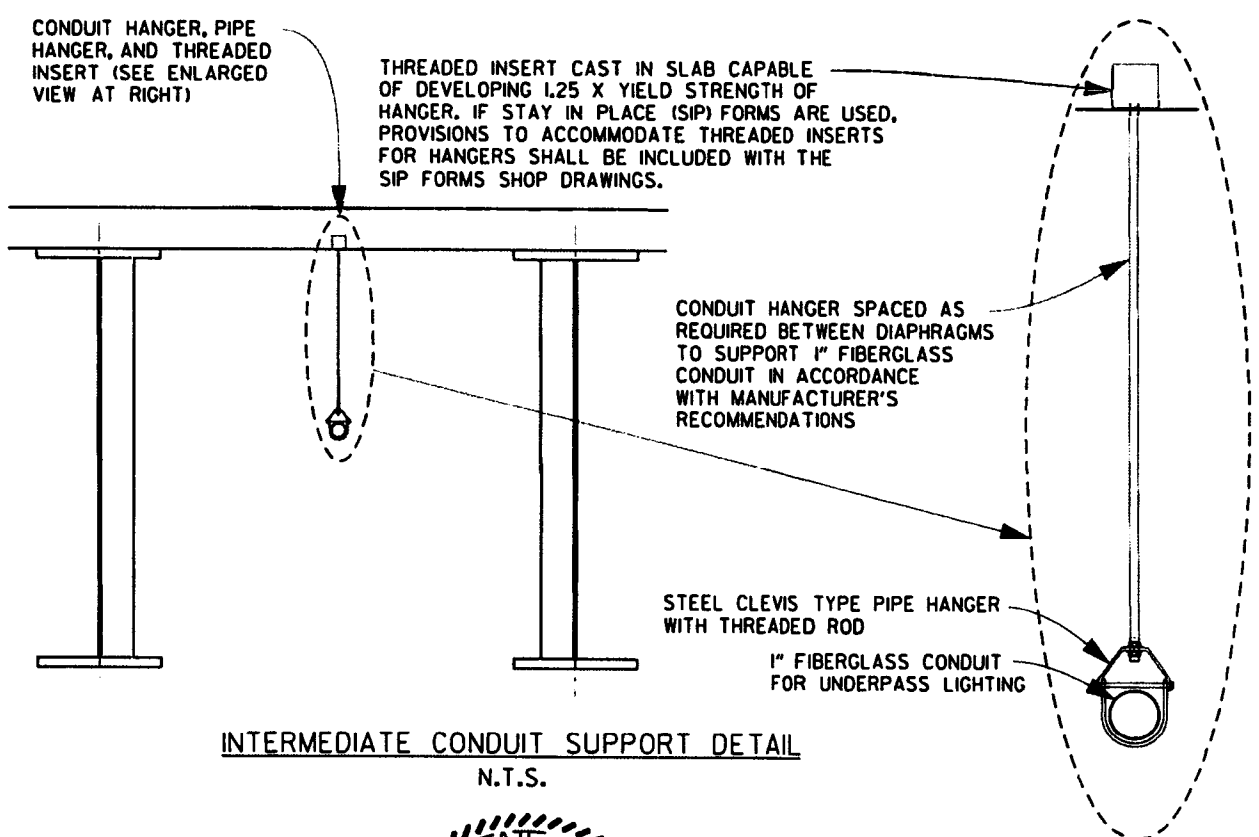
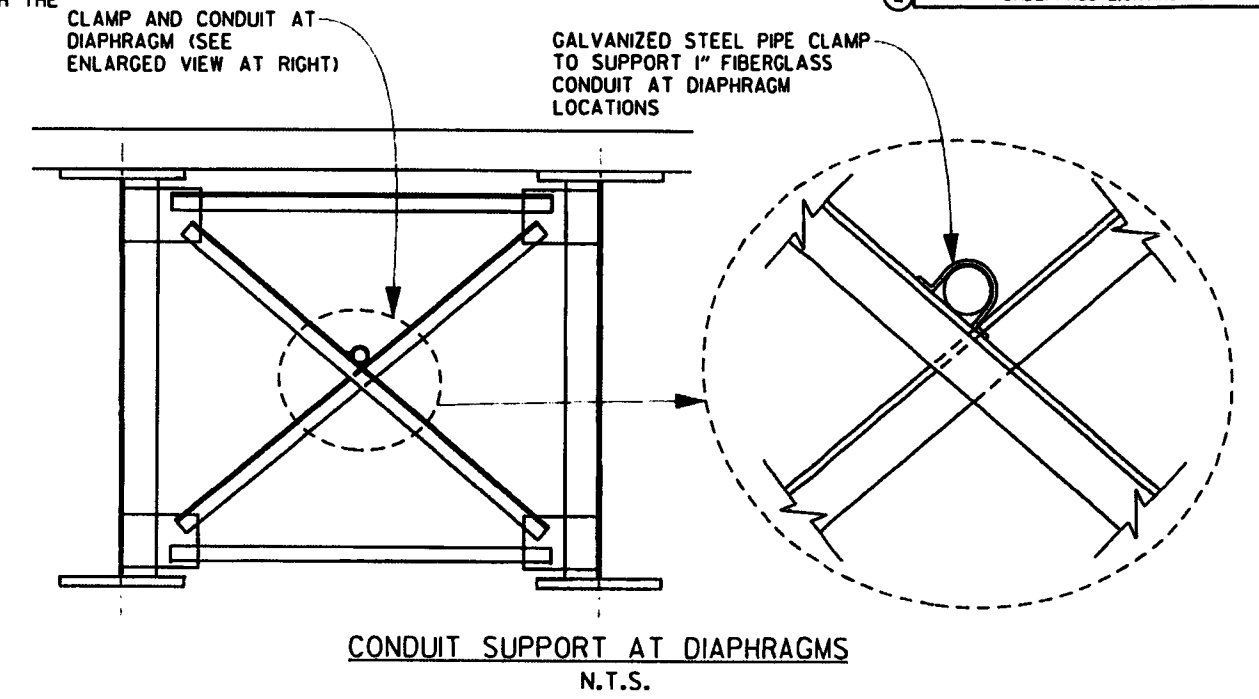
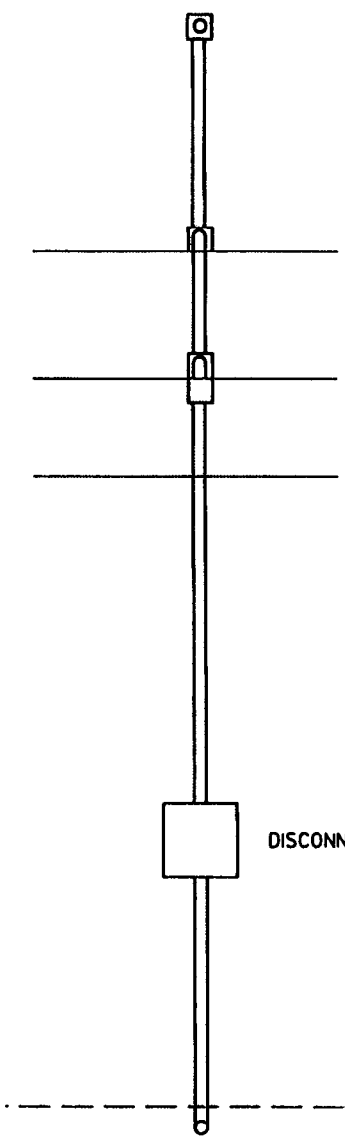
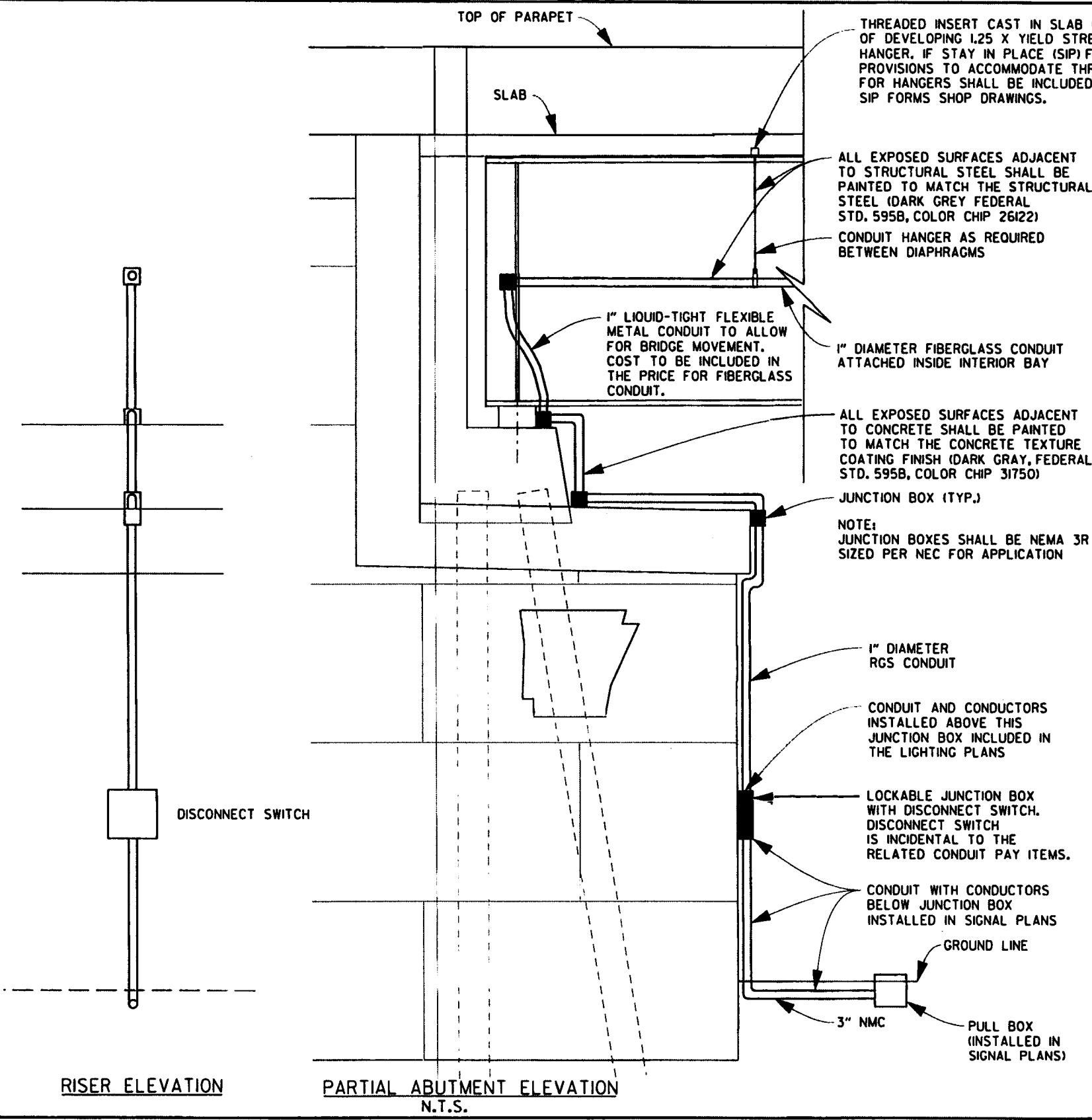


UNDERPASS LIGHTING PLAN AND ELEVATION

LOCATION: I-49/HWY. 71B
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: 1"=30' DRAWN BY: DW

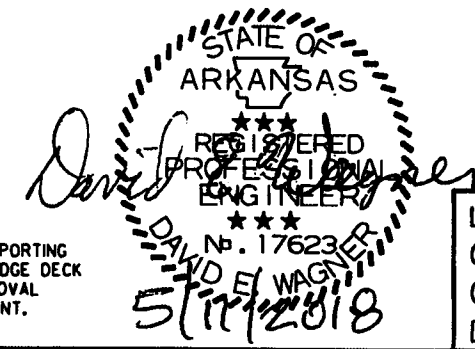
DATE REVISION	DATE FILED	DATE REVISION	DATE FILED	FED. PROJ. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903	IGI	368	

2 UNDERPASS LIGHTING PLAN



- NOTES**
- ALL STEEL USED FOR SUPPORTING CONDUIT, INCLUDING PIPE, NUTS, WASHERS, THREADED RODS, CLAMPS, HANGERS SHALL BE GALVANIZED ACCORDING TO ASTM A123.
 - SPACING OF INTERMEDIATE CONDUIT SUPPORTS AND CONDUIT EXPANSION JOINTS SHALL BE IN ACCORDANCE WITH THE CONDUIT MANUFACTURER'S RECOMMENDATIONS AND SPECIAL PROVISIONS.
 - MOUNTING PLATES, PIPES, BOLTS, CLAMPS, WASHERS, NUTS, AND HANGERS SHALL NOT BE MEASURED SEPARATELY BUT WILL BE CONSIDERED SUBSIDIARY TO "STRUCTURAL STEEL IN PLATE GIRDER SPANS (M 270, GRADE 50) AND STRUCTURAL STEEL IN PLATE GIRDER SPANS (M 270, GRADE HPS 70W)".
 - ALL WELDING THAT IS DONE DURING FABRICATION, INCLUDING ANY TEMPORARY WELDS, SHALL BE DETAILED ON THE SHOP DRAWINGS AND SUBMITTED FOR APPROVAL.
 - ALL BOLTS USED TO ATTACH JUNCTION BOXES AND CONDUIT TO THE RETAINING WALL AND ABUTMENT SHALL BE DRILLED AND GROUTED WITH AN APPROVED EPOXY GROUT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED EMBEDMENT AND INSTALLATION PROCEDURES.
 - CONTRACTOR MAY SUBMIT ALTERNATE DETAILS FOR APPROVAL TO THE ENGINEER.
 - SEE NEC 350.30 FOR LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LFMC).

NOTE: SIZE, TYPE, AND METHOD OF SUPPORTING JUNCTION BOXES UNDER THE BRIDGE DECK SHALL BE SUBMITTED FOR APPROVAL PRIOR TO BRIDGE DECK PLACEMENT.



UNDERPASS LIGHTING DETAILS 1 OF 2
 LOCATION: I-49/HWY. 71B
 CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DW

DESIGN FILE: R:\647613\TRAFFIC SIGNALS\WRT718\LIGHTING\Lighting_Details 1 of 2.dgn
 PLOTTED: 5/20/18 15:25
 MODEL: PROPOSED DESIGN
 SCALE: N/A

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	162	368	

2 UNDERPASS LIGHTING PLAN

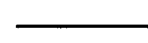
LEGEND

SYMBOLS

DESCRIPTION



UNDERPASS LUMINAIRE, TYPE V MEDIUM DISTRIBUTION, 90 WATTS. UNDERPASS LIGHTING WAS DESIGNED USING A CREE LUMINAIRE LED CATALOG NO. TSP-EDG-5M-PD2-08-E-UL-SV-350-40K AND IES CURVE NO. TSP-EDG-5M-08-E-UH-350-40K-CONFIGURED. IES, TYPE V MEDIUM DISTRIBUTION, 80 LEDS, 90 WATTS, 8,893 INITIAL LUMENS, 4000K COLOR TEMPERATURE, 350MA (STANDARD) DRIVE CURRENT. CONTRACTOR MAY SUBMIT AN ALTERNATIVE LUMINAIRE, PER SPECIAL PROVISION THAT MEETS THE ILLUMINATION CRITERIA SHOWN ON THESE PLANS, TO ARDOT AND THE ENGINEER FOR APPROVAL. THE IES FILE OF THE SUBSTITUTED LUMINAIRE MAY BE SUBMITTED TO THE ENGINEER FOR SUBSTITUTION IN THE AGI32 LIGHTING SOFTWARE TO VERIFY ILLUMINATION REQUIREMENTS ARE MET WITH THE SUBSTITUTED LUMINAIRE USED AT THE LOCATIONS SHOWN IN THE PLANS.



UNDERGROUND CONDUIT, SHOWN FOR INFORMATION ONLY ON THE UNDERPASS LIGHTING PLAN SHEET. PAID AND INSTALLED IN THE SIGNAL PLANS.



1" SURFACE MOUNTED CONDUIT, RIGID GALVANIZED STEEL (RGS) OR LIQUID-TIGHT FLEXIBLE METAL AS SHOWN ON THE UNDERPASS LIGHTING DETAILS SHEET BETWEEN THE GROUND AND UNDERSIDE OF BRIDGE, OR FIBERGLASS RUNNING BETWEEN THE CROSS BRACES BELOW THE BRIDGE DECK. LIGHTING CONTRACTOR TO RUN CONDUCTORS AS SPECIFIED IN THESE PLANS.

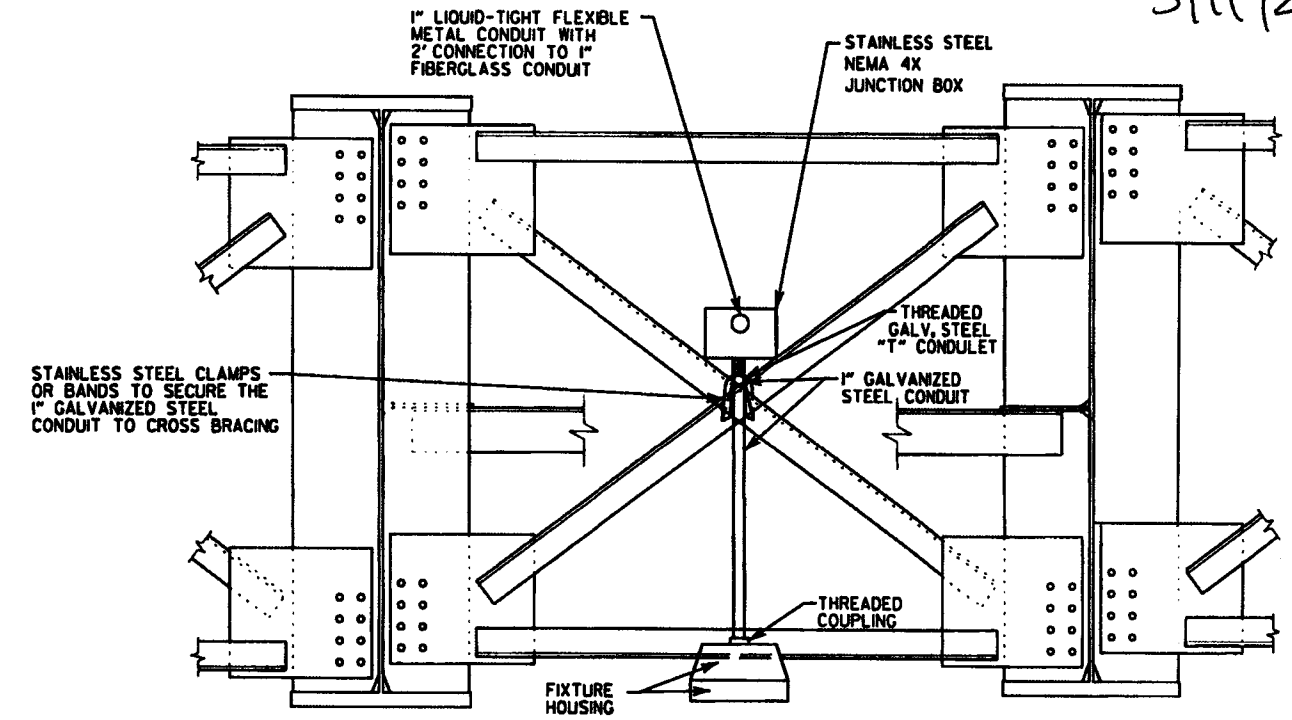
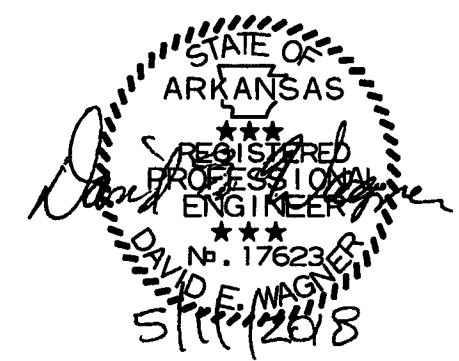


UNDERGROUND PULL BOX, SHOWN FOR INFORMATION ONLY ON THE UNDERPASS LIGHTING PLAN SHEET. PAID AND INSTALLED IN THE SIGNAL PLANS.



SURFACE MOUNTED BRIDGE PULL OR JUNCTION BOX ATTACHED TO BRIDGE STRUCTURE (8" X 8" MINIMUM). BOX SIZE TO BE INCREASED WHEN REQUIRED BY THE NEC.

NOTE: CONDUIT IS AS LABELED ON THE UNDERPASS LIGHTING DETAILS SHEET.



UNDERPASS LIGHTING DESIGN CRITERIA

AVERAGE MAINTAINED ILLUMINANCE	1.2 FOOT CANDLES
UNIFORMITY RATIO AVG./MIN.	3:1 OR LESS
MINIMUM ILLUMINANCE (ACHIEVED WITH DESIGNED LUMINAIRE)	0.58 FC

UNDERPASS LUMINAIRE SCHEDULE

LUM NO.	STATION AND OFFSET	NO. OF LEDS	MOUNTING HEIGHT (FT)
UD-1	1244+11.00 33.33' LT @ I-49	80	16.83
UD-2	1244+81.00 33.33' LT @ I-49	80	16.83
UD-3	1245+31.00 33.33' LT @ I-49	80	16.83
UD-4	1246+01.00 33.33' LT @ I-49	80	16.83
UD-5	1244+11.00 33.33' RT @ I-49	80	16.83
UD-6	1244+81.00 33.33' RT @ I-49	80	16.83
UD-7	1245+31.00 33.33' RT @ I-49	80	16.83
UD-8	1246+01.00 33.33' RT @ I-49	80	16.83

MOUNTING HEIGHT IS THE DISTANCE BETWEEN THE BOTTOM OF THE LUMINAIRE AND THE PAVEMENT ELEVATION DIRECTLY BELOW THE LUMINAIRE. OFFSETS ARE ±1'. CLEAR DISTANCES BETWEEN CROSS BRACES AND LUMINAIRES SHALL BE 3" UP TO 1'.

1. THE LIGHTING CONTRACTOR SHALL COORDINATE WITH THE STRUCTURE CONTRACTOR FOR THE LOCATION OF ELECTRICAL ITEMS (CONDUITS, PULL BOXES, AND JUNCTION BOXES) REQUIRED FOR THE INSTALLATION OF UNDERPASS LIGHTING. ALL PULL BOXES, JUNCTION BOXES, AND RELATED HARDWARE ARE INCIDENTAL TO THE RELATED CONDUIT PAY ITEMS.
2. THE CONTRACTOR SHALL DESIGN AND DETAIL THE CONNECTION AND BRACING FOR THE UNDERPASS LUMINAIRE HANGING ROD TO RESIST DESIGN WIND LOAD, IN ACCORDANCE WITH THE AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 4TH EDITION WITH 2003 AND 2006 INTERIMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS, SIGNED AND SEALED BY AN ARKANSAS REGISTERED PROFESSIONAL ENGINEER, WHICH SUPPORTS THE DESIGN. USE A SWIVEL HANGER TO ACCOMMODATE FIXTURE WEIGHT. PROVIDE WIND BRACING AND CONNECTIONS FROM VERTICAL CONDUIT TO CROSS BRACES FOR STABILITY OF THE LUMINAIRE.
3. THE CONTRACTOR MAY SUBMIT ALTERNATE DETAILS FOR APPROVAL TO THE ENGINEER.
4. SEE NEC 350.30 FOR LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LFMC).

UNDERPASS LUMINAIRE DETAILS N.T.S.

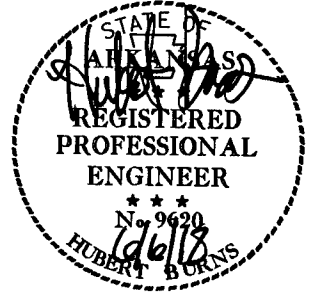
UNDERPASS LIGHTING DETAILS 2 OF 2

LOCATION: I-49/HWY. 71B CITY: ROGERS AND BENTONVILLE
 COUNTY: BENTON
 DISTRICT: 9 SCALE: N/A DRAWN BY: DW

DESIGN FILE: R:\647873\TRAFFIC SIGNALS\HRT718\LIGHTING\Lighting_Details 2 of 2.dgn
 PLOTTED: 5/20/08 10:43
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 MODEL: PROPOSED DESIGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	163	368	

2 SIGNING SUMMARY OF QUANTITIES



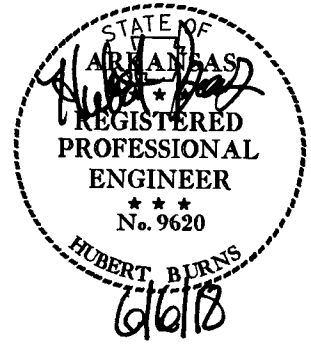
SIGNING SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	TOTAL	UNIT
725	GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	888	SQ.FT.
726	STANDARD SIGN	889	SQ.FT.
729	CHANNEL POST SIGN SUPPORT (TYPE U-1)	10	EACH
729	CHANNEL POST SIGN SUPPORT (TYPE U-2)	6	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	11297	POUNDS
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	37	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	7	EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	164	368	

GUIDE SIGNING QUANTITIES

2 SIGNING QUANTITIES



SIGN NO.	G-2	GUIDE SIGN			BREAKAWAY SIGN SUPPORT									
		LENGTH LIN. FT.	HEIGHT LIN. FT.	SQ. FT.	STEEL SECT.		SIGN POST LENGTH		STUB POST		FOOTING			SIGN POST AND STUB POUND
					A-572	H-1	H-2	H-1	H-2	DIA.	DEPTH	EBED.		
		BEAM	LBS.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.			
EXR1-STA941+60NB	1	6.50	5.00	32.50	W6	15	14.00	13.25	3.66	3.66	1.5	5.00	3.33	519
LLR1-STA943+91NB-RT	1	12.50	6.50	81.25	W8	18	18.33	20.85	5.00	5.00	2.5	7.00	4.67	885
LFR1-STA944+66NB-RT	1	11.00	6.50	71.50	W8	18	17.69	19.68	5.00	5.00	2.5	7.00	4.67	853
LAR1-STA944+66NB-LT	1	10.50	7.50	78.75	W8	18	16.68	17.73	5.00	5.00	2.5	7.00	4.67	799
LGR1-STA945+41NB-RT	1	10.50	6.50	68.25	W8	18	17.78	19.96	5.00	5.00	2.5	7.00	4.67	859
SSR1-STA946+16NB-RT	1	7.50	2.50	18.75	W6	15	13.88	15.39	3.33	3.33	2	4.50	3.00	539
SSR1-STA946+99NB-RT	1	6.50	2.50	16.25	W6	15	16.46	17.97	3.33	3.33	2	4.50	3.00	616
SSR1-STA946+99NB-RT		5.50	2.50	13.75										
SSR1-STA946+99NB-LT	1	7.50	2.50	18.75	W6	9	14.41	15.08	4.66	4.66	1.5	6.50	4.33	349
SSR1-STA946+99NB-LT		6.00	2.50	15.00										
EXR3-STA960+90SB	1	6.50	5.00	32.50	W6	15	12.72	12.10	3.66	3.66	1.5	5.00	3.33	482
LLR3-STA958+38SB-LT	1	11.00	6.50	71.50	W8	18	16.96	18.53	5.00	5.00	2	7.00	4.67	819
LFR3-STA957+56SB-LT	1	11.00	6.50	71.50	W8	18	16.77	18.34	5.00	5.00	2	7.00	4.67	812
SSR3-STA957+56SB-RT	1	6.50	2.50	16.25	W6	9	11.62	12.27	2.66	2.66	1.5	3.50	2.33	263
LAR3-STA956+81SB-RT	1	10.50	7.00	73.50	W8	18	17.27	18.84	5.00	5.00	2	7.00	4.67	830
LGR3-STA956+81SB-RT	1	10.50	7.00	73.50	W8	18	16.26	17.31	5.00	5.00	2	7.00	4.67	784
SSR3-STA956+07SB-LT	1	6.50	2.50	16.25	W6	15	18.27	19.24	3.33	3.33	2	4.50	3.00	663
SSR3-STA956+07SB-LT		6.00	2.50	15.00										
SSR3-STA957+97SB-LT		4.50	2.50	11.25										
SSR3A-STA0+26SB-LT	1	5.50	2.50	13.75	W6	9	9.38	10.06	2.66	2.66	1.5	3.50	2.33	223
SS71B-STA102+00WB	1	6.00	2.50	15.00	W6	9	9.42	10.62	3.33	3.33	1.5	4.50	3.00	240
SS71B-STA103+52WB	1	6.00	3.50	21.00	W6	9	10.42	11.62	3.33	3.33	1.5	4.50	3.00	258
SS71B-STA113+05EB	1	6.00	2.50	15.00	W6	9	12.00	12.25	3.33	3.33	1.5	4.50	3.00	278
SS71B-STA113+05EB		5.50	2.50	13.75										
SS71B-STA118+81EB	1	5.50	2.50	13.75	W6	9	9.23	9.21	3.33	3.33	1.5	4.50	3.00	226
TOTALS (ROADSIDE MOUNTED):	20			888.25										11297

STANDARD ROADSIDE SIGNS SHEET ALUMINUM 0.125" THICKNESS (GREATER THAN 5 SQ. FT.)

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ.FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ.FT.)	LEGEND/BACKGROUND
R1-2	48"x48"x48"	6.93	8	55.44	RED/WHITE
R3-7R	48"x48"	16	2	32.00	BLACK/WHITE
R5-1	36"x36"	9	8	72.00	RED/WHITE
R5-1a	42"x30"	8.75	12	105.00	RED/WHITE
R6-1R	54"x18"	6.75	3	20.25	BLACK/WHITE
R6-1L	54"x18"	6.75	2	13.50	BLACK/WHITE
W3-3	48"x48"	16	4	64.00	BLACK/YELLOW
W4-2	48"x48"	16	1	16.00	BLACK/YELLOW
W9-1R	48"x48"	16	1	16.00	BLACK/YELLOW
W11-2	48"x48"	16	14	224.00	BLACK/YELLOW
W12-1	48"x48"	16	2	32.00	BLACK/YELLOW
W13-2	48"x60"	20	2	40.00	BLACK/YELLOW
TOTAL 0.125" THICKNESS:				690.19	

STANDARD ROADSIDE SIGNS SHEET ALUMINUM 0.100" THICKNESS (5 SQ. FT. OR LESS)

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ.FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ.FT.)	LEGEND/BACKGROUND
M1-1	24"x24"	4.00	16	64.00	RED/WHITE/BLUE
M2-1	15"x21"	2.19	2	4.38	BLUE/WHITE
M3-1	12"x24"	2.00	7	14.00	BLUE/WHITE
M3-3	12"x24"	2.00	7	14.00	BLUE/WHITE
M5-1L	21"x15"	2.19	2	4.38	BLUE/WHITE
M5-2R	21"x15"	2.19	2	4.38	BLUE/WHITE
M5-2L	21"x15"	2.19	2	4.38	BLUE/WHITE
M5-4	24"x18"	3.00	2	6.00	BLUE/WHITE
M5-6	24"x18"	3.00	2	6.00	BLUE/WHITE
M6-2R	21"x15"	2.19	2	4.38	BLUE/WHITE
M6-2aR	21"x15"	2.19	2	4.38	BLACK/WHITE
M6-3	21"x15"	2.19	2	4.38	BLUE/WHITE
R4-7a	24"x30"	5.00	8	40.00	BLACK/WHITE
W16-7L	12"x24"	2.00	12	24.00	BLACK/YELLOW
TOTAL 0.100" THICKNESS:				198.66	

SIGNING QUANTITIES

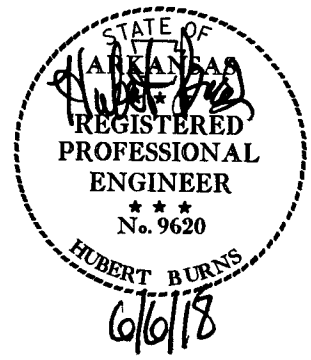
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STANDARD SIGNS FLAT SHEET

SIGN NO.	STANDARD SIGNS FLAT SHEET				SIGN NO.	COMMENTS	
	I-BEAM SIGN SUPPORTS						STANDARD SIGN TO BE MOUNTED
	CHANNEL POST/OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT EACH TYPE						
LOCATION	U-1	U-2	G-1	G2-1			
EXR1-STA940+69NB-RT			1		W13-2		
EXR3-STA962+32SB-LT			1		W13-2		
SS71B-STA92+46WB			1		R4-7a		
SS71B-STA92+92WB	1				M2-1, M1-1		
SS71B-STA96+06WB		1			M3-1, M3-3, M1-1, M1-1, M6-3, M5-2R		
SS71B-STA96+33EB	1				R6-1R		
SS71B-STA98+68EB				1	R3-7R		
SS71B-STA99+00WB		1			M3-3, M3-1, M1-1, M1-1, M5-4, M5-6		
SS71B-STA99+38EB			1		R4-7a		
SS71B-STA99+51WB			1		W11-2, W16-7L		
SS71B-STA99+62EB			1		W11-2, W16-7L		
SS71B-STA100+54EB			1		W11-2, W16-7L		
SS71B-STA100+57WB			1		W11-2, W16-7L		
SS71B-STA100+70WB			1		R4-7a		
SS71B-STA102+00WB					M3-1, M3-3, M1-1, M1-1, M5-1L, M6-2R	ATTACH TO GUIDE SIGN ASSEMBLY	
SS71B-STA104+59WB					W11-2, W16-7L		
SS71B-STA104+68EB					R5-1a, R5-1, W11-2, W16-7L		
SS71B-STA106+08EB			1		R4-7a		
SS71B-STA106+46WB	1				M3-1, M1-1, M5-2L		
SS71B-STA106+60WB			1		W11-2, W16-7R		
SS71B-STA110+75WB		2			R1-2		
SS71B-STA107+00EB			1		R5-1a, R5-1, W11-2, W16-7L		
SS71B-STA107+66EB			1		R6-1L, R5-1, R5-1a		
SS71B-STA108+04WB			1		R6-1L, R5-1, R5-1a		
SS71B-STA108+57WB			1		R5-1a, R5-1, W11-2, W16-7L		
SS71B-STA109+26EB	1				M3-3, M1-1, M5-2L		
SS71B-STA109+52WB			1		R4-7a		
SS71B-STA110+94WB			1		R5-1a, R5-1, W11-2, W16-7L		
SS71B-STA112+60WB			1		W11-2, W16-7L		
SS71B-STA113+04EB			1		R4-7a		
SS71B-STA113+05EB			1		M3-1, M3-3, M1-1, M1-1, M5-1L, M6-2R	ATTACH TO GUIDE SIGN ASSEMBLY	
SS71B-STA114+27WB			1		R4-7a		
SS71B-STA114+46WB			1		W11-2, W16-7L		
SS71B-STA114+60EB				1	R3-7R		
SS71B-STA115+00EB		1			M3-1, M3-3, M1-1, M1-1, M5-4, M5-6		
SS71B-STA115+91WB	1				W9-1R		
SS71B-STA117+80WB					R6-1R		
SS71B-STA118+81EB					M3-1, M3-3, M1-1, M1-1, M6-3, M5-2R	ATTACH TO GUIDE SIGN ASSEMBLY	
SS71B-STA119+49WB				1	W4-2		
SS71B-STA120+00EB	1				R6-1R		
SS71B-STA121+31EB			1		R4-7a		
SS71B-STA121+53EB	1				M2-1, M1-1		
SSML-STA10+64SB			1		R1-2		
SSML-STA11+45SB			1		R5-1, R1-2		
SSML-STA11+98SB			1		R5-1, R1-2		
SSR1A-STA1+30NB-LT			1		R5-1a		
SSR1A-STA1+30NB-RT			1		R5-1a		
SSR1-STA943+16NB-LT				1	W3-3		
SSR1-STA943+16NB-RT				1	W3-3		
SSR1-STA949+14NB	1				W12-1		
SSR1-STA949+25NB-RT			1		R5-1a		
SSR2-STA954+12NB			1		R1-2		
SSR2-STA954+24NB			1		R1-2		
SSR3A-STA1+87SB-RT			1		R5-1a		
SSR3A-STA1+87SB-LT			1		R5-1a		
SSR3-STA954+22SB-LT			1		R5-1a		
SSR3-STA955+03SB	1				W12-1		
SSR3-STA957+97SB-LT		1			W3-3	GUIDE SIGN	
SSR3-STA959+21SB-LT				1	W3-3		
SSR3-STA959+21SB-RT				1	W3-3		
SSR4A-STA0+73SB			1		W11-2, W16-7R		
SSR4B-STA0+89EB			1		W11-2, W16-7L		
SSR4B-STA1+74SB			1		R1-2		
SSR4B-STA1+74SB			1		R1-2		
TOTALS:	10	6	37	7			

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903		165	368

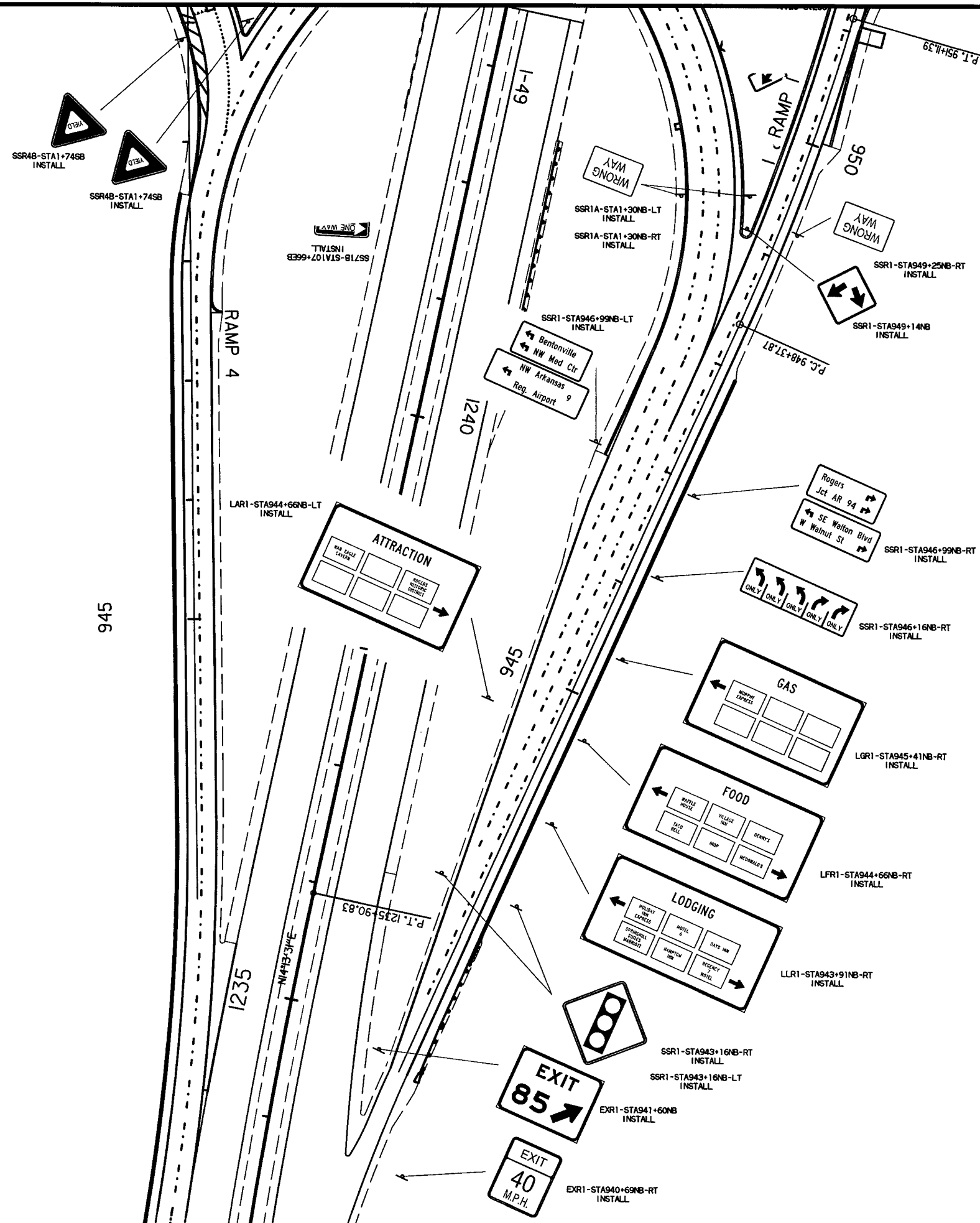
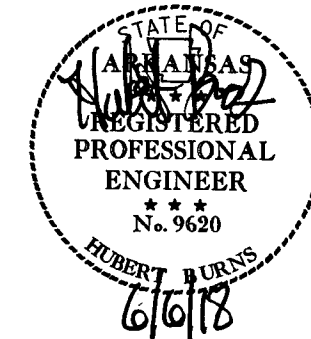
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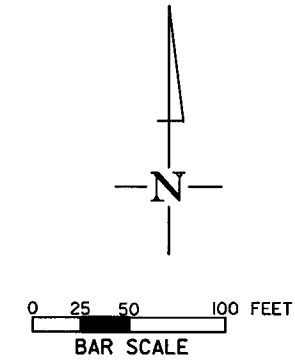
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				6	ARK.			
				JOB NO.	BB0903		166	368

2 SIGNING PLACEMENT



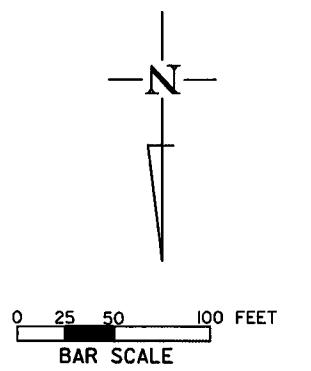
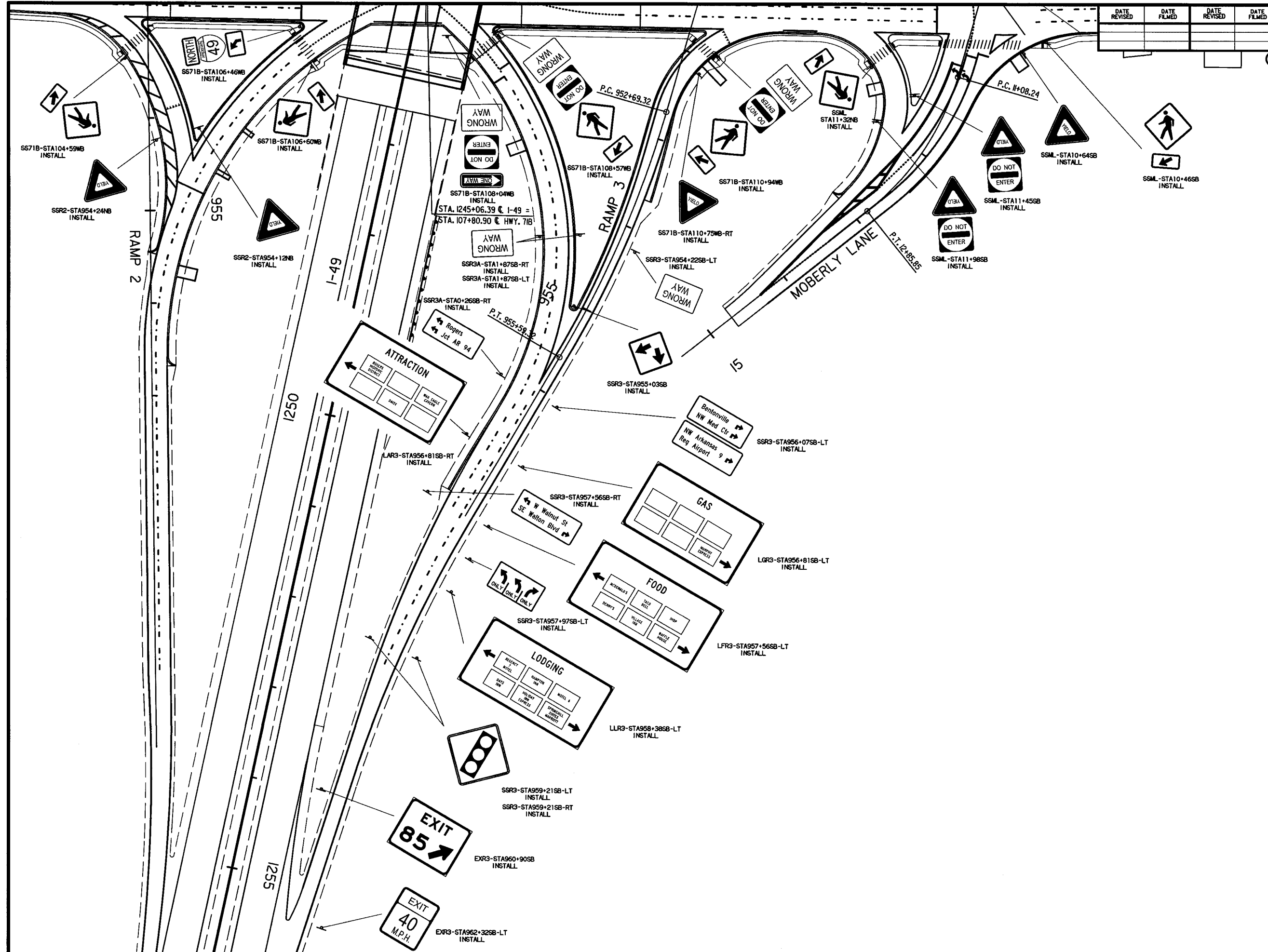
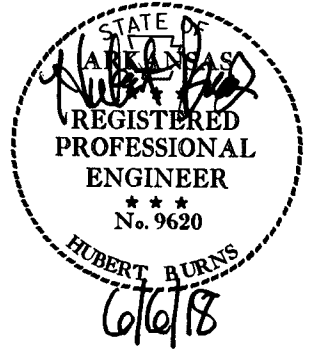
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SIGNING PLACEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	167	368	

2 SIGNING PLACEMENT

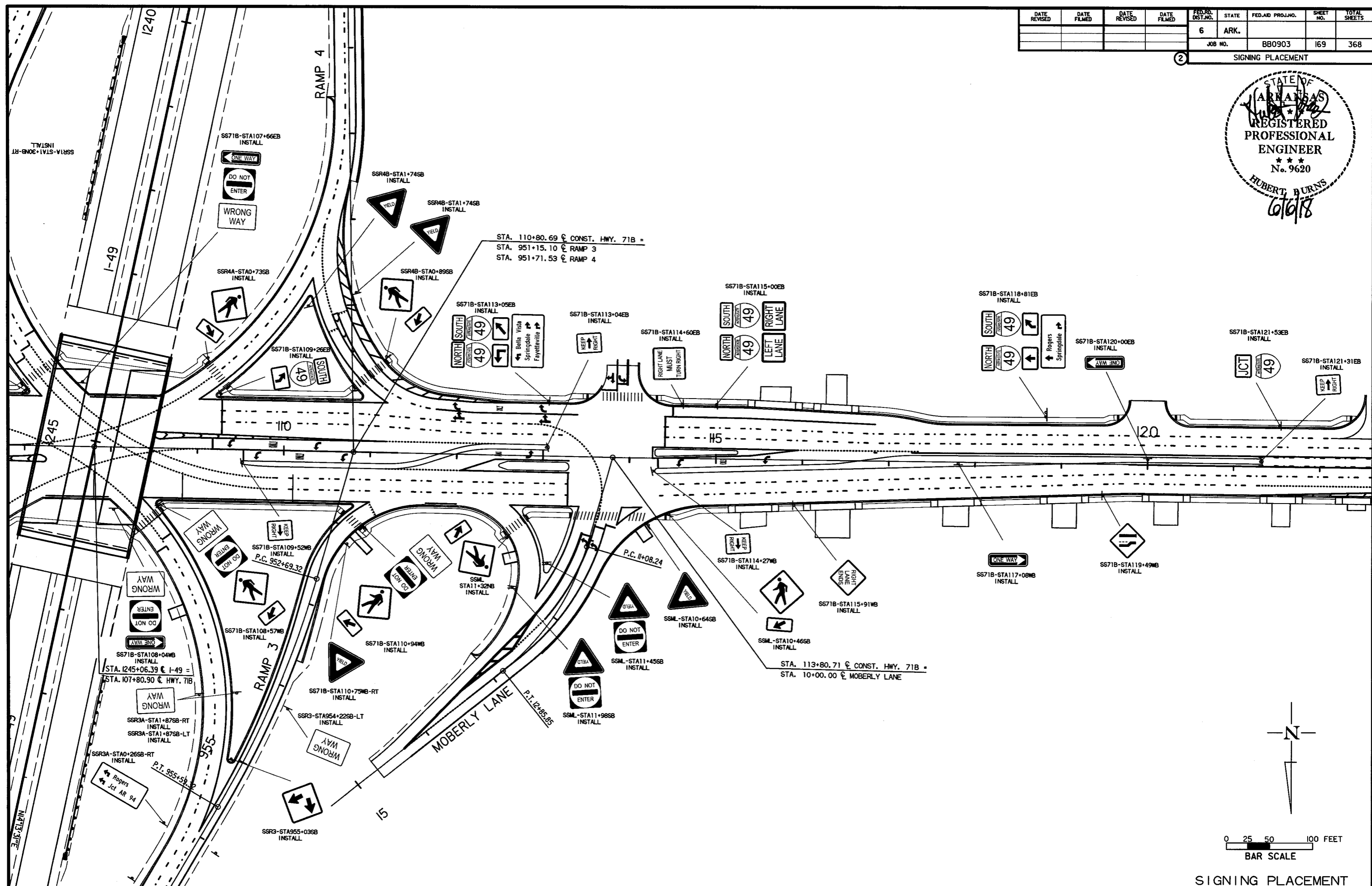
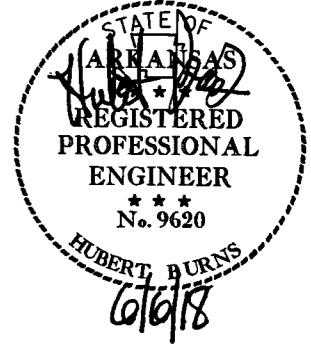


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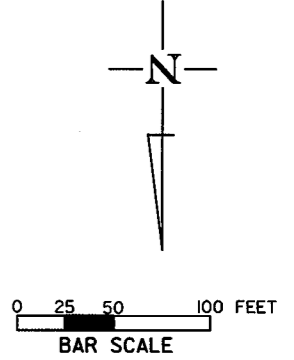
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	169	368	

2 SIGNING PLACEMENT



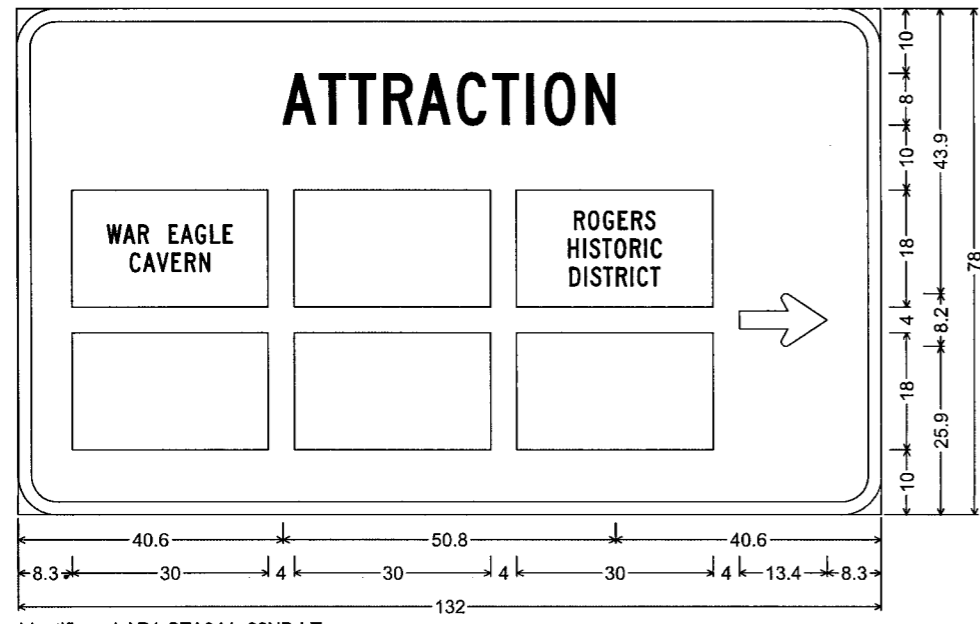
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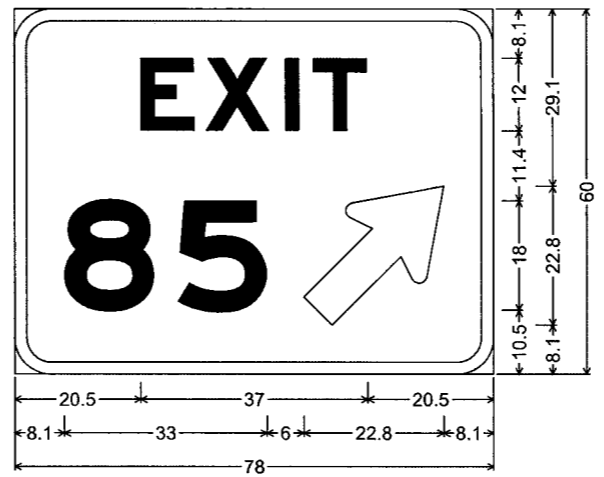
SIGNING PLACEMENT

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				6	ARK.			
				JOB NO.	BB0903	IT0	368	

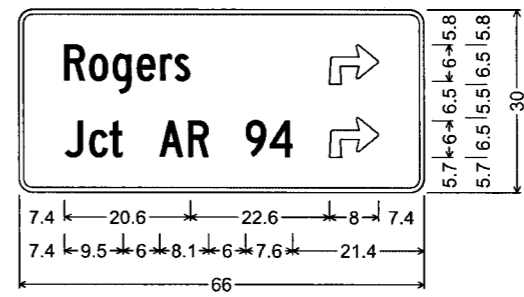
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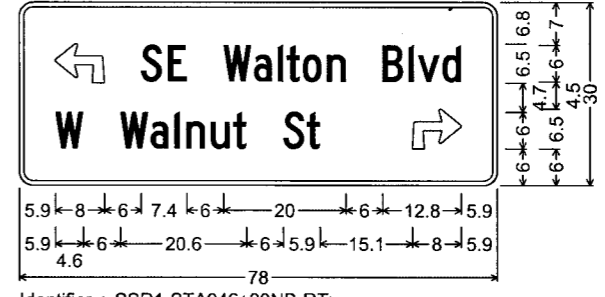
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[ATTRACTION] C 2K;
Standard Arrow Custom 13.4" X 8.1" 0°;



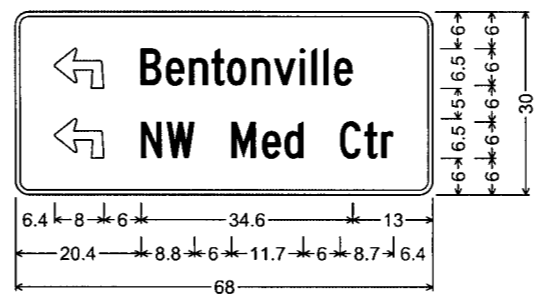
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[EXIT] E Mod 2K; [85] E Mod 2K;
Standard Arrow Custom 29.0" X 17.6" 45°;



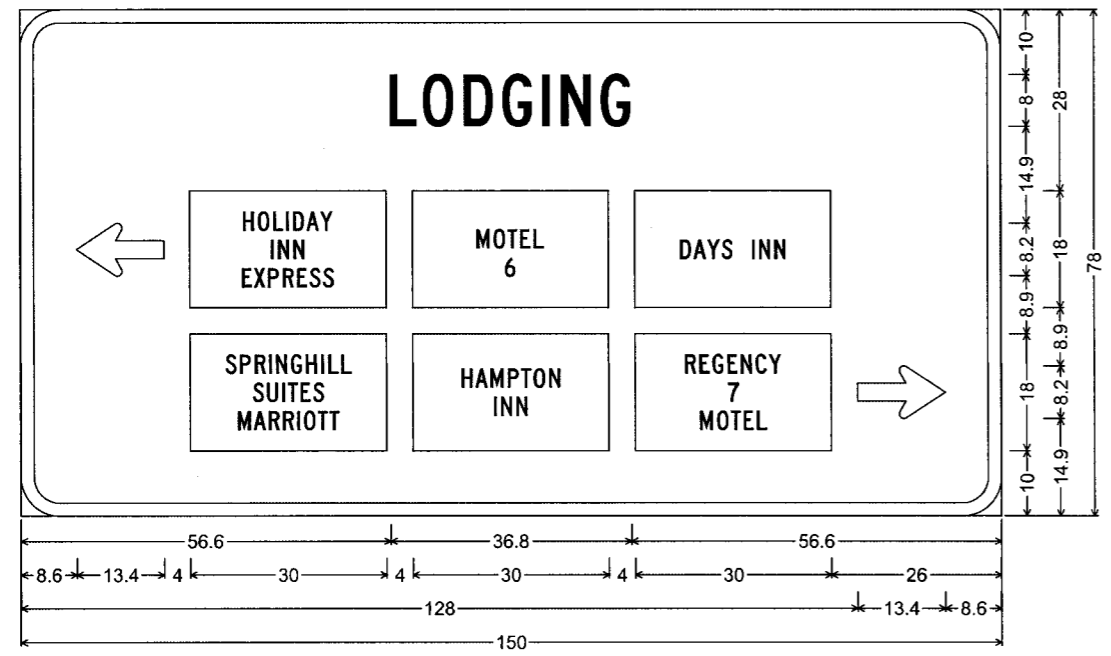
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90 Deg Advance Turn Arrow 8.0" X 6.5";
[Jct AR 94] C 2K;
90 Deg Advance Turn Arrow 8.0" X 6.5";



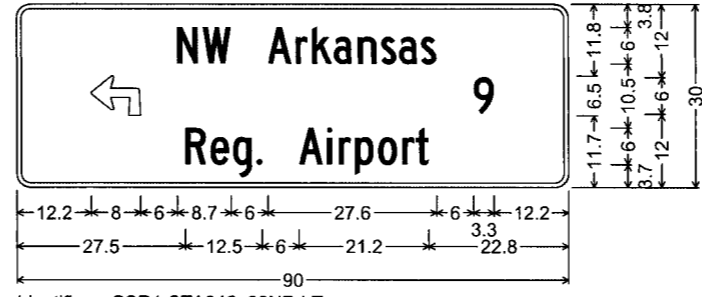
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[SE Walton Blvd] C 2K; [W Walnut St] C 2K;
90 Deg Advance Turn Arrow 8.0" X 6.5";



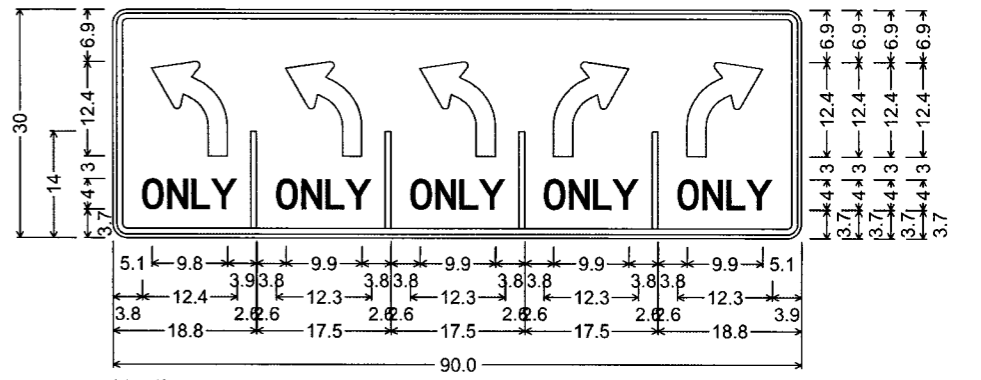
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[NW Med Ctr] C 2K;



Identifier : LLR1-STA943+91NB-RT;
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[LODGING] C 2K; Standard Arrow Custom 13.4" X 8.1" 180°;
Standard Arrow Custom 13.4" X 8.1" 0°;



Identifier : SSR1-STA946+99NB-LT;
2.3" Radius, 0.8" Border, White on Green;
90 Deg Advance Turn Arrow 8.0" X 6.5";
[NW Arkansas] C 2K; [Reg. Airport] C 2K; [9] C 2K;



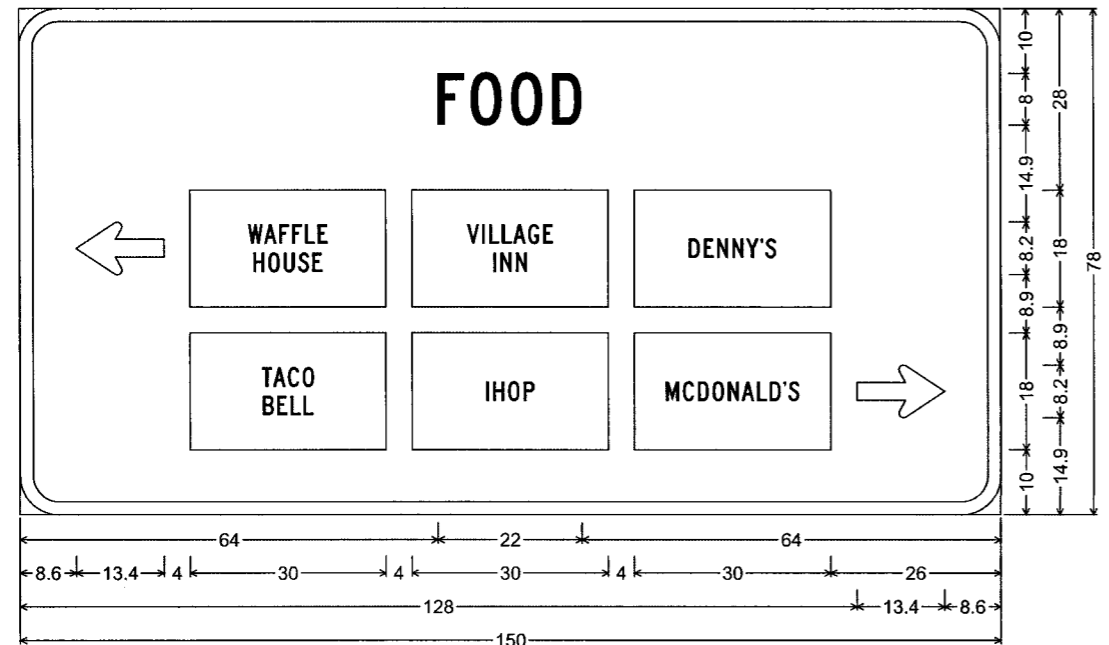
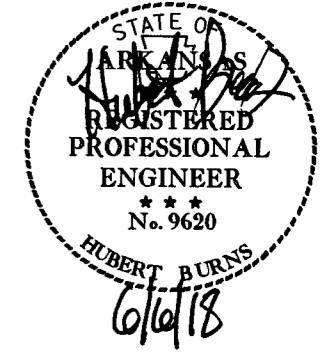
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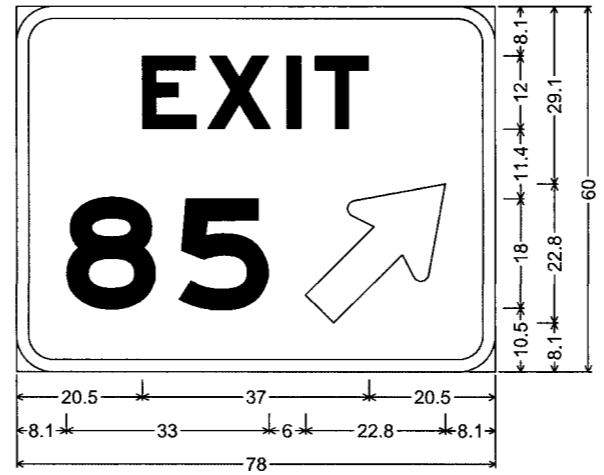
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				JOB NO.	BB0903	171	368	

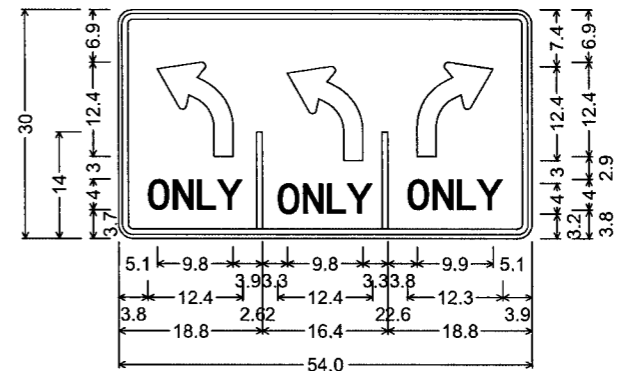
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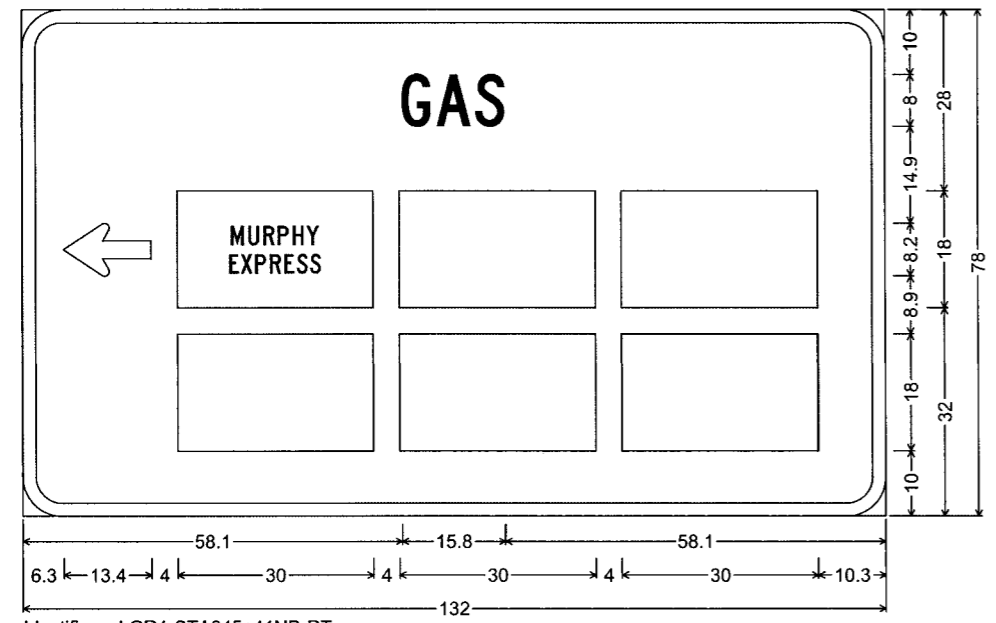
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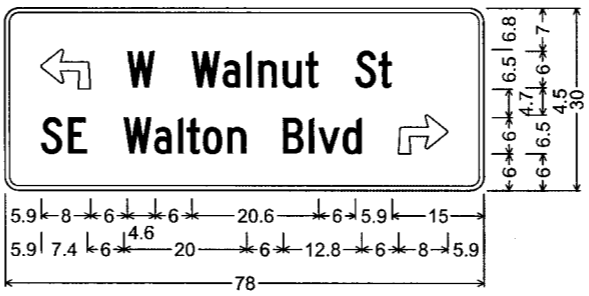
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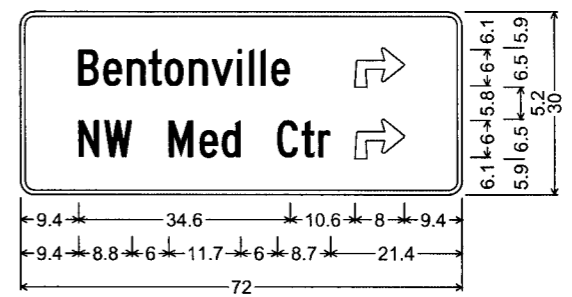
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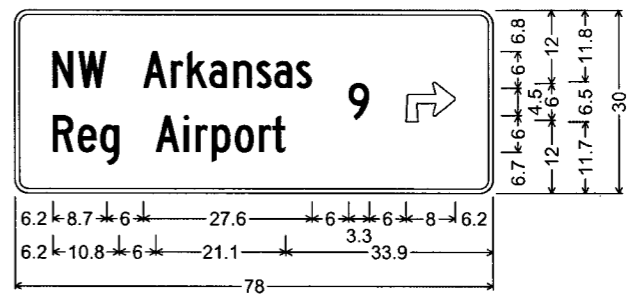
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Identifier : SSR3-STA957+56SB-RT;
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 90 Deg Advance Turn Arrow 8.0" X 6.5";
 [W Walnut St] C 2K; [SE Walton Blvd] C 2K;
 90 Deg Advance Turn Arrow 8.0" X 6.5";



Identifier : SSR3-STA956+07SB-LT;
 2.3" Radius, 0.8" Border, White on Green;
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 90 Deg Advance Turn Arrow 8.0" X 6.5";
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 90 Deg Advance Turn Arrow 8.0" X 6.5";



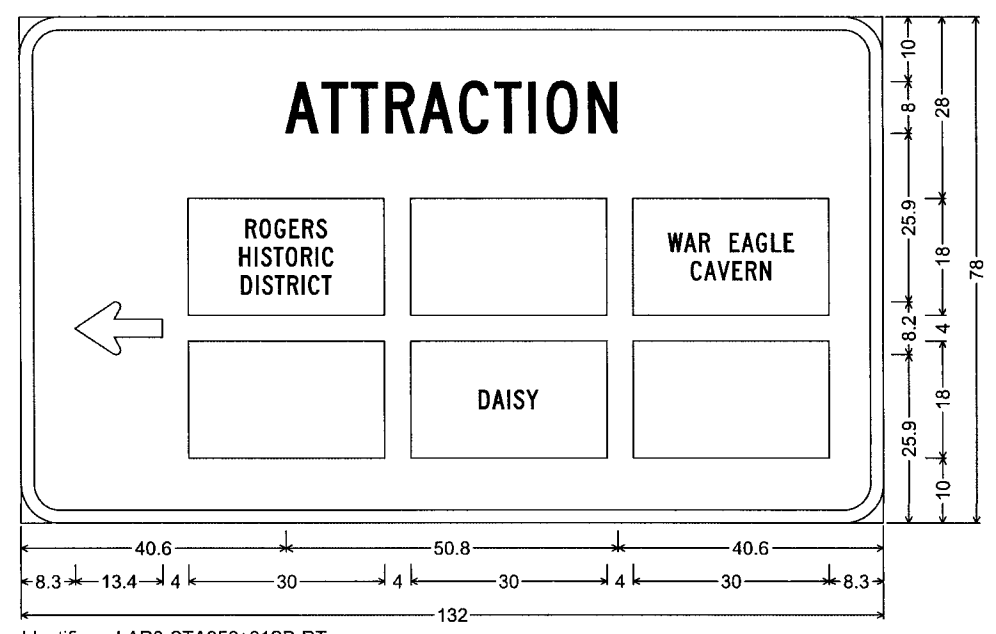
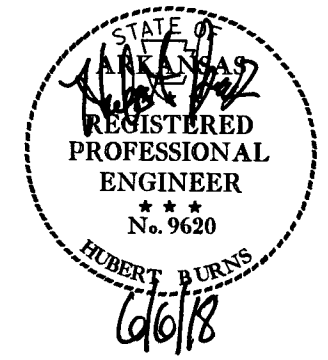
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 [9] C 2K; 90 Deg Advance Turn Arrow 8.0" X 6.5";

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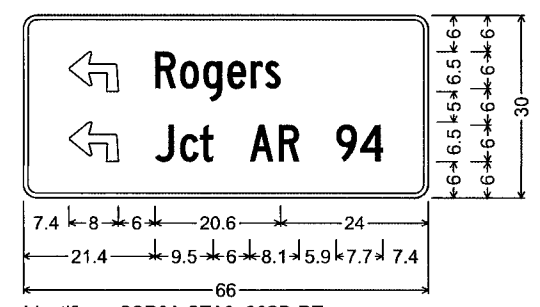
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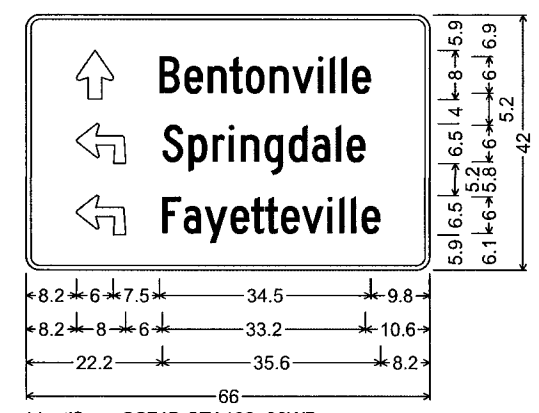
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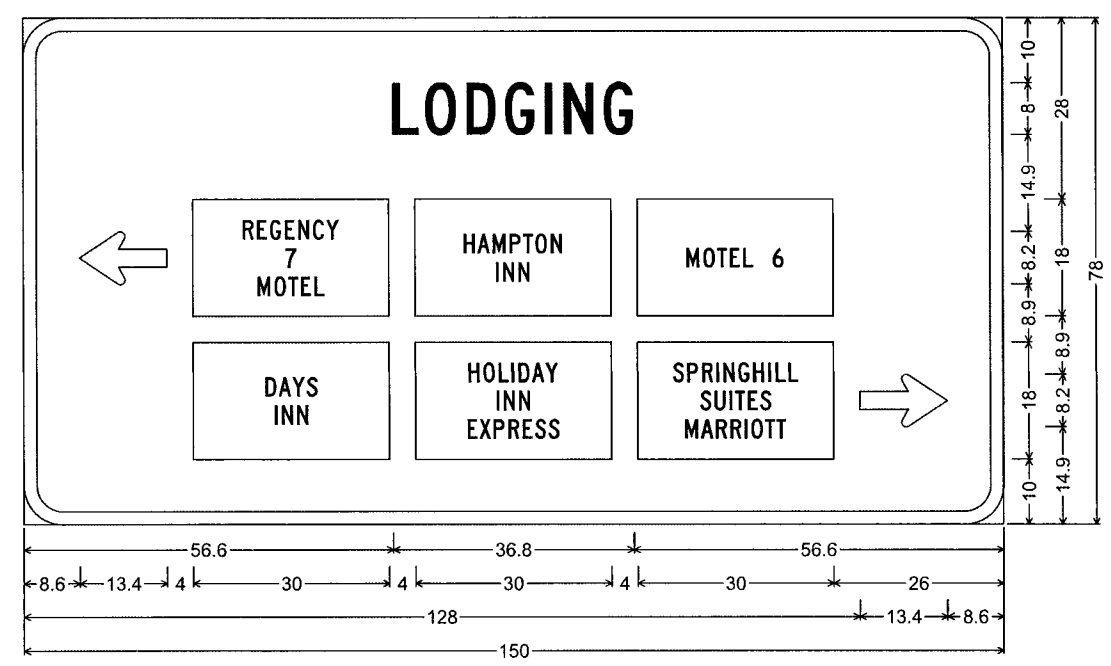
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 Rectangle Blue;
 Rectangle Blue;



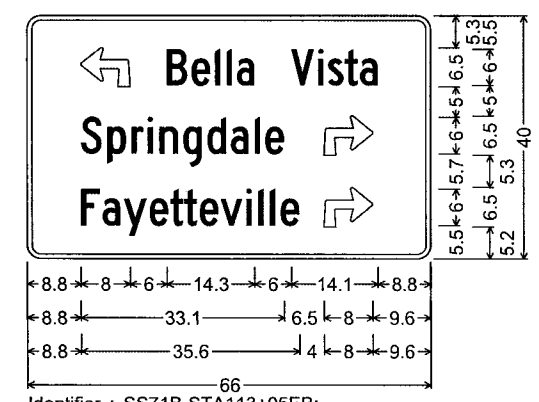
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 [Rogers] C 2K;
 90 Deg Advance Turn Arrow 8.0" X 6.5";
 [Jct AR 94] C 2K;



Identifier : SS71B-STA102+00WB;
 2.3" Radius, 0.8" Border, White on Green;
 Standard Arrow Custom 8.0" X 6.0" 90°;
 [Bentonville] C 2K;
 90 Deg Advance Turn Arrow 8.0" X 6.5";
 [Springdale] C 2K;
 90 Deg Advance Turn Arrow 8.0" X 6.5";
 [Fayetteville] C 2K;



Identifier : LRR3-STA958+38SB-LT;
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 [LODGING] C 2K; Standard Arrow Custom 13.4" X 8.1" 180°;
 Standard Arrow Custom 13.4" X 8.1" 0°;



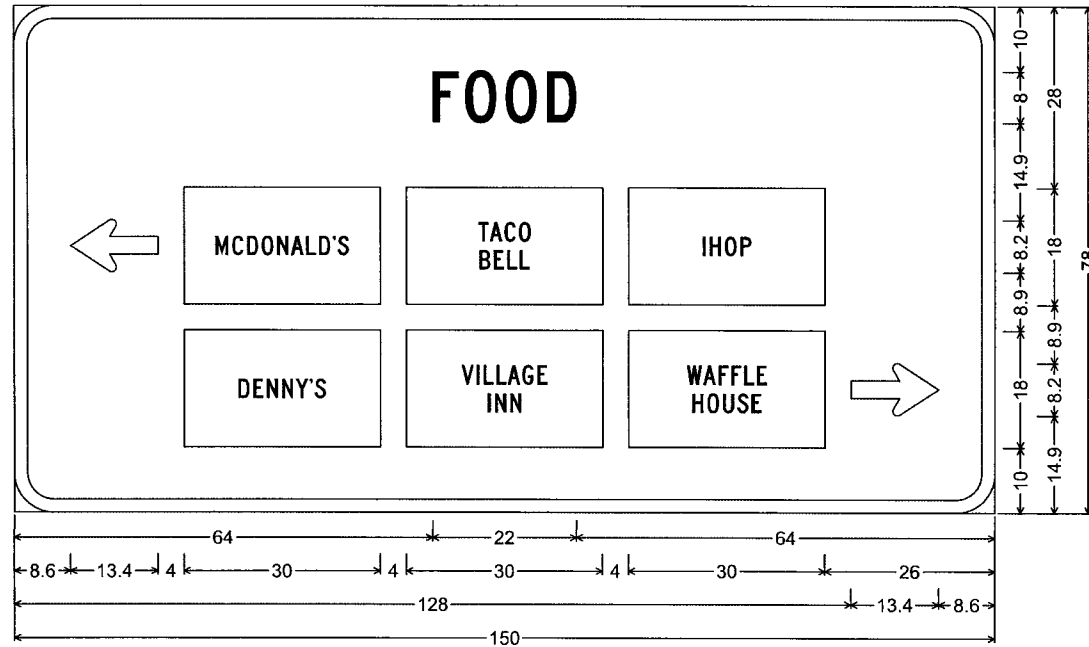
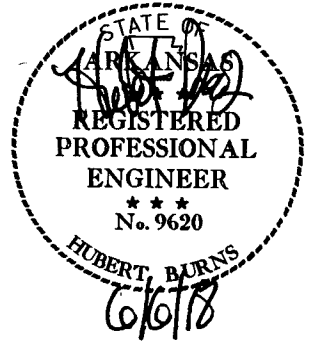
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 [Bella Vista] C 2K; [Springdale] C 2K;
 90 Deg Advance Turn Arrow 8.0" X 6.5";
 [Fayetteville] C 2K;
 90 Deg Advance Turn Arrow 8.0" X 6.5";

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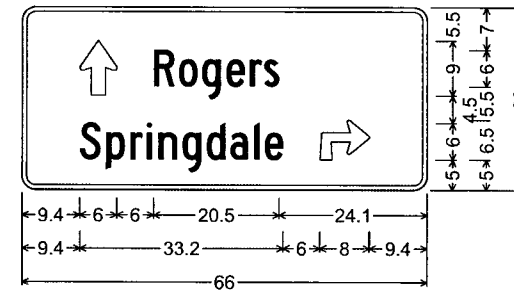
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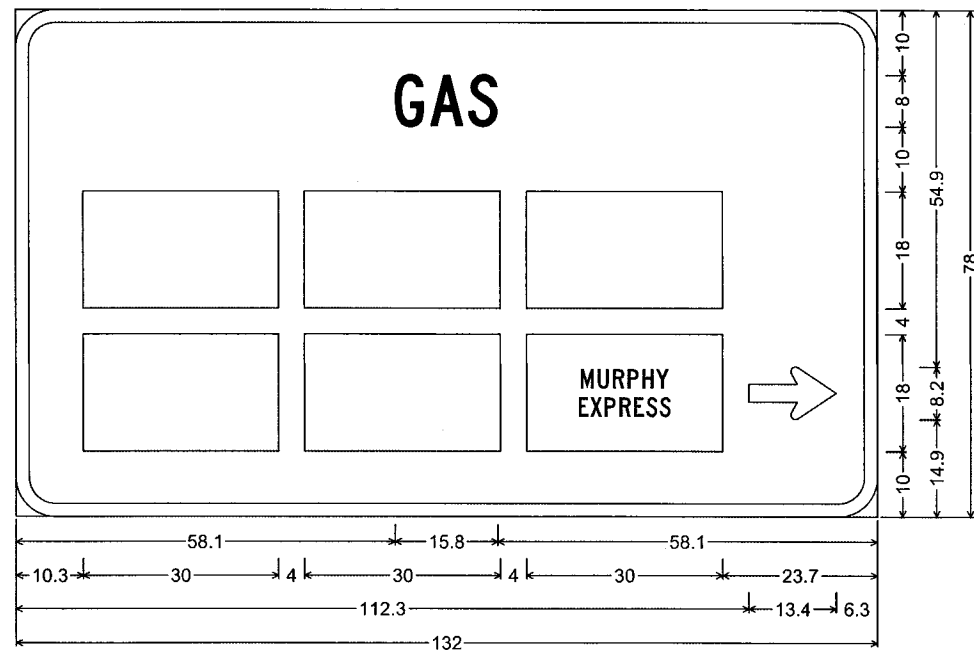
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Identifier : SS71B-STA118+81EB;
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 Standard Arrow Custom 9.0" X 6.0" 90°;
 [Rogers] C 2K; [Springdale] C 2K;
 90 Deg Advance Turn Arrow 8.0" X 6.5";

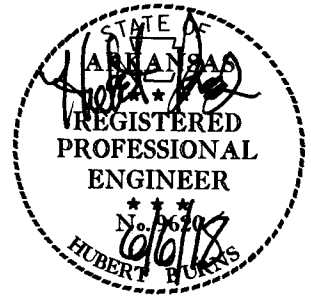


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 Standard Arrow Custom 13.4" X 8.1" 0°;

SIGNING LAYOUT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	174	368	

2 SIGNING LAYOUT



KEEP RIGHT
R4-7a (24' X30')
SS71B-STA92+46WB
SS71B-STA99+38EB
SS71B-STA100+70WB
SS71B-STA106+08EB
SS71B-STA109+52WB
SS71B-STA113+04EB
SS71B-STA114+27WB
SS71B-STA121+31EB

ONE WAY
R6-1R (54' X18')
SS71B-STA96+33EB
SS71B-STA117+80WB
SS71B-STA120+00EB

W3-3 (48' X48')
SSR1-STA943+16NB-LT
SSR1-STA943+16NB-RT
SSR3-STA959+21SB-LT
SSR3-STA959+21SB-RT

W11-2 (36' X36')
W16-7L (12' X24')
SS71B-STA99+51WB
SS71B-STA99+62EB
SS71B-STA100+54EB
SS71B-STA100+57WB
SS71B-STA104+59WB
SS71B-STA112+60WB
SS71B-STA114+46WB
SSR4B-STA0+89EB

WRONG WAY
R5-1a (42' X30')
R5-1 (36' X36')
SS71B-STA104+68EB
SS71B-STA107+00EB
SS71B-STA108+57WB
SS71B-STA110+94WB

ONLY ONLY ONLY
(54' X30')
SSR3-STA957+97SB-LT

ONLY ONLY ONLY ONLY ONLY
(90' X30')
SSR1-STA946+16NB-RT

DO NOT ENTER
R5-1 (36' X36')
YIELD
R1-2 (48' X48' X48')
SSML-STA11+98SB
SSML-STA11+45SB

WRONG WAY
R5-1a (42' X30')
SSR1A-STA1+30NB-LT
SSR1A-STA1+30NB-RT
SSR1-STA949+25NB-RT
SSR3-STA954+22SB-LT
SSR3A-STA1+87SB-LT
SSR3A-STA1+87SB-RT

ONE WAY
R6-1L (54' X18')
DO NOT ENTER
R5-1 (36' X36')
WRONG WAY
R5-1a (42' X30')
SS71B-STA107+66EB
SS71B-STA108+04WB

YIELD
R1-2 (48' X48' X48')
SSML-STA10+64SB
SS71B-STA110+75WB-RT
SSR2-STA954+24NB
SSR2-STA954+12NB
SSR4B-STA1+74SB
SSR4B-STA1+74SB

W11-2 (36' X36')
W16-7L (12' X24')

Bentonville
NW Med Ctr
D1-2 (68' X30')

Rogers
Jct AR 94
D1-2 (66' X30')

Bentonville
NW Med Ctr
D1-2 (72' X30')

Rogers
Jct AR 94
D1-2 (66' X30')

NW Arkansas
Reg. Airport
D1-2 (90' X30')
SSR1-STA946+99NB-LT

SE Walton Blvd
W Walnut St
D1-2 (78' X30')
SSR1-STA946+99NB-RT

NW Arkansas
Reg Airport
D1-2 (78' X30')
SSR3-STA956+07SB-LT

W Walnut St
SE Walton Blvd
D1-2 (78' X30')
SSR3-STA957+56SB-RT

EXIT 85
EXR1-STA941+60NB
EXR3-STA960+90SB

NORTH
M3-1 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

W11-2 (48' X48')
W16-7R (12' X24')
SSR4A-STA0+73SB
SS71B-STA106+60WB

EXIT 40 M.P.H.
W13-2 (48' X60')
EXR1-STA940+69NB-RT
EXR3-STA962+32SB-LT

RIGHT LANE MUST TURN RIGHT
R3-7R (48' X48')
SS71B-STA98+68EB
SS71B-STA114+60EB

RIGHT LANE ENDS
W9-1R (48' X48')
SS71B-STA115+91WB

W12-1 (48' X48')
SSR1-STA949+14NB
SSR3-STA955+03SB
W4-2 (48' X48')
SS71B-STA119+49WB

JCT
M2-1 (15' X21')
INTERSTATE 49
M1-1 (24' X24')
SS71B-STA92+92WB
SS71B-STA121+53EB

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')
LEFT LANE
M6-3 (21' X15')

NORTH
M3-1 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')
LEFT LANE
M5-4 (24' X18')

NORTH
M3-1 (12' X24')
INTERSTATE 49
M1-1 (24' X24')
RIGHT LANE
M5-6 (24' X18')

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

NORTH
M3-1 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

NORTH
M3-1 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

NORTH
M3-1 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

NORTH
M3-1 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

SOUTH
M3-3 (12' X24')
INTERSTATE 49
M1-1 (24' X24')

Bentonville
Springdale
Fayetteville
D1-3 (66' X42')
SS71B-STA102+00WB

Bella Vista
Springdale
Fayetteville
D1-3 (66' X40')
SS71B-STA113+05EB

LEFT LANE
M5-4 (24' X18')

RIGHT LANE
M5-6 (24' X18')

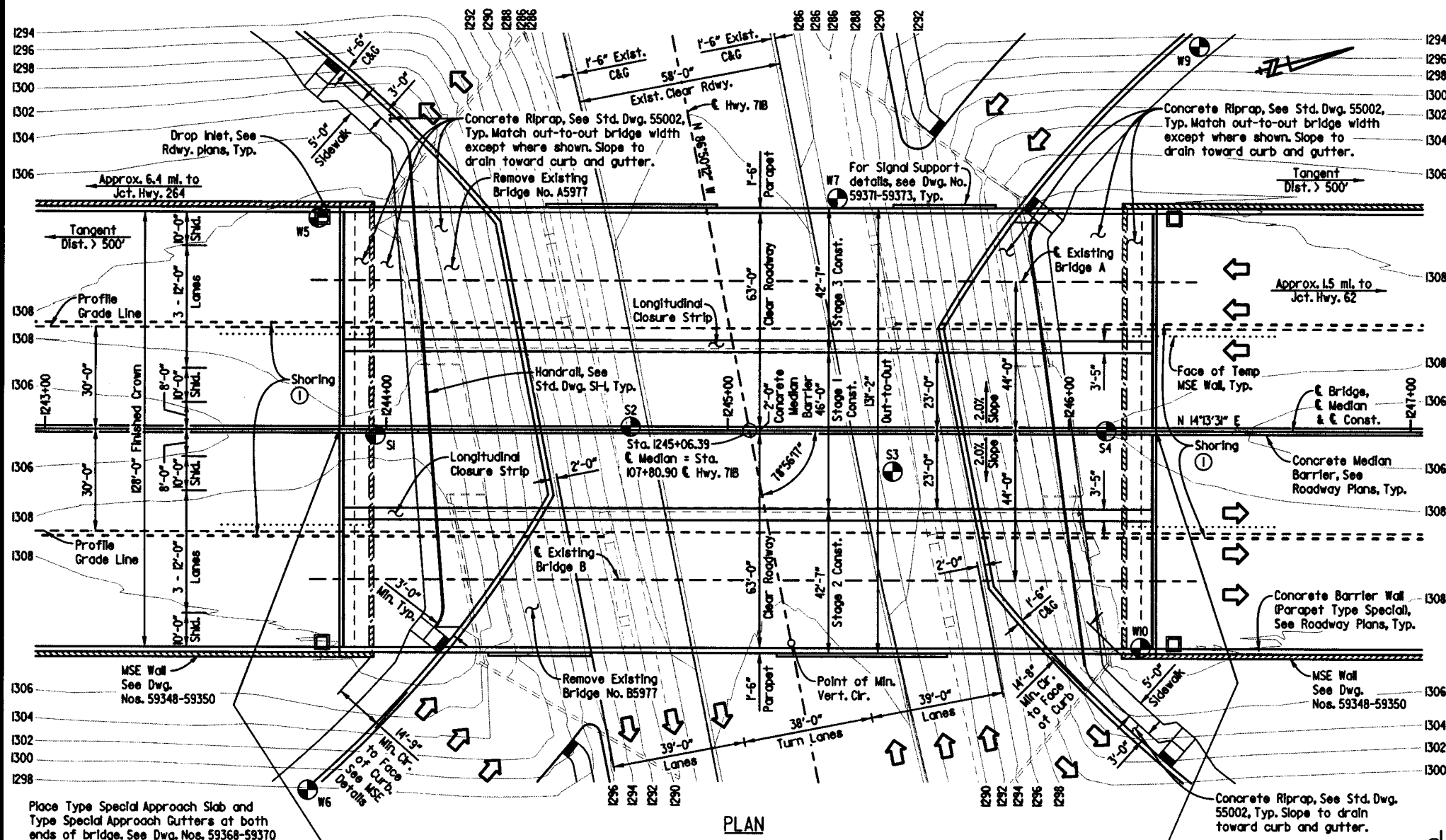
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For R/W Data, See Roadway Plans.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. BB0903		175		368
				07405		LAYOUT		59346



GENERAL NOTES

BENCH MARK: AHTD Cap set in S.E. corner of Br. No. B5977, 68.69' Rt., Centerline, Sta. 1244+26.74, Elev. 1308.04.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design specifications (7th Edition) with current Interim specifications.

LIVE LOADING: HL-93 SEISMIC PERFORMANCE ZONE: I $S_{D1} = 0.087$ SITE CLASS: C

MATERIALS AND STRENGTHS:
 Class S(AE) Concrete (superstructure) $f'_c = 4,000$ psi
 Class 5 Concrete (substructure) $f'_c = 3,500$ psi
 Reinforcing Steel (AASHTO M 31 or M 322 Type A, Gr. 60) $f_y = 60,000$ psi
 Structural Steel (AASHTO M 270, Gr. 36) $f_y = 36,000$ psi
 Structural Steel (AASHTO M 270, Gr. 50) $f_y = 50,000$ psi
 Structural Steel (AASHTO M 270, Gr. HPS 70W) $f_y = 70,000$ psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Procurement Section of Program Management Division.

STEEL PILING: Piling in End Bents 1 & 2 shall be HP 14x89 (Gr. 50) and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 163 tons per pile and into the material designated as Hard Cherty Limestone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after excavation to top of leveling pad and preboring are complete. On all piles, the Contractor shall use approved steel H-Pile driving points.

Pile casings are required for all piling in End Bents 1 & 2. Casings shall be installed prior to embankment construction and shall extend from top of leveling pad to bottom of cap. Pile casing material shall be of sufficient strength to retain its original form free from harmful distortions after compaction of the fill material surrounding it. The minimum inside diameter of the casing shall be 2". Piles shall be driven after preboring and before embankment is in place. The pile casings shall be backfilled according to Subsection 805.08(a) in a single continuous operation to completely fill voids. Pile casings and backfill will not be paid for directly but shall be considered subsidiary to the item "Steel Piling (HP 14x89)".

PREBORING: Preboring is required for all piling in End Bents 1 & 2 and shall extend from top of leveling pad to a minimum of 3' into the material designated as Hard Cherty Limestone on the boring legend. A preboring depth of 37' is anticipated. Prebore using a minimum diameter of 21". The Contractor shall be responsible for keeping prebored holes free from debris prior to backfilling which may require casings or other methods. After driving is completed, the prebored hole shall be backfilled with Class 5 Concrete to the top of rock and the remaining length of prebored hole shall be backfilled in accordance with Subsection 805.08(a) or other approved material to completely fill voids. The backfill and any required casings will not be paid for directly but shall be considered subsidiary to the item "Preboring".

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

CLASS 2 PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface and roadway face and top of parapet rails and median barrier.

For Additional General Notes see Dwg. No. 59347.

PLAN

Place Type Special Approach Slab and Type Special Approach Gutters at both ends of bridge. See Dwg. Nos. 59368-59370

Begin Bridge Sta. 1243+86.33 EL. 1313.87

Total Length of Bridge = 237'-2 1/4"

End Bridge Sta. 1246+28.54 EL. 1314.06

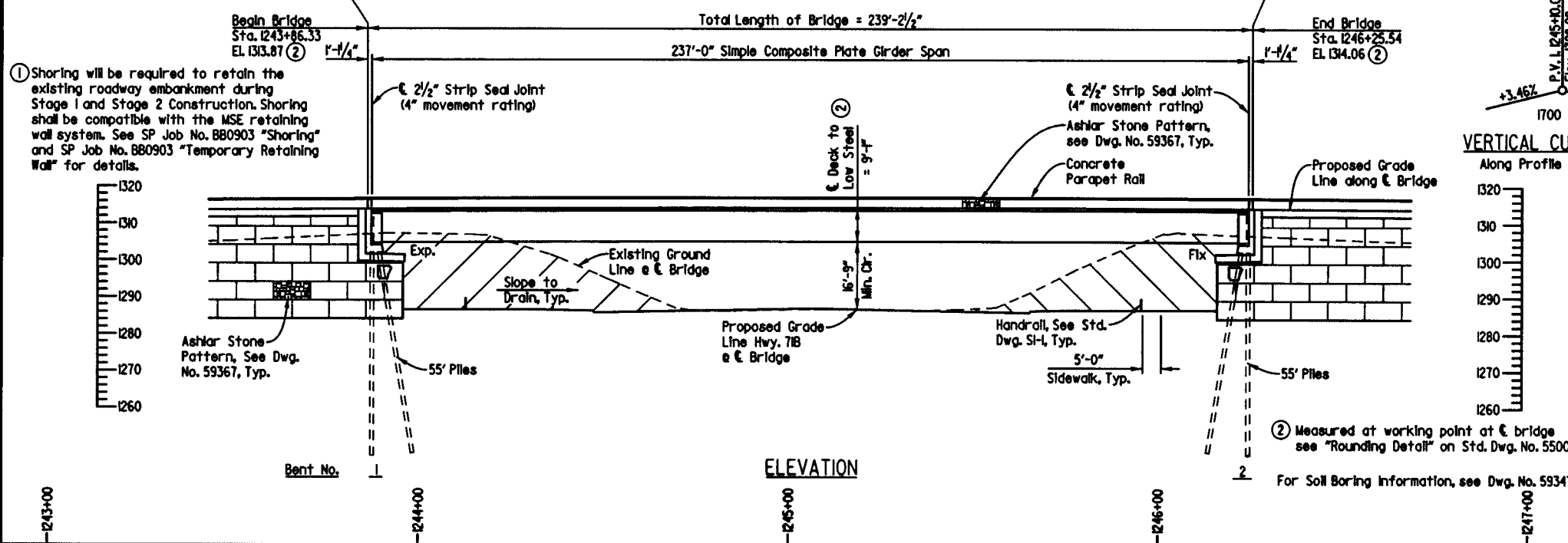
1700 V.C.

VERTICAL CURVE DATA
 Along Profile Grade Line

① Shoring will be required to retain the existing roadway embankment during Stage 1 and Stage 2 Construction. Shoring shall be compatible with the MSE retaining wall system. See SP Job No. BB0903 "Shoring" and SP Job No. BB0903 "Temporary Retaining Wall" for details.

② Measured at working point at E bridge see "Rounding Detail" on Std. Dwg. No. 55007.

For Soil Boring Information, see Dwg. No. 59347



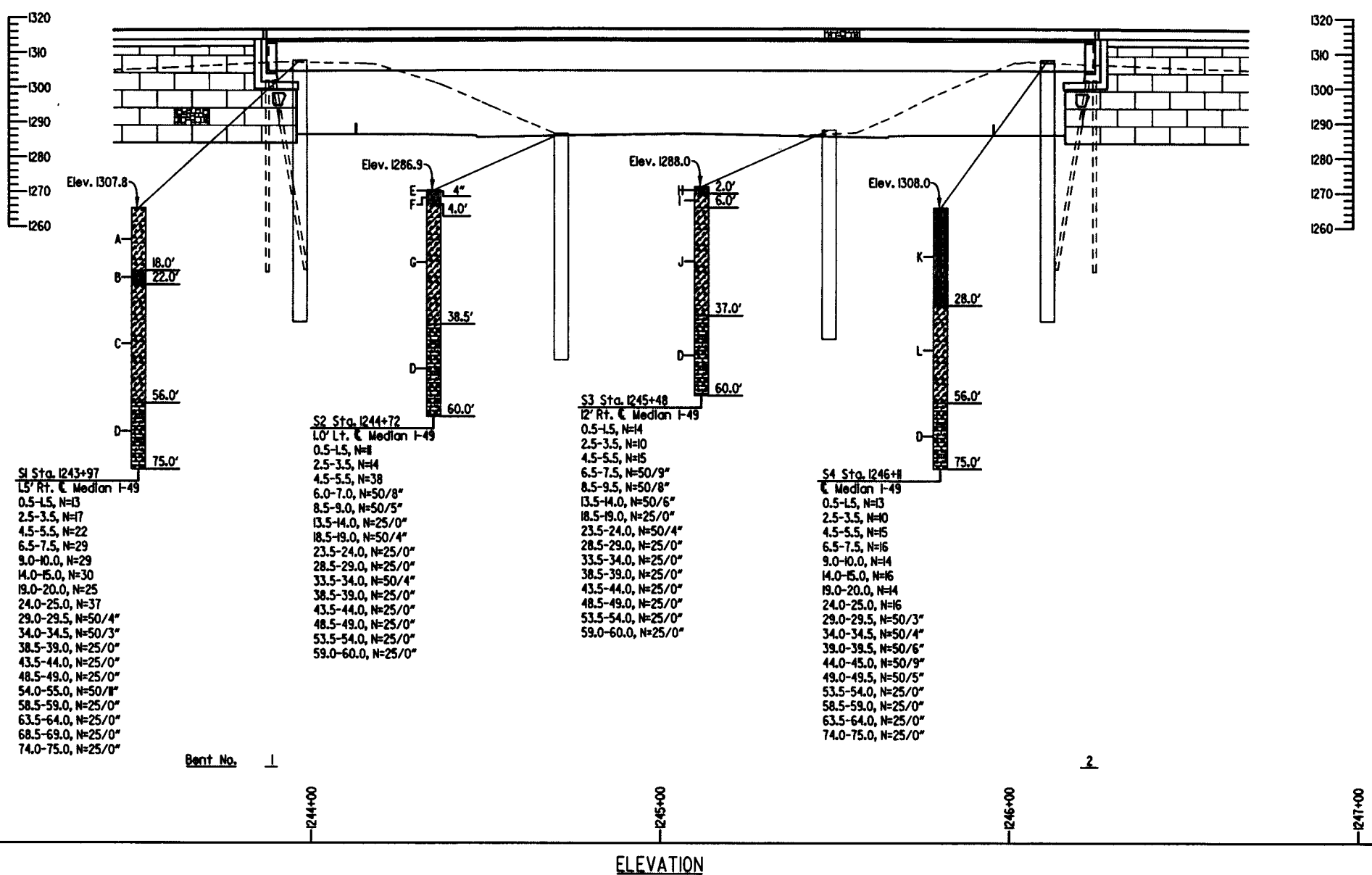
SHEET 1 OF 2
 LAYOUT OF BRIDGE OVER HWY. 71B
 HWY. 71B INTCHNG. IMPVTS. (S)
 BENTON COUNTY
 ROUTE 49 SEC. 29
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: BNC DATE: 06-23-16 FILENAME: bbb0903.dgn
 CHECKED BY: CAM DATE: 07-01-16 SCALE: 1" = 20'
 DESIGNED BY: KRM DATE: 06-24-16
 BRIDGE NO. 07405 DRAWING NO. 59346

REGISTERED PROFESSIONAL ENGINEER
 CHARLES A. WIFE
 No. 11856

USER: CT/KAUSER
 DESIGN FILE: G:\2103305_Hwy71Inchng\TRANSP\dgn\bridge\bbb0903.dgn
 PLOTTED: 6/16/2016 10:30:51AM SCALE: 40.0000 1/16"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		176	368
				07405	LAYOUT			59347



GENERAL NOTES CONT

TEXTURED COATING FINISH: Class 3 Textured Coating Finish shall be applied to bridge and retaining wall surfaces as specified in SP Job No. BB0903 "Textured Coating Finish" and in accordance with Subsection 802.19(b)(3). Textured Coating Finish shall not be applied on surfaces where Class 2 Protective Surface Treatment is applied. The color of the texture shall be Gray and match Federal Std. 5958, Color Chip 37150.

PAINTING STRUCTURAL STEEL: All structural steel except galvanized members and surfaces in contact with concrete shall be painted as specified in Subsection 807.75. Color of paint shall be Dark Gray and match Federal Std. 5958, color chip 26122.

FORM INSERT: State of Arkansas Form Insert shall be used at MSE Wall locations shown. See Dwg. No. 59354.

DETAIL DRAWINGS:	DRAWING NUMBER
MSE Walls	59348-59350
Stage Construction	59351-59353
Standard Form Inserts	59354
End Bents	56355-59356
Elastomeric Bearings	59357
237'-0" Simple Composite Plate Girder Span	59358-59367
Type Special Approach Slabs	59368-59369
Type Special Approach Gutters	59370
Standard General Notes for Steel Bridge Structures	55006
Standard Details for Steel Bridge Structures	55007
Standard Details for Steel H-Piles and Pile Encasements	55020

EXISTING BRIDGE: Existing Bridge Nos. A&B5977 are approximately 43' wide and 183' long. Each bridge consists of 3 span w-beam units on multi-column bents on spread footings and pile caps, and steel pile end bents. Plans of the existing structure may be obtained upon request to the Construction Contract Procurement Section of the Program Management Division.

REMOVAL AND SALVAGE: Existing Bridge Nos. A&B5977 shall be removed in accordance with Section 205 of the Standard Specifications. All material from the existing bridges shall become the property of the Contractor except the following shall remain the property of the Department:

1. Heavy Bridge Section of the Maintenance Division shall receive all of the W36x135 steelbeams from Br. No. A5977, including splice plates, diaphragms, end struts, expansion bearings, elastomeric bearings, and sole plates. This material shall be delivered to 1300 West Baseline Road, Little Rock, AR, 72209.

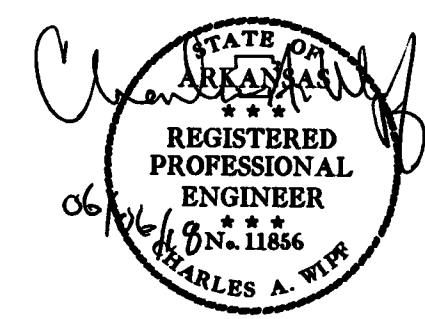
2. District 9 shall receive all of the W36x135 steelbeams from Br. No. B5977, including splice plates. The Contractor shall provide temporary storage and on site loading onto AHTD equipment for removal of the structural steel from the site.

Payment for this work shall be considered incidental to "Removal of Existing Bridge Structure (Site No. 1)".

MAINTENANCE OF TRAFFIC: See Roadway Plans and Special Provisions for more information.

BORING LEGEND

- A. Stiff to very stiff red CLAY with chert fragments - fill
- B. Very stiff gray silty CLAY with limestone fragments and trace organics - fill
- C. Very stiff red CLAY with numerous chert fragments
- D. Hard light gray and gray cherty LIMESTONE
- E. CONCRETE
- F. Stiff brown silty CLAY with a little fine gravel and chert fragments - fill
- G. Very stiff reddish tan CLAY with chert nodules and fragments
- H. Stiff brown silty CLAY with a little fine gravel and occasional organics - fill
- I. Firm to stiff reddish tan CLAY with chert fragments
- J. Very stiff red CLAY with numerous chert nodules and fragments
- K. Stiff brownish red and brown silty CLAY with chert fragments - fill
- L. Very stiff red and tan CLAY with numerous chert fragments and seams



SHEET 2 OF 2
 LAYOUT OF BRIDGE OVER HWY. 71B
 HWY. 71B INTCHNG. IMPVTS. (S)
 BENTON COUNTY
 ROUTE 49 SEC. 29
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: BNC DATE: 06-29-16 FILENAME: bbb0903.12.dgn
 CHECKED BY: CAW DATE: 07-01-16 SCALE: F = 20'
 DESIGNED BY: KBW DATE: 06-24-16
 BRIDGE NO. 07405 DRAWING NO. 59347

USER: CTAUSER
 DESIGN FILE: G:\2013\305_Hwy71bchng\TRANSP\dwg\bridge\bbb0903.12.dgn
 PLOTTED: 6/6/2016 10:30:52 AM SCALE: 40.0000' / 1" /

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	178	368	
				07405	RETAINING WALLS	59349		

TABLE OF QUANTITIES
(FOR INFORMATION ONLY)

ITEM NO.	210	SP JOB BB0903	SP JOB BB0903	SP JOB BB0903	SP JOB BB0903
ITEM	UNCLASSIFIED EXCAVATION	SELECT GRANULAR BACKFILL	RETAINING WALL	TEXTURED COATING FINISH	TEMPORARY RETAINING WALL
LOCATION	CU. YD.	CU. YD.	SQ. FT.	SQ. YD.	SQ. FT.
Bent 1					
WALL A - B	1934	2769	3305	379	930
WALL C - D	--	--	155	17	178
WALL D - E	3146	3706	2430	296	
WALL E - F	--	--	182	20	178
WALL G - H	1668	2652	3471	390	930
Bent 2					
WALL A - B	1717	2734	3538	397	1017
WALL C - D	--	--	181	20	176
WALL D - E	3118	3772	2409	296	
WALL E - F	--	--	155	17	176
WALL G - H	2003	2888	3370	387	1017
TOTALS	13586	18521	19196	2219	4602

GENERAL NOTES:

BENCH MARK: AHTD Cap set in S.E. corner of Br. No. B5977, 68.69' Rt., Centerline, Sta. 1244+26.74, Elev. 1308.04.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications 7th Edition (2014) with current Iterims.

LIVE LOADING: HL-93 SEISMIC PERFORMANCE ZONE: I S_D : 0.087 SITE CLASS: C

MATERIALS AND STRENGTHS:
Class (SAE) Concrete (superstructure) f'_c = 4,000 psi
Reinforcing Steel (AASHTO M 31 or M 322 Type A, Gr. 60) f_y = 60,000 psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Procurement Section of Program Management division.

FOUNDATION MATERIAL: The bottom of Reinforcement Zone shall be set a minimum of 1'-0" into the material designated as very stiff clay on the boring legend. A factored bearing resistance of 7.50 ksf is recommended for the existing foundation material based on an estimated width of the reinforcement zone. See Job SP No. BB0903 "Retaining Walls" and "Temporary Retaining Walls" for more information.

UNDERCUTTING & BACKFILL: Large scale undercut is not anticipated. However, if soft or unstable material is encountered beneath the retaining wall and reinforcement zone, it shall be removed and backfilled with Select Granular Backfill. Depth and area of any required undercutting shall be determined by the Engineer.

Any excavation and backfill required for undercutting shall be paid for as "Unclassified Excavation" and "Select Granular Backfill" in accordance with SP Job No. BB0903 "Retaining Walls".

Retaining Wall Stations shown are along CL Construction I-49. Stations and offsets are measured to the outside face of coping. Elevations shown are profile grade for top of concrete coping. Elevations are approximate. Wall dimensions may vary depending on wall design selected.

Reinforcement placement and details for retaining walls may be affected by end bent construction and proposed roadway drainage structures. See End Bent drawings for pile locations. See Roadway Plans for locations and details of drainage structures.

For Concrete Riprap, see Std. Dwg. No. 55002.

Preformed joint filler, joint sealer, polystyrene board, and pipe underdrains will not be paid for directly, but will be considered subsidiary to the item "Retaining Wall".

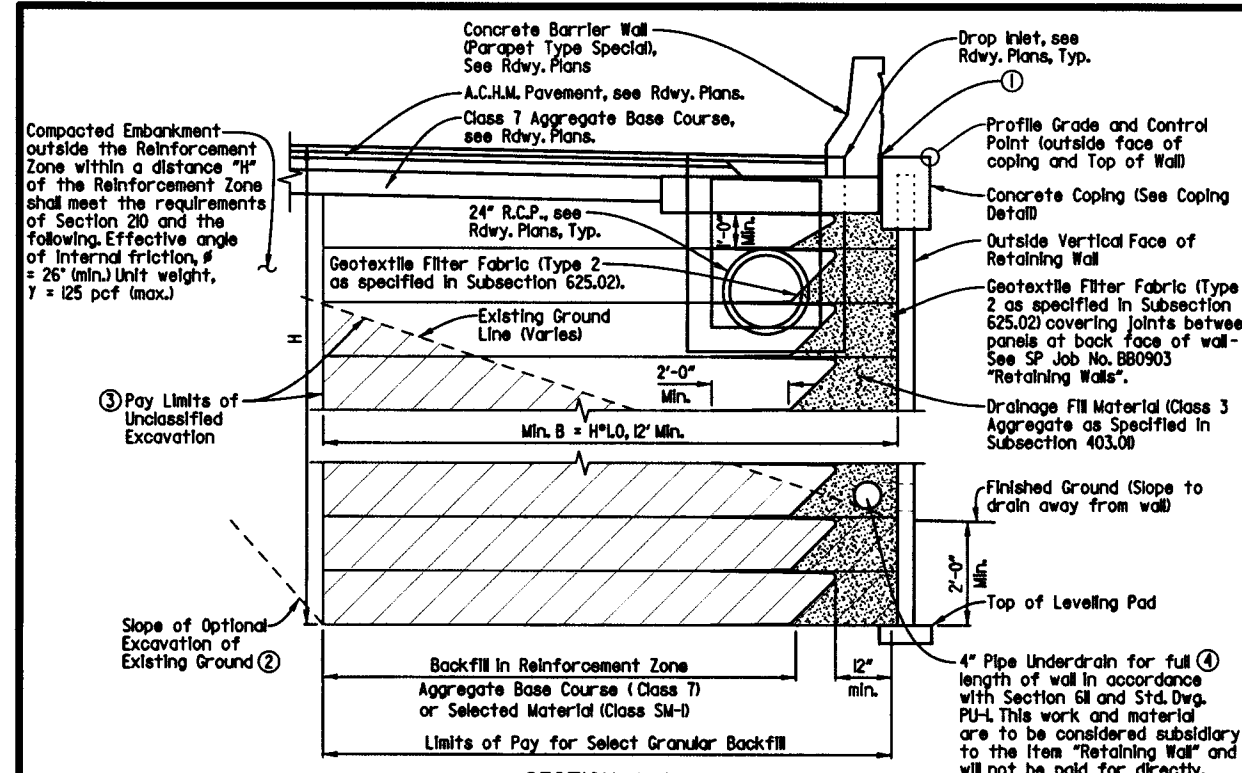
WALL FINISH: The exposed face of the MSE wall concrete panels shall receive an Ashlar Stone Finish. See Dwg. No. 59367 and SP Job No. BB0903 "Architectural Finish" for details.

A Class 3 Textured Coating Finish shall be applied to retaining wall surfaces as specified in SP Job No. BB0903 "Textured Coating Finish" and in accordance with Subsection 802.19(b)(3).

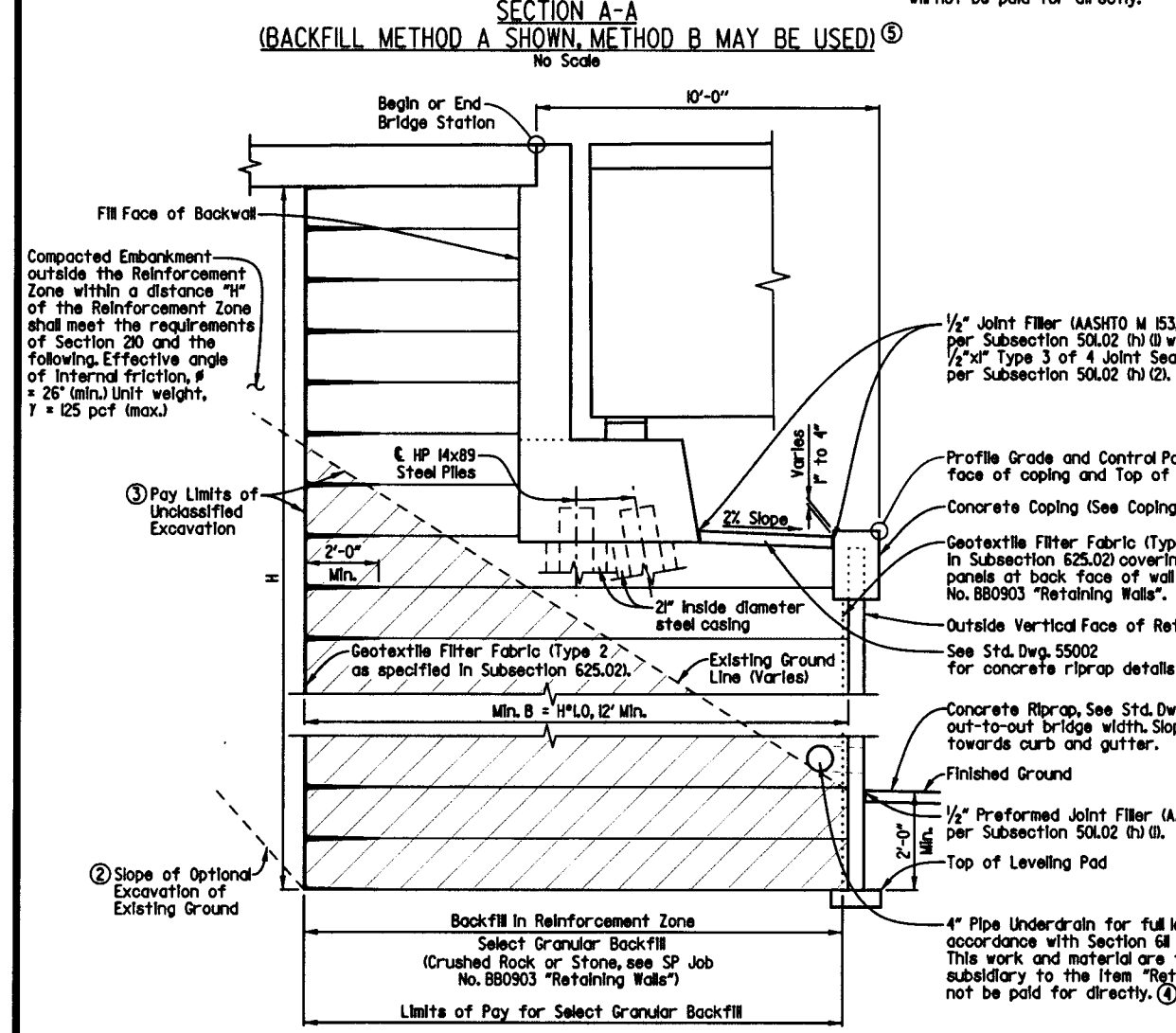
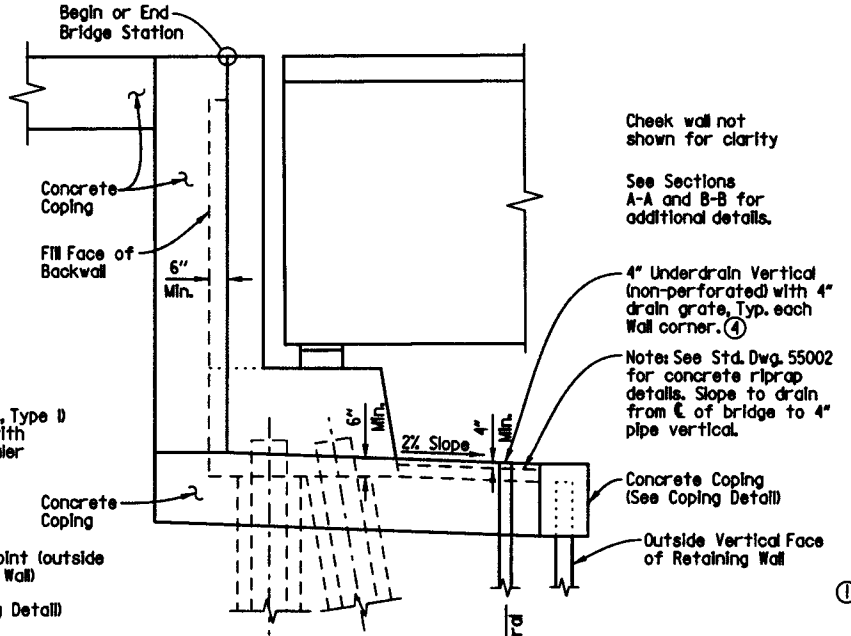
State of Arkansas Form Inserts shall be placed as shown at each corner of retaining walls in accordance with Dwg. No. 59354.

See SP Job No. BB0903 "Retaining Walls" for additional information.

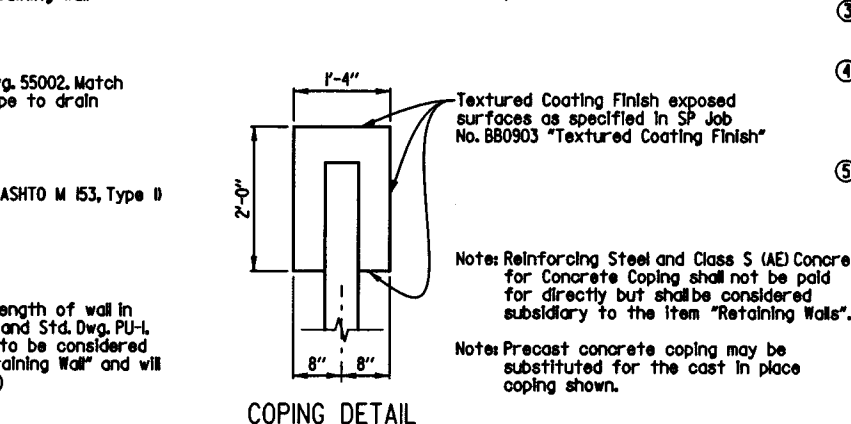
See Dwg. Nos. 59348 & 59350 for retaining wall layout and additional details.



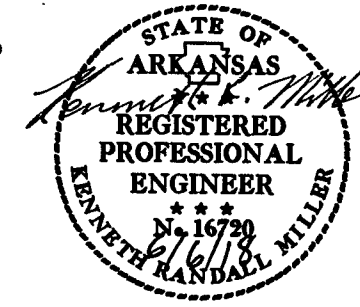
⑥ Exposed surfaces of coping & wall.



⑦ Coping Detail



- ① 1" Preformed Joint Filler (AASHTO M 153, Type I) per Subsection 50L.02(h)(1). Seal with 1" x 1" Type 3 or 4 Joint Sealer per Subsection 50L.02(h)(2).
- ② The Contractor has the option of using a cut slope or shoring to maintain stability of the cut. Any excavation beyond the limits of the reinforcement zone or any shoring used will not be paid for directly, but shall be considered incidental to the item "Retaining Wall". See SP Job No. BB0903 "Retaining Walls" for additional information.
- ③ Excavation within the reinforcement zone and for the leveling pad will be paid for as Unclassified Excavation in accordance with SP Job No. BB0903 "Retaining Walls".
- ④ 4" underdrain, pipe lateral (non-perforated) and pipe vertical (non-perforated) in accordance with Section 61 and Std. Dwg. PU-L. Lateral underdrains shall be spaced at 50'-0" o.c., max., and placed at the ends of walls. 4" drain grates shall be in accordance with Section 609. This work and material shall be considered subsidiary to the item "Retaining Walls" and shall not be paid for directly.
- ⑤ Contractor has the option of using either Backfill Method A or Backfill Method B for the MSE Wall. Only one method shall be used for the entire job. See SP Job No. BB0903 "Retaining Walls".

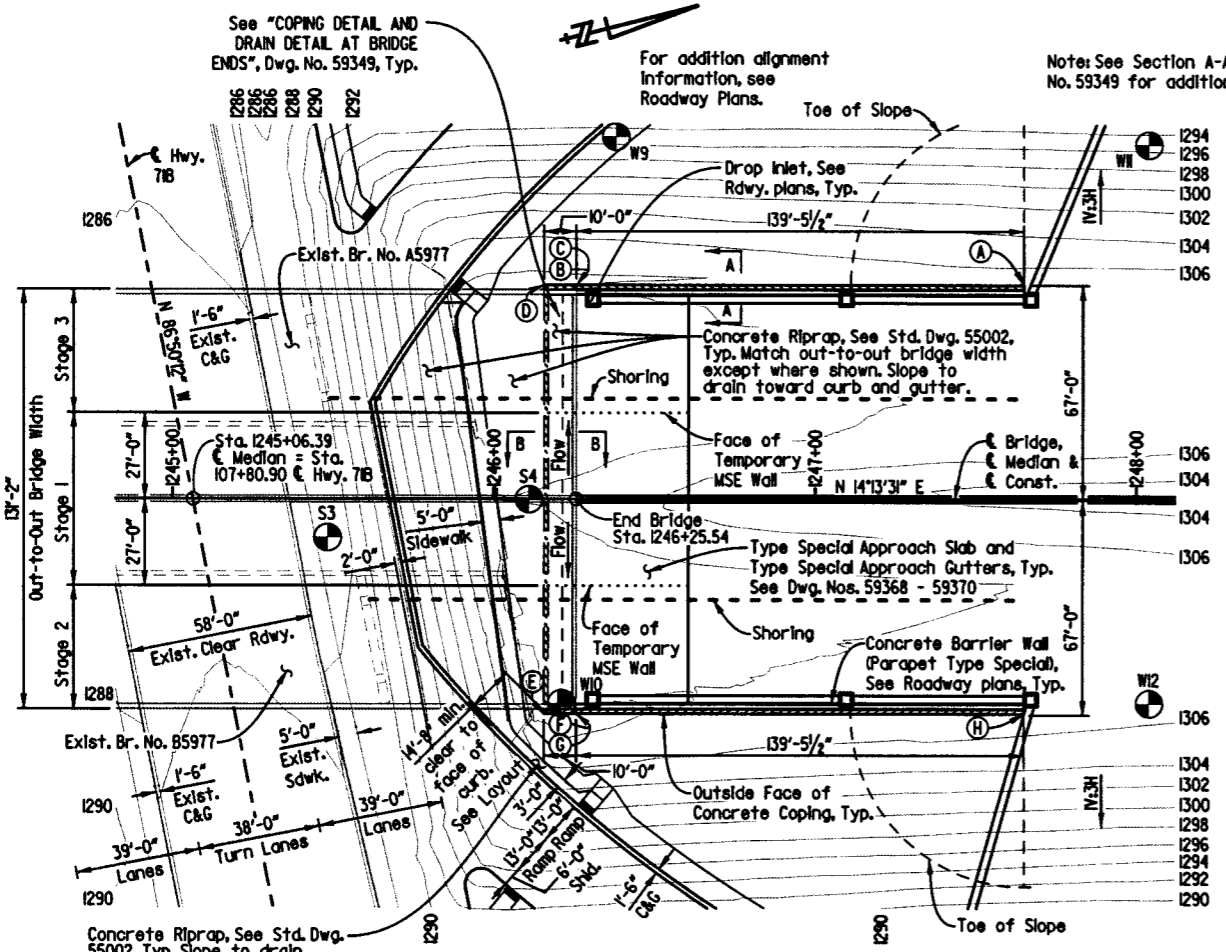


SHEET 2 OF 3
DETAILS OF MSE RETAINING WALLS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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CHECKED BY: CAM DATE: 07-01-16 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 06-24-16
BRIDGE NO. 07405 DRAWING NO. 59349

USER: CTAUSER
DESIGN FILE: G:\2013\05_Hwy17\bridge\TRANSP\dwg\bridge\bb0903_v12.dgn
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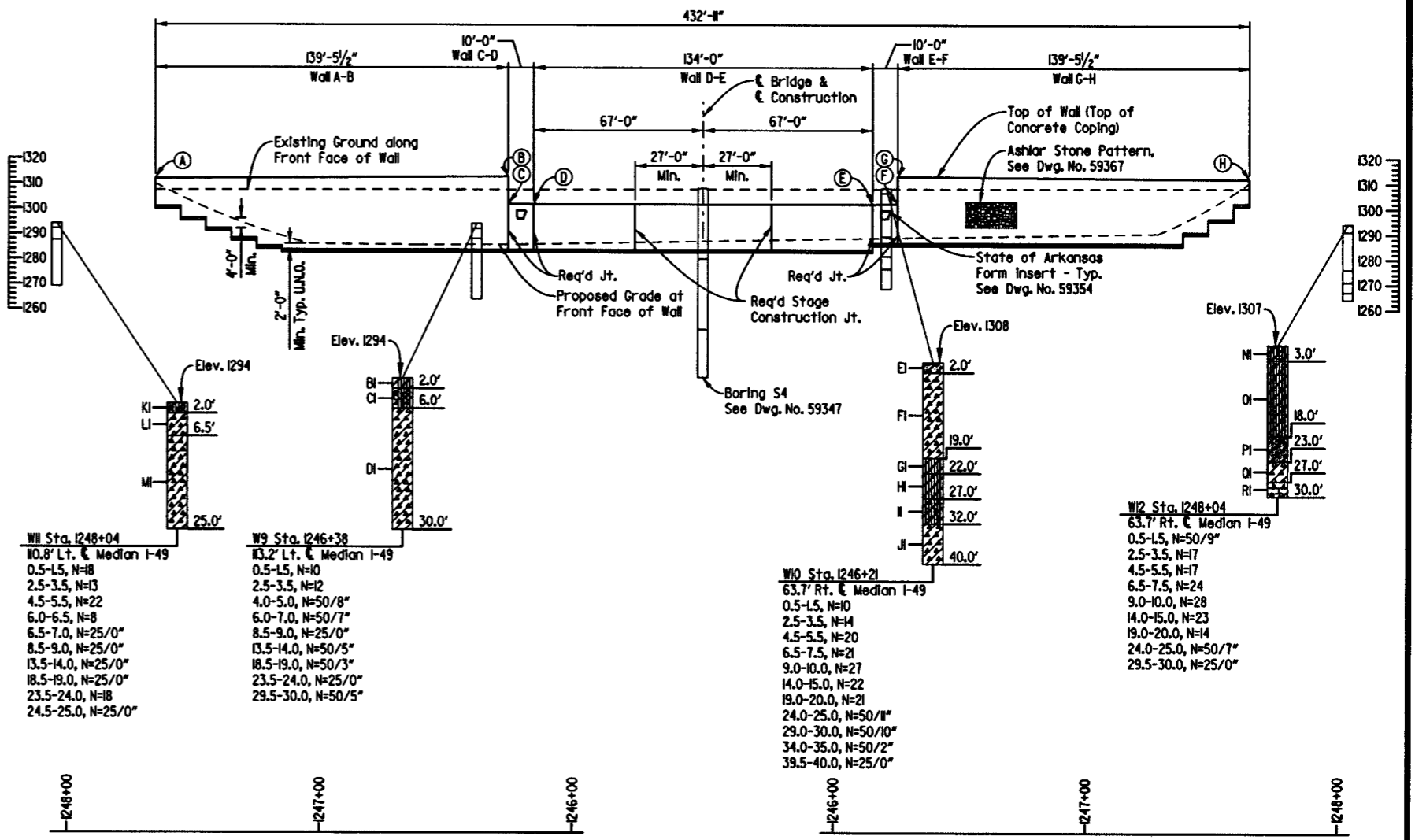


PLAN OF WALL AT BENT 2
Scale: 1" = 30'

TABLE OF VARIABLES FOR WALL AT BENT 2

POINT	STATION	OFFSET	TOP OF WALL ELEVATION	TOP OF LEVELING PAD ELEVATION	PROPOSED GRADE FRONT FACE OF WALL
A	1247+65.00	67.00' LT.	1311.83	1300.79	1309.80
B	1246+25.54	67.00' LT.	1312.77	1283.71	1285.81
C	1246+25.54	67.00' LT.	1301.30	1283.71	1285.81
D	1246+15.54	67.00' LT.	1301.00	1283.71	1285.95
E	1246+15.54	67.00' RT.	1301.00	1283.71	1288.34
F	1246+25.54	67.00' RT.	1301.30	1286.34	1288.52
G	1246+25.54	67.00' RT.	1312.77	1286.34	1288.52
H	1247+65.00	67.00' RT.	1311.83	1302.15	1301.38

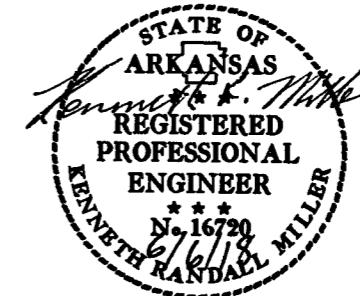
Stations shown are along C Construction I-49.
Stations and offsets are measured to the outside face of coping.
Elevations shown are to top of concrete coping.



ELEVATION OF WALL AT BENT 2
(Looking at Exposed Face)
Scale: 1" = 30'

BORING LEGEND

- Bl. Firm to stiff brown silty Clay
- Cl. Stiff reddish tan and light gray silty Clay w/ferrous nodules and stains, sandstone fragments and fine sand pockets
- Dl. Stiff to very stiff reddish brown Clay w/numerous chert fragments
- El. Firm tan and brown fine sandy Clay, silty w/some chert fragments and trace organics - fill
- Fl. Stiff reddish brown, reddish tan and tan Clay w/chert and sandstone fragments, ferrous nodules and trace organics - fill
- Gl. Stiff reddish brown, reddish tan and gray silty Clay w/ferrous nodules and trace organics
- Hl. Very stiff to hard tan and gray silty Clay, slightly sandy w/trace sandstone fragments
- Il. Very stiff to hard red, tan and gray silty Clay w/chert fragments
- Jl. Stiff to very stiff reddish brown Clay w/numerous chert fragments and interbedded chert layers
- Kl. Stiff reddish brown, red and brown silty Clay w/chert and sandstone fragments - fill
- Ll. Stiff reddish brown Clay w/numerous chert fragments
- Ml. Stiff to very stiff reddish brown Clay w/numerous chert fragments and interbedded chert layers and beds
- Nl. Very stiff dark brown silty Clay, sandy w/crushed stone and trace organics, dry - fill
- Ol. Stiff reddish brown and reddish tan silty Clay w/chert and sandstone fragments and ferrous nodules
- Pl. Stiff reddish brown, gray and brown fine sandy Clay w/ferrous nodules
- Ql. Very stiff to hard red, tan and gray Clay, w/trace sandstone fragments and numerous chert fragments
- Rl. Moderately hard to hard light gray cherty Limestone



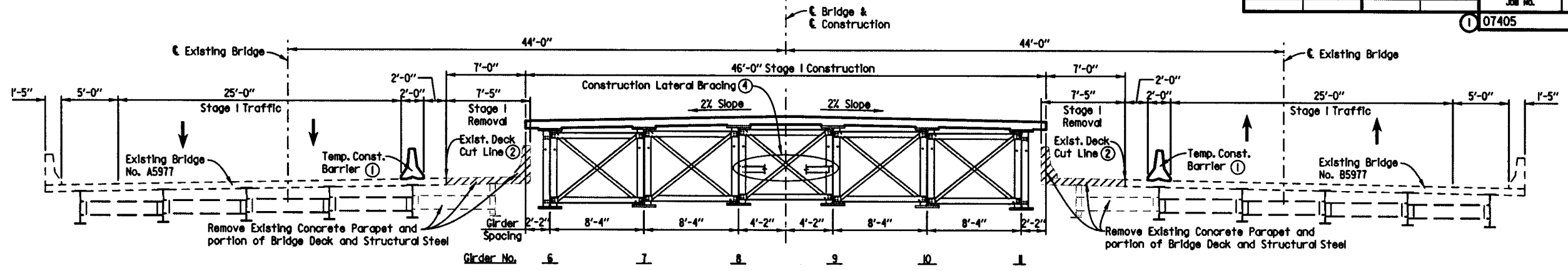
SHEET 3 OF 3
DETAILS OF MSE RETAINING WALLS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

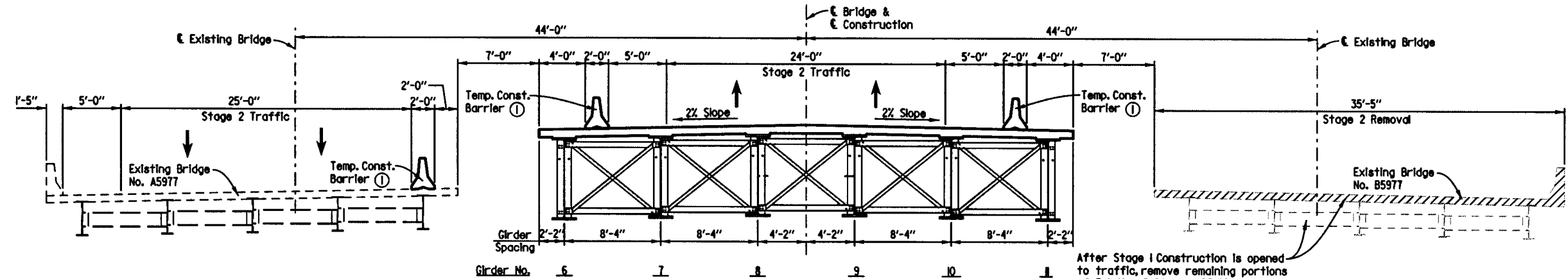
ROUTE 67
SEC. 11

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CHECKED BY: CAM DATE: 07-01-16 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 06-24-16
BRIDGE NO. 07405 DRAWING NO. 59350

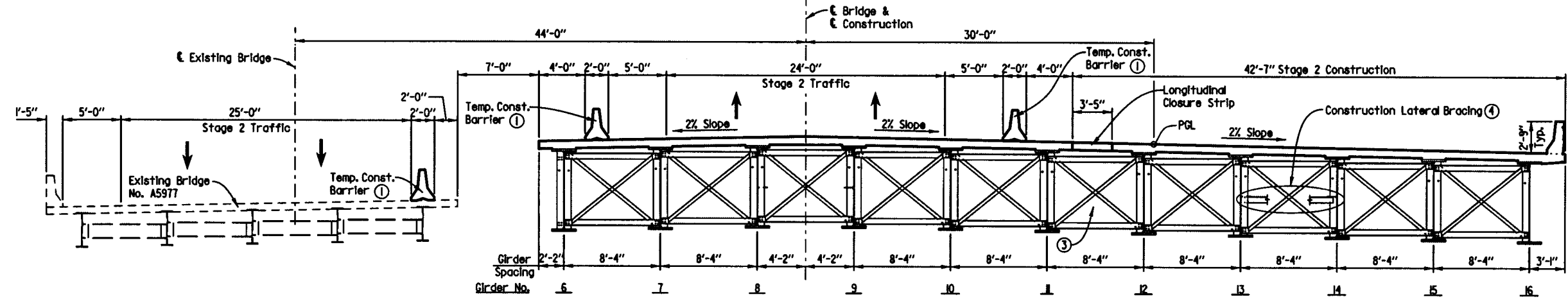
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				6	ARK.			
				JOB NO.	BB0903	180	368	
				07405	STAGE CONST.		59351	



STAGE I CONSTRUCTION
(Looking Ahead)

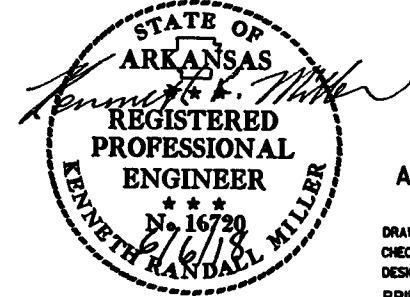


STAGE 2 CONSTRUCTION
(Looking Ahead)



STAGE 2 CONSTRUCTION
(Looking Ahead)

- Notes:
- For Details of Temporary Precast Barrier, See Std. Dwg. No. TC-4. Attach Temporary Precast Barrier to existing deck. Do not attach Temporary Precast Barrier to new deck.
 - Full Depth Saw Cut.
 - Cross frames in this bay shall not be installed until completion of Stage 2 Deck pour.
 - For details of Construction Lateral Bracing, see Construction Lateral Bracing Details Dwg. No. 59363



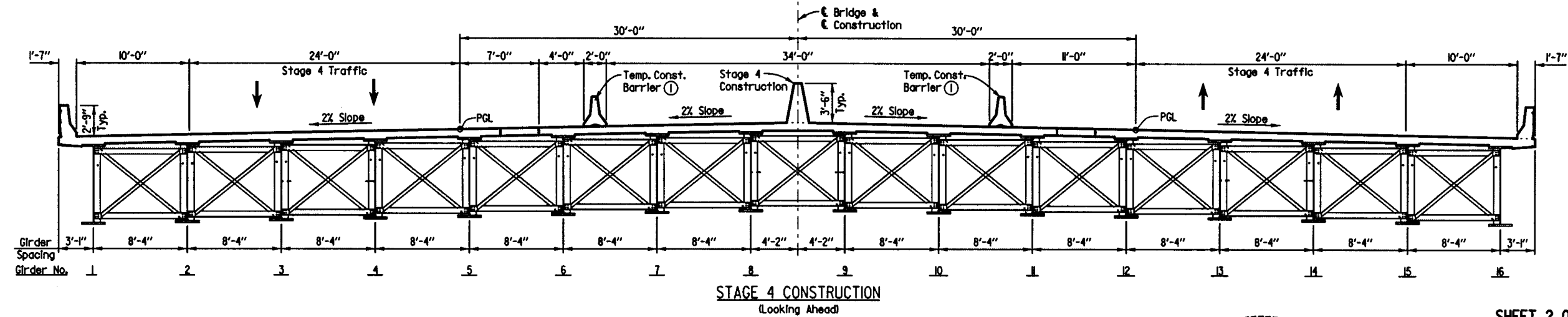
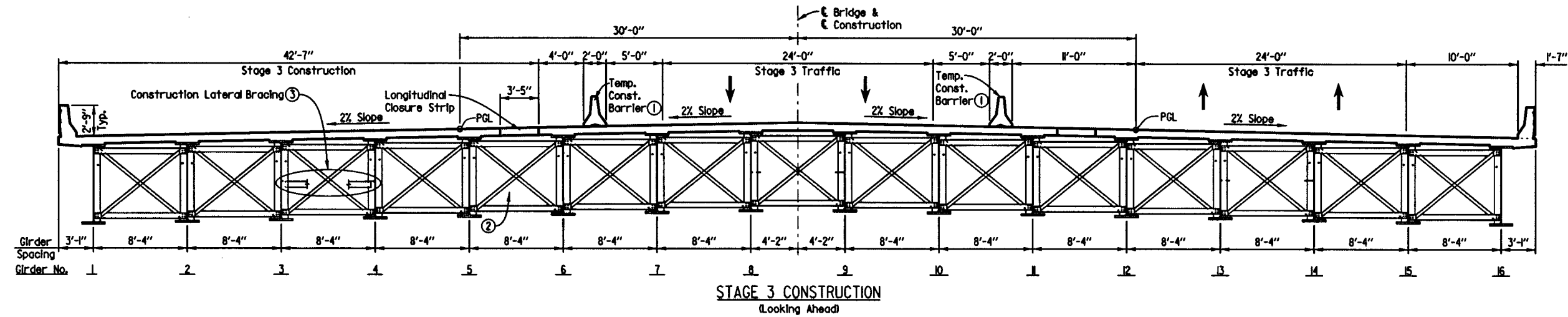
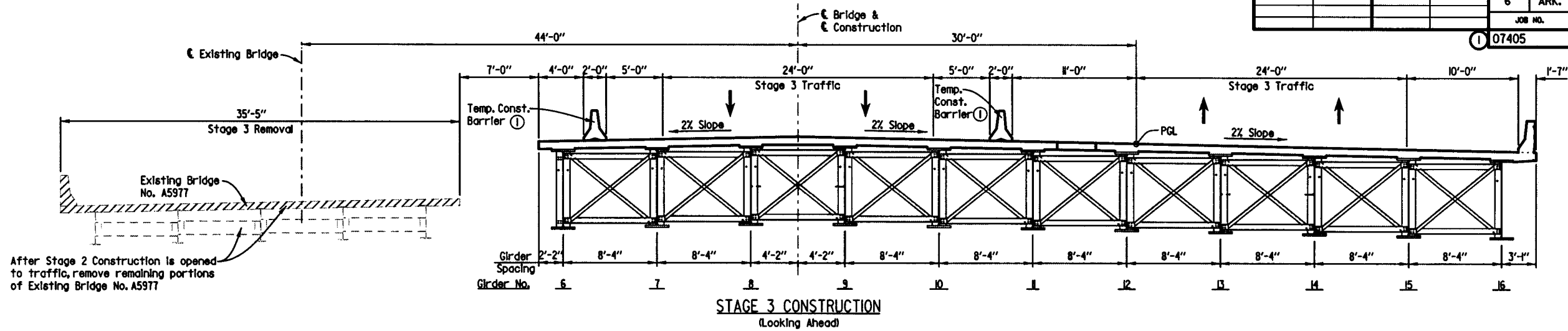
SHEET 1 OF 3
DETAILS OF STAGE CONSTRUCTION
BRIDGE OVER HWY. 71B

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BUC DATE: 06-23-15 FILENAME: bbb0903.dgn
 CHECKED BY: CAM DATE: 07-01-15 SCALE: 3/8" = 1'-0"
 DESIGNED BY: ERM DATE: 06-24-15
 BRIDGE NO. 07405 DRAWING NO. 59351

USER: CTAUSER
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 PLOTTED: 6/6/2018 10:53 AM SCALE: 10.6667 / 1"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	181	368	
				07405	STAGE CONST.		59352	



- Notes:
- For Details of Temporary Precast Barrier, See Std. Dwg. No. TC-4. Attach Temporary Precast Barrier to existing deck. Do not attach Temporary Precast Barrier to new deck.
 - Cross frames in this bay shall not be installed until completion of Stage 3 Deck pour.
 - For details of Construction Lateral Bracing, See Construction Lateral Bracing Details Dwg. No. 59363.



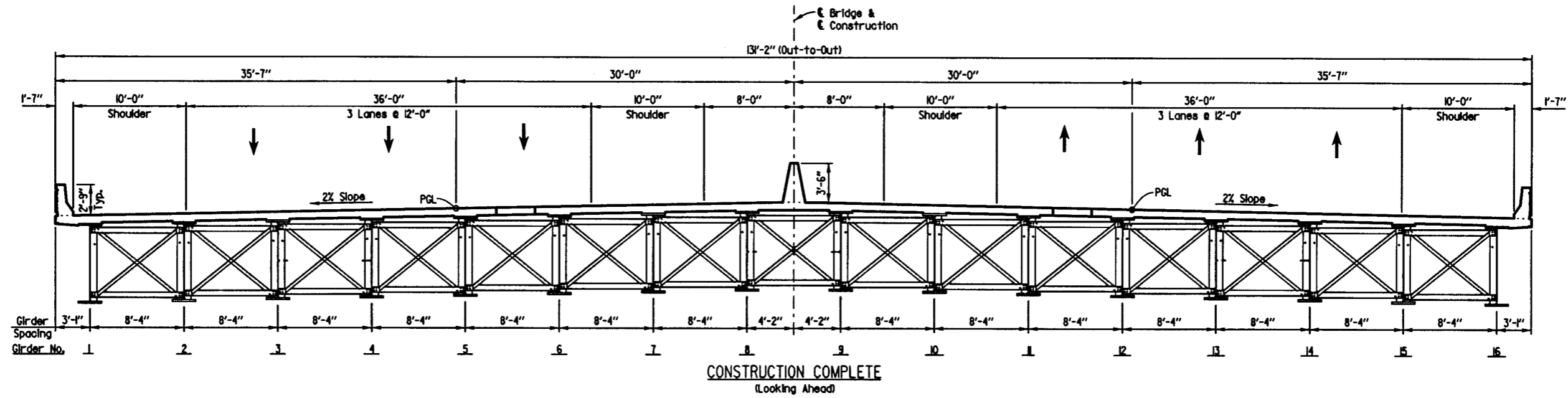
SHEET 2 OF 3
DETAILS OF STAGE CONSTRUCTION
BRIDGE OVER HWY. 71B

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BPC DATE: 05-23-15 FILENAME: bbb0903_14.dgn
 CHECKED BY: CAW DATE: 07-01-15 SCALE: 3/8" = 1'-0"
 DESIGNED BY: KRM DATE: 05-24-15
 BRIDGE NO. 07405 DRAWING NO. 59352

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BBO903	182	368	

① 07405 STAGE CONST. 59353



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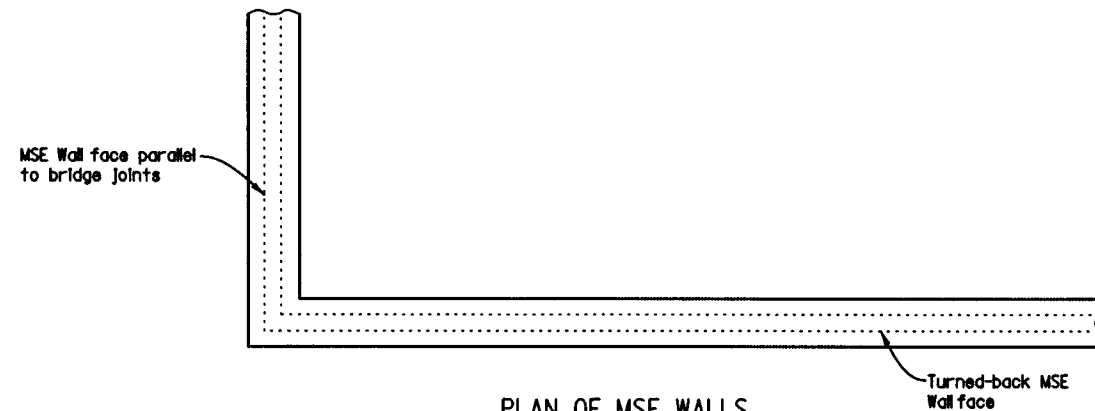
SHEET 3 OF 3
 DETAILS OF STAGE CONSTRUCTION
 BRIDGE OVER HWY. 71B

ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

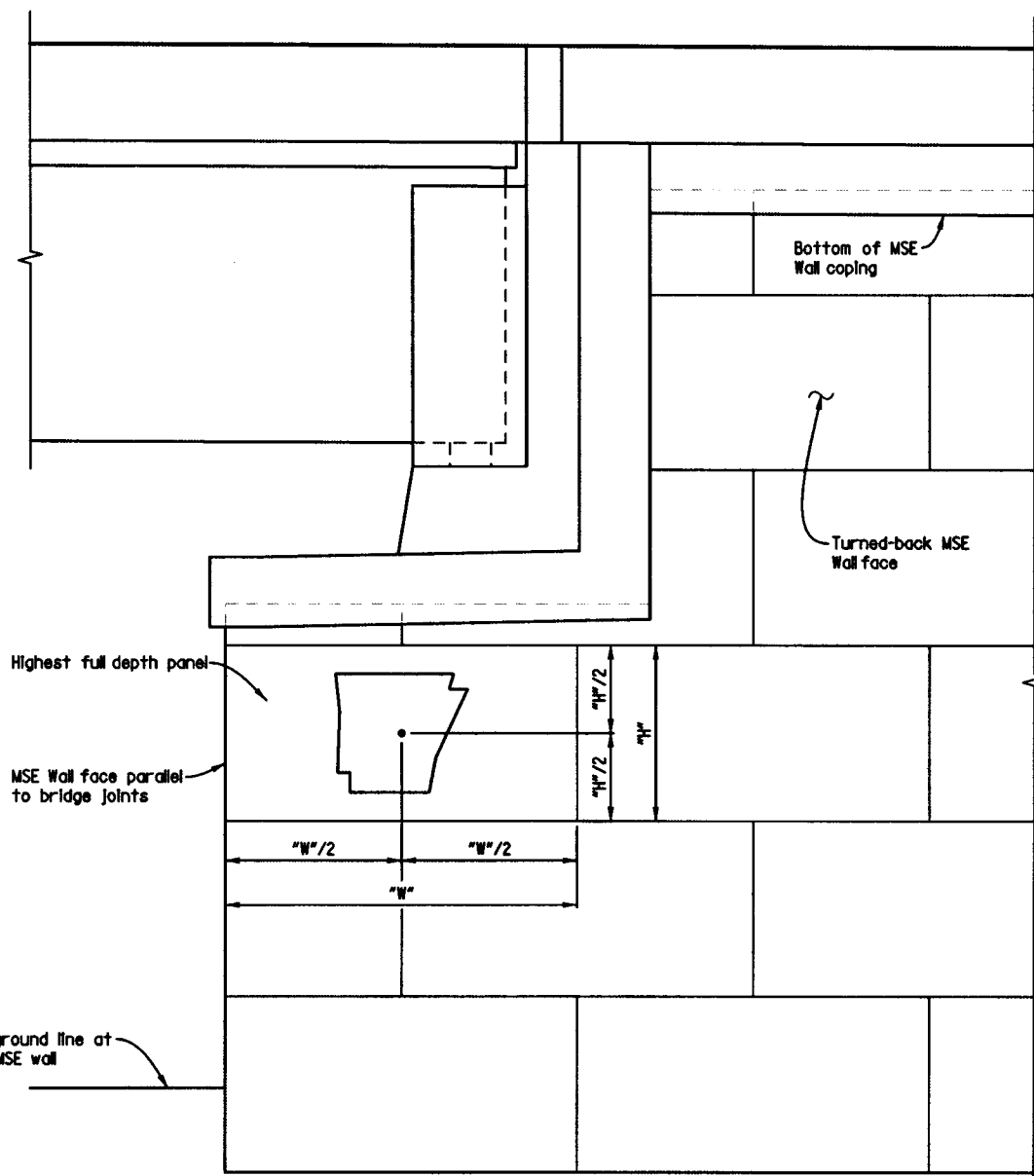
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 BRIDGE NO. 07405 DRAWING NO. 59353

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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						JOB NO. BB0903	183	368

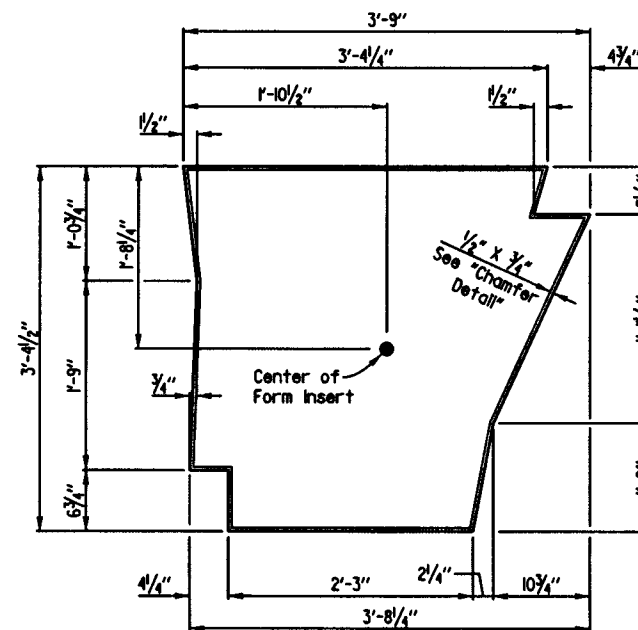
① 07405 FORM INSERT 59354



PLAN OF MSE WALLS
Scale: 3/8" = 1'-0"

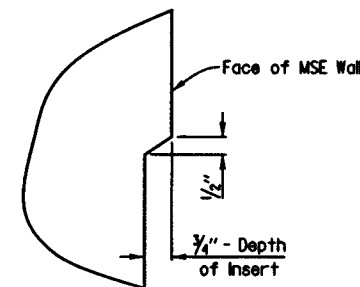


ELEVATION OF MSE WALLS
(Bent 2, Right shown, other locations similar)
Scale: 3/8" = 1'-0"



NOTE: See Bridge Layouts for locations of form inserts.

FORM INSERT DETAILS AT MSE WALL
No Scale



CHAMFER DETAIL
No Scale

GENERAL NOTES

Place center of insert in the first full-width MSE Wall panel along the turned-back wall face at the approximate height shown.

Fabricate form insert as a one piece unit, without the use of splices, joints or glue.

Wash and clean multi-use form inserts before each use.

All work and materials for form inserts shall be included in the unit price bid for "Retaining Wall".

The form insert shall be approved by the Engineer before its use.

Paint insert with a Class 3 Textured Coating Finish as specified in Special Provision "Textured Coating Finish" and in accordance with Subsection 802.19(b)(3). The color of the Arkansas State insert shall match Federal Std. 595B, color chip 36122, dark gray.

DETAILS OF
STATE OF ARKANSAS
FORM INSERT

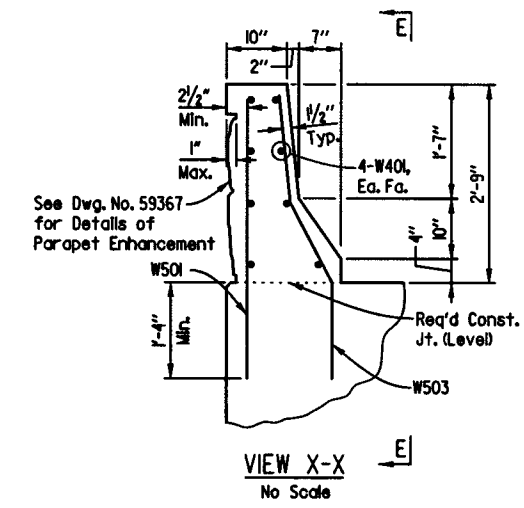
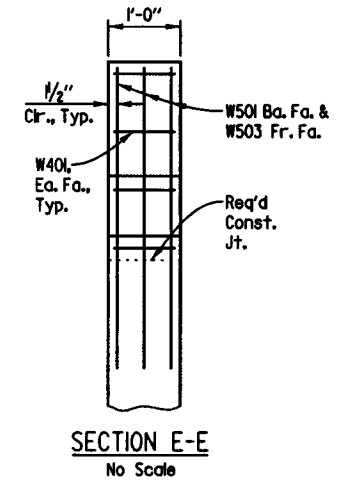
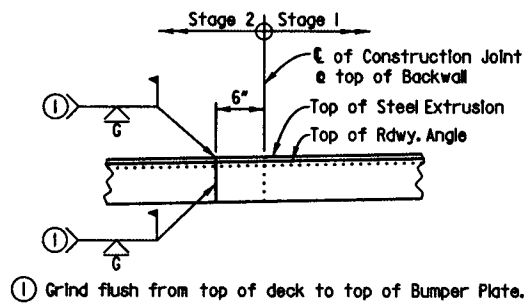
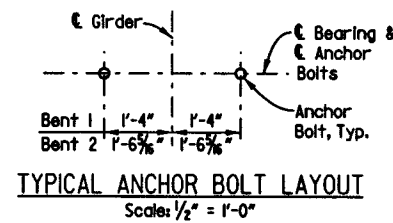
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.



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PLOTTER: 6/6/2018 10:30:54 AM SCALE: 5.3333 / in.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	185	368	
				07405	END BENT DETAILS		59356	



GENERAL NOTES

The backwall shall not be poured before the girders are in place. Backwall may be placed prior to placing the adjacent concrete deck only if the optional backwall construction joint is used. See Detail Z for additional information.

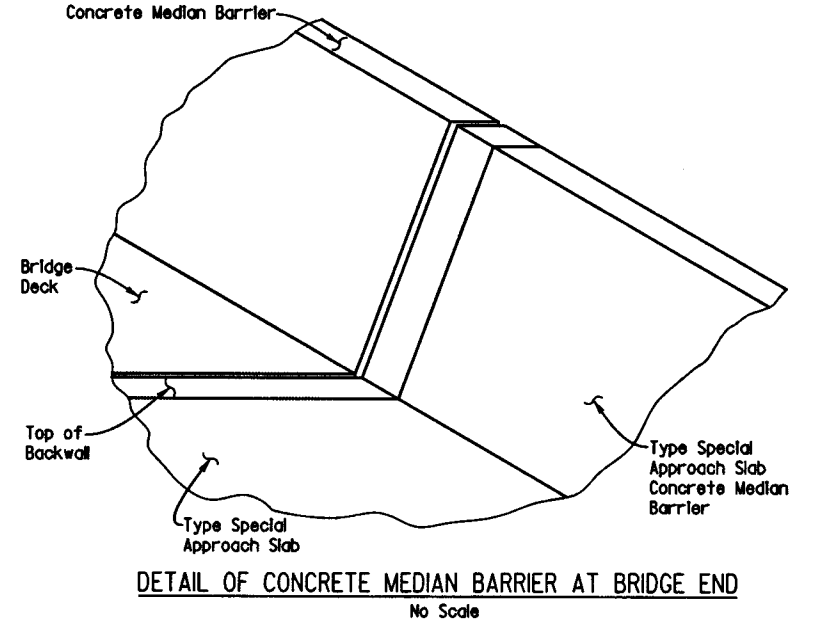
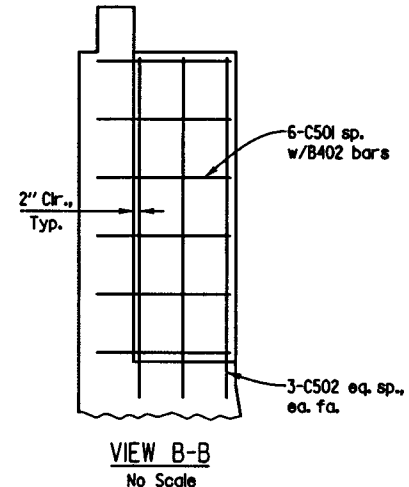
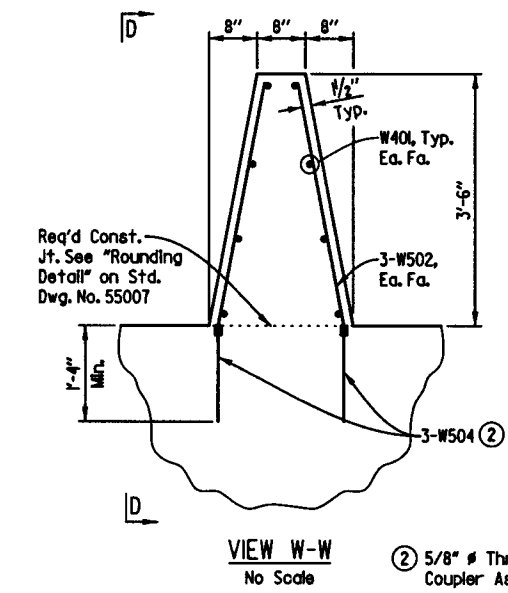
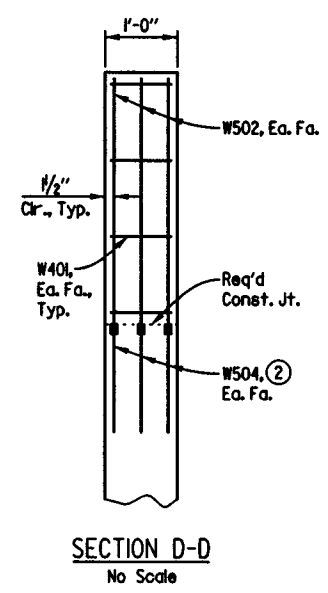
Structural Steel in end bents may be AASHTO M 270, Gr. 36, 50, or 50W and shall be included in the bid item "Structural Steel in Plate Girder Spans (M270, Gr. 50)."

See Std. Dwg. No. 55006 for additional General Notes.

For additional information, see Layout.

① Grind flush from top of deck to top of Bumper Plate.

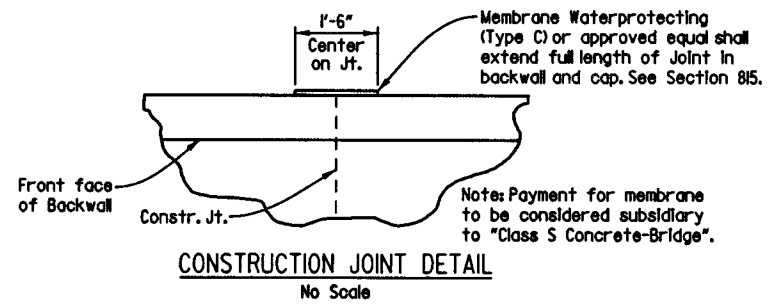
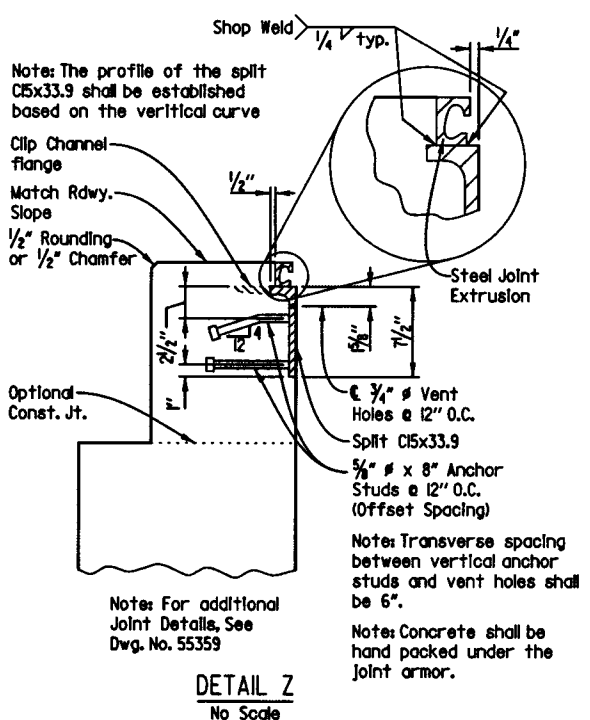
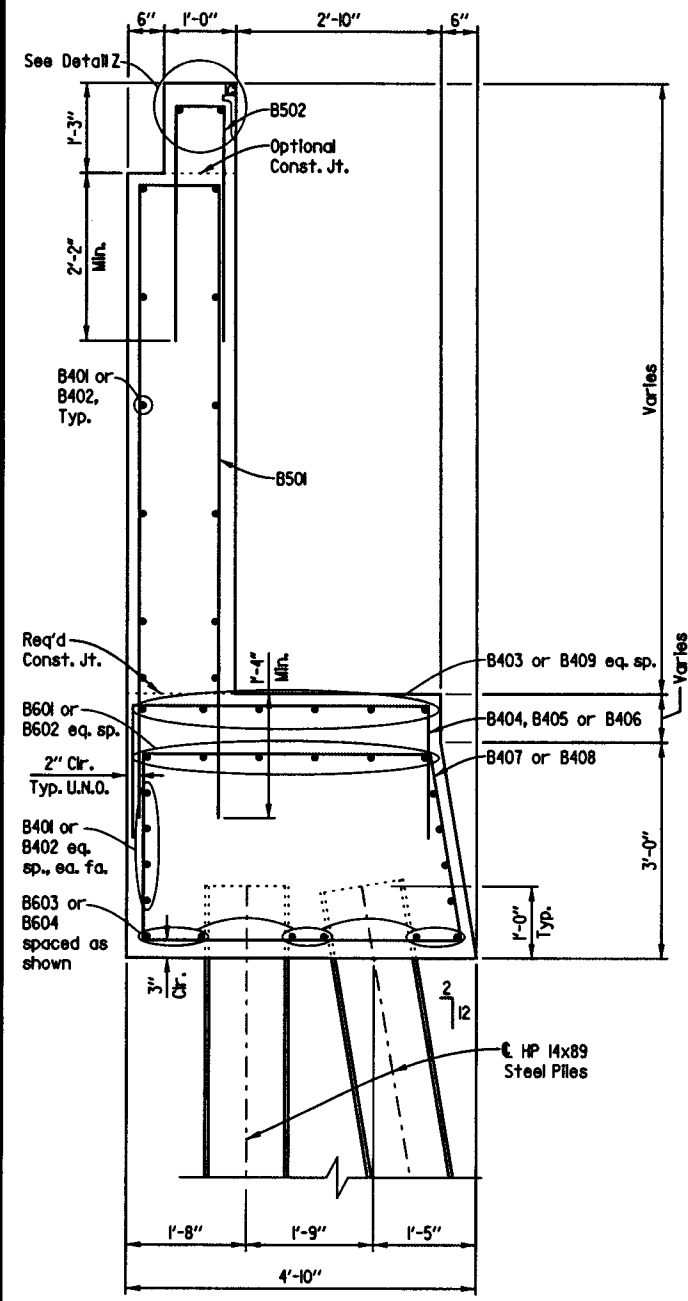
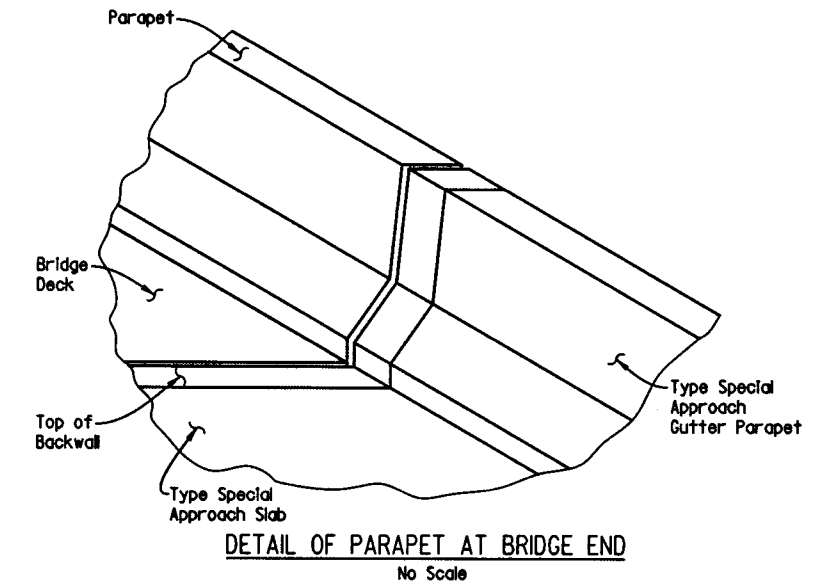
DETAIL OF WELD LOCATION FOR JOINT ARMOR
(Looking Back - Bent 1, Bent 2 similar
Stage 1 & 2 shown, Stage 1 & 3 similar)
No Scale



② 5/8" # Threaded Dowel and Coupler Assembly

The Threaded Dowel and Coupler Assembly shall consist of a QPL approved mechanical splice with protective cap and threaded dowel bars as shown and shall develop at least 125% of the yield strength of the dowel bars. The Threaded Dowel and Coupler Assembly will not be paid for separately but will be considered included in the unit bid price for "Reinforcing Steel (Grade 60)".

Dowel bars shall be of minimum 60 ksi yield strength and threaded as required. Threaded Dowel and Coupler Assembly, except mating surfaces, shall be epoxy coated in accordance with the requirements of Section 804.



SHEET 2 OF 2
DETAILS OF END BENTS 1 & 2



ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BRC DATE: 1-28-16 FILENAME: bbb0903_b2.dgn
CHECKED BY: CAM DATE: 12-01-16 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 1-01-16
BRIDGE NO. 07405 DRAWING NO. 59356

USER: CTAUSER
DESIGN FILE: G:\2013305_Hwy7\linchg\TRANSP\dgn\bridge\bb0903_b2.dgn
PLOTTER: 6/6/2018 8:30:55 AM SCALE: 2.6667 / / In.

TABLE OF FABRICATOR VARIABLES

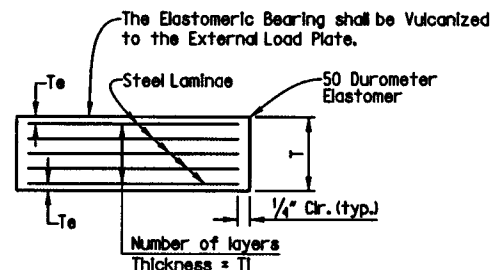
Brg. No.	Location	Bearing Type	No. of Bearings Each Bent	Maximum Design Load (Klbs)	G	H	Elastomeric Pad										External Load Plate				Anchor Bolt							
							A	B	N	T ₁	T ₂	No. & Thickness of Steel Laminæ	T	C	D	E	F	J	K	M	T _a	T _b	Anchor Bolt # X L	Grade	Pipe Sleeve Size (# X L)	Sheet Metal Sleeve Size (# X L)	Steel Washer Size (O.D.)	
07405	1	I-16	Exp.	16	344	9 5/8"	6 5/8"	27"	12"	8	3/8"	1/4"	9 @ 12 Ga.	4 5/8"	13"	38"	6 3/8"	2 5/8"	---	1/2"	16"	2.04"	1.96"	1 3/4" X 33"	55	2" X 7 1/2"	4" X 18"	3 3/8"
	2	I-16	Fix	16	344	9 5/8"	6 5/8"	27"	12"	8	3/8"	1/4"	9 @ 12 Ga.	4 5/8"	13"	45 1/4"	2 5/8"	2 5/8"	4 1/8"	1/2"	18 5/8"	1.97"	2.03"	1 3/4" X 33"	55	2" X 7 1/2"	4" X 18"	3 3/8"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FEDERAL DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	186	368	
				07405	BEARING DETAILS			59375

- Care shall be taken to ensure that the External Load plate is in full and complete contact with the Girder Flange before welding begins.
- Center line of Girder shall be aligned with center line of Elastomeric pad.
- Maximum Design Load = Service I Limit State
- Shear blocks 4 inches or thicker may be fabricated from built-up plates with a 3/8" groove weld on all sides. No plate shall be less than 2" nominal thickness.

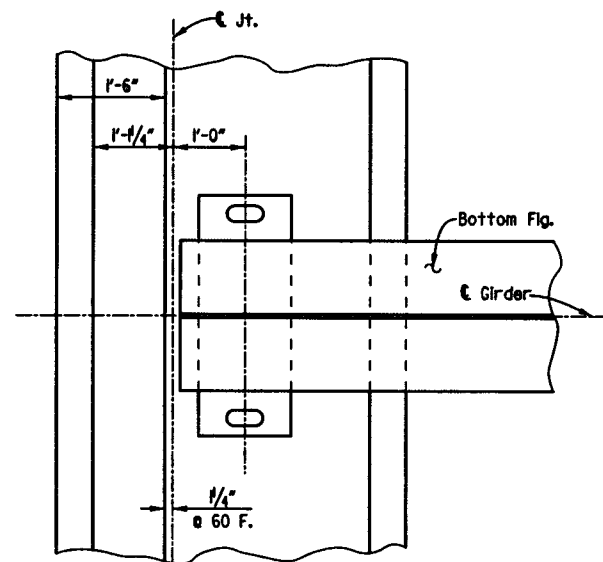
Unless otherwise approved by the Engineer, welding of the External Load Plate at expansion bearings to the Girder will be allowed only where 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40°F and 80°F, and 2) the slots in the External Load Plate are positioned to center on the Anchor Bolts, and 3) no horizontal deformation at the Elastomeric pad is evident. If welding at another temperature is required, the Engineer will provide adjustment data.

Note:
The direction of bevel of the external load plate may not be accurately depicted with respect to T_a and T_b values shown in TABLE OF FABRICATOR VARIABLES.

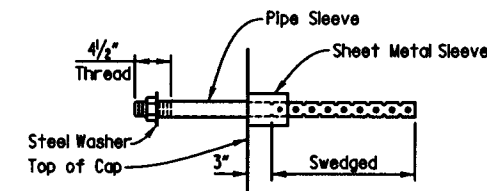


T_e = thickness of Elastomer cover on top and bottom of pad
T = thickness of Elastomer between Steel Laminæ
N = number of Elastomer layers of thickness T

ELASTOMERIC BEARING
No Scale



BEARING PLAN AT END BENT
Scale: 3/4" = 1'-0"



ANCHOR BOLT DETAIL
No Scale

Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the galvanized Sheet Metal Sleeves will not be required.

If Anchor Bolts are to be drilled and grouted in place, the galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of structural steel, the dry pack shall be removed. Bolts placed in drilled holes shall be accurately set and fixed using an AHTD OPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized sheet metal sleeves will not be paid for directly, but will be considered subsidiary to the Items "Structural Steel in Plate Girder Spans, (M 270, Gr. 50)".

GENERAL NOTES

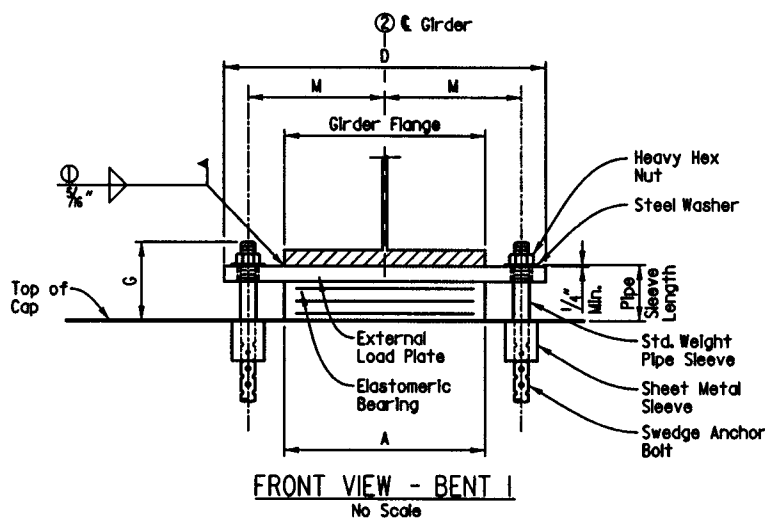
Elastomeric bearings shall conform to Special Provision Job BB0903 "Elastomeric Bearings" and Section 808 and shall be paid for at the unit price bid for "Elastomeric Bearings". Long-duration testing of random lot samples specified in Subsection 808.05 is not required.

External load plates and shear blocks shall conform to AASHTO M 270, Grade 50. Pipe sleeves shall be ASTM A500, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or ASTM B695, Class 50.

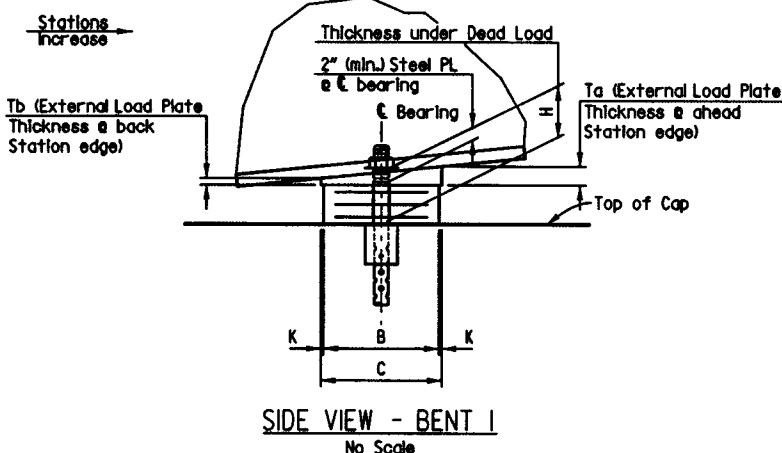
External load plates and shear blocks shall be completely fabricated (including bevel, bolt holes and all shop welding) and shall be cleaned before vulcanizing to the elastomeric bearing. Surfaces in contact with the elastomeric bearing shall be cleaned in accordance with Subsection 808.03. Other surfaces shall be blast cleaned in accordance with Subsection 807.84(b) and painted according to Subsection 807.75. The color of the paint shall be as specified in the General Notes.

Anchor Bolts, Washers and Nuts shall conform to Subsection 807.07. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

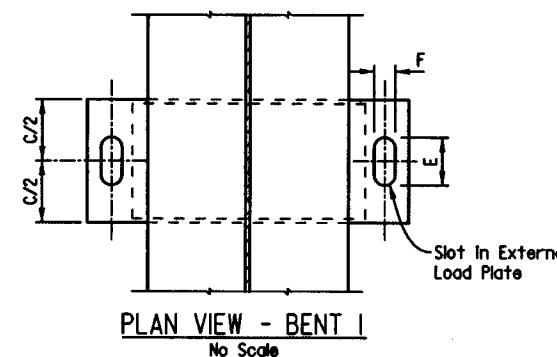
Bearings shall be seated in accordance with Subsection 808.08. This work and materials are considered subsidiary to the Item "Elastomeric Bearings" and will not be paid for directly. Pipe Sleeves, Anchor bolts, Washers, and Nuts shall be paid for at the unit price bid for "Structural Steel in Plate Girder Spans (M 270, Gr. 50)".



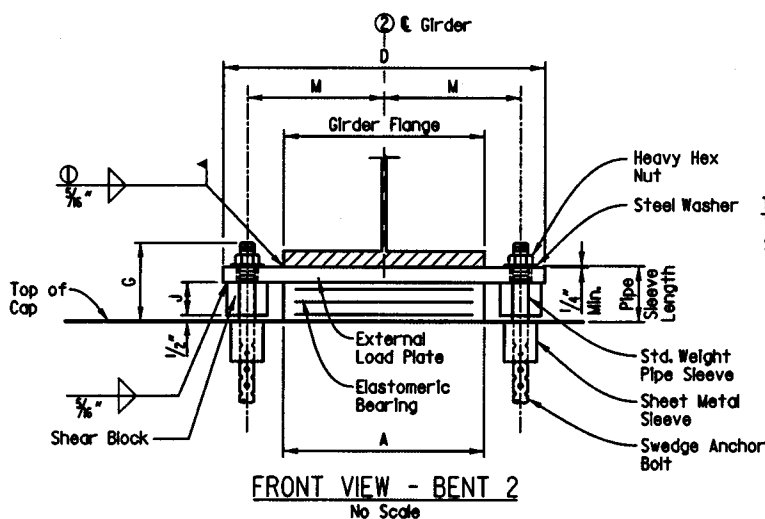
FRONT VIEW - BENT 1
No Scale



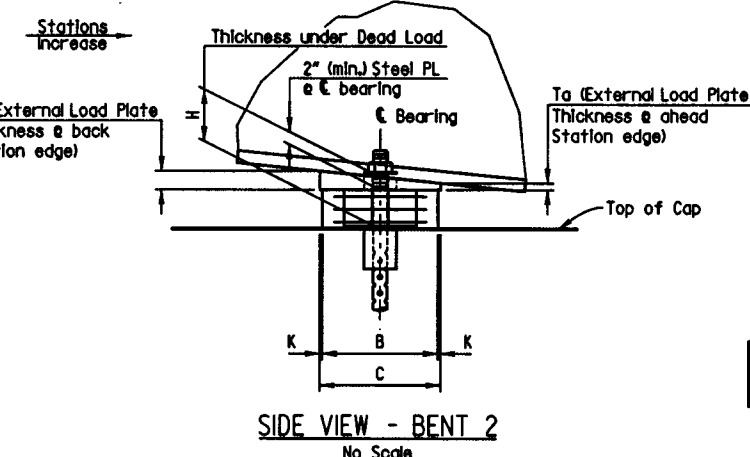
SIDE VIEW - BENT 1
No Scale



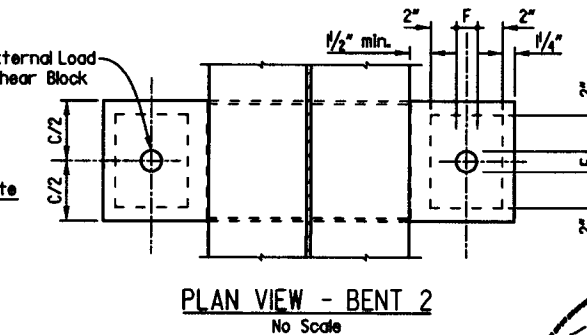
PLAN VIEW - BENT 1
No Scale



FRONT VIEW - BENT 2
No Scale



SIDE VIEW - BENT 2
No Scale



PLAN VIEW - BENT 2
No Scale

Prior to erection of the Girders, the Contractor shall verify the orientation of the bearings with respect to T_a and T_b



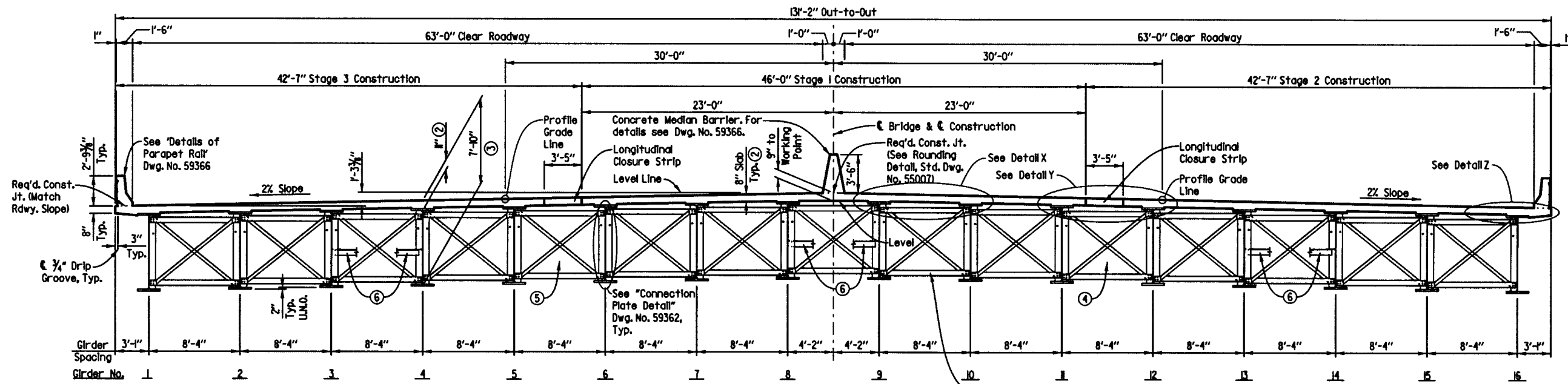
DETAILS OF ELASTOMERIC BEARINGS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BRC DATE: 8-08-16 FILENAME: bbb0903.dwg
CHECKED BY: CAW DATE: 8-21-16 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 8-01-16
BRIDGE NO. 07405 DRAWING NO. 59375

Note: Class 2 Protective Surface Treatment shall be applied to the roadway surface, roadway face and top of parapet rail and median barrier. Class 3 Textured Coating Finish shall be applied to all areas specified in Special Provision Job No. BB0903 "Textured Coating Finish".

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. BB0903	187	368
							07405	SPAN DETAILS	59358



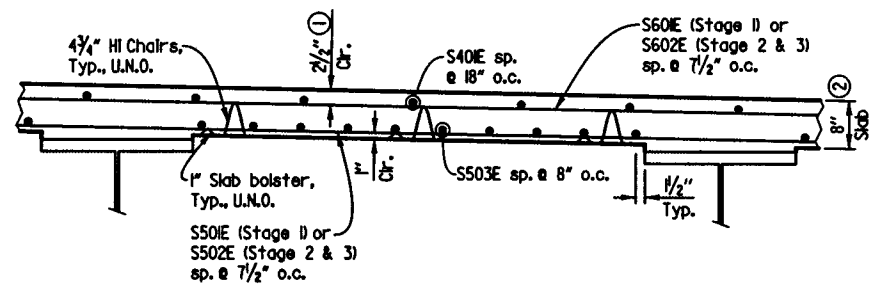
TYPICAL ROADWAY SECTION
(Looking Ahead)
Scale: 3/8" = 1'-0"

Note: The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class (S)AE Concrete. See AHTD Std. Dwg. No. 55005 for allowable modifications and for tolerances when permanent steel bridge deck forms are used.

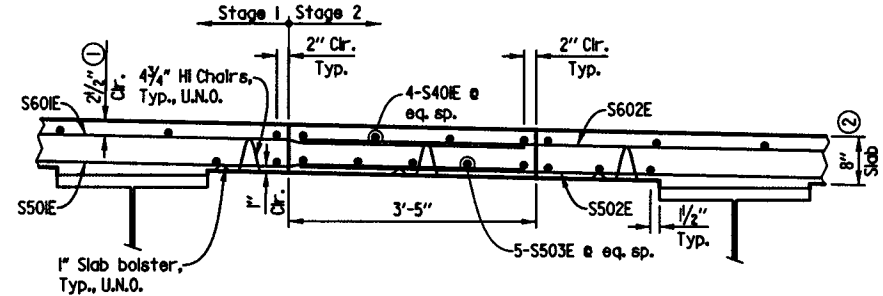
SLAB REINFORCING:
Transverse:
S60E & S60ZE @ 7 1/2" o.c. in top
S70E @ 15" o.c. in top (overhang)
S50E & S50ZE @ 7 1/2" o.c. in bottom

Longitudinal:
S40E @ 1'-6" o.c. in top U.N.O.
S503E in bottom (Spaced as shown)

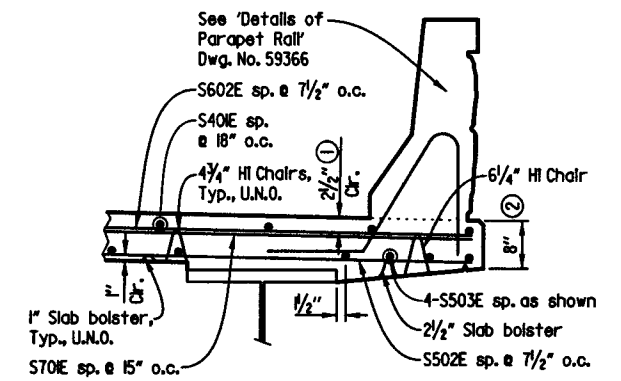
Note: Space Hi-Chairs as shown Trans. (4'-0" max.) & 3'-9" o.c. long. Space slab bolsters 4'-0" max. sp.



DETAIL X
Scale: 3/4" = 1'-0"



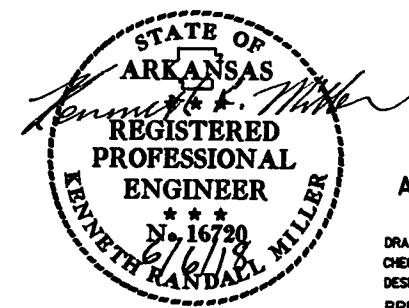
DETAIL Y
(Stage 1 & 2 Longitudinal Closure Strip shown, Stage 1 & 3 Opposite Hand)
Scale: 3/4" = 1'-0"



DETAIL Z
Scale: 3/4" = 1'-0"

- ① Tolerances: Minus = 1/4"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance
- ② See "Adjustment for Slab Thickness Tolerance" Std. Dwg. No. 55007.
- ③ Measured at ϵ Bearing and ϵ Girders, Typ.
- ④ Cross frames in this bay shall not be installed until completion of Stage 2 Deck pour.
- ⑤ Cross frames in this bay shall not be installed until completion of Stage 3 Deck pour.
- ⑥ Construction Lateral Bracing these bays only, See Dwg. No. 59363.

Note: Longitudinal Closure strip shall not be poured until adjacent concrete decks have sufficiently cured.



SHEET 1 OF 10
DETAILS OF 237'-0' SIMPLE COMPOSITE PLATE GIRDER SPAN

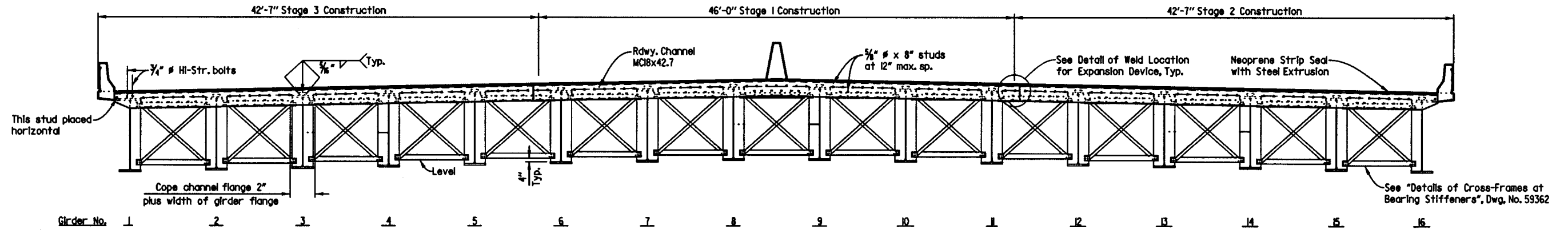
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ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
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CHECKED BY: CAW DATE: 1-18-15 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 06-24-15
BRIDGE NO. 07405 DRAWING NO. 59358

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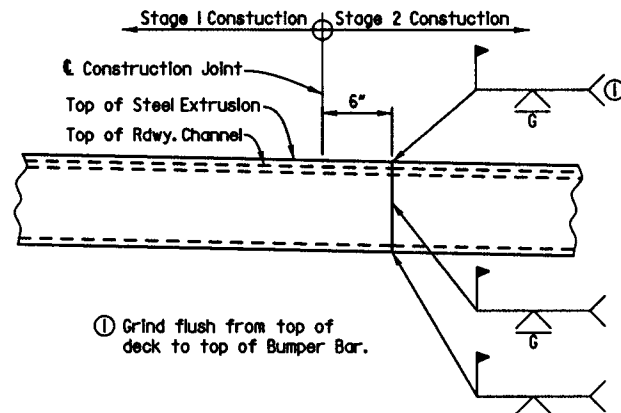
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				6	ARK.			
				JOB NO.	BB0903	188	368	
				① 07405	SPAN DETAILS			59359

Expansion Device:
 Rdwy. Channel-MC18x42.7
 Conn. Angle's-Split C15x33.9
 Detail Device 1/8" high & provide 1/4" shims using 2-3/8" & 1-1/8" PLS.

Note: For details of Strip Seal Joint, see Dwg. No. 55009



TYPICAL SECTION THROUGH JOINT
 (Looking Ahead)
 Scale: 3/8" = 1'-0"



DETAIL OF WELD LOCATION FOR EXPANSION DEVICE
 Looking Ahead - Bent 1, Bent 2 similar
 Stage 1 & 2 shown, Stage 1 & 3 similar
 No Scale

TABLE OF STRIP SEAL JOINT DATA

Bent No.	Movement Rating	"A" Width Perpendicular to Joint at 24 Hour Average ② Temperature of:			"B" Width Perpendicular to Joint at 24 Hour Average ② Temperature of:			"C" Perpendicular to Joint at 24 Hour Average ② Temperature of 60° F
		40° F	60° F	80° F	40° F	60° F	80° F	
1	4"	2-3/8"	2"	5/8"	2-1/8"	2-1/2"	2-1/8"	2-1/4"
2	4"	2"	2"	2"	2-1/2"	2-1/2"	2-1/2"	2-1/4"

② Installation is limited to 40°F min. and 80°F max.
 The temperature used to set the joint opening shall be approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature.

STAGED CONSTRUCTION NOTES:

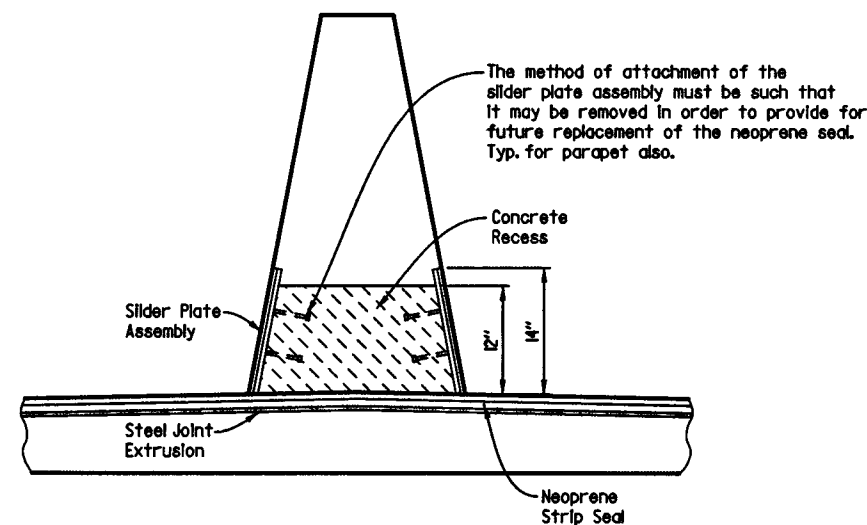
Neoprene Strip Seal shall be continuous across entire width of finished bridge.

Strip Seal shall be threaded through joint in Stage 1 such that excess length at each end is sufficient to be threaded in Stages 2 and 3.

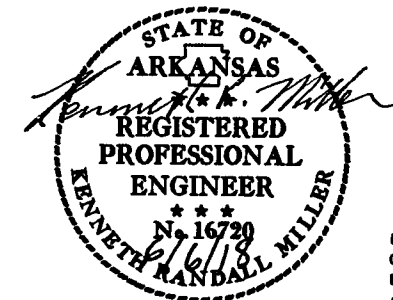
Excess Strip Seal at each end of joint at Stage 1 shall be called and protected from the environment and construction activities. Damage to any part of the Strip Seal will require complete replacement of Strip Seal at Contractor's expense.

Follow Manufacturer's recommendations/instructions for installation if the instructions differ from above.

See Standard Details For Neoprene Strip Seal Joints Dwg. No. 55009 for additional details.



DETAILS OF NEOPRENE STRIP SEAL AT CONCRETE MEDIAN BARRIER
 No Scale



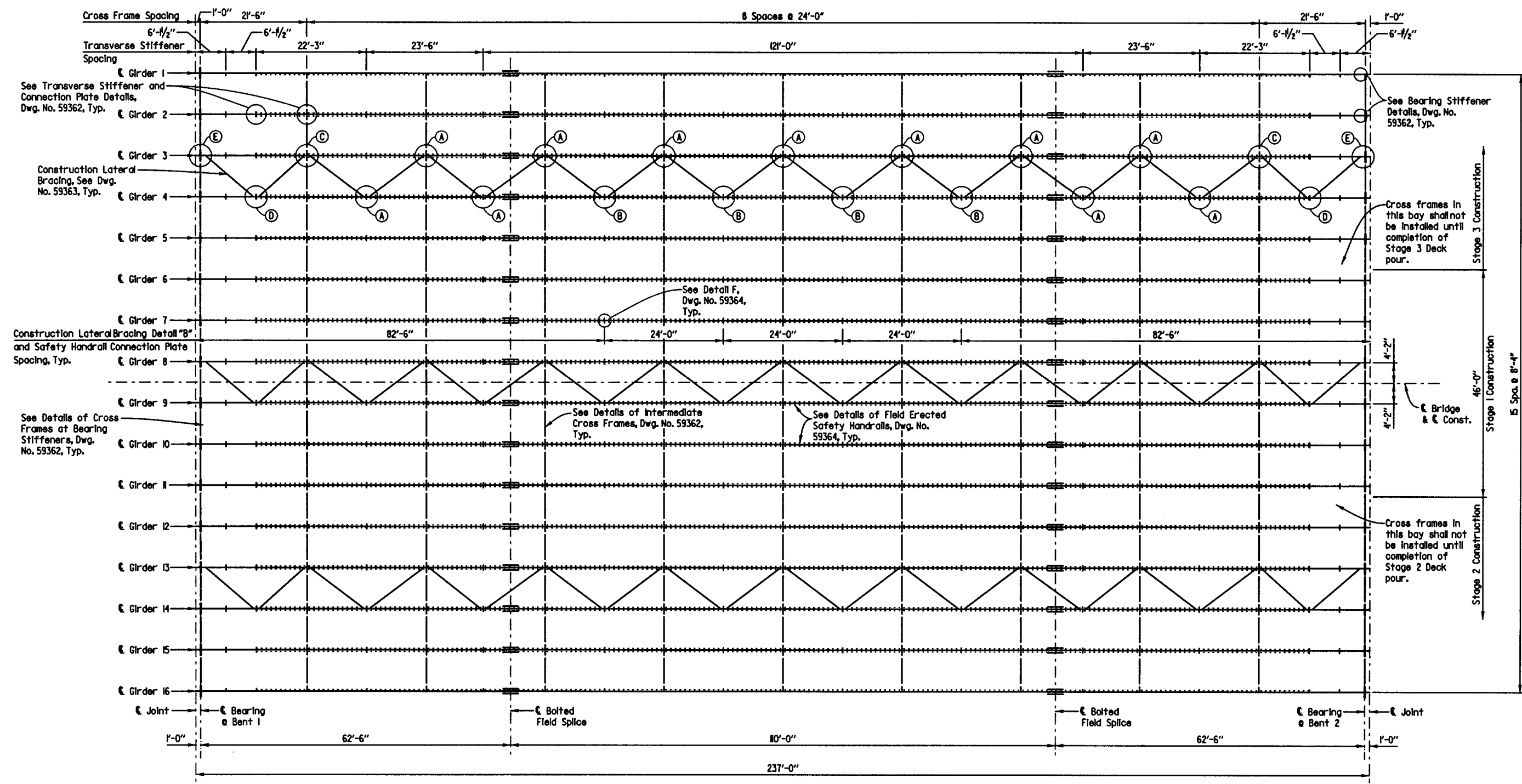
SHEET 2 OF 10
 DETAILS OF 237'-0' SIMPLE
 COMPOSITE PLATE GIRDER SPAN

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: BJC DATE: 1-08-15 FILENAME: bbb0903.s2.dgn
 CHECKED BY: CAW DATE: 1-08-15 SCALE: SEE DETAILS
 DESIGNED BY: KRM DATE: 1-01-15
 BRIDGE NO. 07405 DRAWING NO. 59359

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				6	ARK.			
				JOB NO.	BB0903		189	368
				07405		SPAN DETAILS		59360



- (A) See Detail A, Dwg. No. 59363, Typ.
- (B) See Detail B, Dwg. No. 59363, Typ.
- (C) See Detail C, Dwg. No. 59363, Typ.
- (D) See Detail D, Dwg. No. 59363, Typ.
- (E) See Detail E, Dwg. No. 59363, Typ.

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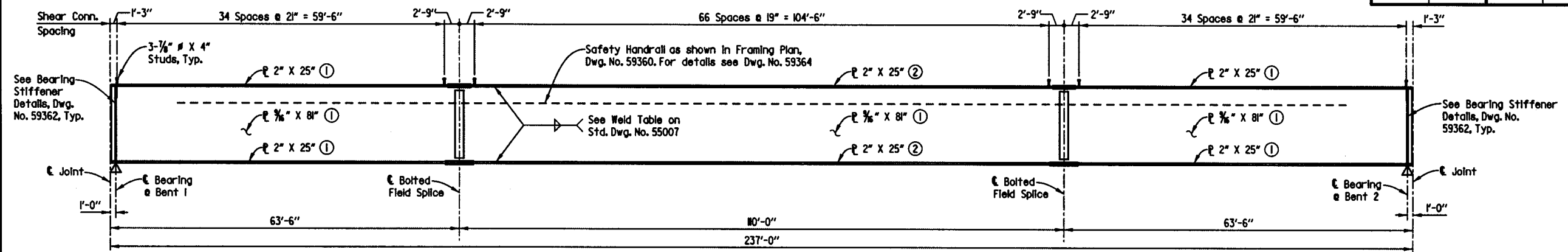


SHEET 3 OF 10
DETAILS OF 237'-0' SIMPLE COMPOSITE PLATE GIRDER SPAN

ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

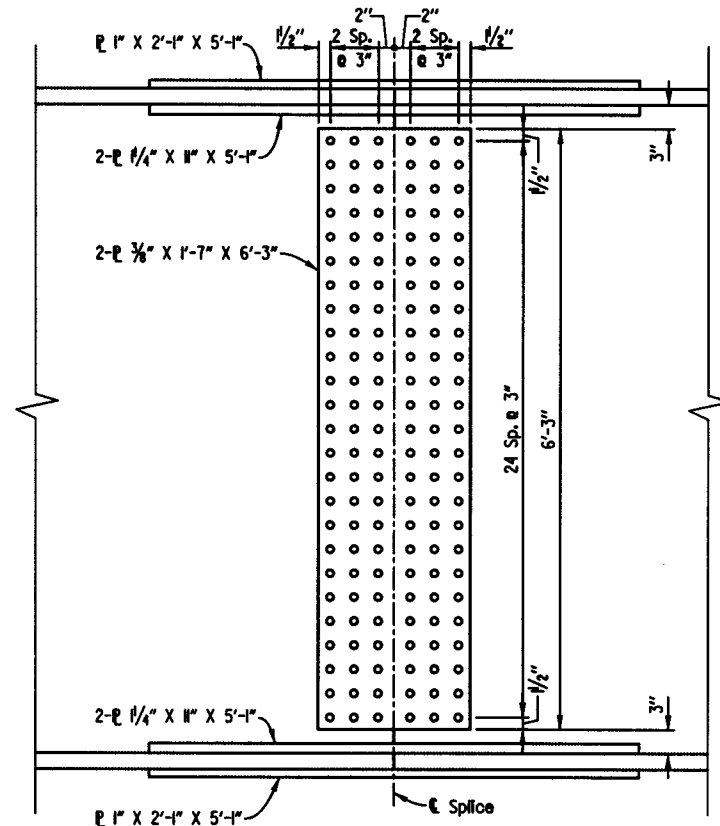
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 DESIGNED BY: KRM DATE: 1-08-15
 BRIDGE NO. 07405 DRAWING NO. 59360

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				07405	SPAN DETAILS		59361	

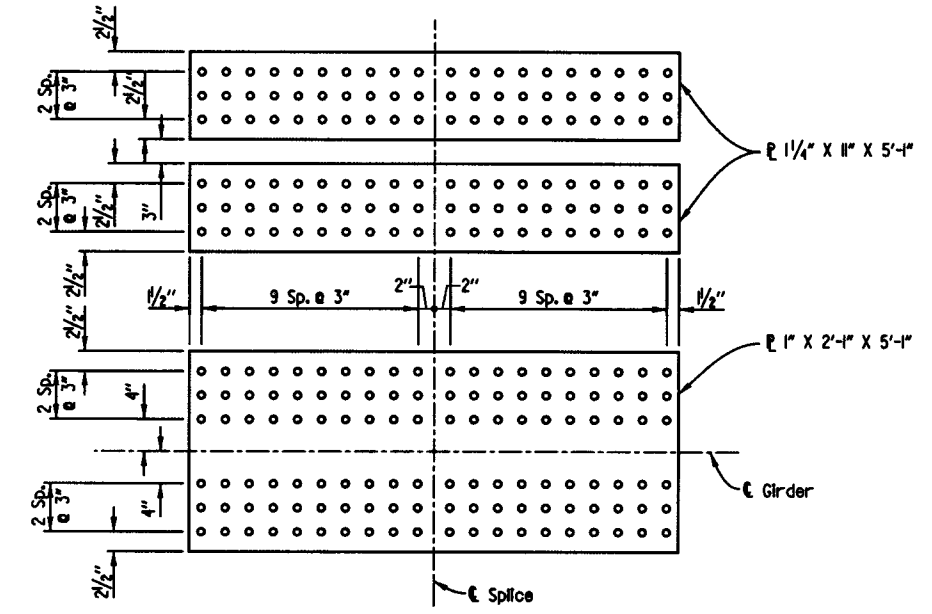


GIRDER ELEVATION
No Scale

- ① Structural Steel plate shall conform to AASHTO M 270-GR. 50.
- ② Structural Steel plate shall conform to AASHTO M 270-GR. HPS 70W.



WEB SPICE
Scale: 1" = 1'-0"



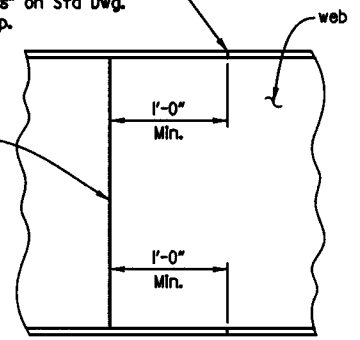
FLANGE SPICE
Scale: 1" = 1'-0"

FIELD SPICE DETAILS

Note: Bolts shall be 3/8" # H.S. Bolts. All holes shall be 5/8" #. All field splice plates shall be AASHTO M 270 Grade HPS 70W.

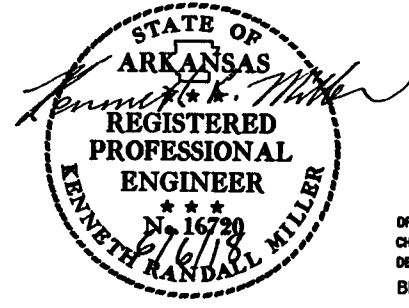
See Flange Splice detail within "Details of Welded Splices for Plate Girders" on Std Dwg. No. 55007, Typ.

See Web Splice detail within "Details of Welded Splices for Plate Girders" on Std Dwg. No. 55007, Typ.



Note: Web and flange shop splices shall be located a minimum of 8" from stiffener and connection plates.

LOCATION OF SHOP SPLICES
No Scale

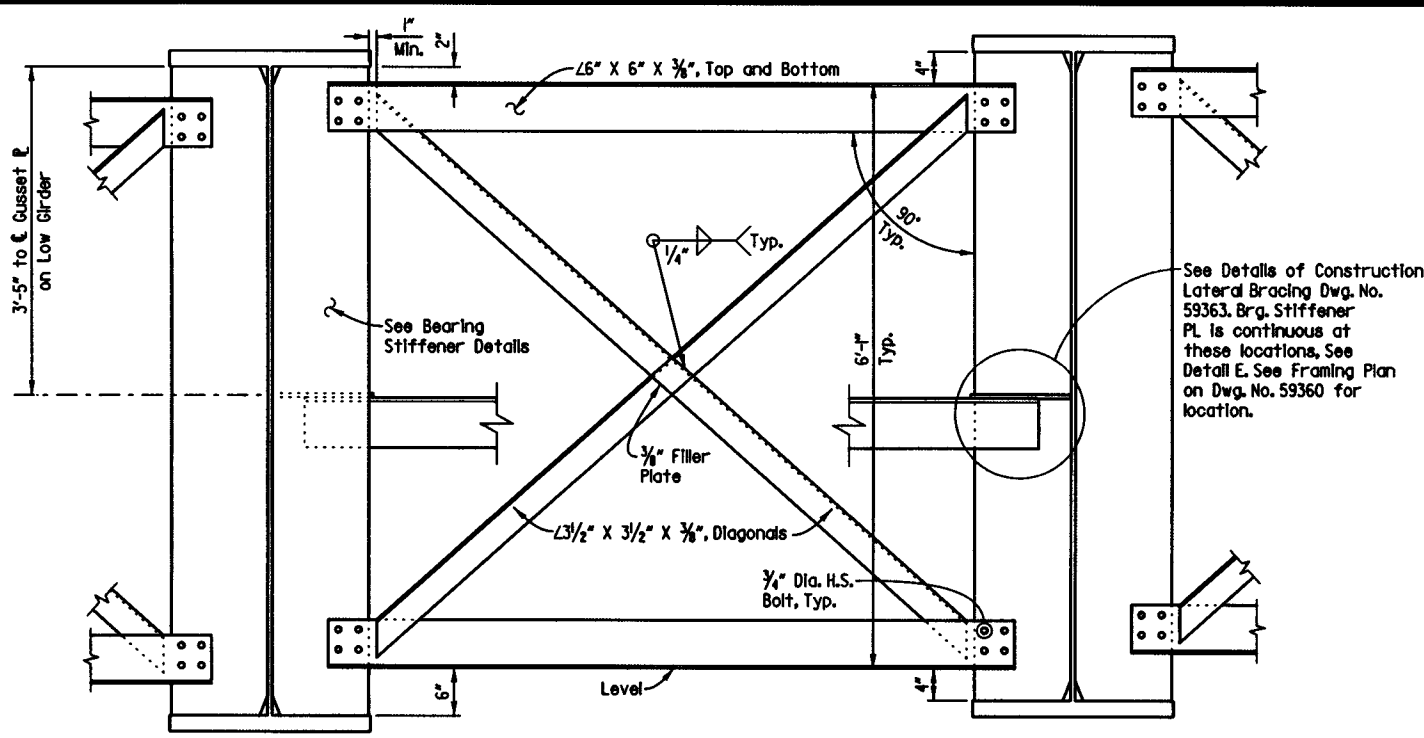


SHEET 4 OF 10
DETAILS OF 237'-0" SIMPLE
COMPOSITE PLATE GIRDER SPAN

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: BIC DATE: 1-08-15 FILENAME: bbb0903_s4.dgn
CHECKED BY: CAM DATE: 1-12-15 SCALE: SEE DETAILS
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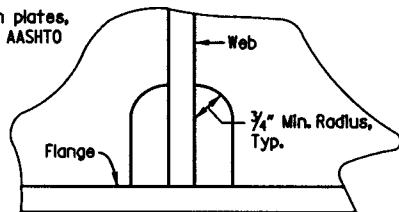
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				6	ARK.			
				JOB NO.	BB0903	191	368	
				07405	SPAN DETAILS		59362	



DETAILS OF CROSS FRAMES AT BEARING STIFFENERS

Scale: 1" = 1'-0"

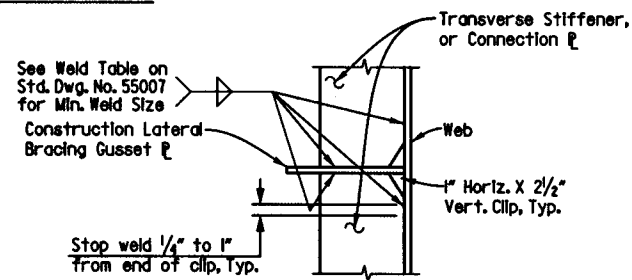
Note: All transverse stiffeners, connection plates, bearing plates, and cross frames shall be AASHTO M 270 Grade 50.



Height and width of clip shall be as noted in other details.

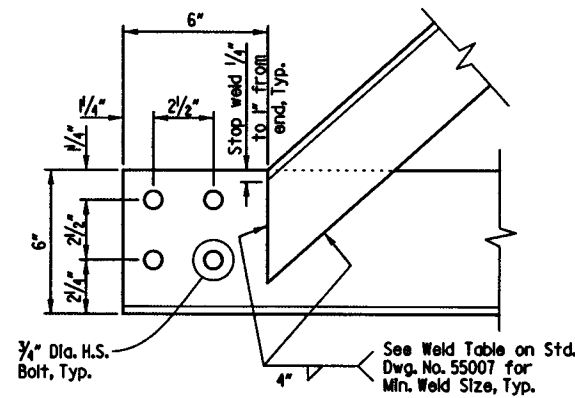
ALTERNATE CLIP DETAIL

(For Bearing Stiffeners, Intermediate Stiffeners, and Cross-frame or Diaphragm Connection Plates)
No Scale



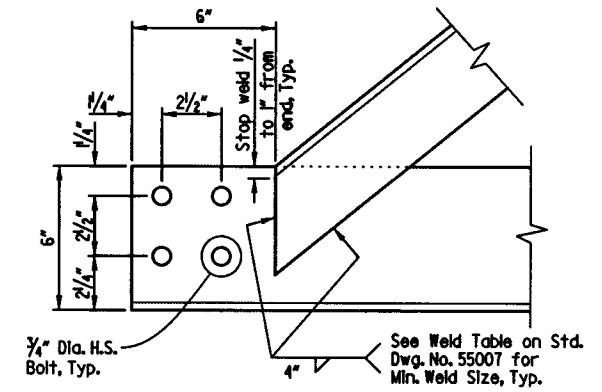
DETAIL A

No Scale



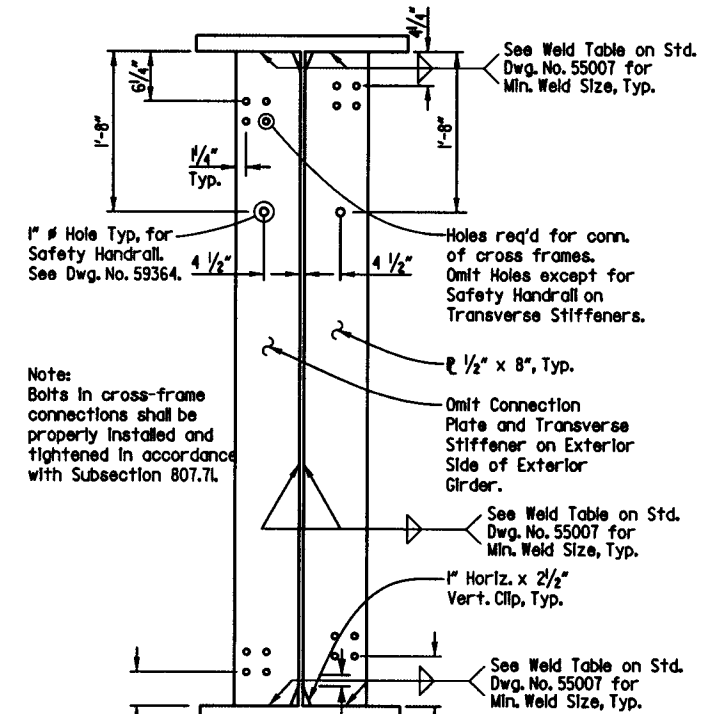
DETAIL AT END CROSS FRAME

Scale: 3" = 1'-0"



DETAIL AT INTERMEDIATE CROSS FRAME

Scale: 3" = 1'-0"



TRANSVERSE STIFFENER AND CONNECTION PLATE DETAILS

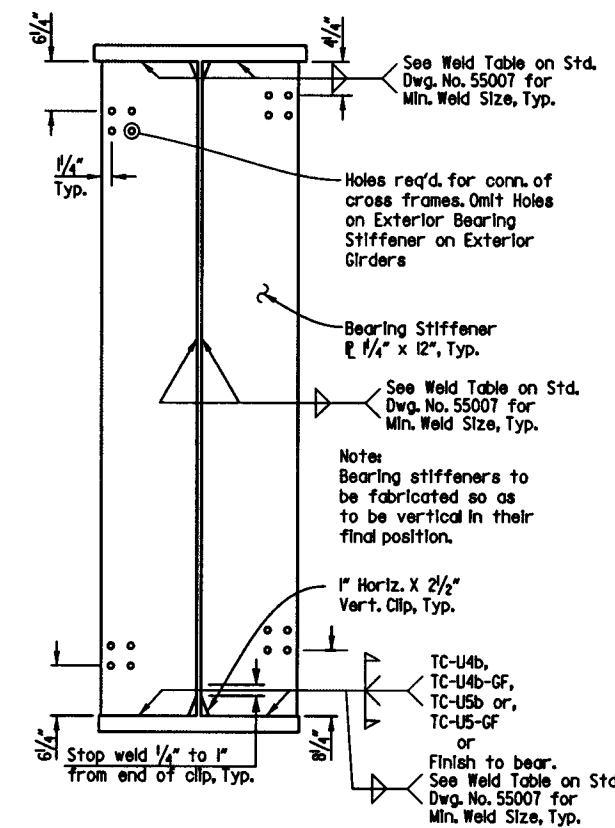
(Shown with 2% cross slope increasing to the right. Opposite hand for 2% cross slope decreasing to the right.)
Scale: 1" = 1'-0"

SHEET 5 OF 10

DETAILS OF 237'-0" SIMPLE COMPOSITE PLATE GIRDER SPAN

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

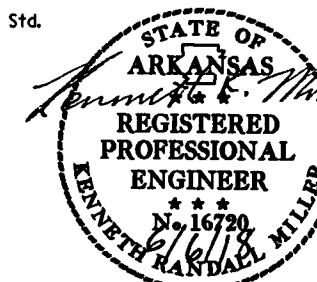
DRAWN BY: BRC DATE: 1-28-16 FILENAME: bbb0903_e5.dgn
CHECKED BY: CAM DATE: 1-28-16 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 1-28-16
BRIDGE NO. 07405 DRAWING NO. 59362



BEARING STIFFENER DETAILS

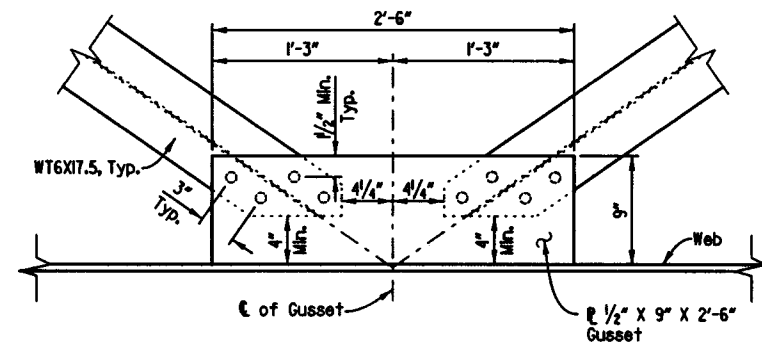
(Shown with 2% cross slope increasing to the right. Opposite hand for 2% cross slope decreasing to the right.)
Scale: 1" = 1'-0"

Note: The Bearing Stiffener Plate is unhardened. Transverse Stiffener Connection Plate is hardened due only to the Safety Handrail hole.

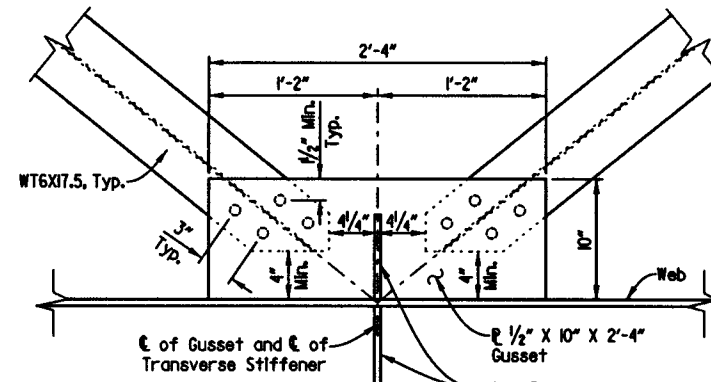


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	192	368

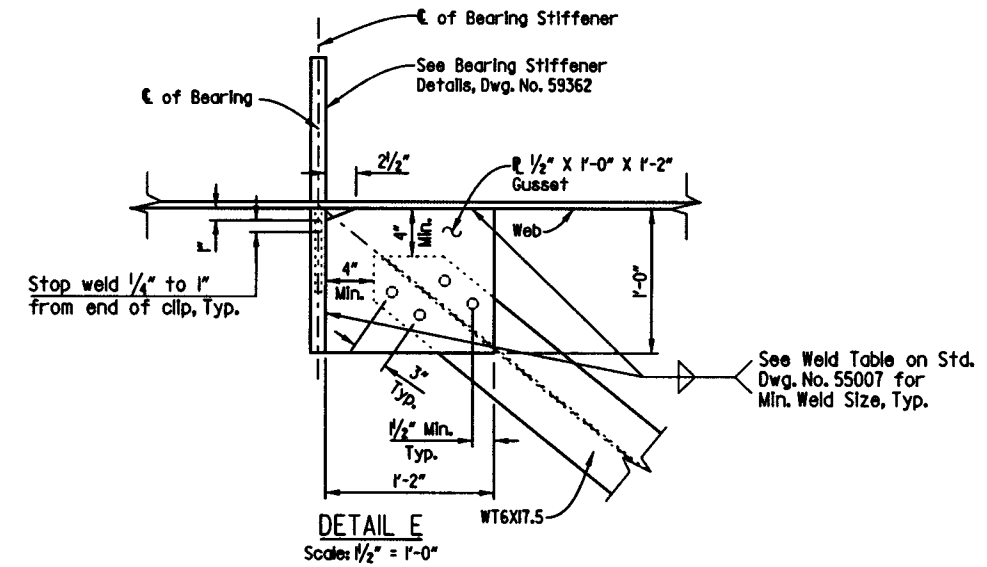
07405 SPAN DETAILS 59363



DETAIL B
Scale: 1/2" = 1'-0"



DETAIL D
Scale: 1/2" = 1'-0"



DETAIL E
Scale: 1/2" = 1'-0"

NOTES:

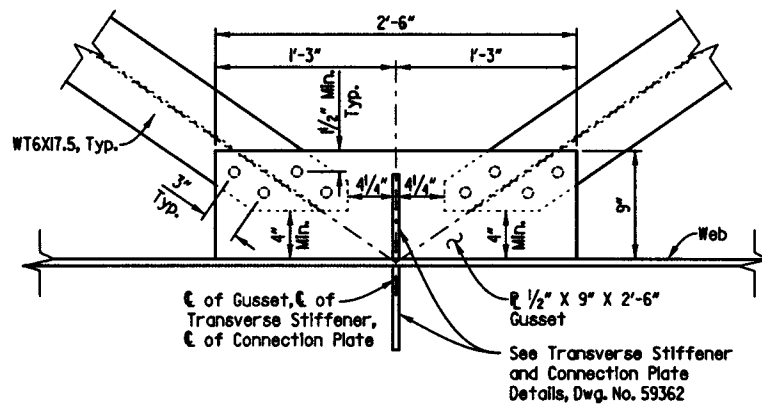
Construction Lateral Bracing shall be M 270-GR. 50 steel.

Bolts shall be 7/8" # H.S. Bolts, all holes shall be 5/8" #.

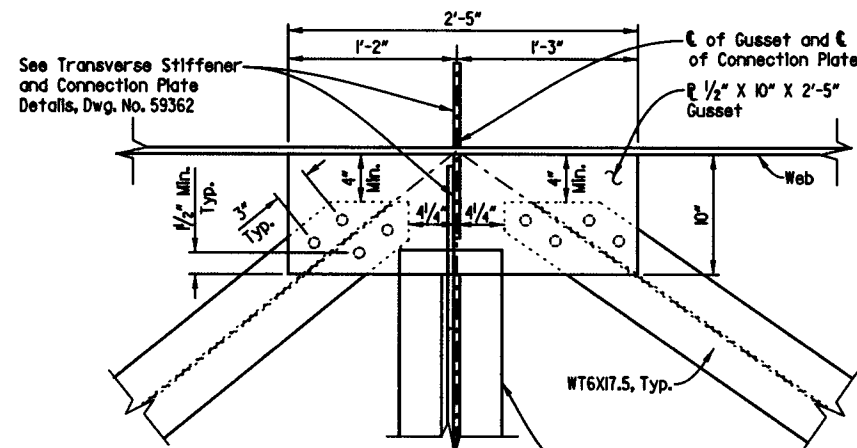
Stage 1 construction lateral bracing shall be installed between Girder No. 8 and 9 during Stage 1 girder erection. The Contractor shall provide adequate lateral support for the erected girders while the Stage 1 construction lateral bracing is installed. After the entire Stage 1 deck has been poured and cured, the Stage 1 construction lateral bracing shall be removed and reused between Girder No. 13 and 14 during Stage 2 girder erection. The Contractor shall provide adequate lateral support for the erected girders while the Stage 2 construction lateral bracing is installed. After the entire Stage 2 deck has been poured and cured, the Stage 2 construction lateral bracing shall be removed and reused between Girder No. 3 and 4 during Stage 3 girder erection. The Contractor shall provide adequate lateral support for the erected girders while the Stage 3 construction lateral bracing is installed. After the entire Stage 3 deck has been poured and cured, the Stage 3 construction lateral bracing shall be removed and shall become the property of the Contractor.

Safety Handrail not shown for Clarity. See Dwg. No. 59364.

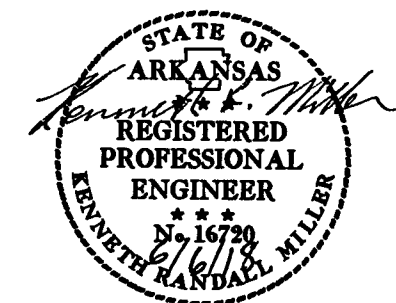
Note: Intermediate Cross Frame not shown.



DETAIL A
Right hand shown, left hand similar.
Scale: 1/2" = 1'-0"



DETAIL C
Begin bridge shown, and bridge opposite hand.
Scale: 1/2" = 1'-0"

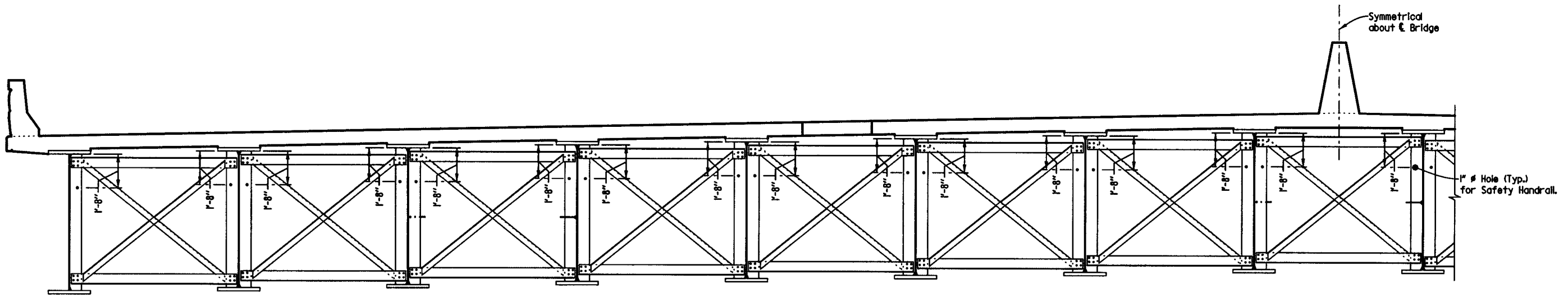


SHEET 6 OF 10
DETAILS OF 237'-0' SIMPLE
COMPOSITE PLATE GIRDER SPAN

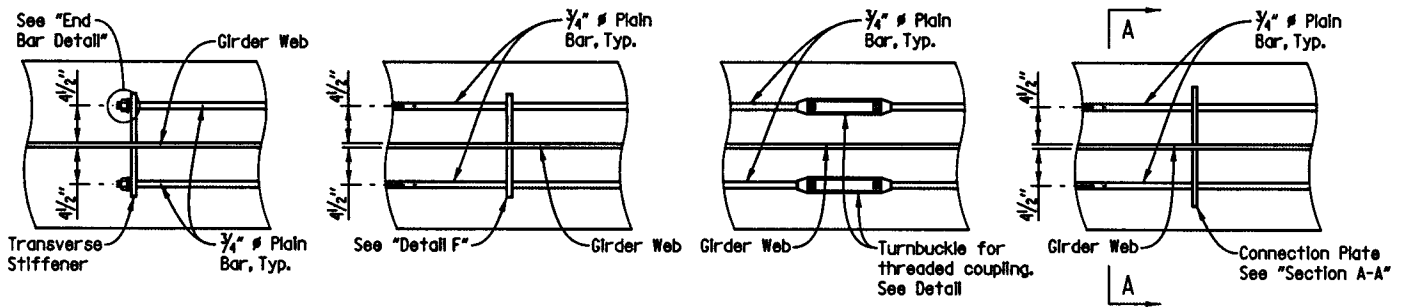
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BIC DATE: 1-28-15 FILENAME: bbb0903_s6.dgn
CHECKED BY: CAW DATE: 1-22-15 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 1-21-15
BRIDGE NO. 07405 DRAWING NO. 59363

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	193	368	
				07405	SPAN DETAILS		59364	



TYPICAL ROADWAY SECTION
Scale: 3/8" = 1'-0"

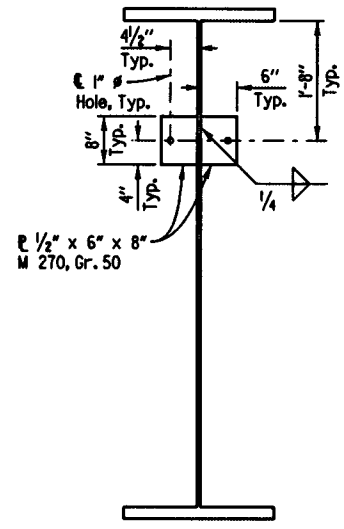


DETAILS OF FIELD ERECTED SAFETY HANDRAILS
No Scale

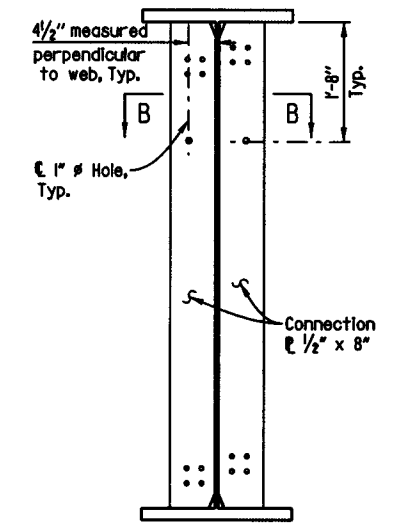
Unless otherwise noted, all structural steel in safety handrails shall conform to the requirements of AASHTO M 270, GR. 36 and Section 807.

Structural steel, including 3/4" # plain bar and support plates shall be included in the 237' span structural steel quantities. Turnbuckles shall not be paid for directly but shall be subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. 50)".

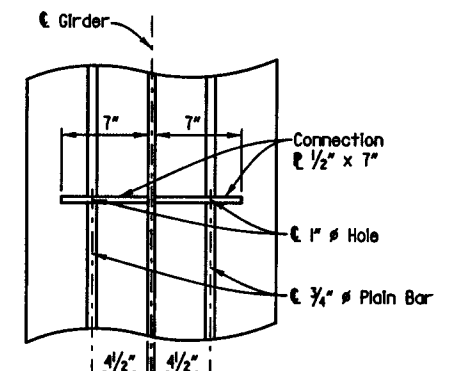
The 3/4" # plain bar, turnbuckles and accessories shall be galvanized according to AASHTO M 232, Class C or AASHTO M 298, Class 50. All galvanizing will not be paid for directly, but will be subsidiary to the item of "Structural Steel in Plate Girder Spans (M 270, Gr. 50)".



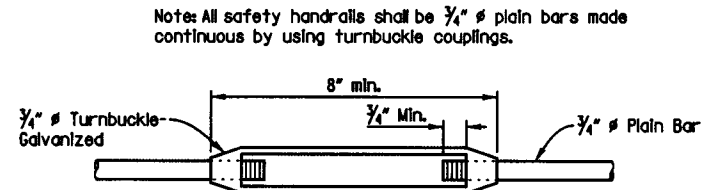
DETAIL F
No Scale



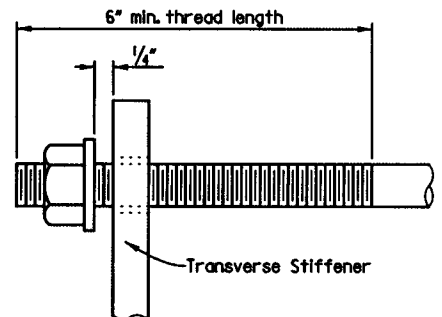
SECTION A-A
No Scale



SECTION B-B
No Scale



TURNBUCKLE FOR THREADED COUPLING
No Scale

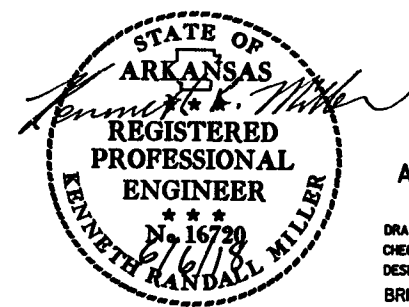


END BAR DETAIL
No Scale

3/4" # Heavy hex nuts with standard washer. After gap width has been set, tack weld heavy hex nut to plain bar.

Gap width shall be set after slab has been poured.

SHEET 7 OF 10
DETAILS OF 237'-0' SIMPLE COMPOSITE PLATE GIRDER SPAN

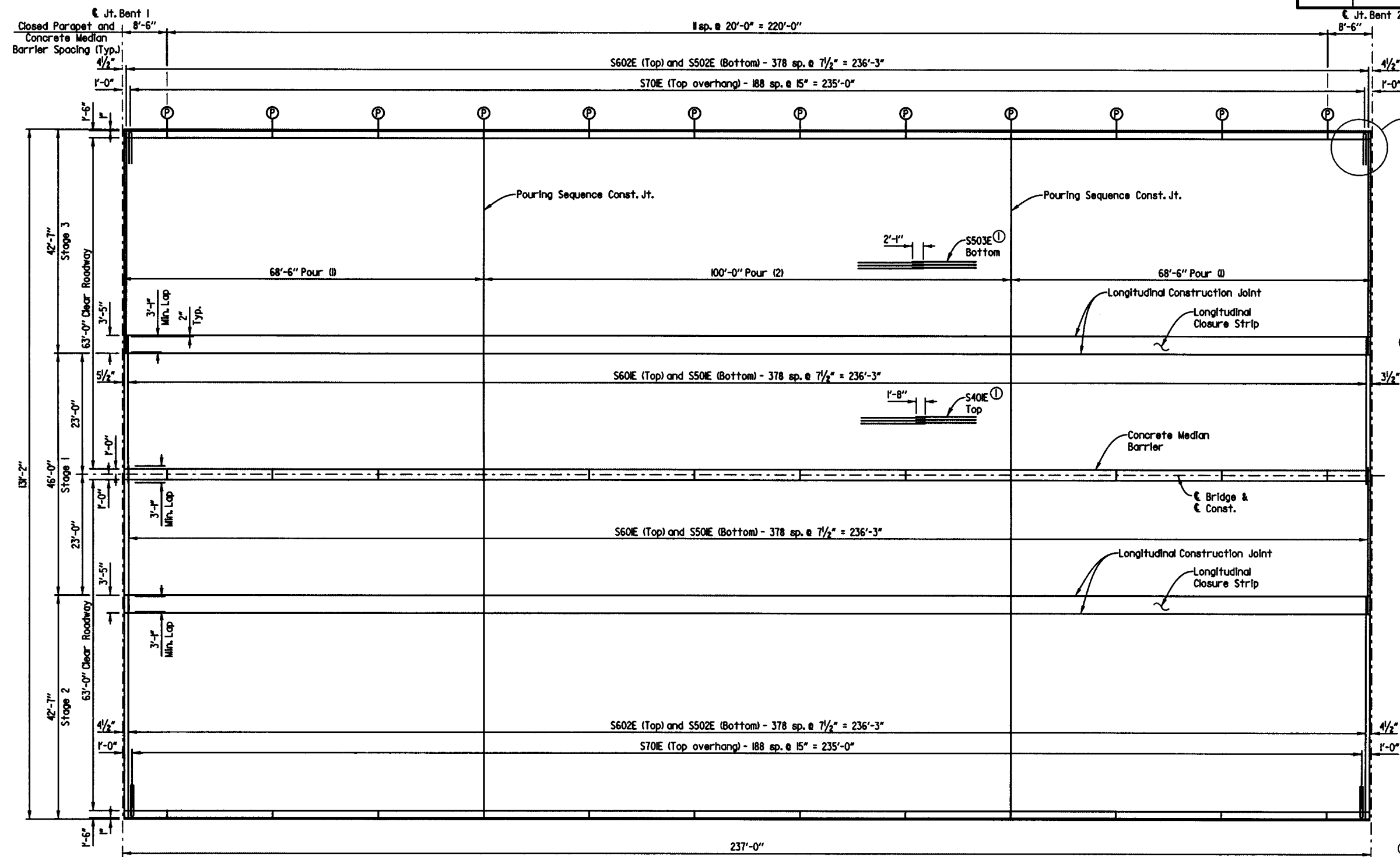


ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 1-08-15 FILENAME: bbb0903.s7.dgn
CHECKED BY: CAW DATE: 1-22-15 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 1-01-15
BRIDGE NO. 07405 DRAWING NO. 59364

USER: CTAUSER
DESIGN FILE: G:\2013\05_Hwy7\hwy7\TRANSP\dgn\bridge\bbb0903.s7.dgn
PLOTTED: 6/6/2018 10:06:58 AM SCALE: 5.3333 / in.

DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	194	368	
				07405	SPAN DETAILS		59365	

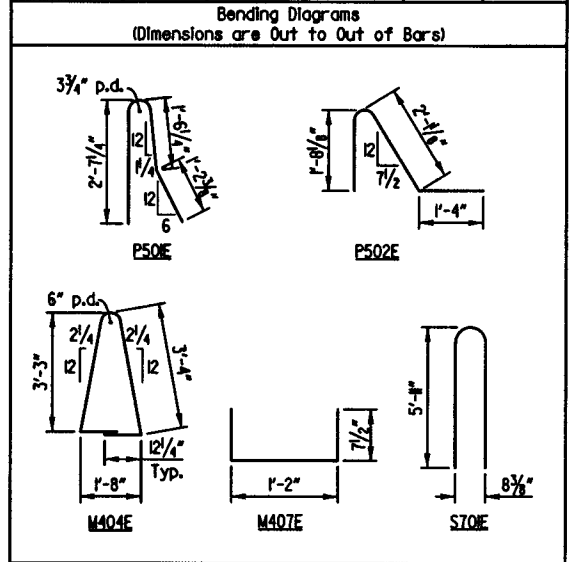


Ⓟ Partial-Depth Parapet Joint (1/4" to 1" max.). Stop 1'-2" from top of slab. See Dwg. No. 59366.
Notes: Bars with an "E" designation shall be epoxy coated.

See Detail 'Q', Typ.

BAR LIST

Mark	Number Required	Length	"A"	"B"	Pin Diameter
P401E	28	35'-3"			Str.
P402E	28	35'-10"			Str.
P403E	66	19'-6"			Str.
P404E	12	7'-8"			Str.
P501E	756	5'-7"			3 3/4"
P502E	756	4'-9"			3 3/4"
M401E	14	35'-3"			Str.
M402E	14	35'-10"			Str.
M403E	44	19'-6"			Str.
M404E	378	8'-8"			2"
M405E	756	1'-0"			Str.
M406E	8	7'-8"			Str.
M407E	378	2'-3"			2"
S401E	651	35'-3"			Str.
S501E	758	27'-10"			Str.
S502E	758	42'-3"			Str.
S503E	790	49'-0"			Str.
S601E	758	27'-10"			Str.
S602E	758	42'-2"			Str.
S701E	378	12'-1"			6 3/8"



Ⓣ Ends threaded for Mechanical coupler. Length of bar does not include any additional length for engagement into Mechanical Coupler. The actual length of bar engagement into the Mechanical Coupler shall be determined by the Mechanical Coupler Manufacturer, and the length of the bar shall be adjusted accordingly.

SHEET 8 OF 10
DETAILS OF 237'-0" SIMPLE COMPOSITE PLATE GIRDER SPAN

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BNC DATE: 1-08-16 FILENAME: bbb0903_e8.dgn
CHECKED BY: CAW DATE: 1-09-16 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 1-01-16
BRIDGE NO. 07405 DRAWING NO. 59365

USER: CTAUSER
DESIGN FILE: G:\2103305_Hwy7\bridge\TRANS\p\dgn\bridge\bbb0903_e8.dgn
PLOTTER: 6/6/2016 8:30:58 AM SCALE: 2/32 = 1/8" = 1'-0"

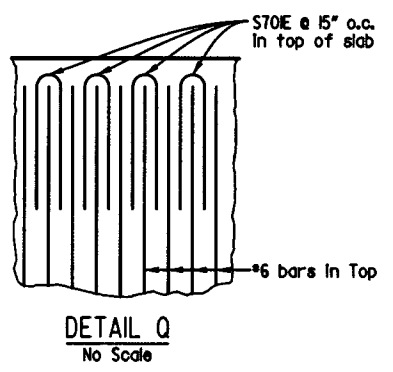
Notes: The S501E and S601E bars have been offset to avoid conflicts with Stage 2 and Stage 3 lap splices.

Note: For each Stage of Construction, pours with the same number may be placed simultaneously or separately. Pour (1) must be placed before Pours (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between completion of the slab and the pouring of the parapet and median railing. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence.

Concrete in bridge superstructure shall be placed, consolidated and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

Note: A longitudinal screed is not permitted for concrete placement procedure.

REINFORCING PLAN
Scale: 1/2" = 1'-0"

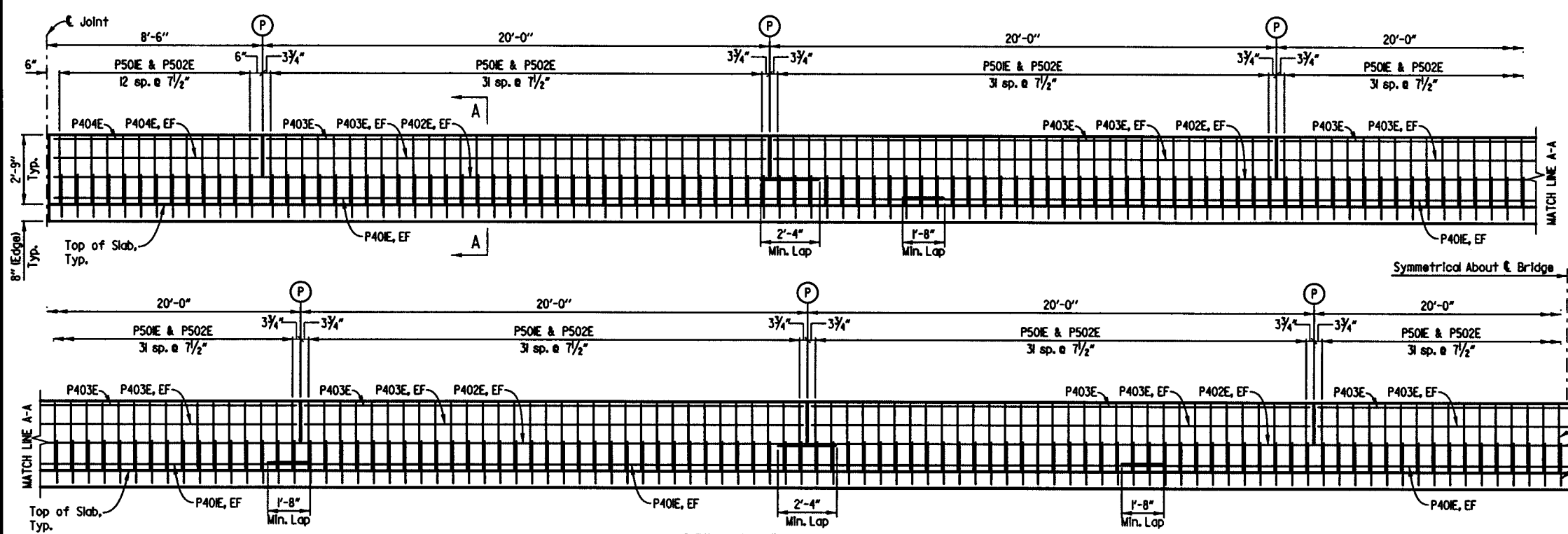


Ⓛ Place reinforcing as shown in Typical Roadway Section.

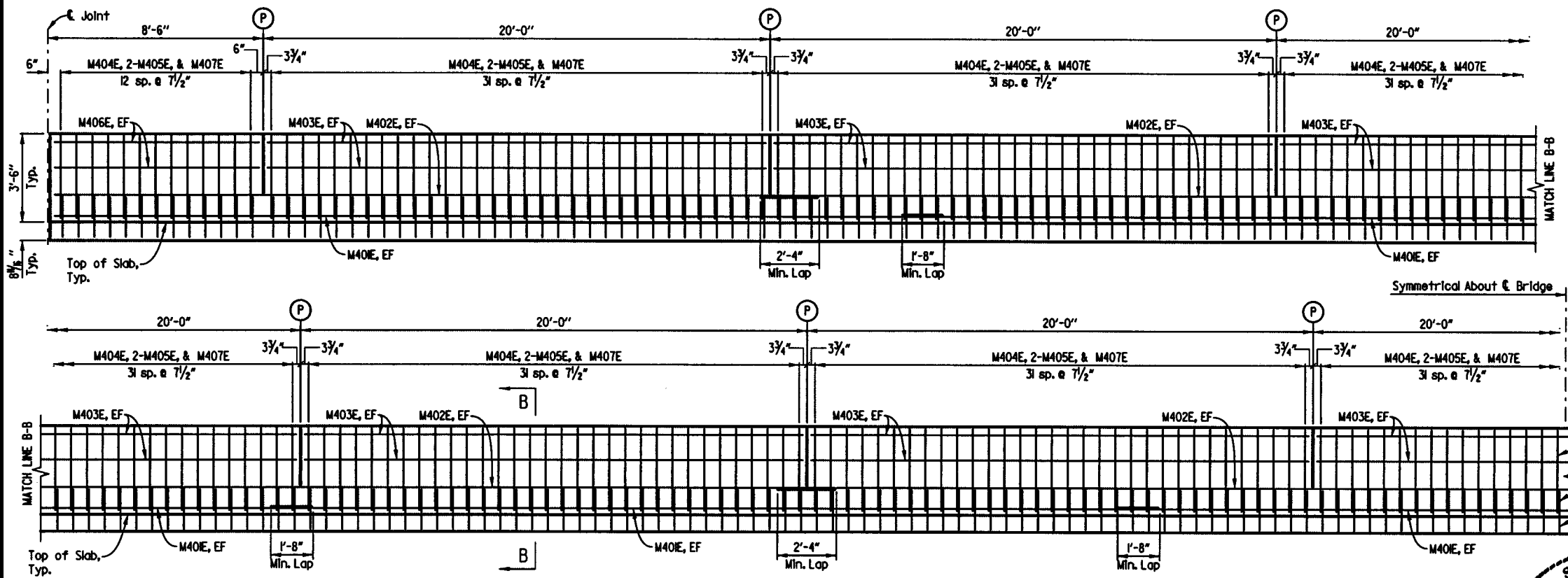


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. BBO903	195	368

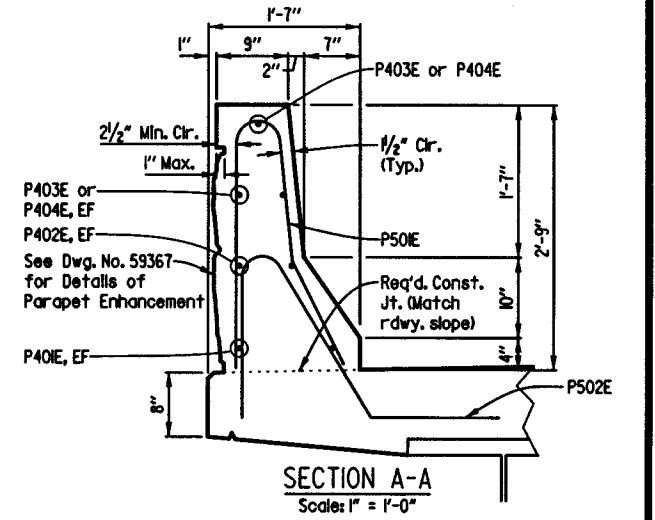
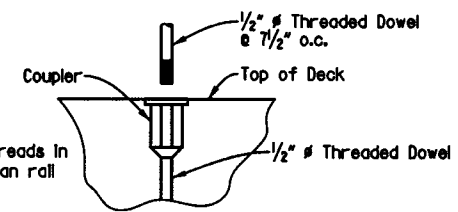
07405 SPAN DETAILS 59366



DETAILS OF CLOSED PARAPET
Scale: 3/8" = 1'-0"



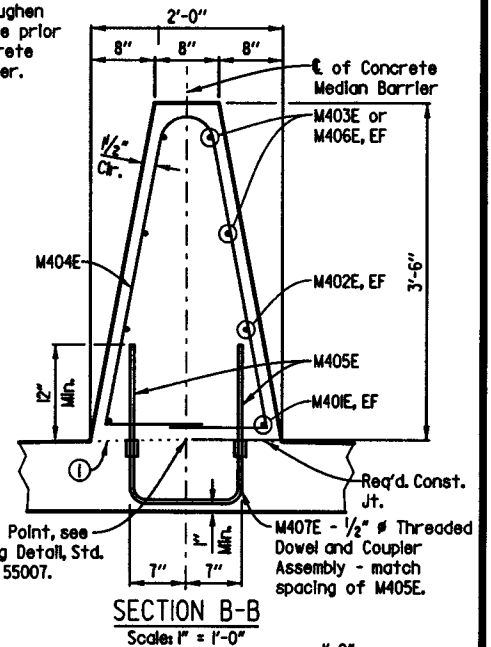
DETAILS OF CONCRETE MEDIAN BARRIER
Scale: 3/8" = 1'-0"



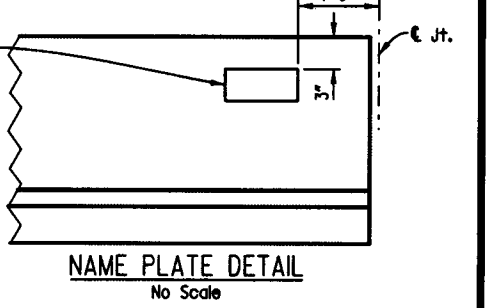
The Threaded Dowel and Coupler Assembly shall consist of a OPL approved mechanical splice with protective cap and threaded dowel bars as shown and shall develop at least 125% of the yield strength of the dowelbars.

Dowel bars shall be of minimum 60 ksi yield strength and threaded as required. Threaded Dowel and Coupler Assembly, except mating surfaces, shall be epoxy coated in accordance with the requirements of Section 804.

The Threaded Dowel and Coupler Assembly will not be paid for separately, but will be considered included in the unit bid price for "Epoxy Coated Reinforcing Steel (Grade 60)".



Place Type D Bridge Name Plate on front face of right side of Begin Bridge only, approx. 1'-0" from Joint.



SHEET 9 OF 10
DETAILS OF 237'-0" SIMPLE COMPOSITE PLATE GIRDER SPAN

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BRC DATE: 1-22-16 FILENAME: bbb0903.s9.dgn
CHECKED BY: CAM DATE: 1-22-16 SCALE: SEE DETAILS
DESIGNED BY: KFM DATE: 1-22-16
BRIDGE NO. 07405 DRAWING NO. 59366



USER: CTAUSER
DESIGN FILE: G:\2013\305_Hwy7\bridge\TRANSP\dgn\bridge\bbb0903.s9.dgn
PLOTTED: 6/6/2018 10:30:59 AM SCALE: 5.3133 1/16"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	196	368	
				07405	SPAN DETAILS	59367		

GENERAL NOTES

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (2014, 7th Edition)

LIVE LOADING: HL-93

CONCRETE:

Concrete in the bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

STRUCTURAL STEEL:

Unless otherwise noted, Field Connections and splices shall be bolted with 3/4" # High-Strength Bolts using 5/8" # open holes. The use of oversized holes will not be allowed on main members unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior Girder Webs and on the bottom of the Girder Flanges.

All stud connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the manufacturer.

All structural steel except galvanized steel and steel which is completely encased in concrete shall be painted in accordance with Subsection 807.75. The color of paint shall conform to Federal Std. 595B, Color Chip 2622, Dark Gray.

Girder web and flange plates and field splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered as subsidiary to the Item "Structural Steel in Plate Girder Spans (M 270, Gr. 50)" and "Structural Steel in Plate Girder Spans (M 270, Gr. HPS 70W)".

Cross-Frames and Lateral Bracing shall be installed as Girders are erected. Traffic shall not be allowed underneath an erected girder until it is adequately braced to an adjacent girder. During each stage of construction, girders with lateral bracing shall be erected before girders without lateral bracing are erected. The Contractor may have to use falsework to temporarily support the girders during erection. If used, temporary falsework shall be removed prior to pouring the deck. All bolts in Cross-Frames, Lateral Bracing, and Field Splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the Concrete Deck unless noted otherwise.

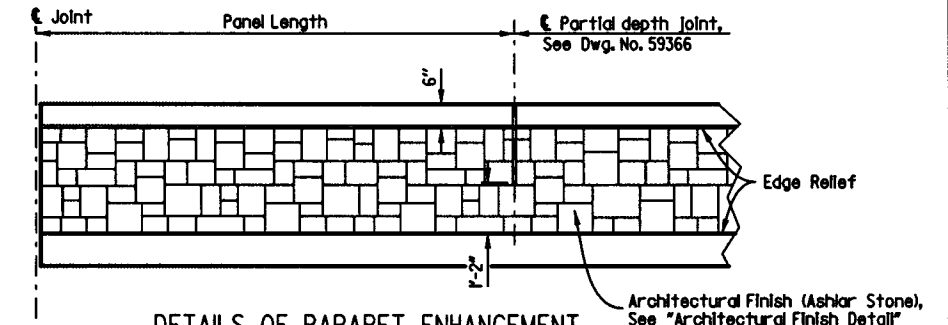
REMOVAL OF STRUCTURAL STEEL:

The existing paint system used on the existing beams consists of a lead based paint system. The Contractor shall take all necessary steps to protect the workers and public while removing the existing beams.

REMOVAL OF EXISTING DECK:

The deck removal shall progress in a manner that will ensure the stability of the existing structure. The concrete deck in the end spans shall not be removed before the deck in the interior spans has been removed. This work will not be paid for directly but will be considered subsidiary to the Item "Removal of Existing Bridge Structure (Br. No. A&B5977)".

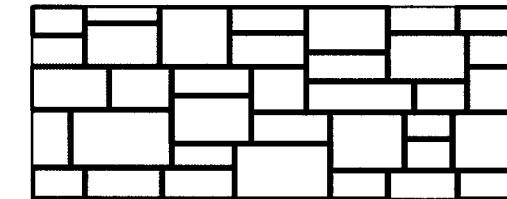
See Bridge Standard Dwg. Nos. 55005, 55006, and 55007 for additional details and notes.



DETAILS OF PARAPET ENHANCEMENT

No Scale

Notes: Slip forming of parapet panels shall not be permitted.



ARCHITECTURAL FINISH DETAIL

(Ashlar Stone)
No Scale

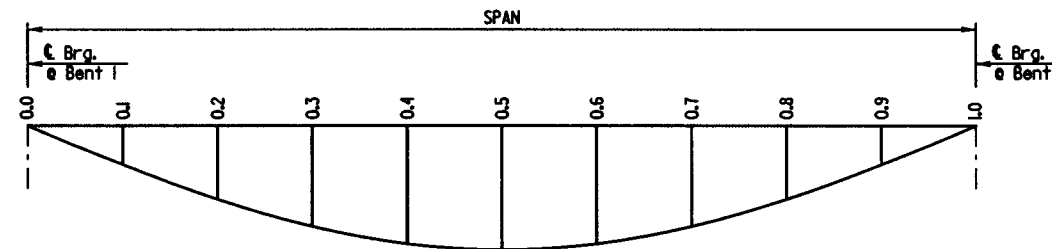
General Notes:

The pattern finish shall be applied to the exposed surfaces in accordance with the Special Provision Job No. BB0903 "Architectural Finish" and as shown in plans. Care shall be taken with form liner handling and installation to insure aesthetic quality of the pattern finish is maintained. Where form liner panels require modification to conform to the location, dimensions, and lines shown in the plans, the Contractor shall provide edge relief matching that of the unadorned form liner. Payment for pattern finish shall be in accordance with Special Provision Job No. BB0903 "Architectural Finish".

No adjustments will be made in concrete volume due to the use of "Architectural Finish". Class "SIAE" Concrete shall be measured in accordance with Subsection 802.24(a). Care shall be taken in placing concrete to avoid segregation and to eliminate flow lines.

Class 3 Textured Coated Finish shall be applied to surfaces as specified in Special Provision Job No. BB0903 "Textured Coating Finish".

For details and dimensions not shown see Dwg. No. 59366.



DEAD LOAD DEFLECTION DIAGRAM

No Scale

TABLE OF DEAD LOAD DEFLECTIONS - INCHES

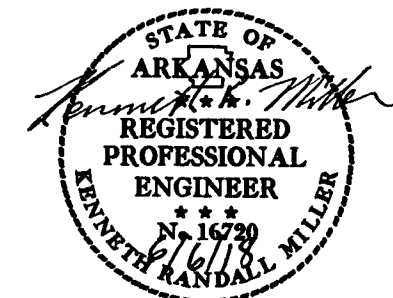
Point of Deflection	STAGE 1: ① GIRDERS 7, 8, 9, & 10, ② GIRDERS 6 & 11						STAGE 2: ③ GIRDERS 13, 14, & 15, ④ GIRDERS 12 & 16						STAGE 3: ⑤ GIRDERS 2, 3, & 4, ⑥ GIRDERS 1 & 5					
	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Median Rail + Longit. Closure Strip		Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet + Median Rail + Longit. Closure Strip		Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet + Median Rail + Longit. Closure Strip	
	①	②	①	②	①	②	③	④	③	④	③	④	⑤	⑥	⑤	⑥	⑤	⑥
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.1	2.239	2.239	6.054	5.092	6.320	5.364	2.239	2.239	6.054	5.318	6.594	5.871	2.239	2.239	6.054	5.318	6.546	5.822
0.2	4.236	4.236	11.455	9.633	11.957	10.148	4.236	4.236	11.455	10.061	12.475	11.108	4.236	4.236	11.455	10.061	12.384	11.014
0.3	5.800	5.800	15.683	13.189	16.369	13.894	5.800	5.800	15.683	13.775	17.080	15.207	5.800	5.800	15.683	13.775	16.955	15.079
0.4	6.793	6.793	18.368	15.447	19.172	16.272	6.793	6.793	18.368	16.133	20.003	17.811	6.793	6.793	18.368	16.133	19.857	17.661
0.5	7.133	7.133	19.287	16.221	20.132	17.087	7.133	7.133	19.287	16.941	21.005	18.702	7.133	7.133	19.287	16.941	20.851	18.545
0.6	6.793	6.793	18.368	15.447	19.172	16.272	6.793	6.793	18.368	16.133	20.003	17.811	6.793	6.793	18.368	16.133	19.857	17.661
0.7	5.800	5.800	15.683	13.189	16.369	13.894	5.800	5.800	15.683	13.775	17.080	15.207	5.800	5.800	15.683	13.775	16.955	15.079
0.8	4.236	4.236	11.455	9.633	11.957	10.148	4.236	4.236	11.455	10.061	12.475	11.108	4.236	4.236	11.455	10.061	12.384	11.014
0.9	2.239	2.239	6.054	5.092	6.320	5.364	2.239	2.239	6.054	5.318	6.594	5.871	2.239	2.239	6.054	5.318	6.546	5.822
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note:
Camber for Dead Load Deflection plus Vertical curve ±1/4" tolerance.
Deflections shown are off a chord from € Bearing to € Bearing.
Vertical curve corrections not included.

Revisions to the "Table of Dead Load Deflections" may be necessary upon review of the Contractor's Submitted forming details.

Girders 5, 6, 11 & 12 are Exterior Girders during staged construction.

Note: During their erection, the Contractor may have to use an additional crane and pick point at midspan of Girders 1, 5, 6, 11, 12 and 16 in order to install the cross frames.

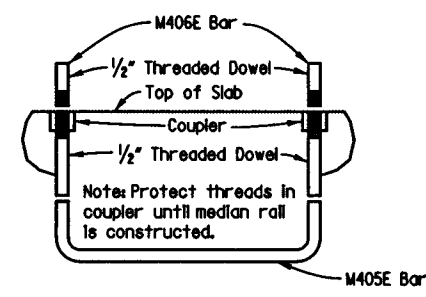
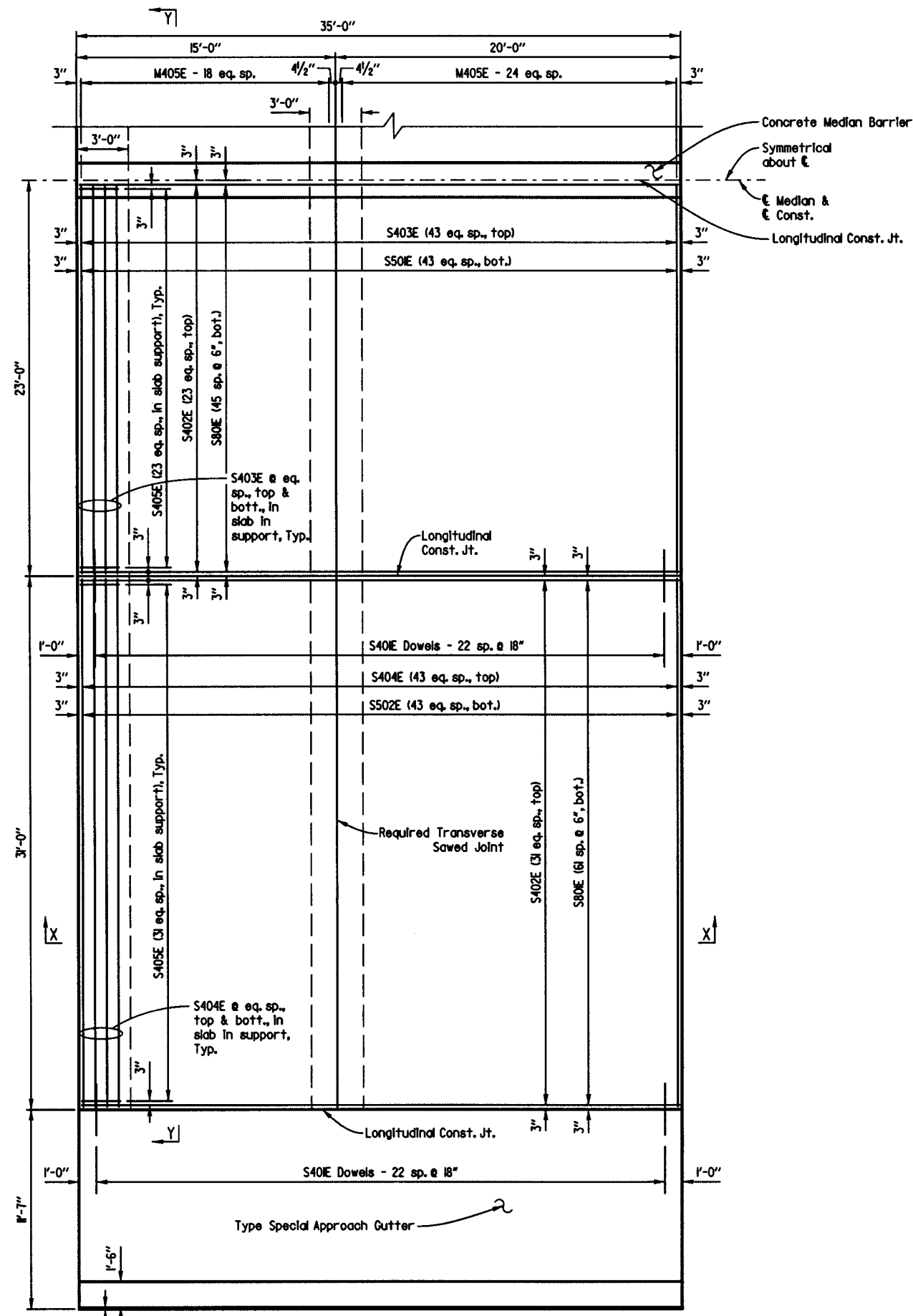


SHEET 10 OF 10
DETAILS OF 237'-0" SIMPLE
COMPOSITE PLATE GIRDER SPAN

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BFC DATE: 1-08-16 FILENAME: bbb0903_e10.dgn
CHECKED BY: CAW DATE: 1-21-16 SCALE: NO SCALE
DESIGNED BY: KRM DATE: 1-01-16
BRIDGE NO. 07405 DRAWING NO. 59367

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						BB0903	197	368
				1 07405	APPR. SLAB			59368

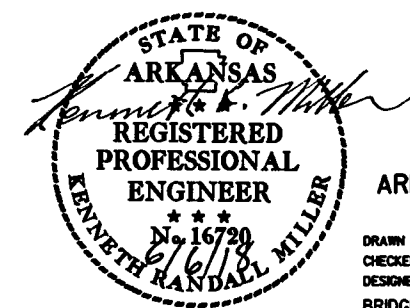


THREADED DOWEL AND COUPLER ASSEMBLY
No Scale

Notes:
The Threaded Dowel and Coupler Assembly shall consist of a QPL approved mechanical splice with protective cap and threaded dowel bars as shown and shall develop at least 125% of the yield strength of the dowel bars. Payment shall be based upon the weight of the M406E and M405E bars. Dowel bars shall be of minimum 60 ksi yield strength and threaded as required.

Threaded Dowel and Coupler Assembly, except mating surfaces, shall be epoxy coated in accordance with the requirements of Section 804.

PLAN - APPROACH SLAB
(Begin Bridge shown)
(End Bridge opposite hand)



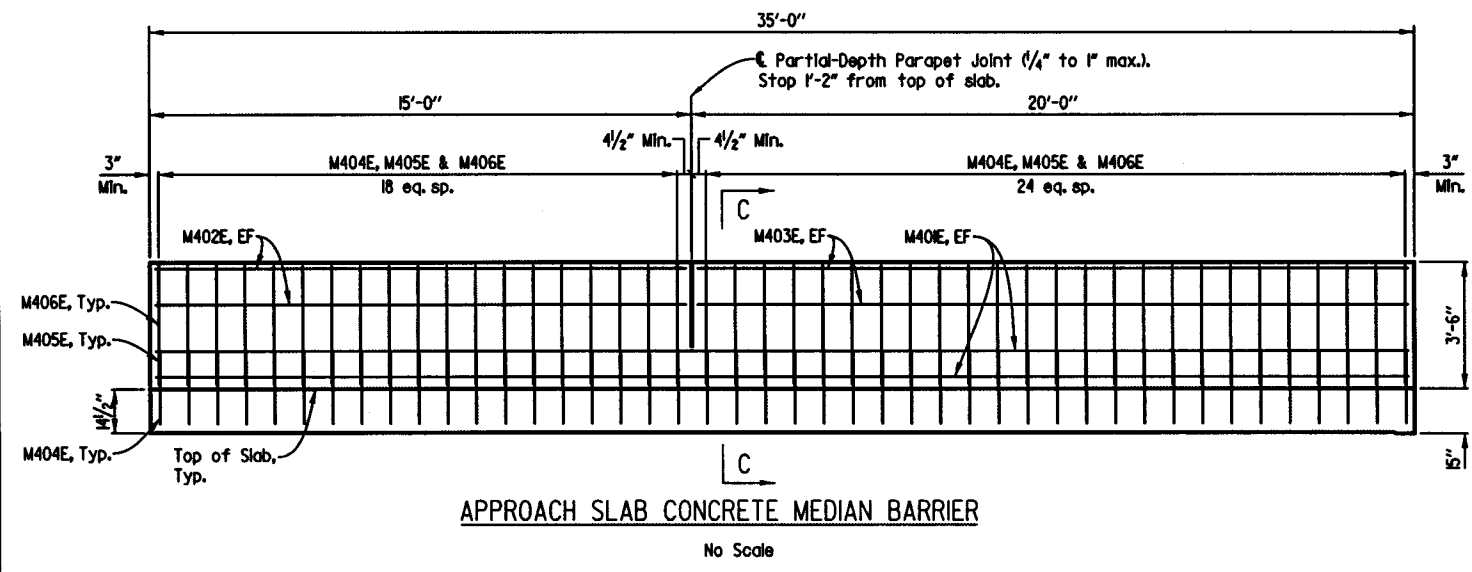
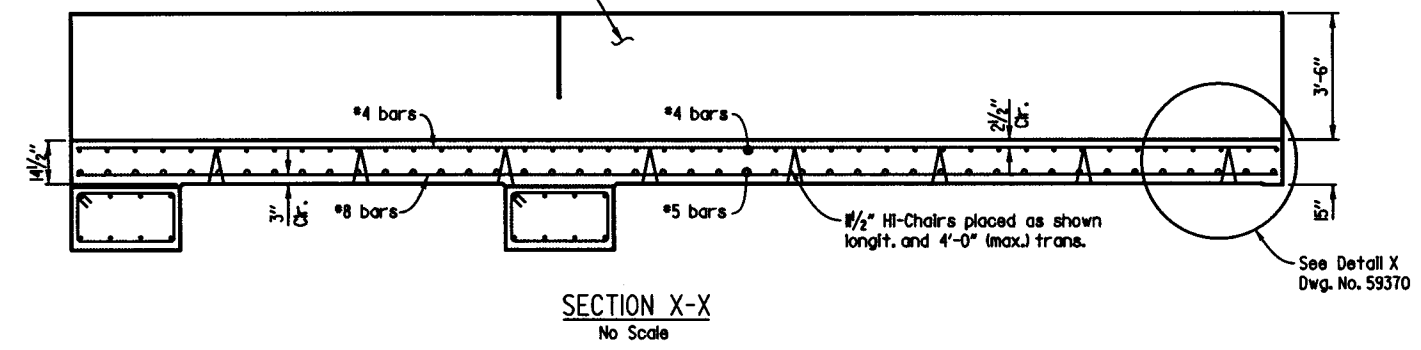
SHEET 1 OF 2
DETAILS OF TYPE SPECIAL APPROACH SLABS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: BRC DATE: 8-08-16 FILENAME: bbb0903.dwg
CHECKED BY: CAW DATE: 8-22-16 SCALE: SEE DETAILS
DESIGNED BY: KRM DATE: 8-01-16
BRIDGE NO. 07405 DRAWING NO. 59368

USER: CTAUSER
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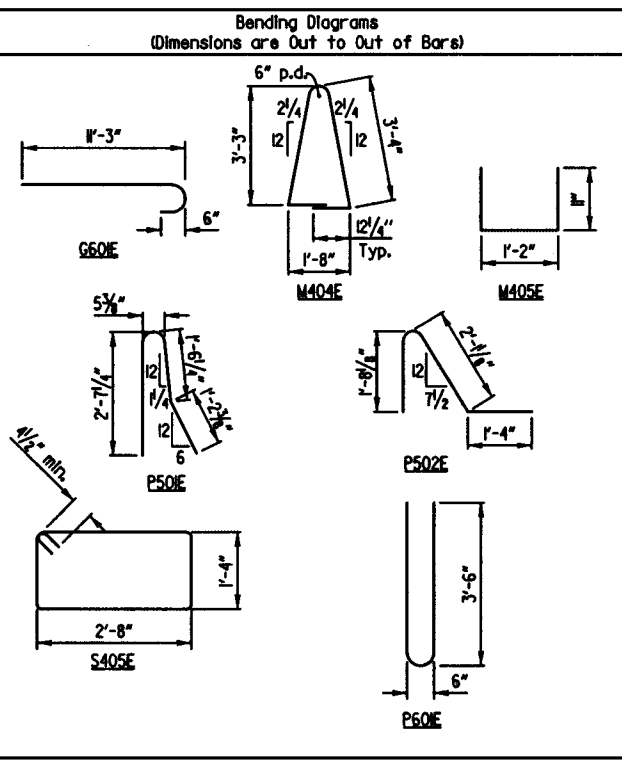
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				6	ARK.			
				JOB NO.	B80903	198	368	
				07405	APPROACH DETAILS		59369	

Reinforcing steel in Approach Median not shown for clarity. See detail "Approach Slab Concrete Median Barrier"



BAR LIST PER BRIDGE END

MARK	NO. REQ'D.	LENGTH	P.D.
G40E	26	34'-8"	Str.
G50E	6	34'-8"	Str.
G60E	140	1'-11"	4 1/2"
G602E	140	1'-3"	Str.
G80E	48	34'-8"	Str.
G802E	6	34'-8"	Str.
M40E	4	34'-8"	Str.
M402E	4	14'-8"	Str.
M403E	4	19'-8"	Str.
M404E	44	8'-11"	2"
M405E	44	2'-10"	2"
M406E	88	1'-0"	Str.
P40E	8	34'-6"	Str.
P402E	6	19'-8"	Str.
P403E	6	14'-8"	Str.
P50E	140	5'-7"	3 3/4"
P502E	122	4'-9"	3 3/4"
P60E	18	7'-2"	4 1/2"
S40E	92	3'-0"	Str.
S402E	112	34'-8"	Str.
S403E	120	23'-11"	Str.
S404E	120	30'-8"	Str.
S405E	224	8'-4"	2"
S50E	88	23'-11"	Str.
S502E	88	30'-8"	Str.
S80E	216	34'-8"	Str.



Note: Bars with an "E" designation shall be epoxy coated.

① Ends threaded for Mechanical coupler. Length of bar does not include any additional length for engagement into Mechanical Coupler. The actual length of bar engagement into the Mechanical Coupler shall be determined by the Mechanical Coupler Manufacturer, and the length of the bar shall be adjusted accordingly.

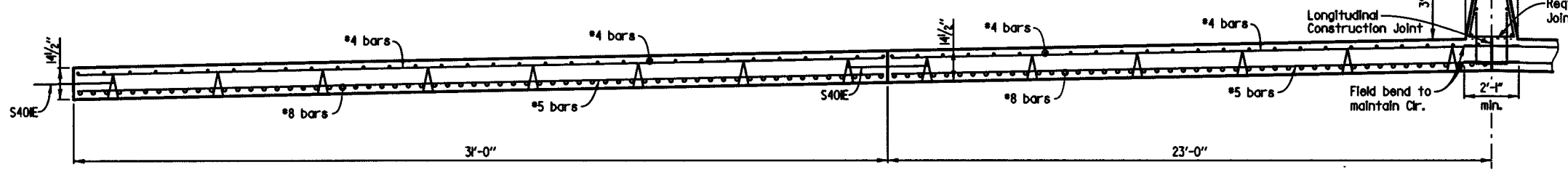
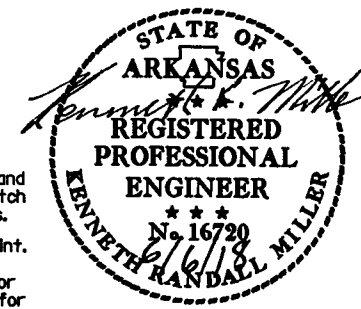
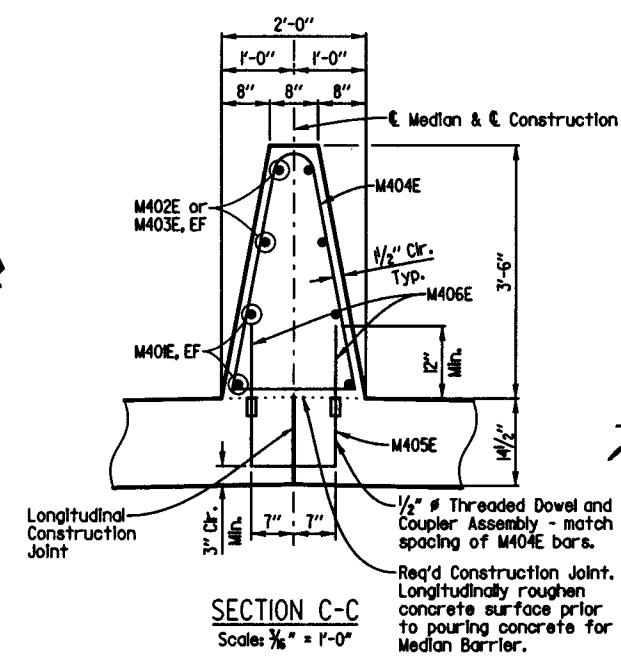
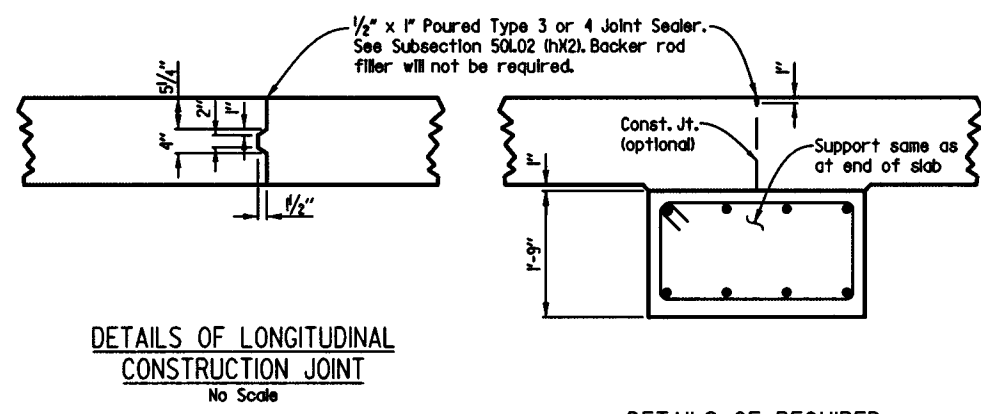
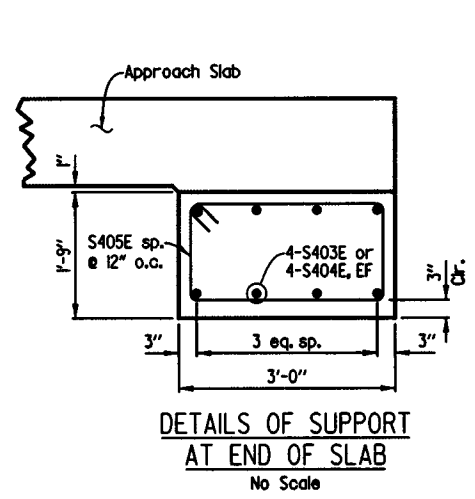


TABLE OF QUANTITIES FOR TYPE SPECIAL APPROACH SLABS (for information only)

Approach Slab	Req. of Bridge	Slab Width	Reinforcing Steel (lbs.)	Concrete (Cu. Yds.)
Approach Slab 1	Beg. of Bridge	108'-0"	34,000	219.3
Approach Slab 2	End of Bridge	108'-0"	34,000	219.3

GENERAL NOTES

All Concrete shall be Class (S)AE with a minimum 28 day compressive strength $f'_c = 4,000$ psi and shall be poured in the dry.
 All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.
 Approach Slabs will be measured and paid for in accordance with Section 504.
 Preformed joint and joint sealer included in the pay item "Approach Slabs".



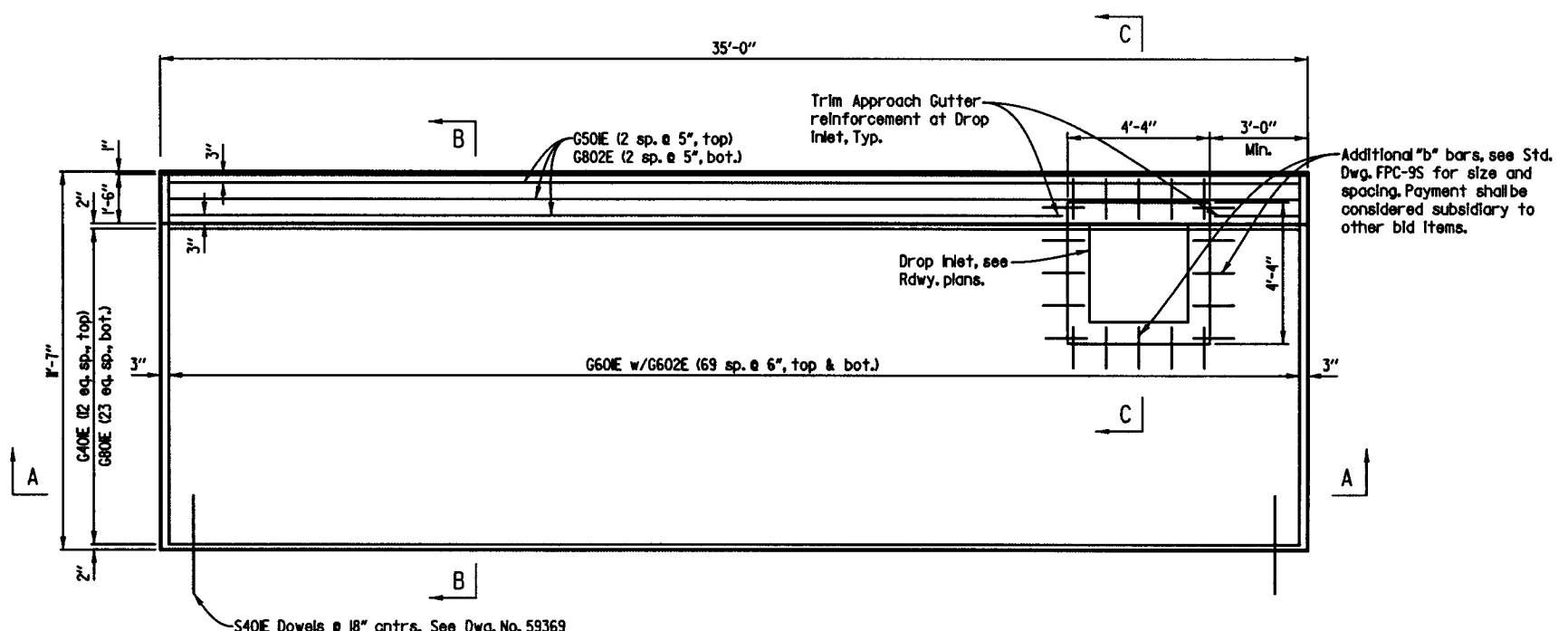
SHEET 2 OF 2
DETAILS OF TYPE SPECIAL APPROACH SLABS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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 CHECKED BY: CAW DATE: 1-22-16 SCALE: SEE DETAILS
 DESIGNED BY: RPM DATE: 1-01-16
 BRIDGE NO. 07405 DRAWING NO. 59369

USER: CTAUSER
 DESIGN FILE: G:\2103305_HwyTlnhgh\TRANSP\dgn\bridge\bb0903_a2.dgn
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	199	368	
				07405	GUTTER DETAILS	59370		



PLAN - APPROACH GUTTER
(Begin Bridge left shown, others similar)
Scale: 3/8" = 1'-0"

GENERAL NOTES

All concrete shall be Class S (AE) with a minimum 28 day compressive strength $f'_c = 4,000$ psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

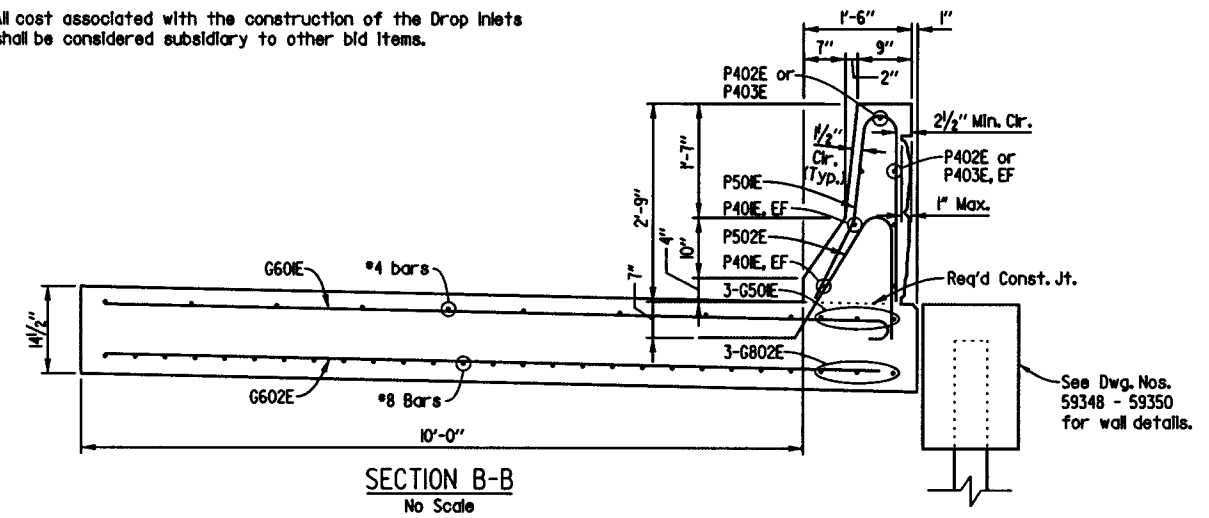
Approach Gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

For bar list, see Dwg. No. 59369.

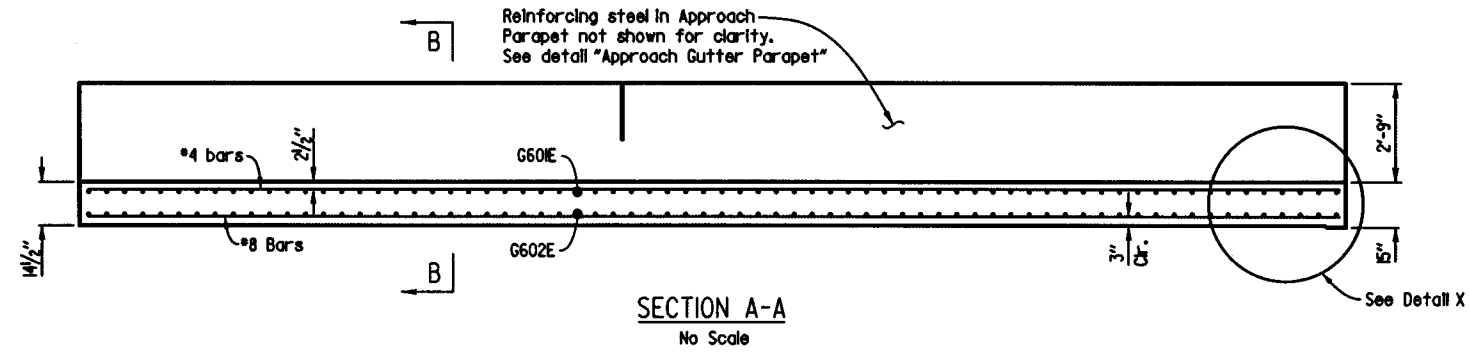
All cost associated with the construction of the Drop Inlets shall be considered subsidiary to other bid items.

TABLE OF QUANTITIES FOR TYPE SPECIAL APPROACH GUTTERS
(for information only)

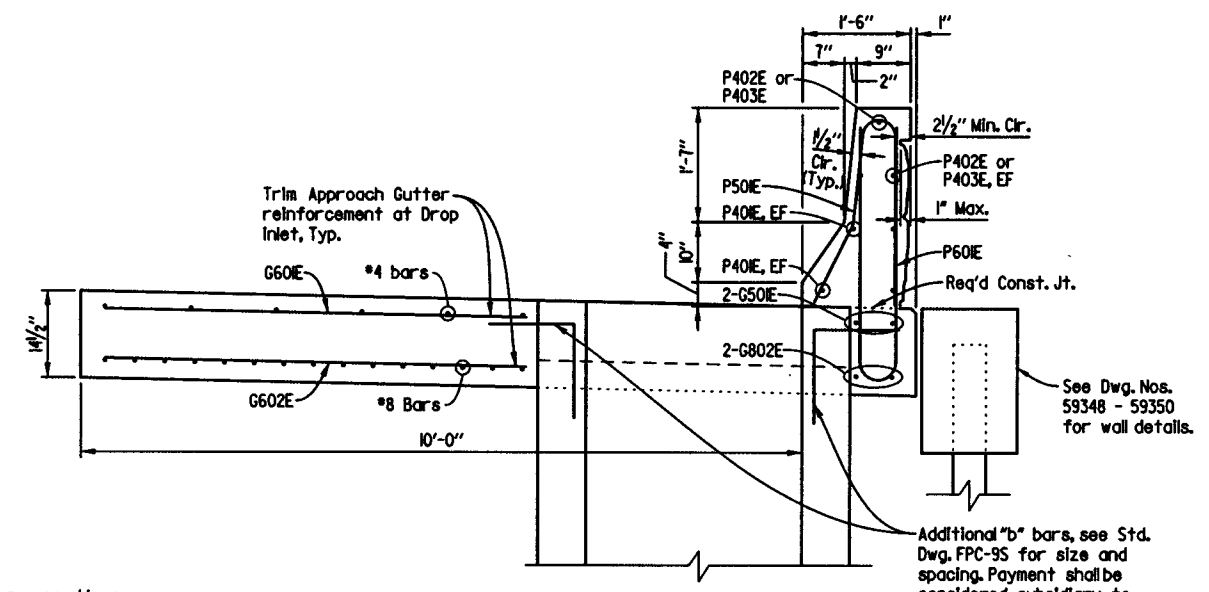
Approach Gutter	Slab Width	Reinforcing Steel (lbs.)	Concrete (Cu. Yds.)
Approach Gutter Beg. of Bridge	1'-7"	12,630	44
Approach Gutter End of Bridge	1'-7"	12,630	44



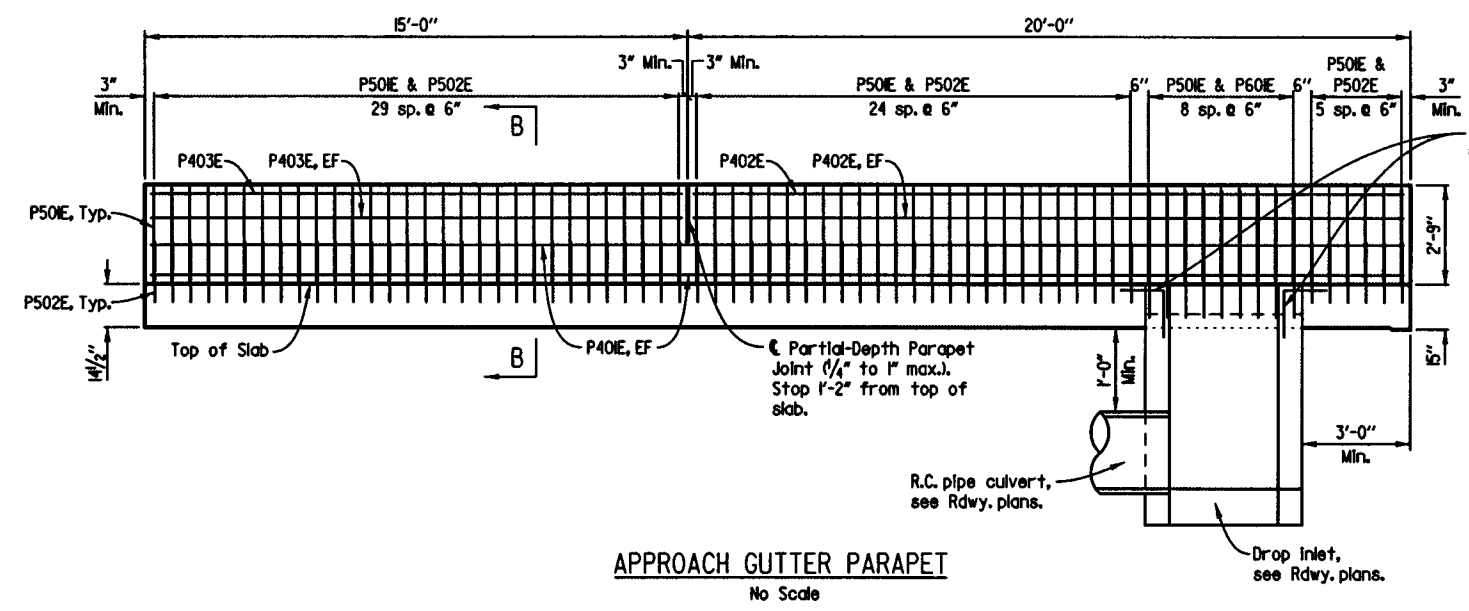
SECTION B-B
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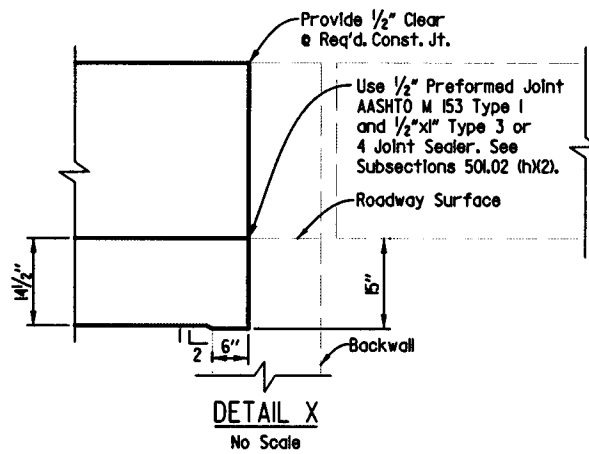
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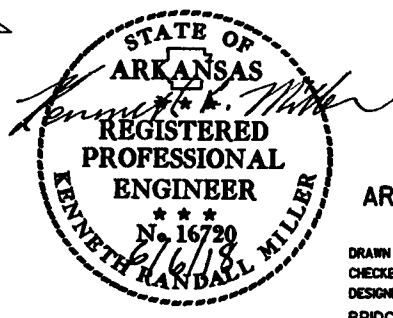
SECTION C-C
No Scale



APPROACH GUTTER PARAPET
No Scale



DETAIL X
No Scale



DETAILS OF TYPE SPECIAL APPROACH GUTTERS

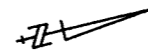
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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DESIGNED BY: KRM DATE: 1-01-15
BRIDGE NO. 07405 DRAWING NO. 59370

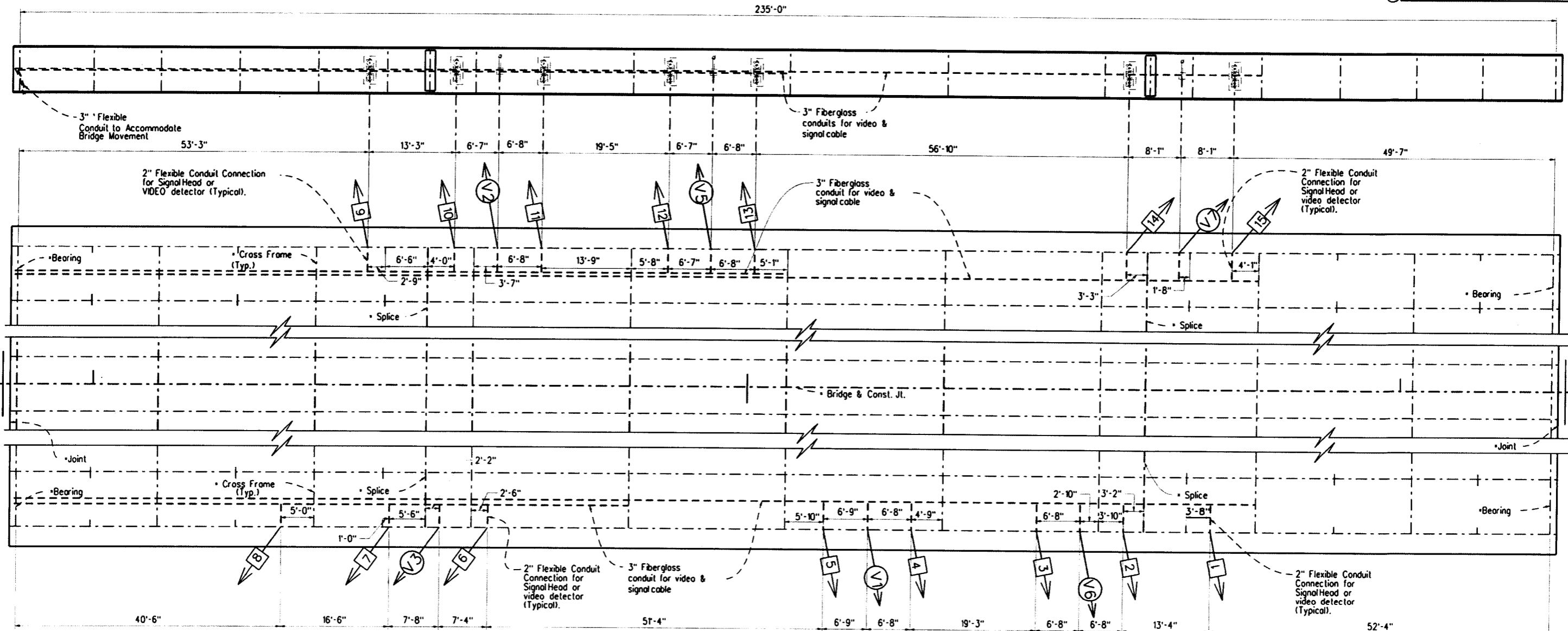
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ELEVATION EXTERIOR GIRDER WEST SIDE

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

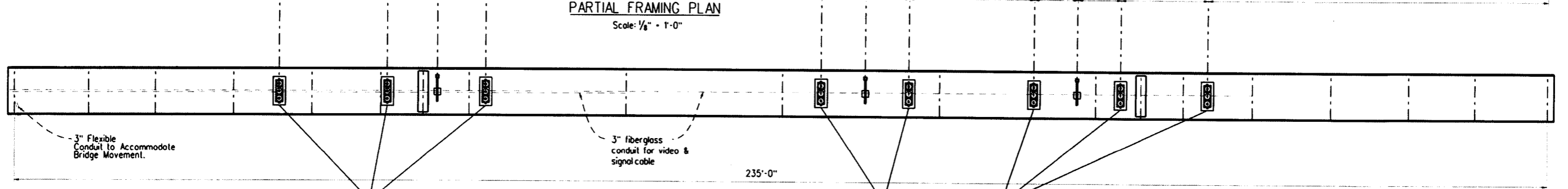


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				JOB NO.	BB0903	200	368	
				07405	SIGNAL ATTACHMENT		59371	



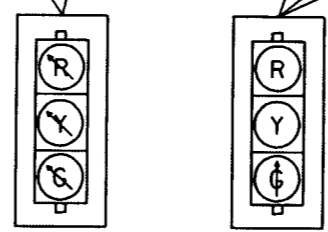
PARTIAL FRAMING PLAN

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



ELEVATION EXTERIOR GIRDER EAST SIDE

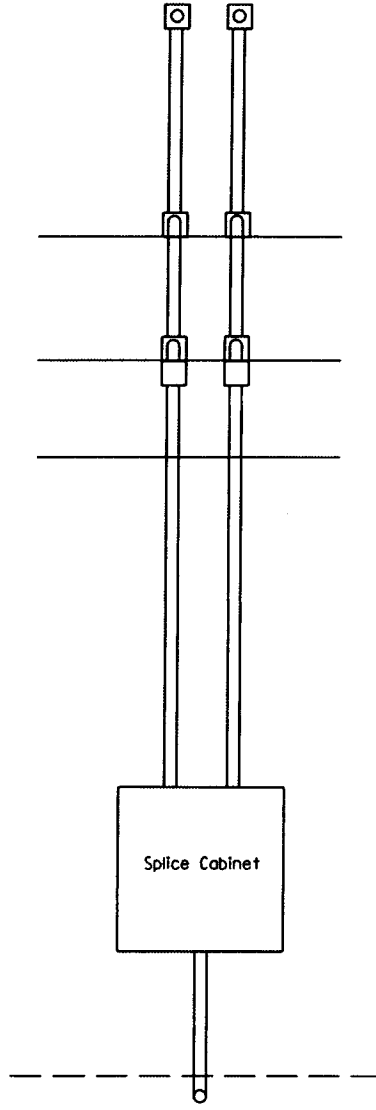
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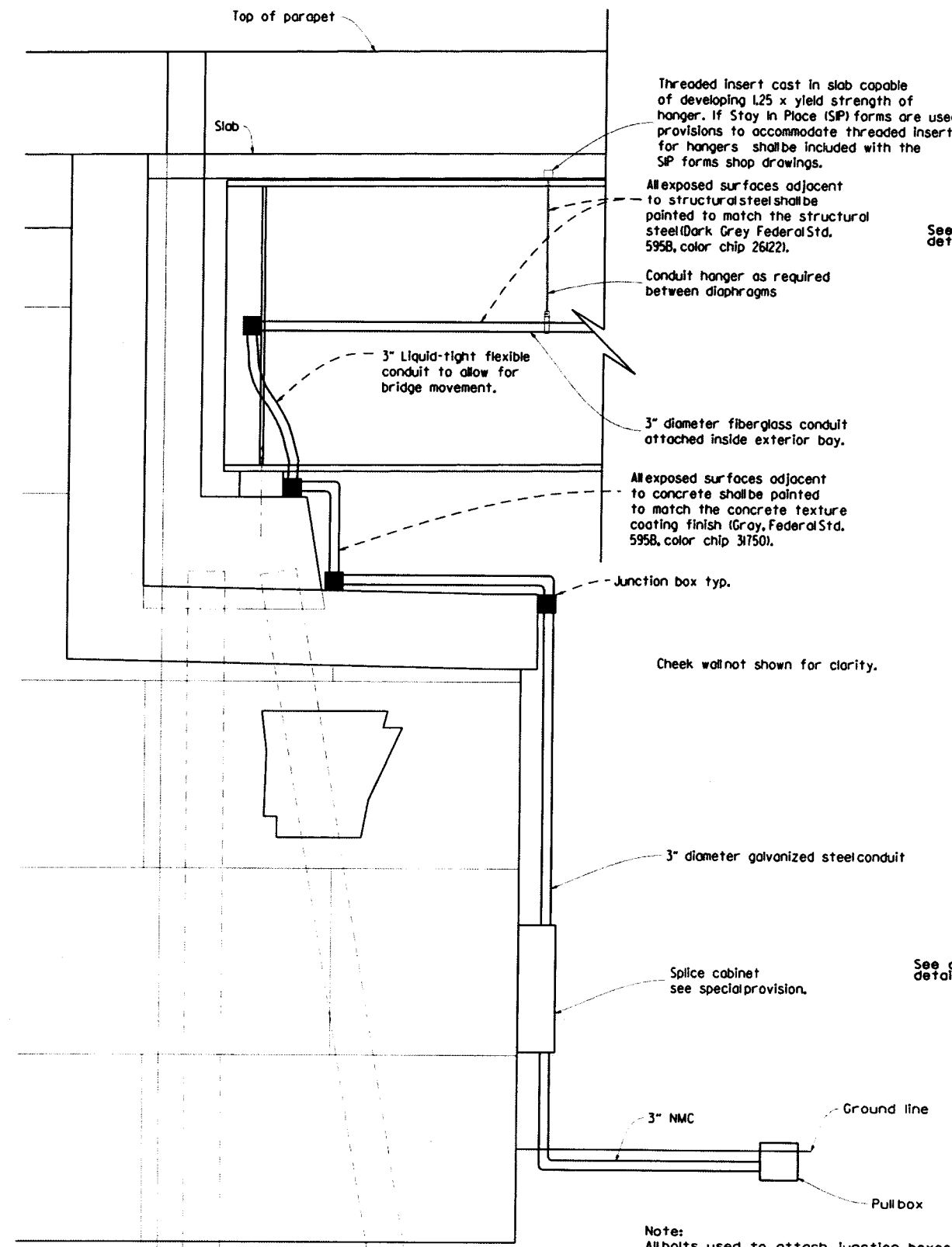
SHEET 1 OF 3
 DETAILS OF SIGNAL SUPPORTS
 ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: DRN DATE: 11-20-15 FILENAME: bbb0903xx_111.dgn
 CHECKED BY: SW DATE: 11-22-15 SCALE: 1/8" = 1'-0"
 DESIGNED BY: DRN DATE: 11-20-15
 BRIDGE NO. 07405 DRAWING NO. 59371

USER: 11656
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 PLOTTED: 04/23/18 10:38 MODEL: HWY71B SIGNALS SCALE: 1/8" = 1'-0"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. NO. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	201	368	
① 07405 SIGNAL ATTACHMENT 59372								



RISER ELEVATION



PARTIAL ABUTMENT ELEVATION

Threaded insert cast in slab capable of developing 1.25 x yield strength of hanger. If Stay in Place (SIP) forms are used, provisions to accommodate threaded inserts for hangers shall be included with the SIP forms shop drawings.

All exposed surfaces adjacent to structural steel shall be painted to match the structural steel (Dark Grey Federal Std. 595B, color chip 2622).

Conduit hanger as required between diaphragms

3" Liquid-tight flexible conduit to allow for bridge movement.

3" diameter fiberglass conduit attached inside exterior bay.

All exposed surfaces adjacent to concrete shall be painted to match the concrete texture coating finish (Gray, Federal Std. 595B, color chip 31750).

Junction box typ.

Cheek wall not shown for clarity.

3" diameter galvanized steel conduit

Splice cabinet see special provision.

3" NMC

Ground line

Pull box

Note:
 All bolts used to attach junction boxes, conduit or splice cabinet to the retaining wall and abutment shall be drilled and grouted with an approved epoxy grout in accordance with the manufacturer's recommended embedment and installation procedures.

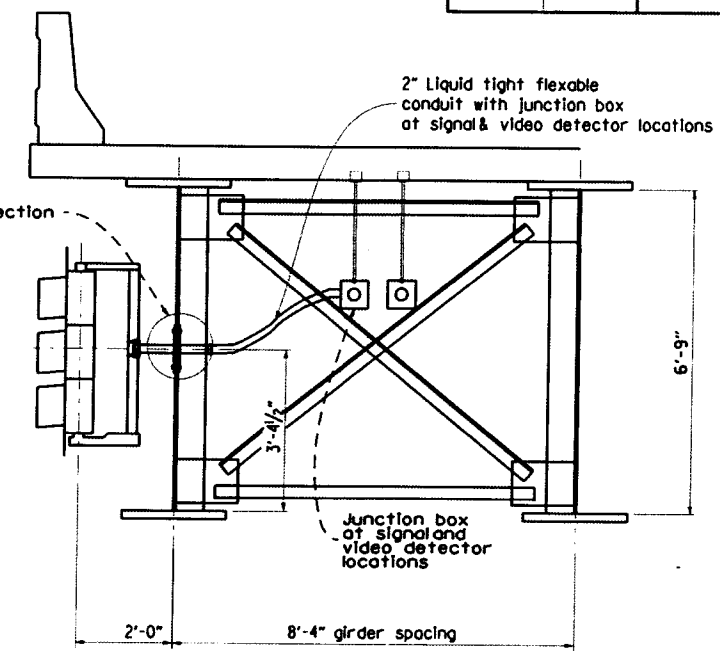
Size, type and method of supporting junction boxes at signal head and video detector locations shall be submitted for approval to the Engineer prior to bridge deck placement.

Liquid-tight metal flexible conduits will not be paid for directly, but will be considered subsidiary to item "FIBERGLASS CONDUIT H.D. (3")".

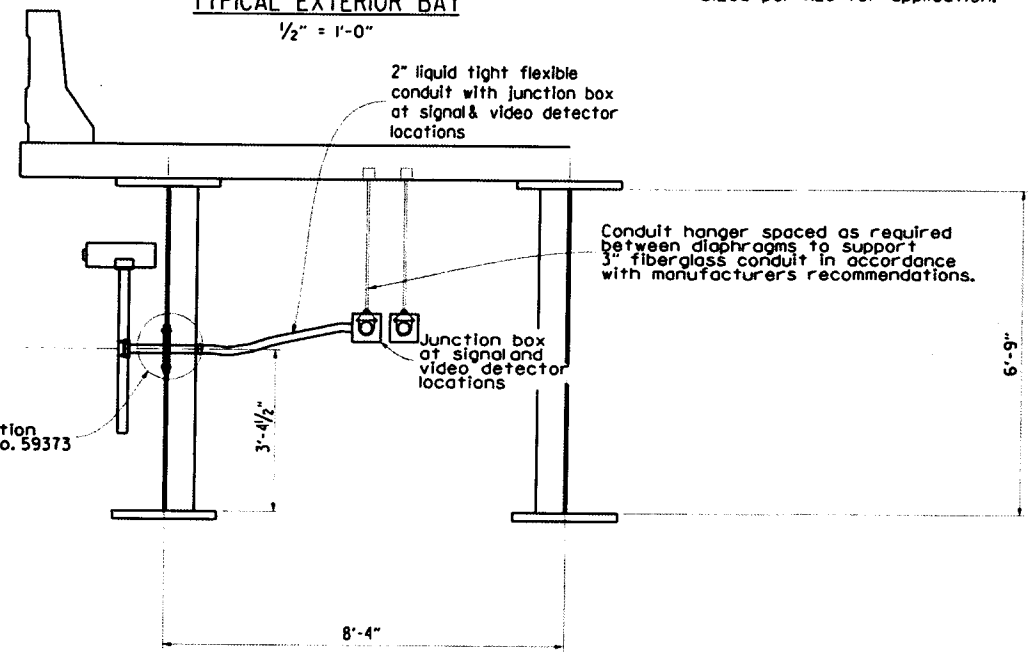
Provide surface mounted or exposed runs of conduit with either expansion joints or flexible conduit sections adequate to take care of vibrations and thermal expansion.

6/4/2018

FILE NAME: R:\Traffic Signals\Hwy 78\DRN SIGNAL BRDG SUPPORTS\bb0903xx.t12.dgn



TYPICAL EXTERIOR BAY
1/2" = 1'-0"



TYPICAL EXTERIOR BAY
1/2" = 1'-0"

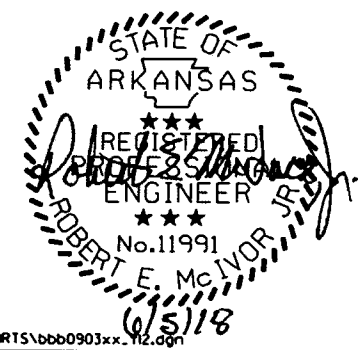
2" Liquid tight flexible conduit with junction box at signal & video detector locations

Junction box of signal and video detector locations

2" liquid tight flexible conduit with junction box at signal & video detector locations

Conduit hanger spaced as required between diaphragms to support 3" fiberglass conduit in accordance with manufacturer's recommendations.

Note:
 Junction boxes shall be NEMA 3R sized per NEC for application.



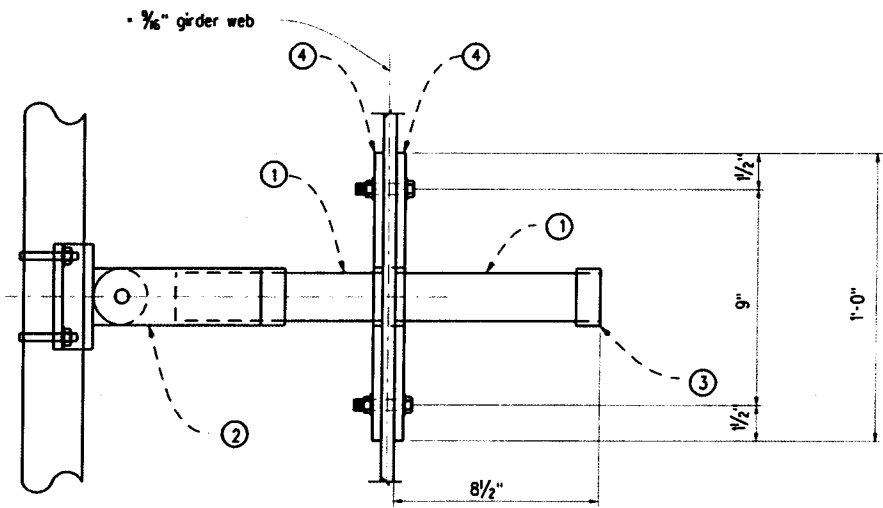
SHEET 2 OF 3
 DETAILS OF SIGNAL SUPPORTS

ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

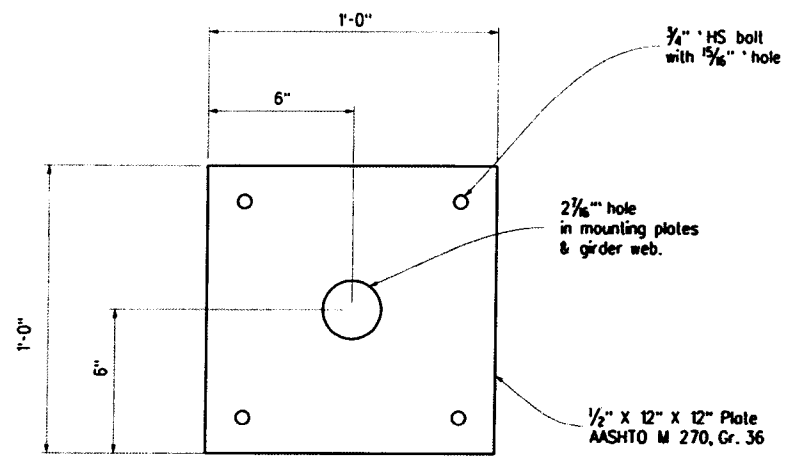
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USER: PARSONS
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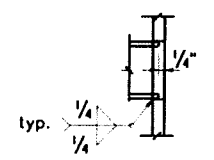
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				6	ARK.			
				JOB NO.	BB0903	202	368	
				07405 - SIGNAL SUPPORT - 59373				



VIDEO DETECTOR OR SIGNAL HEAD SUPPORT DETAIL
3" - 1'-0"

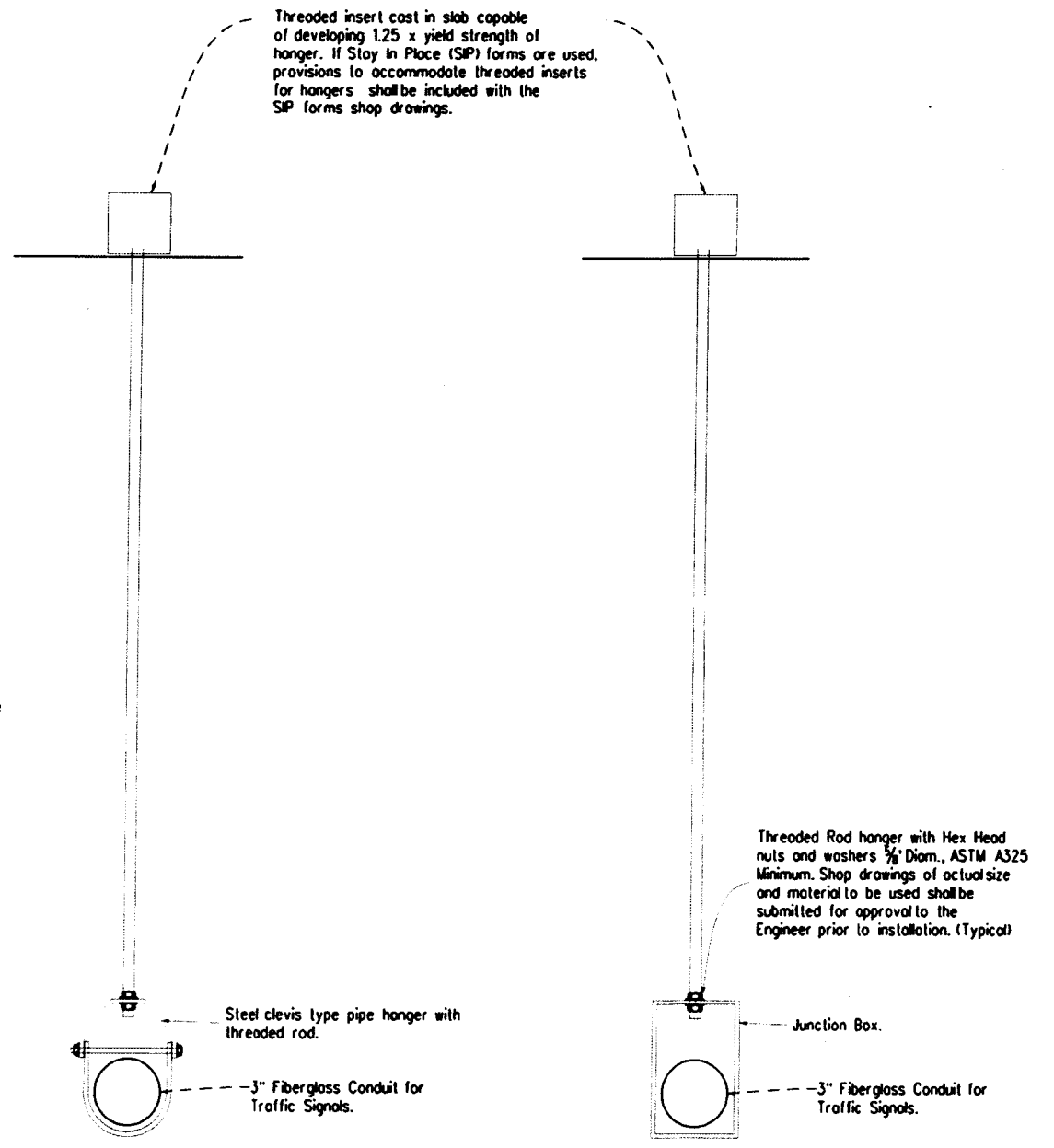


MOUNTING PLATE DETAIL
3" - 1'-0"



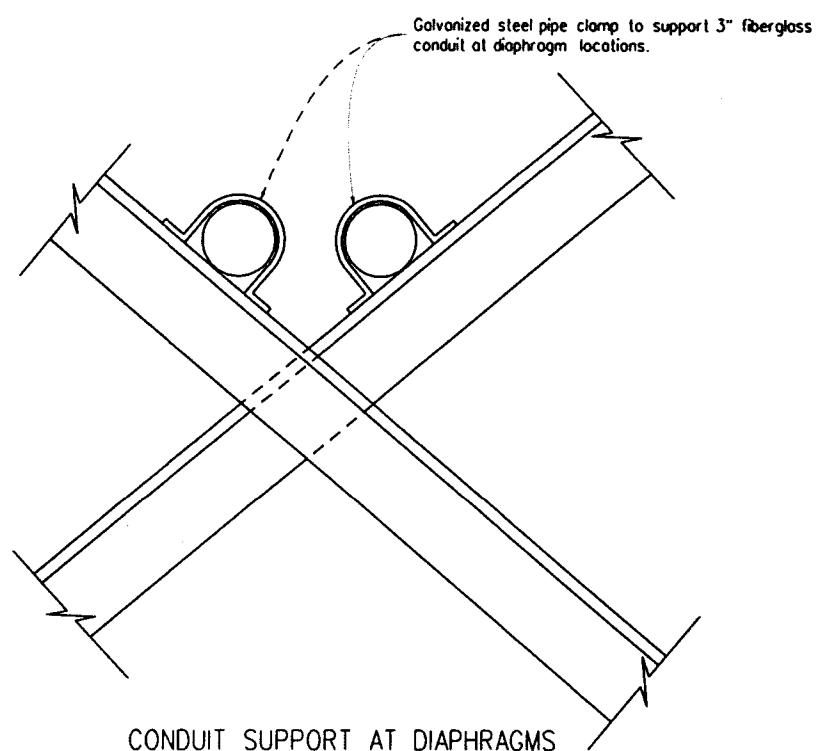
PIPE CONNECTION DETAIL

NOTE:
Cost of Liquid - Tight flexible conduits will not be paid for directly, but will be considered subsidiary to item "FIBERGLASS CONDUIT H.D. (3")".



INTERMEDIATE CONDUIT SUPPORT DETAIL

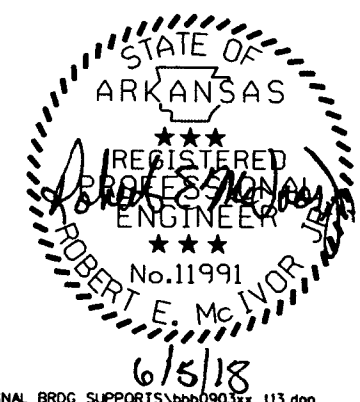
JUNCTION BOX SUPPORT DETAIL



CONDUIT SUPPORT AT DIAPHRAGMS

- ① 2" schedule 40 x 8, steel pipe (astm A500, Gr. B) with threads or hole to accommodate tenon mount or flexible conduit attachment as required.
- ② Tenon mount, articulating serrated with internal wiring capability (Pelco part AB-3028 or equal)
- ③ Coupling for 2" liquid tight flexible conduit for signal & camera wiring.
- ④ Mounting plate 1/2" x 12" x 12" plate AASHTO M 270, Gr. 36 each side of girder web at signal head or video detector locations.

- Notes:
1. All steel used for supporting traffic signals and conduit, including plates schedule 40 pipe, nuts, washers, threaded rods, clamps, hangers shall be galvanized according to ASTM A123.
 2. Spacing of intermediate supports and conduit expansion joints shall be in accordance with the conduit manufacturer's recommendations and special provisions.
 3. Mounting plates, pipes, bolts, clamps, washers, nuts and hangers shall not be measured separately, but will be considered subsidiary to "Structural Steel in Plate Girder Spans (M 270, Grade 50) and Structural Steel in Plate Girder Spans (M 270, Grade HPS 70W)".
 4. All welding that is done during fabrication, including any temporary welds, shall be detailed on the shop drawings and submitted for approval to the Engineer.
 5. Provide surface mounted or exposed runs of conduit with either expansion joints or flexible conduit sections adequate to take care of vibrations and thermal expansion.



SHEET 3 OF 3
DETAILS OF SIGNAL SUPPORTS

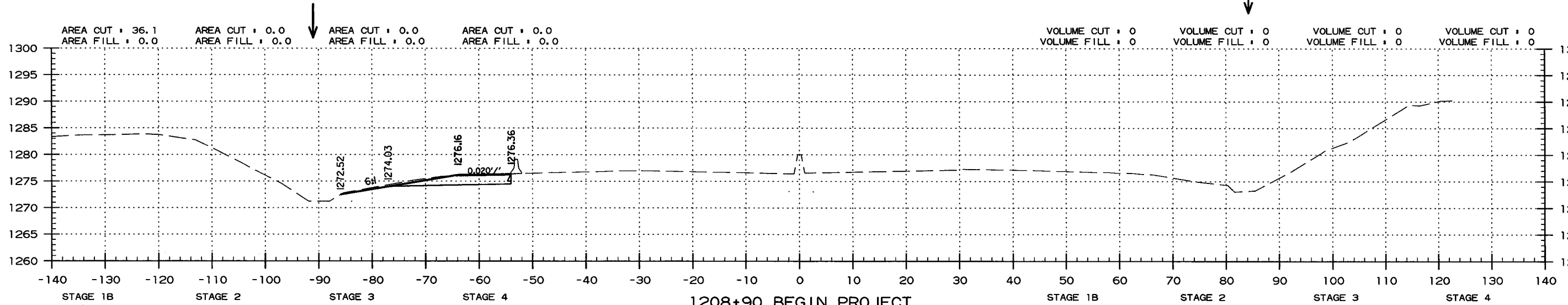
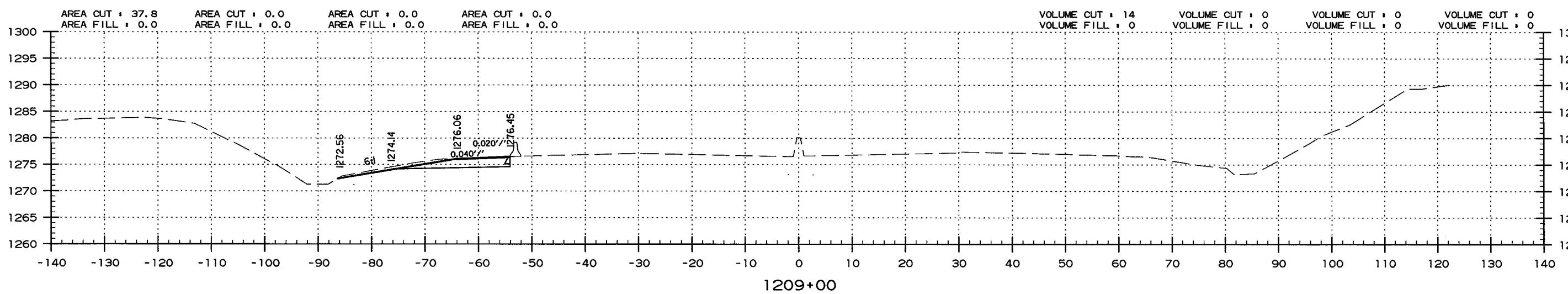
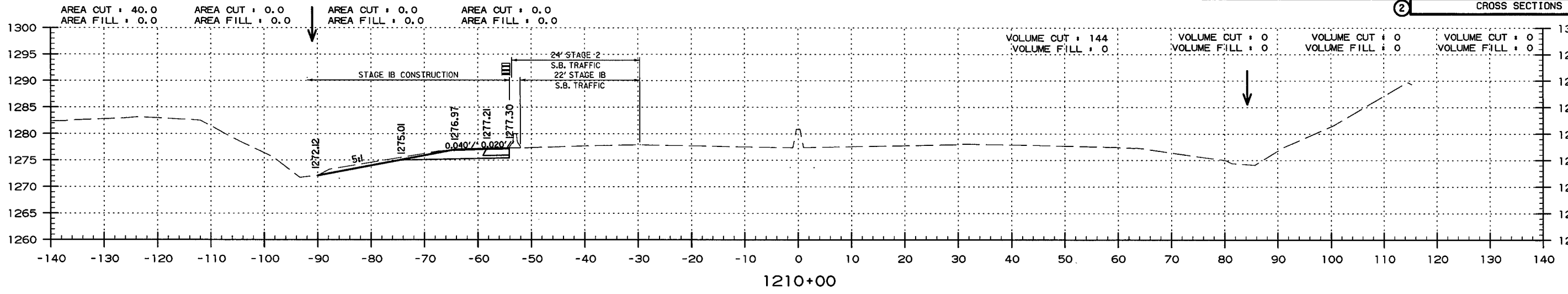
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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CHECKED BY: SW DATE: 11-22-15 SCALE: 3" - 1'-0"
DESIGNED BY: DRN DATE: 11-20-15
BRIDGE NO. 07405 DRAWING NO. 59373

USER: PARSONS
DESIGN FILE: R:\Traffic Signals\Hwy 71B\DRN SIGNAL BRDG SUPPORTS\bbb0903xx_113.dgn
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				JOB NO.		BB0903	203	368

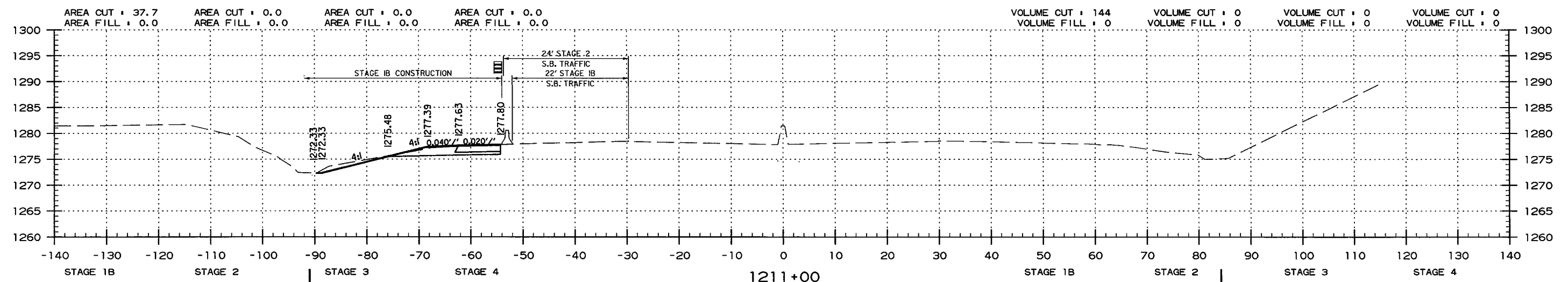
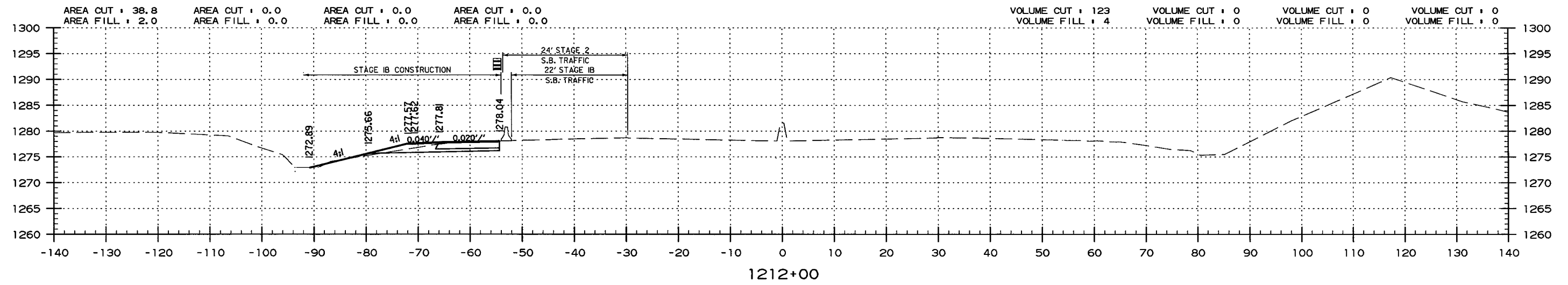
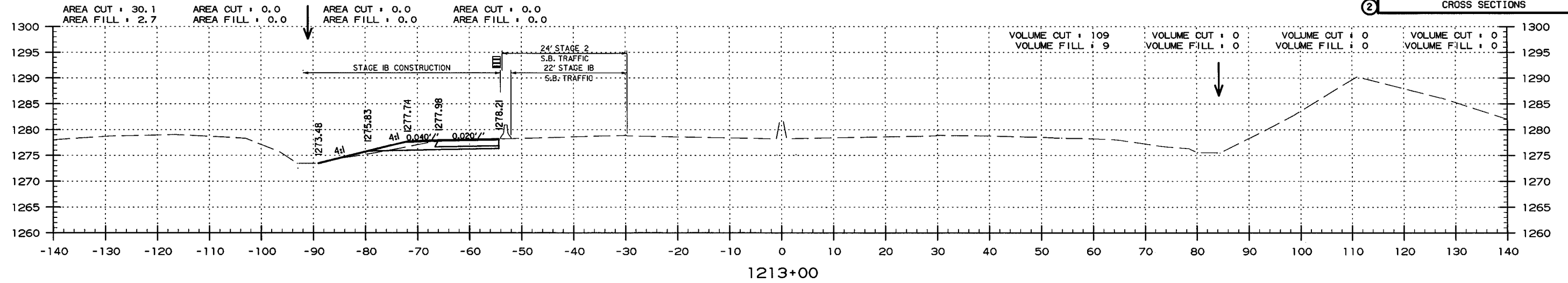
2 CROSS SECTIONS



I-49
CROSS SECTION STA. 1208+90 TO STA. 1210+00

USER: mh514
DESIGN FILE: G:\2103305_Hwy7\linchg\TRANSP\dgn\xsect\BB0903.CX-I-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	204
						CROSS SECTIONS		

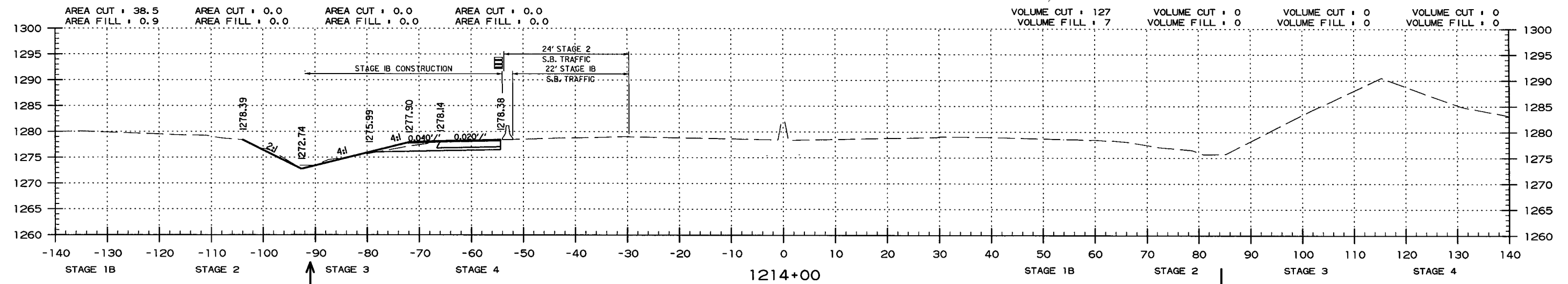
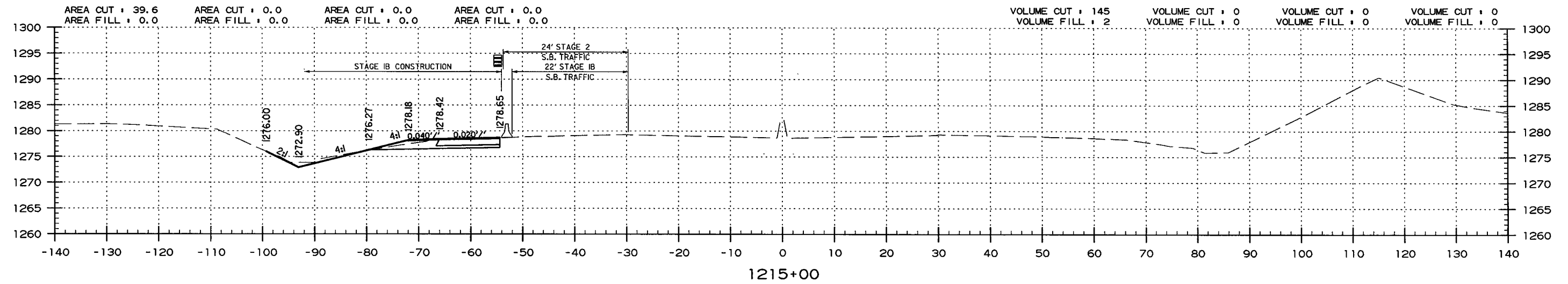
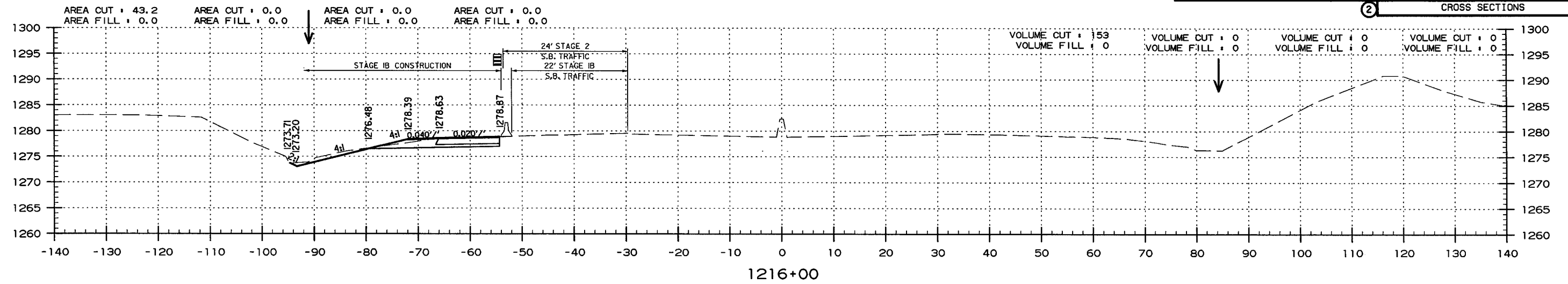


I-49
CROSS SECTION STA. 1211+00 TO STA. 1213+00

USER: mh514
 DESIGN FILE: G:\12103305.Hwy7\Inchq\TRANSP\dgn\sect\BB0903_CX_I-49.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. BB0903	205	368

2 CROSS SECTIONS

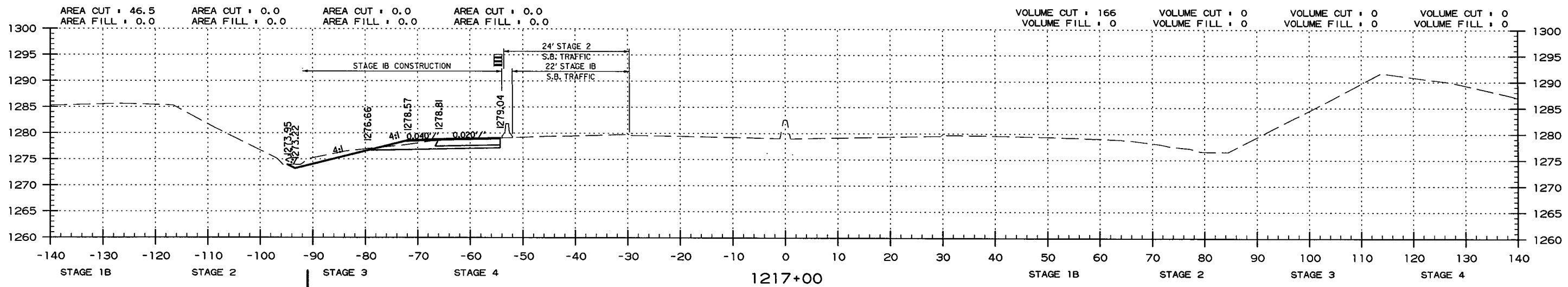
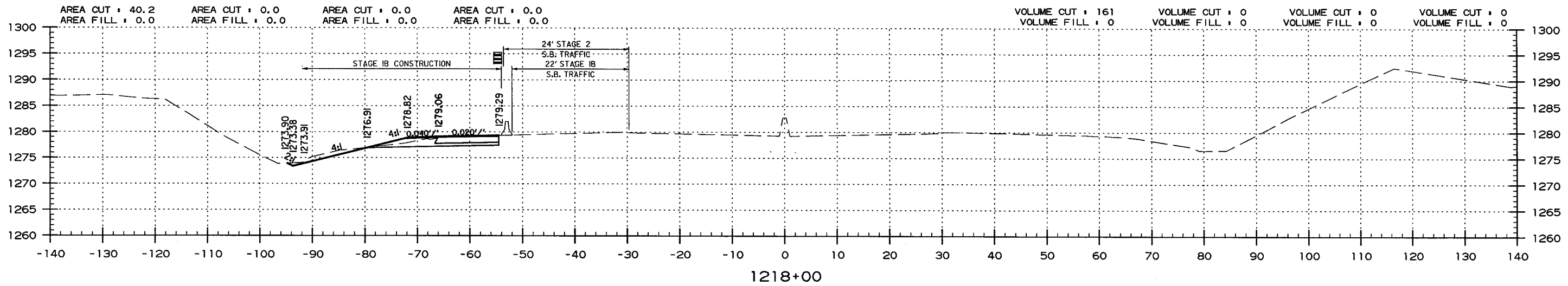
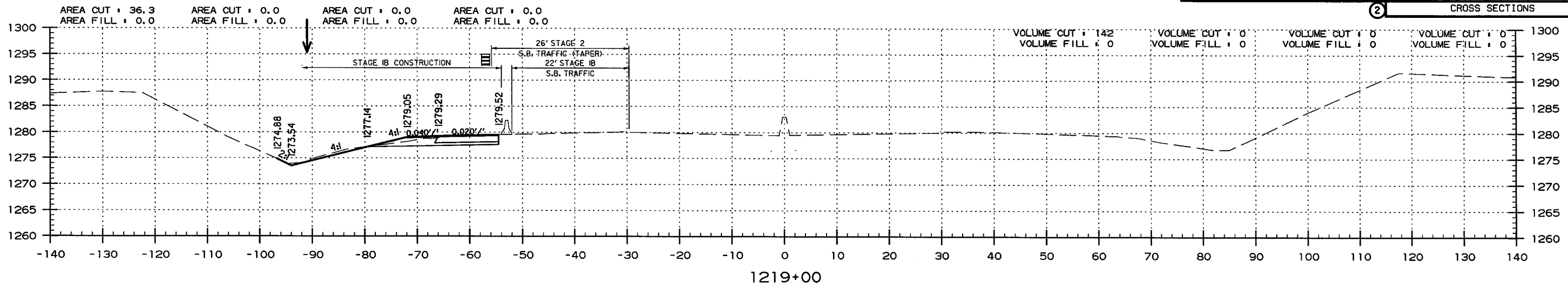


1-49
CROSS SECTION STA. 1214+00 TO STA. 1216+00

USER: mrs114
DESIGN FILE: G:\2103305.Hwy7\Inchp\TRANSP\dgn\sect\BB0903.CX.I-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. BB0903	206	368

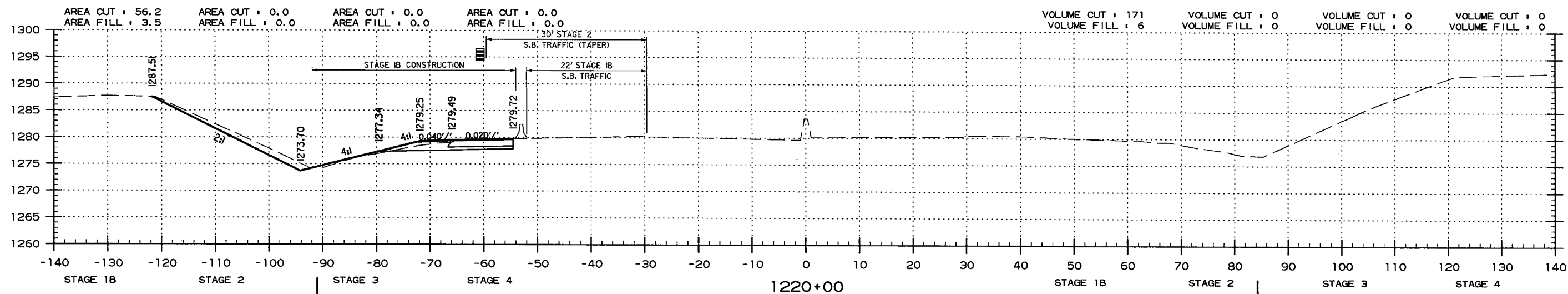
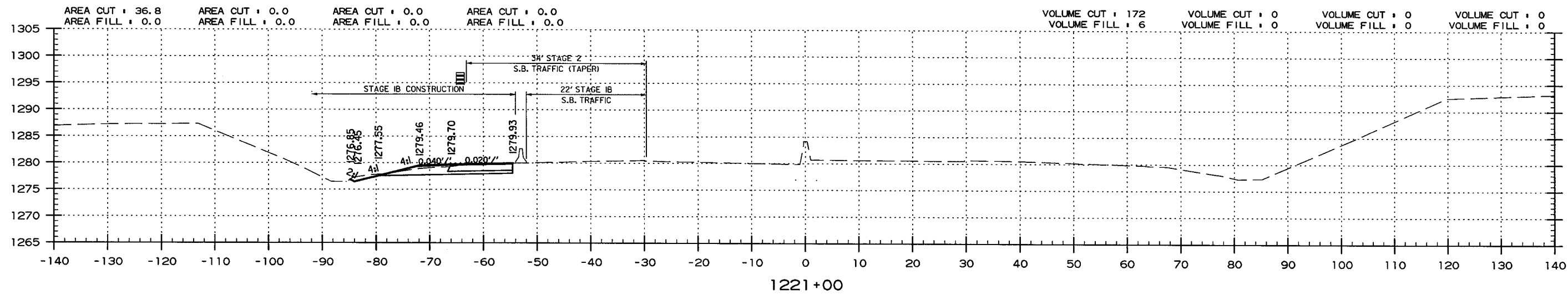
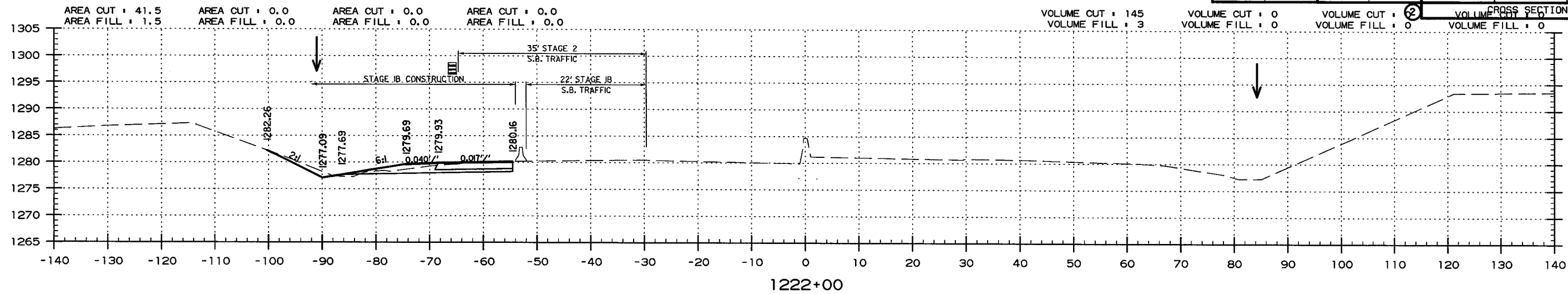
2 CROSS SECTIONS



1-49
CROSS SECTION STA. 1217+00 TO STA. 1219+00

USER: mhs14
DESIGN FILE: G:\2103305.Hwy7\Inch\TRANSP\dgn\xsect\BB0903.CX.I-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		207	368

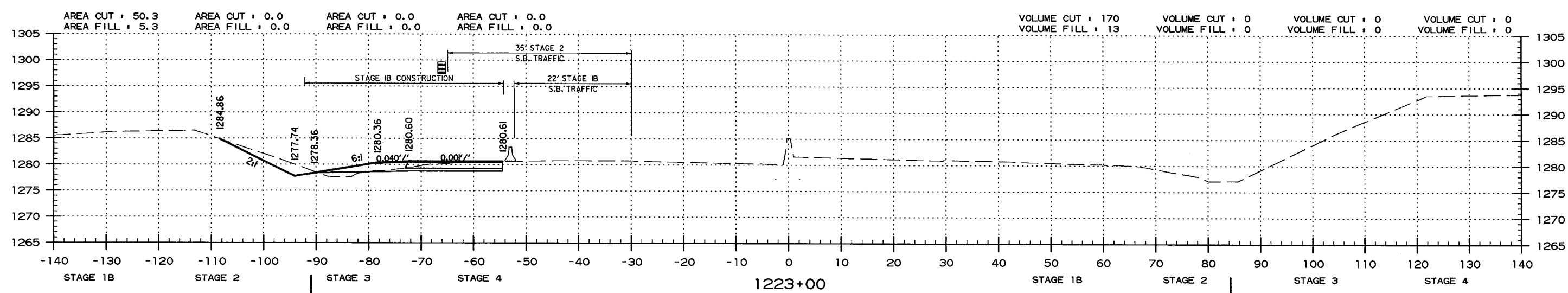
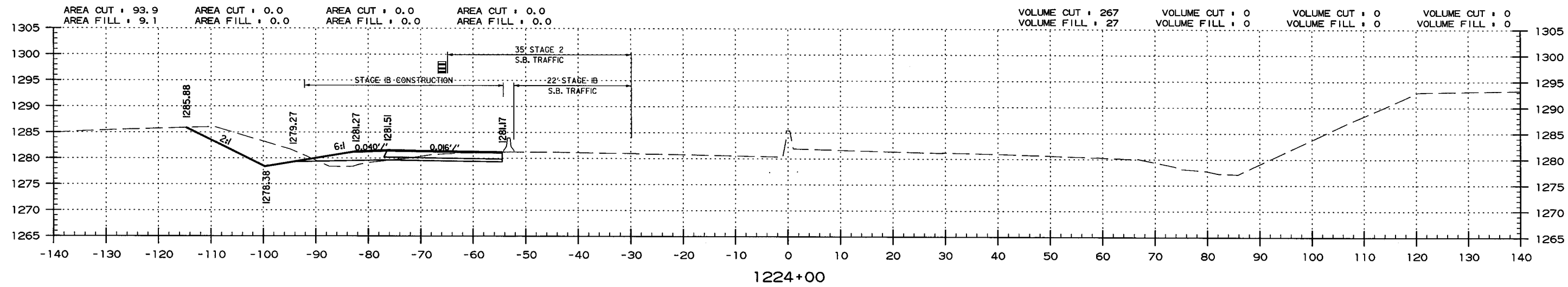
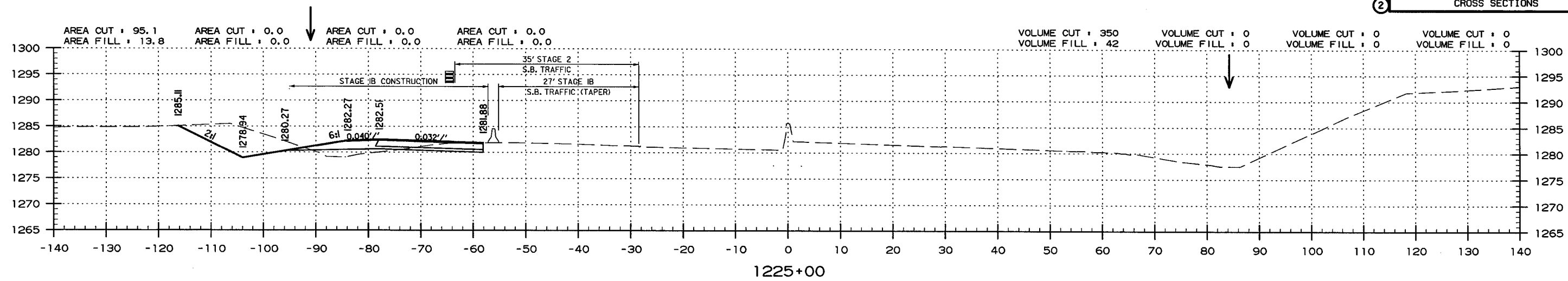


1-49
CROSS SECTION STA. 1220+00 TO STA. 1222+00

USER: mh514
DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.I-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1/20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	208	368	

2 CROSS SECTIONS

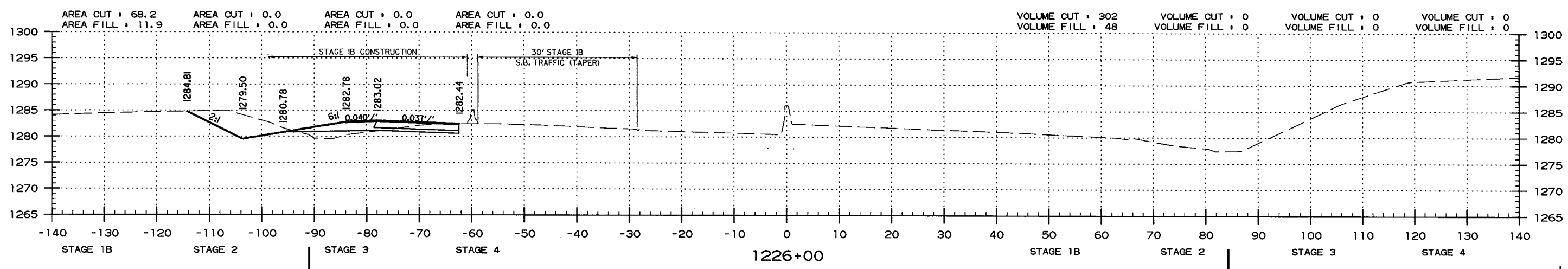
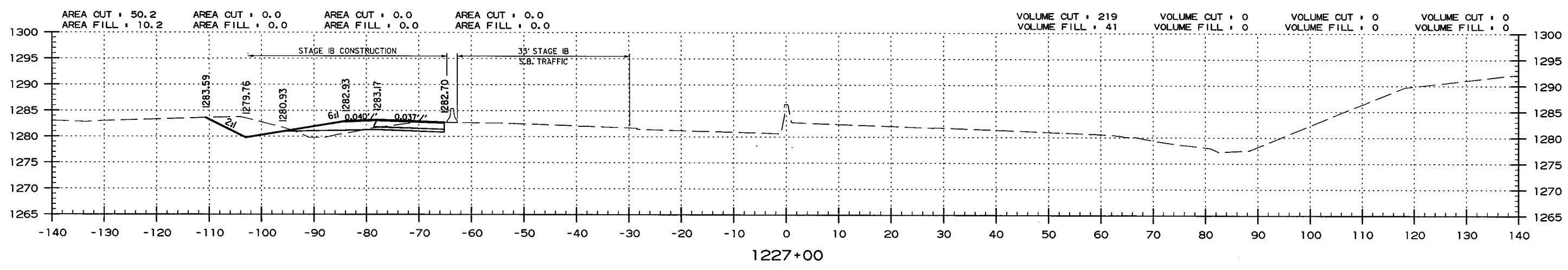
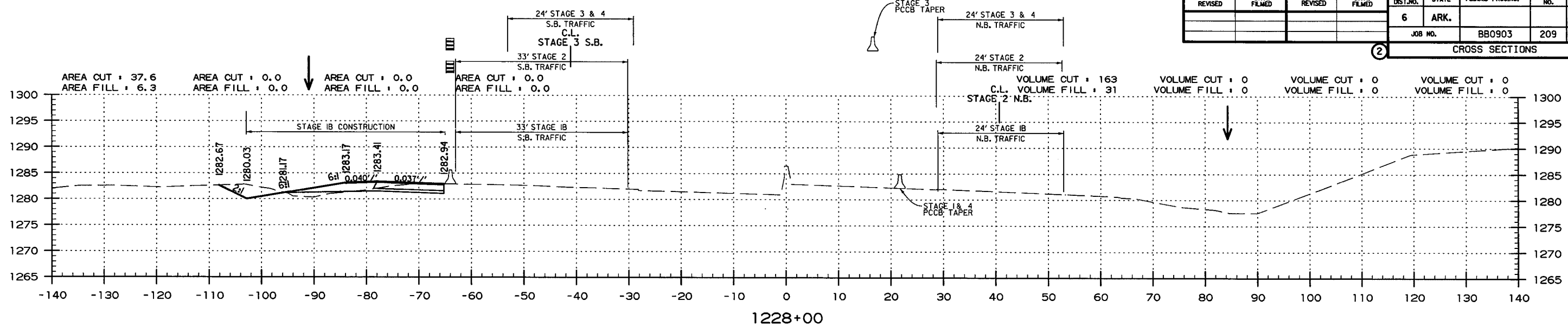


1-49
CROSS SECTION STA. 1223+00 TO STA. 1225+00

USER: mhs14
DESIGN FILE: G:\2103305_Hwy7\Inchg\TRANSP\dgn\xsect\BB0903_CX_1-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		209	368
				JOB NO. BB0903				

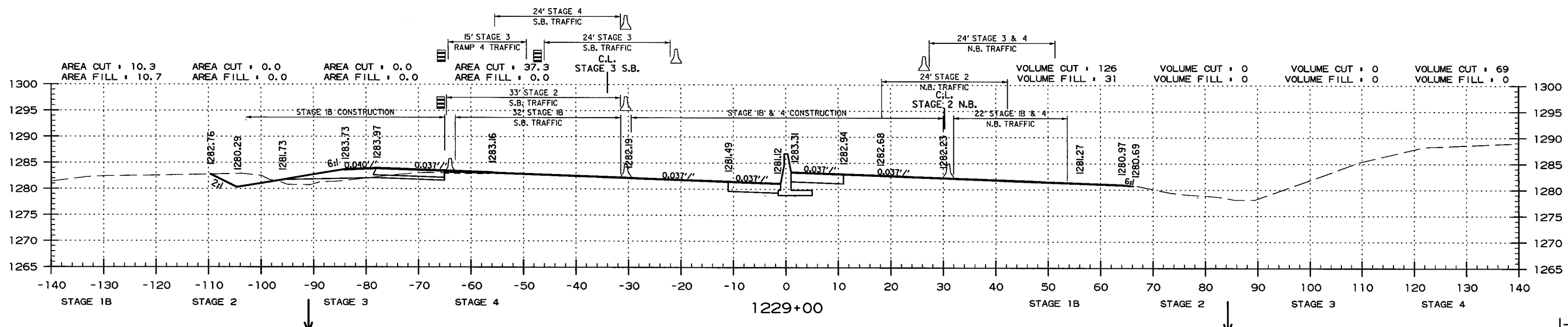
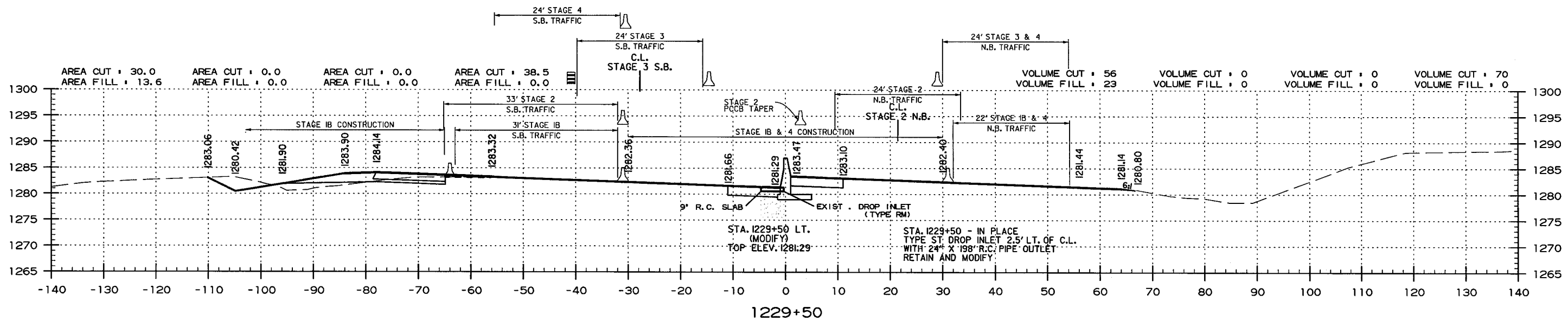
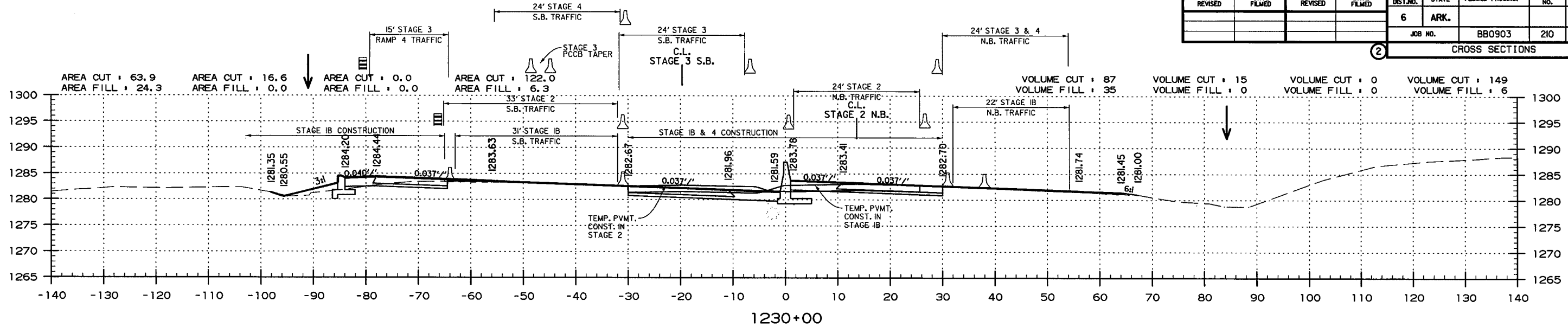
2 CROSS SECTIONS



1-49
CROSS SECTION STA. 1226+00 TO STA. 1228+00

USER: mh5114
DESIGN FILE: G:\12103305.Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.I-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		210	368
				JOB NO. BB0903		210		368
(2) CROSS SECTIONS								

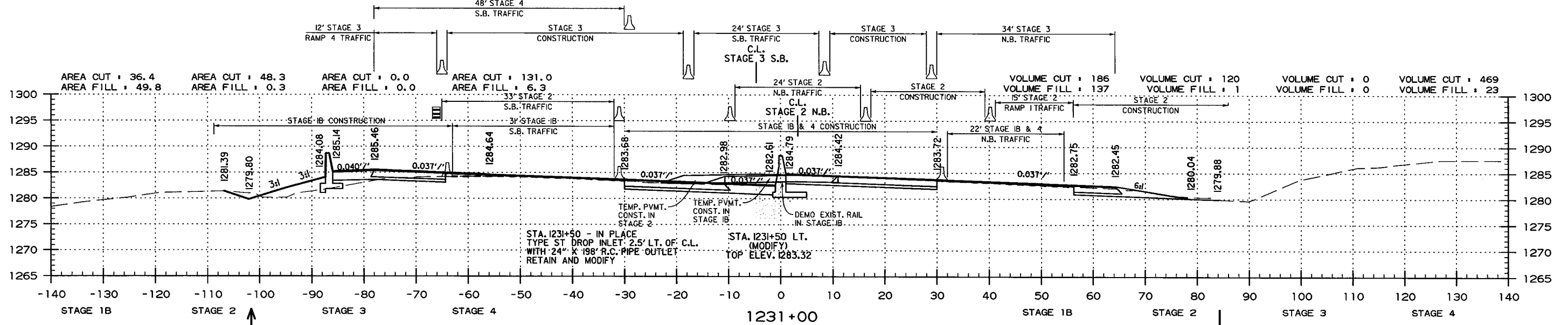
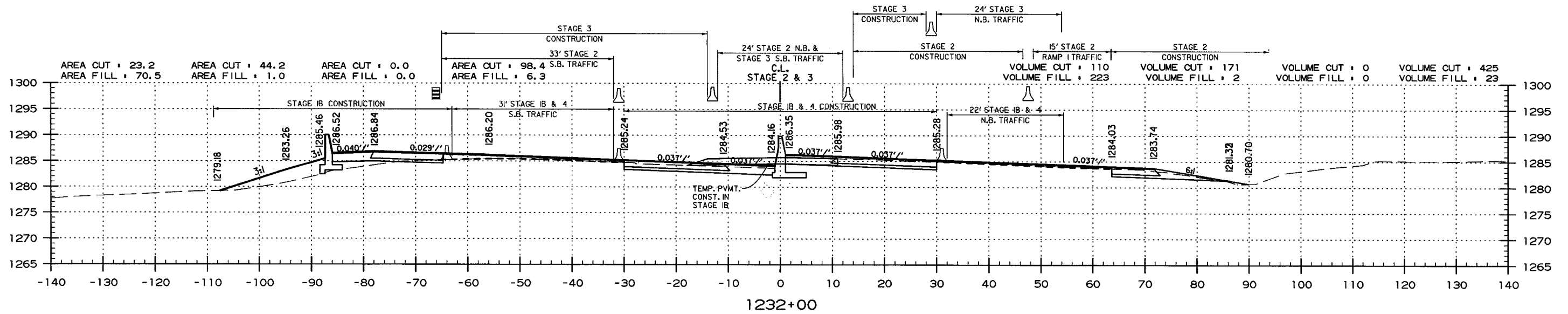
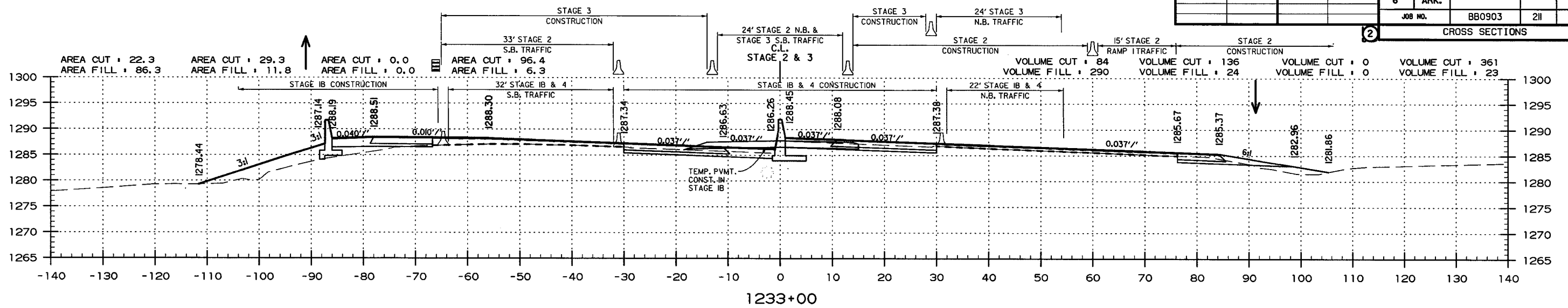


I-49
CROSS SECTION STA. 1229+00 TO STA. 1230+00

USER: mh514
 DESIGN FILE: G:\I2103305.Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.I-49.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		211	368

2 CROSS SECTIONS

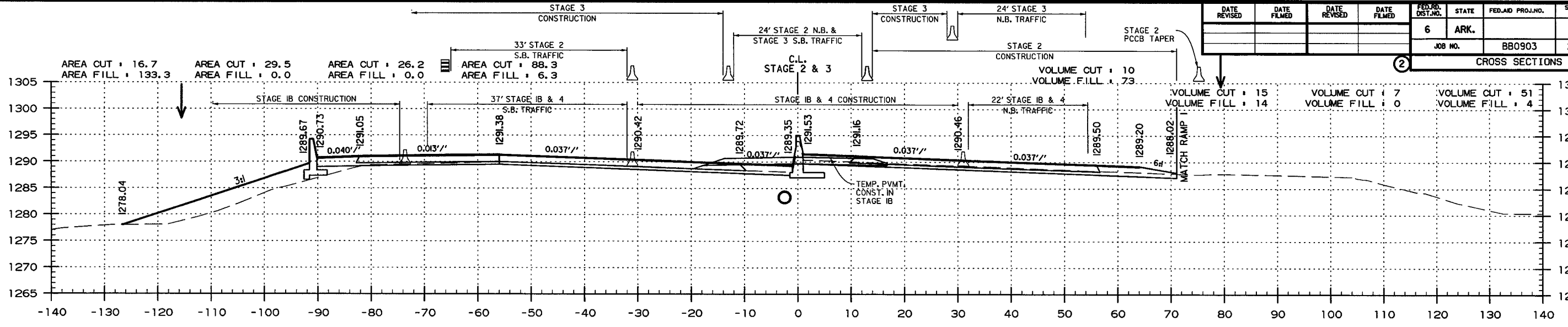


1-49
CROSS SECTION STA. 1231+00 TO STA. 1233+00

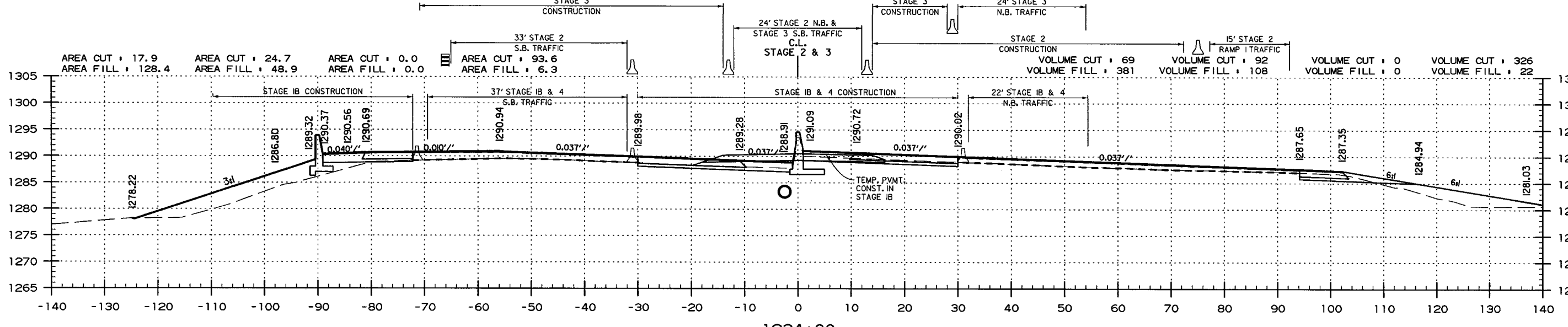
USER: mh5114
DESIGN FILE: G:\2103305.Hwy7\Inchq\TRANSP\dgn\xsect\1-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AD. DIST. NO.	STATE	FED. AD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		212	368
				JOB NO.		BB0903		

CROSS SECTIONS

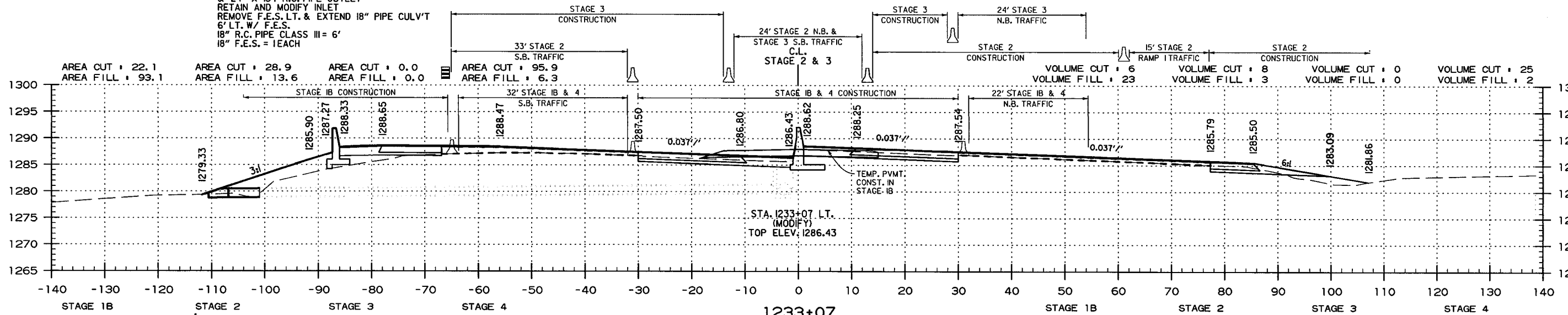


1234+15



1234+00

STA. 1233+07 - IN PLACE
 TYPE ST DROP INLET 2.5' LT. OF C.L.
 WITH 18" X 37' R.C. PIPE OUTLET
 & 24" X 154' R.C. PIPE OUTLET
 RETAIN AND MODIFY INLET
 REMOVE F.E.S. LT. & EXTEND 18" PIPE CULV'T
 6' LT. W/ F.E.S.
 18" R.C. PIPE CLASS III = 6'
 18" F.E.S. = 1 EACH

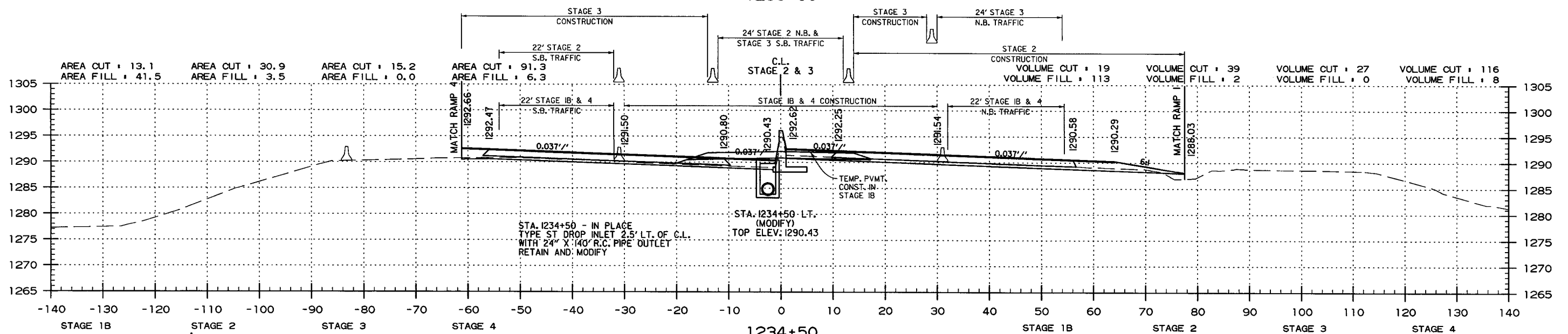
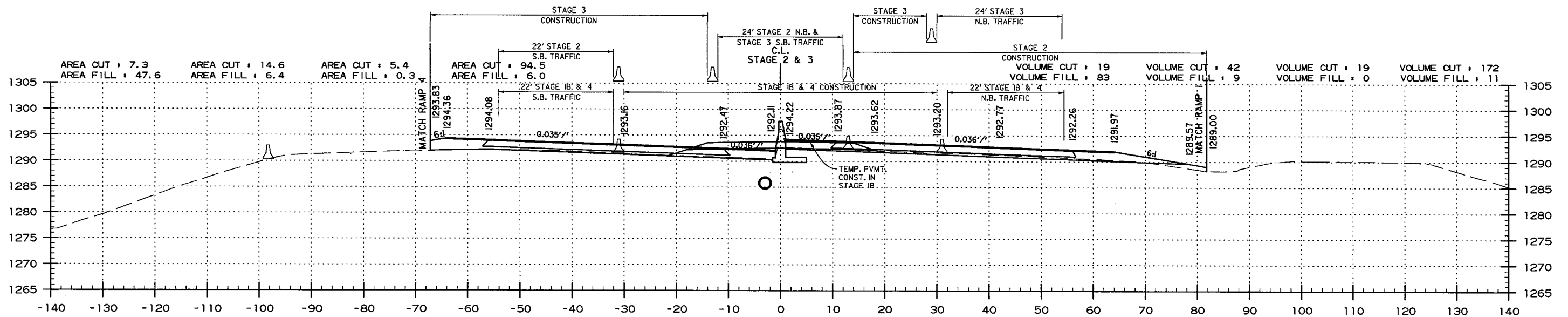
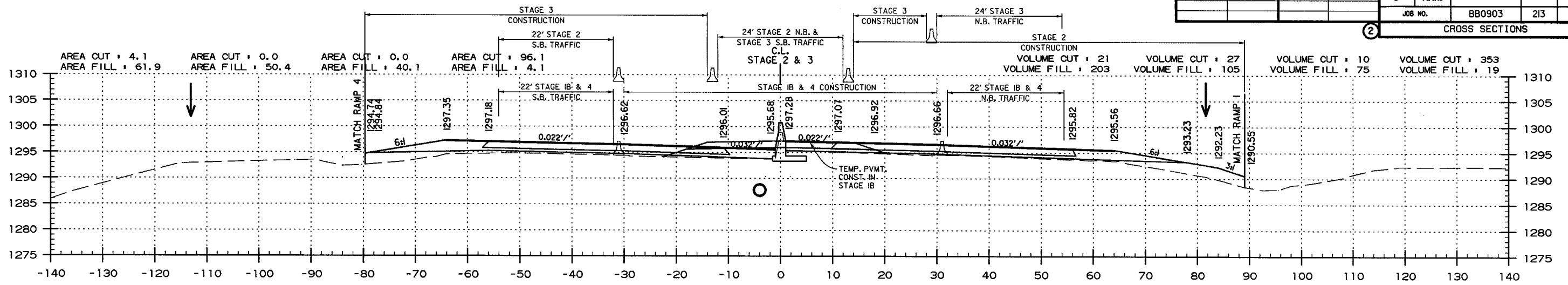


1233+07

CROSS SECTION STA. 1233+07 TO STA. 1234+15

USER: mh514
 DESIGN FILE: G:\2103305.Hwy7\linchg\TRANSP\dgn\xsect\BB0903.CX.I-49.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

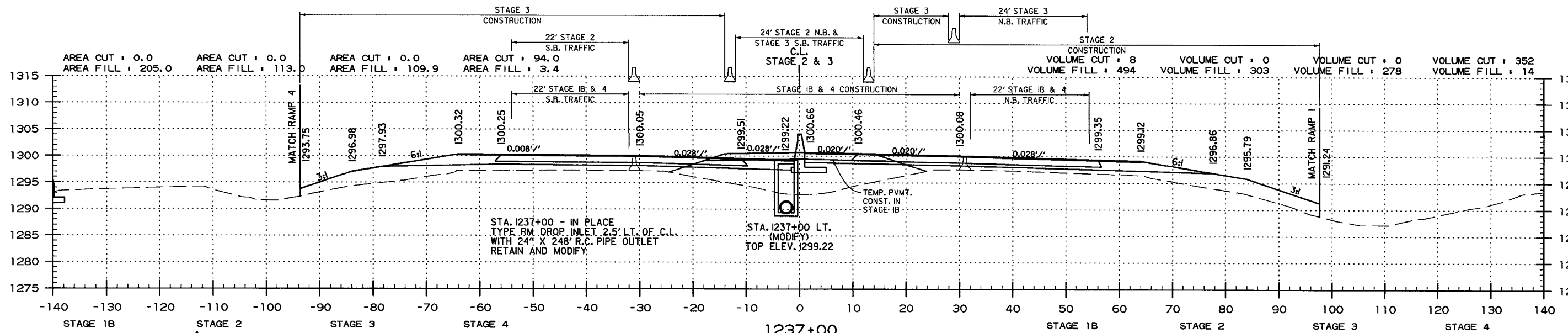
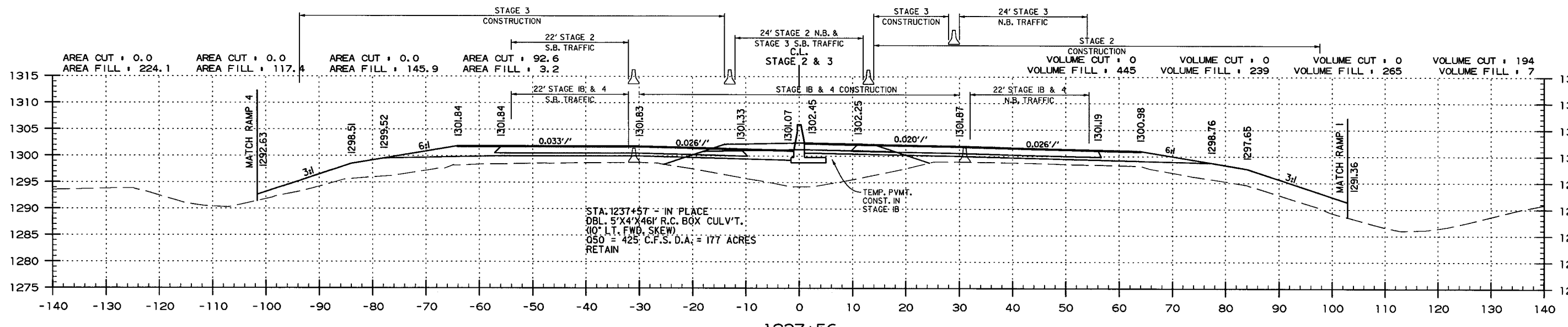
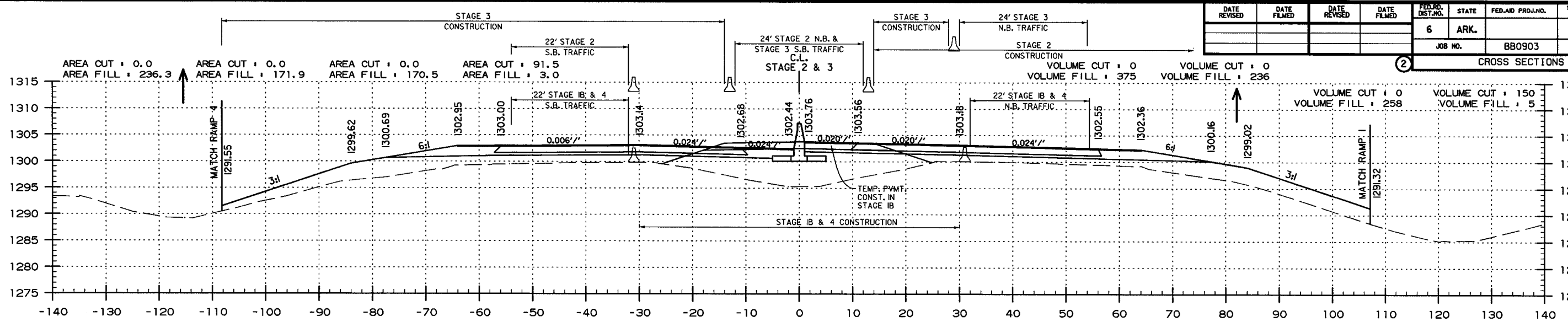
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	BB0903	213	368
				(2) CROSS SECTIONS				



I-49
CROSS SECTION STA. 1234+50 TO STA. 1236+00

USER: mh514
 DESIGN FILE: G:\2103305.Hwy7\linchg\TRANSP\dgn\sect\BB0903.CX.L-49.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	BB0903	214	368

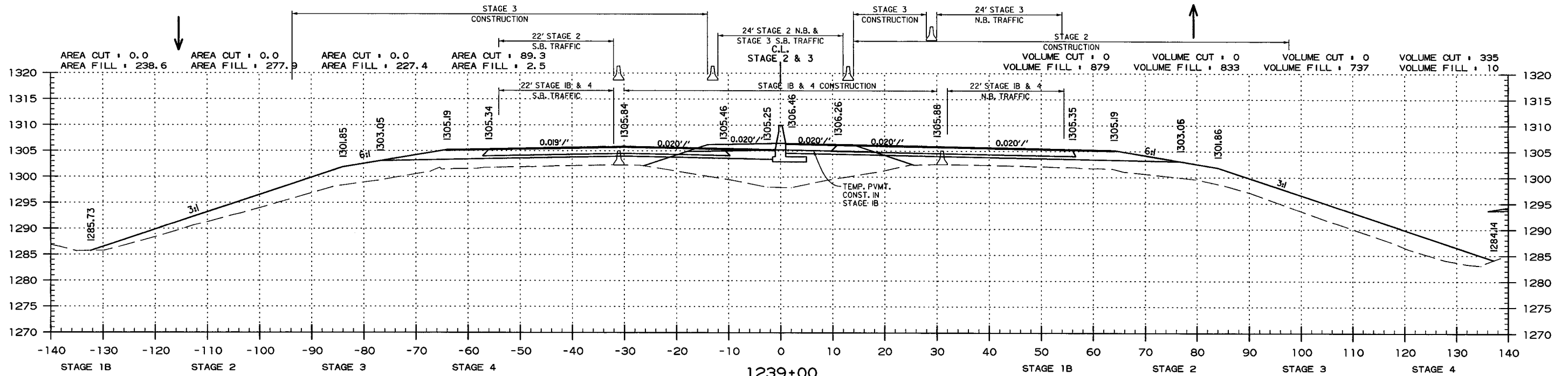


1-49
CROSS SECTION STA. 1237+00 TO STA. 1238+00

USER: mh5114
DESIGN FILE: G:\2103305.Hwy7\Inchg\TRANSP\dgn\sect\BB0903.CX.1-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	215	368	

2 CROSS SECTIONS

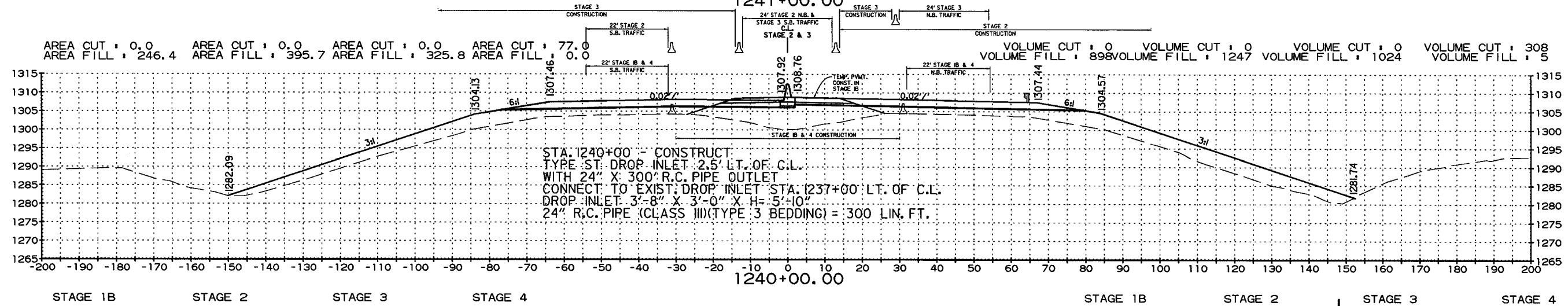
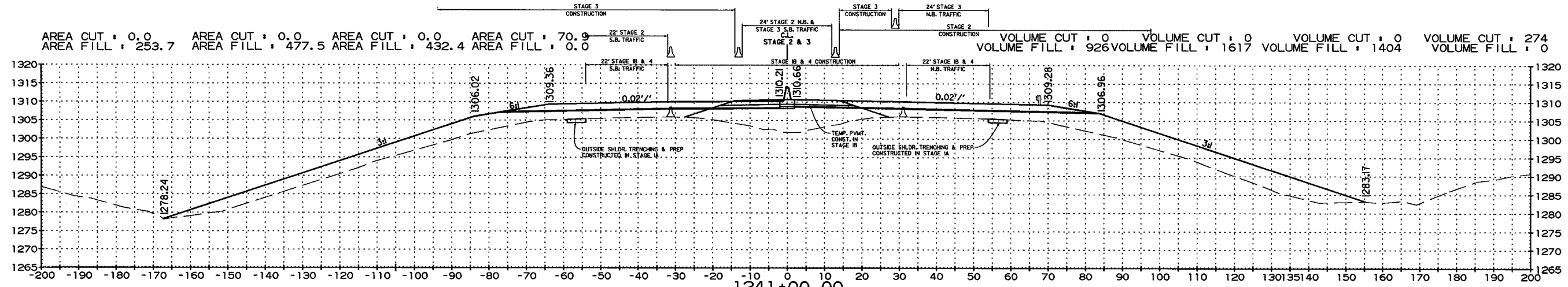
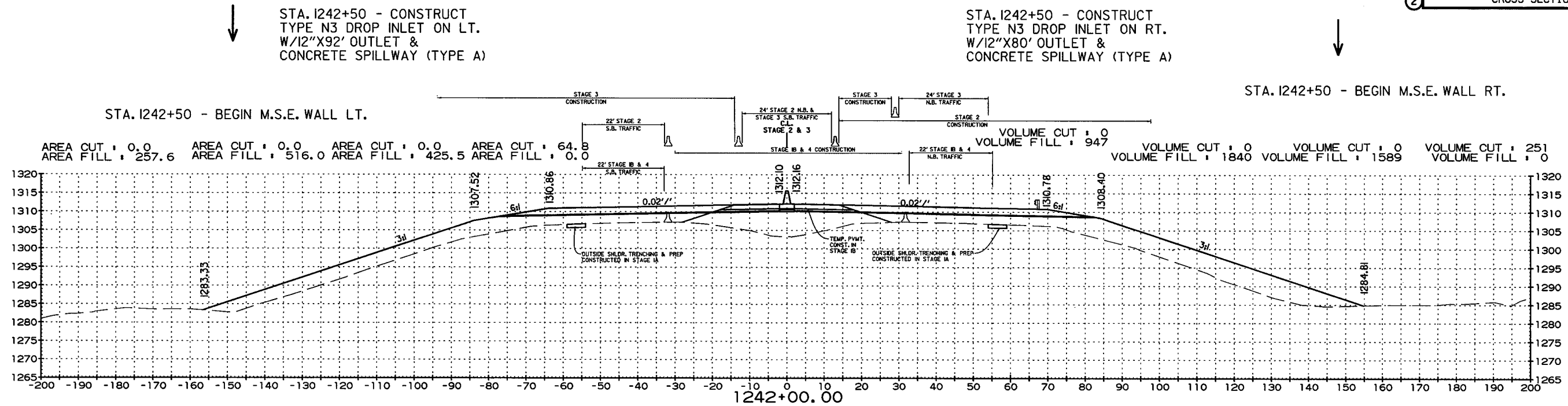


USER: mhs114
DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\xsect\BB0903_CX_1-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

I-49
CROSS SECTION STA. 1239+00 TO STA. 1240+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		216	368

2 CROSS SECTIONS



STAGE 1B STAGE 2 STAGE 3 STAGE 4 STAGE 1B STAGE 2 STAGE 3 STAGE 4

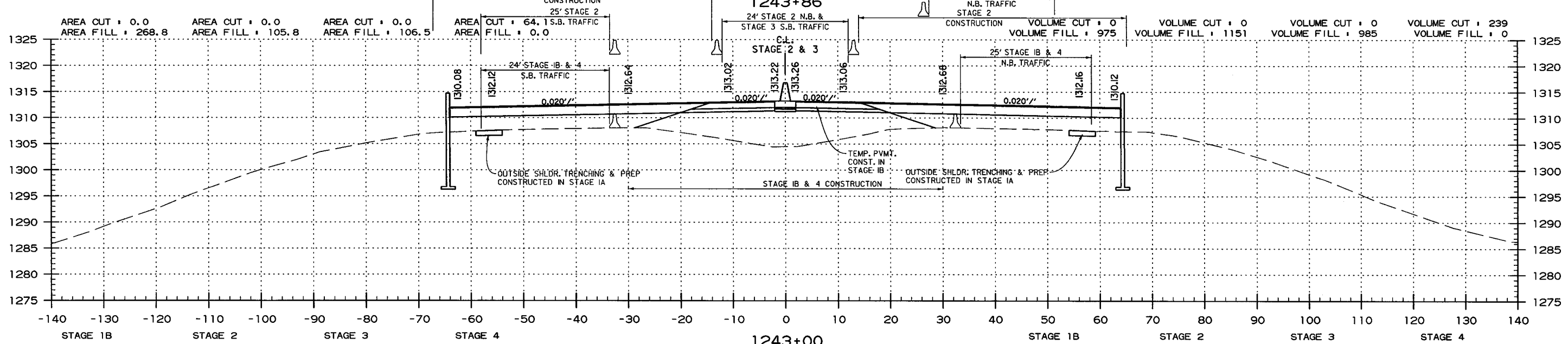
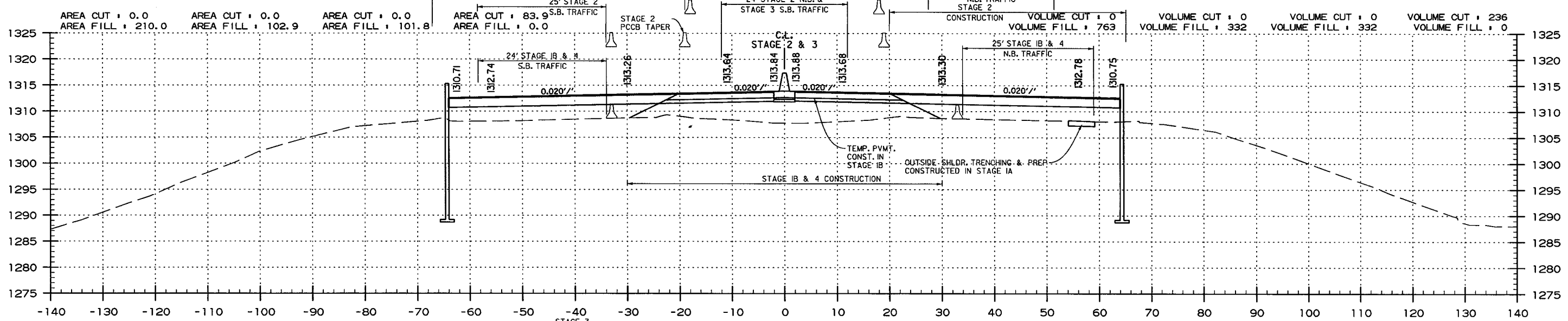
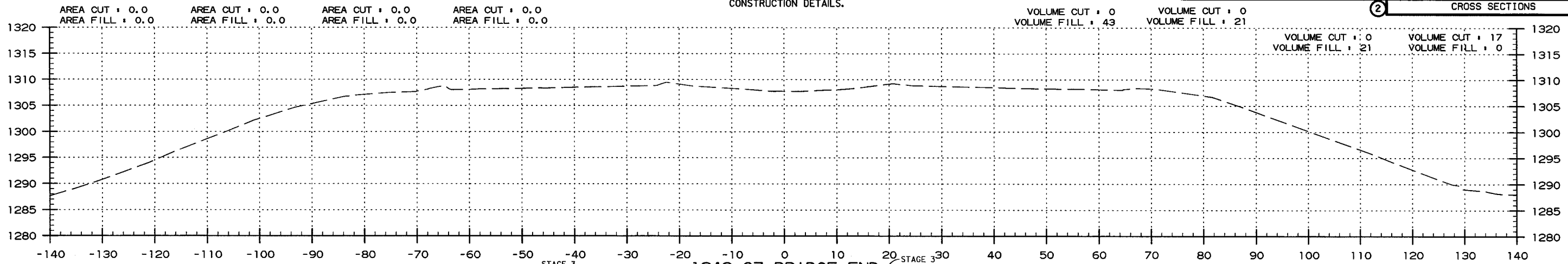
1-49
CROSS SECTION STA. I240+00 TO STA. I242+00

USER: mh514
 DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.I-49.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:30

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	217	368	

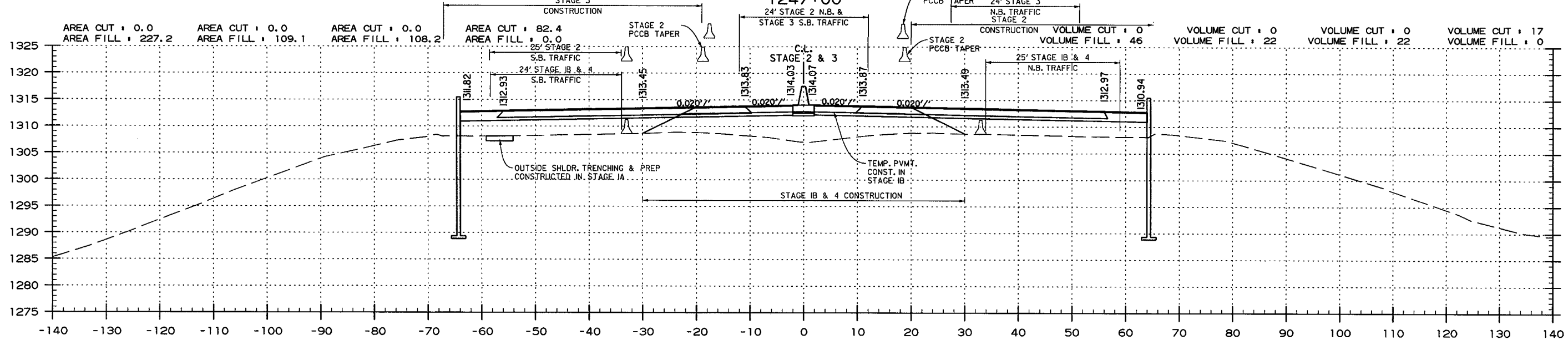
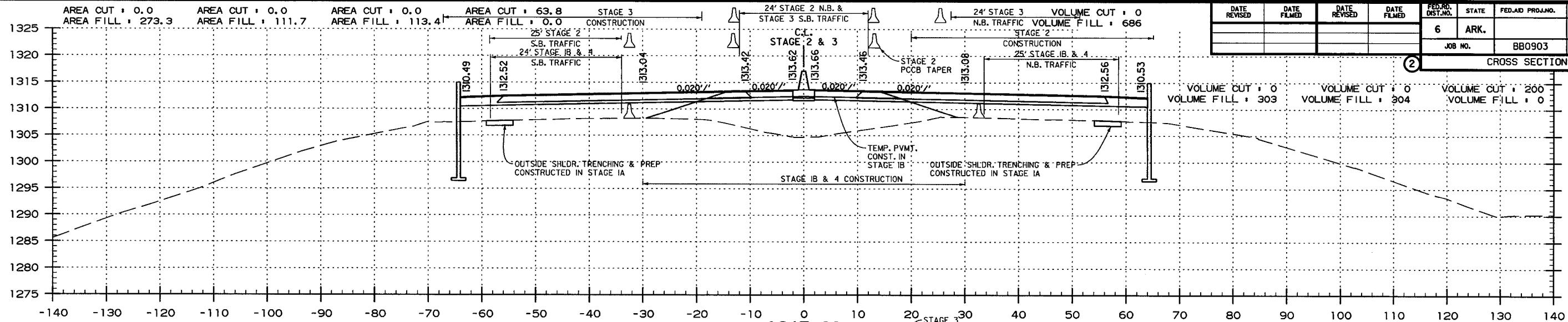
REFER TO BRIDGE STAGE CONSTRUCTION DETAILS.

2 CROSS SECTIONS

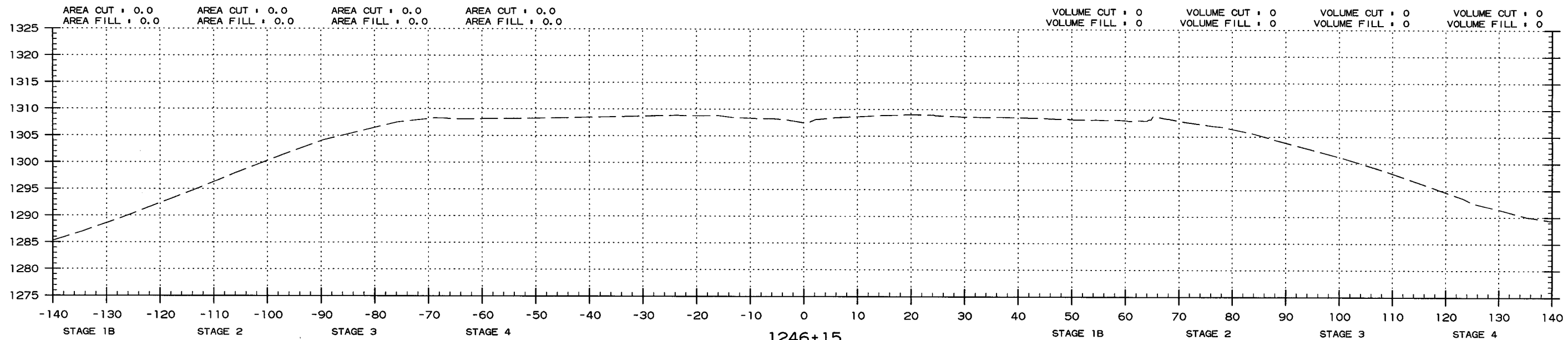


USER: mh514
DESIGN FILE: G:\2103305.Hwy7\Inchg\TRANSP\dgn\sect\BB0903.CX.I-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		218	368



1246+26 BRIDGE END

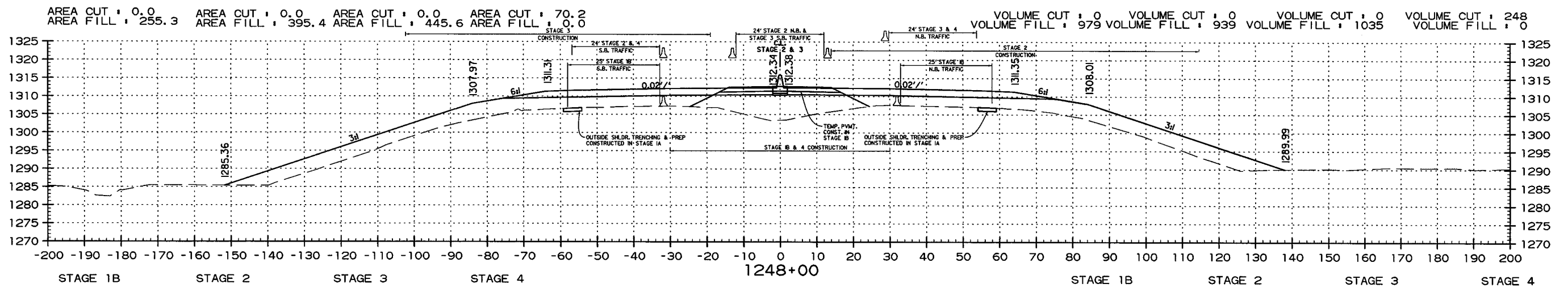
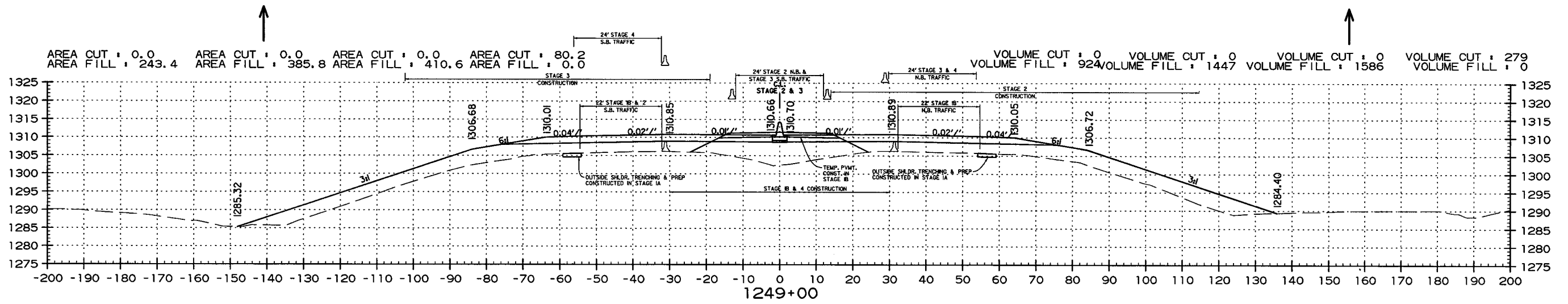


1246+15

1-49
CROSS SECTION STA. 1246+15 TO STA. 1247+00

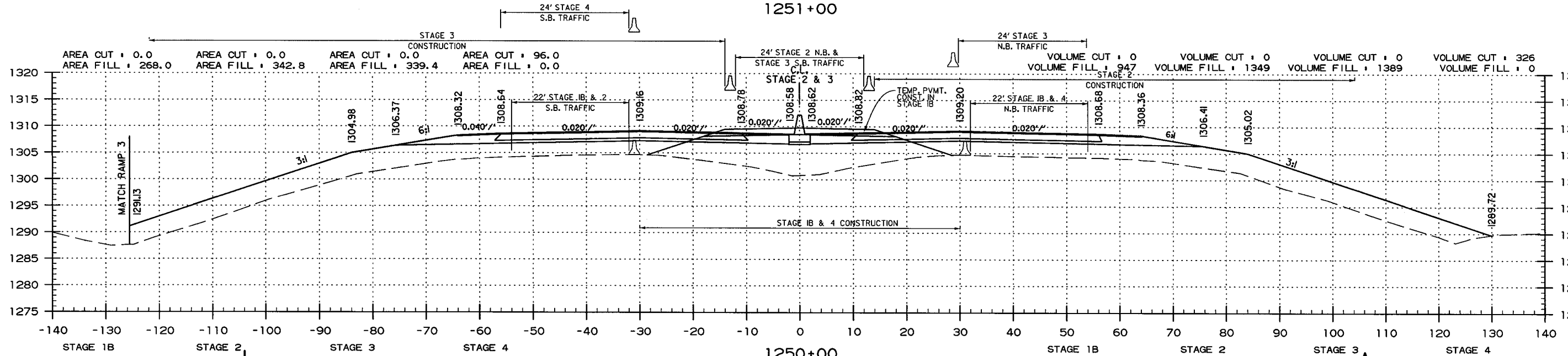
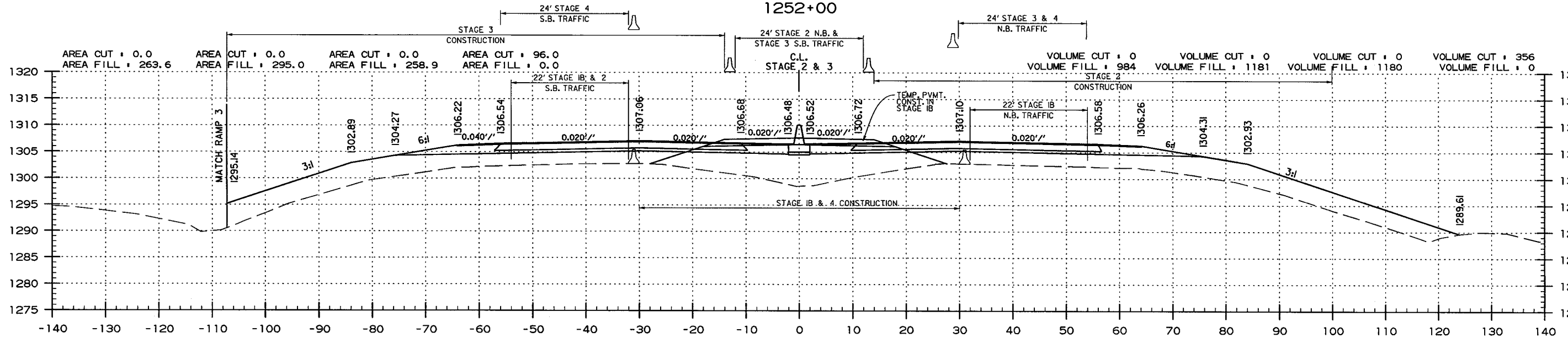
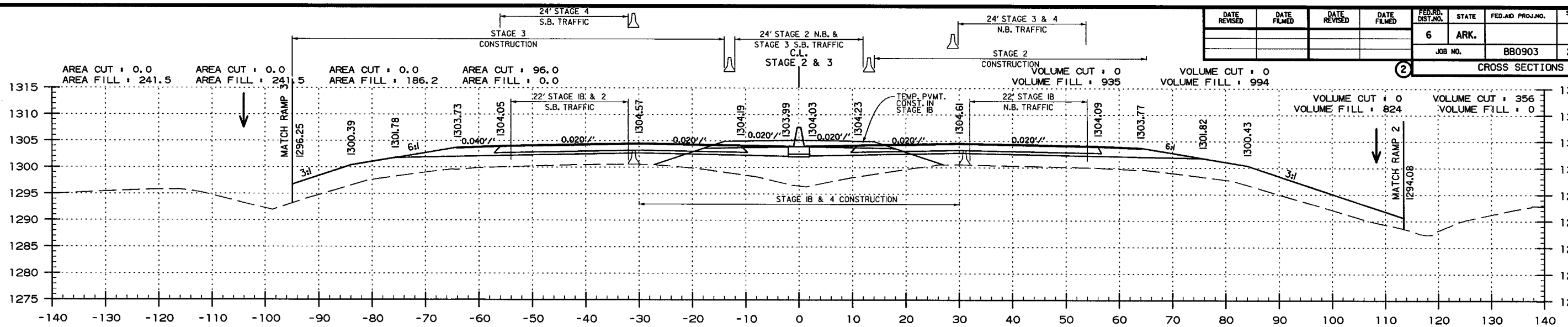
USER: mhs114
DESIGN FILE: G:\2103305.Hwy7\linchg\TRANSP\dgn\sect\BB0903.CX.L-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	BB0903	219	368		
(2) CROSS SECTIONS									



USER: mh514
 DESIGN FILE: G:\2103305.Hwy71\hgh\TRANSP\dgn\sect\BB0903.CX_I-49.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:30

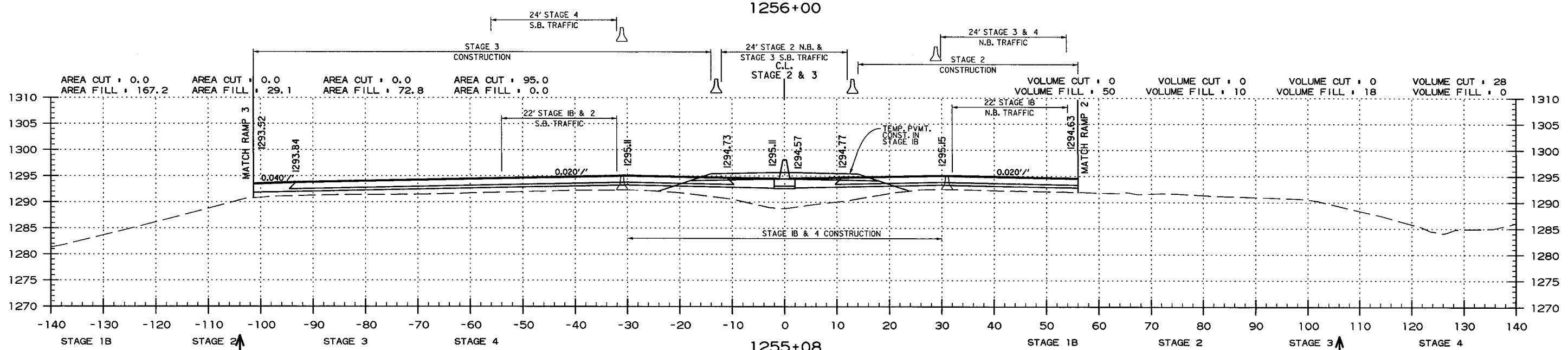
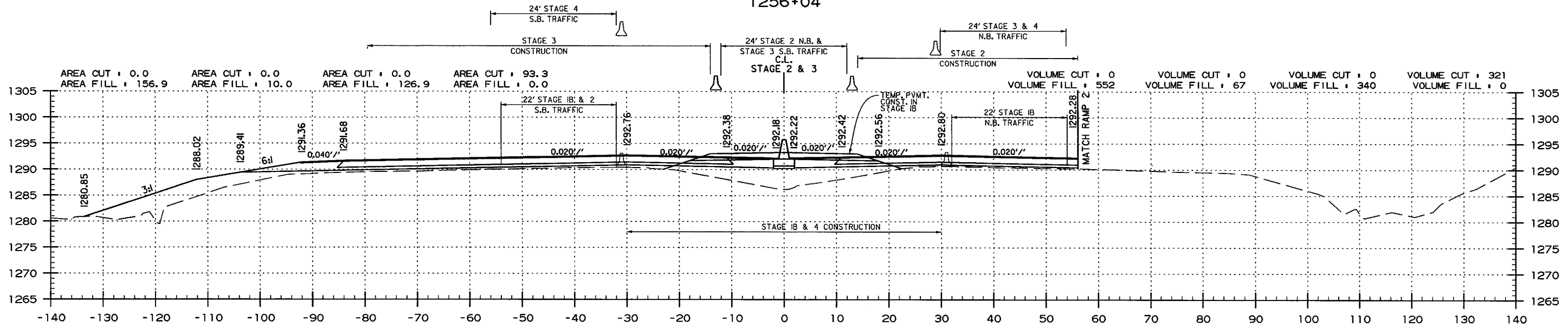
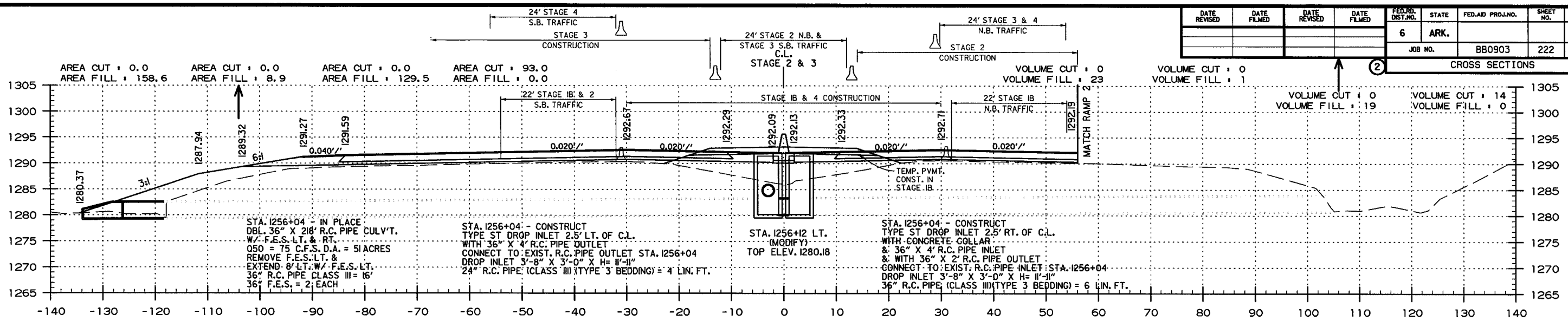
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	BB0903	220	368



I-49
CROSS SECTION STA. 1250+00 TO STA. 1252+00

USER: mh5114
 DESIGN FILE: G:\2103305.Hwy7\linchg\TRANSP\dgn\xsect\BB0903.CX.I-49.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

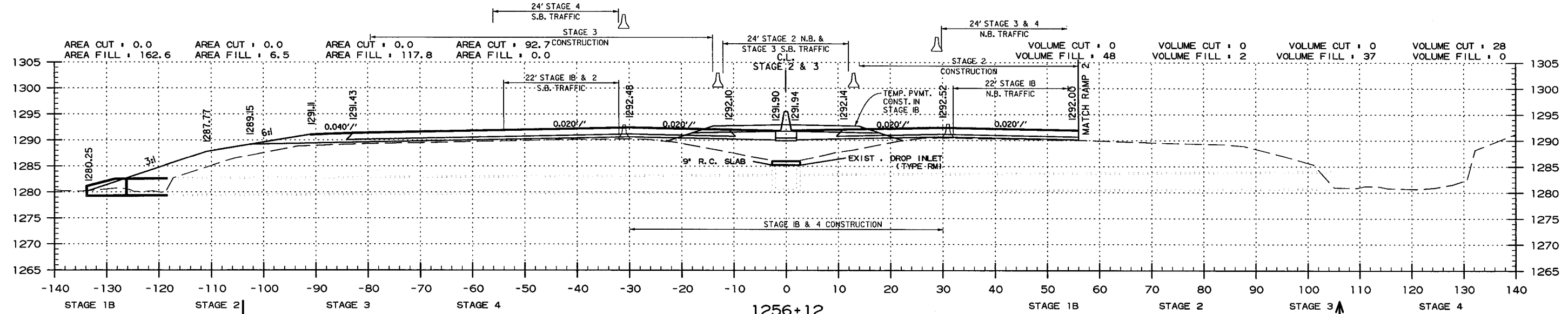
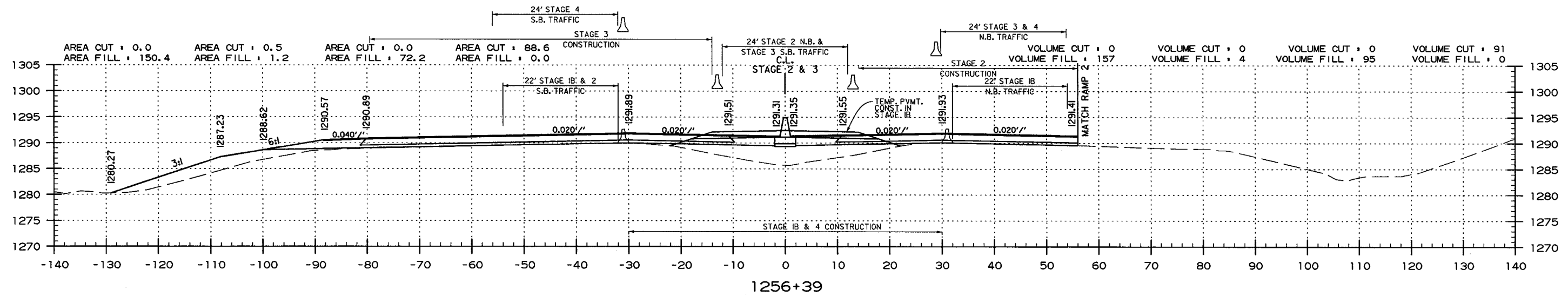
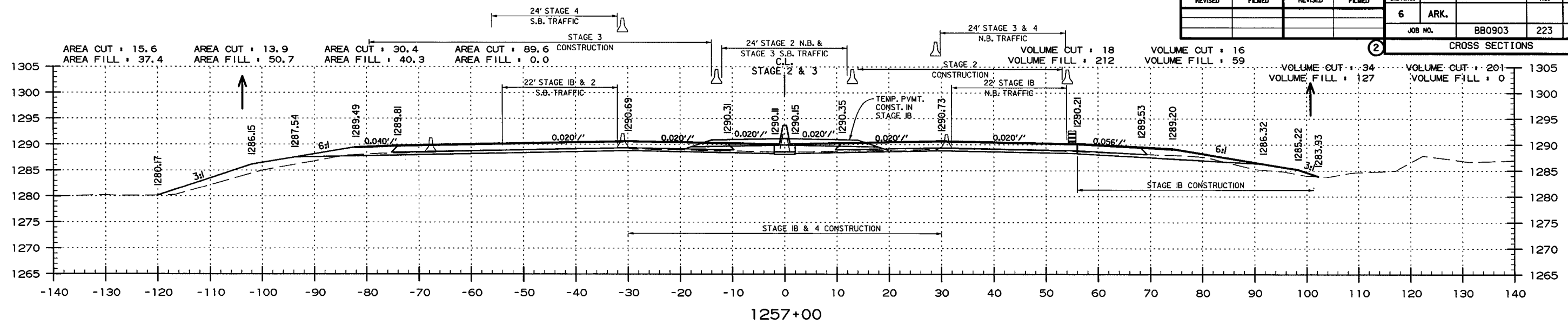
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	222
						CROSS SECTIONS		



1-49
CROSS SECTION STA. 1255+08 TO STA. 1256+04

USER: mh5114
DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX_1-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

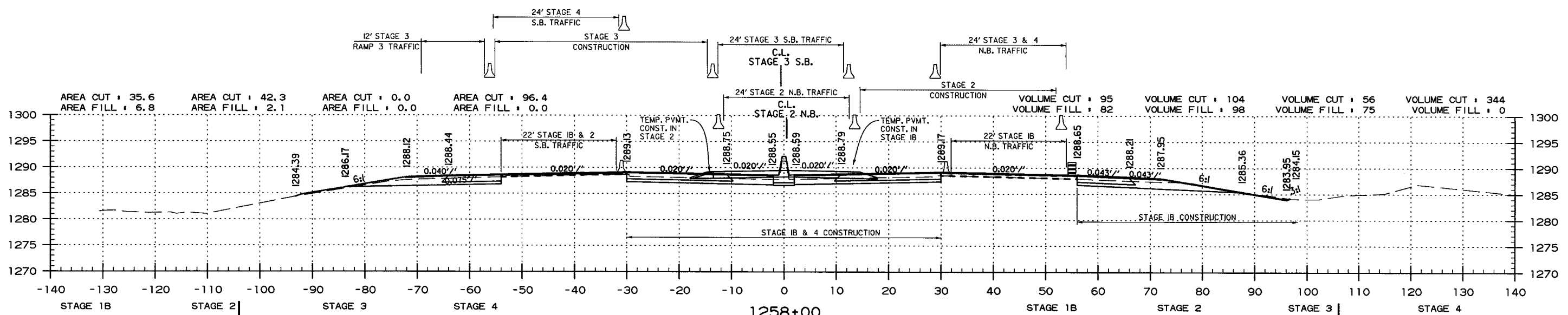
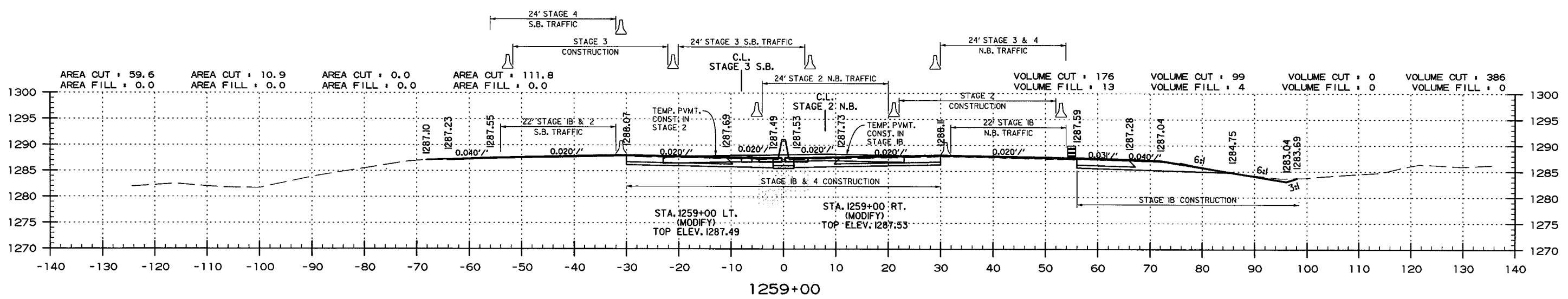
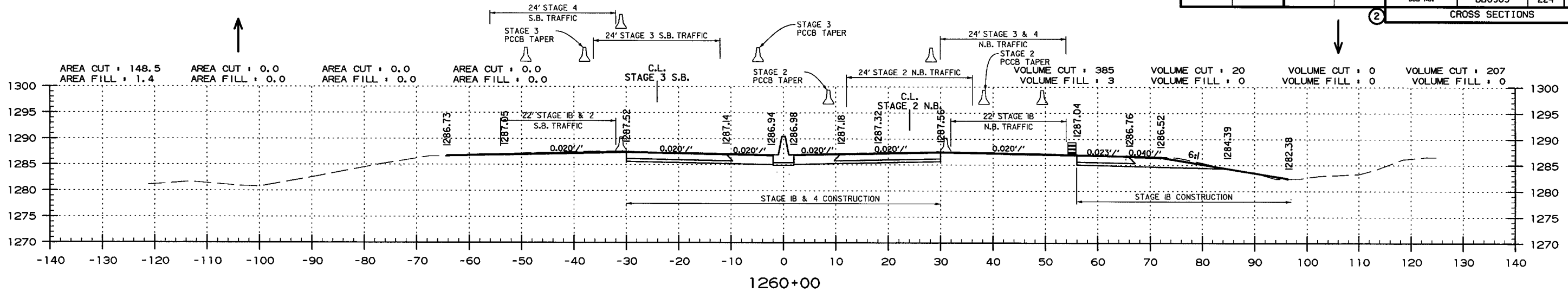
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	223
						CROSS SECTIONS		



1-49
CROSS SECTION STA. 1256+12 TO STA. 1257+00

USER: mh514
DESIGN FILE: G:\2103305.Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX-1-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	224	368	

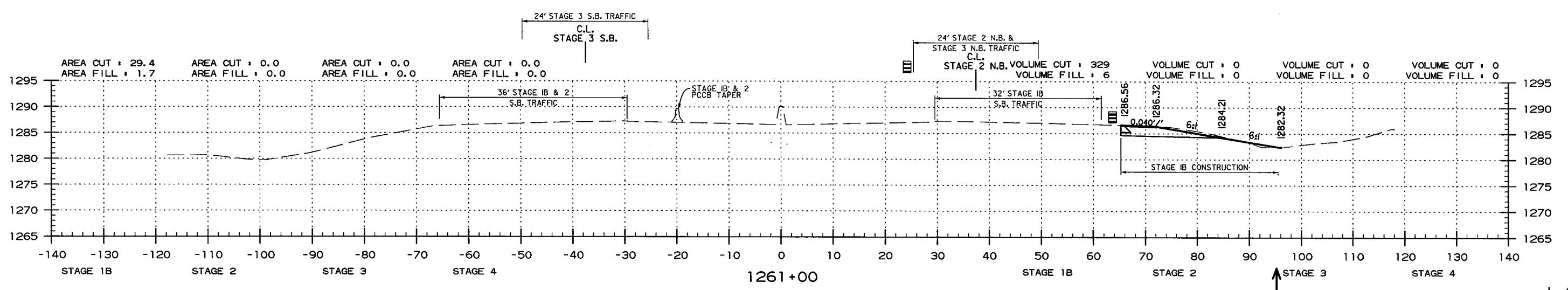
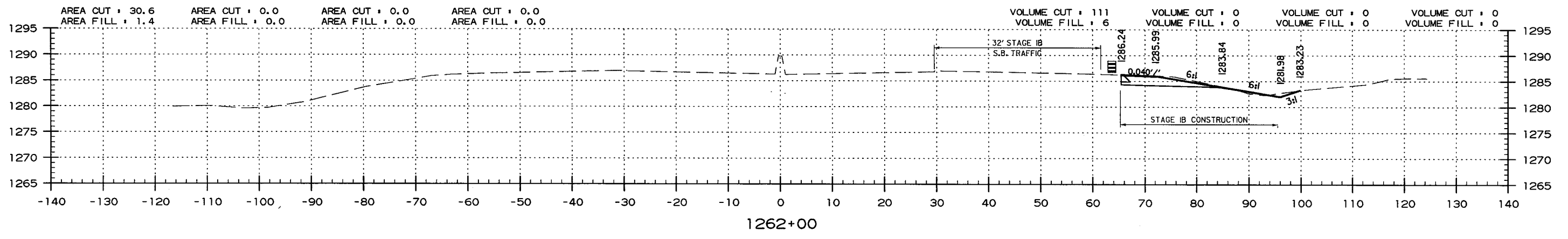
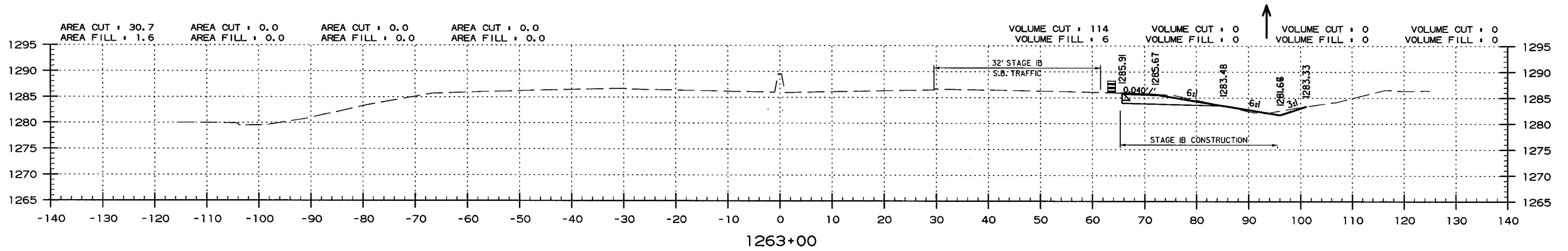


CROSS SECTION STA. 1258+00 TO STA. 1260+00

USER: mh5114
 DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.I-49.dgn
 PLOTTED: 6/6/2018 14:46
 MATCH RAMP 3
 1258.24
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	225
						368		

2 CROSS SECTIONS

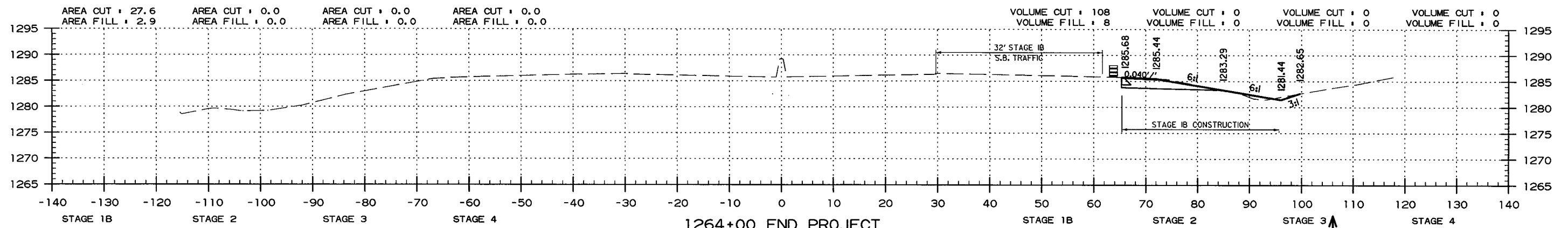


I-49
CROSS SECTION STA. 1261+00 TO STA. 1263+00

USER: mh514
DESIGN FILE: G:\2103305.Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.L-49.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		226	368

② CROSS SECTIONS



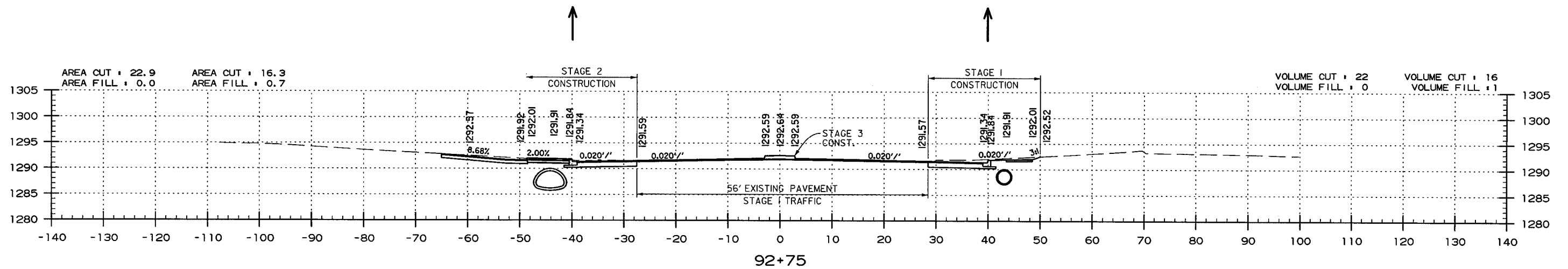
1264+00 END PROJECT

↑
CROSS SECTION STA. 1263+99 TO STA. 1263+99

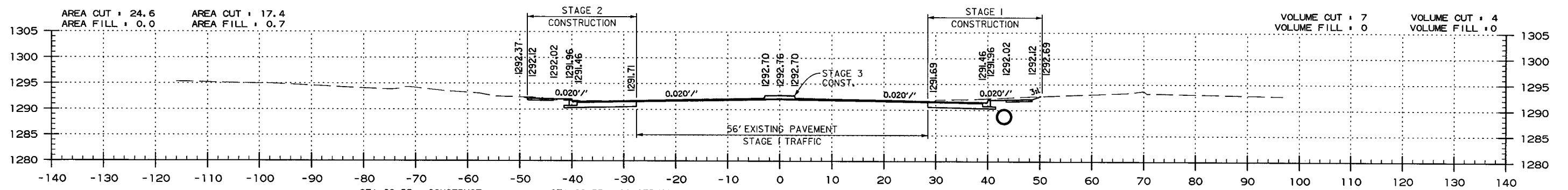
1-49

USER: mhs14
 DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\xsect\BB0903.CX.I-49.dgn
 PLOTTED: 6/6/2018 14:46

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	227	368	
2 CROSS SECTIONS								



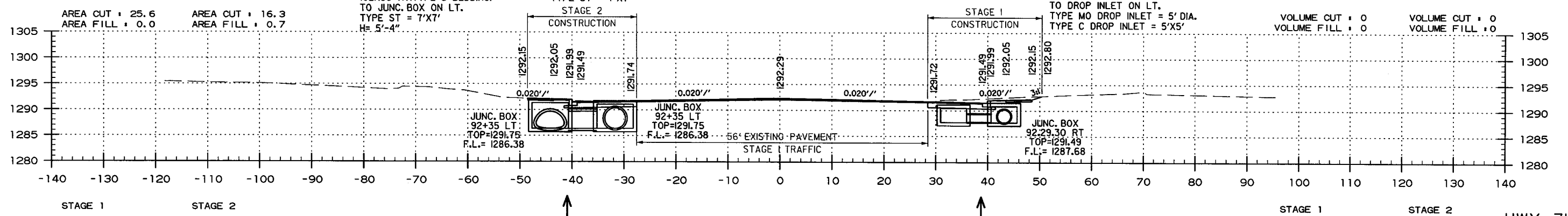
STA. 92+70 CONSTRUCT
APPROACH ON LT. = 20 CU. YDS.
UNCLASSIFIED EXC.



STA. 92+35 - CONSTRUCT
JUNC. BOX ON LT. OVER EXIST.
48" X 193' R.C. PIPE CULVERT INLET
REMOVE 122' OF R.C. PIPE CULVERT
CONSTRUCT 65" X 40" X 6'
ARCH R.C. PIPE CULVERT OUTLET
(CLASS IV)(TYPE 3 BEDDING)
TO JUNC. BOX ON LT.
TYPE ST = 7'X7'
H= 5'-4"

STA. 92+35 - CONSTRUCT
JUNC. BOX ON LT. H= 5'-8"
W/ 65" X 40" X 103'
ARCH R.C. PIPE CULVERT
(CLASS IV)(TYPE 3 BEDDING)
TO JUNC. BOX ON LT.
TYPE ST = 7'X7'

STA. 92+29.30 - CONSTRUCT
JUNC. BOX ON RT. H = 3'-10"
W/ 24" X 6' R.C. PIPE CULVERT INLET
& 30" X 127' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE M0 DROP INLET = 5' DIA.
TYPE C DROP INLET = 5'X5'



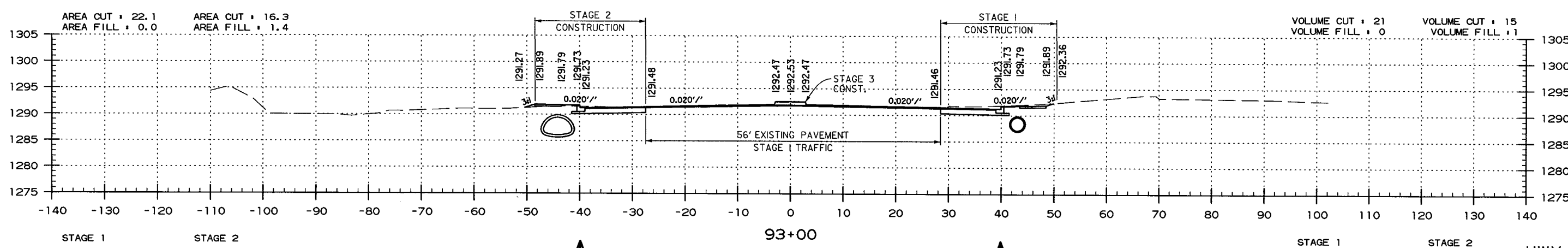
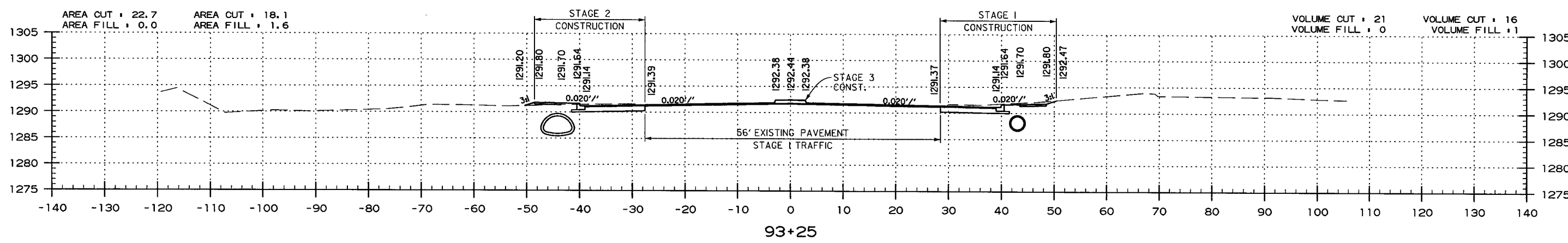
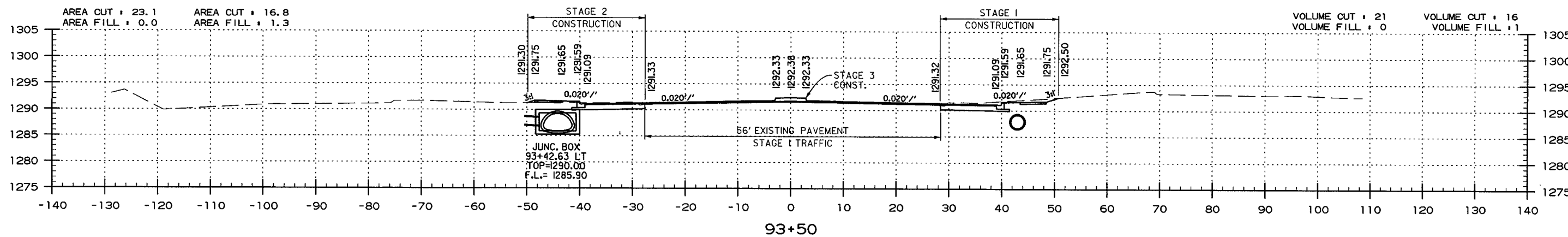
HWY. 71B
CROSS SECTION STA. 92+43 TO STA. 92+75

USER: mhs114
DESIGN FILE: G:\2103305_Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	228	368	

2 CROSS SECTIONS

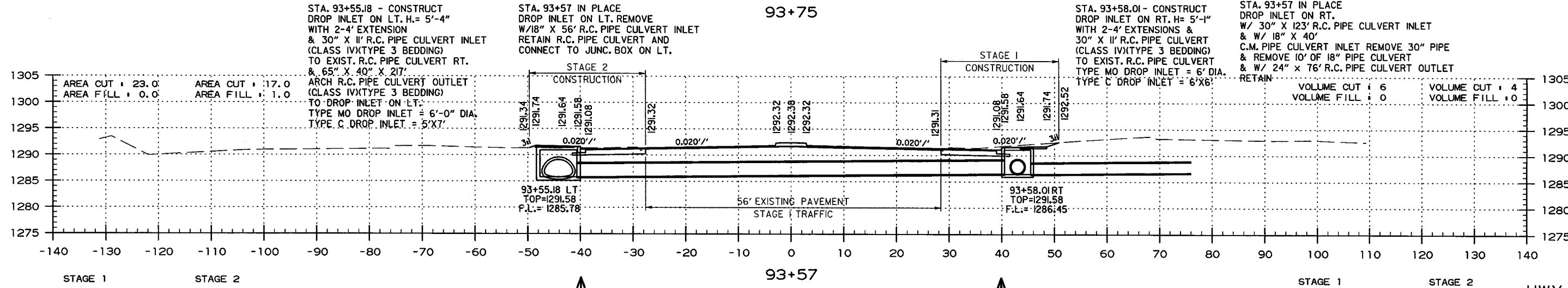
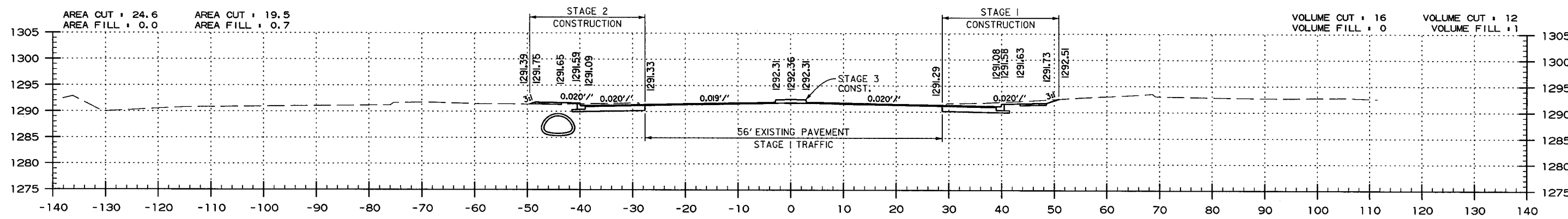
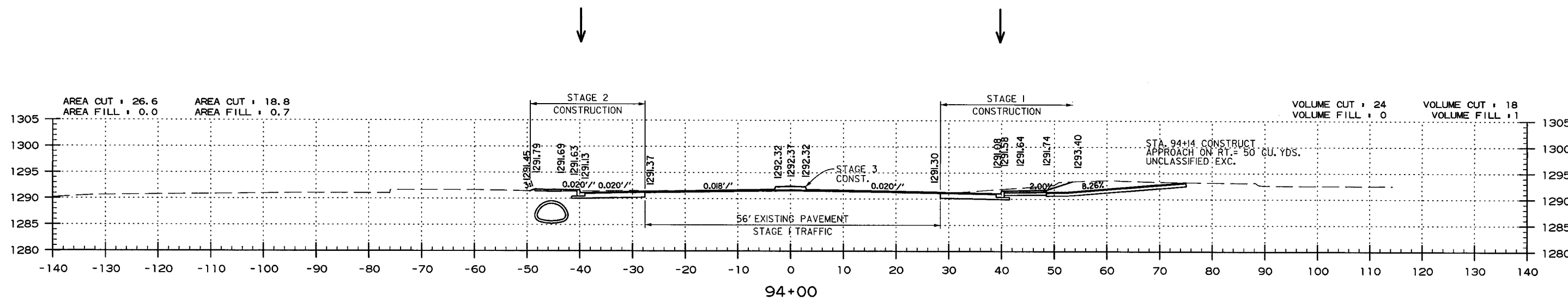
STA. 93+42.63 - CONSTRUCT
 JUNC. BOX ON LT. H= 5'-0"
 W/ 65" X 40" X 8"
 ARCH R.C. PIPE CULVERT
 (CLASS IV)(TYPE 3 BEDDING)
 TO DROP INLET ON LT.
 CONNECT EXIST. 18" PIPE LT.
 TYPE ST = 7'X7'



HWY. 71B
 CROSS SECTION STA. 93+00 TO STA. 93+50

USER: mhs14
 DESIGN FILE: G:\203305_Hwy71\mchq\TRANSP\dgn\seof\BB0903_CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	BB0903	229	368		
								2	CROSS SECTIONS

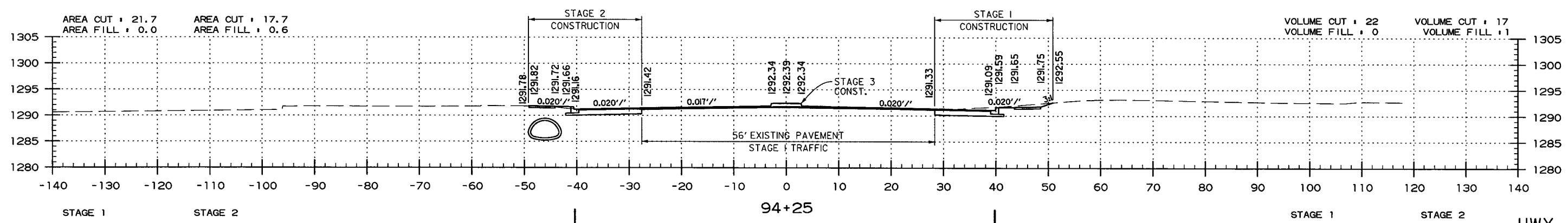
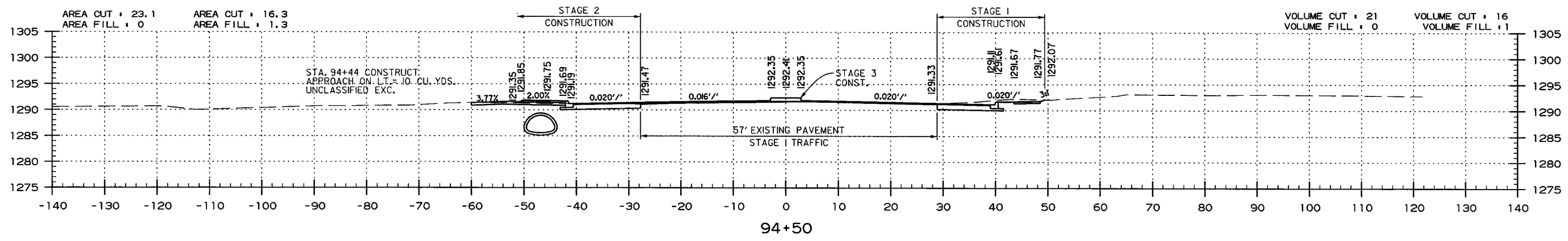
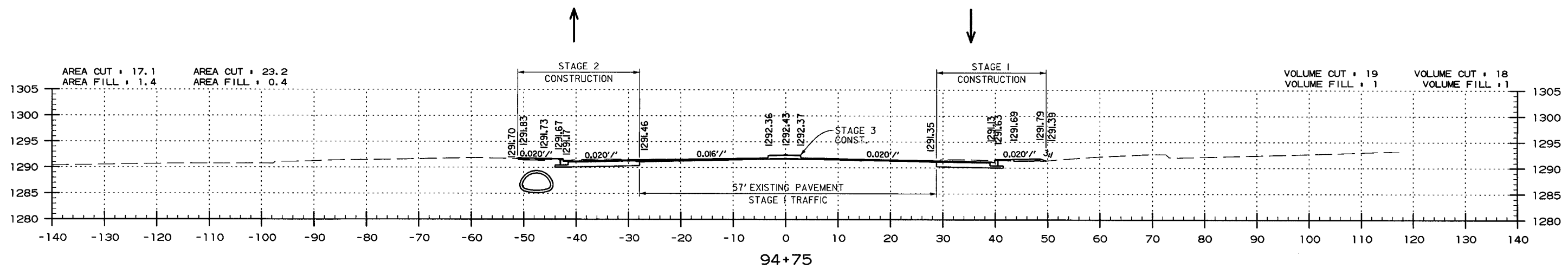


HWY. 71B
CROSS SECTION STA. 93+57 TO STA. 94+00

USER: mh514
DESIGN FILE: G:\2103305.Hwy71inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	230	368	

2 CROSS SECTIONS

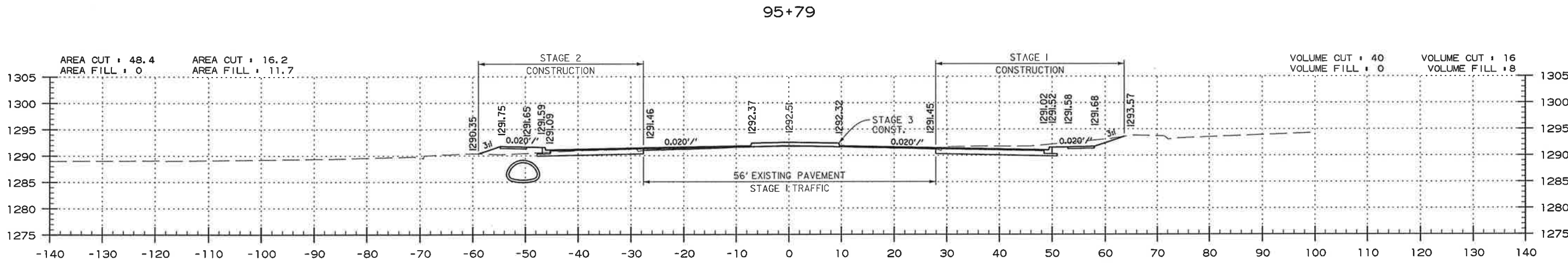
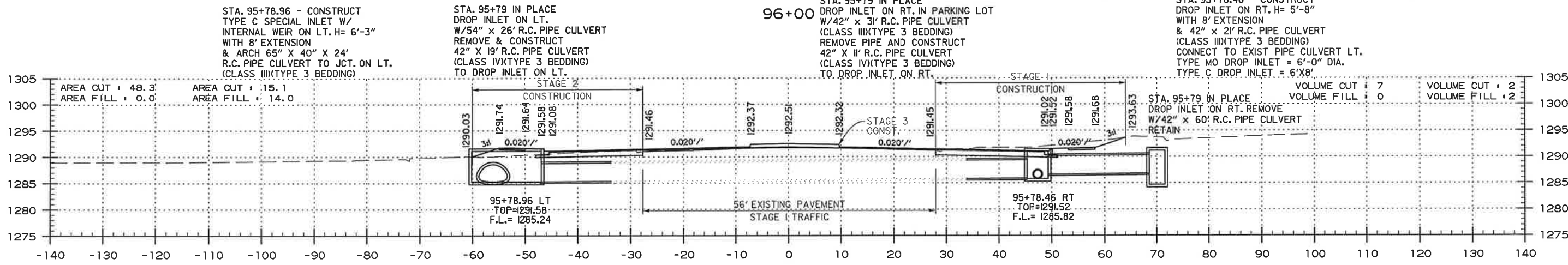
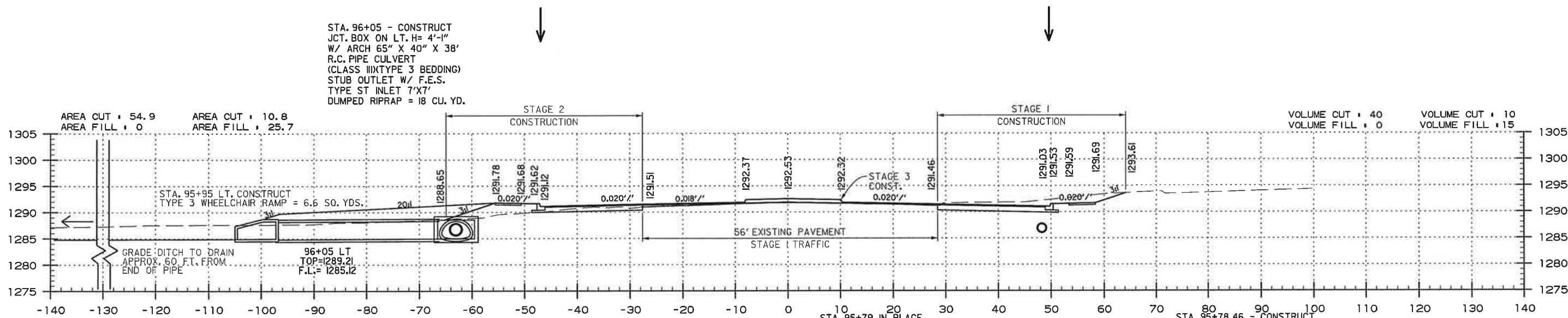


HWY. 71B
CROSS SECTION STA. 94+25 TO STA. 94+75

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\Inchq\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07-16-18				6	ARK.			
						JOB NO. BB0903	232	368

2 CROSS SECTIONS



STAGE 1 STAGE 2

STAGE 1 STAGE 2

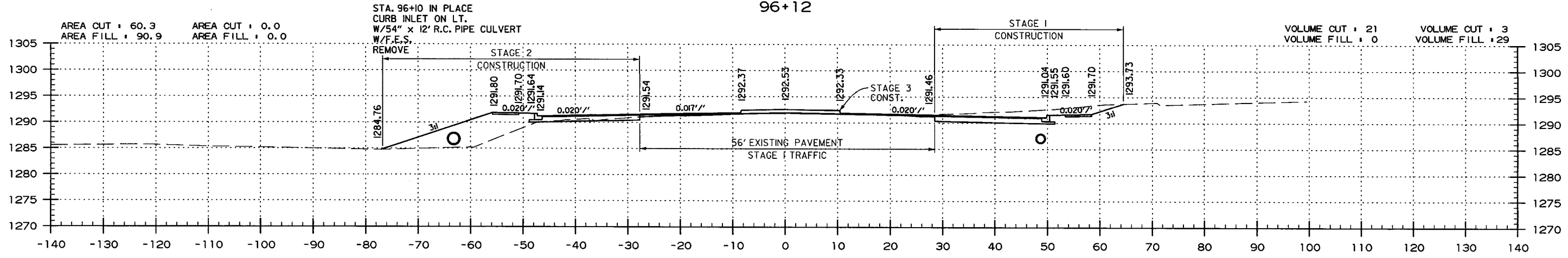
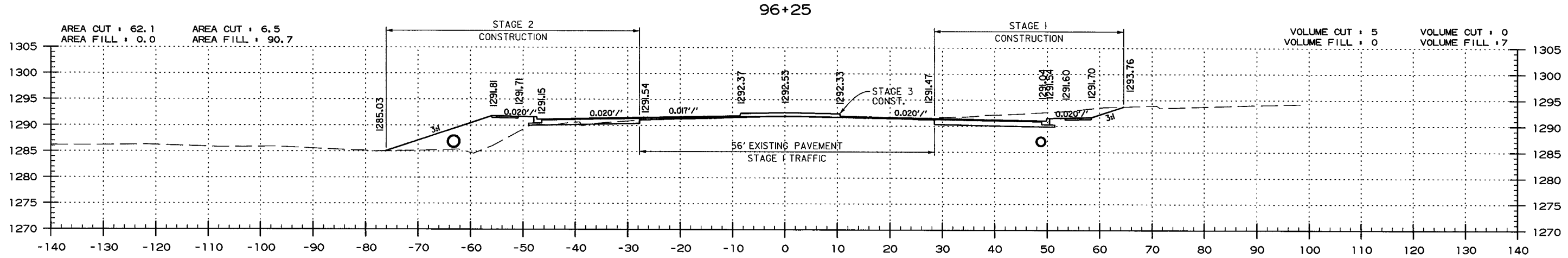
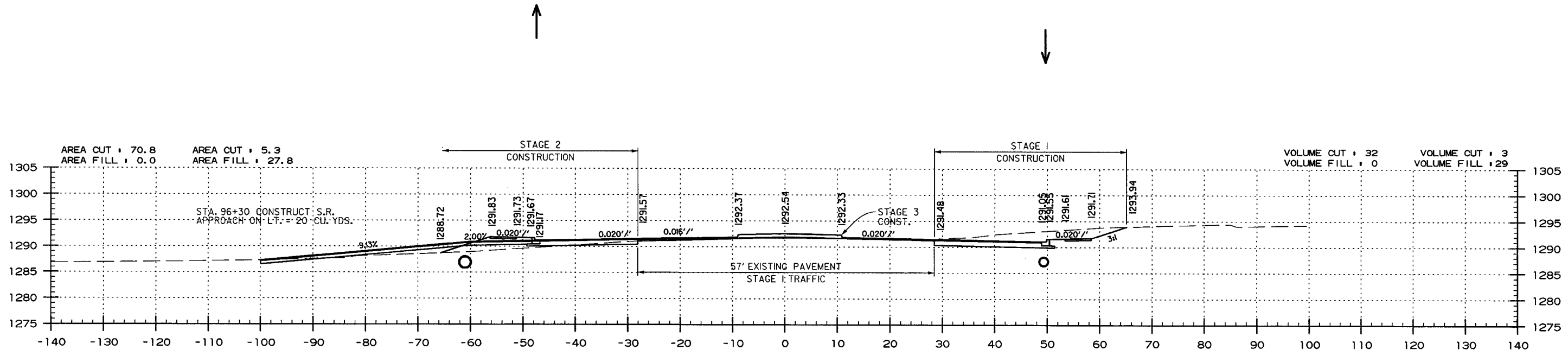
STAGE 1 STAGE 2

HWY. 71B
CROSS SECTION STA. 95+75 TO STA. 96+00

USER: mh514
DESIGN FILE: G:\2103305.Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 7/19/2018 17:38 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	233	368	

2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 96+10 TO STA. 96+25

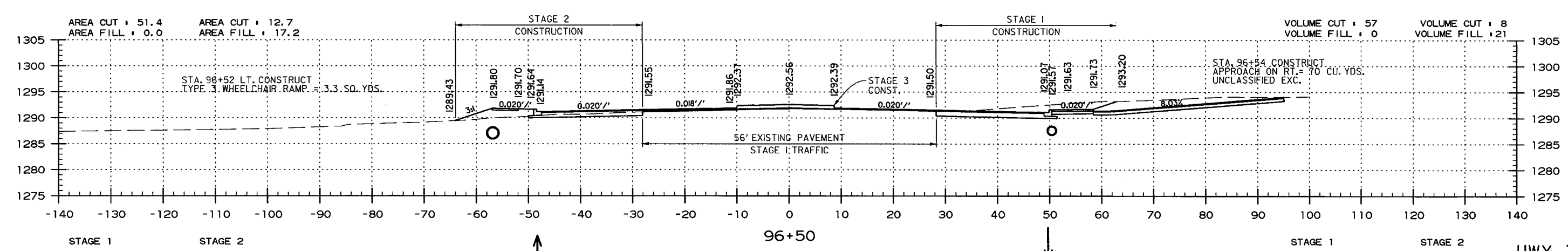
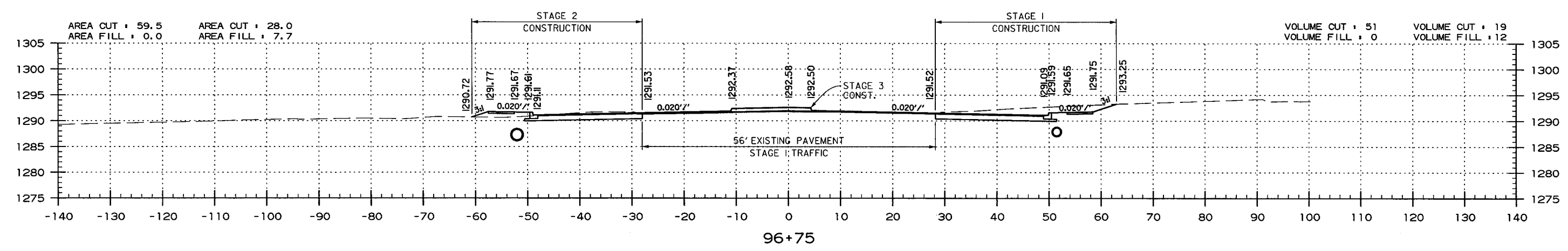
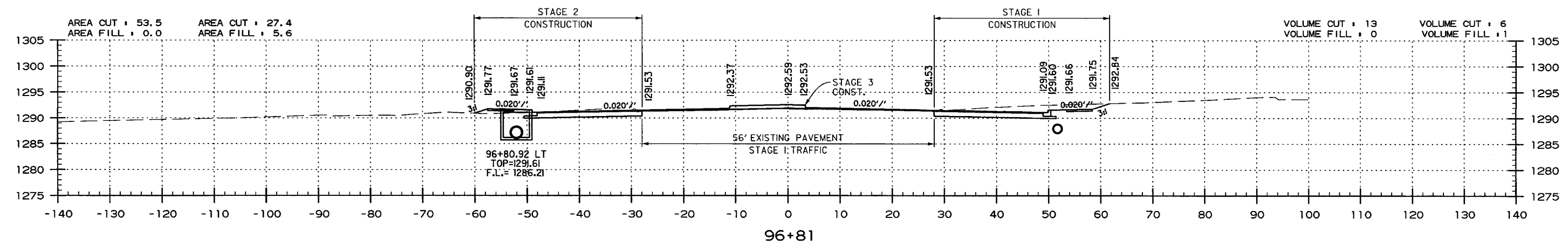
USER: mh514
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PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	234	368	

2 CROSS SECTIONS

STA. 96+80.92 - CONSTRUCT DROP INLET ON LT. H= 4'-5" WITH 8' EXTENSION & 24" x 96' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET ON LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'x4'

STA. 96+81 IN PLACE CURB INLET ON LT. W/18" x 66' R.C. PIPE CULVERT TO CURB INLET ON LT. REMOVE

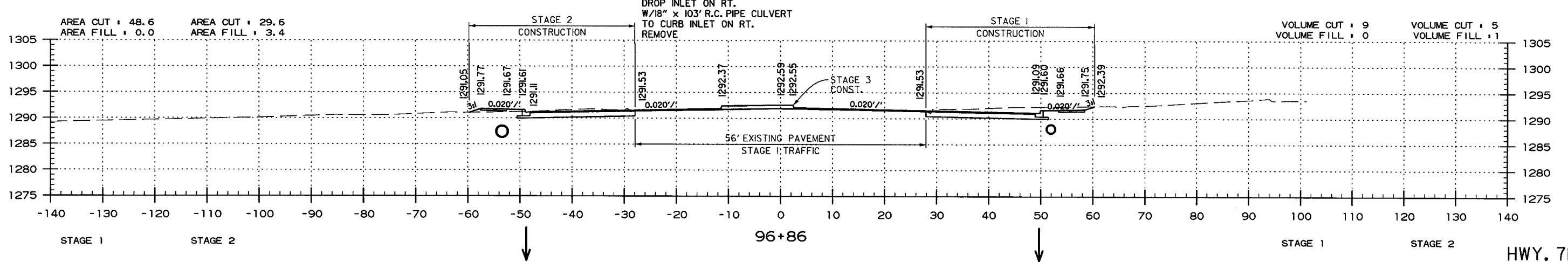
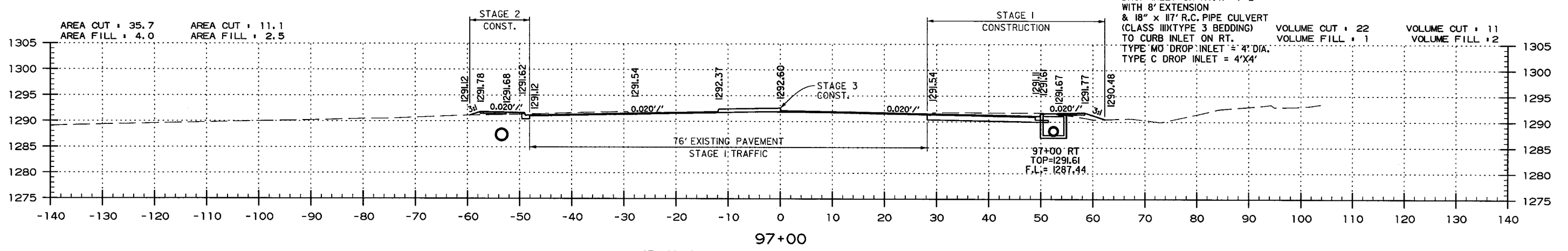
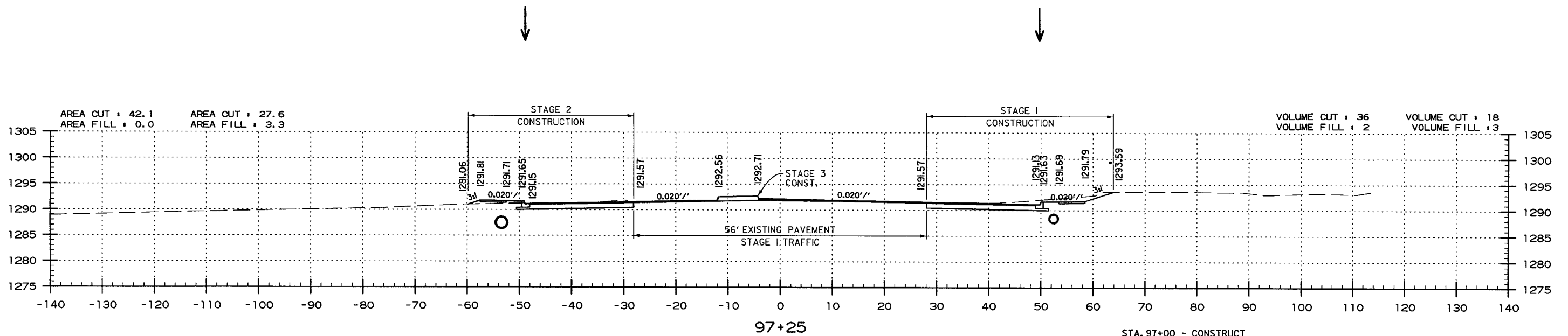


HWY. 71B
CROSS SECTION STA. 96+50 TO STA. 96+81

USER: mhs14
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PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		235	368

2 CROSS SECTIONS

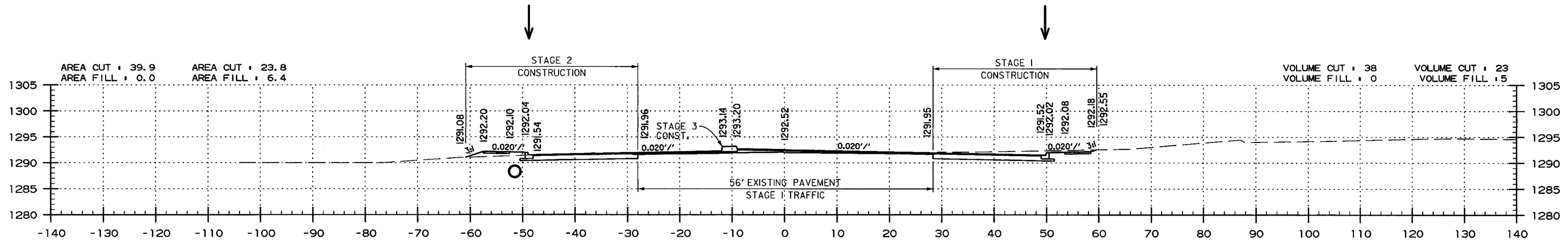


HWY. 71B
CROSS SECTION STA. 96+86 TO STA. 97+25

USER: mhslk
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PLOTTED: 6/6/2018 14:46
SCALE: 1/20

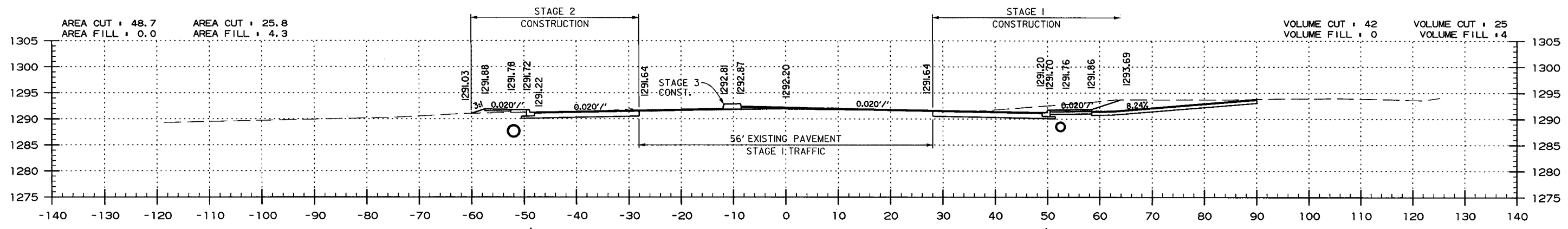
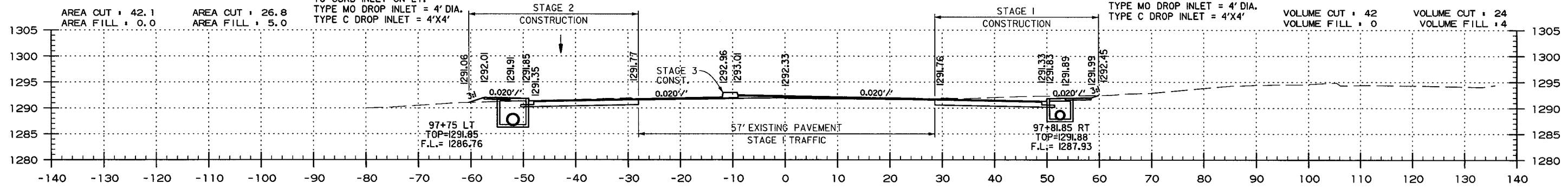
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		236	368

2 CROSS SECTIONS



STA. 97+75 - CONSTRUCT
DROP INLET ON LT. H= 5'-1"
WITH 8' EXTENSION
& 24" x 89' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO CURB INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x4'

STA. 97+81.85 - CONSTRUCT
DROP INLET ON RT. H= 3'11"
WITH 8' EXTENSION
& 18" x 78' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x4'

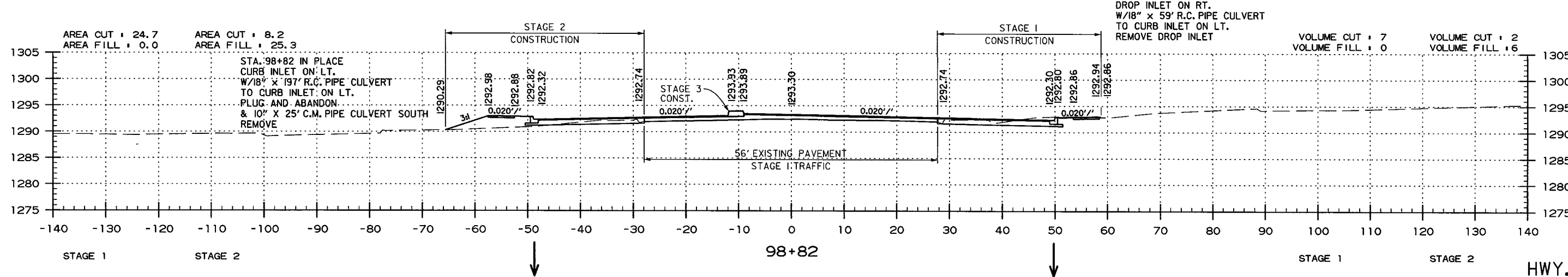
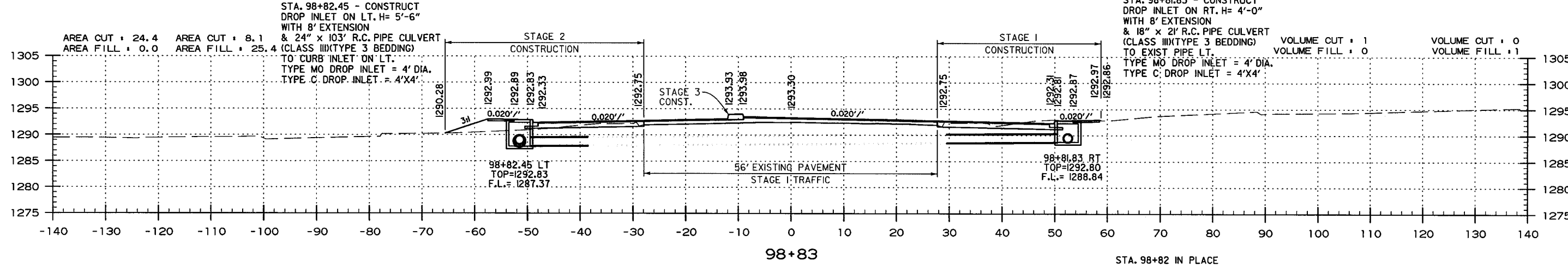
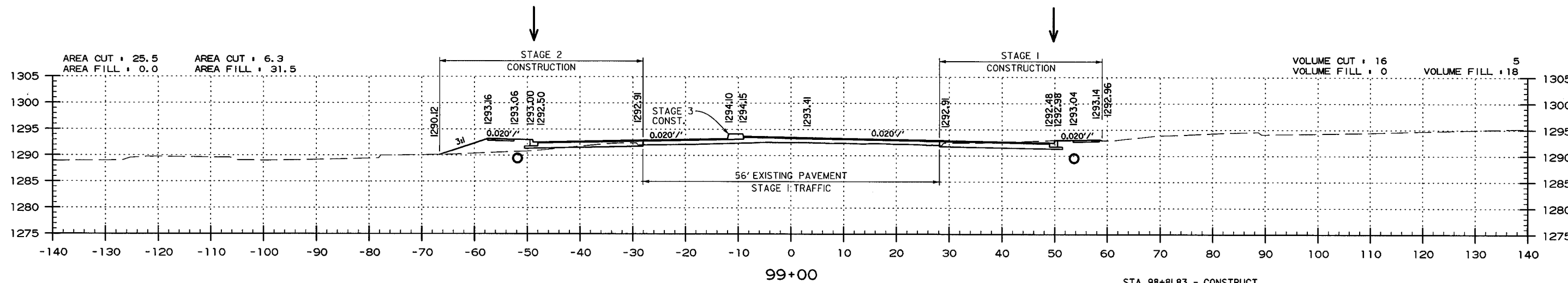


STA. 97+50 CONSTRUCT
APPROACH ON RT.= 90 CU. YDS.
UNCLASSIFIED EXC.

HWY. 71B
CROSS SECTION STA. 97+50 TO STA. 98+00

USER: mh514
DESIGN FILE: G:\2103305_Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
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SCALE: 1:20

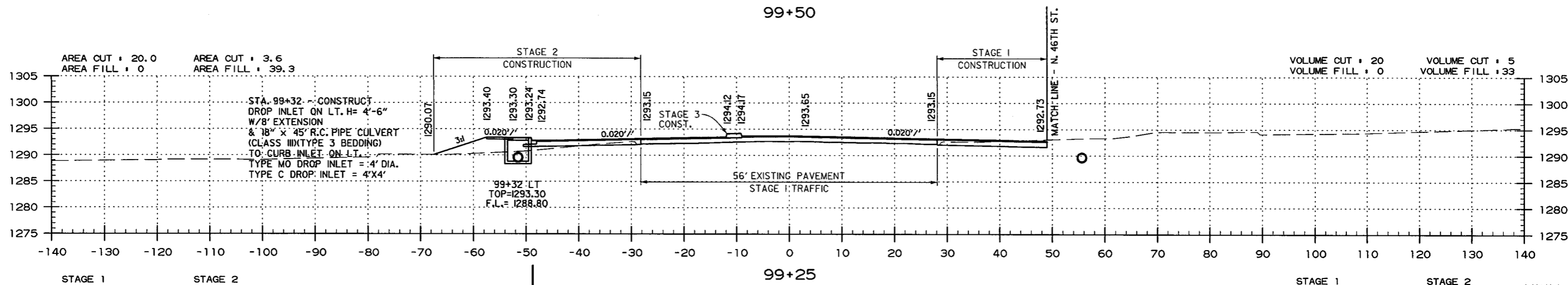
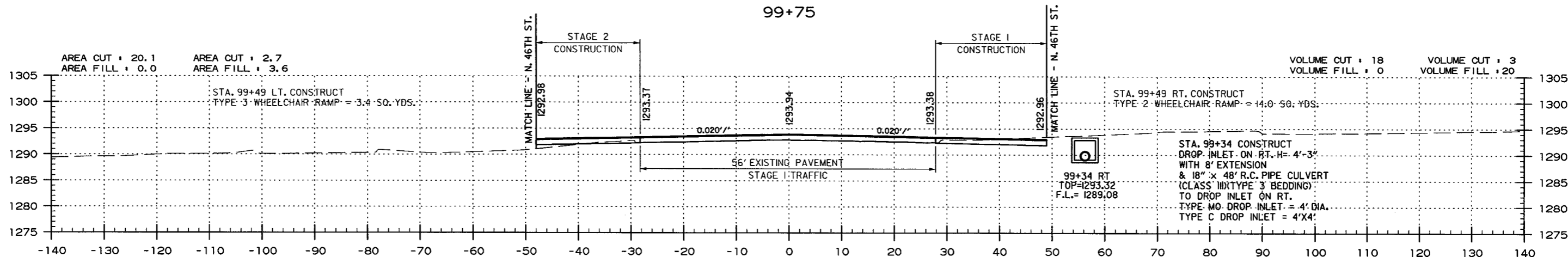
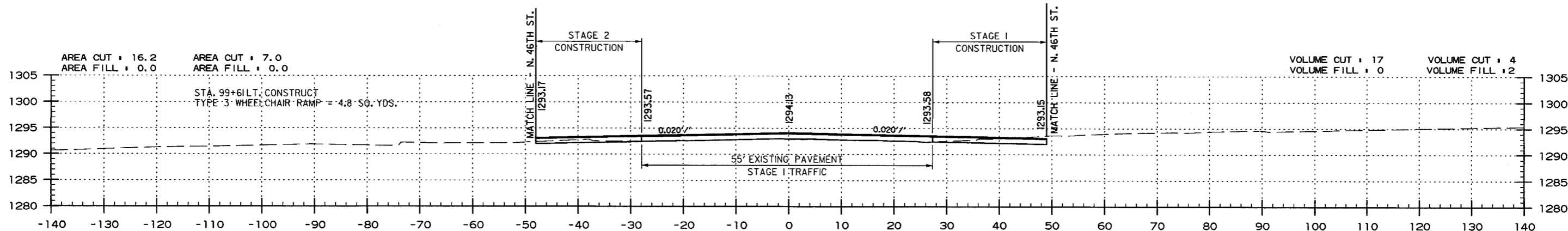
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				6	ARK.				
				JOB NO.	BB0903	238	368		
								2	CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 98+82 TO STA. 99+00

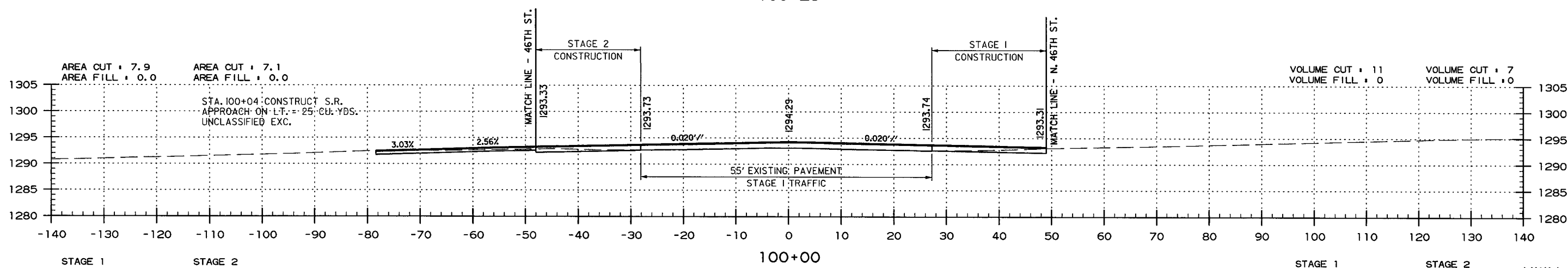
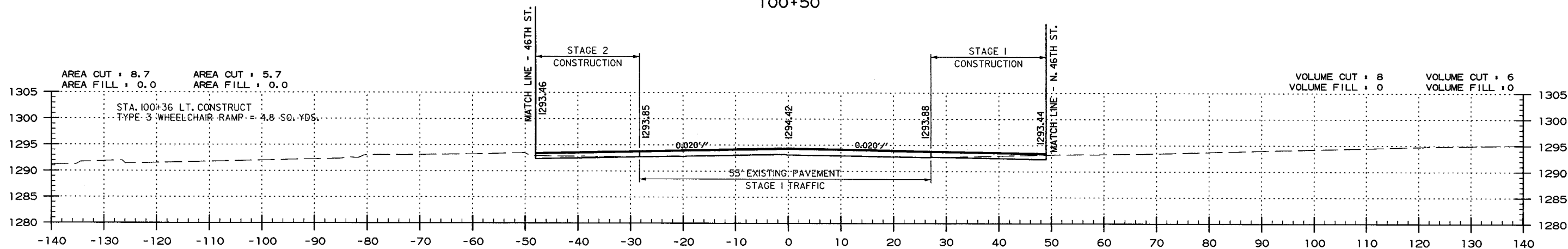
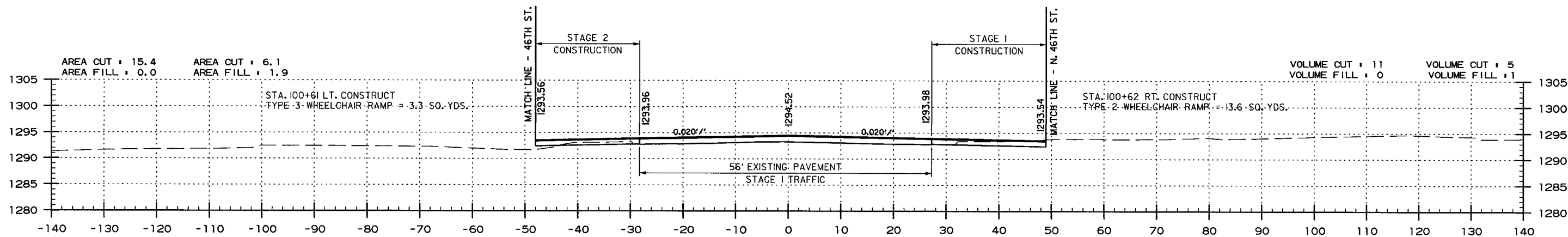
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	BB0903	239	368		
								2	CROSS SECTIONS



STAGE 1 STAGE 2
 HWY. 71B
 CROSS SECTION STA. 99+25 TO STA. 99+75

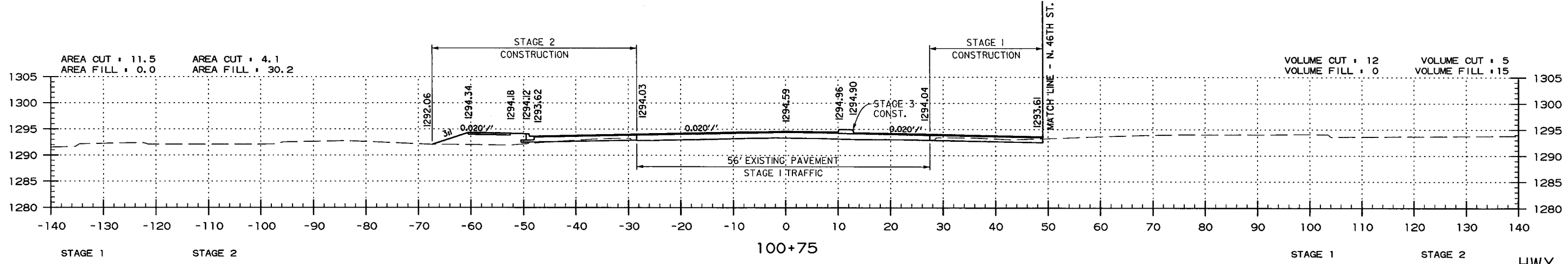
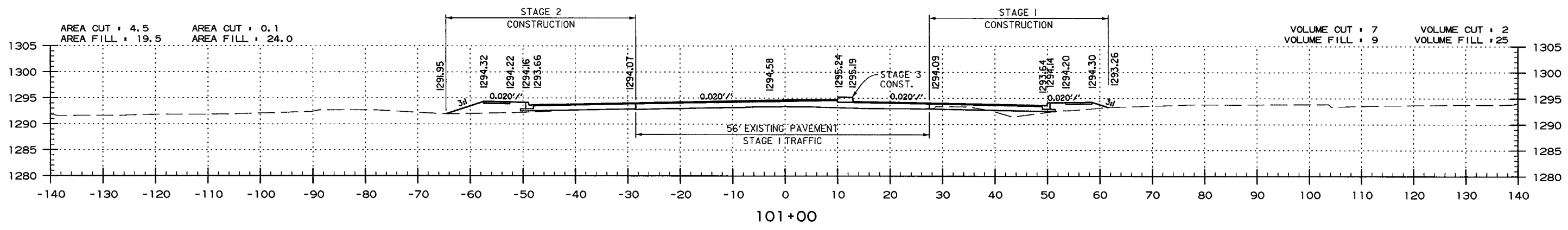
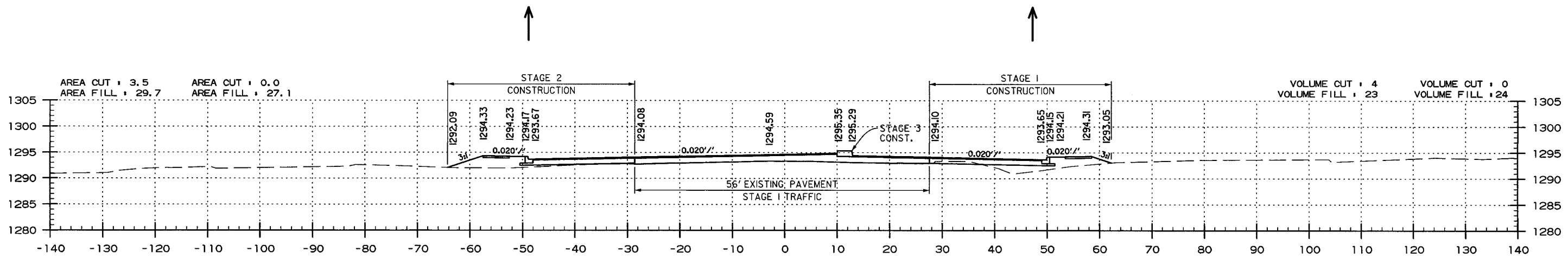
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	BB0903	240	368		
								2	CROSS SECTIONS



STAGE 1 STAGE 2
 HWY. 71B
 CROSS SECTION STA. 100+00 TO STA. 100+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	241	368	

2 CROSS SECTIONS

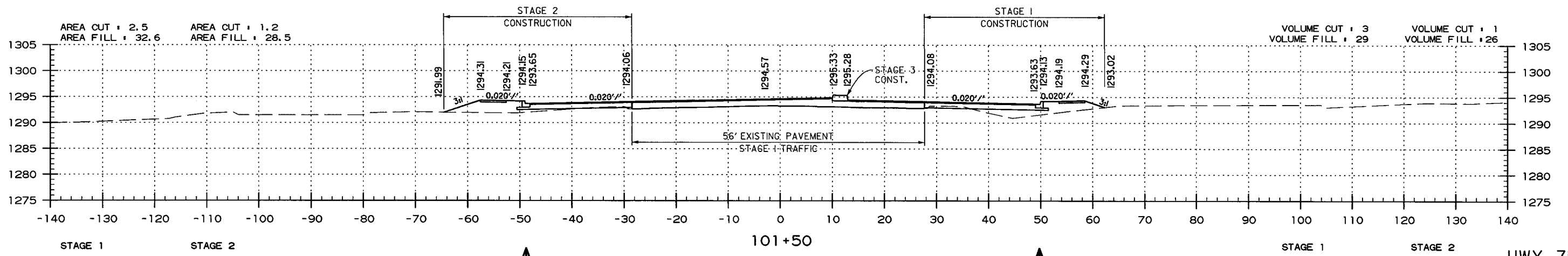
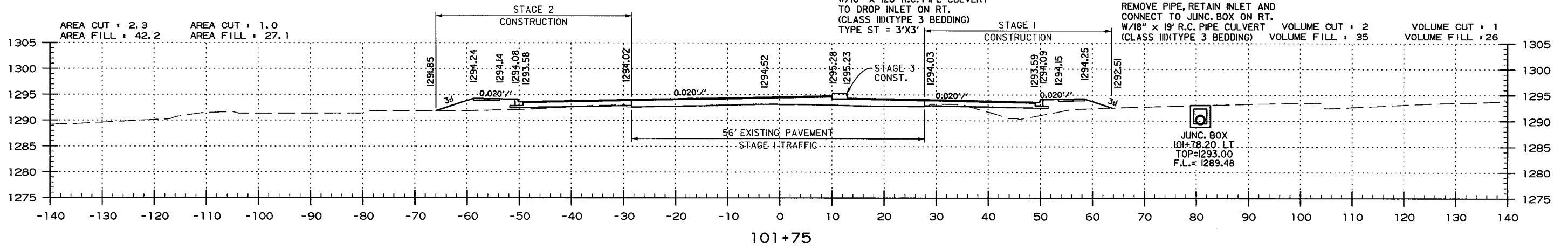
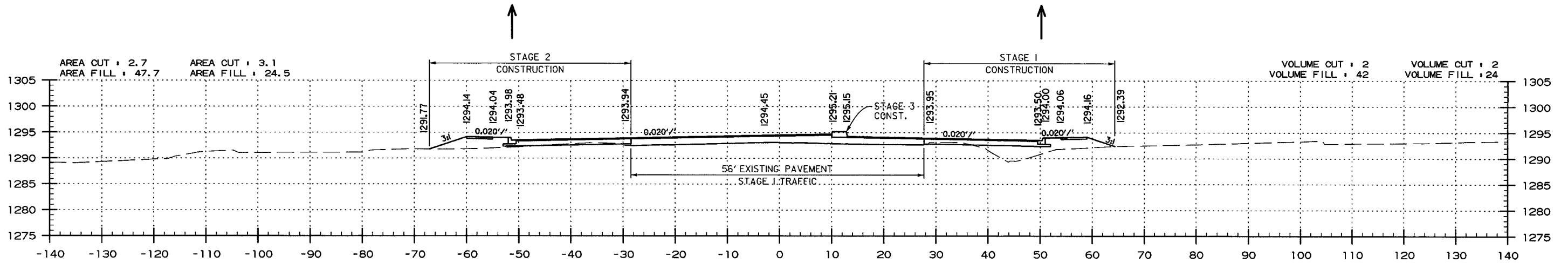


HWY. 71B
CROSS SECTION STA. 100+75 TO STA. 101+25

USER: mh514
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PLOTTED: 6/6/2018 14:46
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		242	368

2 CROSS SECTIONS

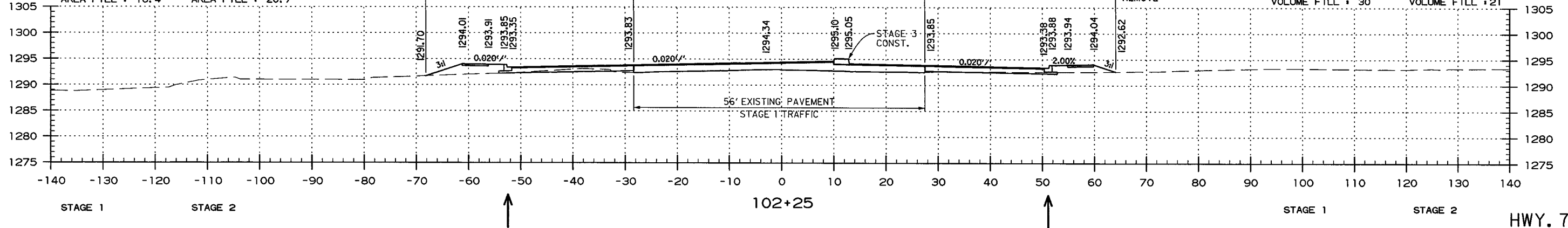
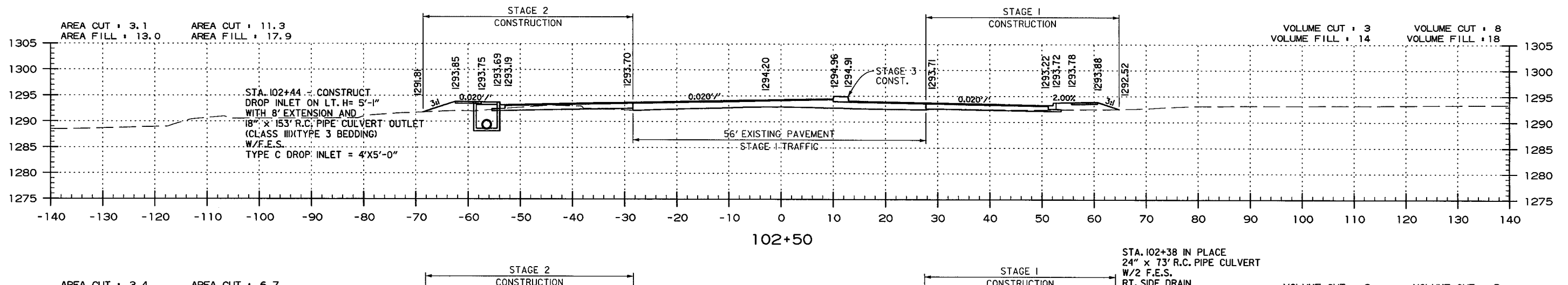
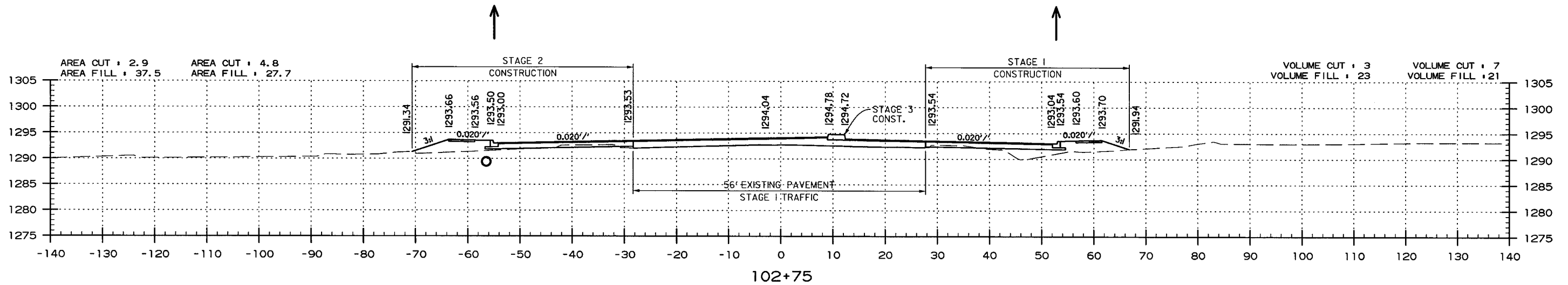


STAGE 1 STAGE 2
HWY. 71B
CROSS SECTION STA. 101+50 TO STA. 102+00

USER: mh5114
DESIGN FILE: G:\2103305.Hwy71\hwy71\transp\dgn\sect\vrBB0903.CX.HWY71B_01.dgn
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	243	368	

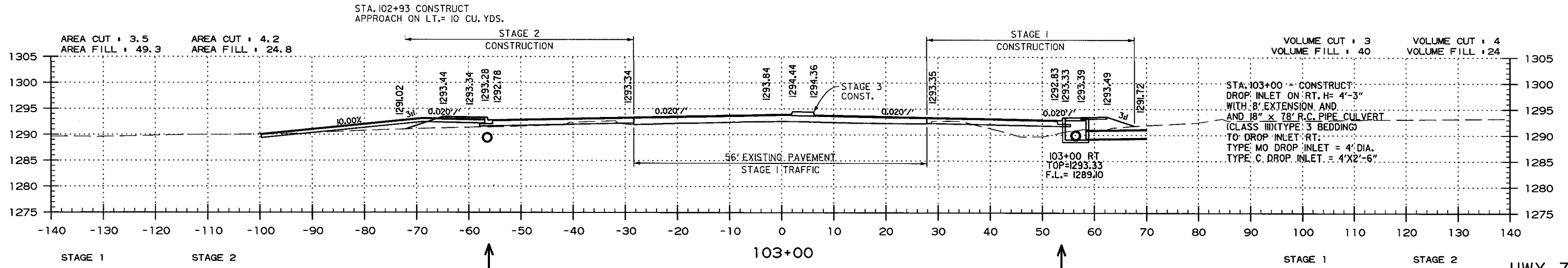
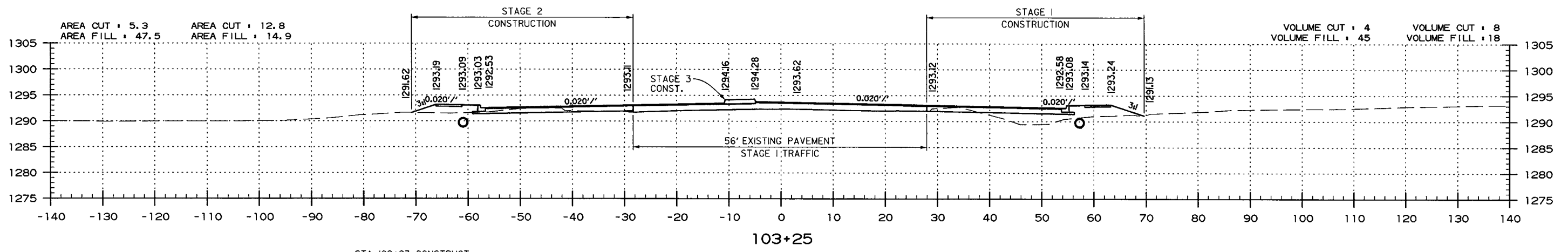
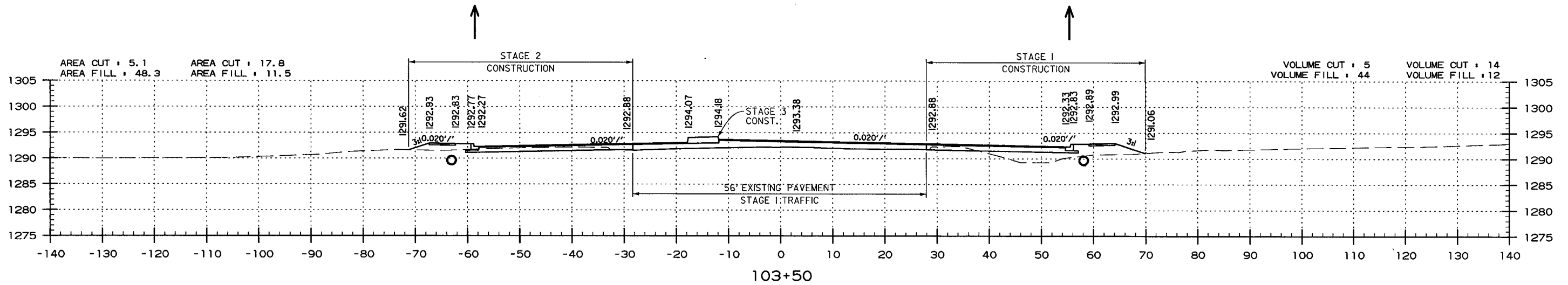
2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 102+25 TO STA. 102+75

USER: mh514
DESIGN FILE: G:\2103305.Hwy71inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		244	368
				2 CROSS SECTIONS				

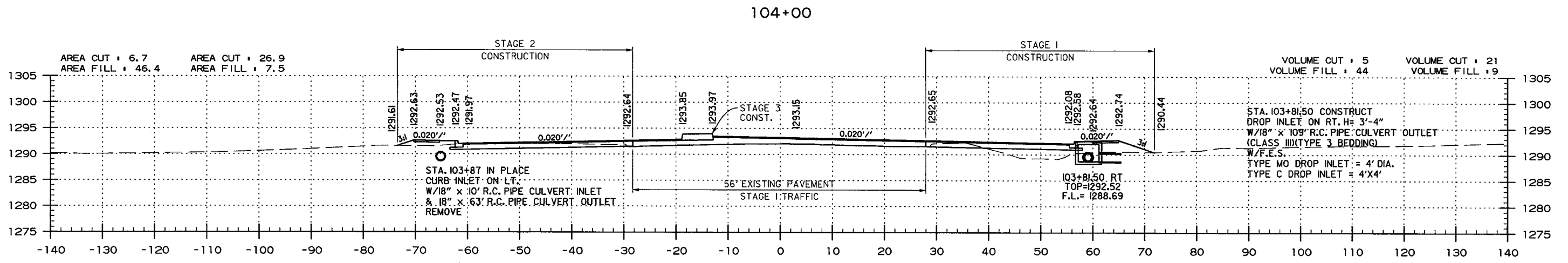
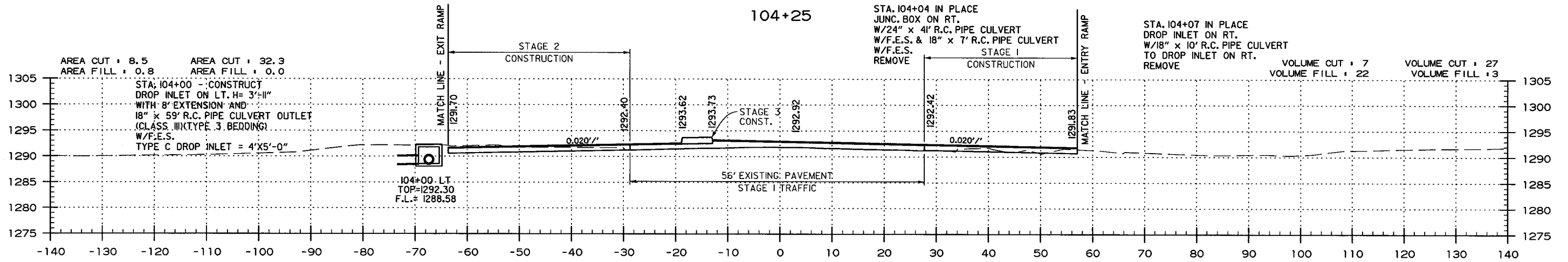
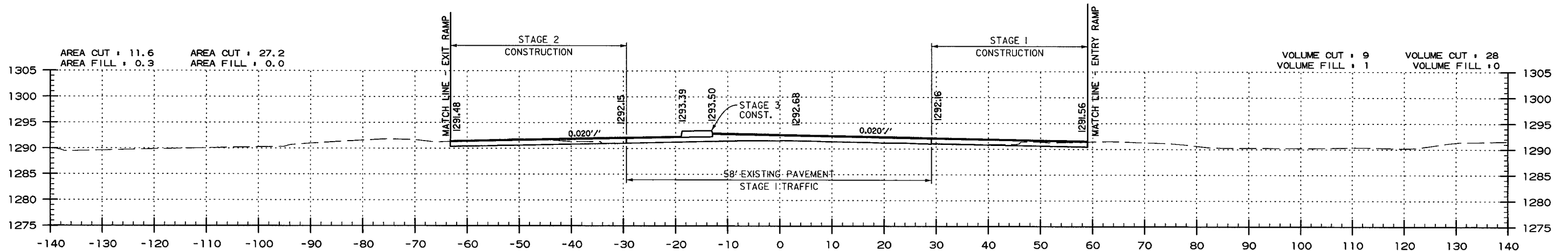


HWY. 71B
CROSS SECTION STA. 103+00 TO STA. 103+50

USER: mh5114
 DESIGN FILE: G:\12103305_Hwy71\Inch\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		245	368

2 CROSS SECTIONS

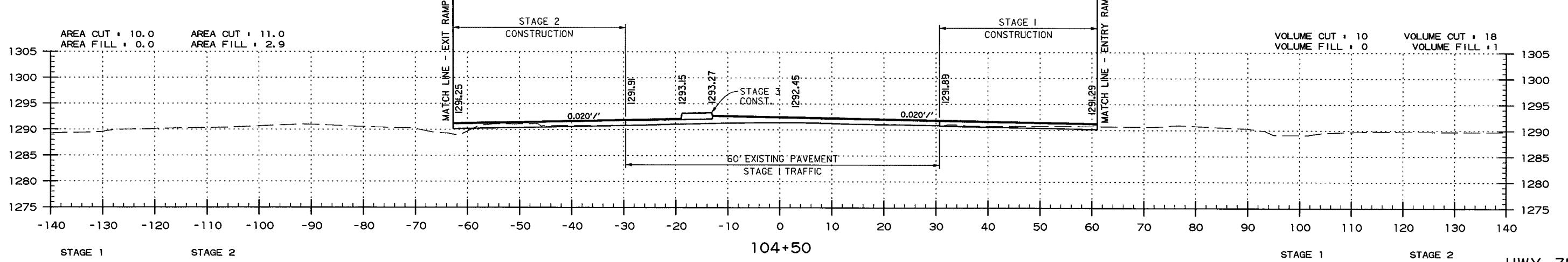
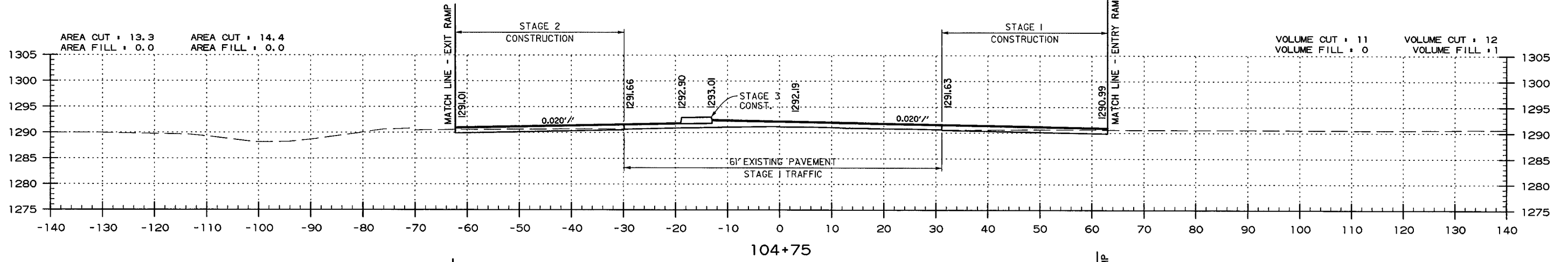
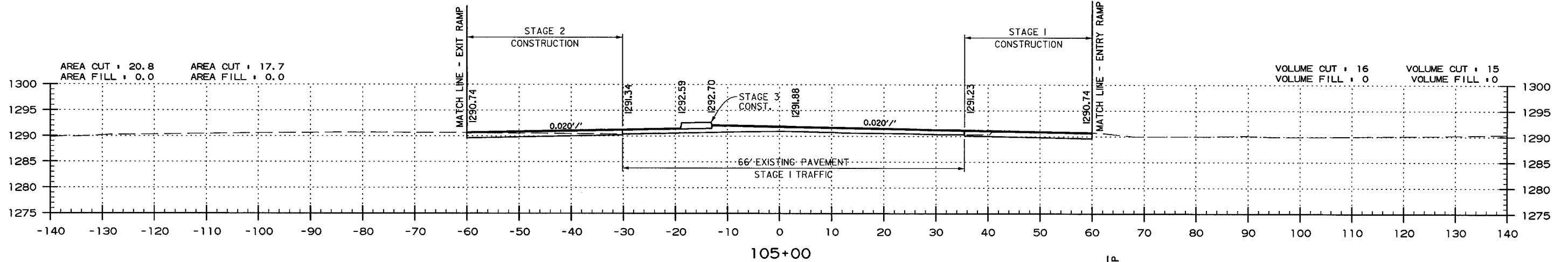


HWY. 71B
CROSS SECTION STA. 103+75 TO STA. 104+25

USER: mh5114
DESIGN FILE: G:\2103305.Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	246	368	

2 CROSS SECTIONS



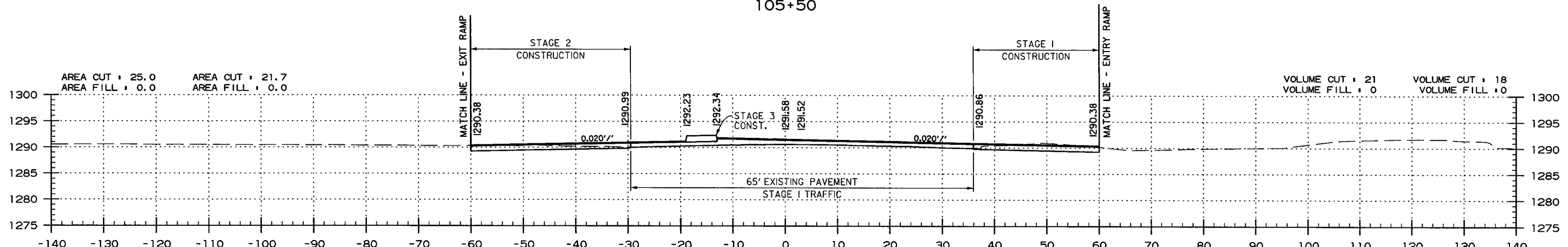
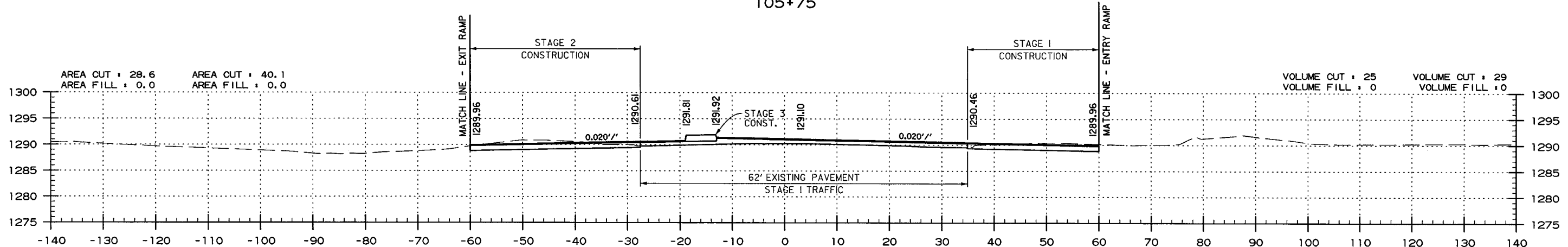
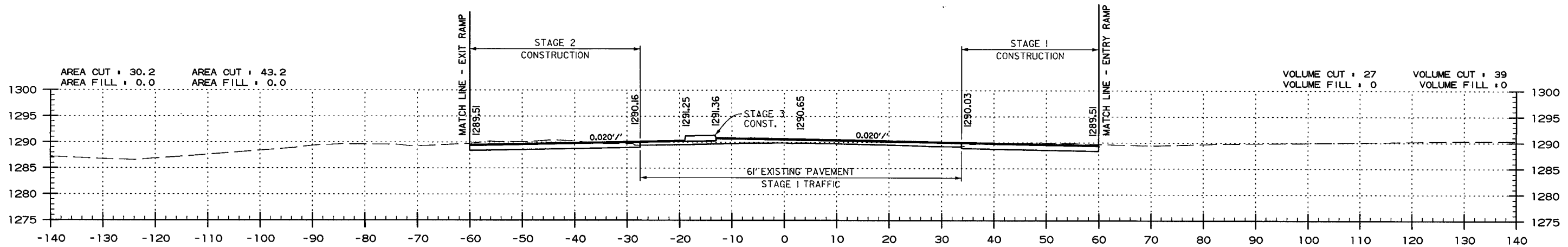
STAGE 1 STAGE 2

HWY. 71B
CROSS SECTION STA. 104+50 TO STA. 105+00

USER: mh5114
DESIGN FILE: G:\2103305_Hwy71Inch\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	247	368	

2 CROSS SECTIONS



STAGE 1 STAGE 2

STAGE 1 STAGE 2

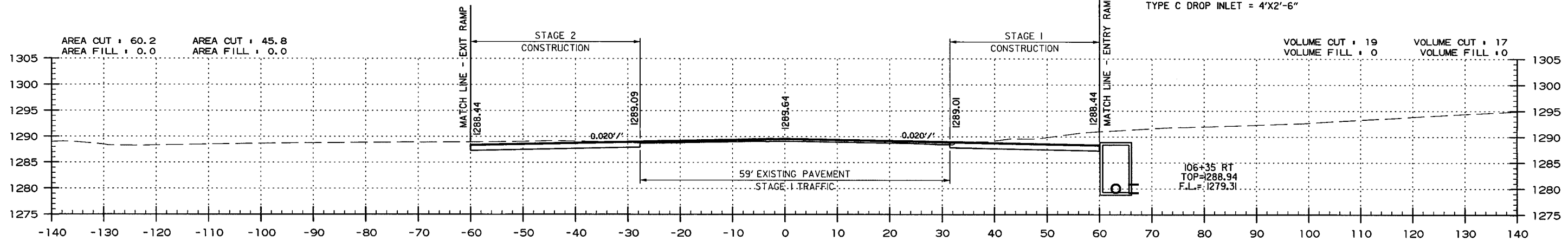
HWY. 71B
CROSS SECTION STA. 105+25 TO STA. 105+75

USER: mh514
DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

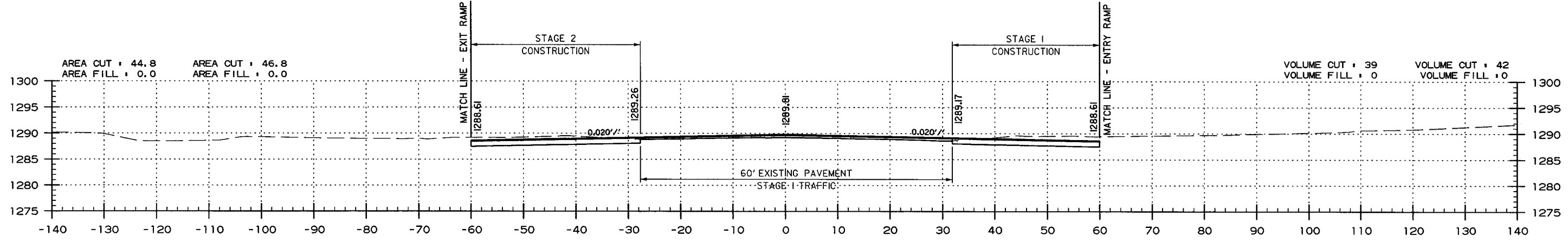
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	248	368	

2 CROSS SECTIONS

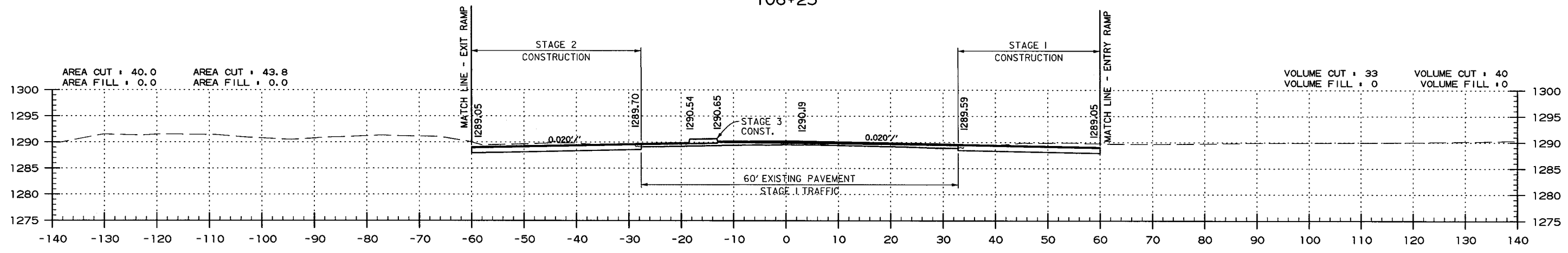
STA. 106+35 - CONSTRUCT
 DROP INLET ON RT. H= 9'-8"
 WITH 8' EXTENSION AND
 18" x 49' R.C. PIPE CULVERT
 (CLASS III)(TYPE 3 BEDDING)
 TO DROP INLET ON RAMP 2B
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4'x2'-6"



106+35



106+25



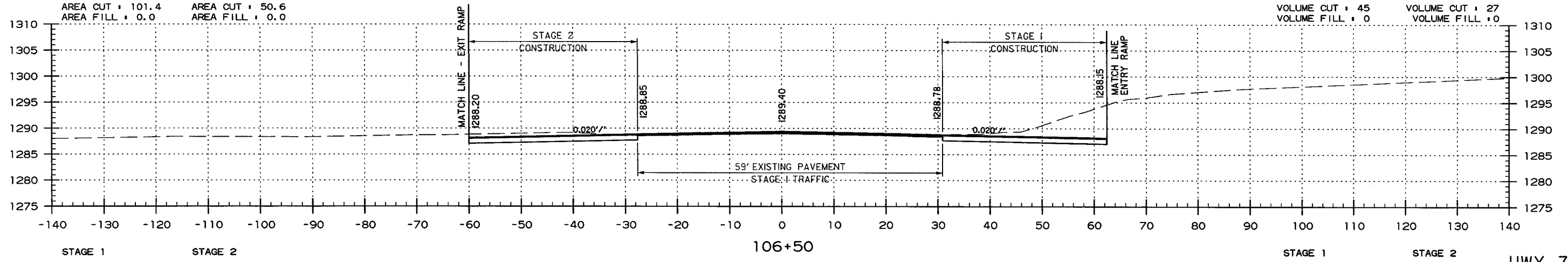
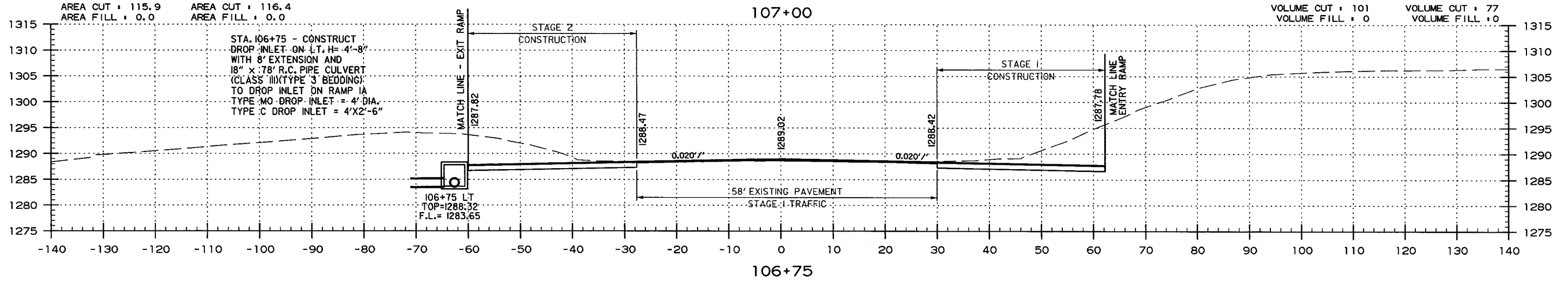
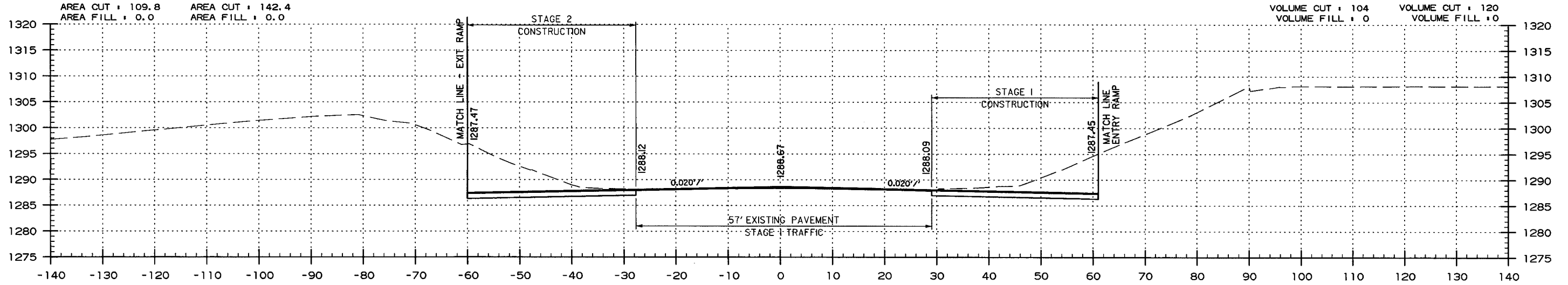
106+00

STAGE 1 STAGE 2
 HWY. 71B
 CROSS SECTION STA. 106+00 TO STA. 106+35

USER: mh514
 DESIGN FILE: G:\2003305_Hwy71\inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	249	368	

2 CROSS SECTIONS

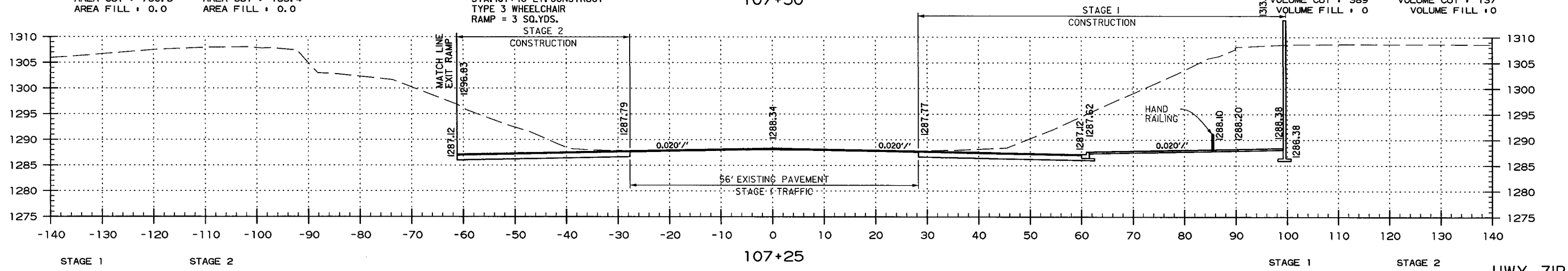
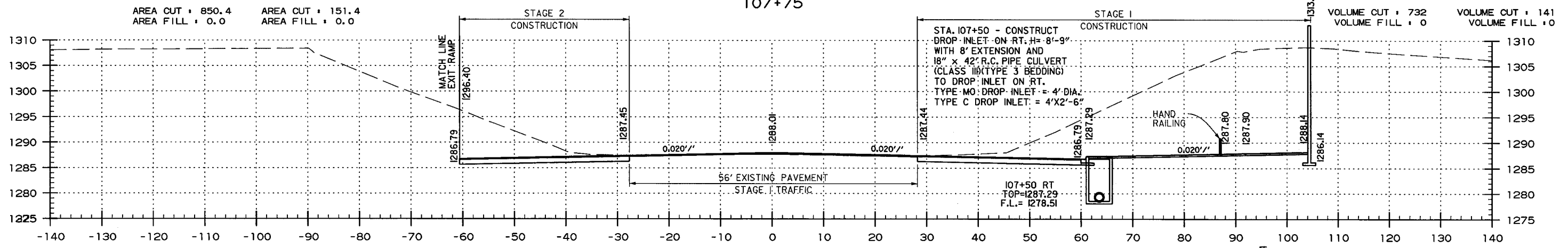
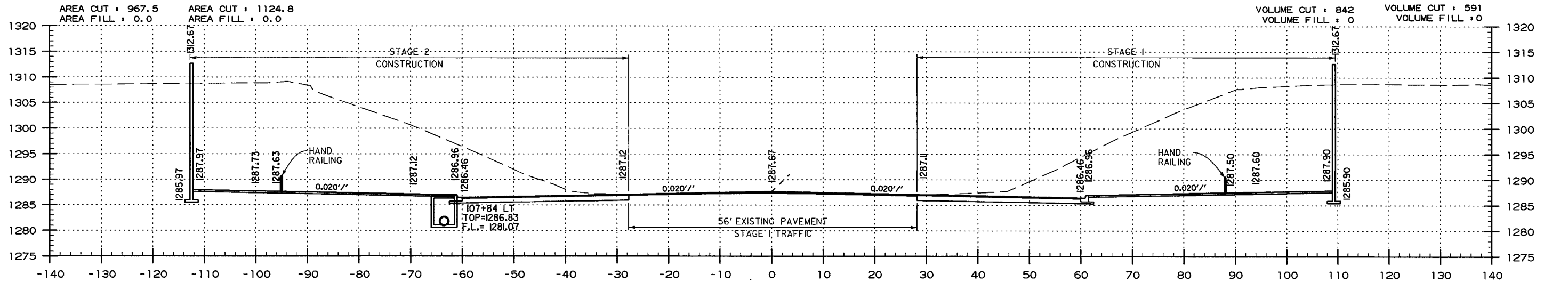


HWY. 71B
 CROSS SECTION STA. 106+50 TO STA. 107+00

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	250	368
				(2) CROSS SECTIONS				

STA. 107+84 - CONSTRUCT
 DROP INLET ON LT. H= 4'-5"
 WITH 8' EXTENSION AND
 18" x 62' R.C. PIPE CULVERT
 (CLASS III)(TYPE 3 BEDDING)
 TO DROP INLET ON LT.
 TYPE M0 DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4'X2'-6"



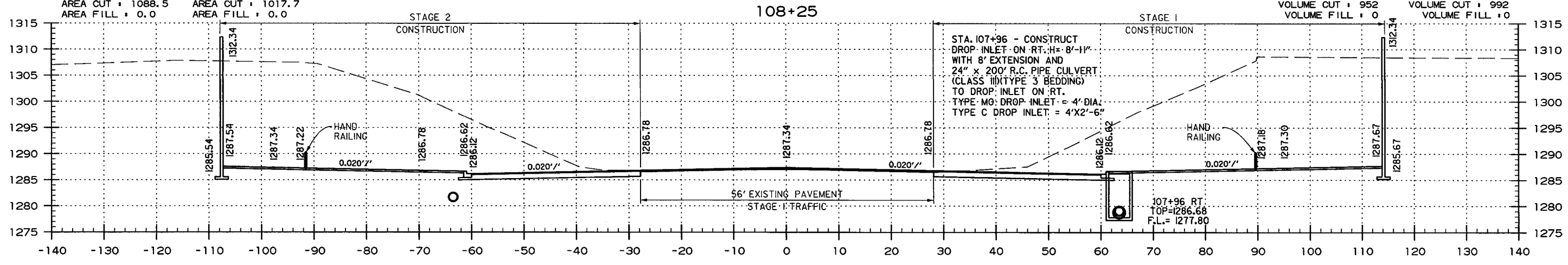
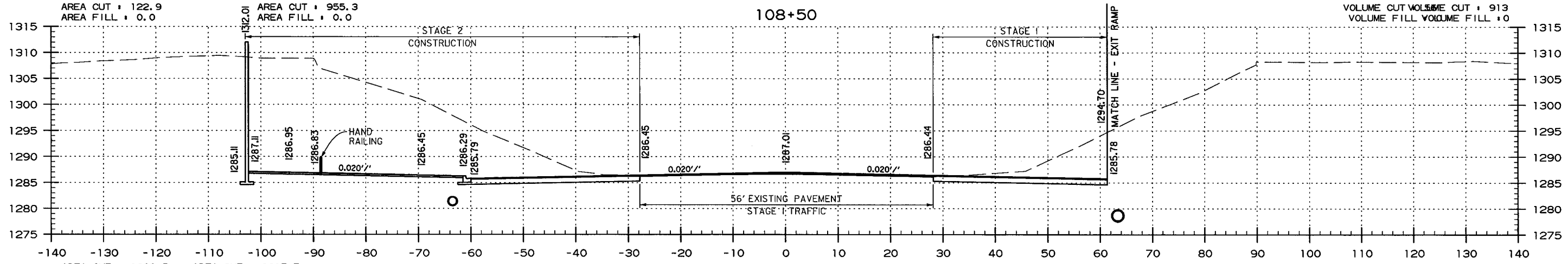
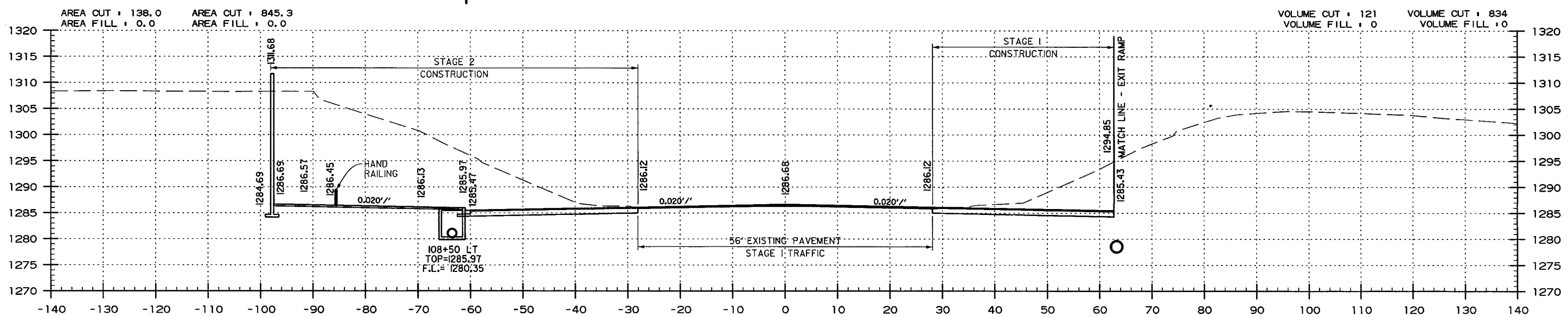
HWY. 71B
 CROSS SECTION STA. 107+25 TO STA. 107+75

USER: mhs114
 DESIGN FILE: G:\2103305_Hwy71\mchq\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	251	368	

2 CROSS SECTIONS

STA. 108+50 - CONSTRUCT
 DROP INLET ON LT. H= 4'-6"
 WITH 8' EXTENSION AND
 24" x 59' R.C. PIPE CULVERT
 (CLASS III)(TYPE 3 BEDDING)
 TO DROP INLET ON RAMP 4A
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4'x4'



STA. 107+96 - CONSTRUCT
 DROP INLET ON RT. H= 8'-11"
 WITH 8' EXTENSION AND
 24" x 200' R.C. PIPE CULVERT
 (CLASS III)(TYPE 3 BEDDING)
 TO DROP INLET ON RT.
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4'x2'-6"

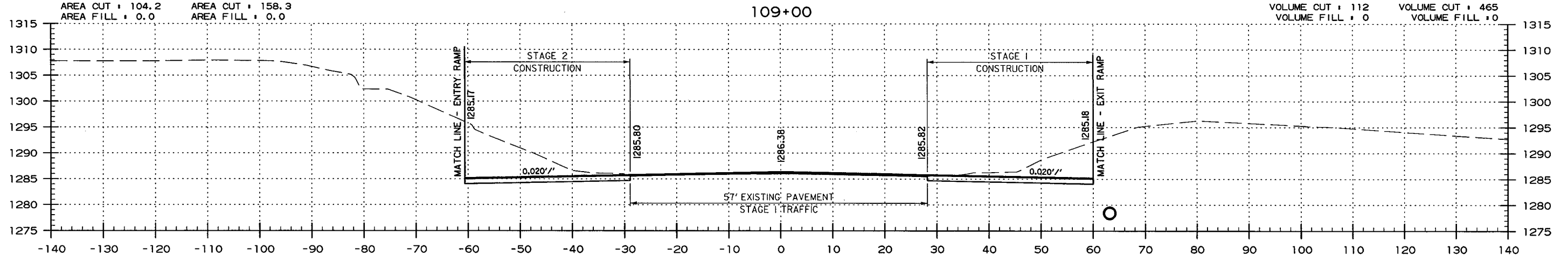
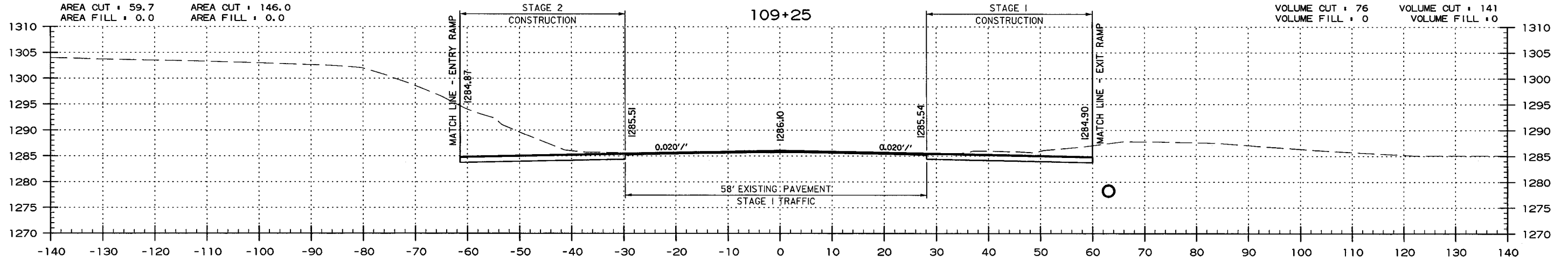
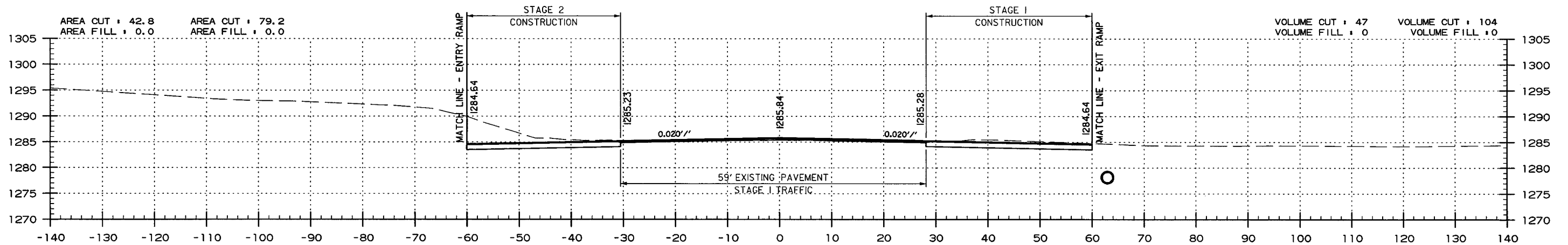
107+96 RT.
 TOP=1286.68
 F.L.= 1277.80

HWY. 71B
 CROSS SECTION STA. 108+00 TO STA. 108+50

USER: mh5114
 DESIGN FILE: G:\2103305.Hwy71Inch\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		252	368

2 CROSS SECTIONS



STAGE 1 STAGE 2 STAGE 1 STAGE 2

HWY. 71B INTERCHANGE
CROSS SECTION STA. 108+75 TO STA. 109+25

USER: mh514
DESIGN FILE: G:\2103305_Hwy71inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

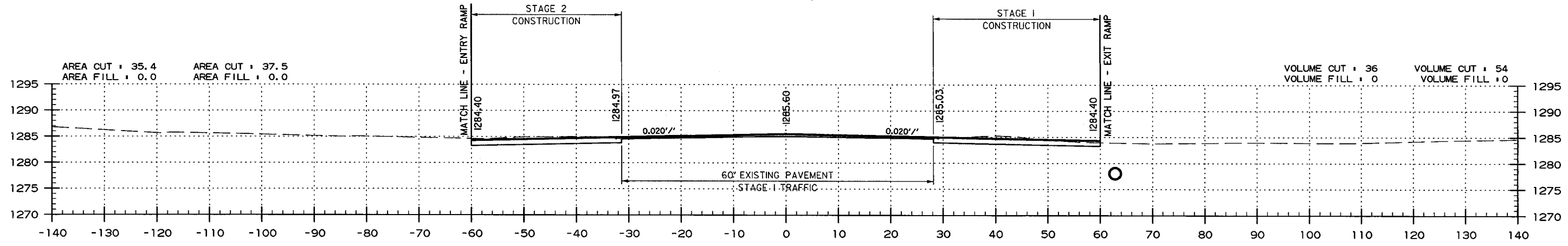
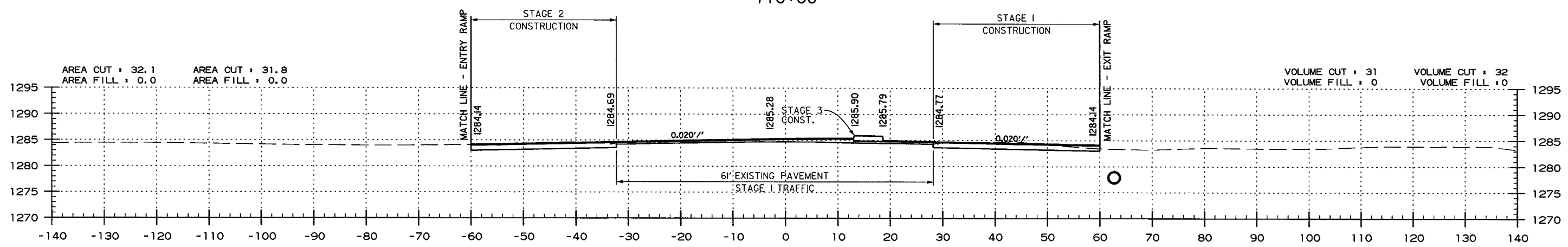
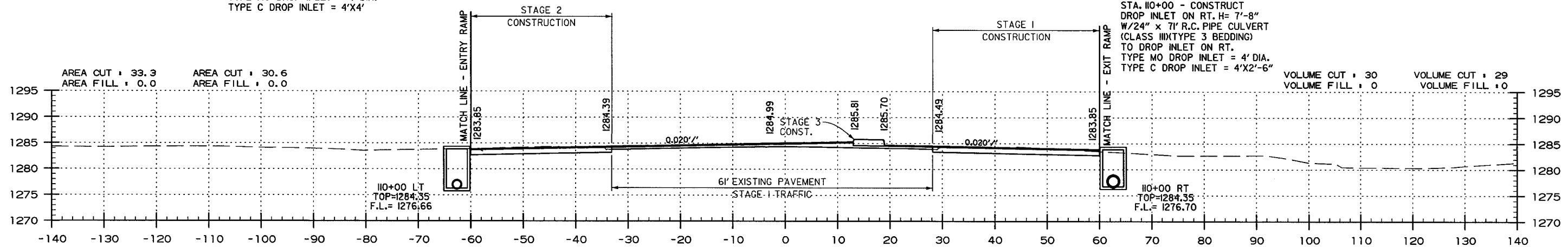
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	253	368	

2 CROSS SECTIONS

STA. 110+00 - CONSTRUCT
DROP INLET ON LT. H= 8'-1"
WITH 8' EXTENSION &
18" x 7' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x4'

STA. 110+20 IN PLACE
DROP INLET ON RT.
W/18" x 6' R.C. PIPE CULVERT
W/F.E.S.
REMOVE

STA. 110+00 - CONSTRUCT
DROP INLET ON RT. H= 7'-8"
W/24" x 7' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x2'-6"

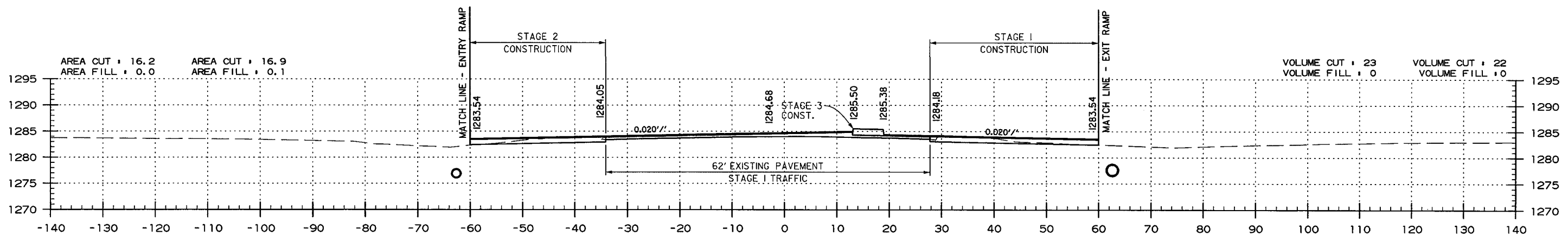
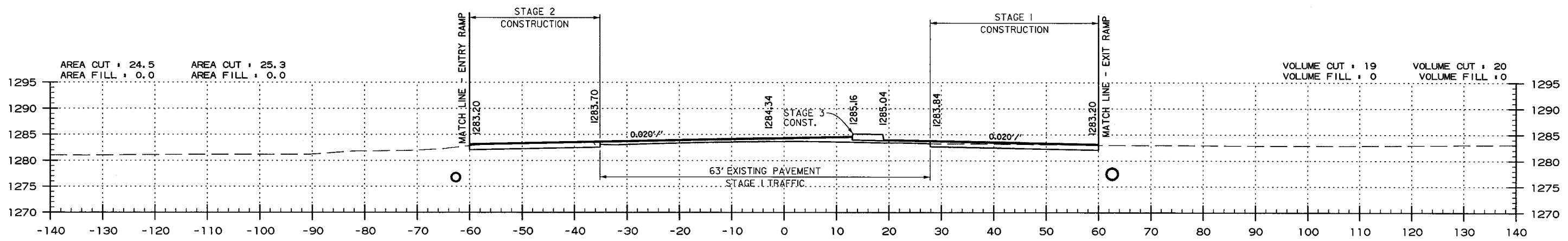
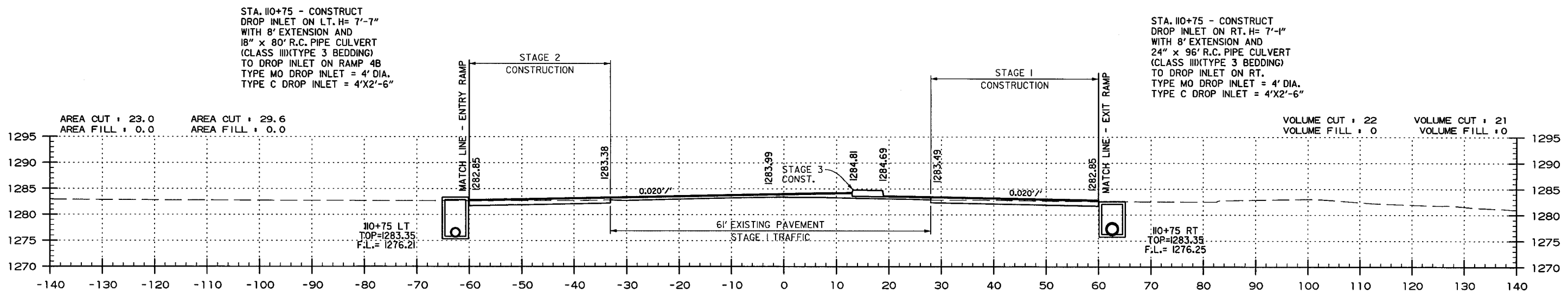


HWY. 71B
CROSS SECTION STA. 109+50 TO STA. 110+00

USER: mh5114
DESIGN FILE: G:\2103305.Hwy71inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	254	368	

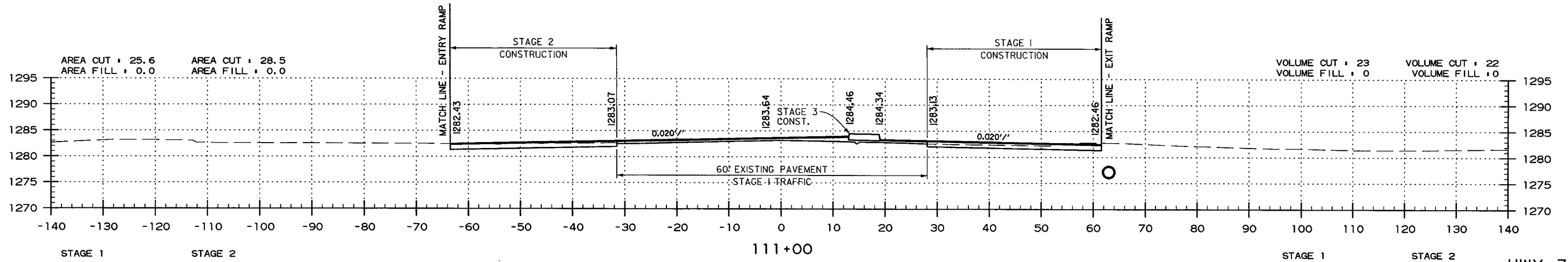
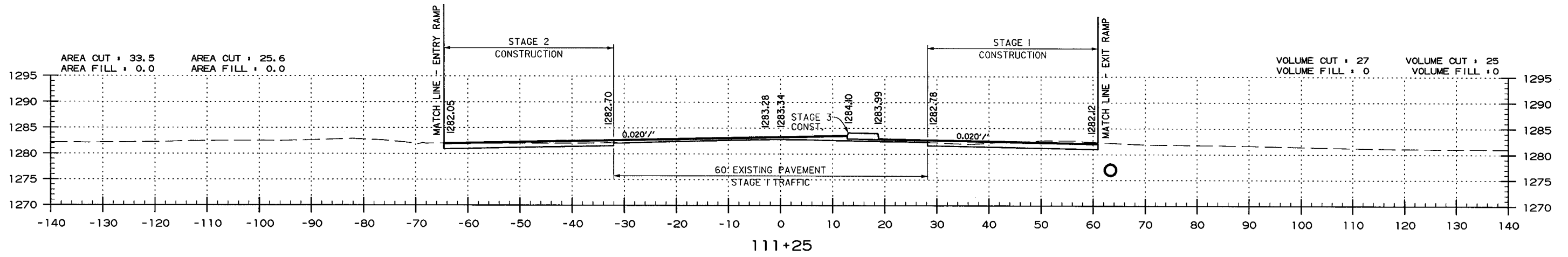
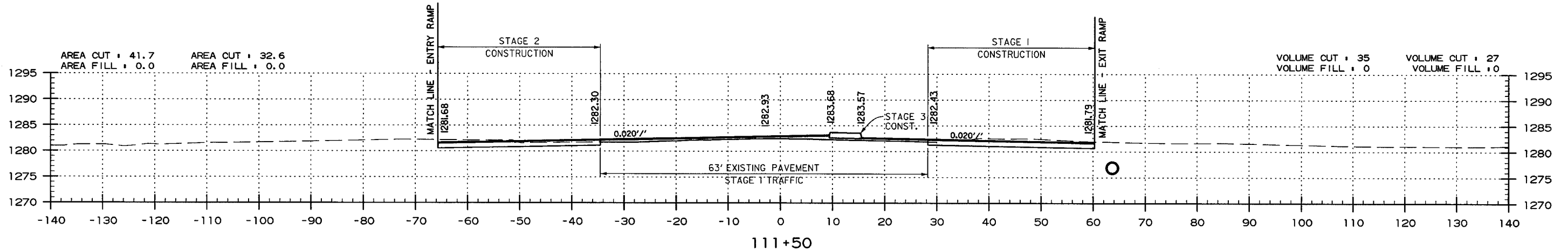
2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 110+25 TO STA. 110+75

USER: mh514
DESIGN FILE: G:\2103305.Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:46
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		255	368
				(2) CROSS SECTIONS				

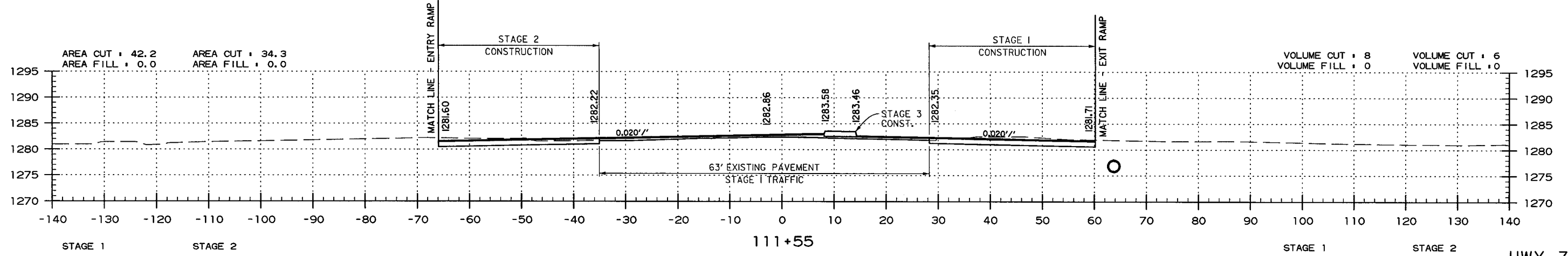
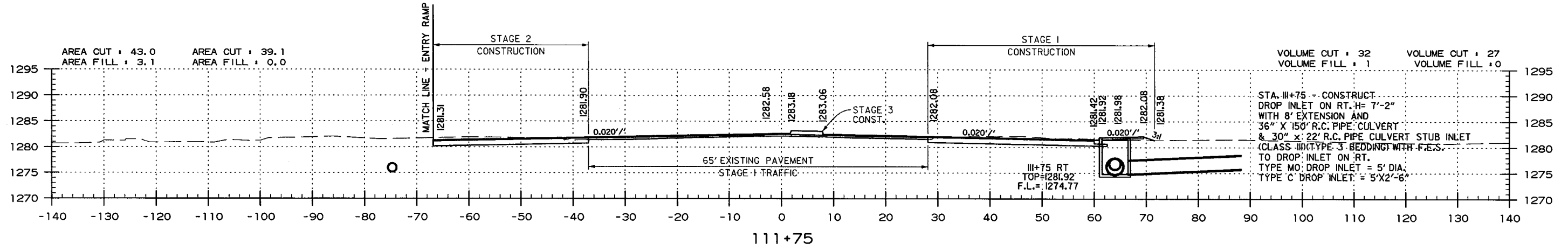
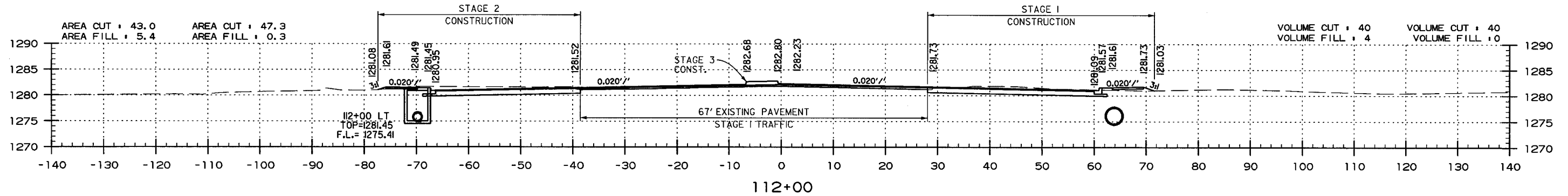


STAGE 1 STAGE 2
 HWY. 71B
 CROSS SECTION STA. III+00 TO STA. III+50

USER: mh5114
 DESIGN FILE: G:\2103305_Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	BB0903	256	368		
								2	CROSS SECTIONS

STA. 112+00 - CONSTRUCT
 DROP INLET ON LT. H= 6'-5"
 WITH 8' EXTENSION AND
 18" x 96' R.C. PIPE CULVERT
 (CLASS III TYPE 3 BEDDING)
 TO DROP INLET ON LT.
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4'x2'-6"

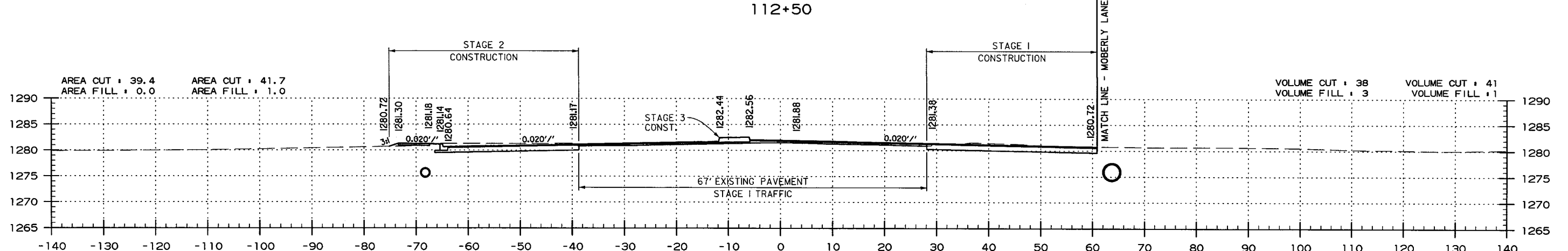
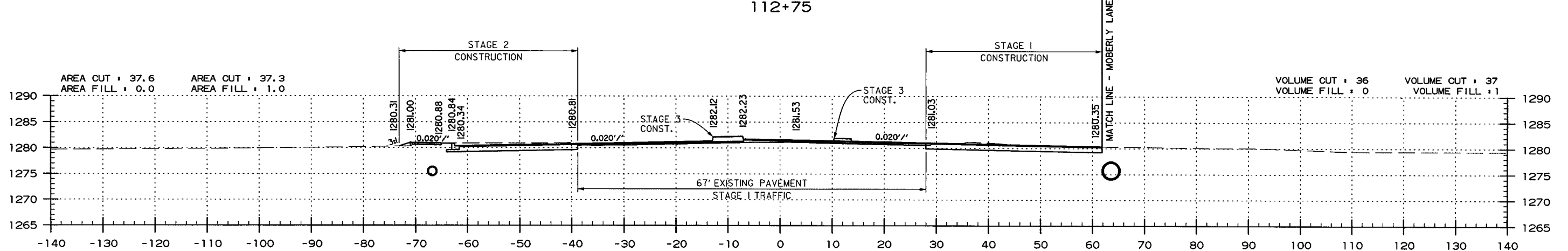
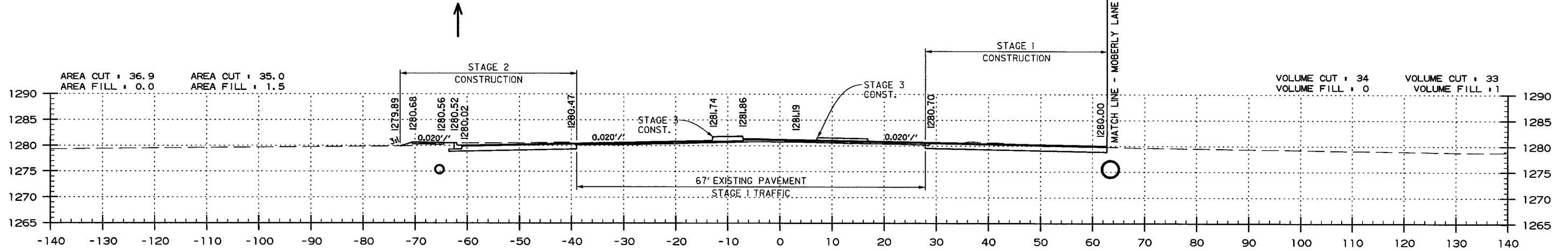


HWY. 71B
 CROSS SECTION STA. 111+55 TO STA. 112+00

USER: mh514
 DESIGN FILE: G:\2103305.Hwy71inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:46
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	257	368	

2 CROSS SECTIONS



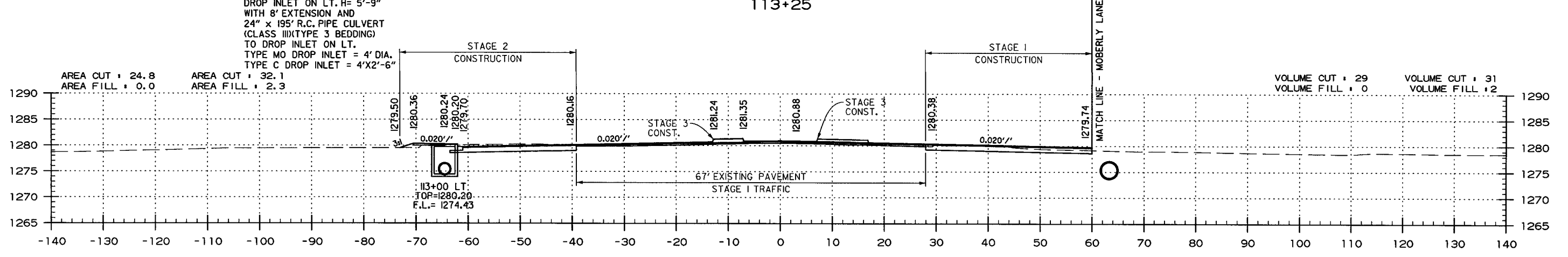
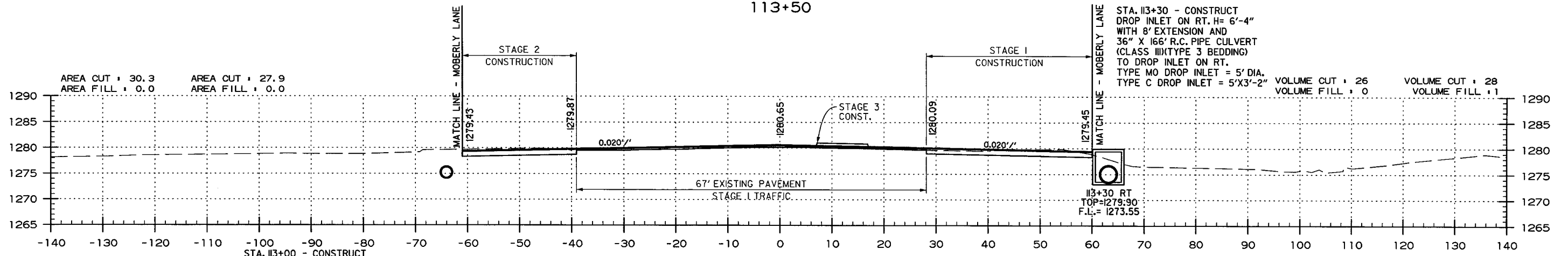
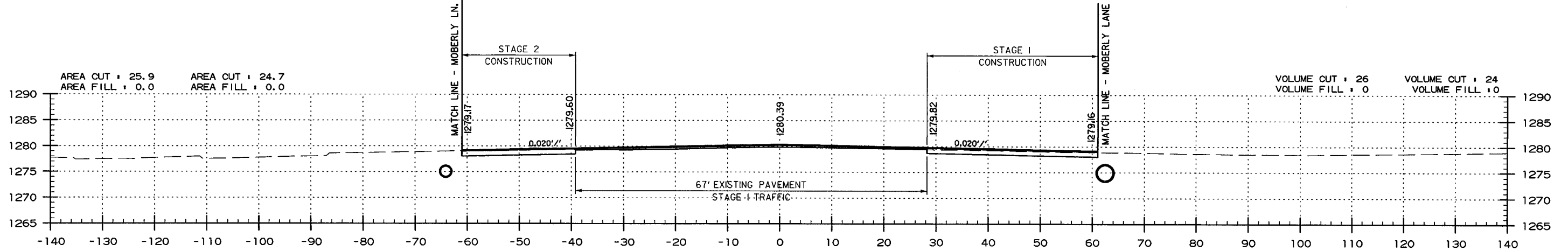
STAGE 1 STAGE 2

STAGE 1 STAGE 2
HWY. 71B
CROSS SECTION STA. 112+25 TO STA. 112+75

USER: mh514
DESIGN FILE: G:\2103305.Hwy71\hohg\TRANSP\dgn\xsect\112+25\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	258	368	

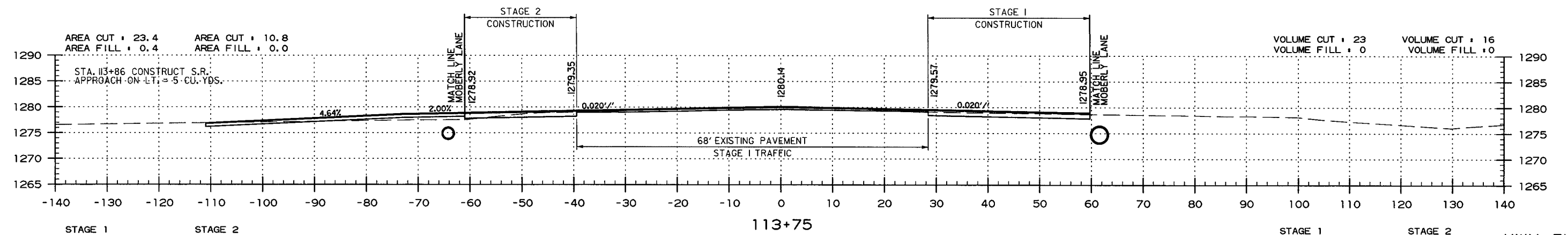
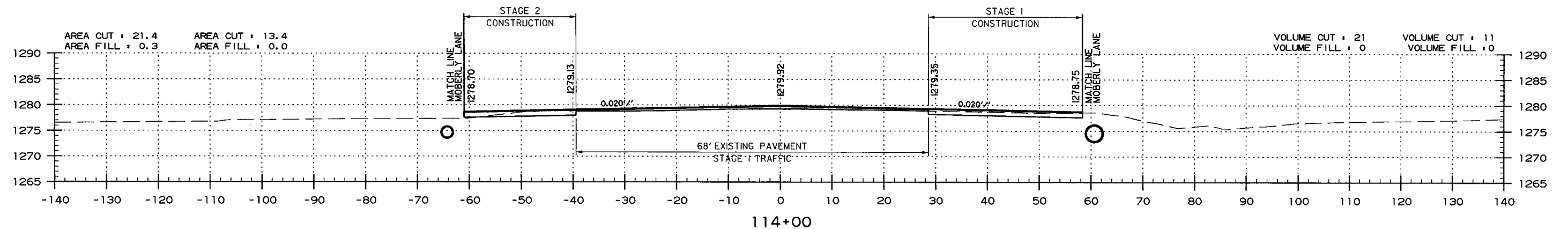
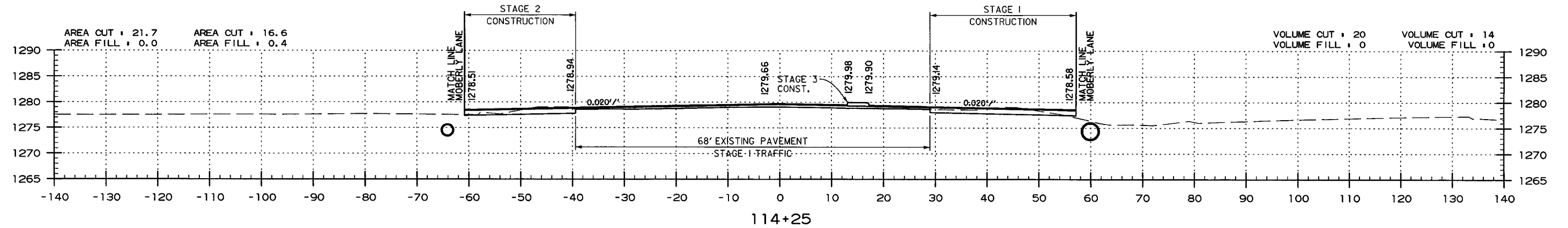
2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 113+00 TO STA. 113+50

USER: mh514
DESIGN FILE: G:\2103305.Hwy71\hgh\TRANSP\dgn\sect\FB80903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	259	368	
2 CROSS SECTIONS								



HWY. 71B
 CROSS SECTION STA. 113+75 TO STA. 114+25

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hchq\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	260	368	

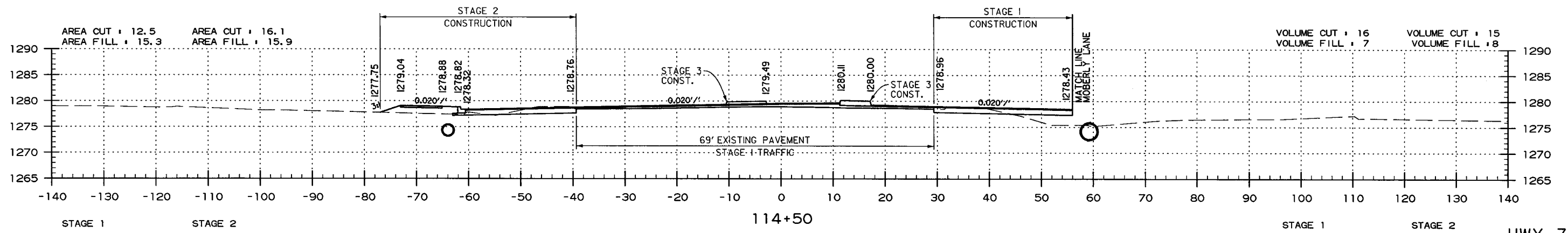
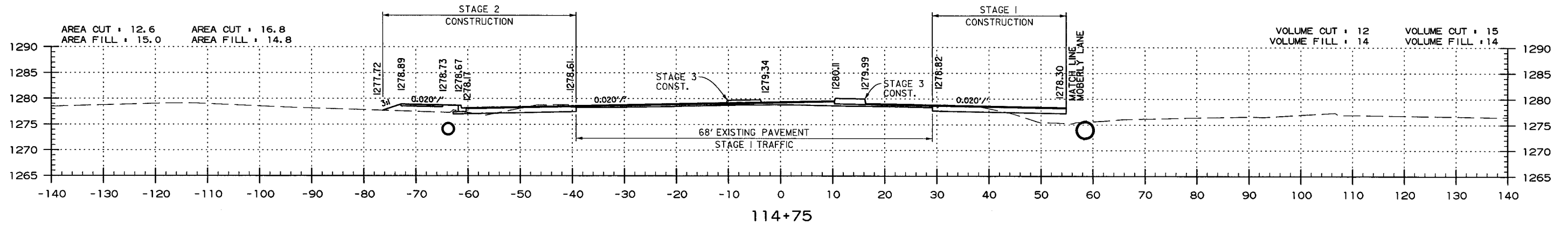
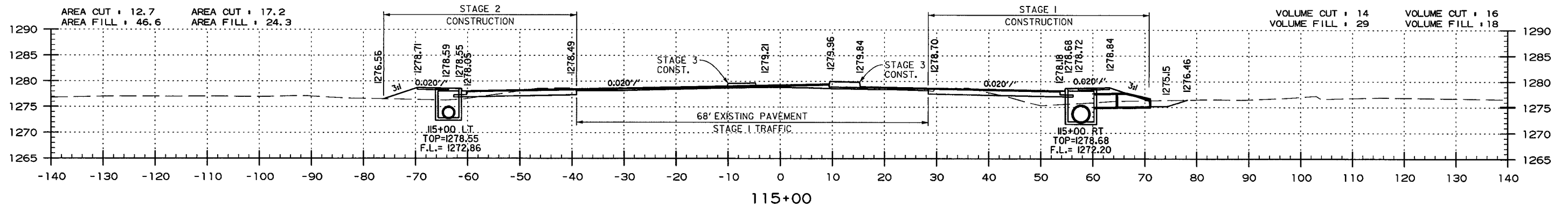
2 CROSS SECTIONS

STA. 115+04 IN PLACE
DROP INLET ON LT.
W/18" X 209' R.C. PIPE CULVERT
REMOVE

STA. 115+00 - CONSTRUCT
DROP INLET ON LT. H= 5'-8"
WITH 8' EXTENSION AND
24" X 106' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X2'-6"

STA. 115+14 IN PLACE
DROP INLET ON RT.
W/12" X 83' C.P. PIPE CULVERT
REMOVE

STA. 115+00 - CONSTRUCT
DROP INLET ON RT. H= 6'-6"
WITH 8' EXTENSION AND
36" X 80' R.C. PIPE CULVERT
& 30" X 11" STUB INLET
(CLASS III)(TYPE 3 BEDDING) W/F.E.S.
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5'X3'-2"

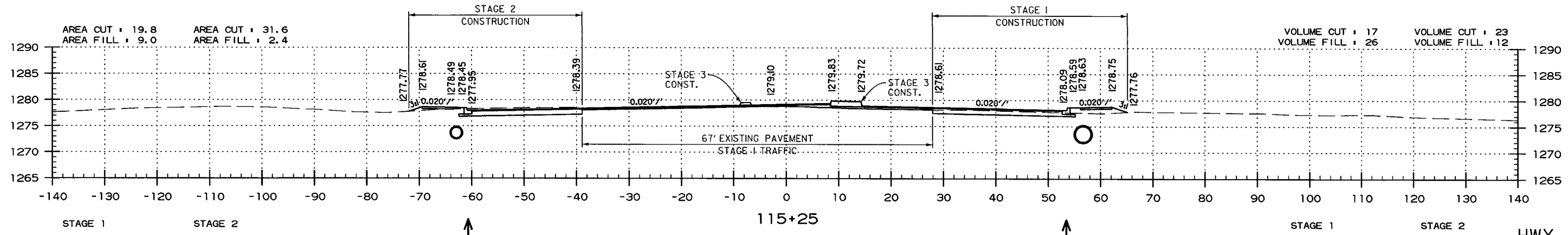
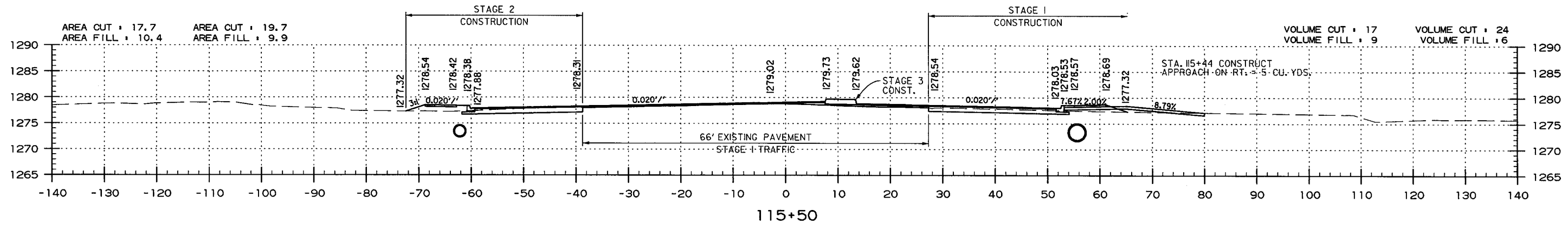
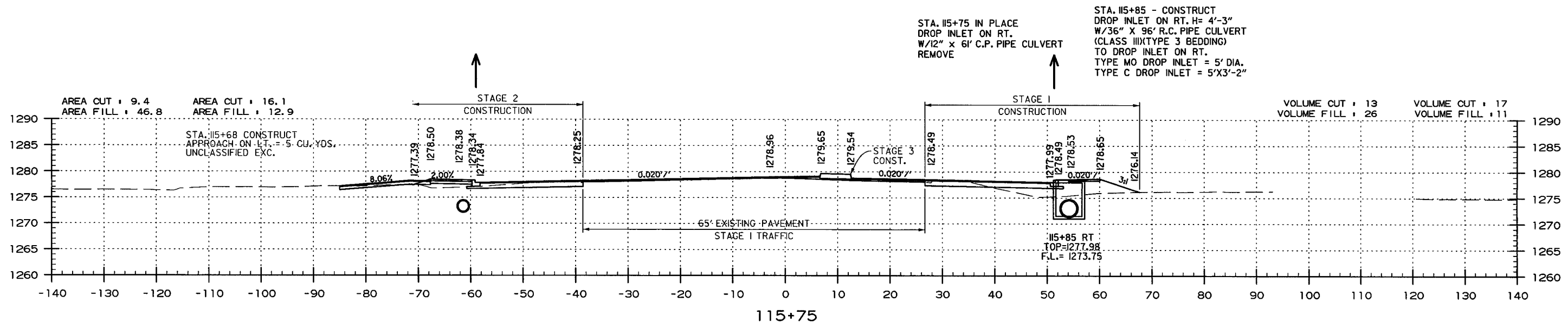


HWY. 71B
CROSS SECTION STA. 114+50 TO STA. 115+00

USER: mh5114
DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\B80903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	261	368	

2 CROSS SECTIONS

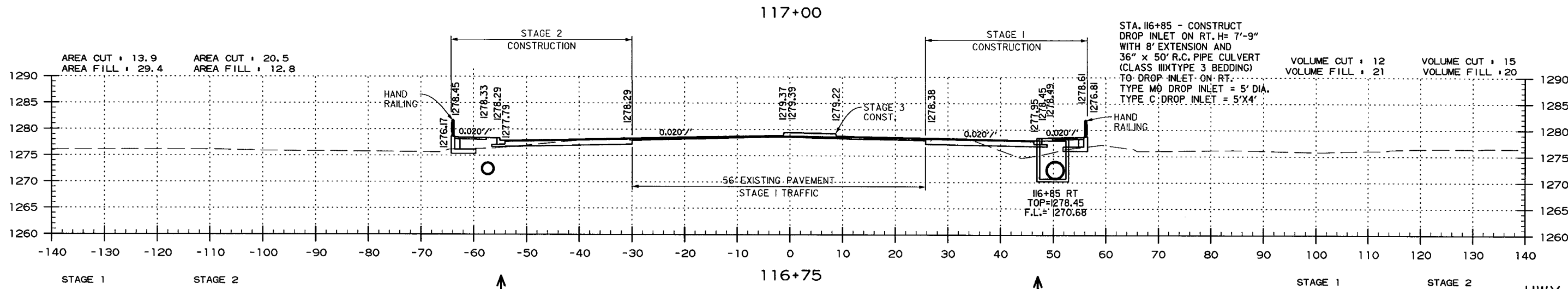
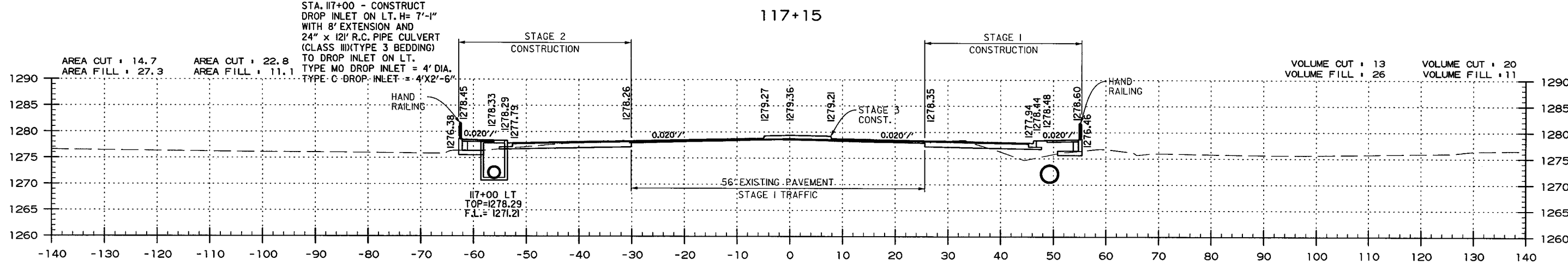
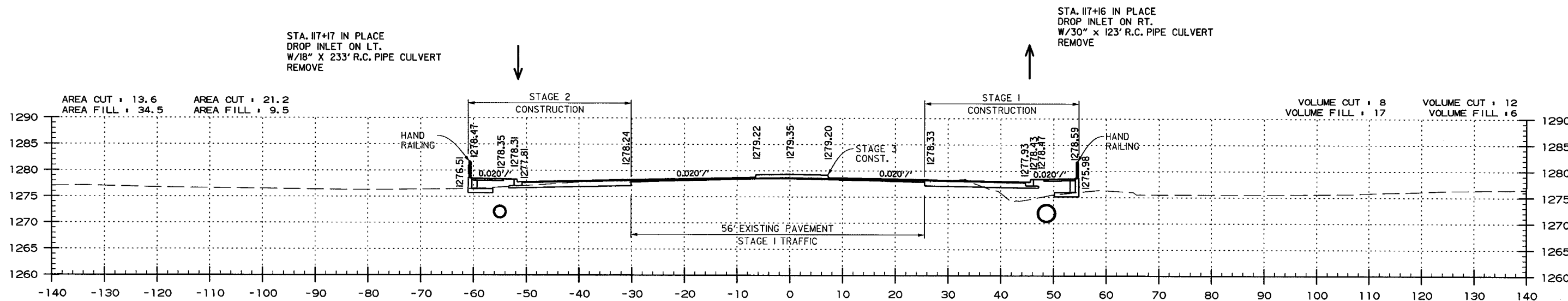


HWY. 71B
CROSS SECTION STA. 115+25 TO STA. 115+75

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\mchq\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
PLOTED: 6/6/2018 14:47

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	263	368	

2 CROSS SECTIONS

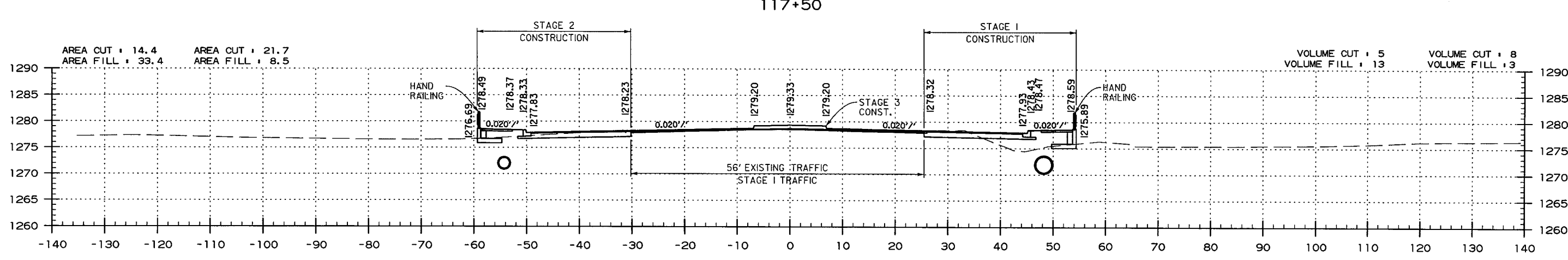
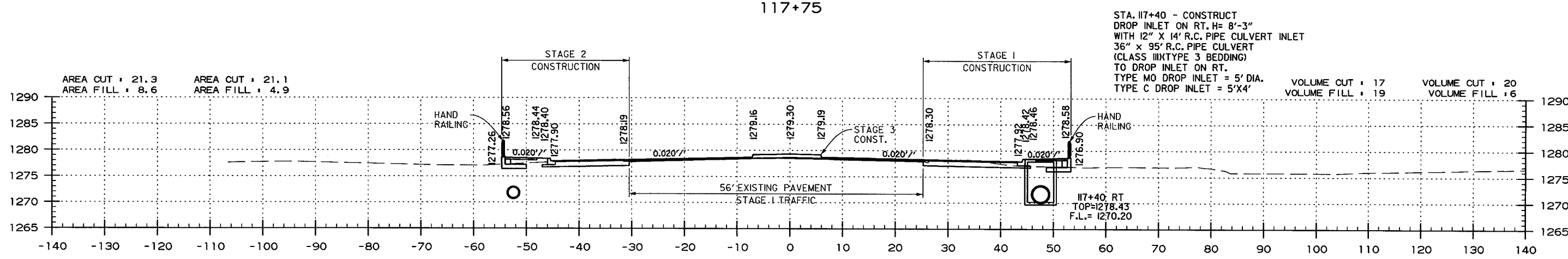
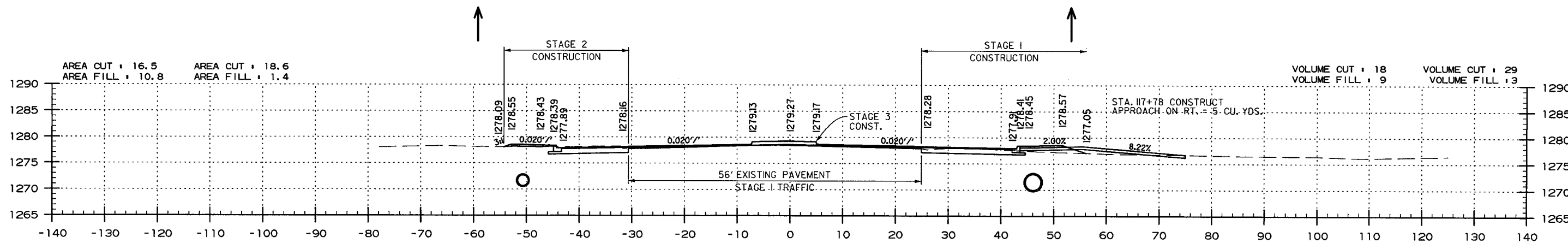


HWY. 71B
CROSS SECTION STA. 116+75 TO STA. 117+15

USER: mh5114
DESIGN FILE: G:\2103305.Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	264	368	

2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 117+25 TO STA. 117+75

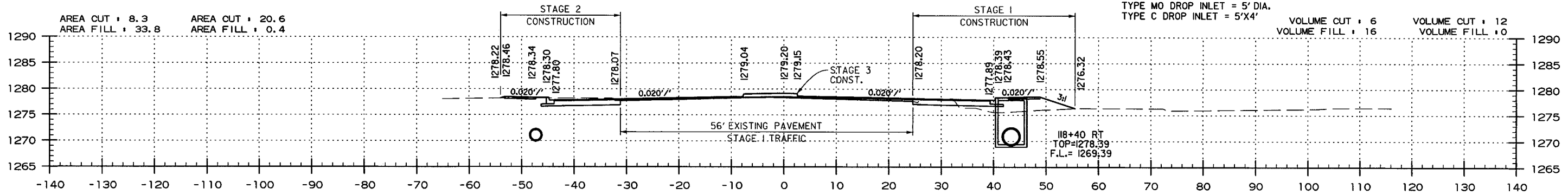
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SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	265	368	

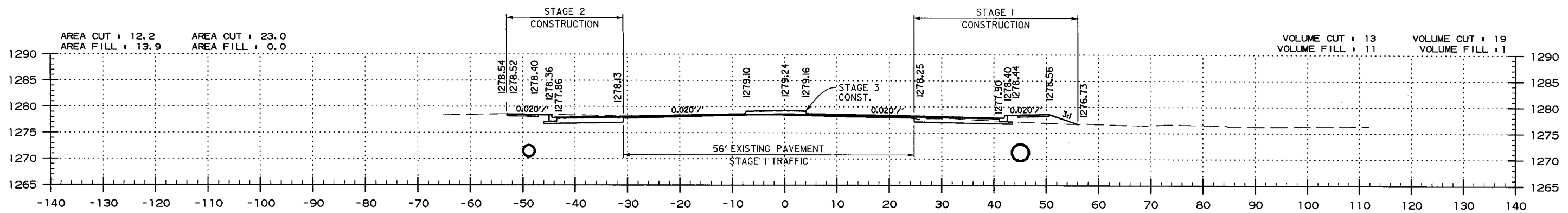
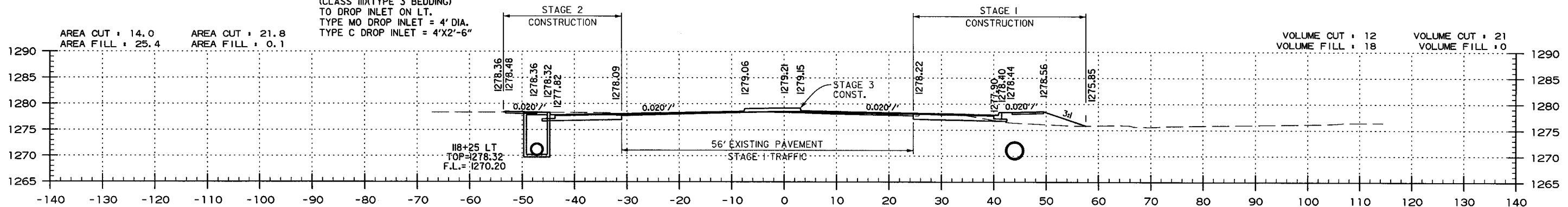
2 CROSS SECTIONS

STA. 118+42 IN PLACE
DROP INLET ON RT.
W/30" x 123' R.C. PIPE CULVERT
REMOVE

STA. 118+40 - CONSTRUCT
DROP INLET ON RT. H= 9'-0"
WITH 8' EXTENSION AND
36" x 123' R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE M0 DROP INLET = 5' DIA.
TYPE C DROP INLET = 5'x4'



STA. 118+25 - CONSTRUCT
DROP INLET ON LT. H= 8'-1"
WITH 8' EXTENSION AND
24" x 116' R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE M0 DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x2'-6"

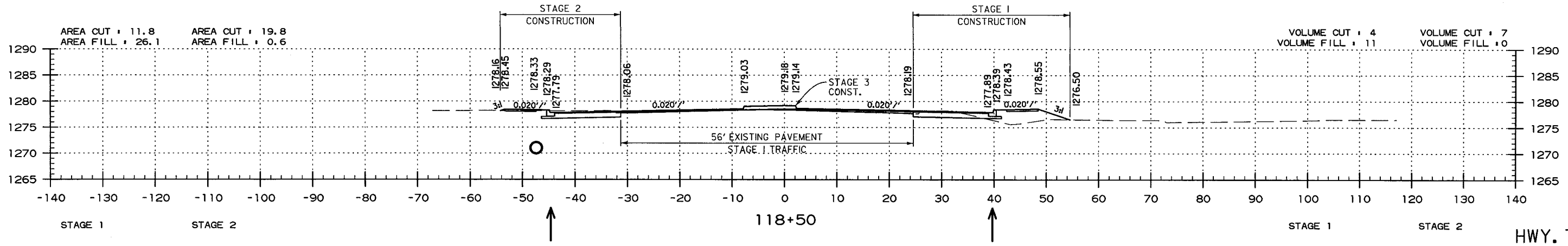
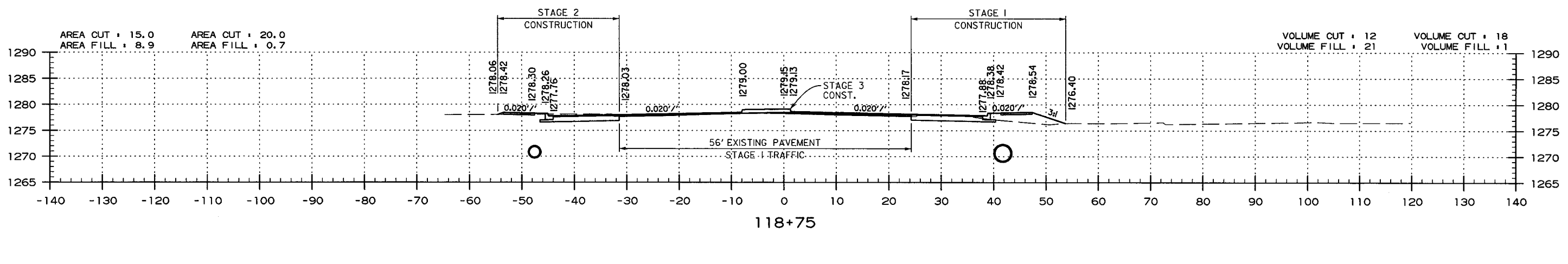
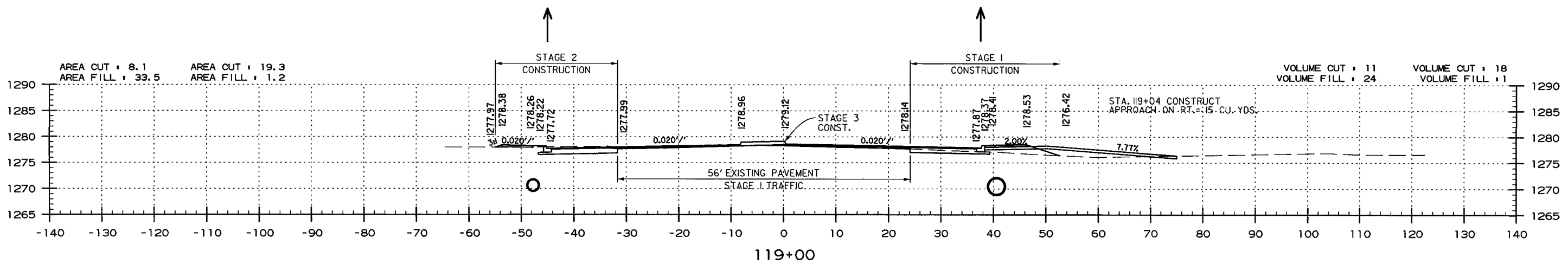


HWY. 71B
CROSS SECTION STA. 118+00 TO STA. 118+40

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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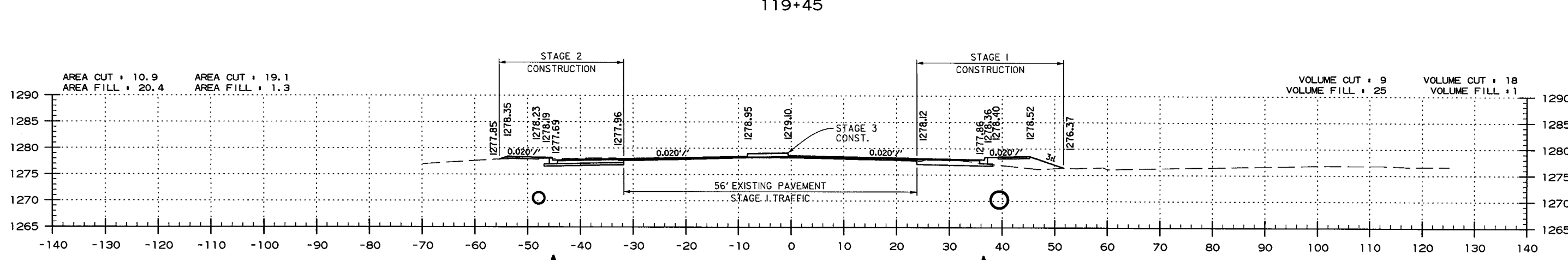
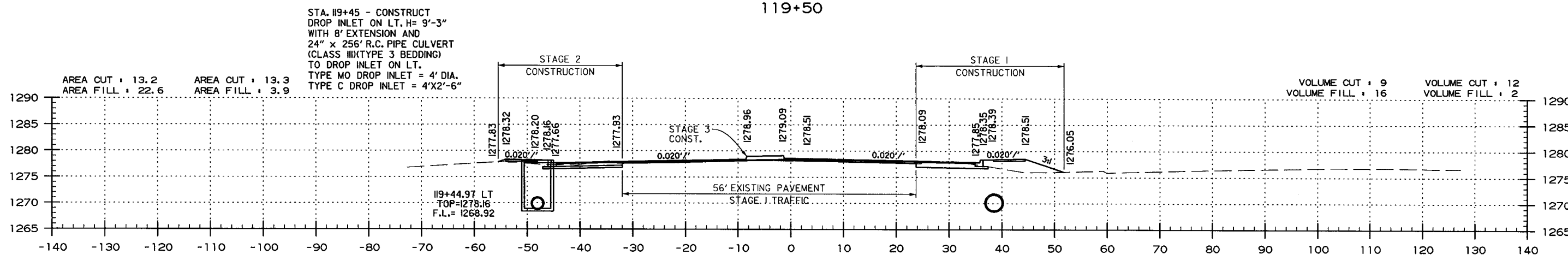
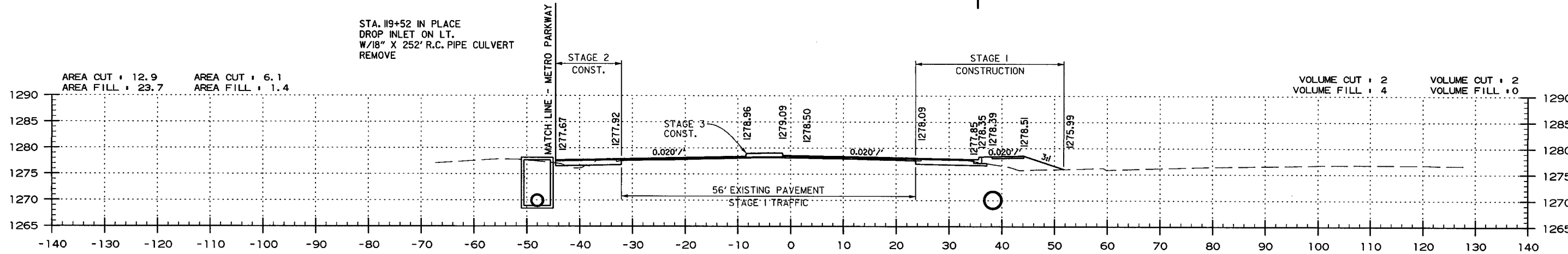
2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 118+50 TO STA. 119+00

USER: mhs114
DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	267	368	
				2 CROSS SECTIONS				

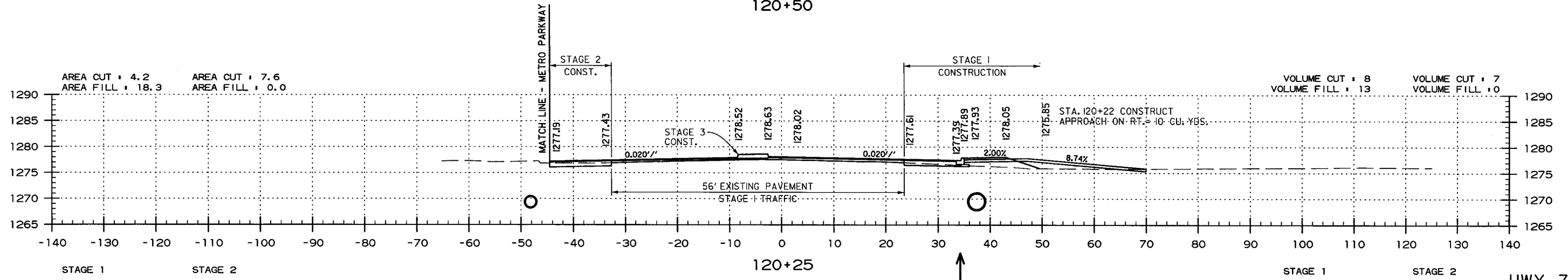
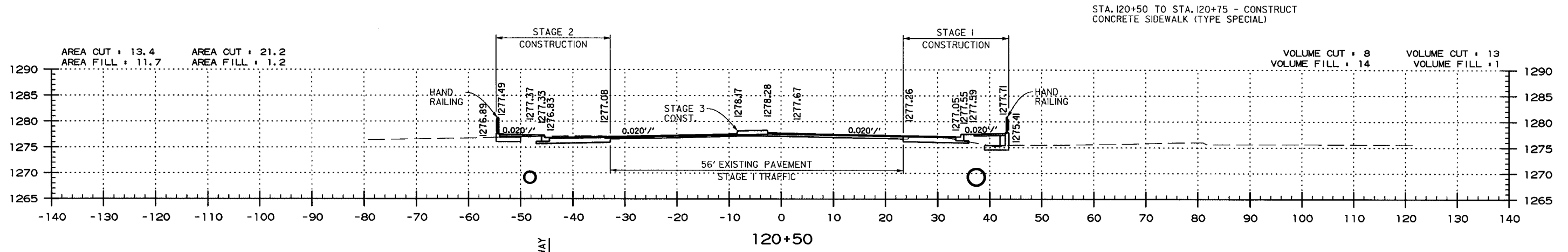
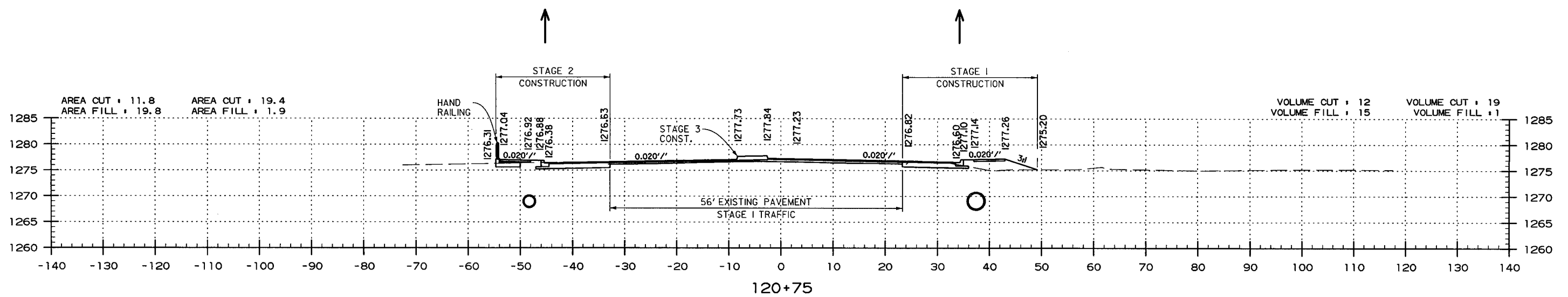


HWY. 71B
CROSS SECTION STA. 119+25 TO STA. 119+50

USER: mhs14
 DESIGN FILE: G:\2103305_Hwy71\mchq\TRANSP\dgn\xsect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	269	368	

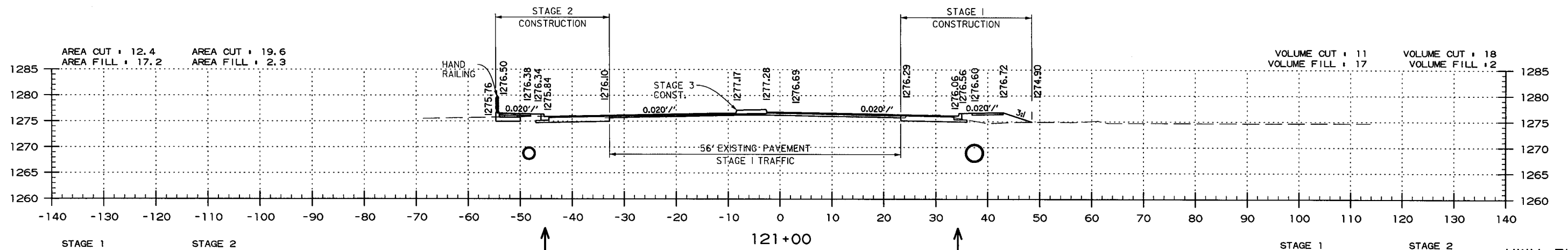
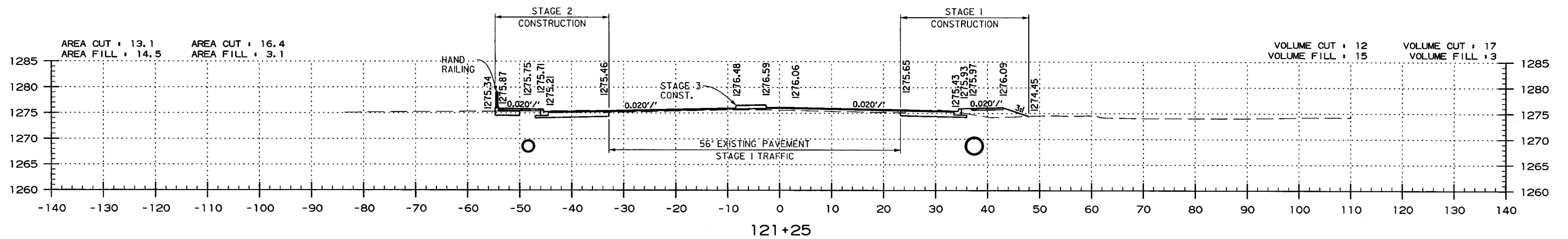
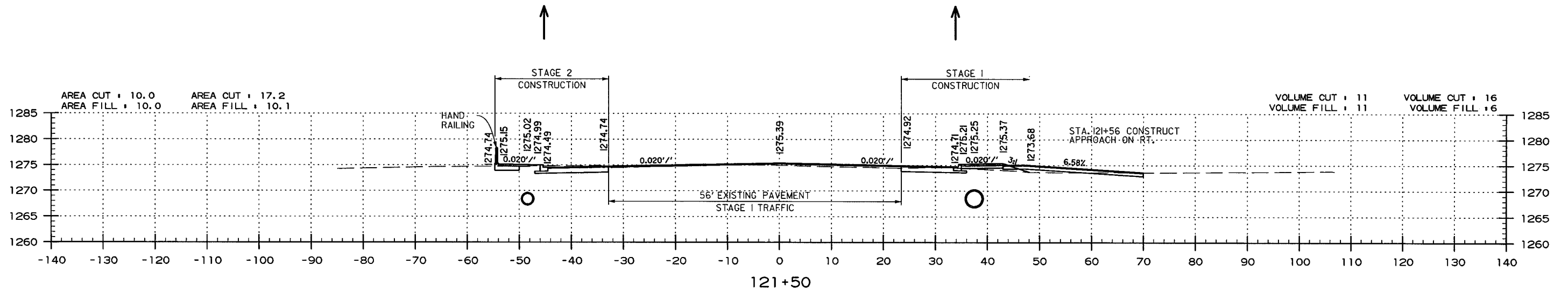
2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 120+25 TO STA. 120+75

USER: mh514
DESIGN FILE: G:\1203305_Hwy71\mchq\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	270	368	
				2 CROSS SECTIONS				

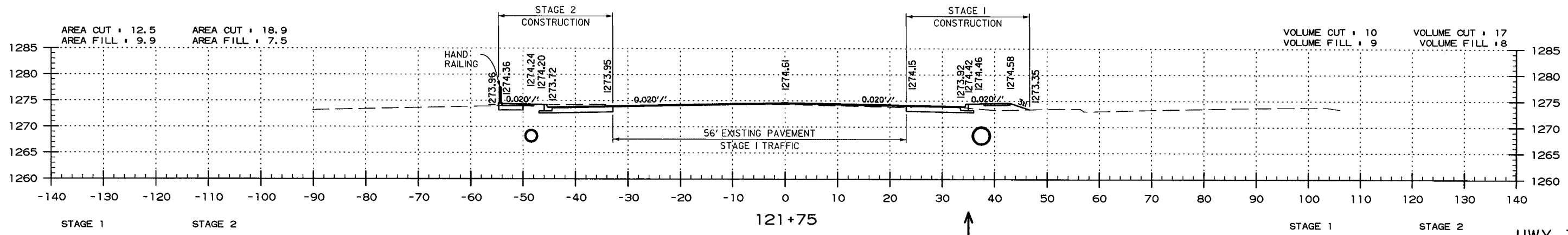
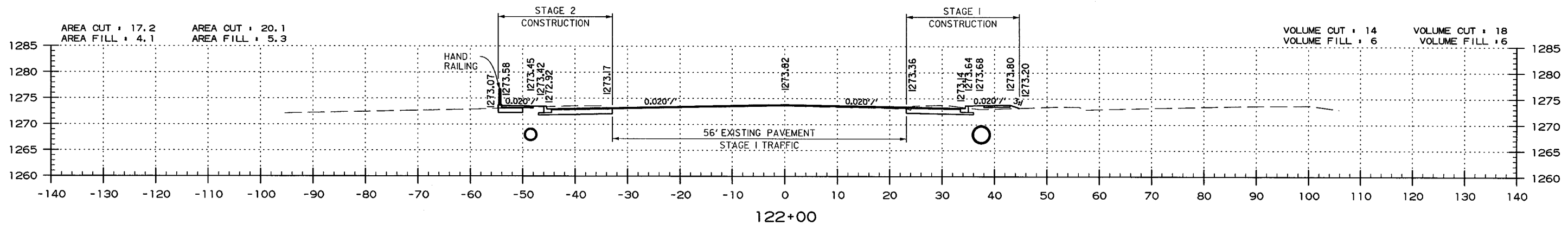
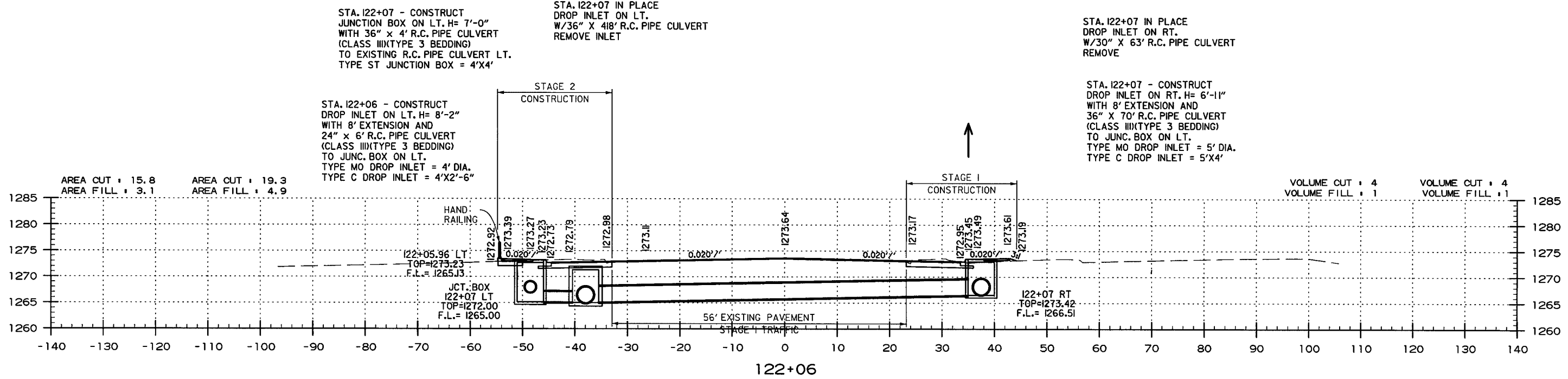


HWY. 71B
 CROSS SECTION STA. 121+00 TO STA. 121+50

USER: mps14
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	271	368	

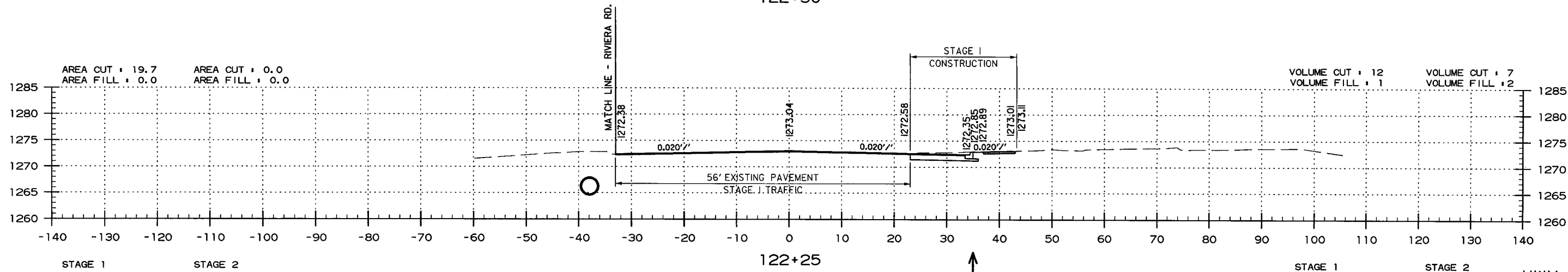
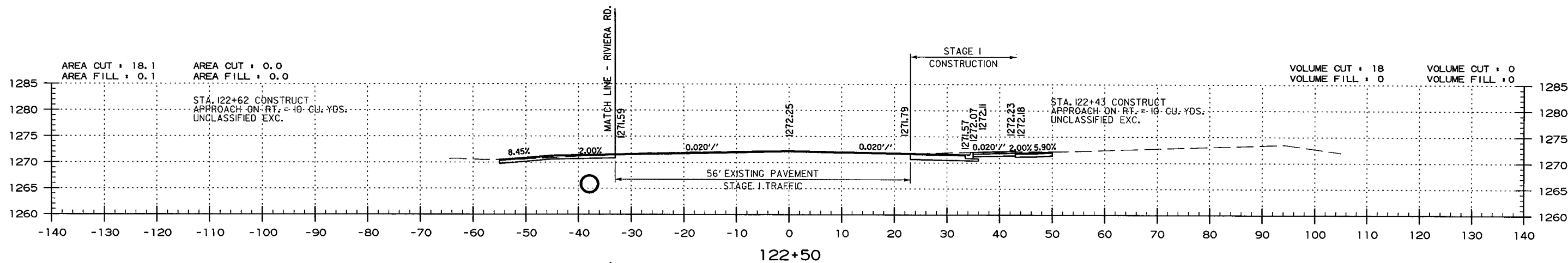
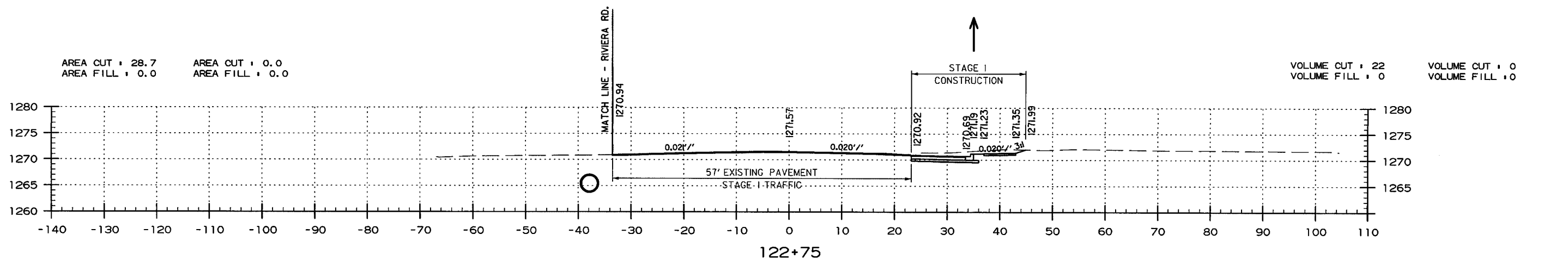
2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 121+75 TO STA. 122+06

USER: mh514
DESIGN FILE: G:\2103305.Hwy71\hwy71\hwy71\TRANSP\dgn\sect+vr\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	272	368	
				2 CROSS SECTIONS				

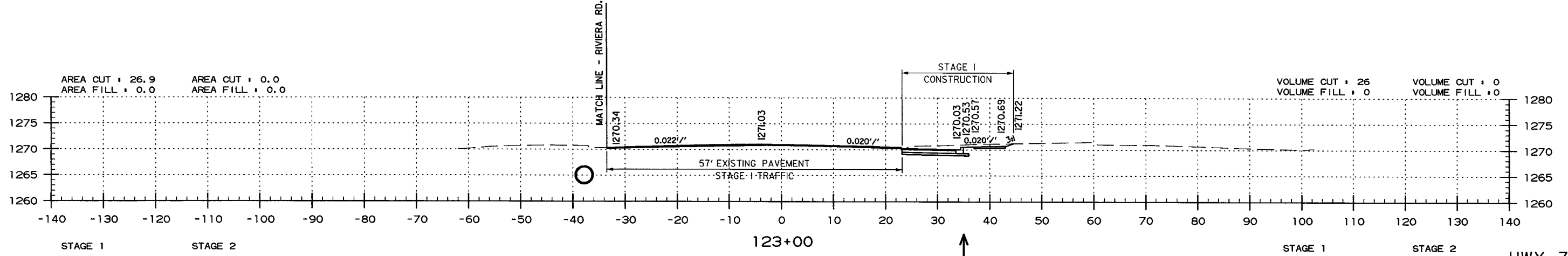
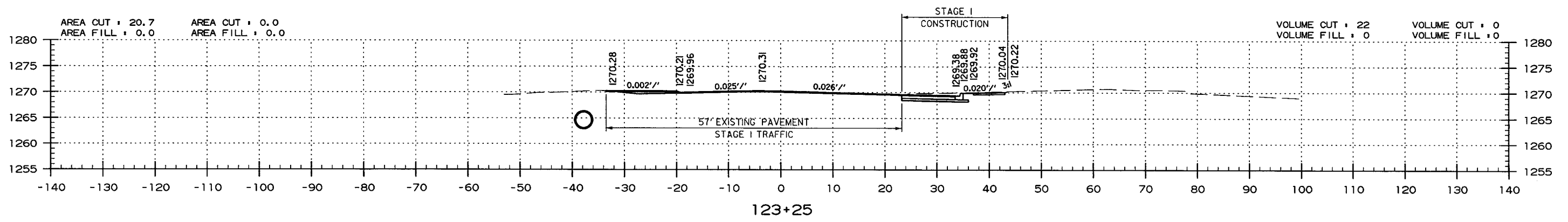
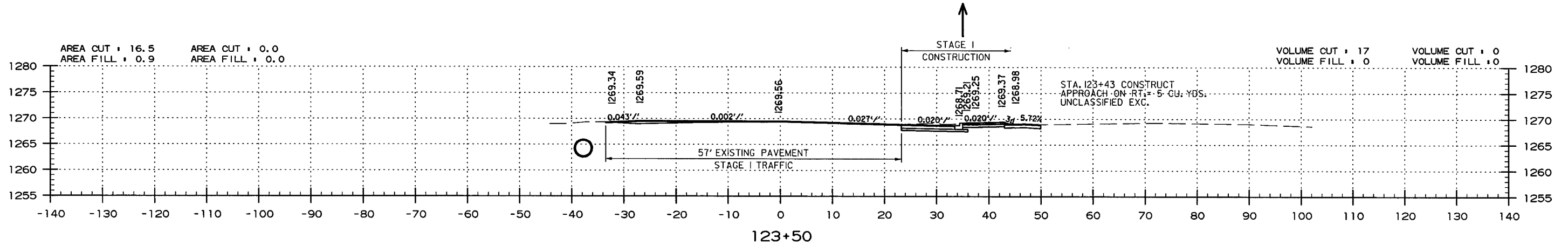


HWY. 71B
 CROSS SECTION STA. 122+25 TO STA. 122+75

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	273	368	

2 CROSS SECTIONS

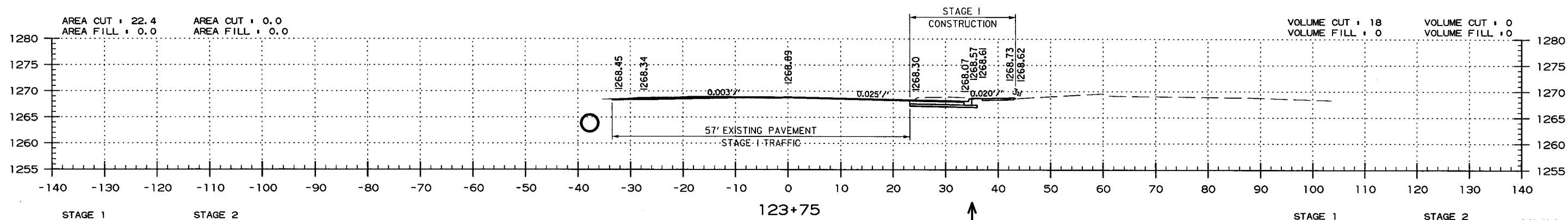
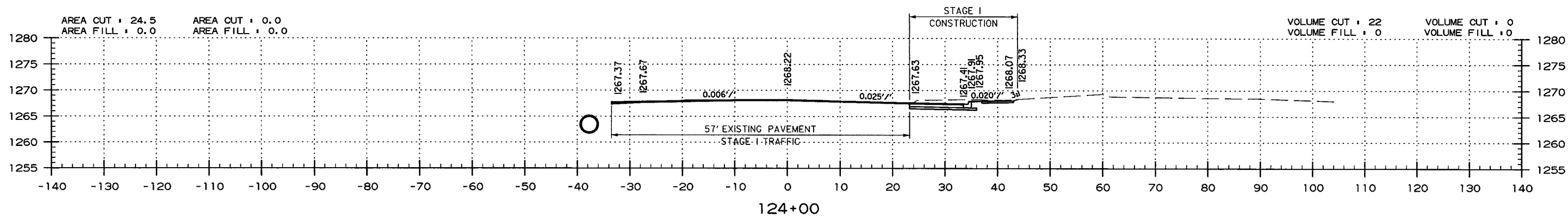
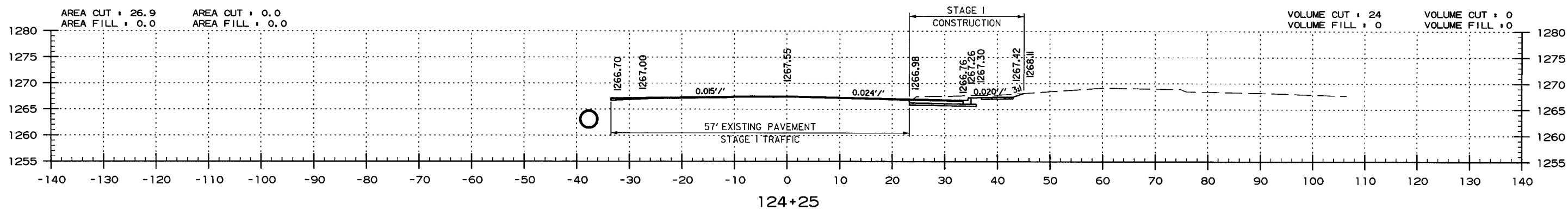


HWY. 71B
CROSS SECTION STA. 123+00 TO STA. 123+50

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	274	368	

2 CROSS SECTIONS

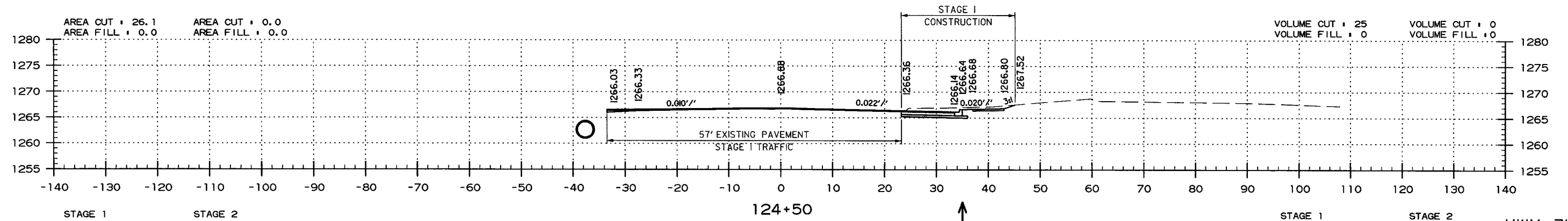
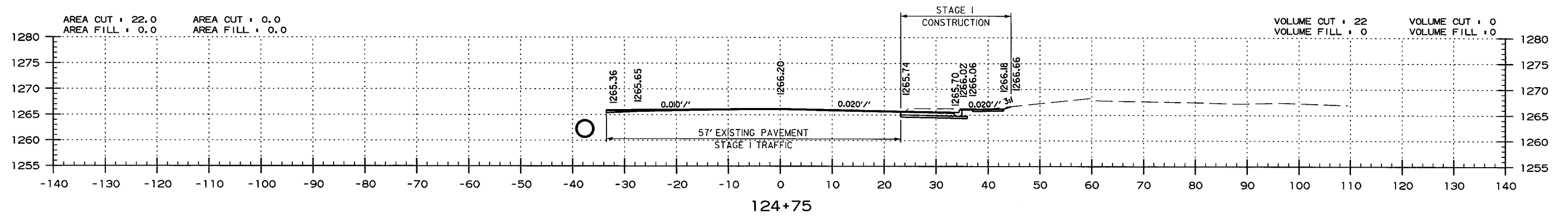
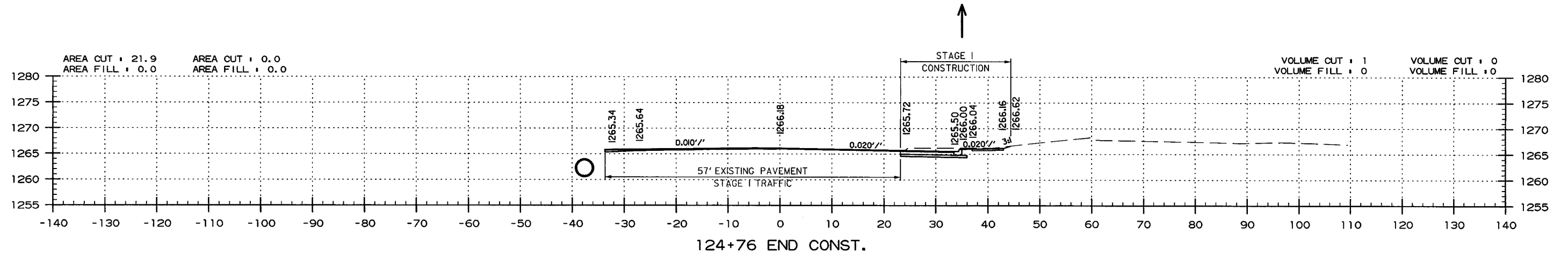


HWY. 71B
CROSS SECTION STA. 123+75 TO STA. 124+25

USER: mh514
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	275	368	

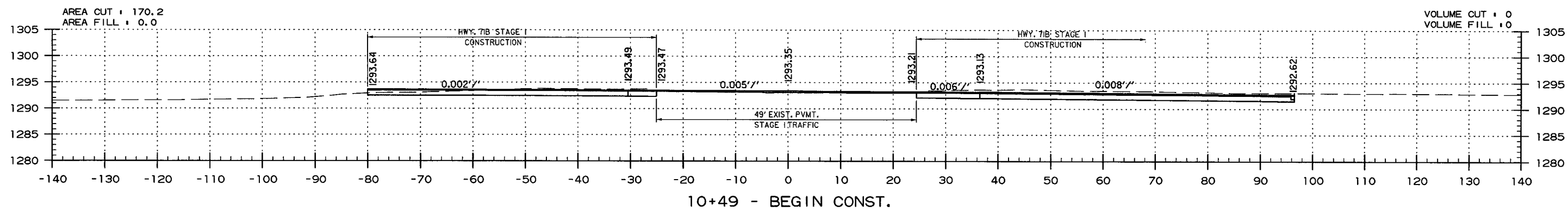
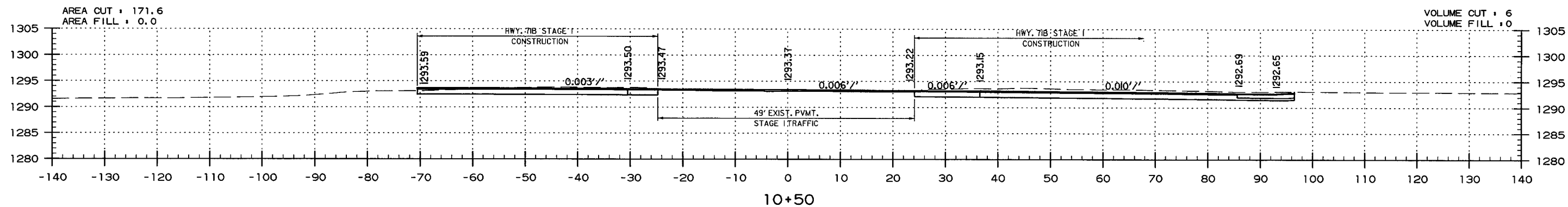
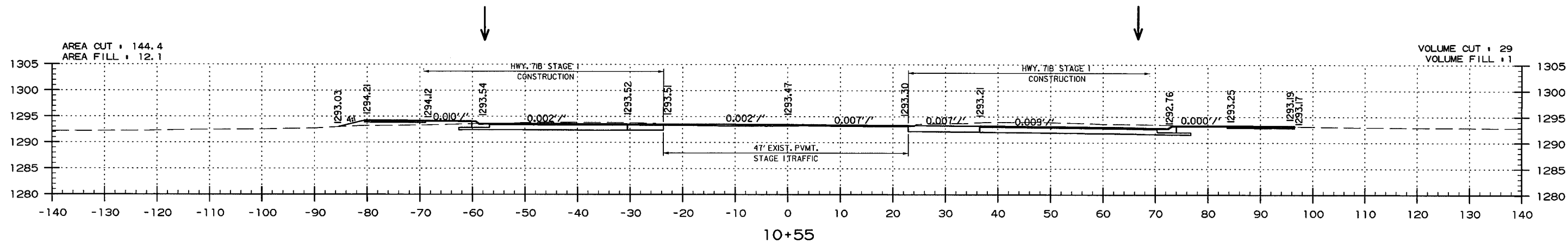
2 CROSS SECTIONS



HWY. 71B
CROSS SECTION STA. 124+50 TO STA. 124+76

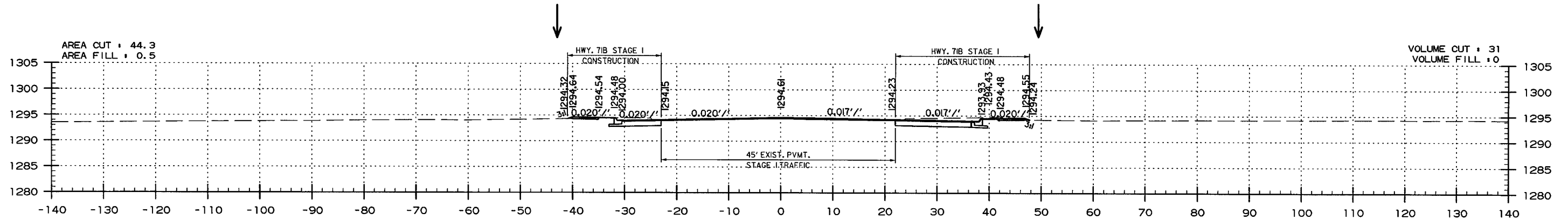
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903		276	368

2 CROSS SECTIONS



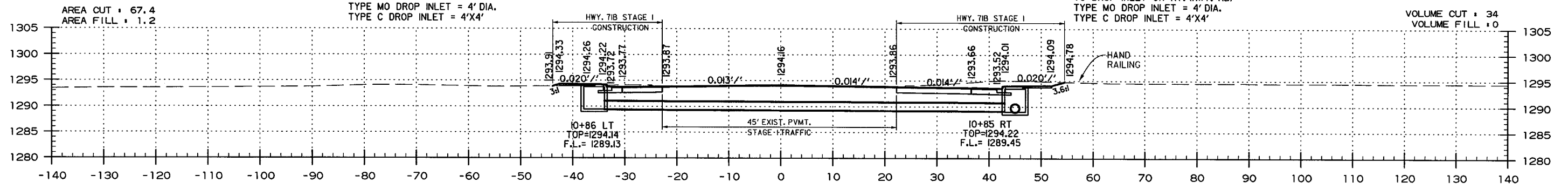
N. 46TH ST.
CROSS SECTION STA. 10+49 TO STA. 10+55

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				(2) CROSS SECTIONS				



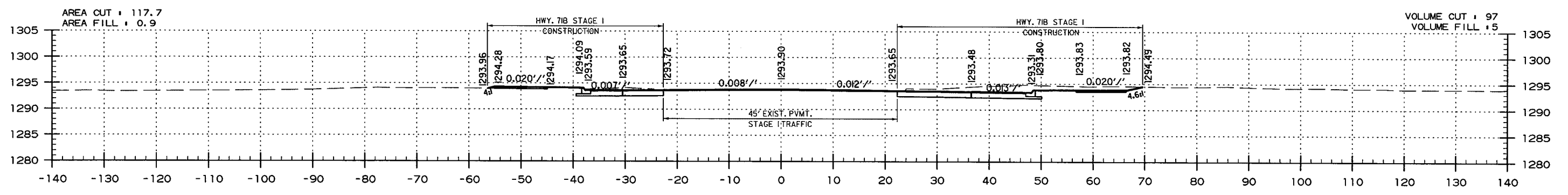
STA. 10+93 - CONSTRUCT
 DROP INLET ON LT. H= 4'-10"
 WITH 8' EXTENSION AND
 18" x 44' R.C. PIPE CULVERT
 (CLASS III)(TYPE 3 BEDDING)
 TO DROP INLET ON RT.
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4'x4'

STA. 10+94 - CONSTRUCT
 DROP INLET ON RT. H= 4'-9"
 WITH 8' EXTENSION AND
 18" x 46' R.C. PIPE CULVERT
 (CLASS III)(TYPE 3 BEDDING)
 TO DROP INLET ON RT. (HWY. 71B)
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4'x4'



10+86 LT
 TOP=1294.14
 F.L.= 1289.13

10+85 RT
 TOP=1294.22
 F.L.= 1289.45

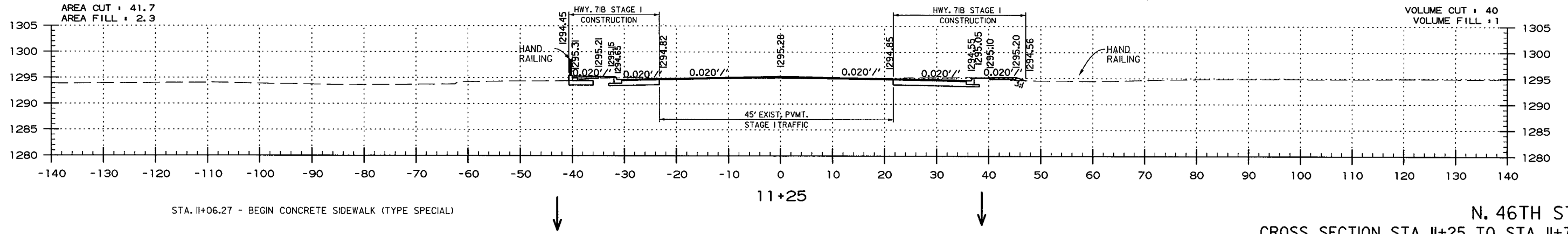
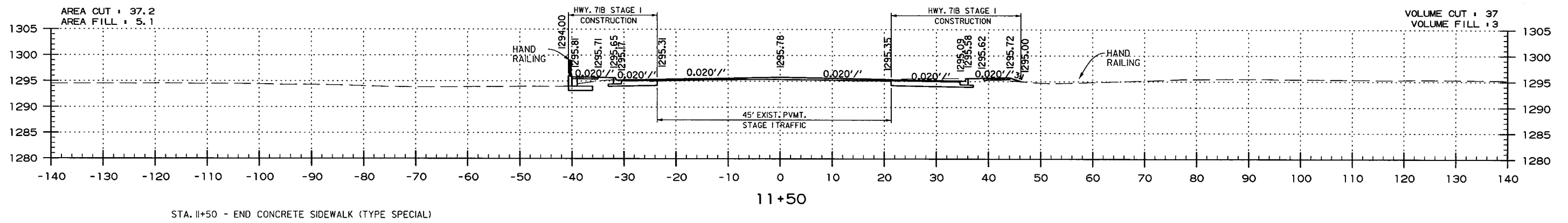
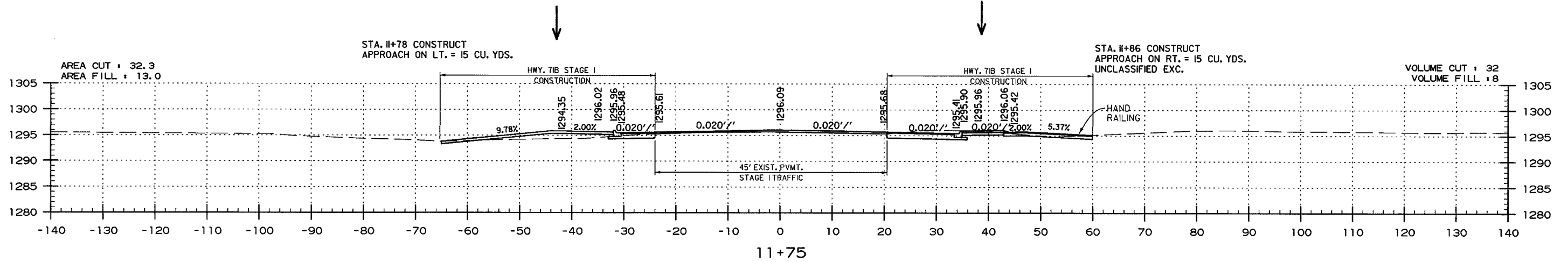


N. 46TH ST.
 CROSS SECTION STA. 10+75 TO STA. 11+00

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71Inchq\TRANSP\dgn\xsect\BB0903_CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	BB0903	278	368	

2 CROSS SECTIONS

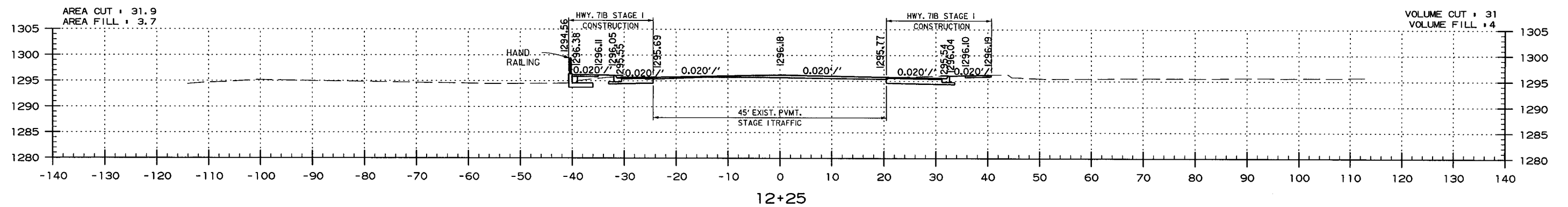
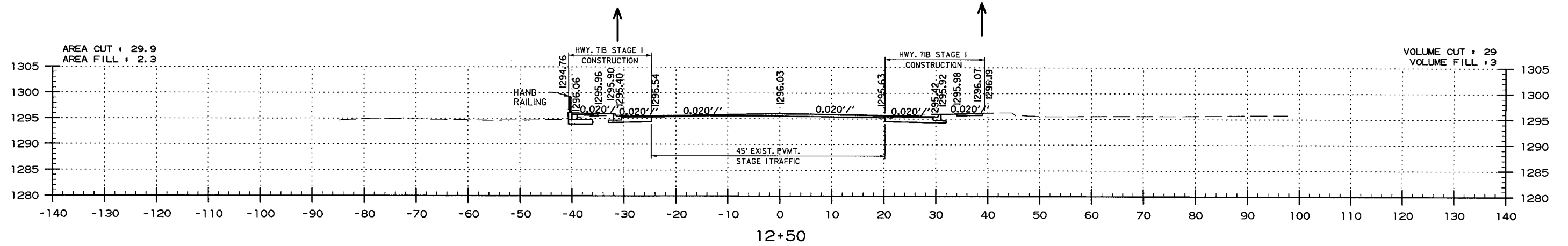


N. 46TH ST.
CROSS SECTION STA. 11+25 TO STA. 11+75

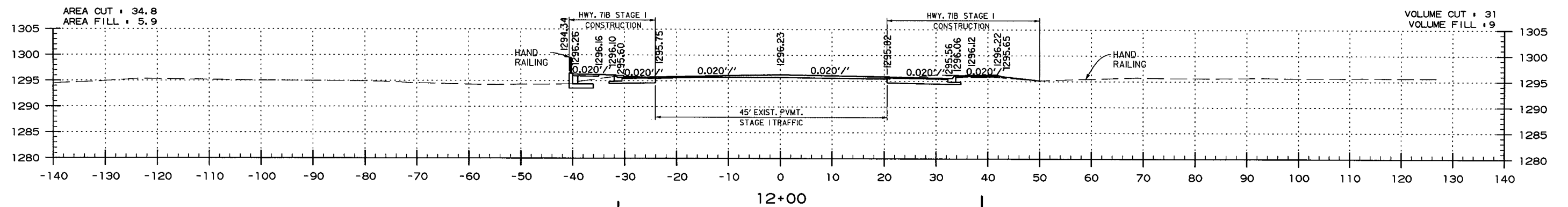
USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	279	368	

2 CROSS SECTIONS

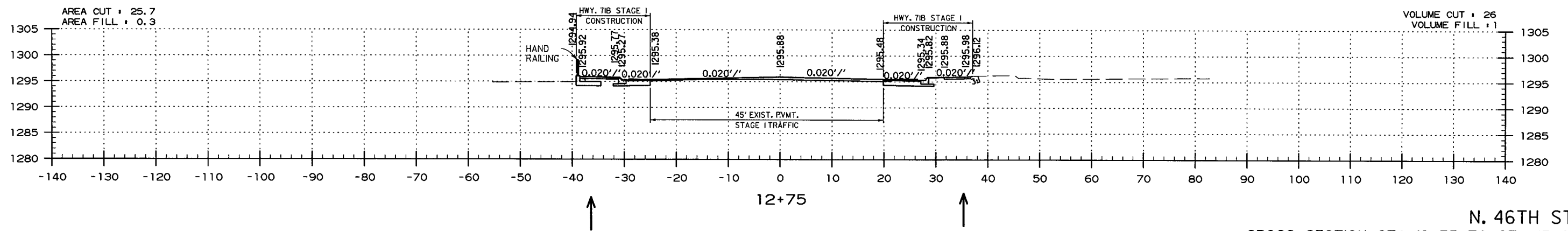
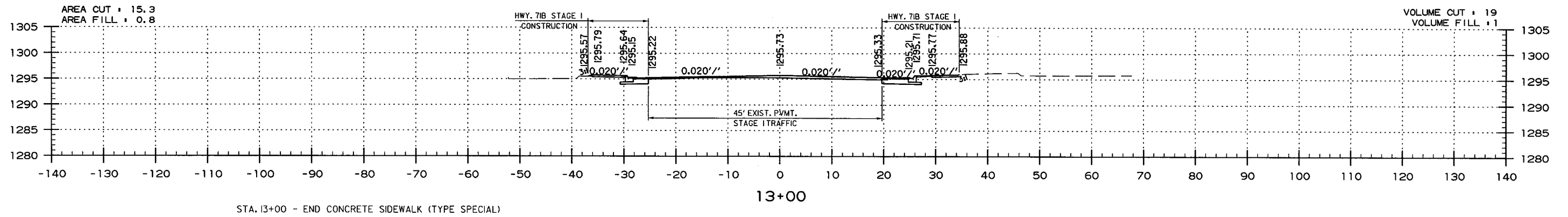
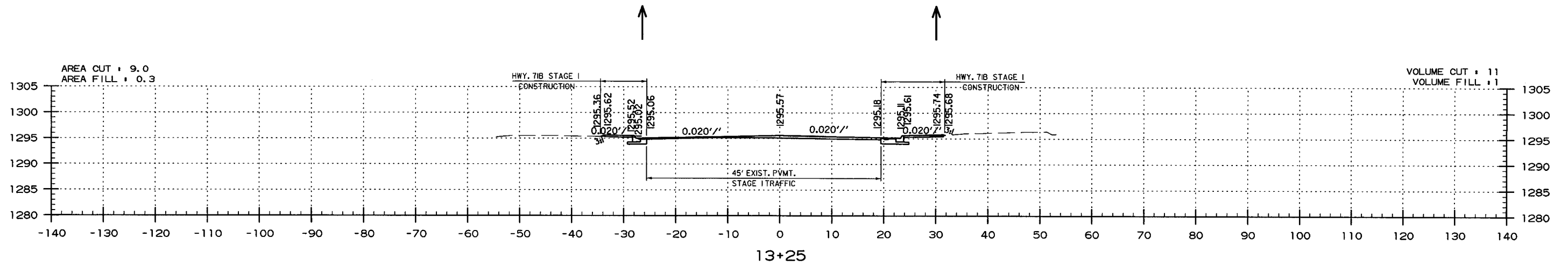


STA. 12+04 - BEGIN CONCRETE SIDEWALK (TYPE SPECIAL)



N. 46TH ST.
CROSS SECTION STA. 12+00 TO STA. 12+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	280	368	
				2 CROSS SECTIONS				

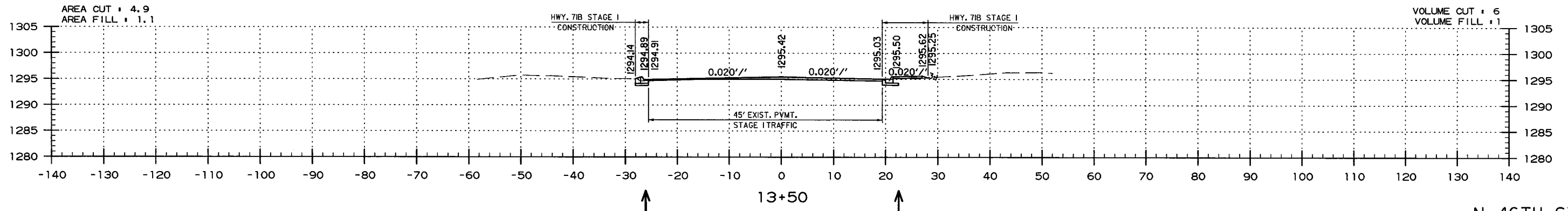
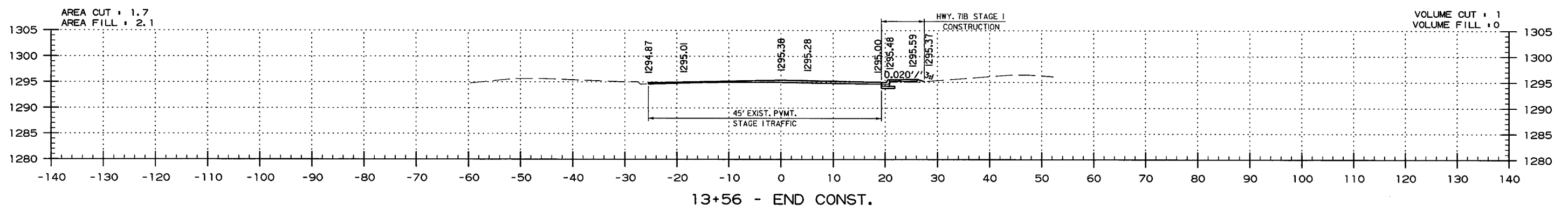
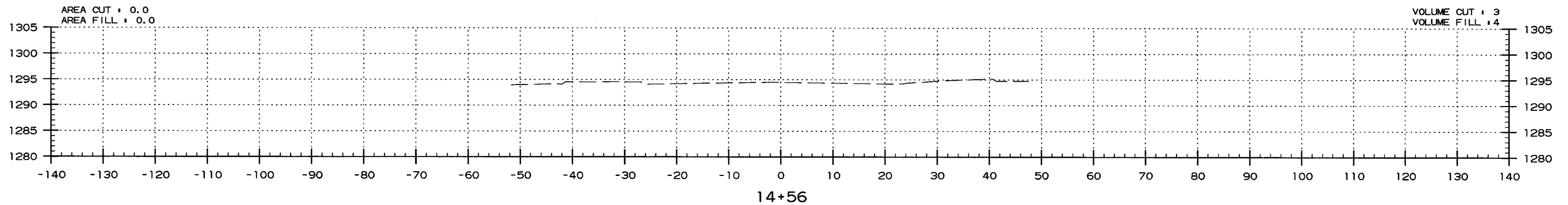


N. 46TH ST.
CROSS SECTION STA. 12+75 TO STA. 13+25

USER: mh5114
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	281	368	

2 CROSS SECTIONS

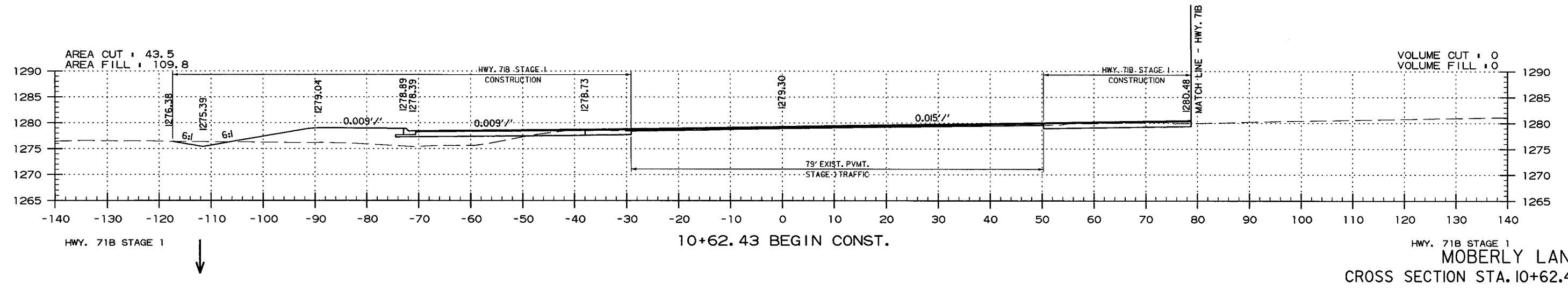


N. 46TH ST.
CROSS SECTION STA. 13+50 TO STA. 14+56

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		282	368

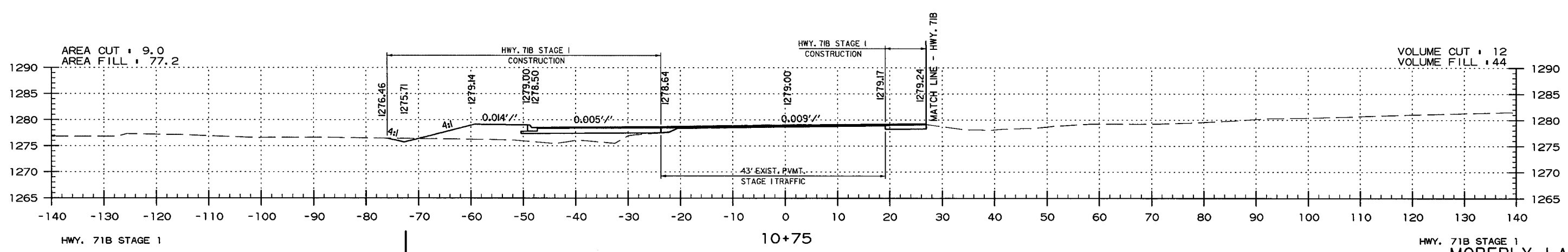
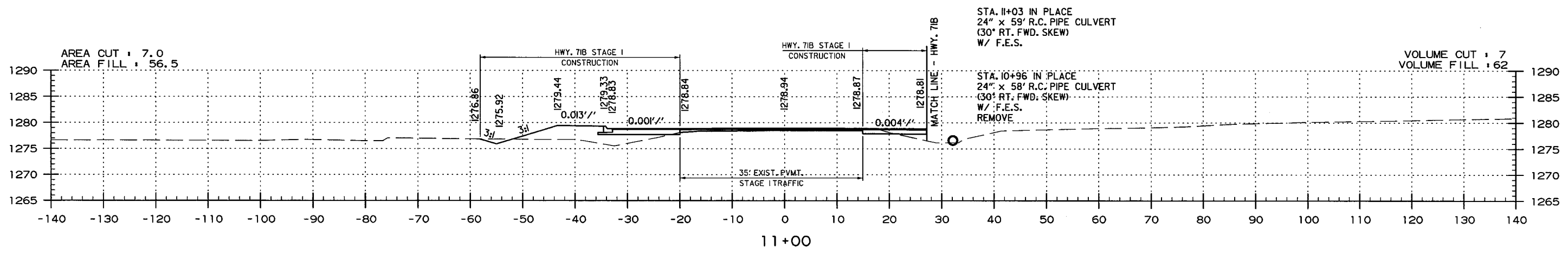
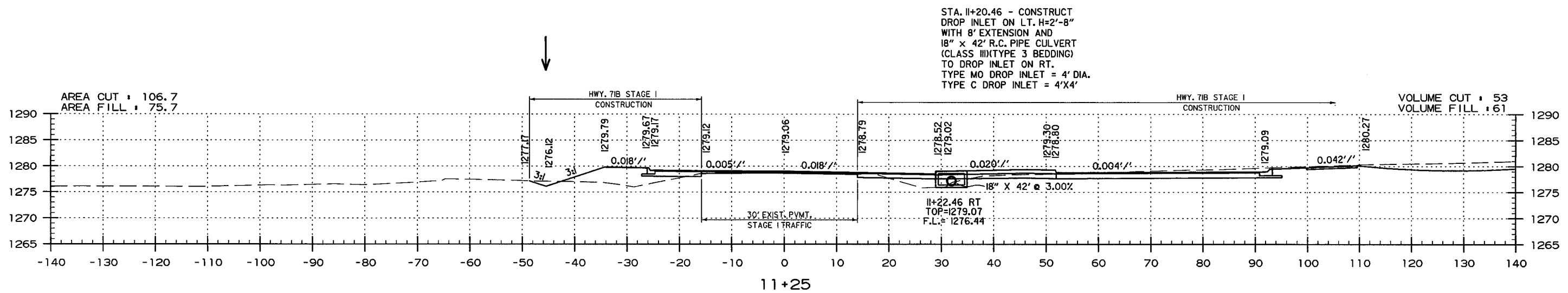
② CROSS SECTIONS



USER: mh5llk
DESIGN FILE: G:\12103305_Hwy71\hchg\TRANSP\dgn\xsect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	283	368	

2 CROSS SECTIONS

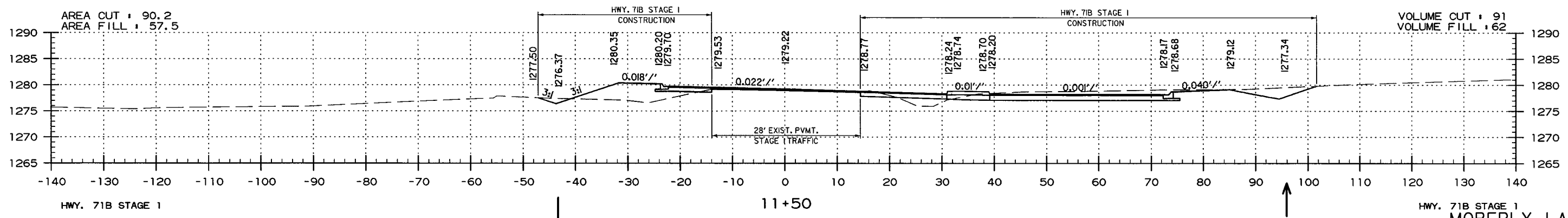
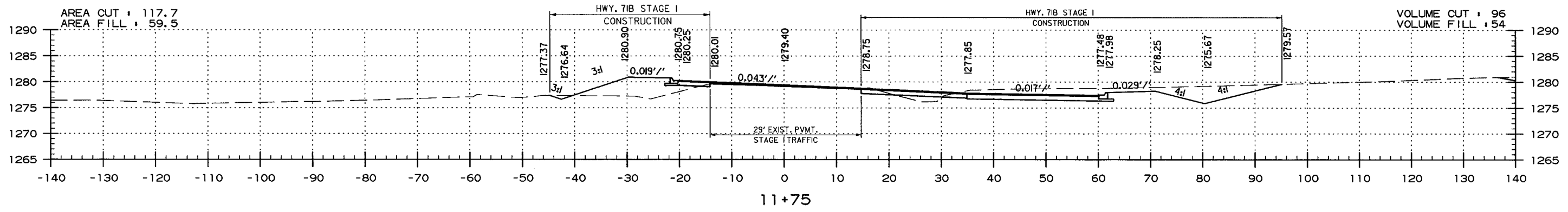
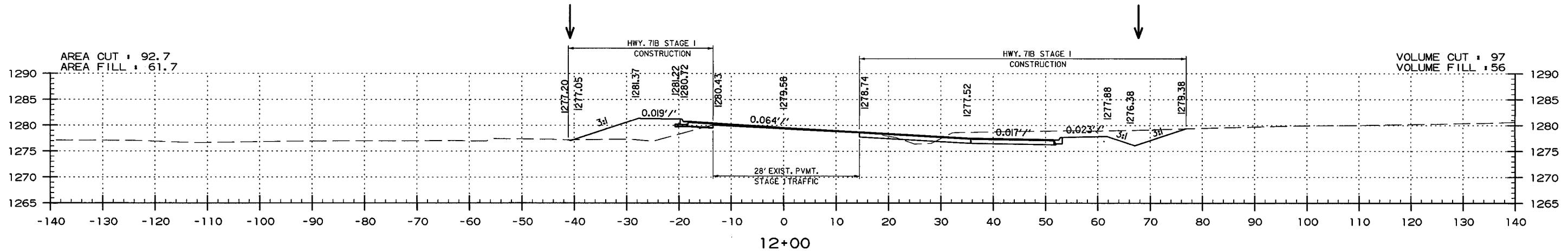


HWY. 71B STAGE I
MOBERLY LANE
CROSS SECTION STA. 10+75 TO STA. 11+25

USER: mh514
DESIGN FILE: G:\2013305_Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	284	368	

2 CROSS SECTIONS

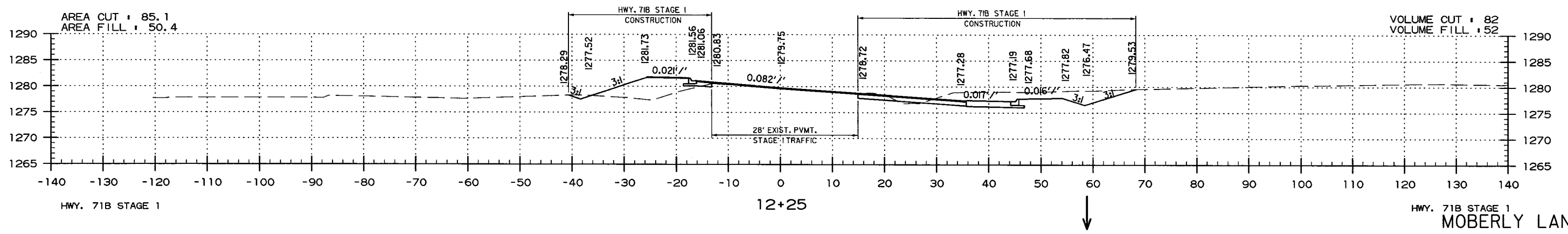
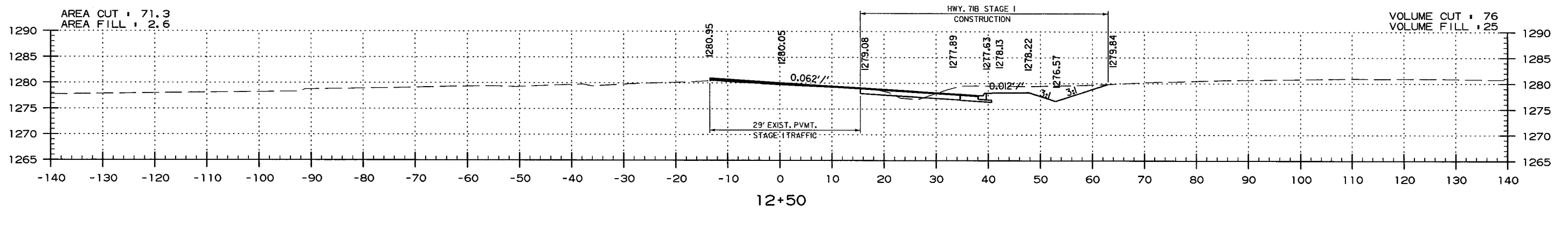
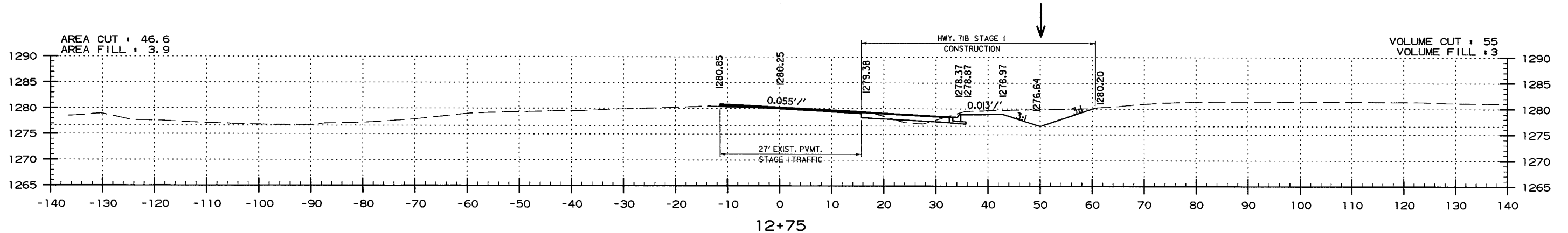


MOBERLY LANE
CROSS SECTION STA. 11+50 TO STA. 12+00

USER: mh514
DESIGN FILE: G:\2103305_Hwy71Inchq\TRANSP\dgn\sect\vr\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		285	368

2 CROSS SECTIONS

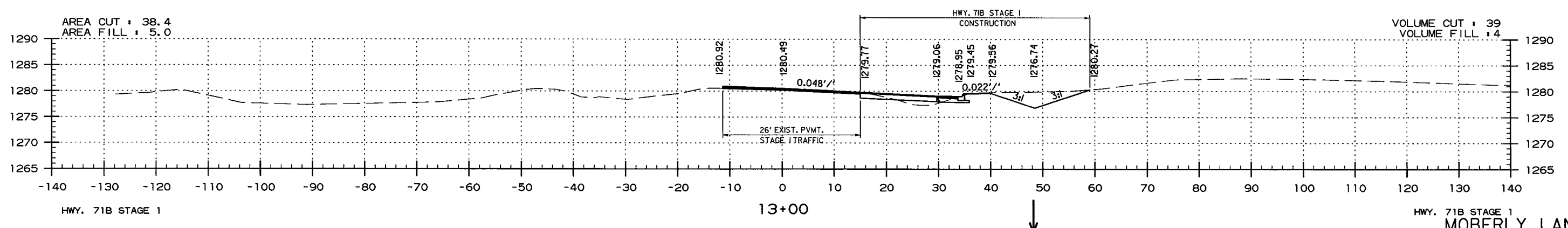
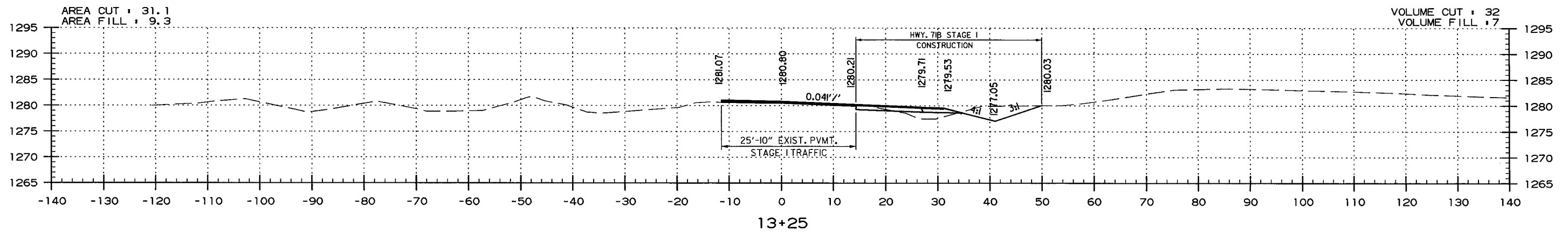
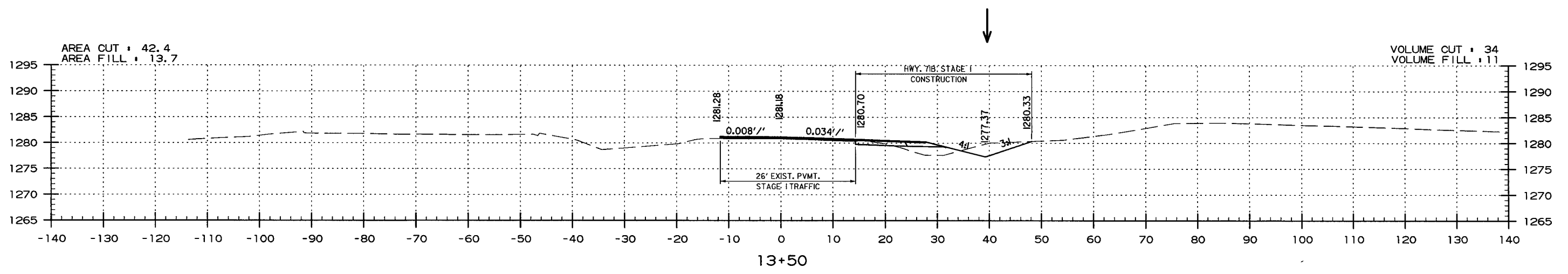


HWY. 71B STAGE I
MOBERLY LANE
CROSS SECTION STA. 12+25 TO STA. 12+75

USER: mh5M4
DESIGN FILE: G:\203305_Hwy71incho\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	286	368	

2 CROSS SECTIONS

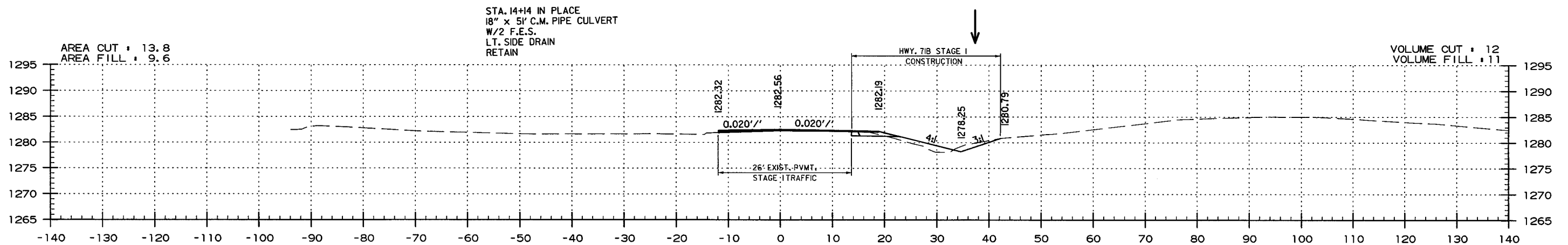


MOBERLY LANE
CROSS SECTION STA. 13+00 TO STA. 13+50

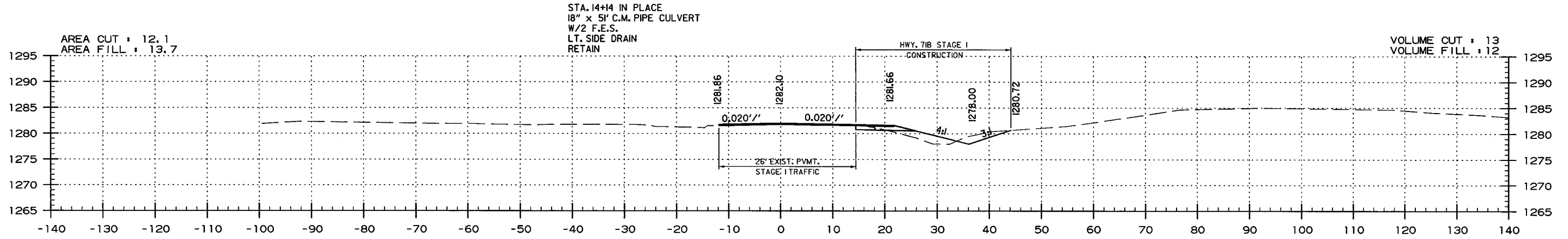
USER: mh514
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PLOTTED: 6/6/2018 14:47
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		287	368

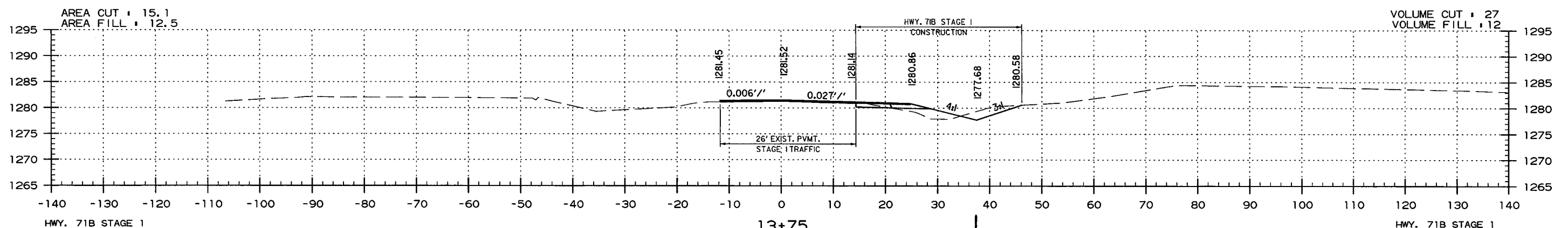
2 CROSS SECTIONS



14+25



14+00



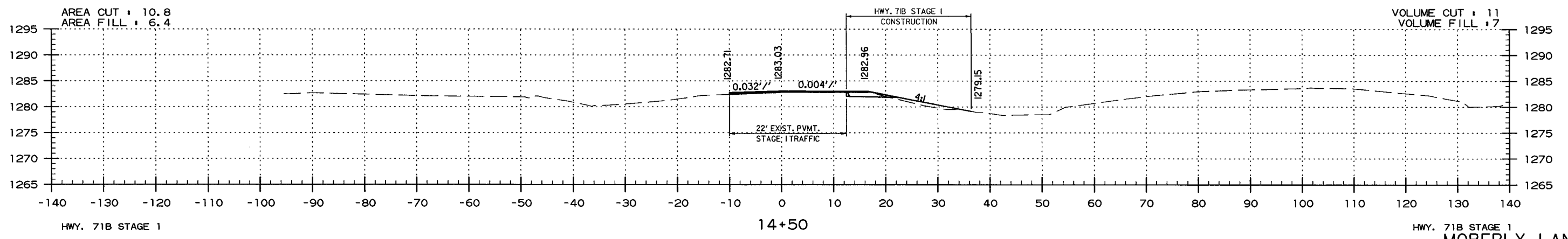
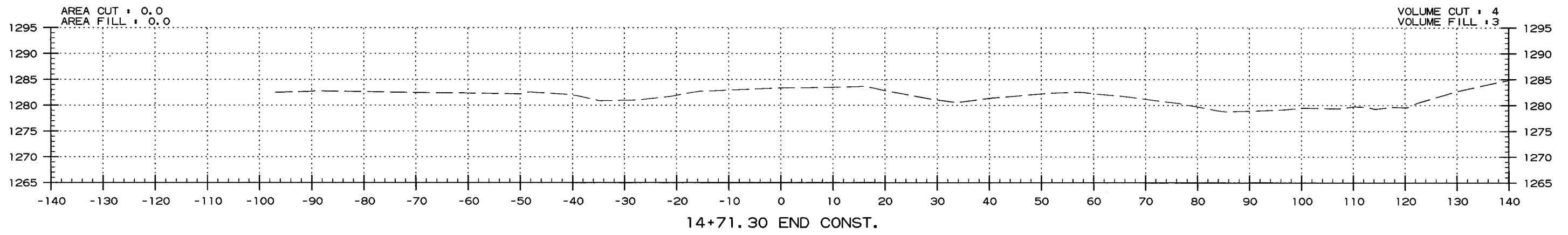
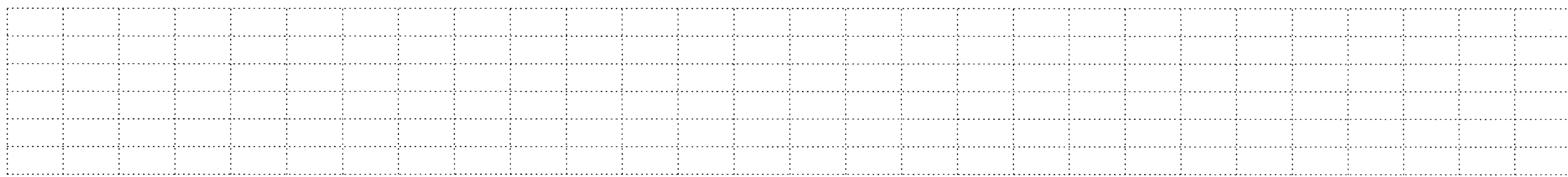
13+75

MOBERLY LANE
CROSS SECTION STA. 13+75 TO STA. 14+25

USER: mh5114
DESIGN FILE: G:\2103305_Hwy71\hchq\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. BB0903	288	368

② CROSS SECTIONS

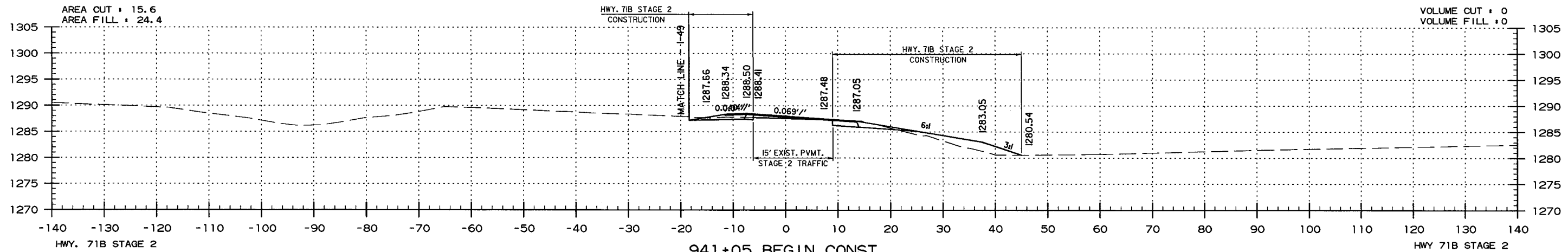
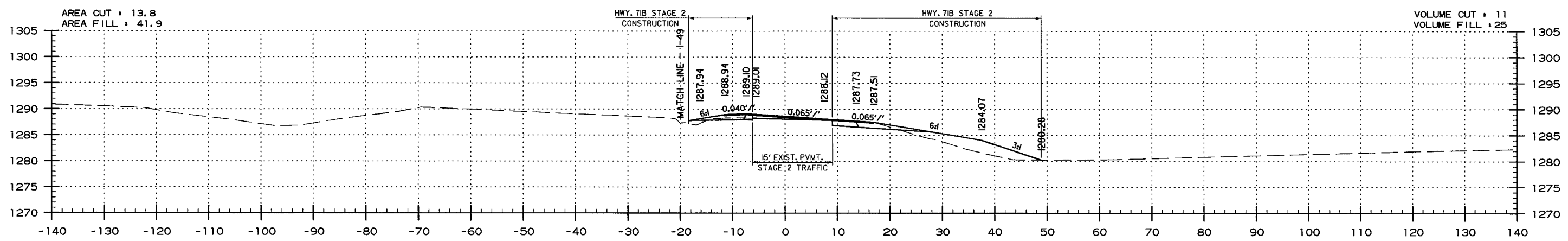
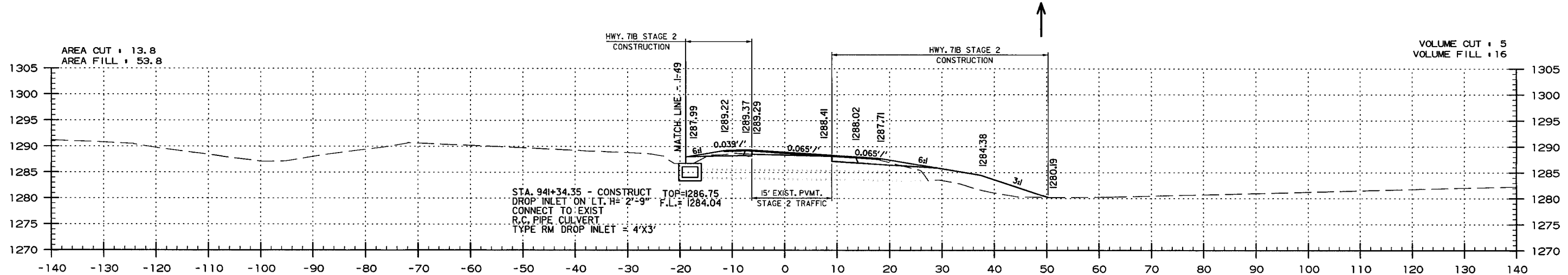


MOBERLY LANE
CROSS SECTION STA. 14+50 TO STA. 15+00

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\inchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	289	368	

2 CROSS SECTIONS

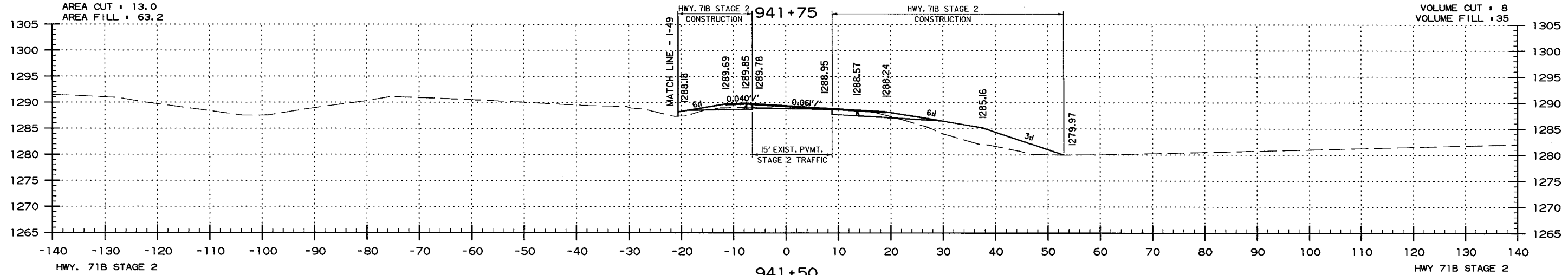
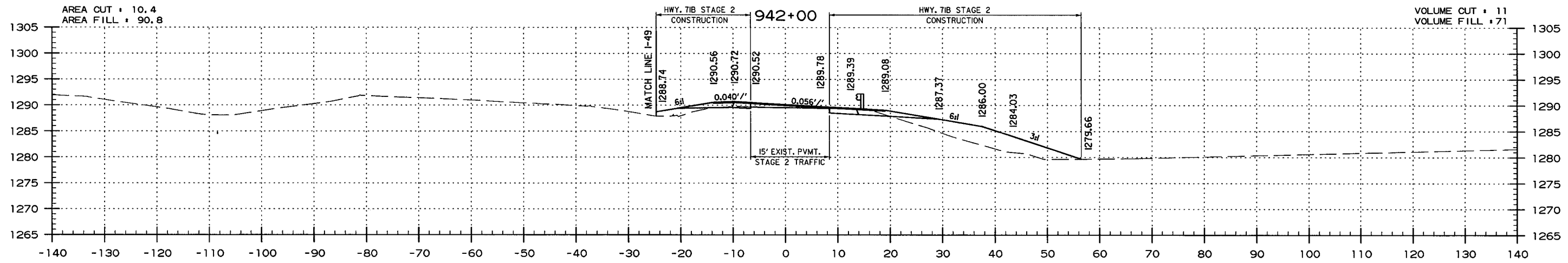
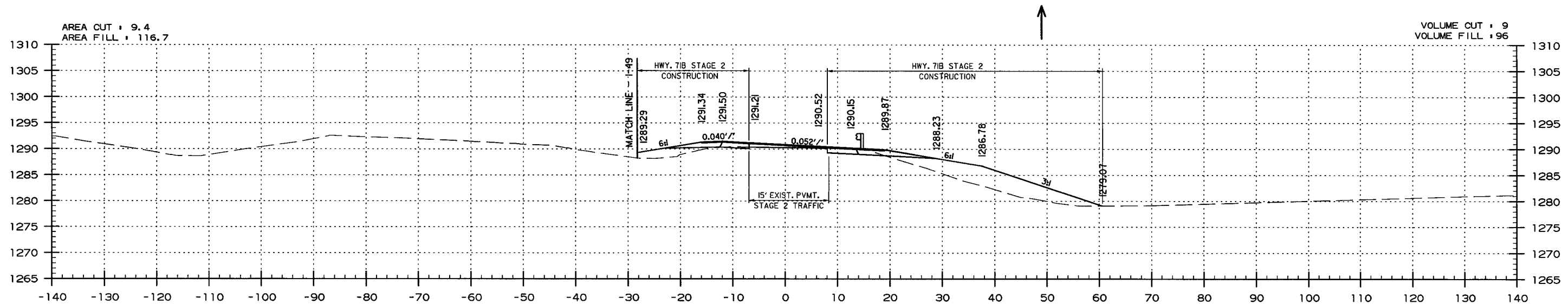


EXISTING RAMP I
CROSS SECTION STA. 941+05 TO STA. 941+34

USER: mh514
DESIGN FILE: G:\203305.Hwy71inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	290	368	

2 CROSS SECTIONS

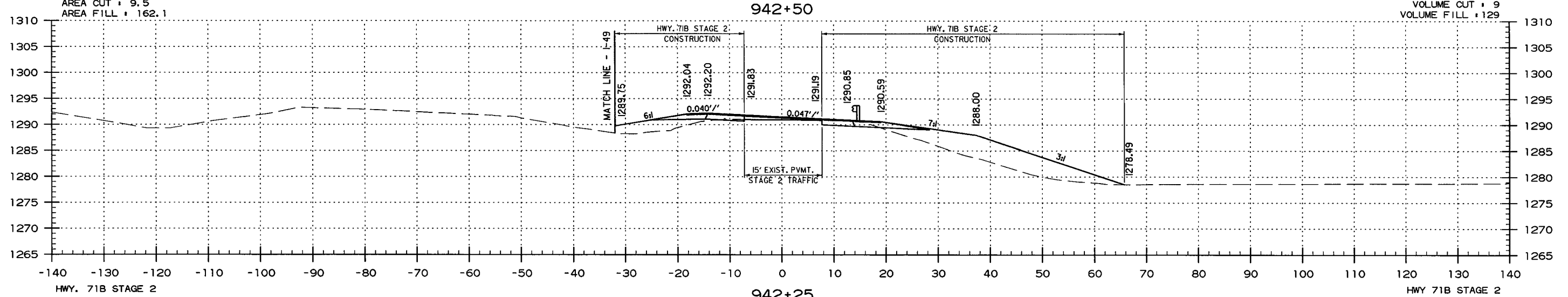
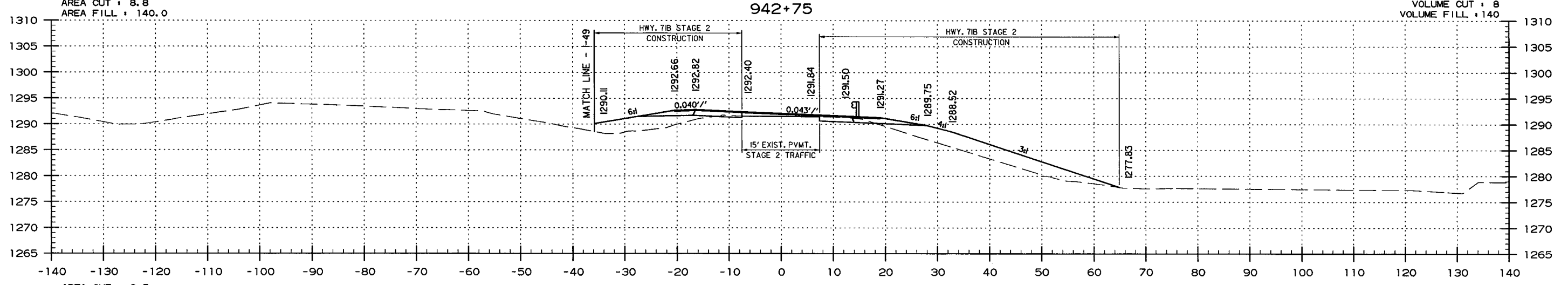
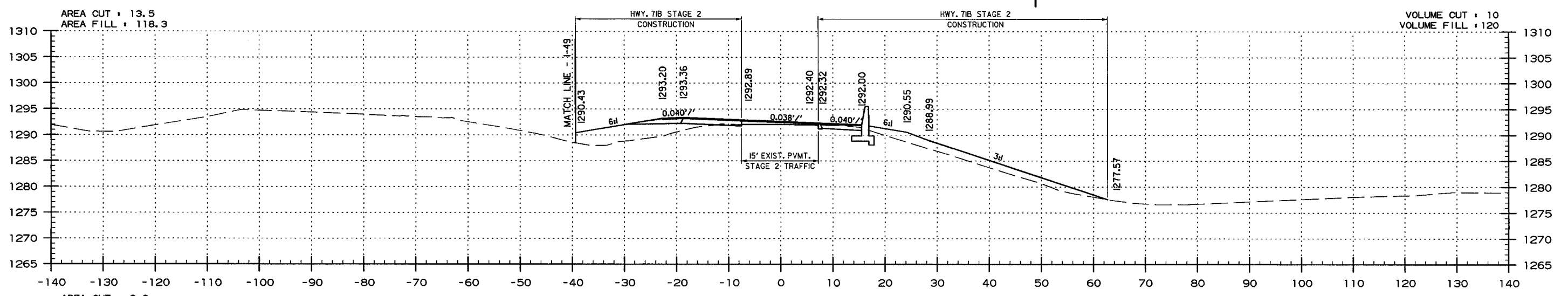


EXISTING RAMP I
CROSS SECTION STA. 941+50 TO STA. 942+00

USER: mh514
DESIGN FILE: G:\201305_Hwy71\hwy71\transp\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	291	368	

2 CROSS SECTIONS

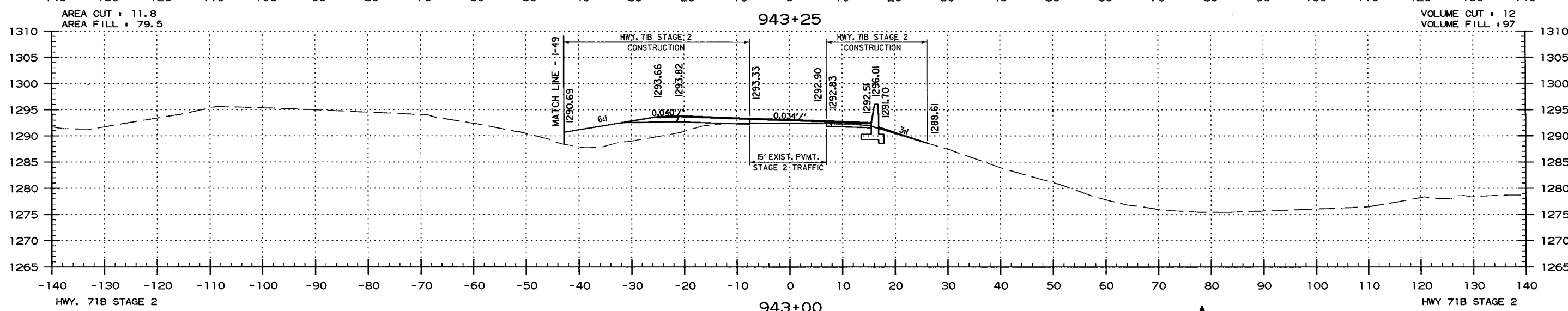
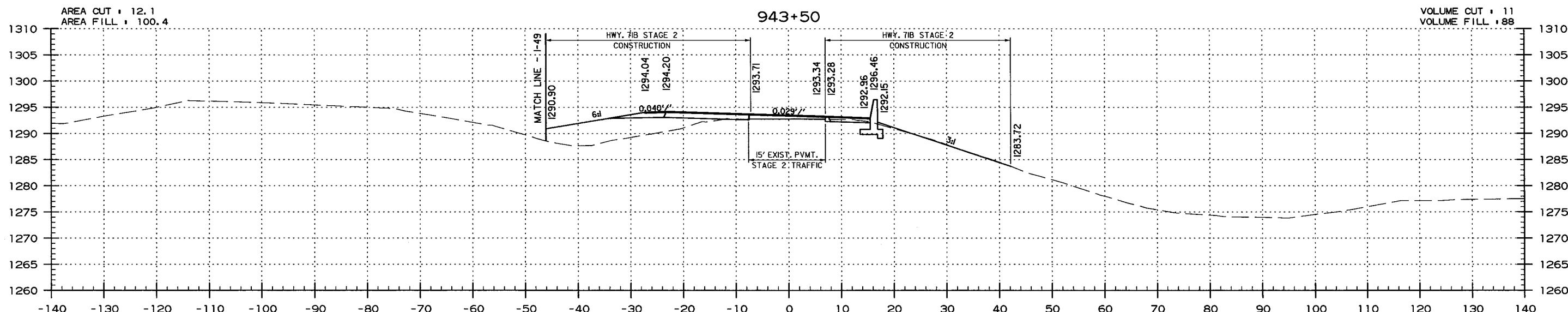
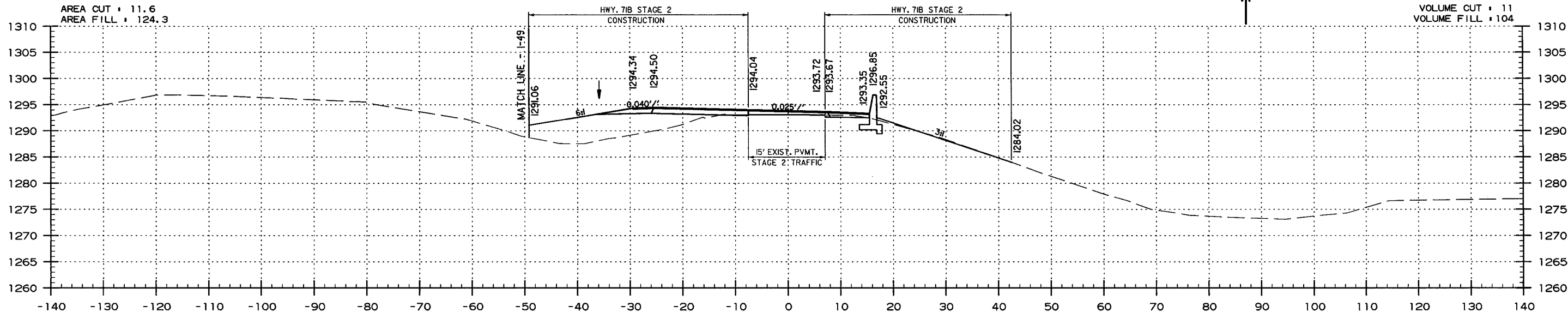


EXISTING RAMP I
CROSS SECTION STA. 942+25 TO STA. 942+75

USER: mh5M4
DESIGN FILE: G:\203305_Hwy7\linchg\TRANSP\dgn\sect\BB0903_CX_HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	292
						CROSS SECTIONS		

2 CROSS SECTIONS

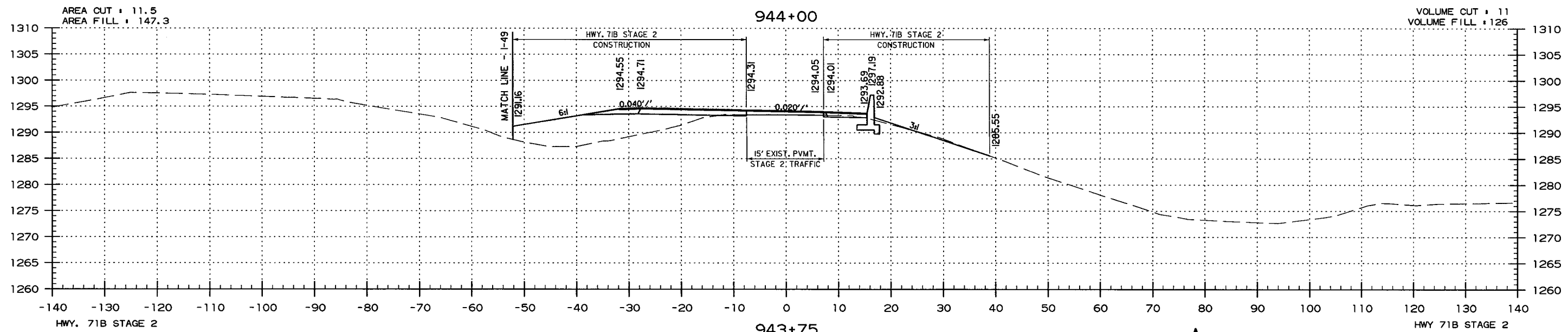
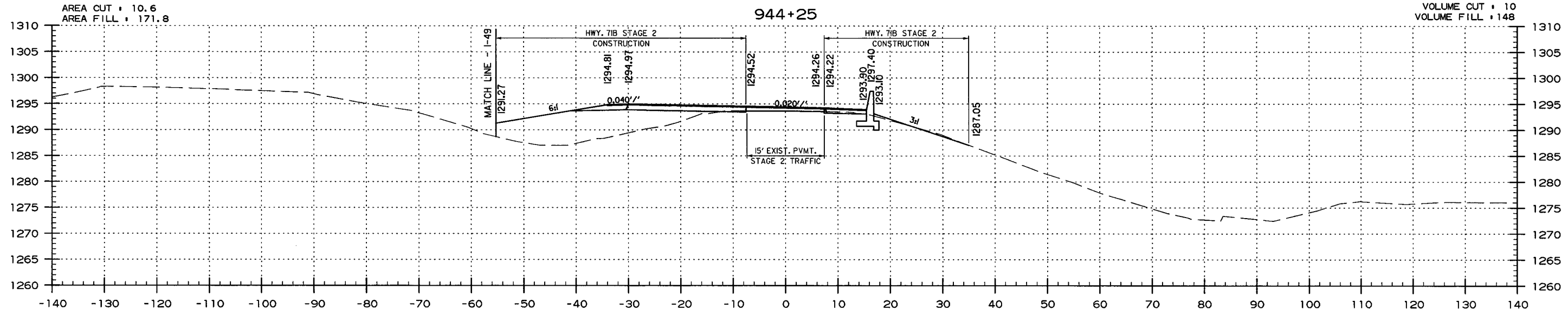
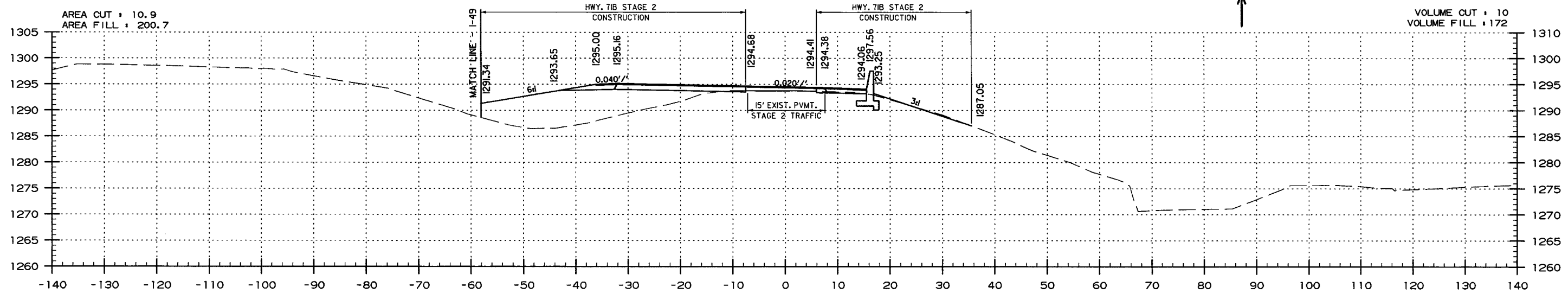


EXISTING RAMP I
CROSS SECTION STA. 943+00 TO STA. 943+50

USER: mh514
DESIGN FILE: G:\2103305_Hwy7\linchg\TRANSP\dgn\xsect\BB0903.CX.HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	293	368	

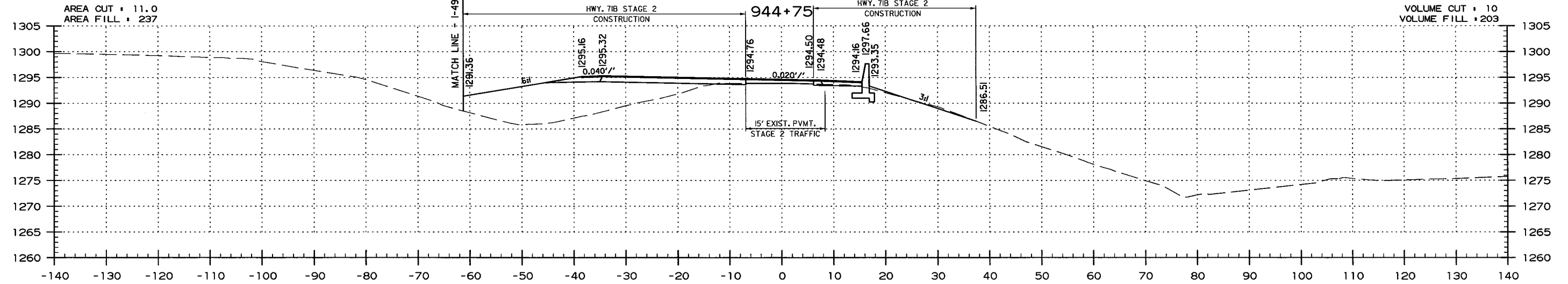
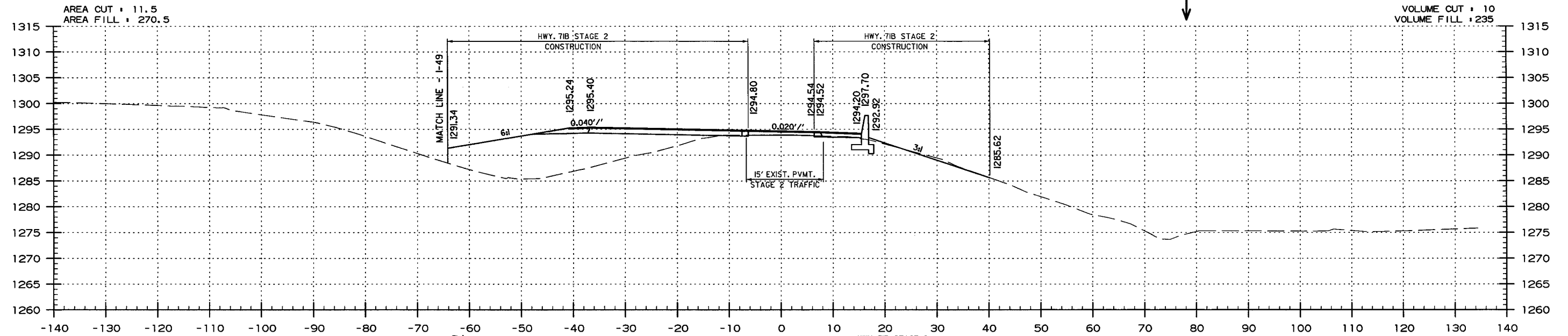
2 CROSS SECTIONS



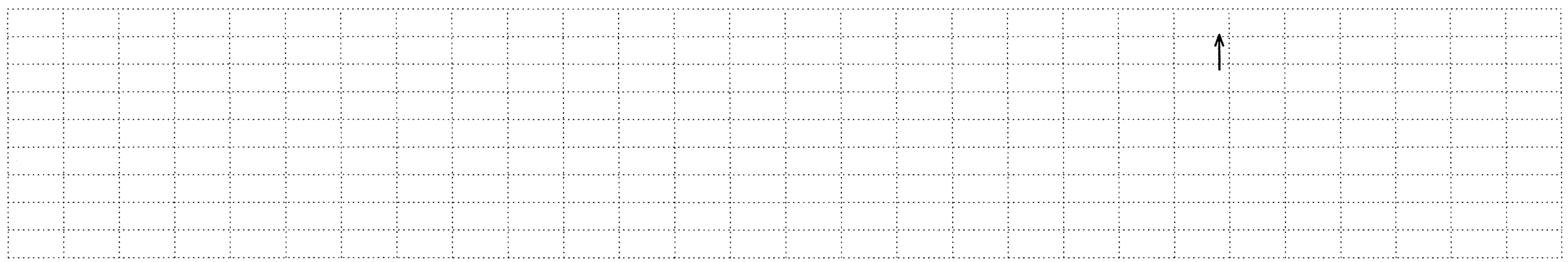
EXISTING RAMP I
CROSS SECTION STA. 943+75 TO STA. 944+25

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\mchq\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	294
						2 CROSS SECTIONS		



944+50



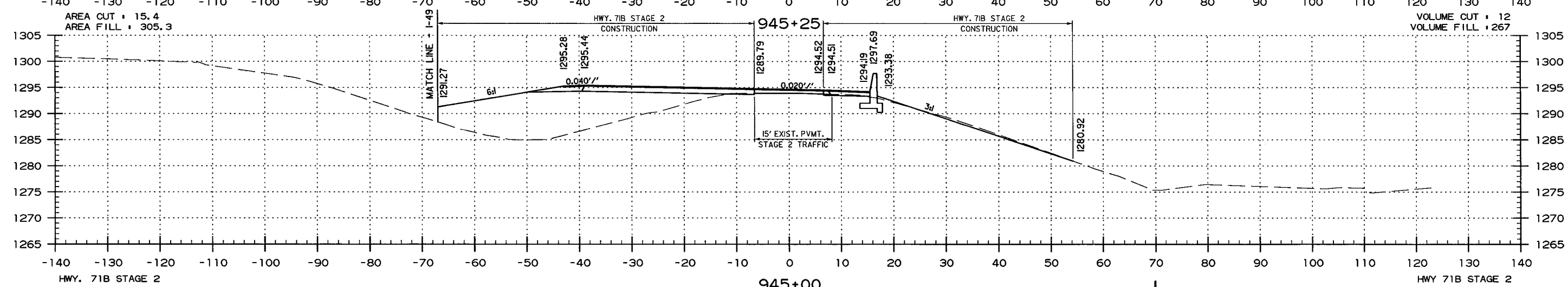
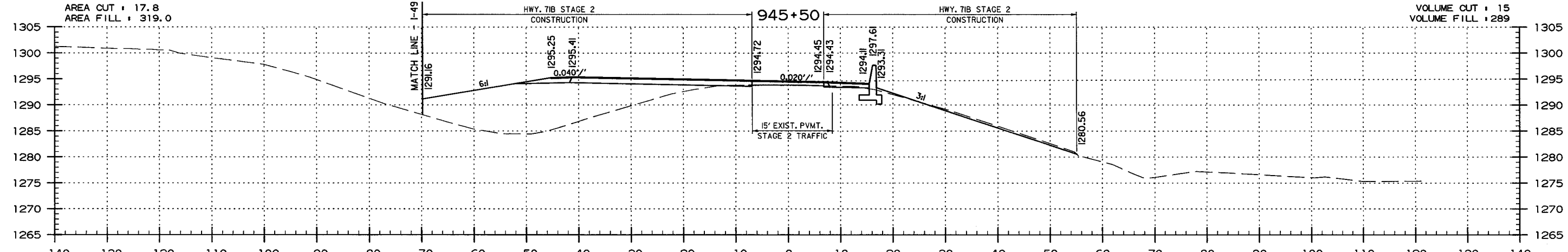
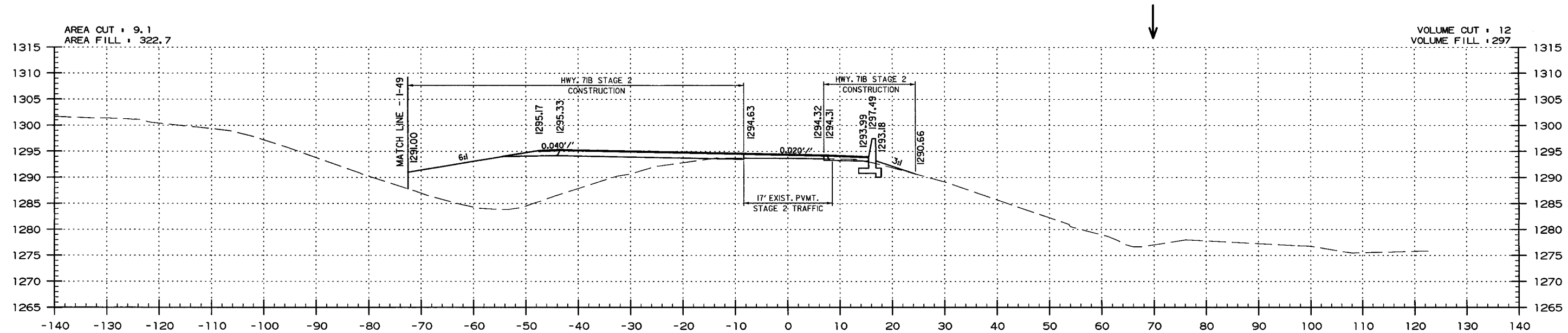
HWY. 71B STAGE 2

HWY 71B STAGE 2
EXISTING RAMP 1
CROSS SECTION STA. 944+25 TO STA. 944+75

USER: mh514
DESIGN FILE: G:\203305_Hwy71inchg\TRANSP\dgn\xsect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	295	368	

2 CROSS SECTIONS

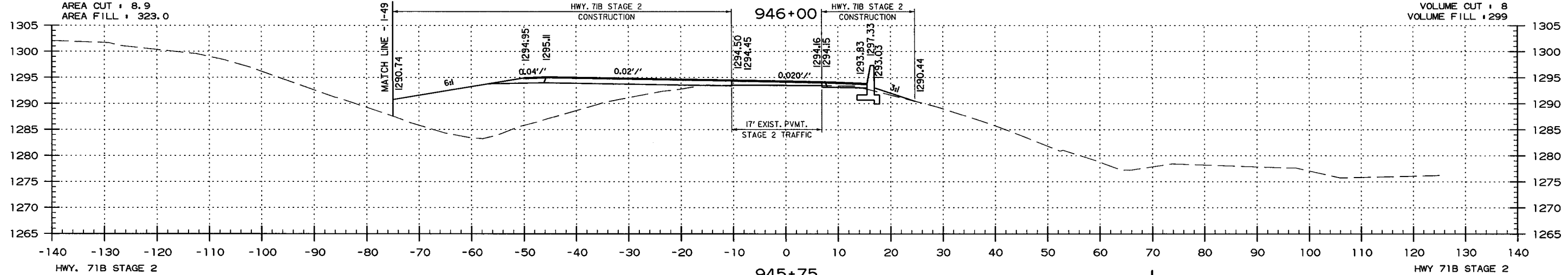
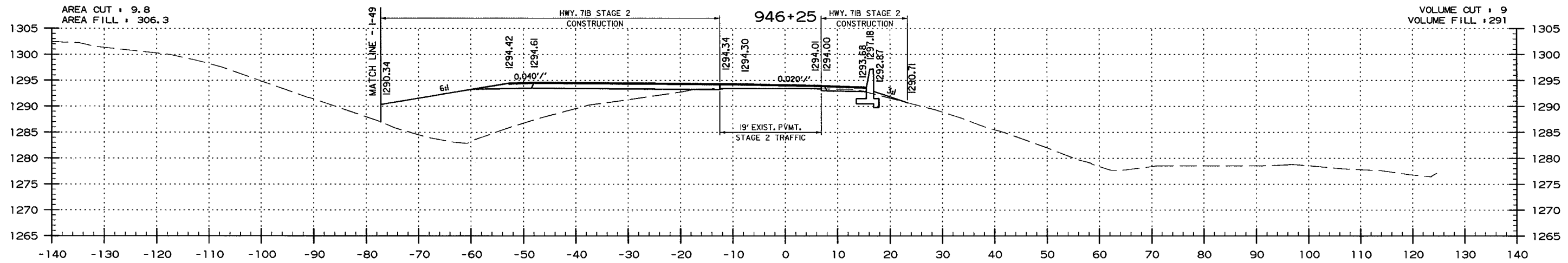
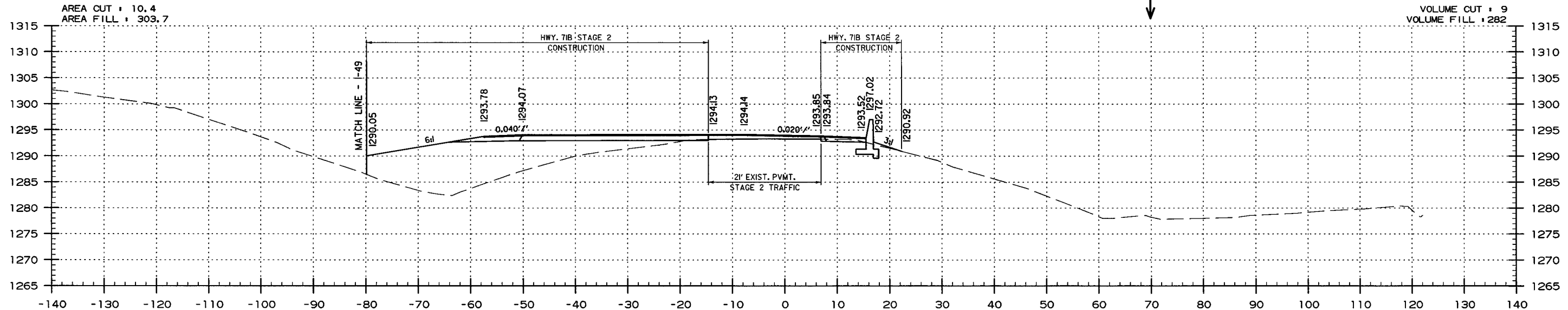


EXISTING RAMP I
CROSS SECTION STA. 945+00 TO STA. 945+50

USER: mh514
DESIGN FILE: G:\2103305.Hwy7\linchg\TRANSP\dgn\xsect\BB0903.CX.HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	296

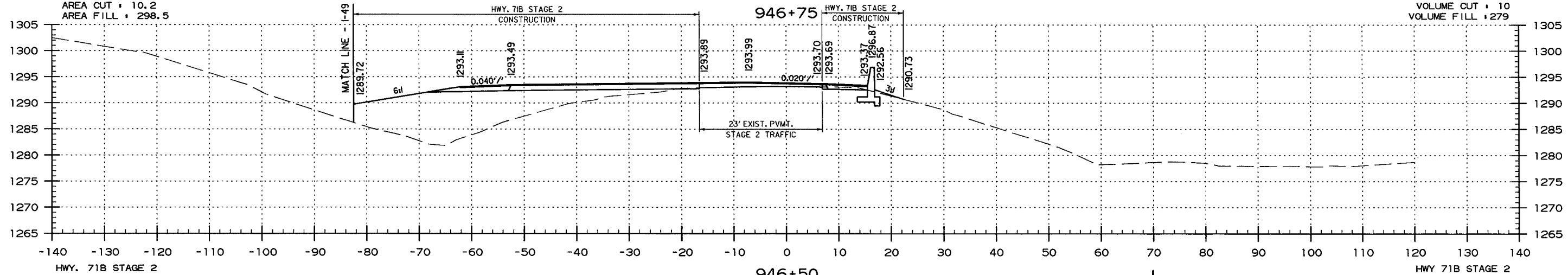
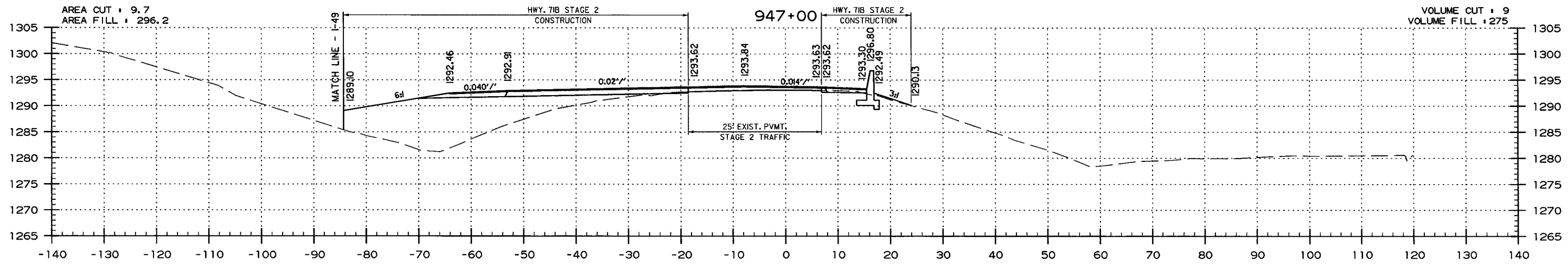
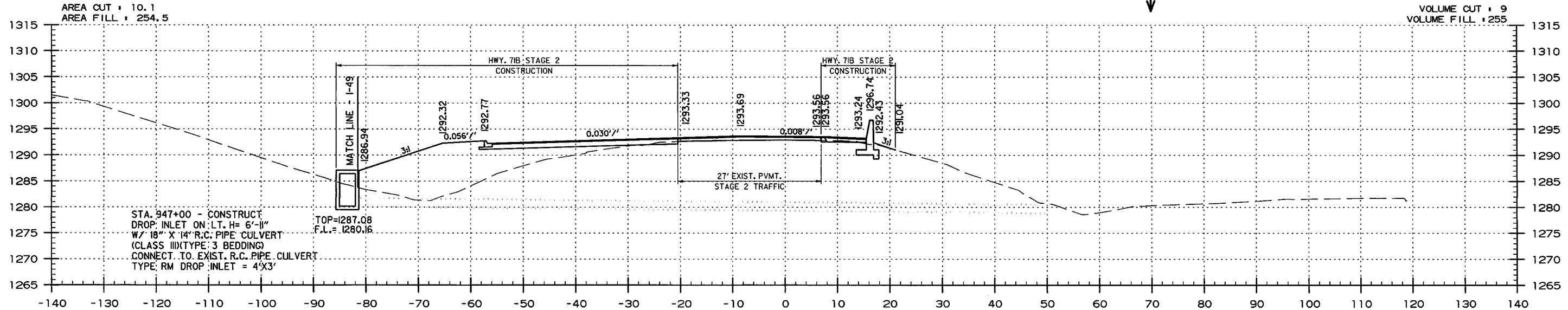
2 CROSS SECTIONS



EXISTING RAMP I
CROSS SECTION STA. 945+75 TO STA. 946+25

USER: mh5M4
DESIGN FILE: G:\203305_Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX_HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	297
						2 CROSS SECTIONS		



HWY. 71B STAGE 2

946+50

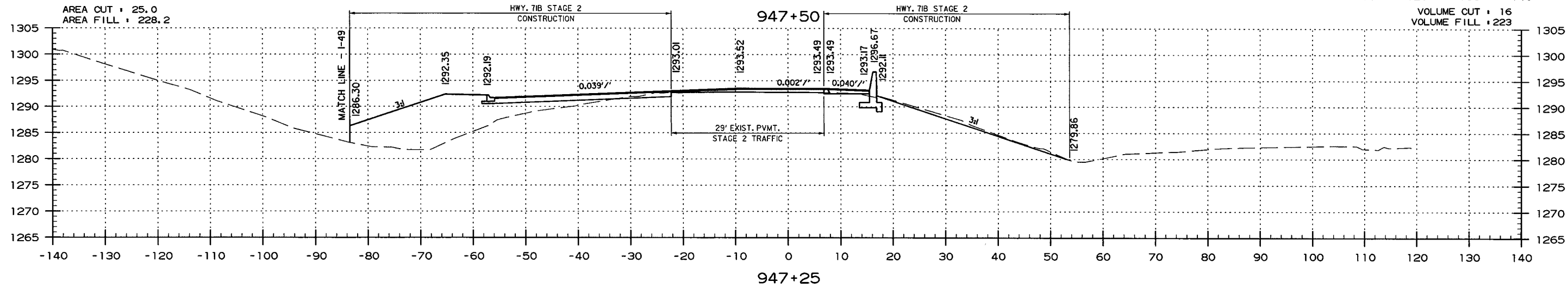
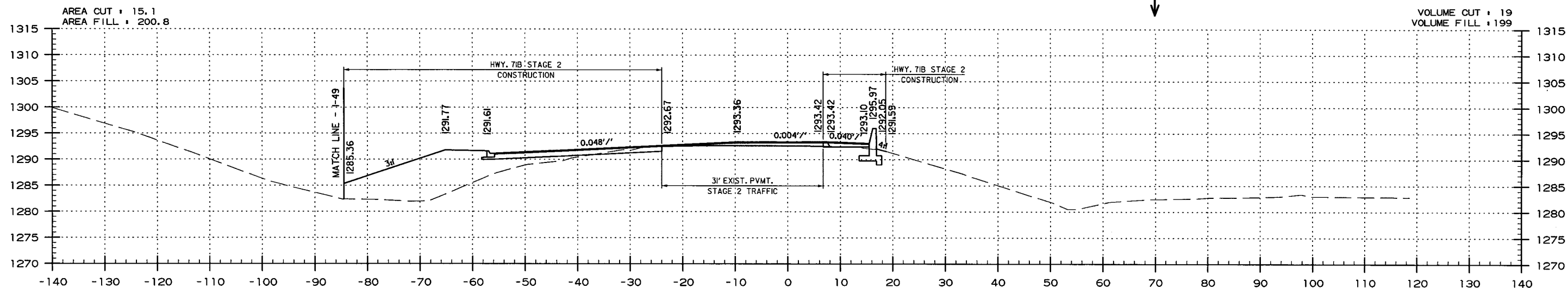
HWY 71B STAGE 2

EXISTING RAMP I
CROSS SECTION STA. 946+50 TO STA. 947+00

USER: mh5M4
DESIGN FILE: G:\203305_Hwy71inchg\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
PLOTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	298	368	

2 CROSS SECTIONS

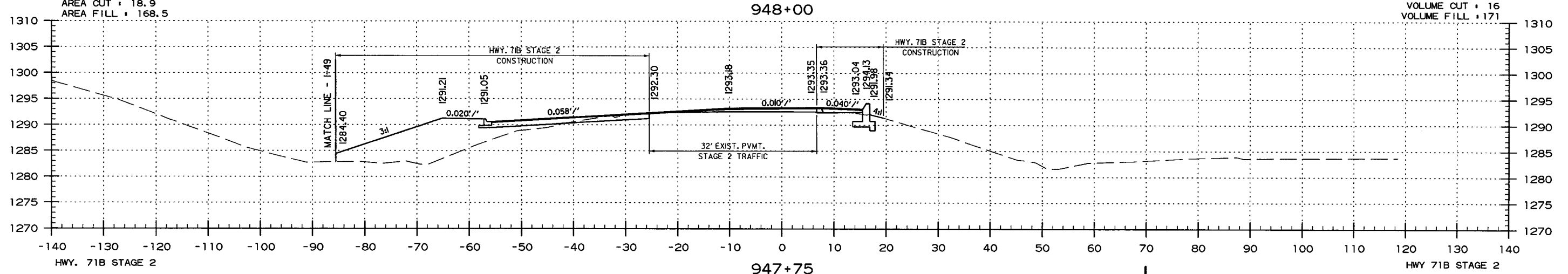
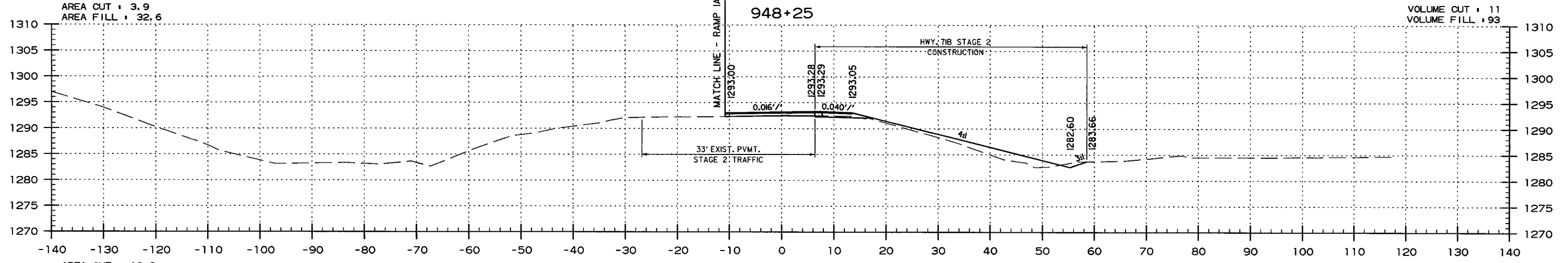
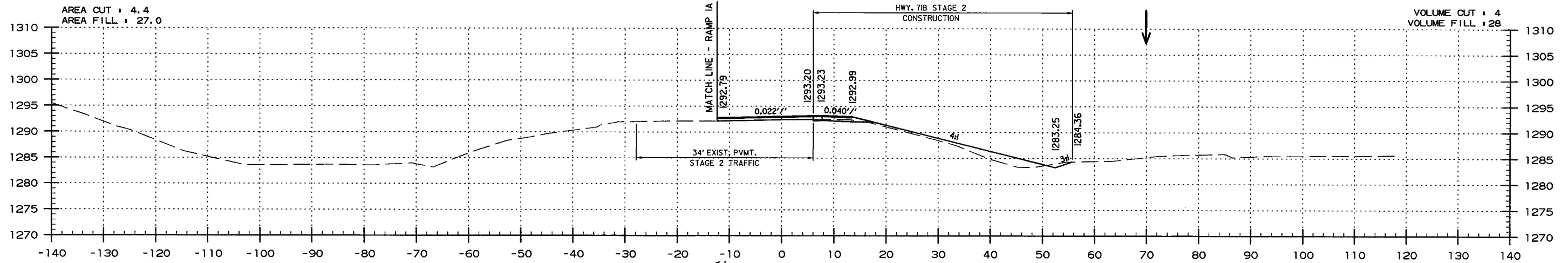


HWY. 71B STAGE 2

HWY 71B STAGE 2
EXISTING RAMP I
CROSS SECTION STA. 947+00 TO STA. 947+50

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	299	368	

2 CROSS SECTIONS



947+75

948+00

948+25

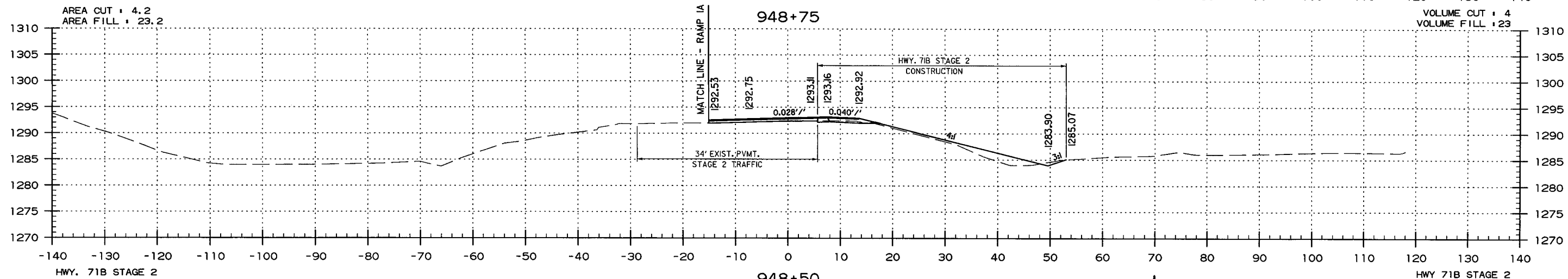
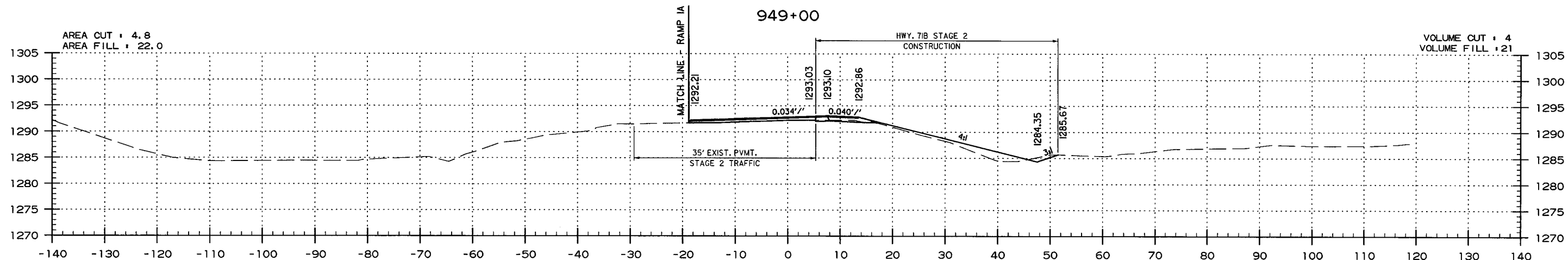
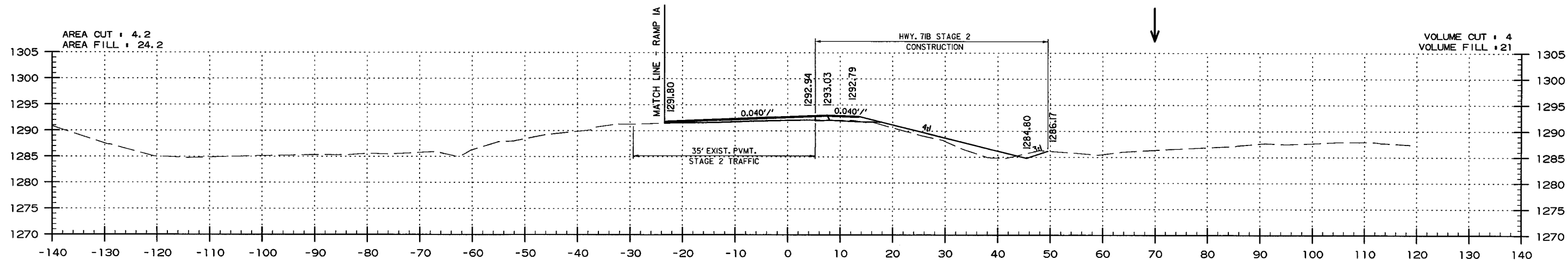
HWY. 71B STAGE 2

EXISTING RAMP 1
CROSS SECTION STA. 947+75 TO STA. 948+25

USER: mh514
DESIGN FILE: G:\12103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	300	368	

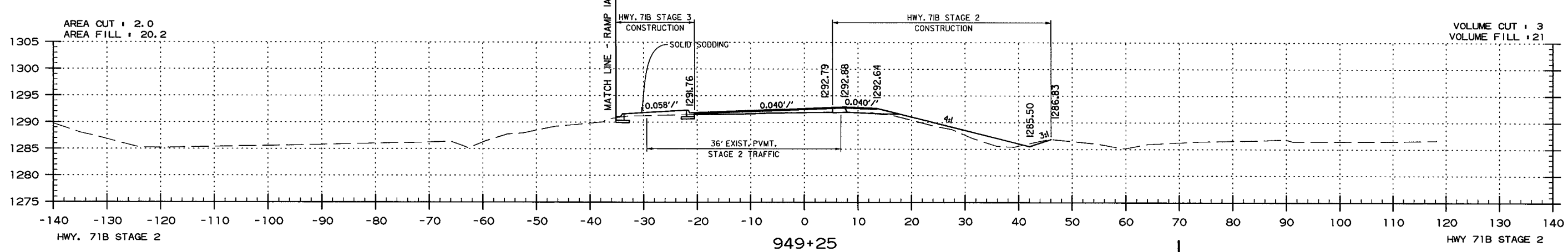
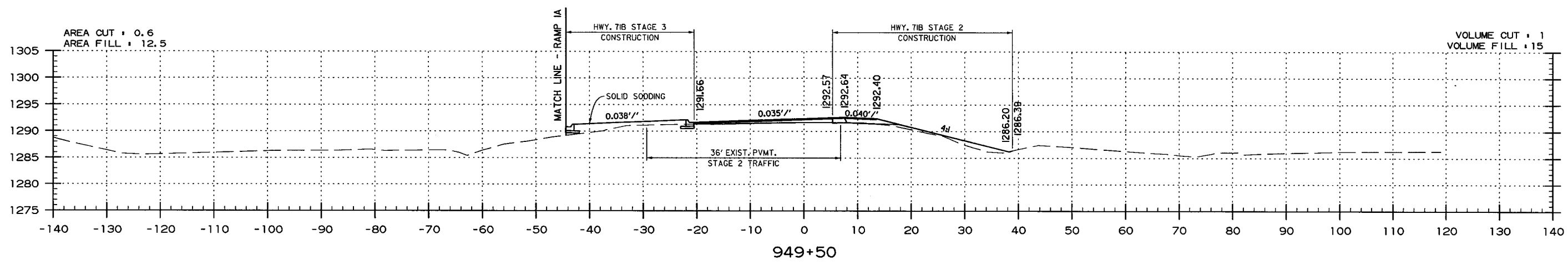
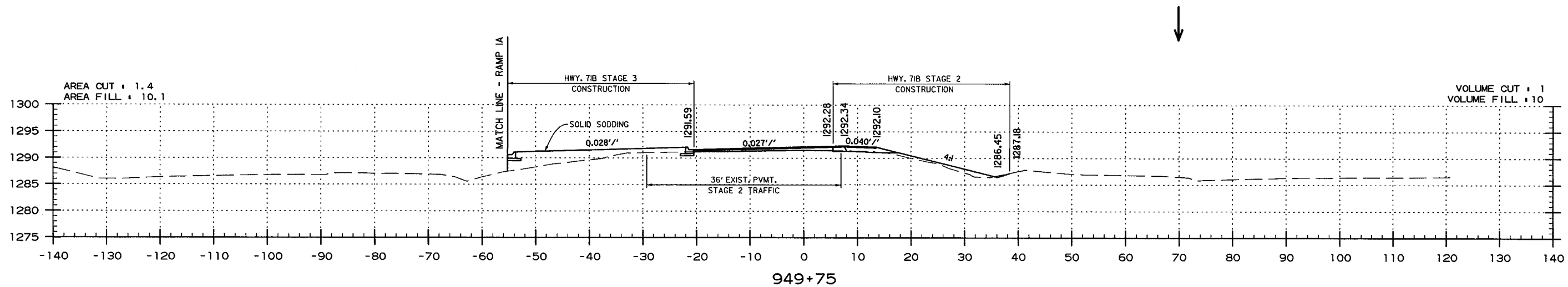
2 CROSS SECTIONS



EXISTING RAMP I
CROSS SECTION STA. 948+50 TO STA. 949+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	301	368	

2 CROSS SECTIONS



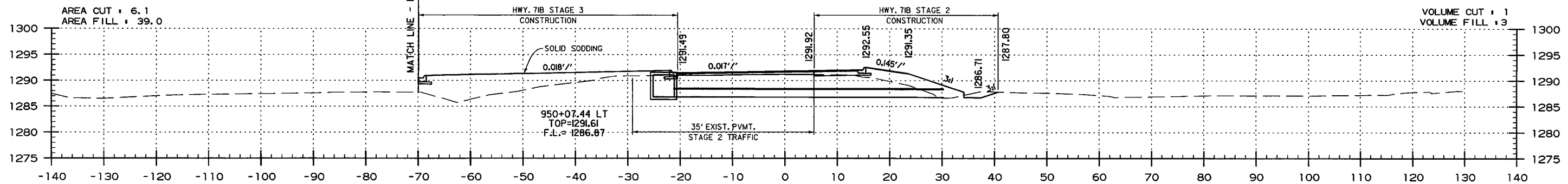
EXISTING RAMP 1
CROSS SECTION STA. 949+25 TO STA. 949+75

USER: mfs14
DESIGN FILE: G:\2103305_Hwy7\Inch\g\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

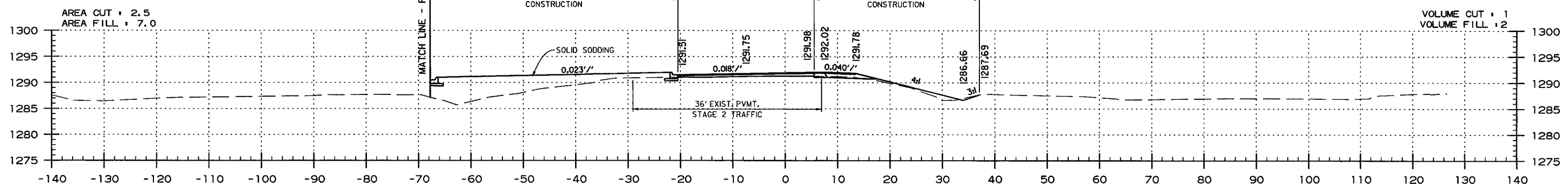
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	302	368	

2 CROSS SECTIONS

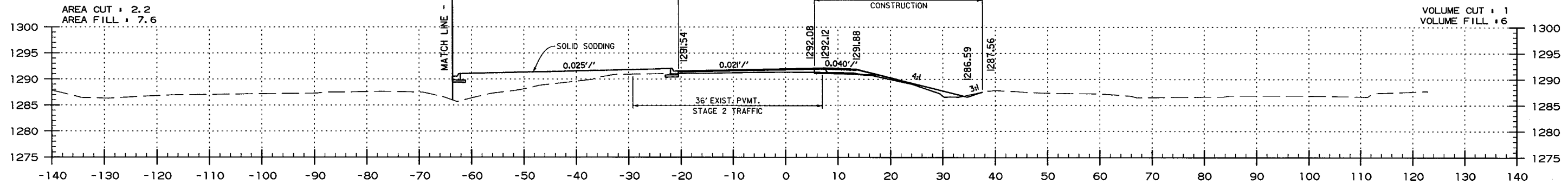
STA. 950+07.44 - CONSTRUCT
 DROP INLET ON LT. H= 4'-9"
 W/ 8' EXTENSION &
 18" X 6' R.C. PIPE CULVERT
 (CLASS III)(TYPE 3 BEDDING)
 TO RT. DITCH
 TYPE MO DROP = 4' DIA.
 TYPE C DROP INLET = 4'X2'-6"



950+04



950+00

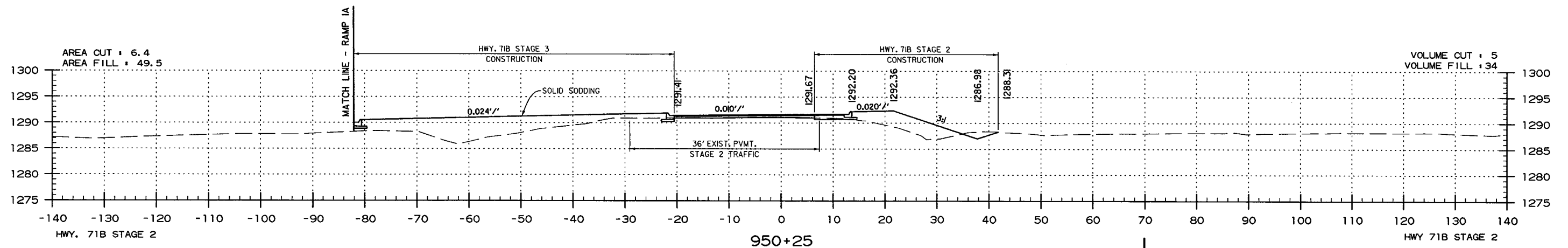
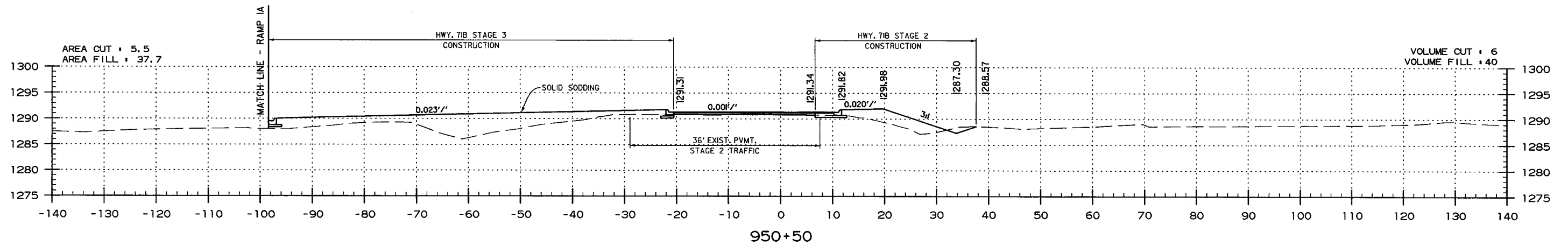
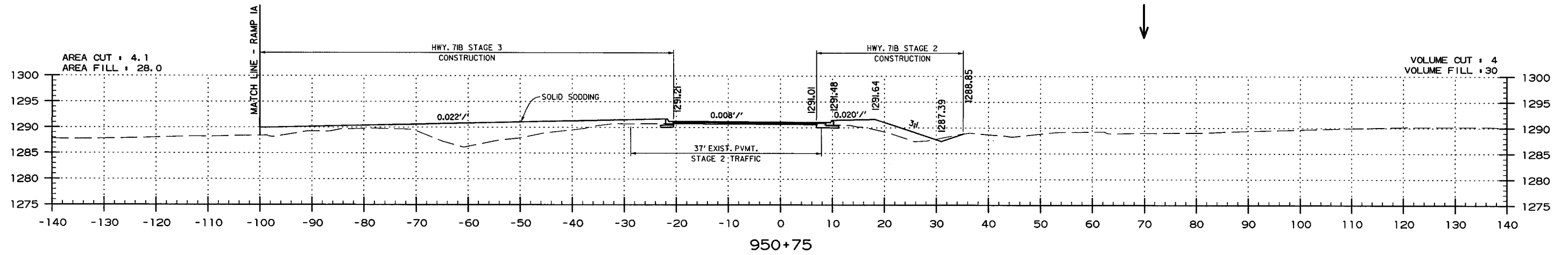


949+92

EXISTING RAMP I
 CROSS SECTION STA. 949+92 TO STA. 950+04

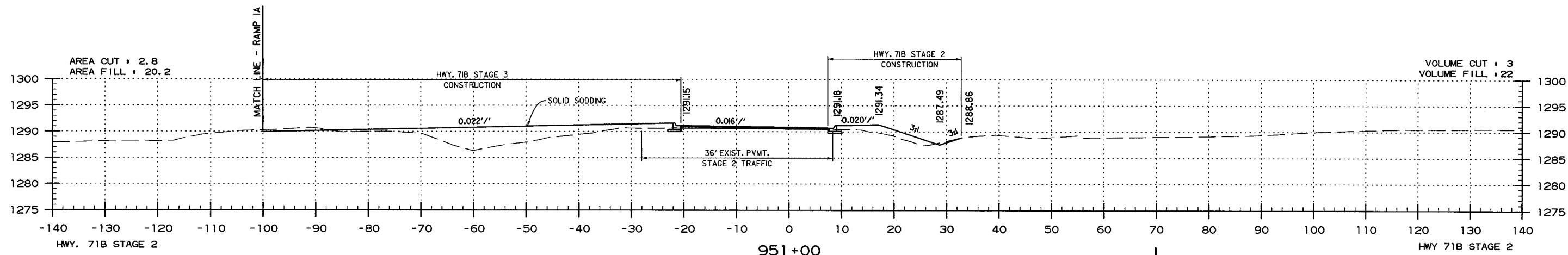
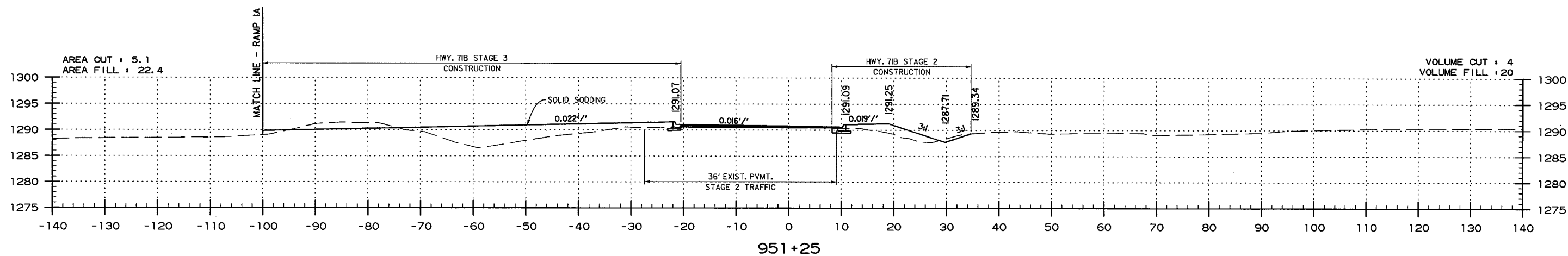
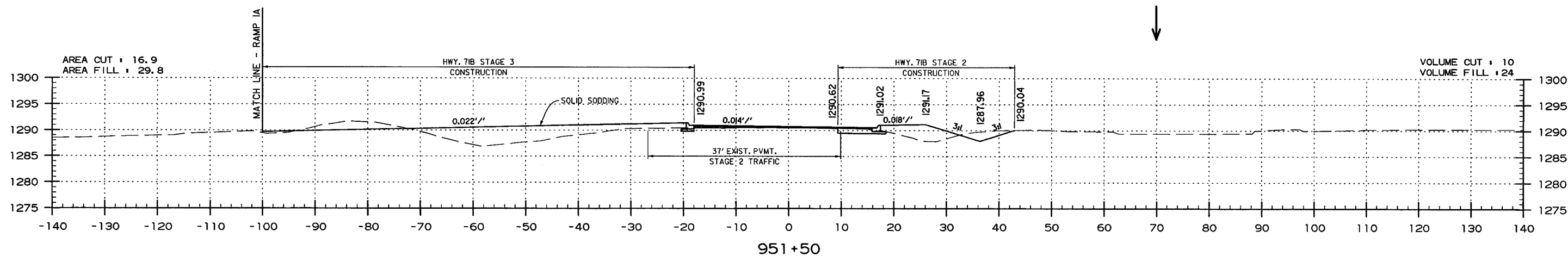
USER: mh5114
 DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX_HWY7IB_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	303	368	
				2 CROSS SECTIONS				



EXISTING RAMP I
CROSS SECTION STA. 950+25 TO STA. 950+75

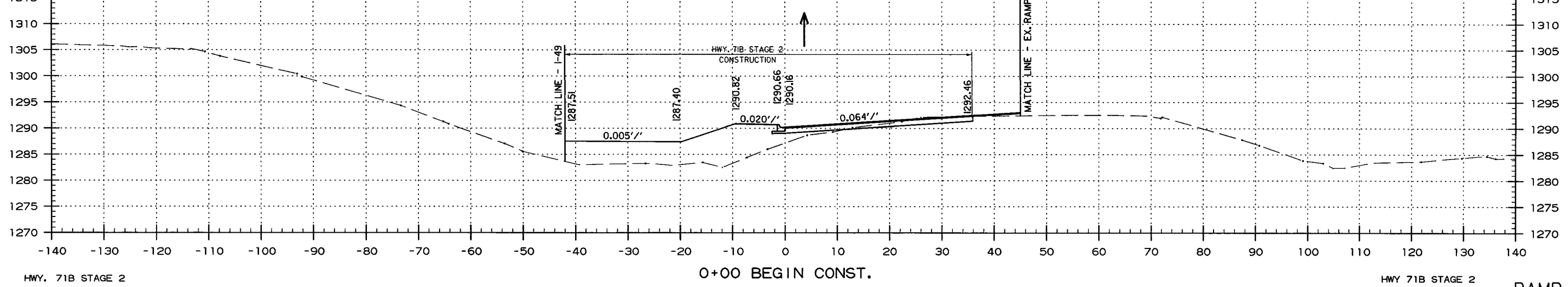
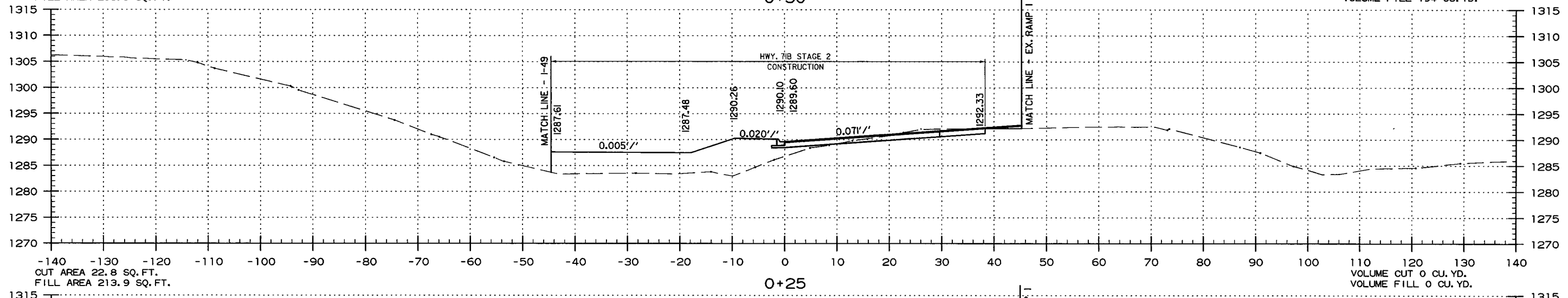
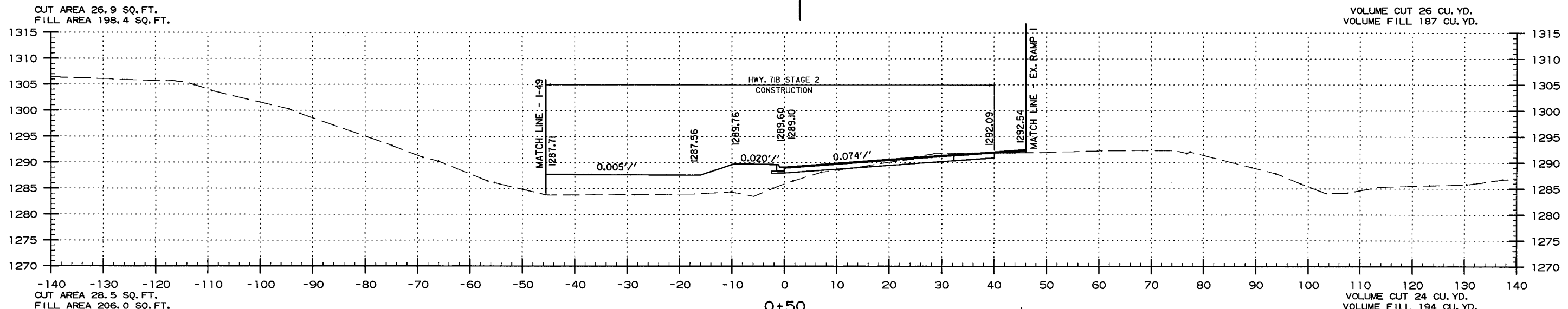
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	304	368	
				2 CROSS SECTIONS				



EXISTING RAMP 1
CROSS SECTION STA. 951+00 TO STA. 951+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	306	368	

2 CROSS SECTIONS

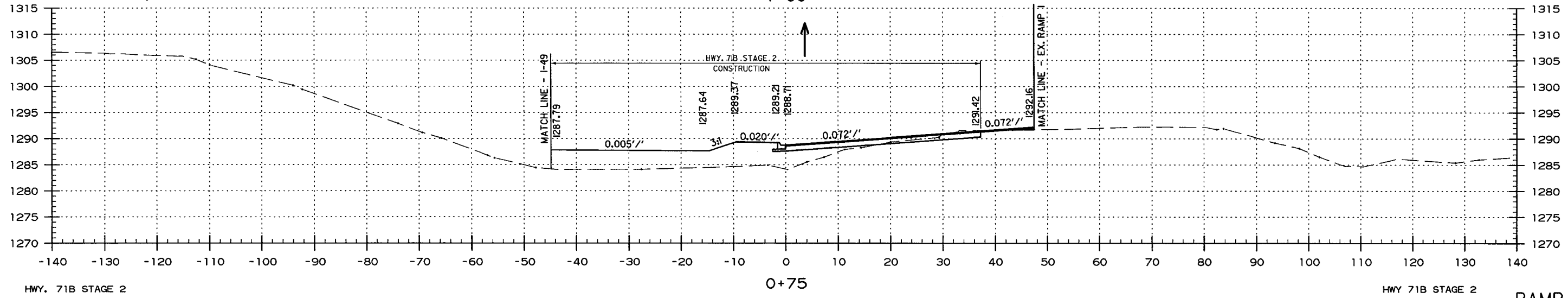
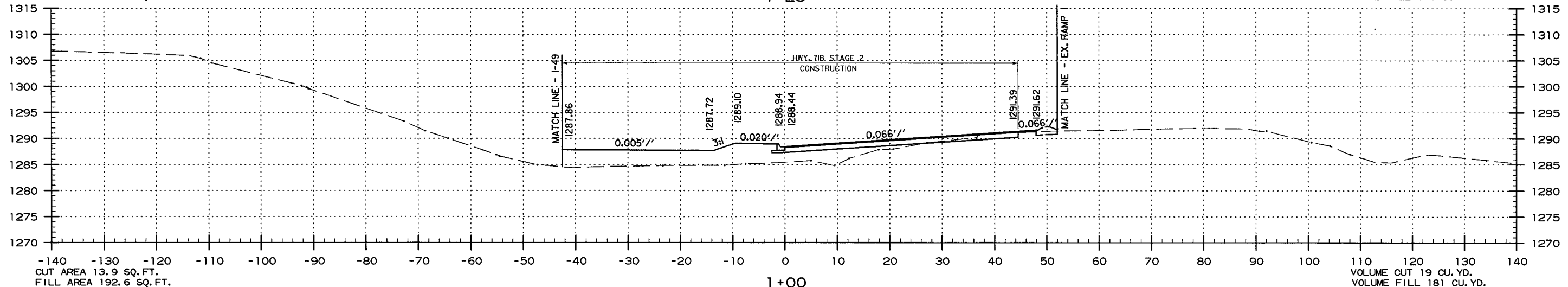
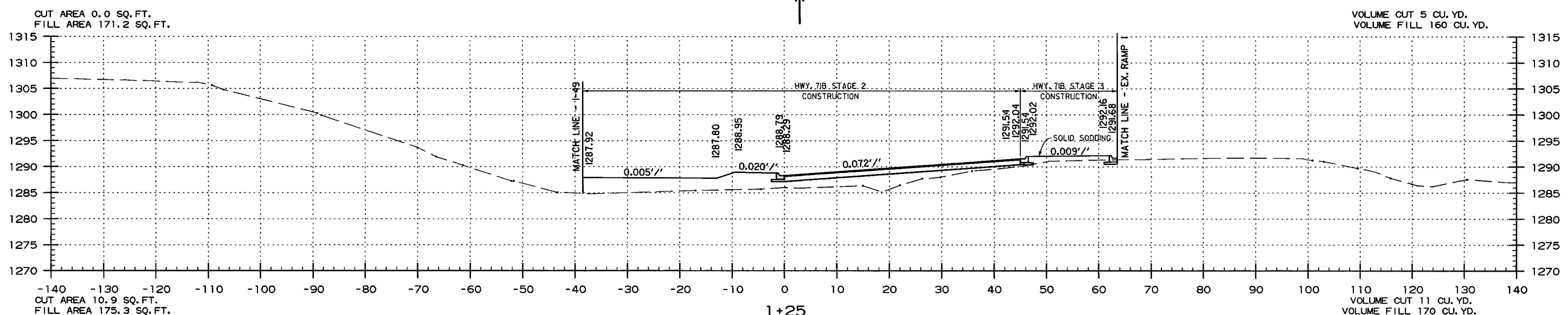


HWY. 71B STAGE 2
RAMP 1A
CROSS SECTION STA. 0+00 TO STA. 0+50

USER: mh5114
DESIGN FILE: G:\2103305.Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	307	368	

2 CROSS SECTIONS



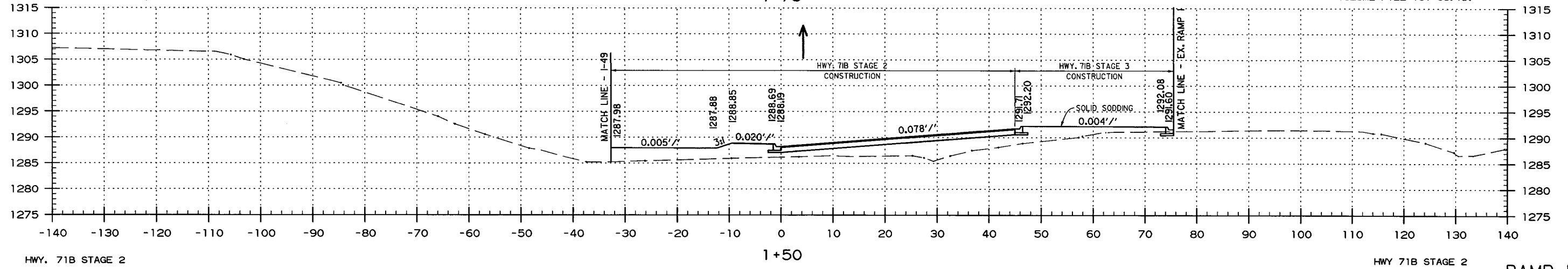
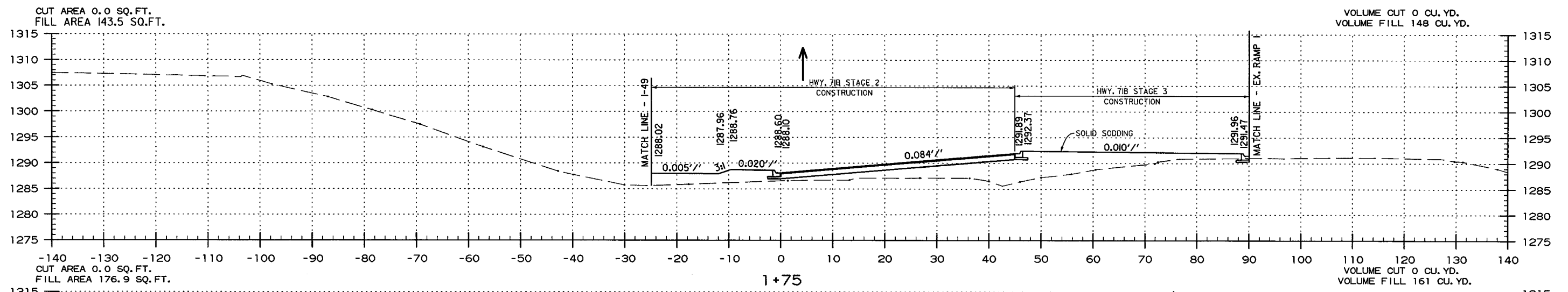
HWY. 71B STAGE 2

HWY 71B STAGE 2
RAMP 1A
CROSS SECTION STA. 0+75 TO STA. 1+25

USER: mh5114
DESIGN FILE: G:\2103305_Hwy71\inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	308	368

2 CROSS SECTIONS



HWY. 71B STAGE 2

HWY 71B STAGE 2

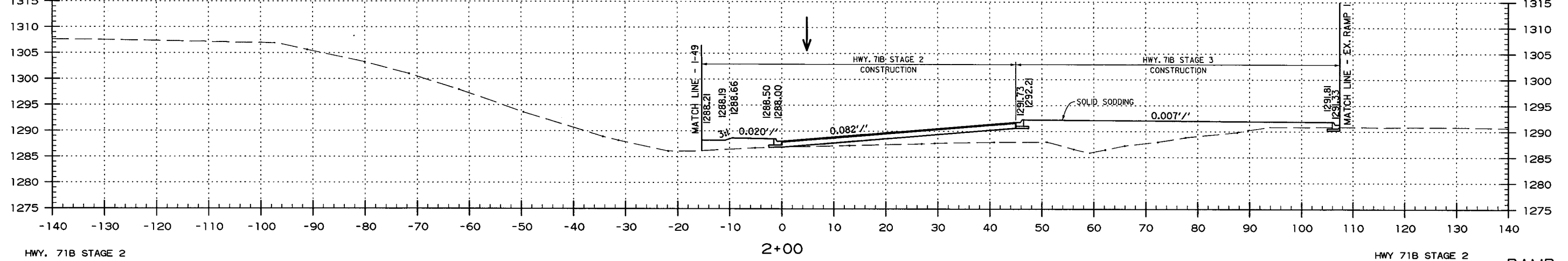
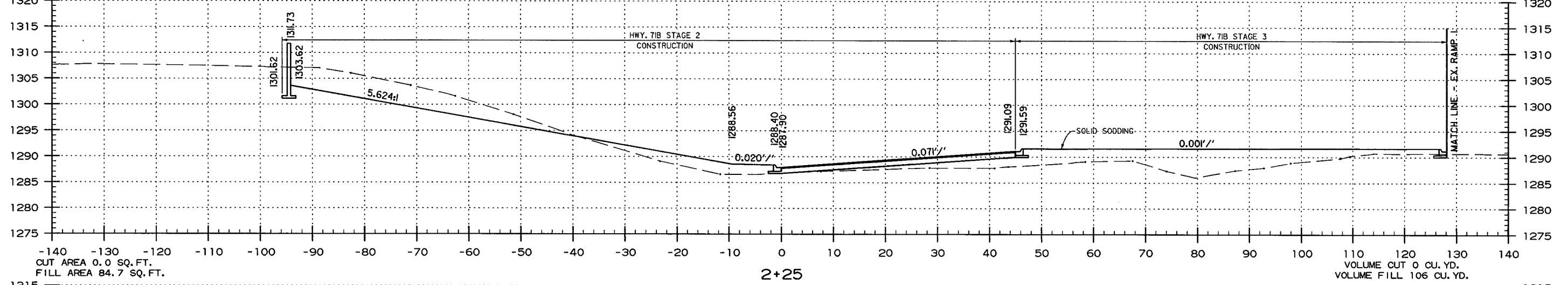
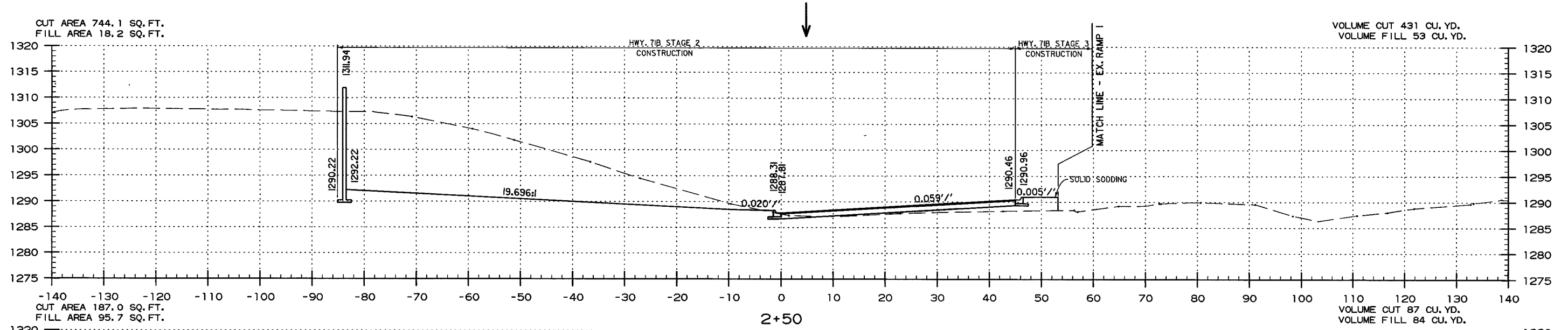
RAMP IA

CROSS SECTION STA. I+50 TO STA. I+89

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	309	368	

2 CROSS SECTIONS

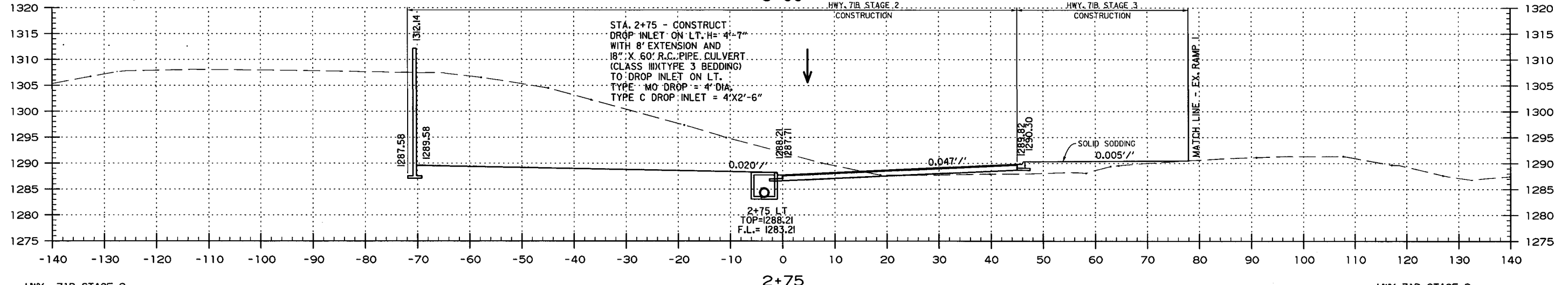
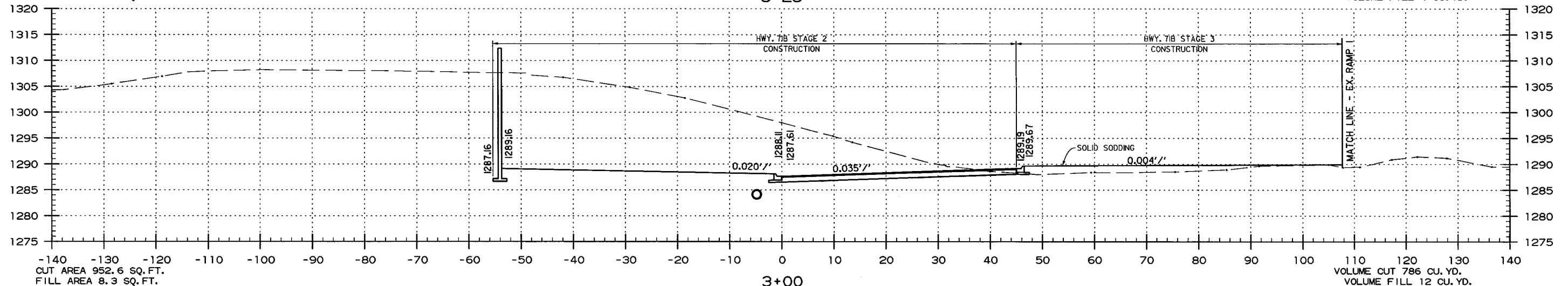
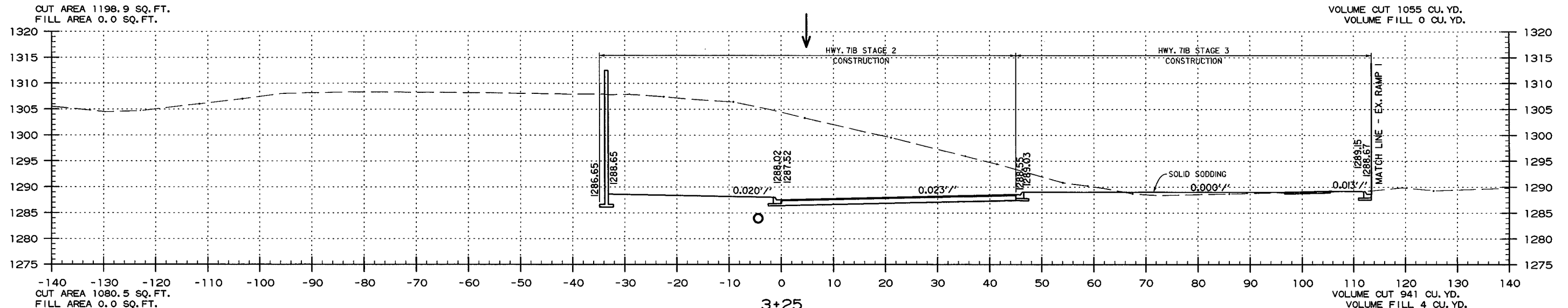


HWY. 71B STAGE 2 RAMP 1A
CROSS SECTION STA. 2+00 TO STA. 2+50

USER: mh514
DESIGN FILE: G:\2103305_Hwy71Inchq\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	310	368	

2 CROSS SECTIONS



HWY. 71B STAGE 2

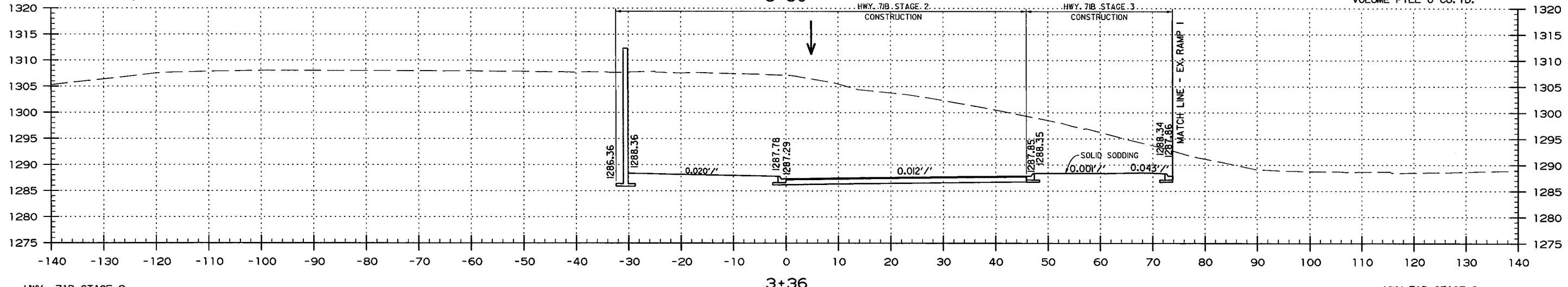
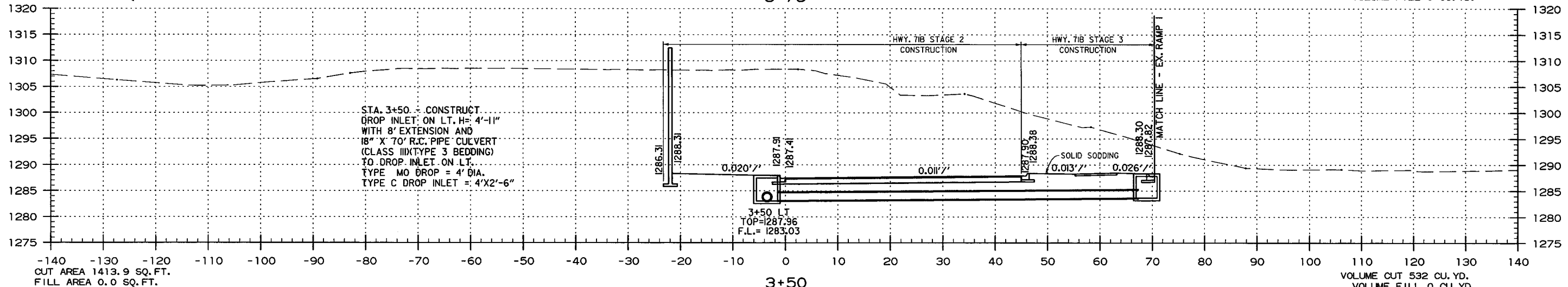
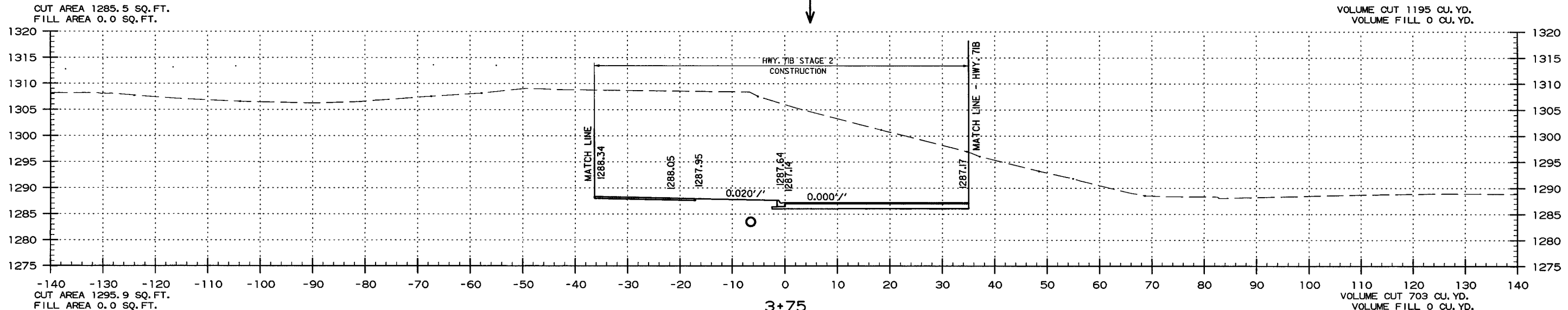
HWY 71B STAGE 2

RAMP 1A
CROSS SECTION STA. 2+75 TO STA. 3+25

USER: mh5114
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		311	368

2 CROSS SECTIONS



HWY. 71B STAGE 2

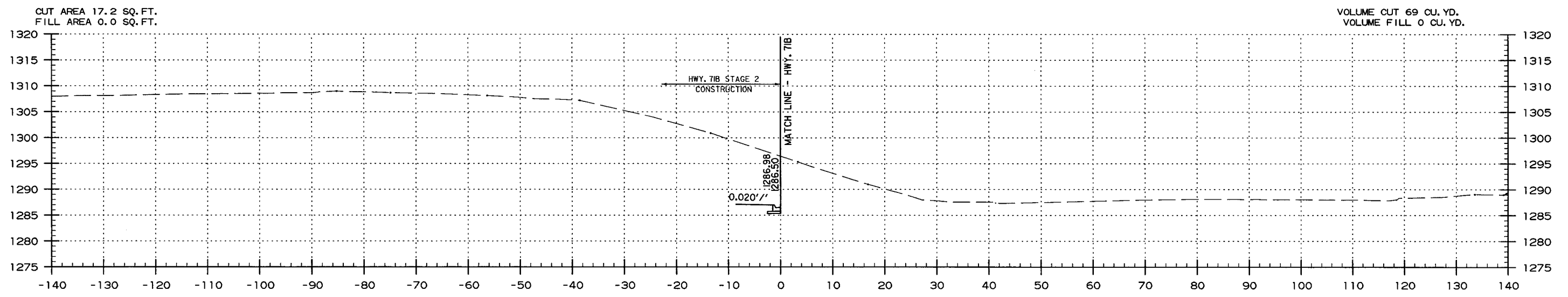
HWY 71B STAGE 2

RAMP 1A
CROSS SECTION STA. 3+36 TO STA. 3+75

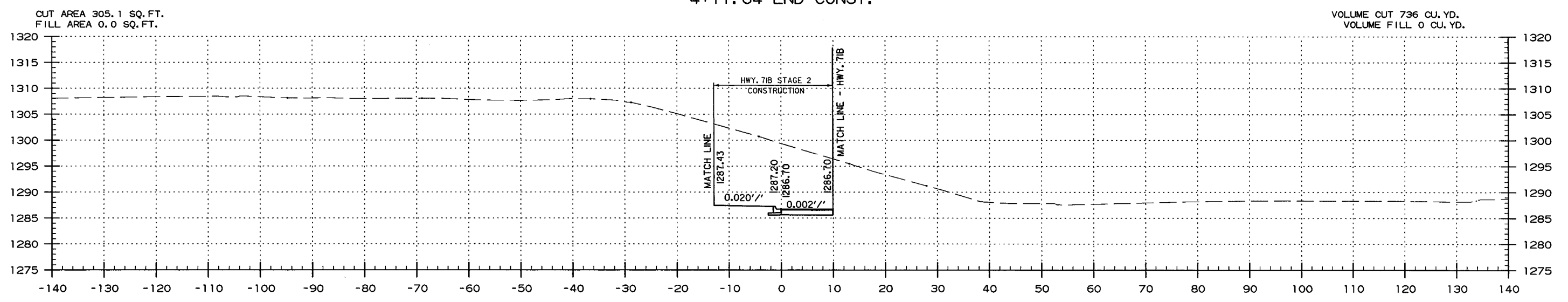
USER: mh5114
DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		312	368

2 CROSS SECTIONS



4+11.64 END CONST.



4+00

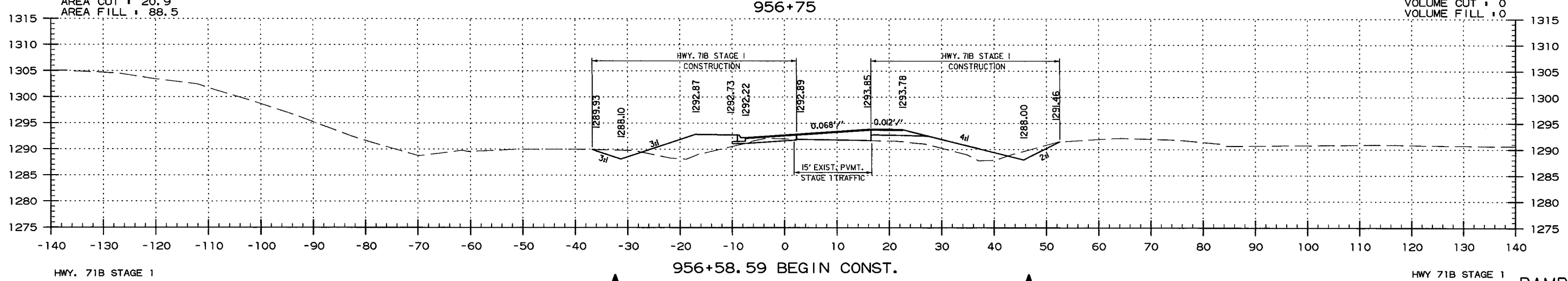
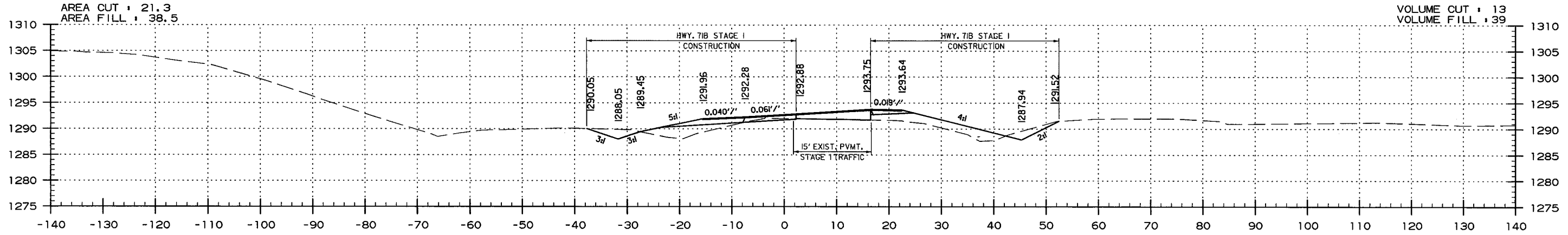
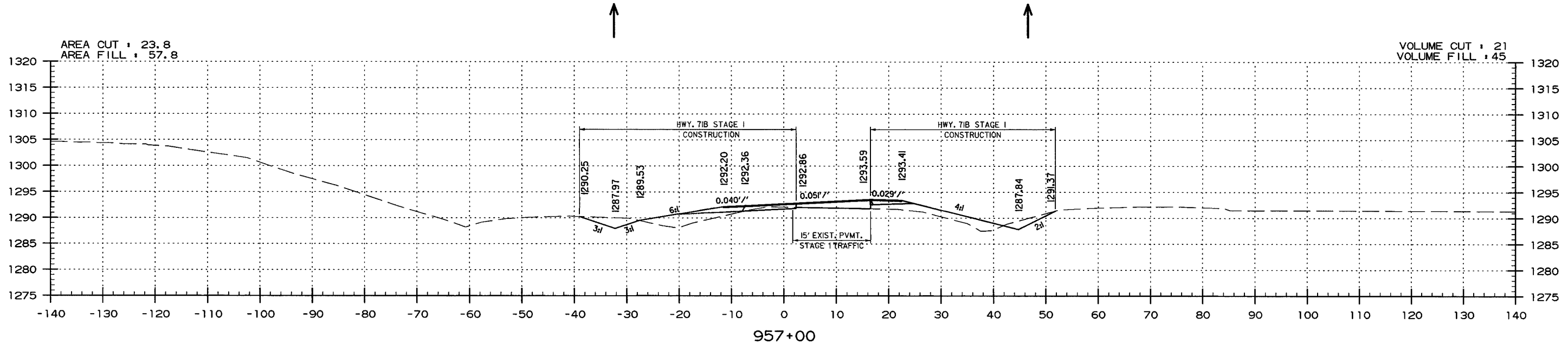
HWY 71B STAGE 2

RAMP 1A
CROSS SECTION STA. 4+00 TO STA. 4+12

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		313	368

2 CROSS SECTIONS

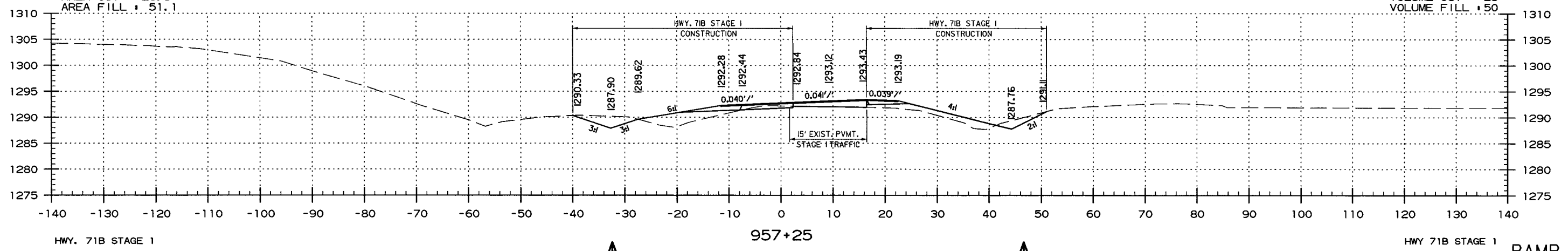
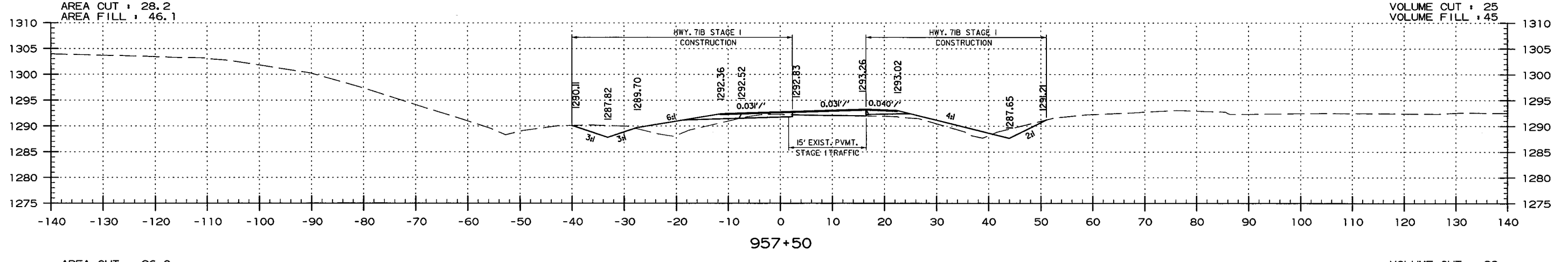
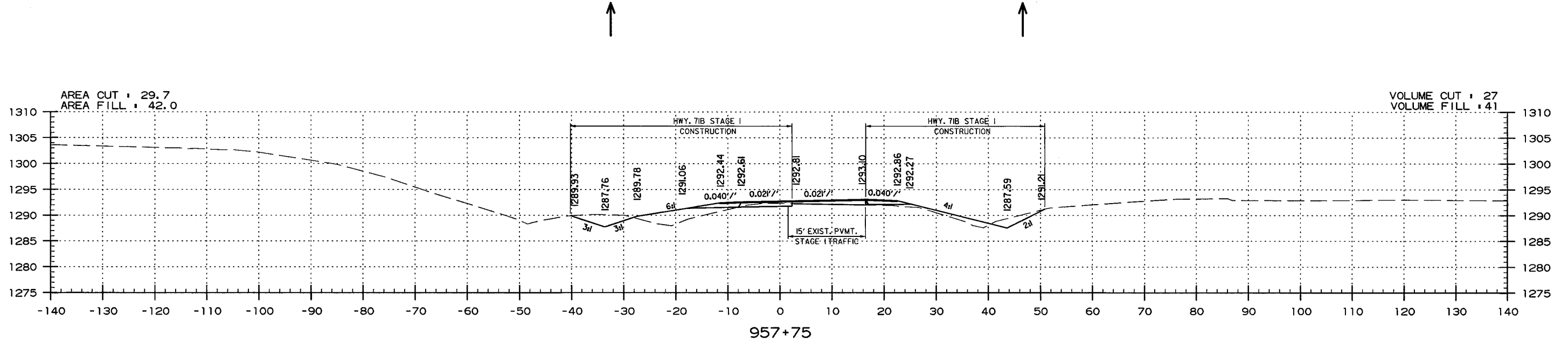


HWY. 71B STAGE 1 RAMP 2
CROSS SECTION STA. 956+59 TO STA. 957+00

USER: mh514
DESIGN FILE: G:\2103305.Hwy71Inchq\TRANSP\dgn\xsect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		314	368

2 CROSS SECTIONS

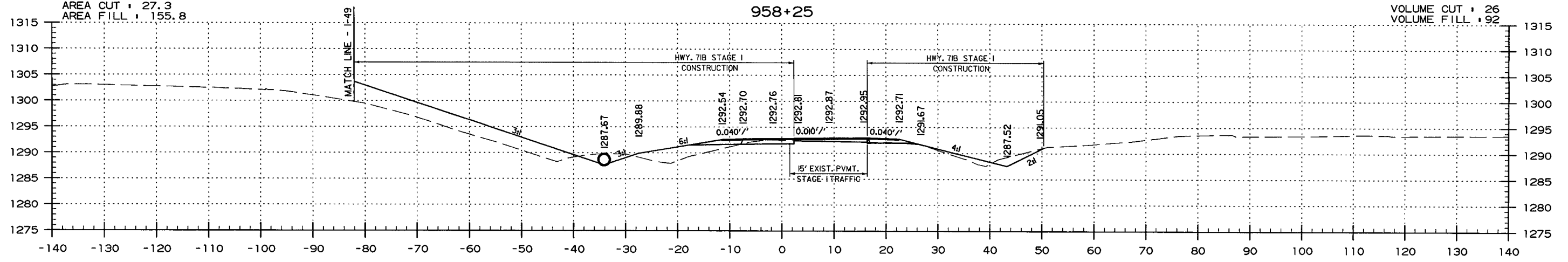
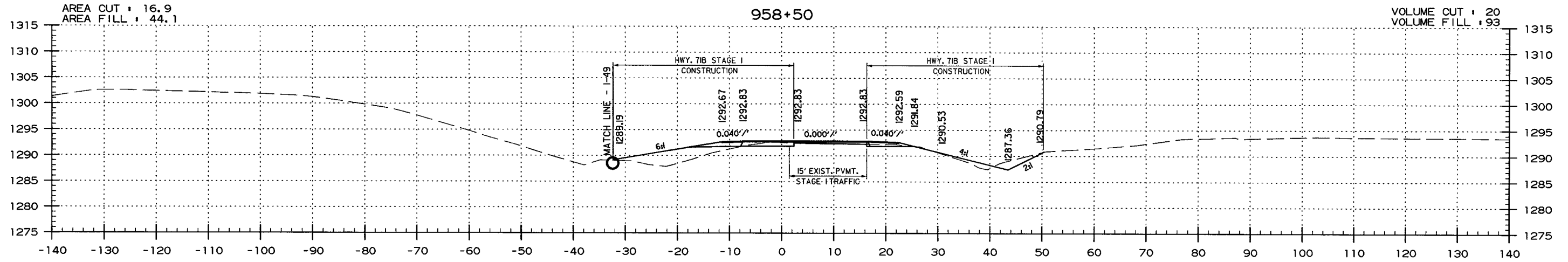
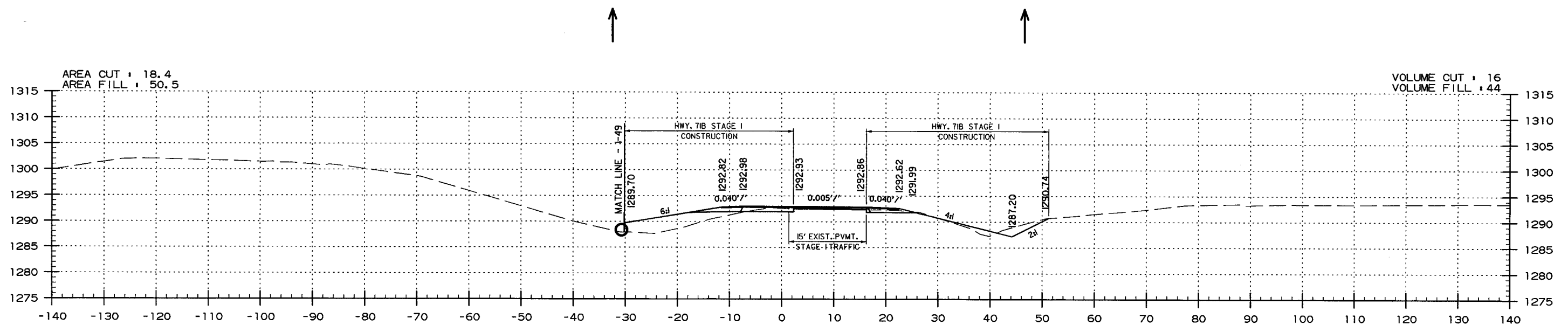


HWY. 71B STAGE I RAMP 2
CROSS SECTION STA. 957+25 TO STA. 957+75

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hwy71\transp\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	315	368	

2 CROSS SECTIONS

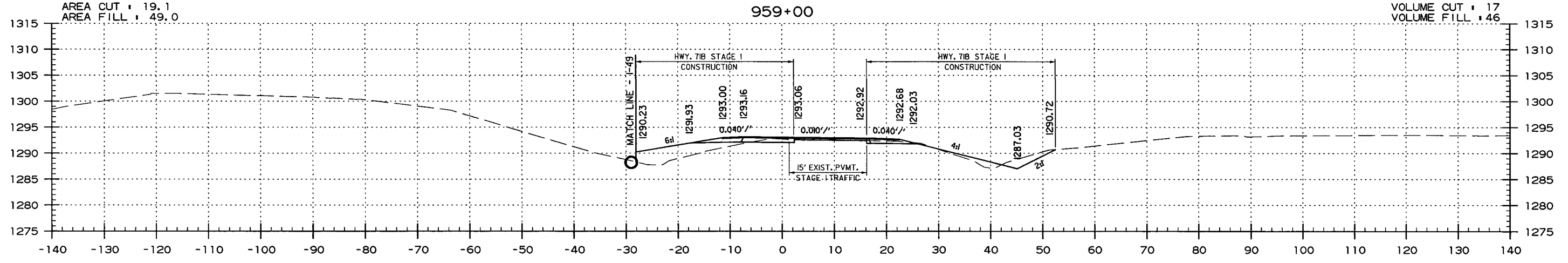
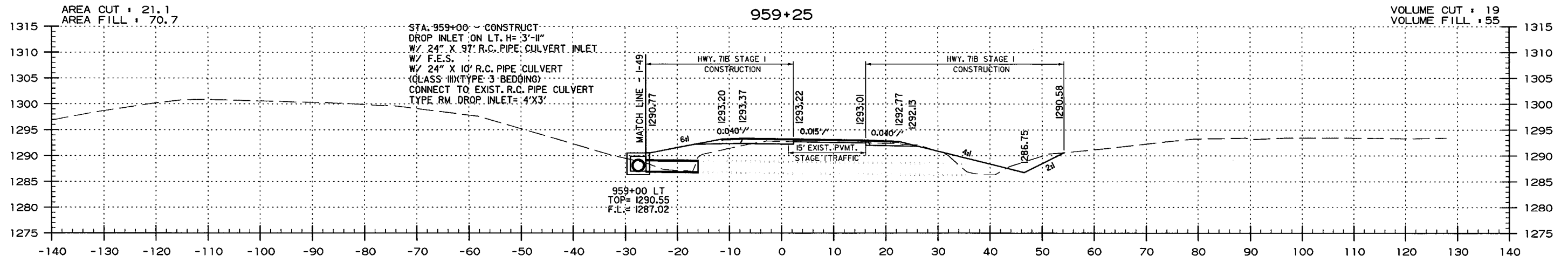
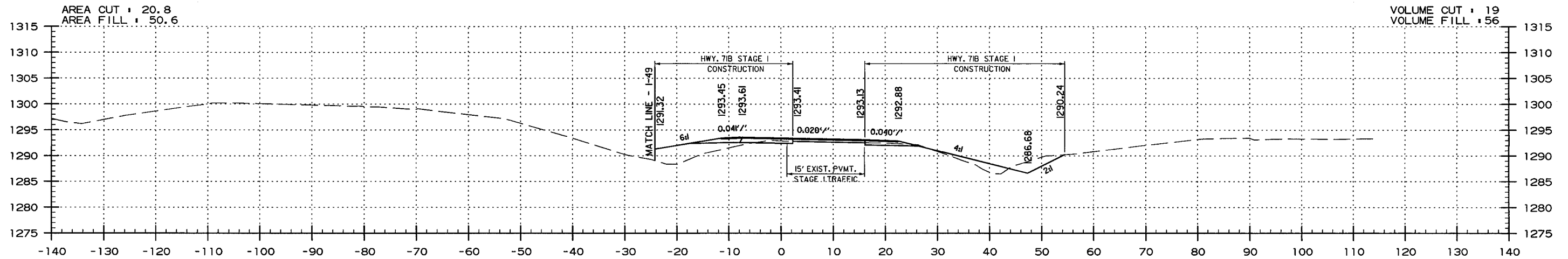


HWY. 71B STAGE 1
 958+00
 RAMP 2
 CROSS SECTION STA. 958+00 TO STA. 958+50

USER: mrs14
 DESIGN FILE: G:\2103305.Hwy71\hchq\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		316	368

2 CROSS SECTIONS



HWY. 71B STAGE 1

958+75

HWY 71B STAGE 1

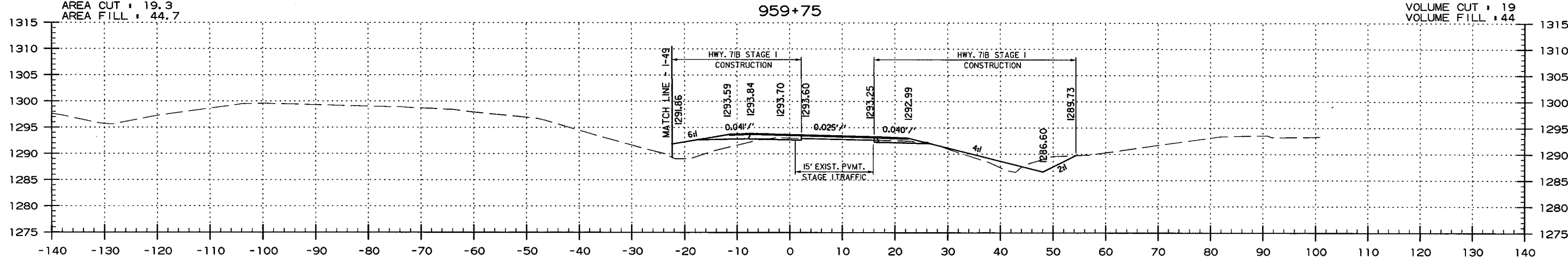
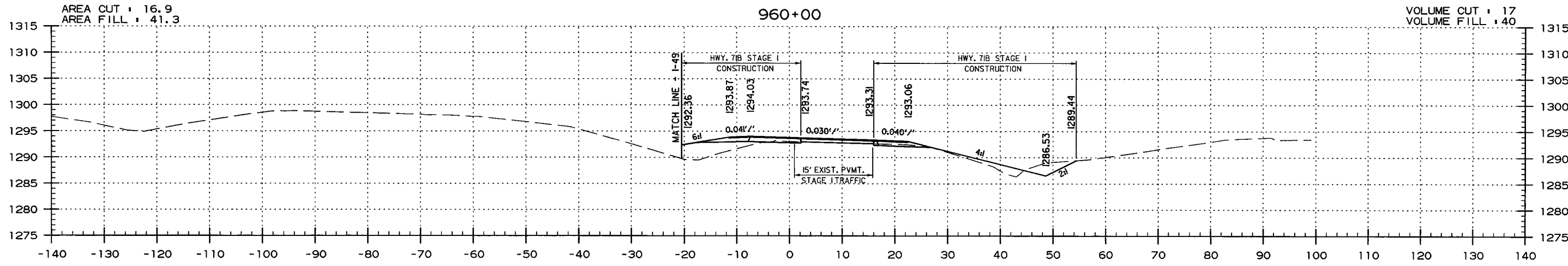
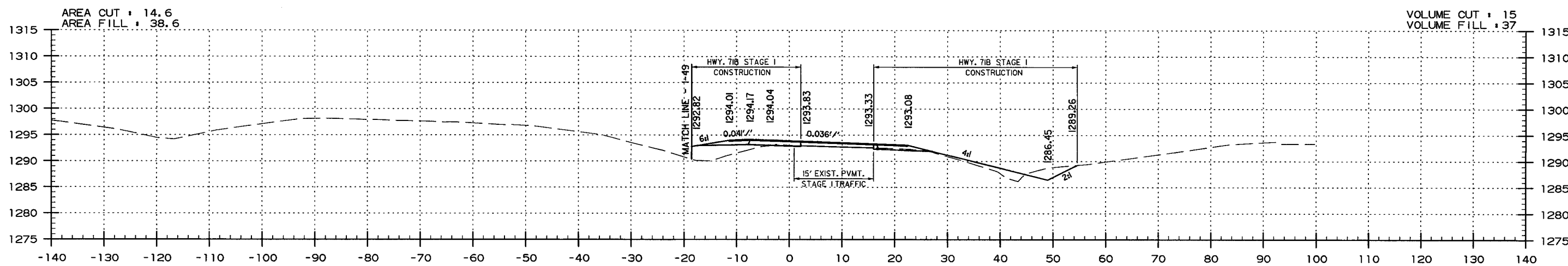
RAMP 2

CROSS SECTION STA. 958+75 TO STA. 959+25

USER: mh514
 DESIGN FILE: G:\I2103305_Hwy71Inch\TRANSP\dgn\sect\BB0903_CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		317	368

2 CROSS SECTIONS



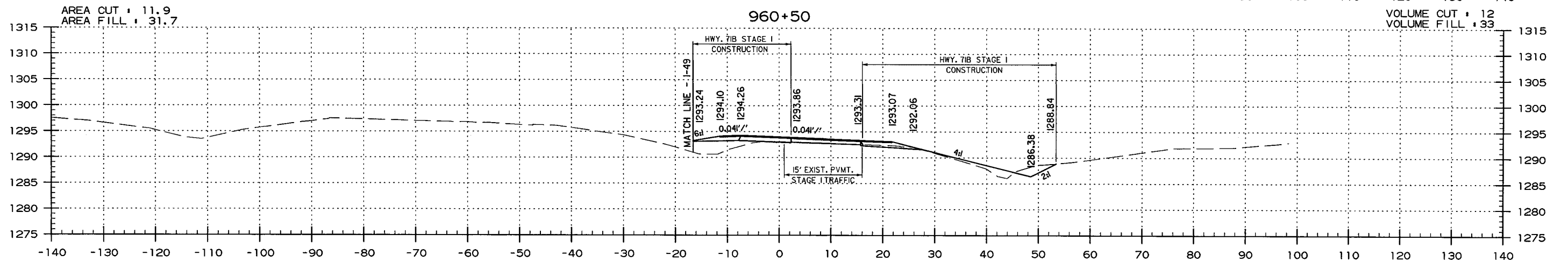
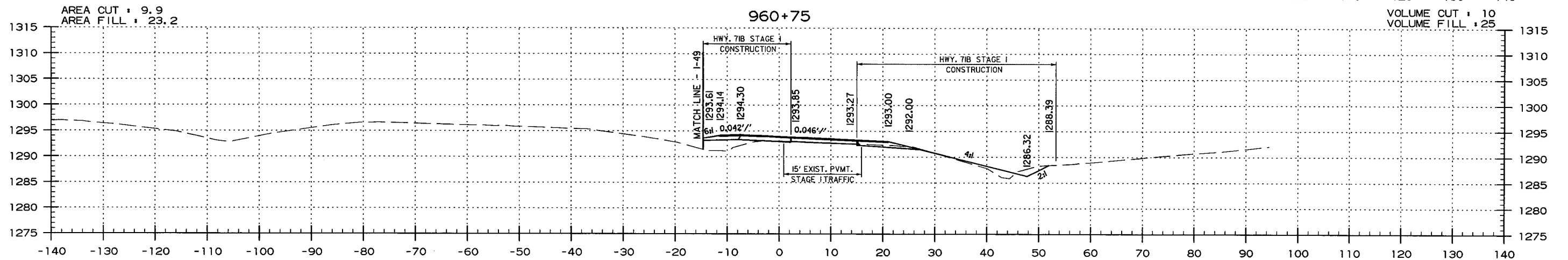
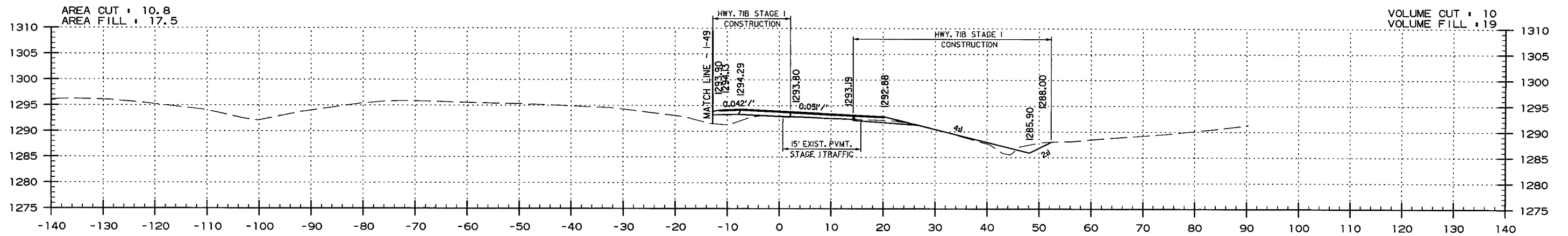
HWY. 71B STAGE 1

HWY 71B STAGE 1

RAMP 2
CROSS SECTION STA. 959+50 TO STA. 960+00

USER: mh514
DESIGN FILE: G:\2103305.Hwy71\hwy71\transp\dgn\sect+r\BB0903.CX.HWY71B_01.dgn
PLOTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		318	368
				2 CROSS SECTIONS				



HWY. 71B STAGE 1

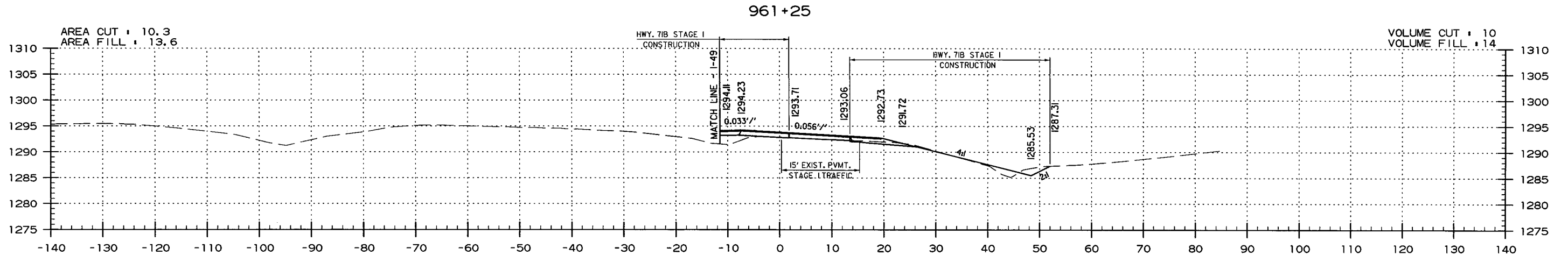
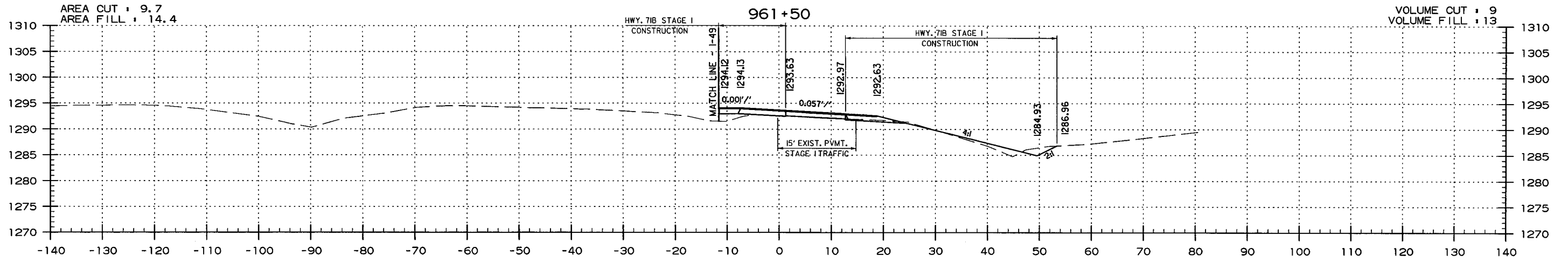
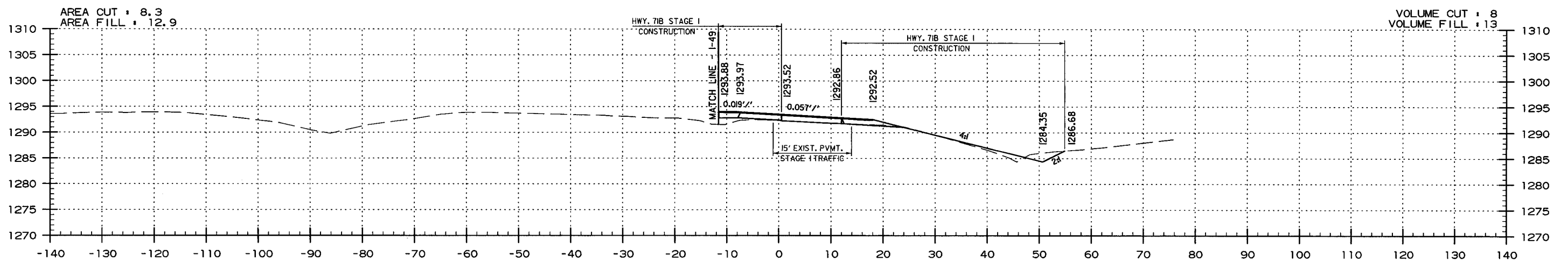
HWY 71B STAGE 1 RAMP 2

CROSS SECTION STA. 960+25 TO STA. 960+75

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\chq\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	319

2 CROSS SECTIONS



HWY. 71B STAGE 1

961+00

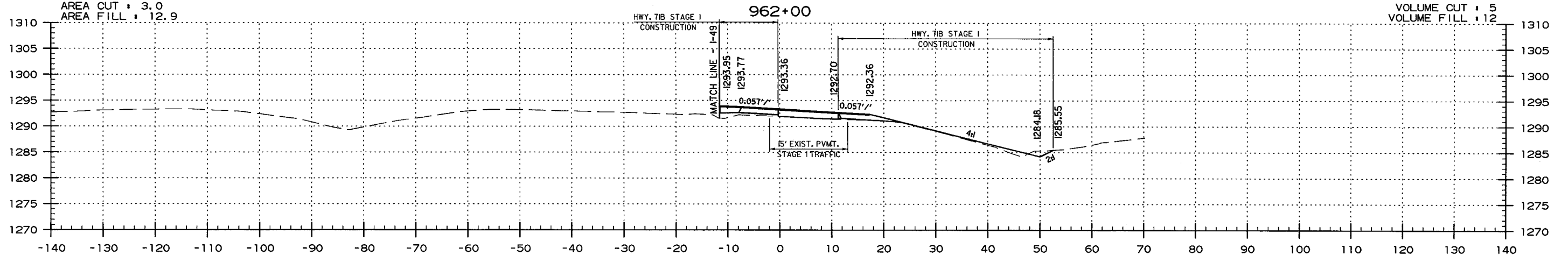
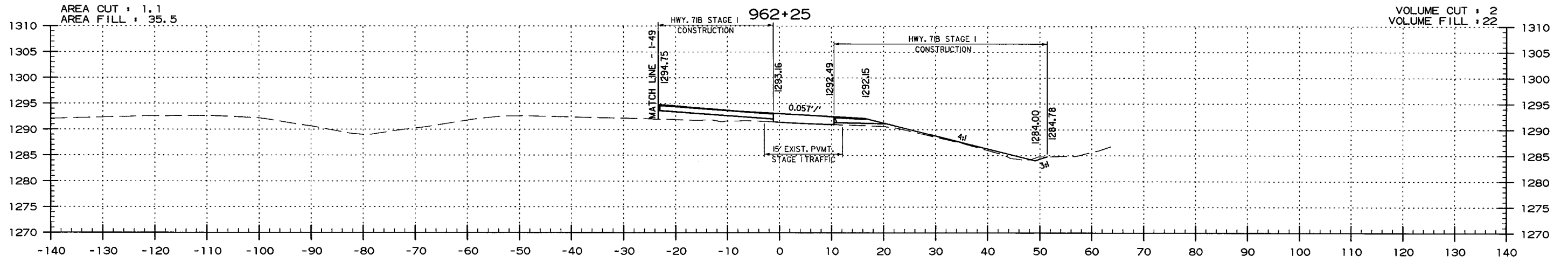
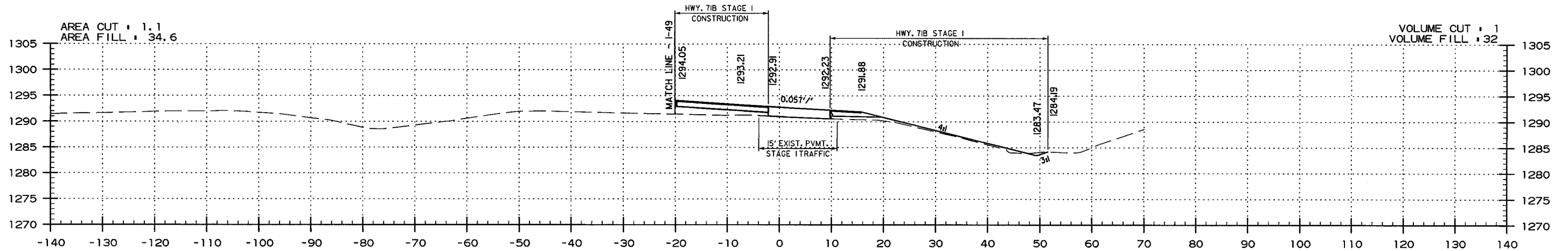
HWY 71B STAGE 1

RAMP 2
CROSS SECTION STA. 961+00 TO STA. 961+50

USER: mhs14
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\xsect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		320	368

2 CROSS SECTIONS



HWY. 71B STAGE I

961+75

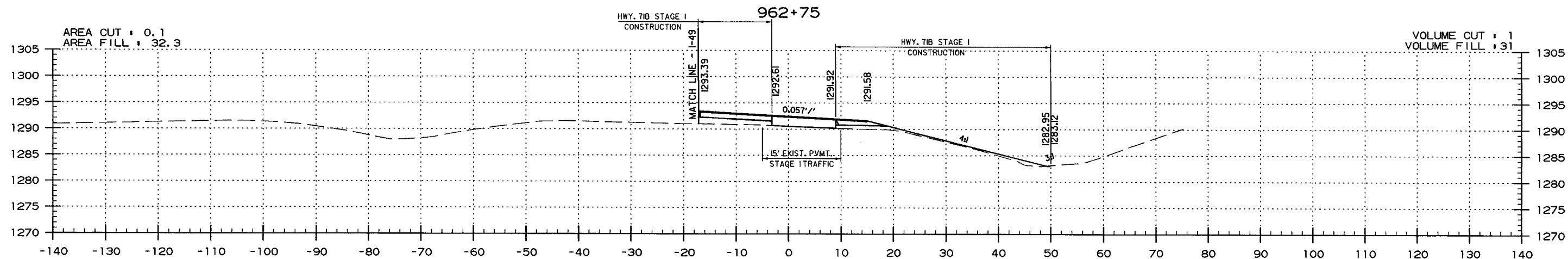
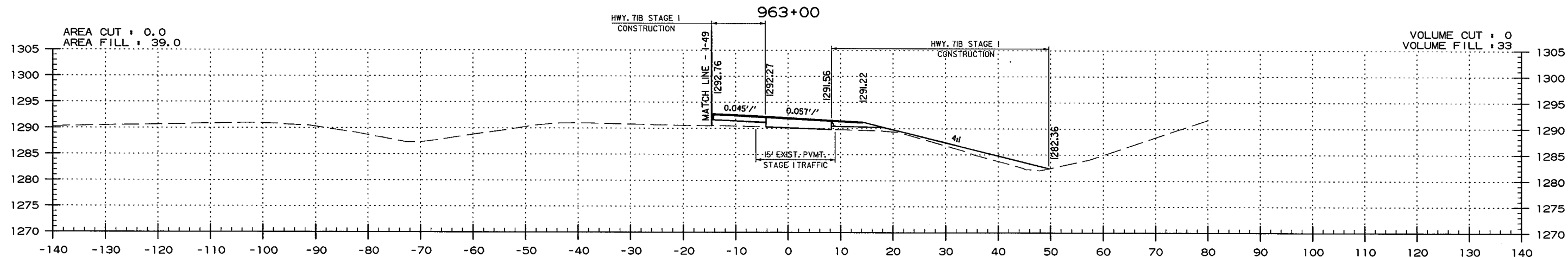
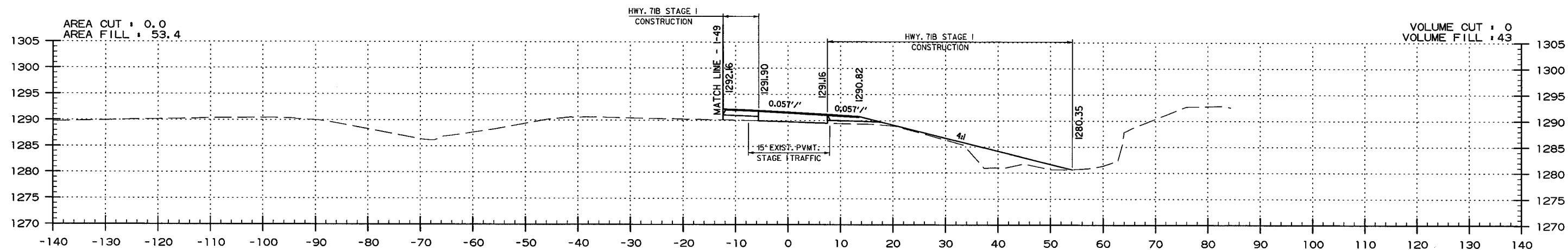
HWY 71B STAGE I

RAMP 2

CROSS SECTION STA. 961+75 TO STA. 962+25

USER: mh5114
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\xsect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:47
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		321	368
② CROSS SECTIONS								



HWY. 71B STAGE 1

962+50

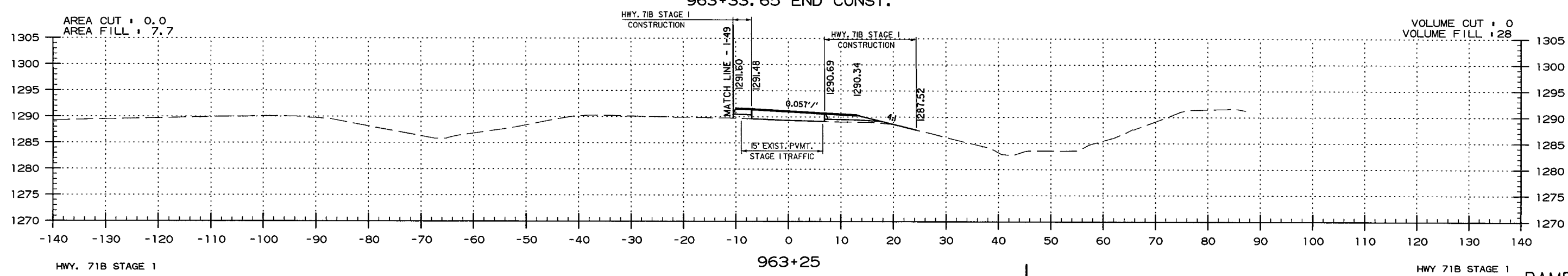
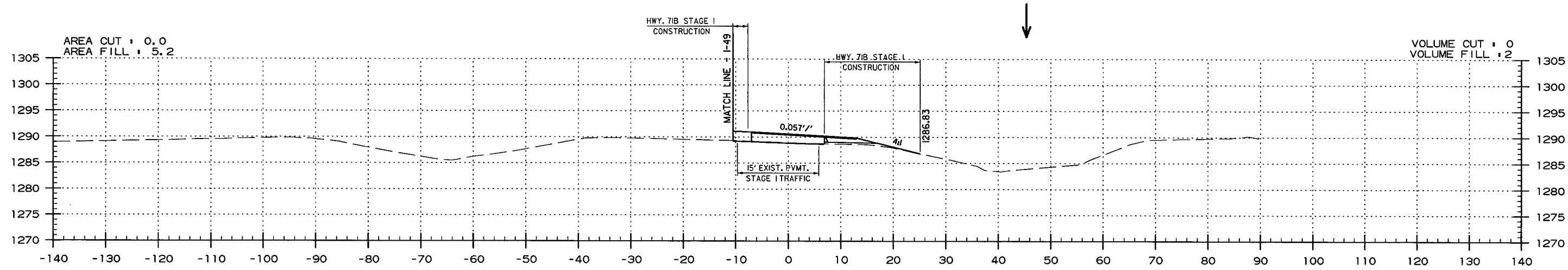
HWY 71B STAGE 1

RAMP 2
CROSS SECTION STA. 962+50 TO STA. 963+00

USER: mh514
DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	322	368	

2 CROSS SECTIONS

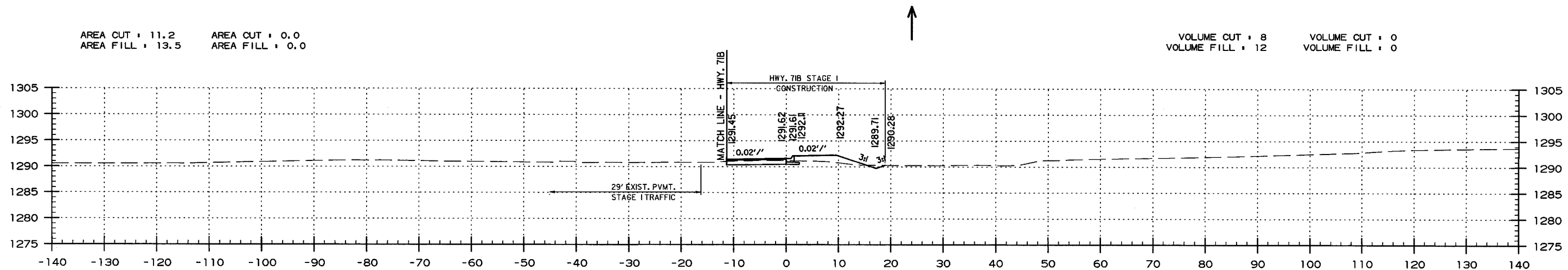


HWY. 71B STAGE 1

HWY 71B STAGE 1 RAMP 2

USER: mh514
DESIGN FILE: G:\2103305.Hwy7\Inch\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	323	368	
2 CROSS SECTIONS								



AREA CUT : 11.2
AREA FILL : 13.5

AREA CUT : 0.0
AREA FILL : 0.0

VOLUME CUT : 8
VOLUME FILL : 12

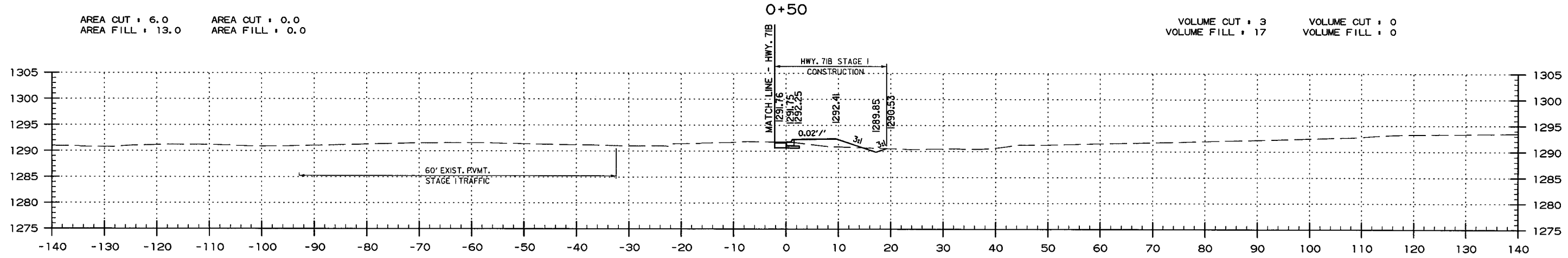
VOLUME CUT : 0
VOLUME FILL : 0

AREA CUT : 6.0
AREA FILL : 13.0

AREA CUT : 0.0
AREA FILL : 0.0

VOLUME CUT : 3
VOLUME FILL : 17

VOLUME CUT : 0
VOLUME FILL : 0

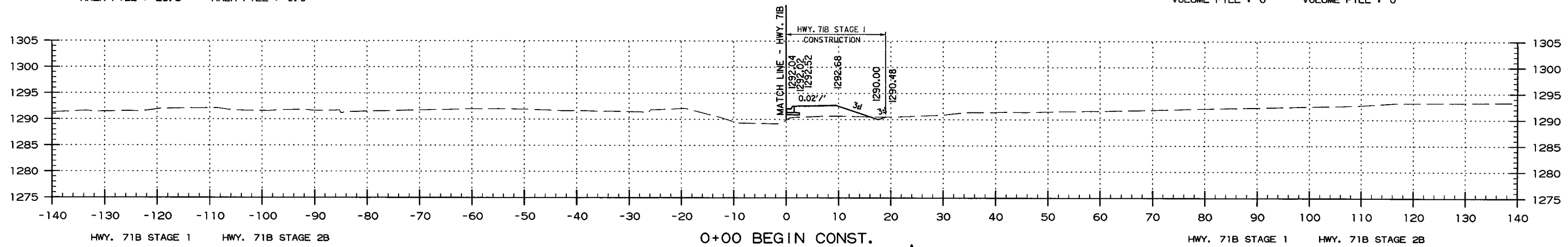


AREA CUT : 0.7
AREA FILL : 23.8

AREA CUT : 0.0
AREA FILL : 0.0

VOLUME CUT : 0
VOLUME FILL : 0

VOLUME CUT : 0
VOLUME FILL : 0



HWY. 71B STAGE 1 HWY. 71B STAGE 2B

O+00 BEGIN CONST.

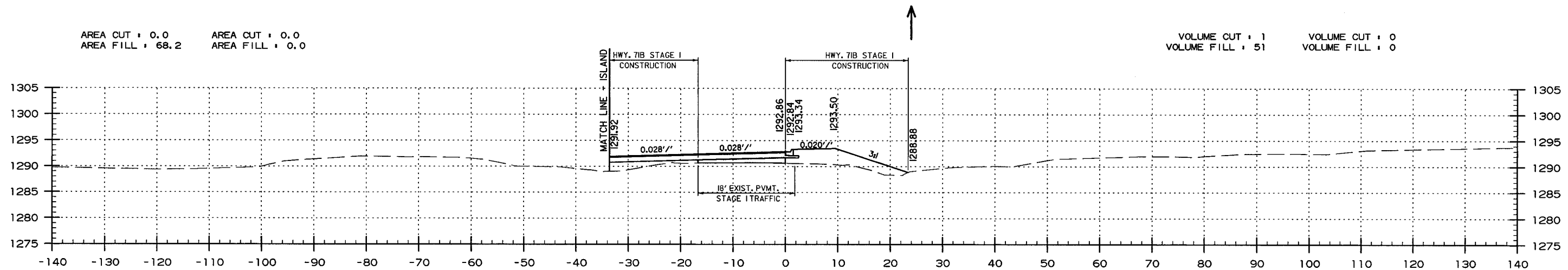
HWY. 71B STAGE 1 HWY. 71B STAGE 2B

RAMP 2A
CROSS SECTION STA. 0+00 TO STA. 0+50

USER: mhs114
DESIGN FILE: G:\2103305_Hwy71\mchq\TRANSP\dgn\sect+r\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:47
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AD. DIST. NO.	STATE	FED. AD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	324	368	

2 CROSS SECTIONS



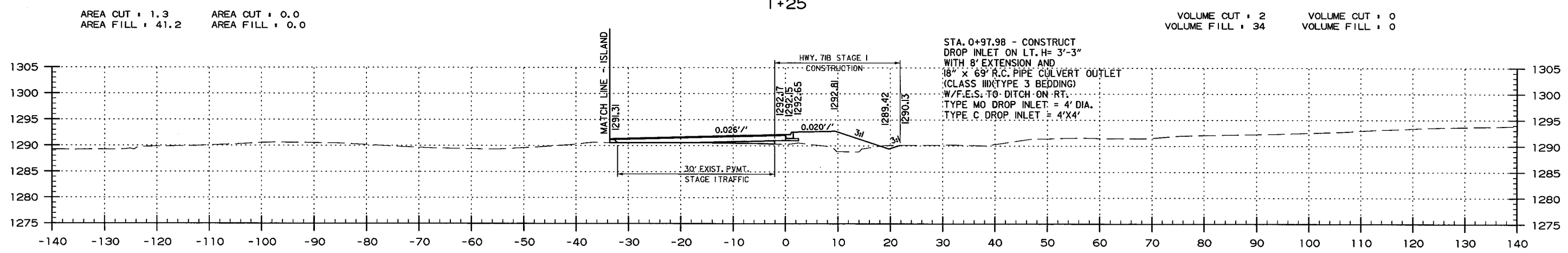
AREA CUT : 0.0
AREA FILL : 68.2

AREA CUT : 0.0
AREA FILL : 0.0

VOLUME CUT : 1
VOLUME FILL : 51

VOLUME CUT : 0
VOLUME FILL : 0

1+25



AREA CUT : 1.3
AREA FILL : 41.2

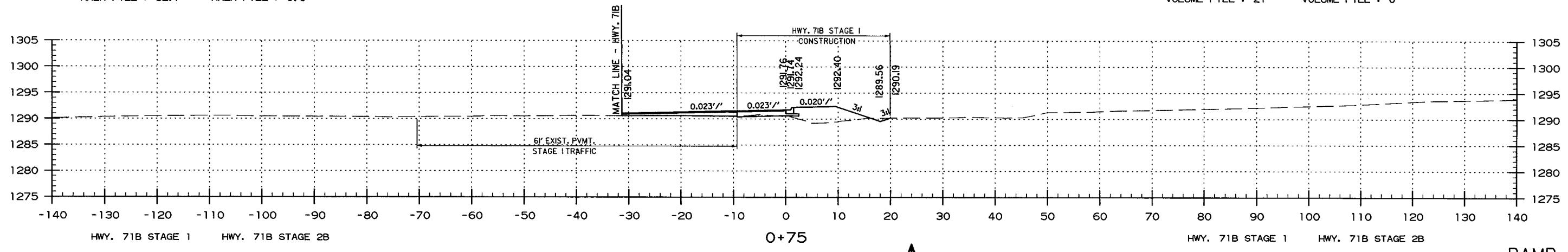
AREA CUT : 0.0
AREA FILL : 0.0

VOLUME CUT : 2
VOLUME FILL : 34

VOLUME CUT : 0
VOLUME FILL : 0

1+00

STA. 0+97.98 - CONSTRUCT
DROP INLET ON LT. H= 3'-3"
WITH 8' EXTENSION AND
18" x 69" R.C. PIPE CULVERT OUTLET
(CLASS III TYPE 3 BEDDING)
W/F.E.S. TO DITCH ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x4'



AREA CUT : 2.4
AREA FILL : 32.7

AREA CUT : 0.0
AREA FILL : 0.0

VOLUME CUT : 6
VOLUME FILL : 21

VOLUME CUT : 0
VOLUME FILL : 0

0+75

HWY. 71B STAGE 1 HWY. 71B STAGE 2B

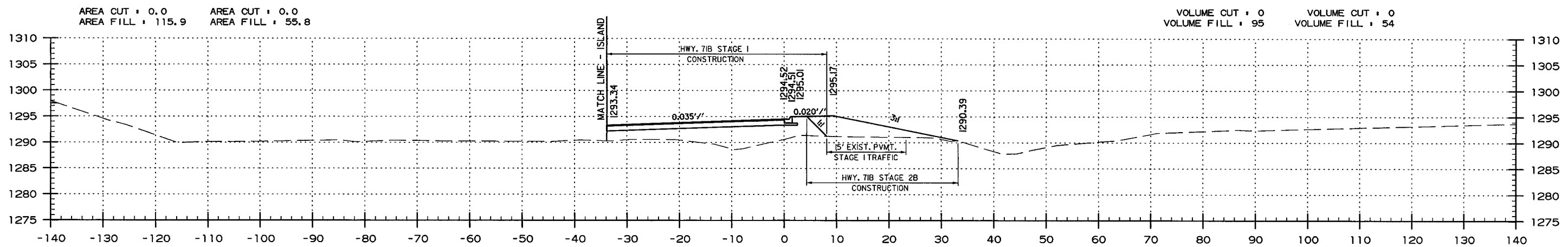
HWY. 71B STAGE 1 HWY. 71B STAGE 2B

RAMP 2A
CROSS SECTION STA. 0+75 TO STA. 1+25

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	325	368

2 CROSS SECTIONS

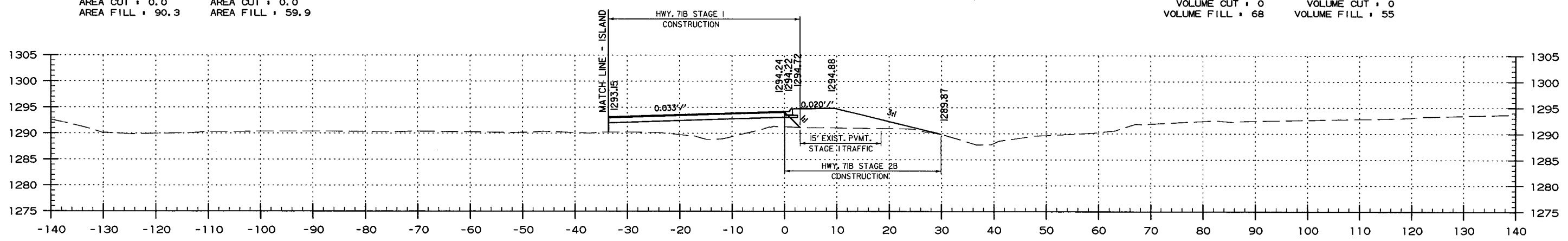


AREA CUT : 0.0
AREA FILL : 90.3

AREA CUT : 0.0
AREA FILL : 59.9

VOLUME CUT : 0
VOLUME FILL : 68

VOLUME CUT : 0
VOLUME FILL : 55

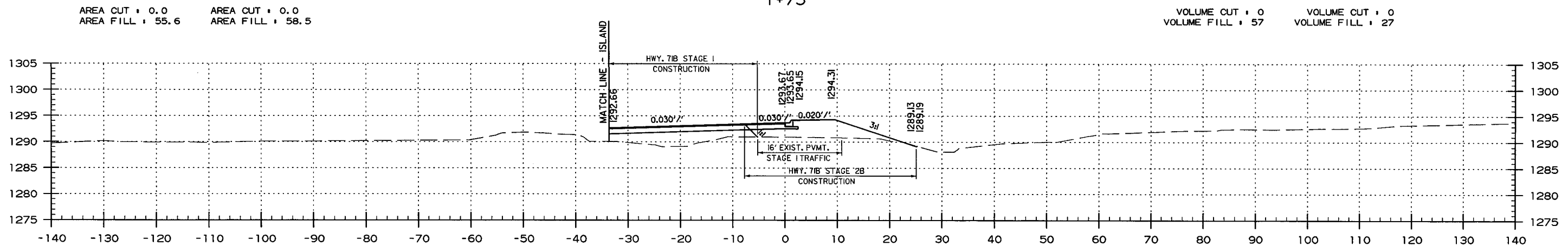


AREA CUT : 0.0
AREA FILL : 55.6

AREA CUT : 0.0
AREA FILL : 58.5

VOLUME CUT : 0
VOLUME FILL : 57

VOLUME CUT : 0
VOLUME FILL : 27



HWY. 71B STAGE 1 HWY. 71B STAGE 2B

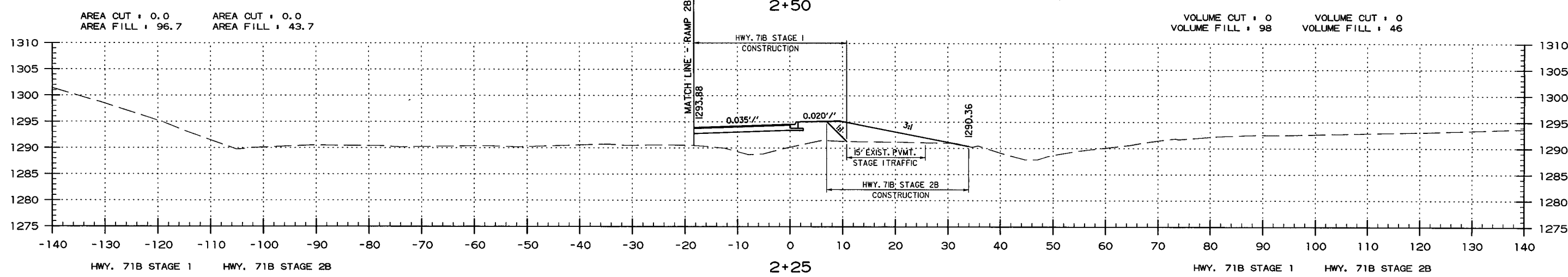
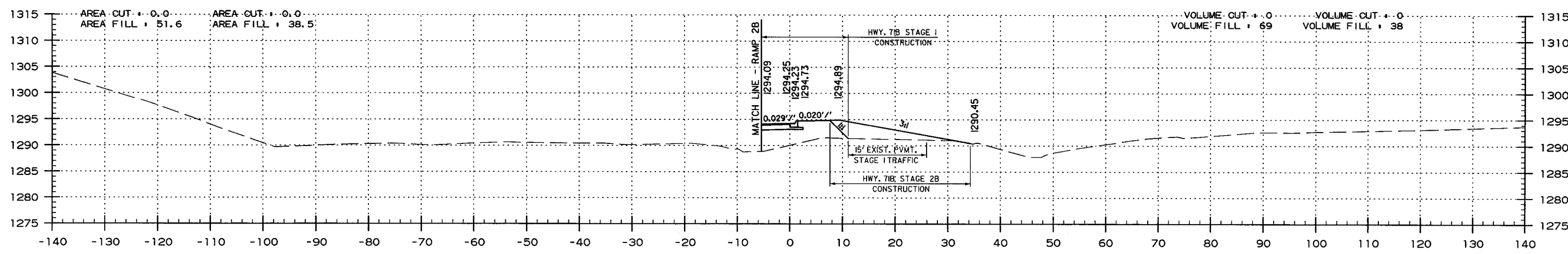
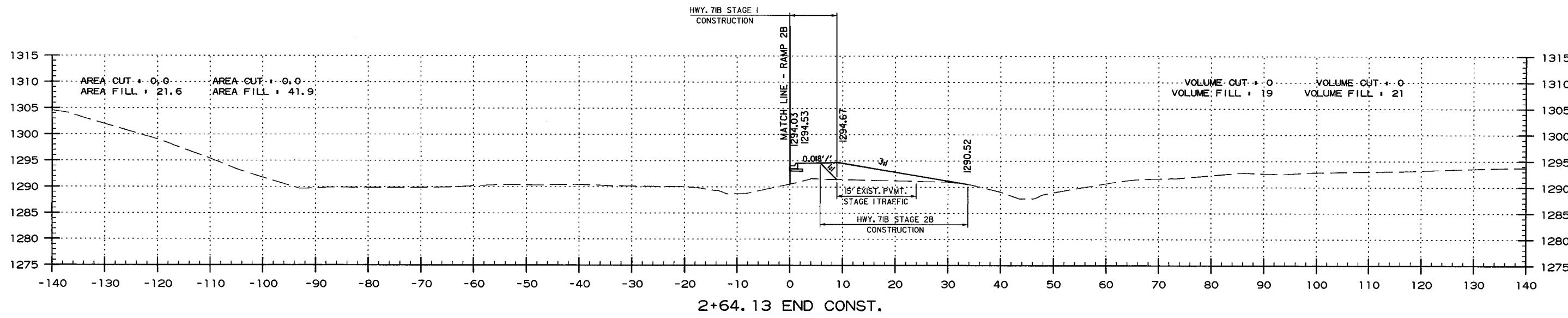
HWY. 71B STAGE 1 HWY. 71B STAGE 2B

RAMP 2A
CROSS SECTION STA. 1+50 TO STA. 2+00

USER: mhs14
DESIGN FILE: G:\2103305_Hwy71\mchq\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	326	368	

2 CROSS SECTIONS

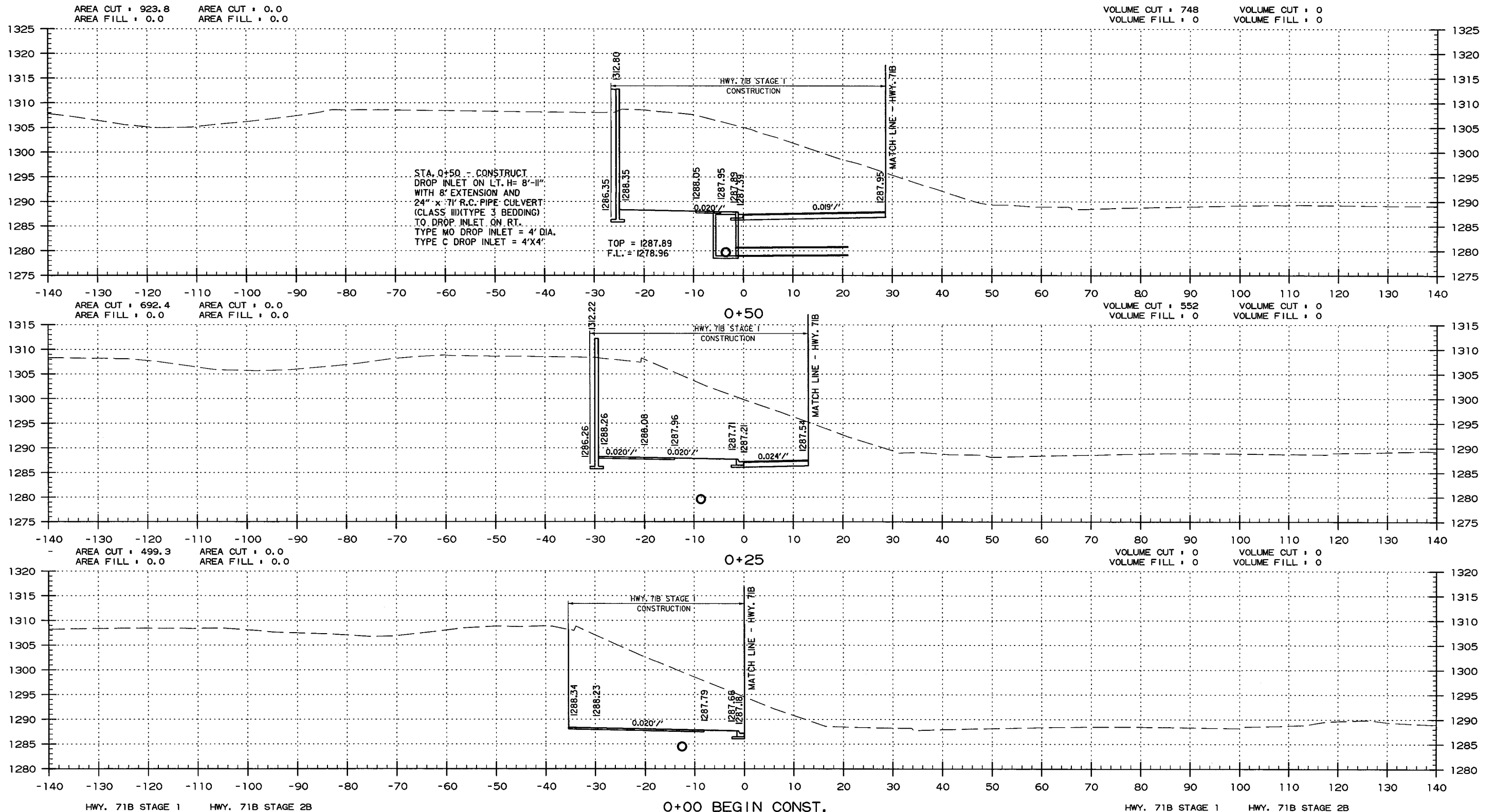


RAMP 2A
CROSS SECTION STA. 2+25 TO STA. 2+75

USER: mh514
DESIGN FILE: G:\2103305.Hwy71\hchq\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		327	368

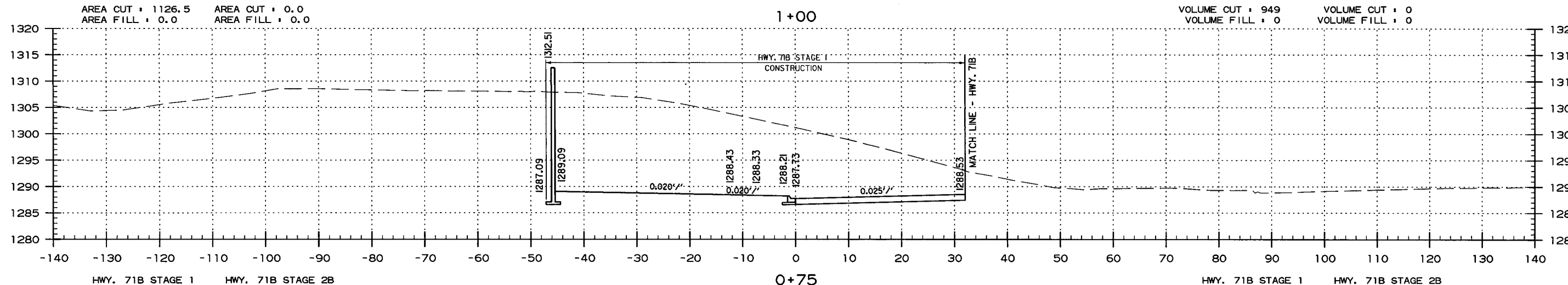
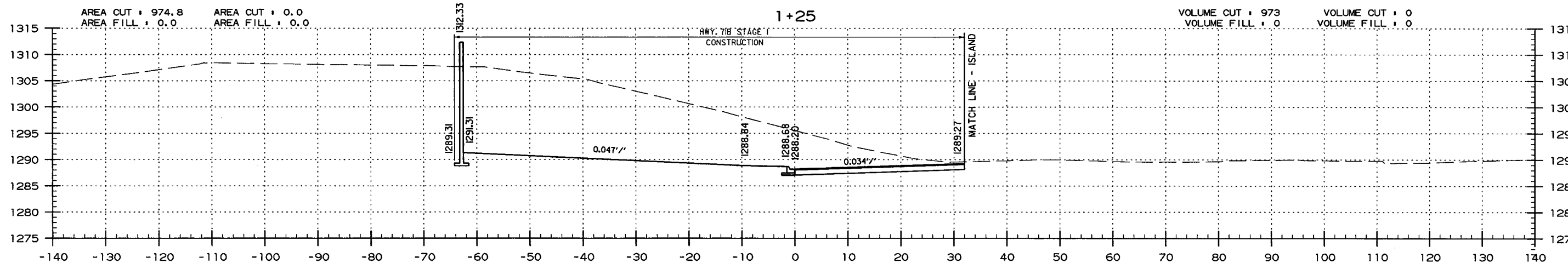
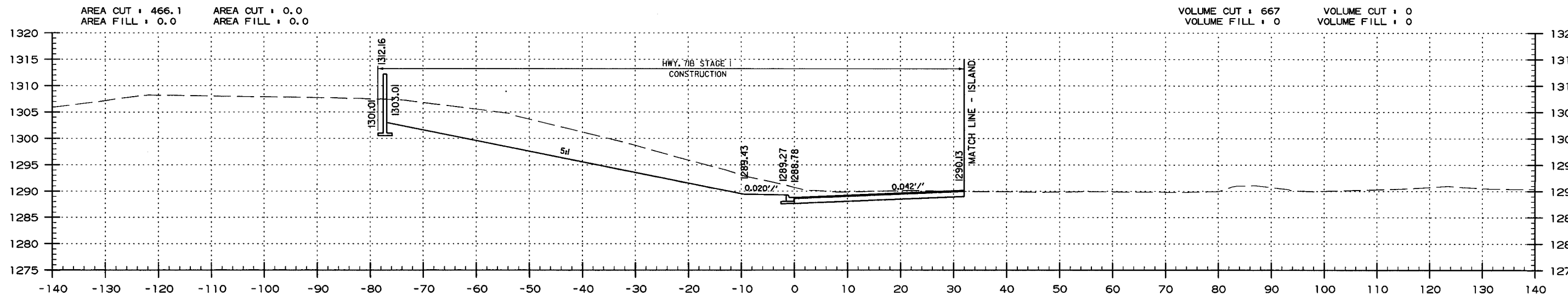
2 CROSS SECTIONS



USER: mhs14
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PLOTTED: 6/6/2018 14:48
SCALE: 1:20

RAMP 2B
CROSS SECTION STA. 0+00 TO STA. 0+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		328	368
				2 CROSS SECTIONS				



HWY. 71B STAGE 1 HWY. 71B STAGE 2B

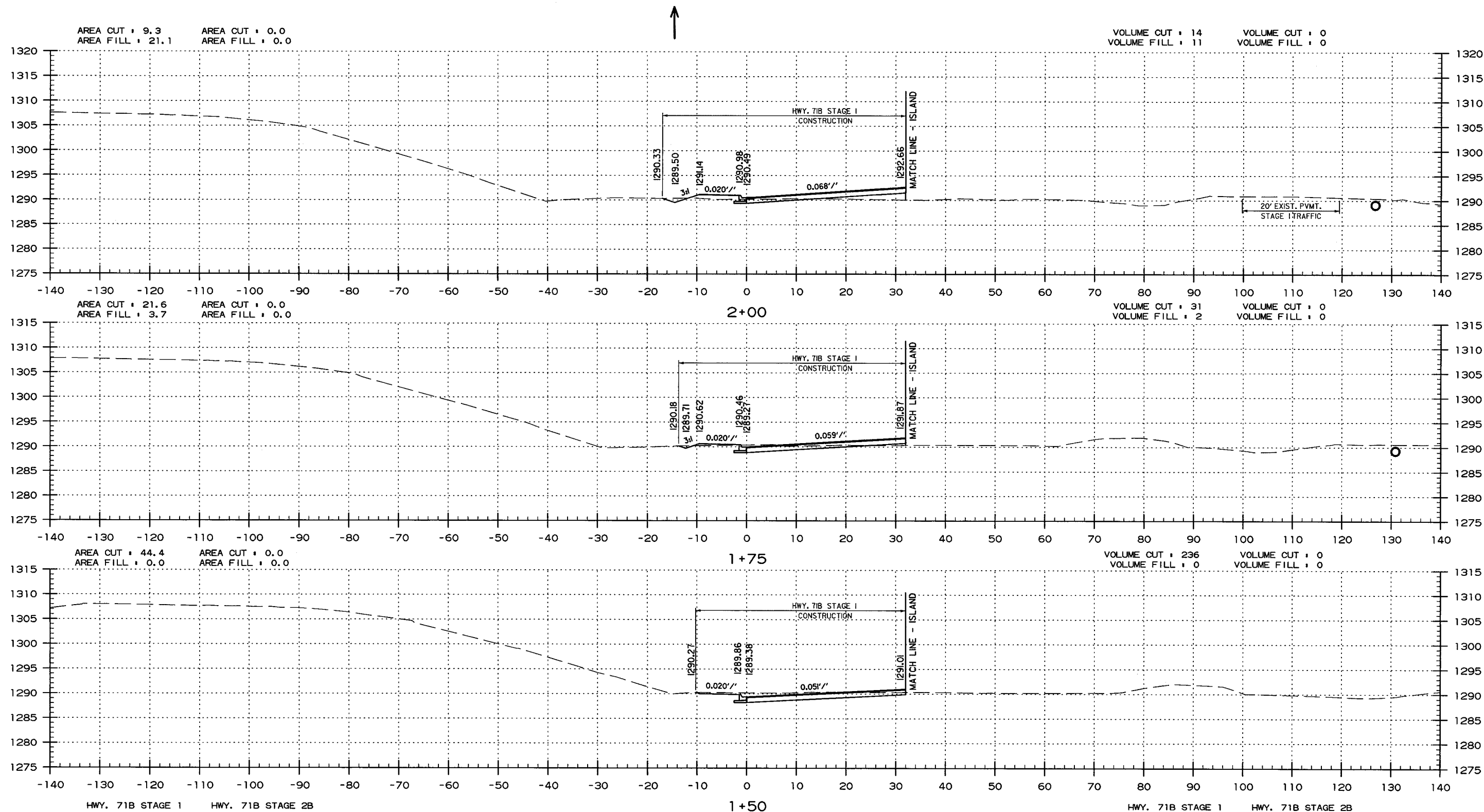
0+75

HWY. 71B STAGE 1 HWY. 71B STAGE 2B

RAMP 2B
 CROSS SECTION STA. 0+75 TO STA. 1+25

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	329	368	

2 CROSS SECTIONS

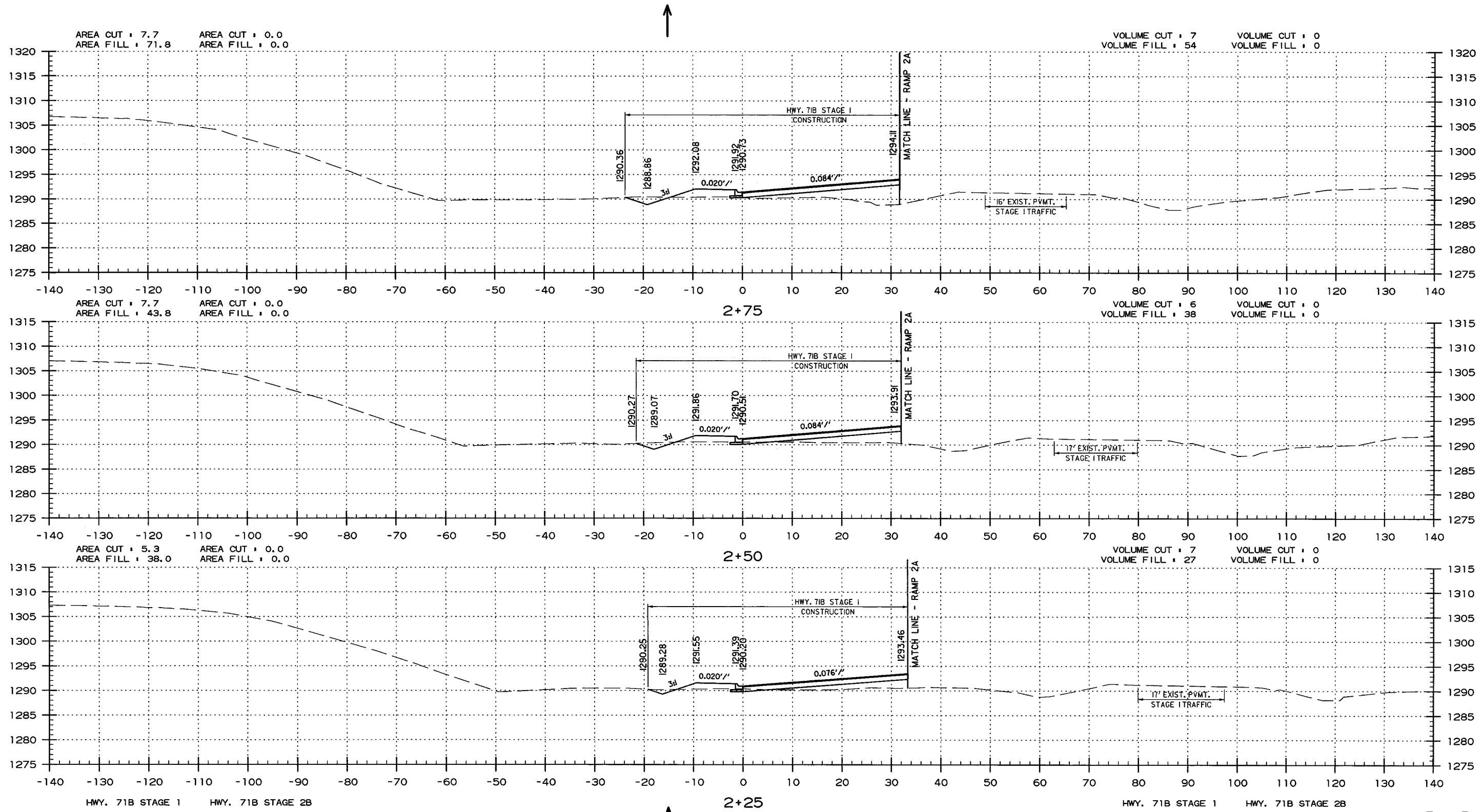


USER: mh514
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 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

RAMP 2B
 CROSS SECTION STA. 1+50 TO STA. 2+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	330	368	

2 CROSS SECTIONS

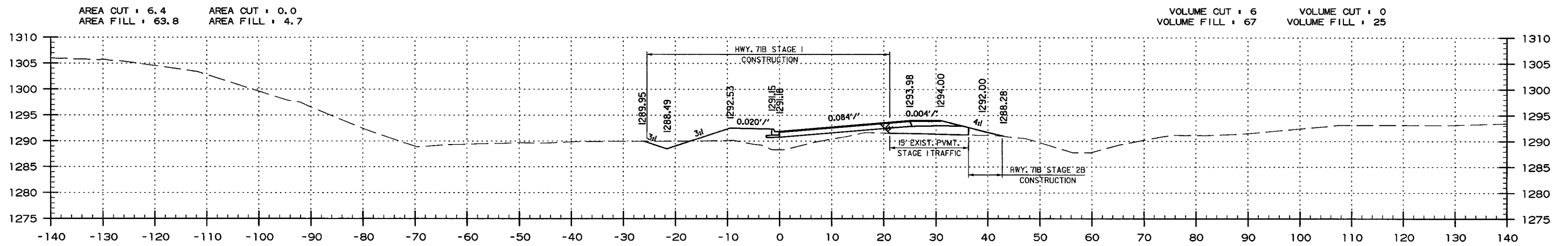


USER: mh514
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PLOTTED: 6/6/2018 14:48
SCALE: 1:20

RAMP 2B
CROSS SECTION STA. 2+25 TO STA. 2+75

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	331	368	

2 CROSS SECTIONS

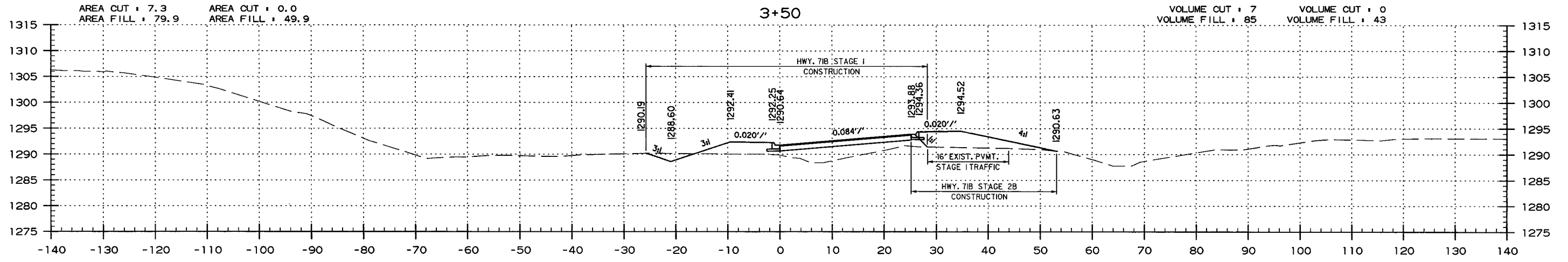


AREA CUT : 6.4
AREA FILL : 63.8

AREA CUT : 0.0
AREA FILL : 4.7

VOLUME CUT : 6
VOLUME FILL : 67

VOLUME CUT : 0
VOLUME FILL : 25

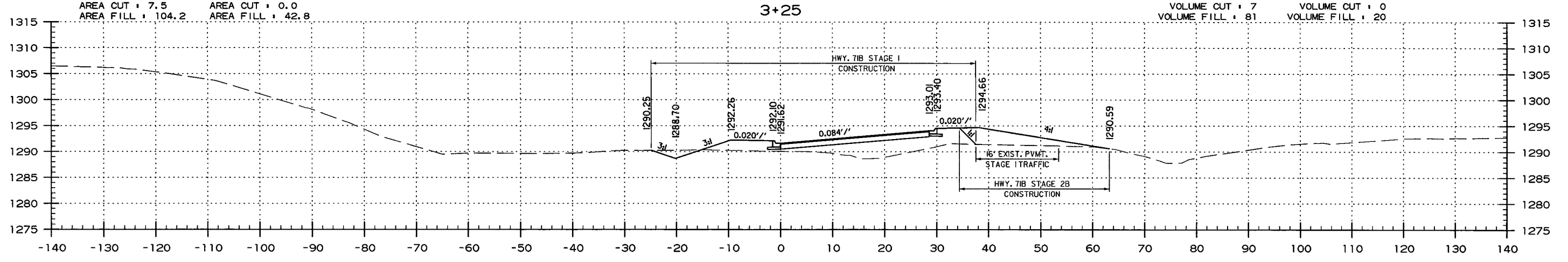


AREA CUT : 7.3
AREA FILL : 79.9

AREA CUT : 0.0
AREA FILL : 49.9

VOLUME CUT : 7
VOLUME FILL : 85

VOLUME CUT : 0
VOLUME FILL : 43



AREA CUT : 7.5
AREA FILL : 104.2

AREA CUT : 0.0
AREA FILL : 42.8

VOLUME CUT : 7
VOLUME FILL : 81

VOLUME CUT : 0
VOLUME FILL : 20

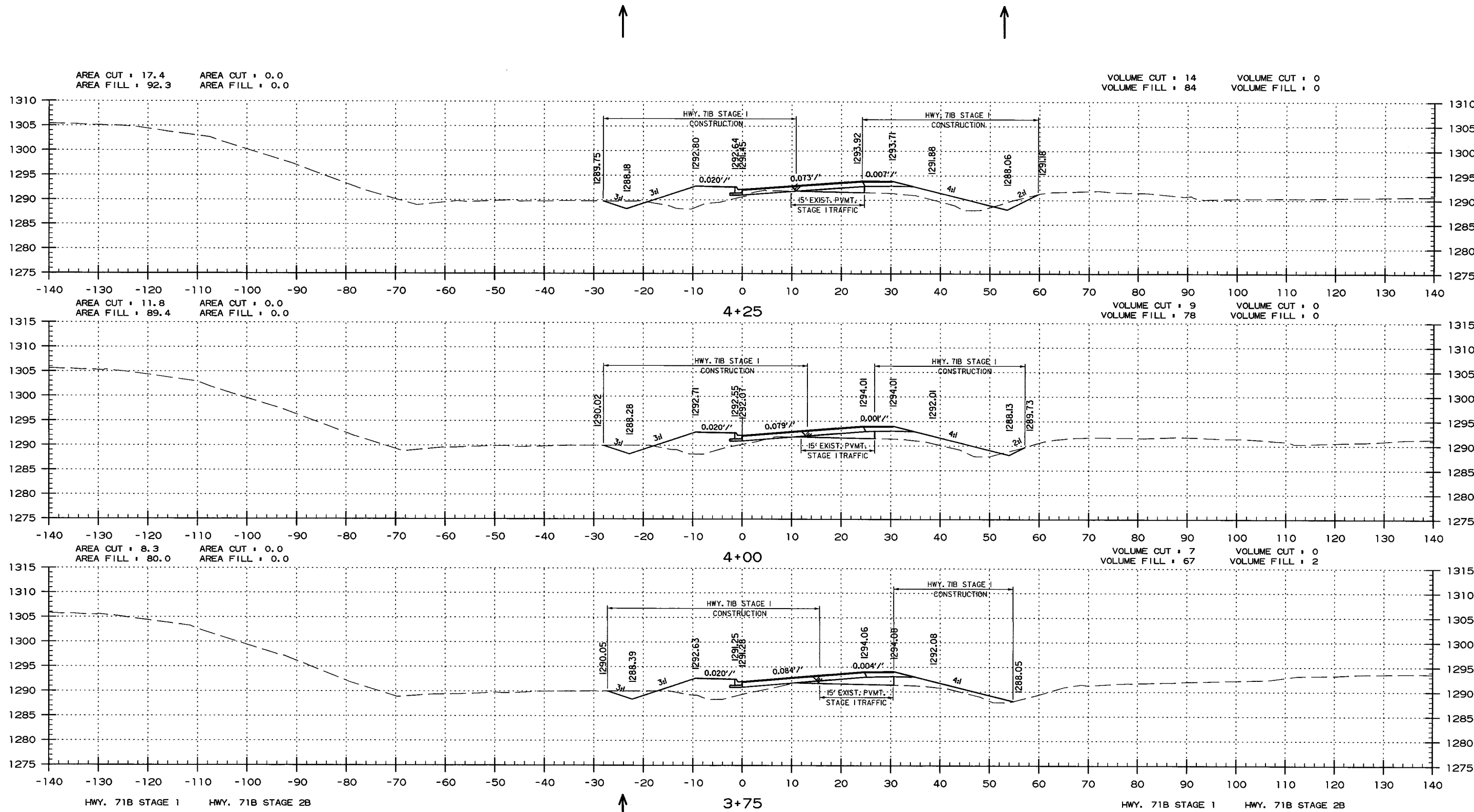
HWY. 71B STAGE 1 HWY. 71B STAGE 2B

HWY. 71B STAGE 1 HWY. 71B STAGE 2B

RAMP 2B
CROSS SECTION STA. 3+00 TO STA. 3+50

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hwy71\transp\dgn\sect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
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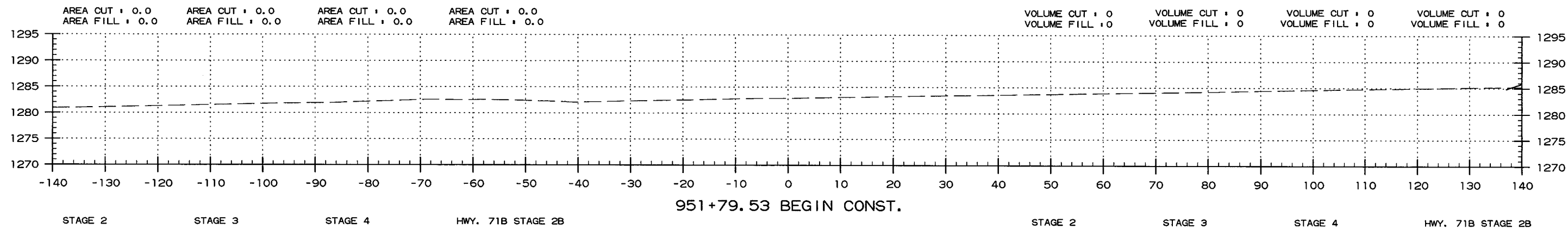
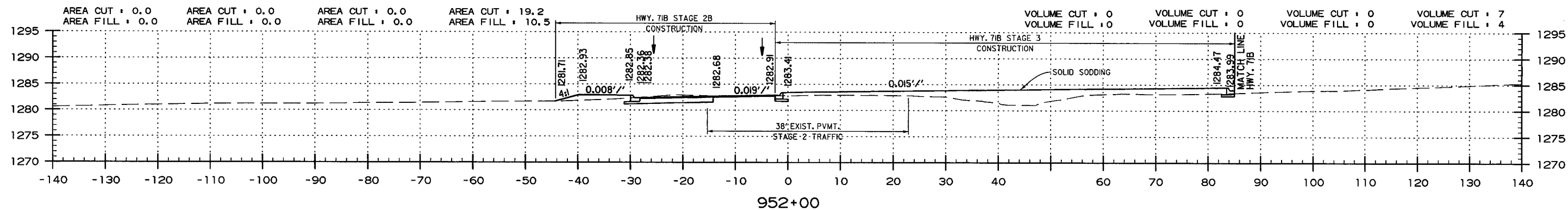
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	332	368	
(2) CROSS SECTIONS								



USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

RAMP 2B
 CROSS SECTION STA. 3+75 TO STA. 4+25

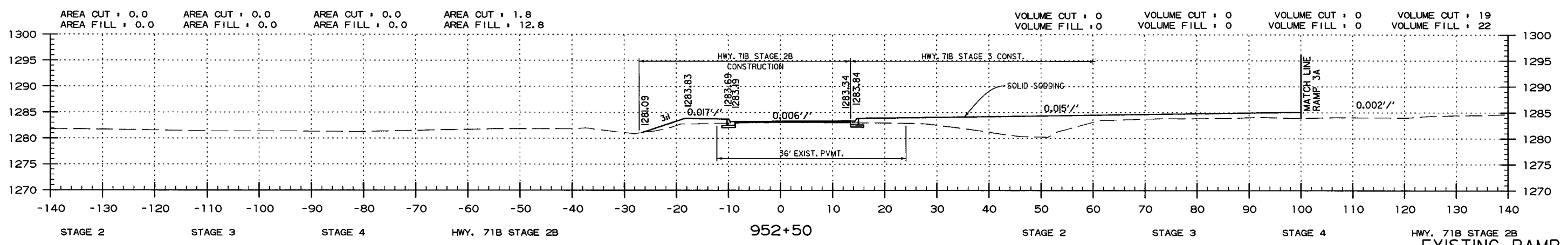
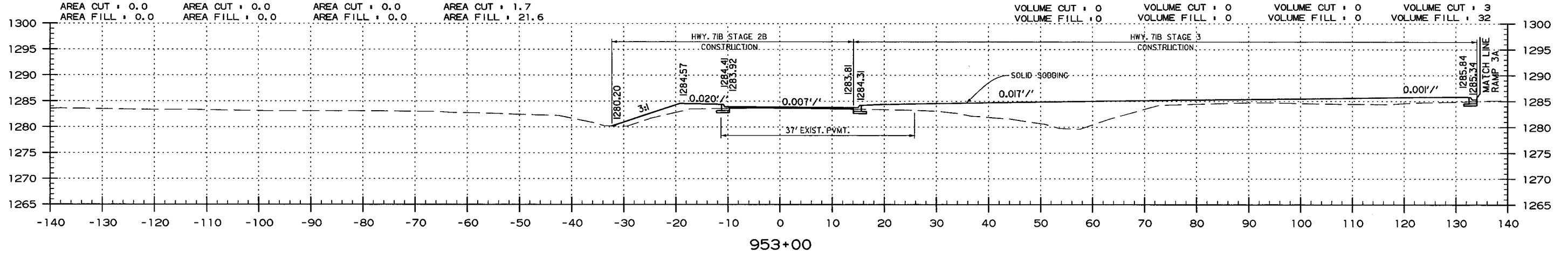
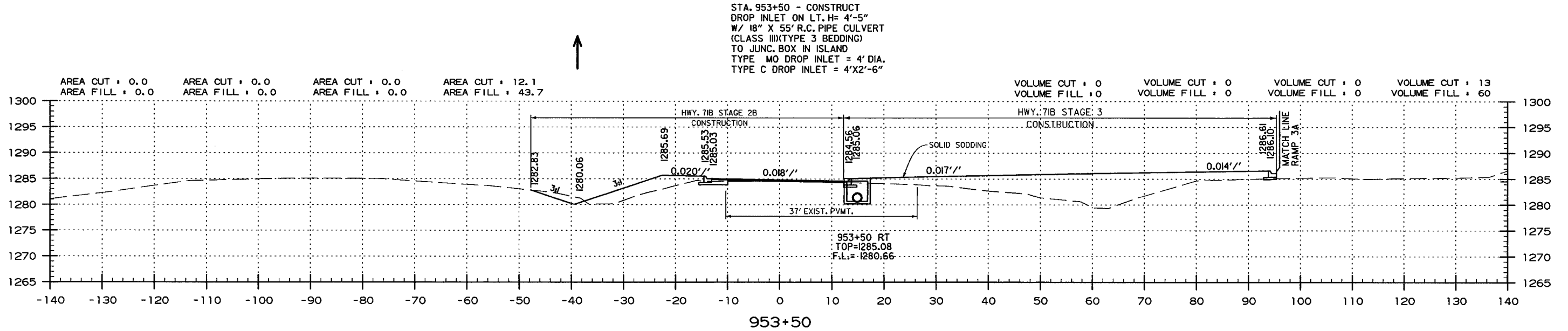
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	334	368	
② CROSS SECTIONS								



EXISTING RAMP 3
CROSS SECTION STA. 951+79.53 TO STA. 952+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	335	368	

2 CROSS SECTIONS

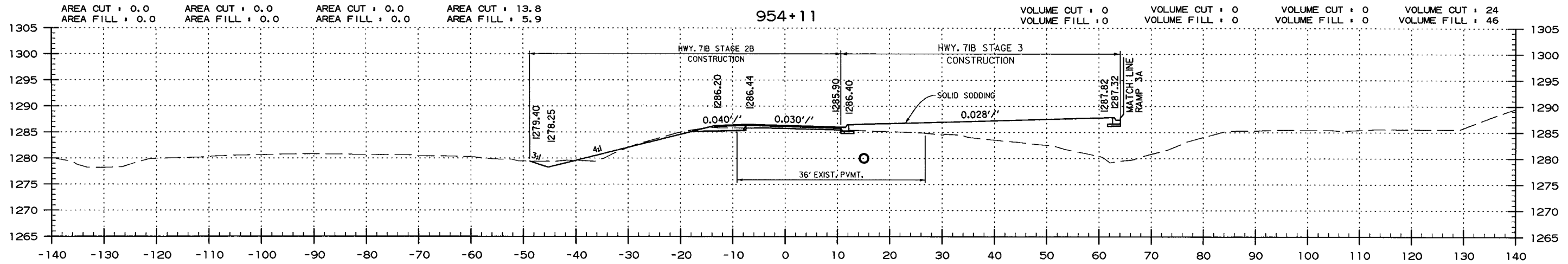
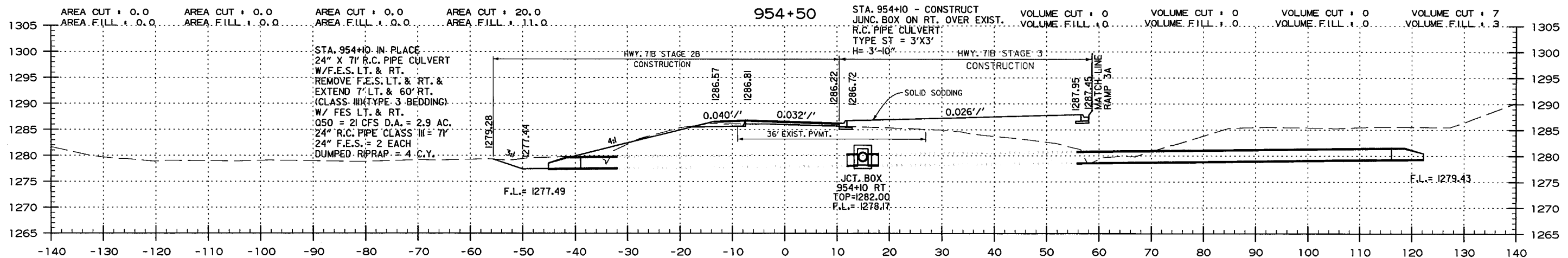
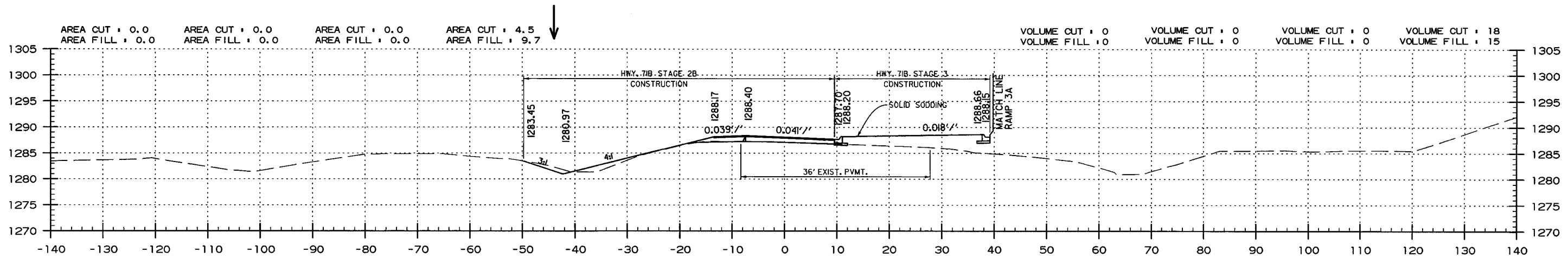


EXISTING RAMP 3
 CROSS SECTION STA. 952+50 TO STA. 953+50

USER: mhslh4
 DESIGN FILE: G:\2103305_Hwy71\hwy71\transp\dgn\sect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	B80903	336	368	

2 CROSS SECTIONS



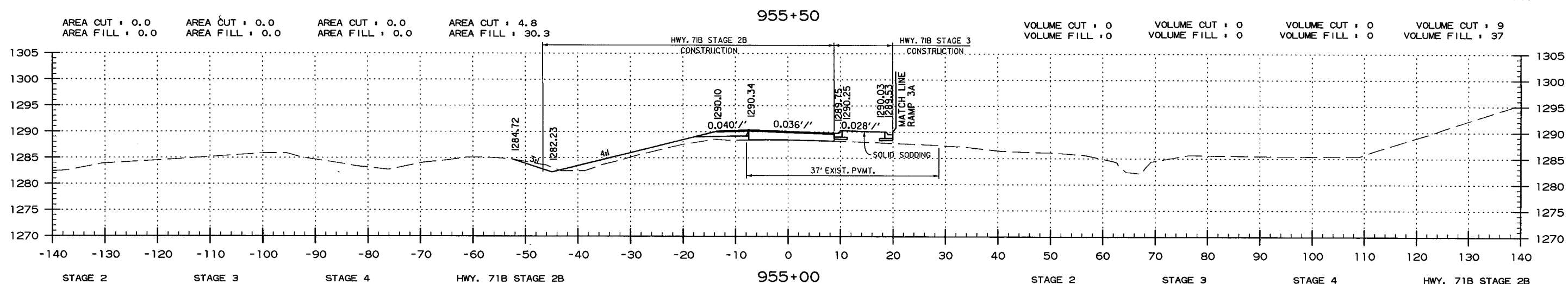
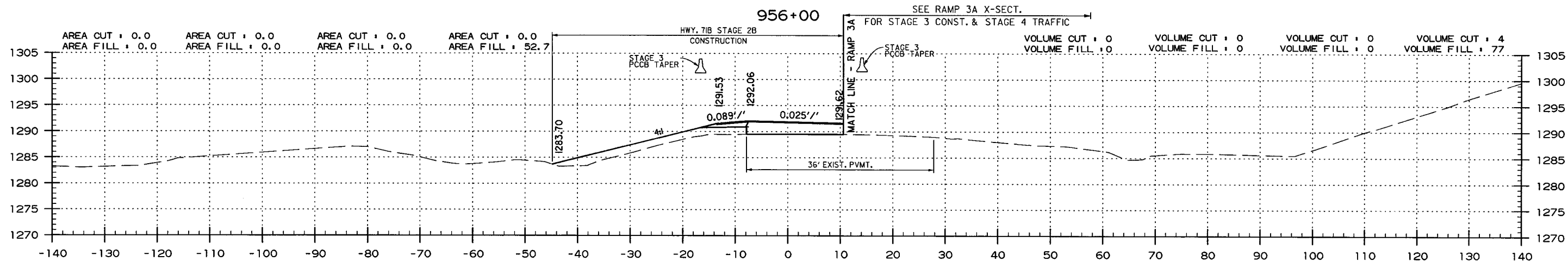
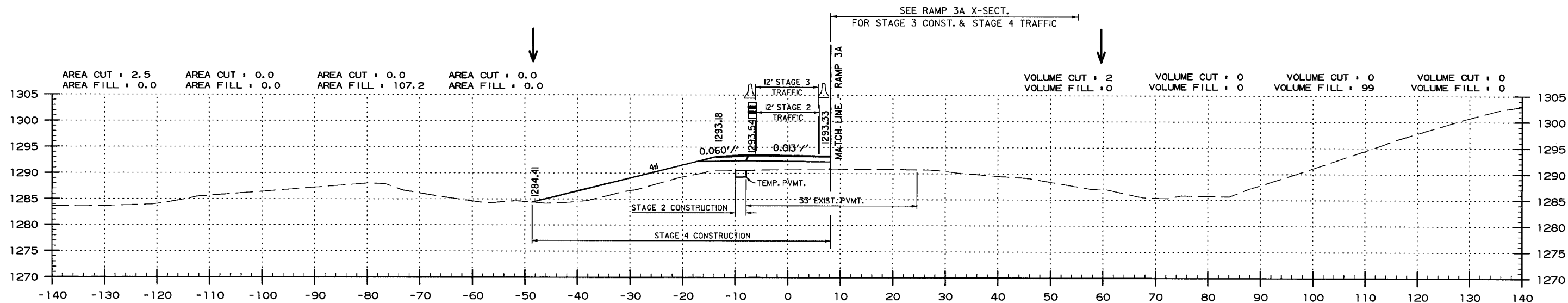
STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B 954+00 STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B

EXISTING RAMP 3
CROSS SECTION STA. 954+00 TO STA. 954+50

USER: mh514
 DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	337	368	

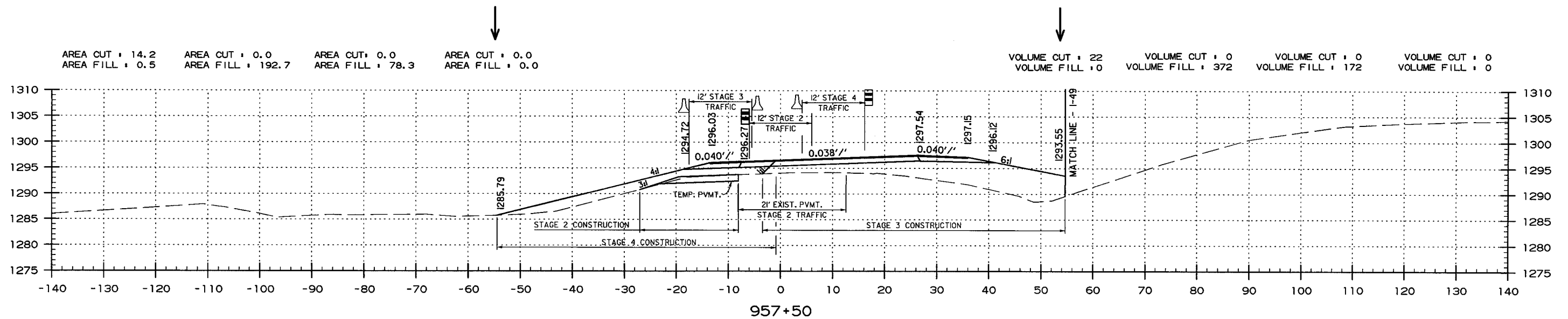
2 CROSS SECTIONS



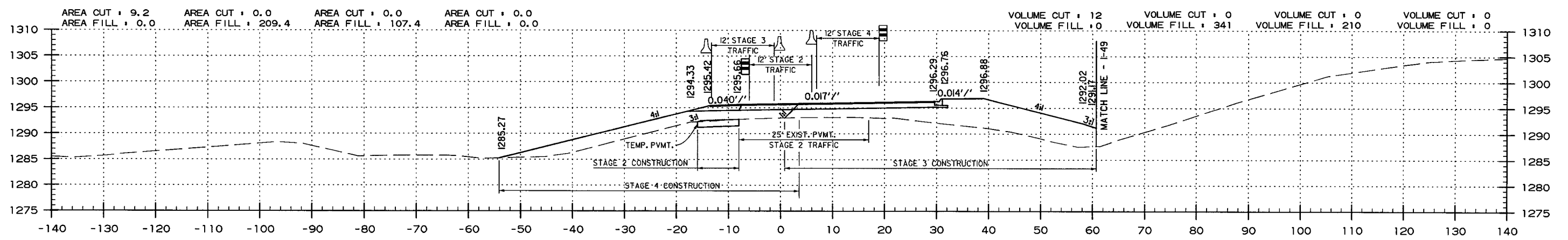
EXISTING RAMP 3
CROSS SECTION STA. 955+00 TO STA. 956+00

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\mchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

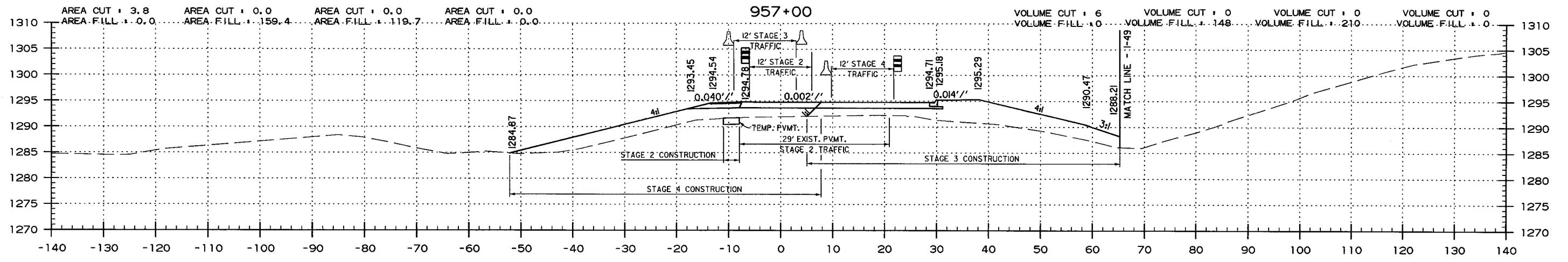
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID. DIST. NO.	STATE	FED. AID. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	338	368	
2 CROSS SECTIONS								



AREA CUT : 14.2 AREA CUT : 0.0 AREA CUT : 0.0 AREA CUT : 0.0 VOLUME CUT : 22 VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 0
 AREA FILL : 0.5 AREA FILL : 192.7 AREA FILL : 78.3 AREA FILL : 0.0 VOLUME FILL : 0 VOLUME FILL : 372 VOLUME FILL : 172 VOLUME FILL : 0



AREA CUT : 9.2 AREA CUT : 0.0 AREA CUT : 0.0 AREA CUT : 0.0 VOLUME CUT : 12 VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 0
 AREA FILL : 0.0 AREA FILL : 209.4 AREA FILL : 107.4 AREA FILL : 0.0 VOLUME FILL : 0 VOLUME FILL : 341 VOLUME FILL : 210 VOLUME FILL : 0



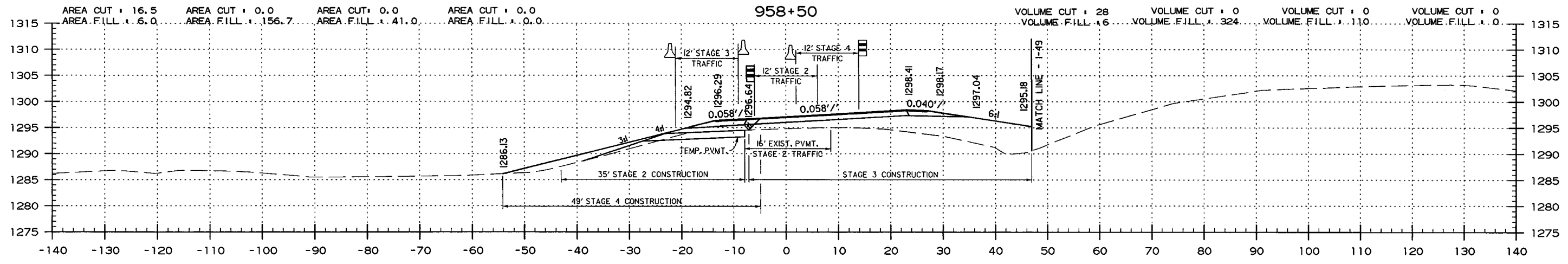
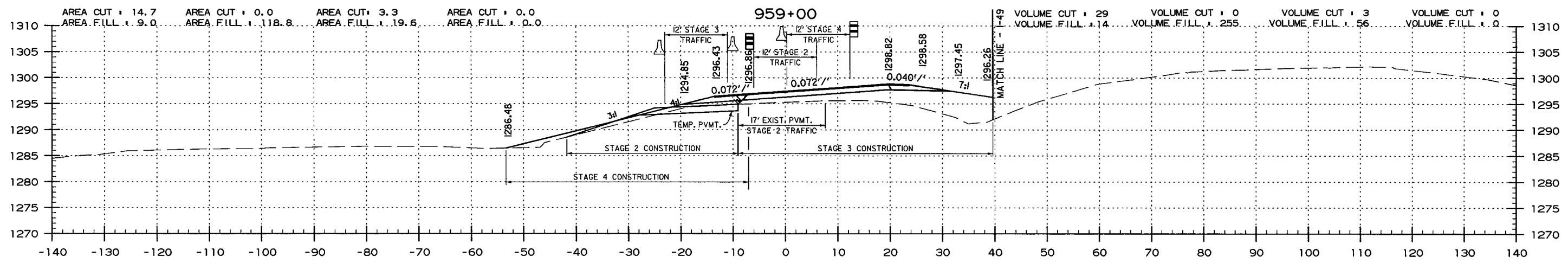
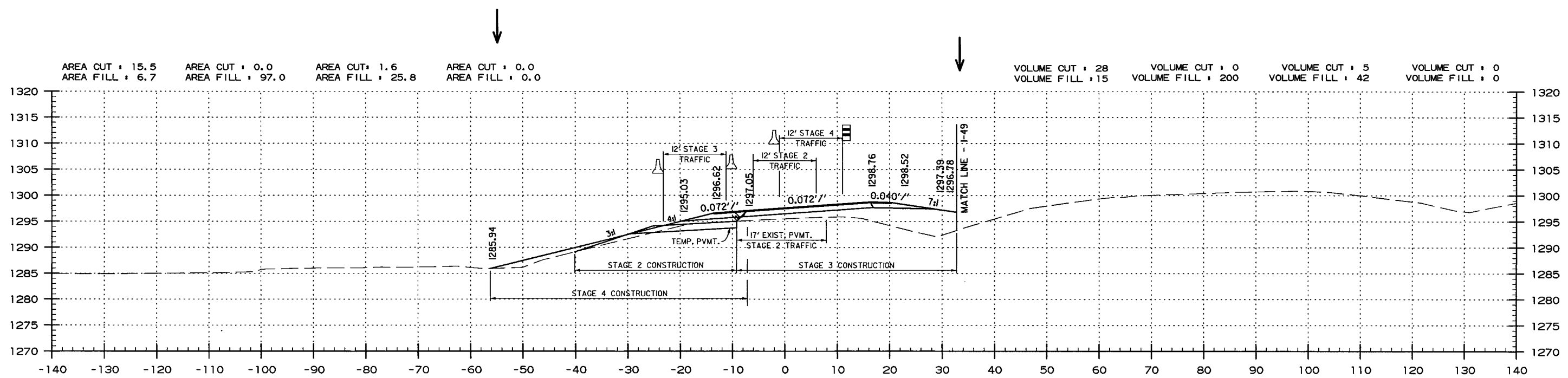
AREA CUT : 3.8 AREA CUT : 0.0 AREA CUT : 0.0 AREA CUT : 0.0 VOLUME CUT : 6 VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 0
 AREA FILL : 0.0 AREA FILL : 159.4 AREA FILL : 119.7 AREA FILL : 0.0 VOLUME FILL : 0 VOLUME FILL : 148 VOLUME FILL : 210 VOLUME FILL : 0

STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B
 EXISTING RAMP 3
 CROSS SECTION STA. 956+50 TO STA. 957+50

USER: mh5114
 DESIGN FILE: G:\2103305.Hwy71\chgs\TRANSP\dgn\sect\BB0903.CX.HWY71B.01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	339	368	

2 CROSS SECTIONS



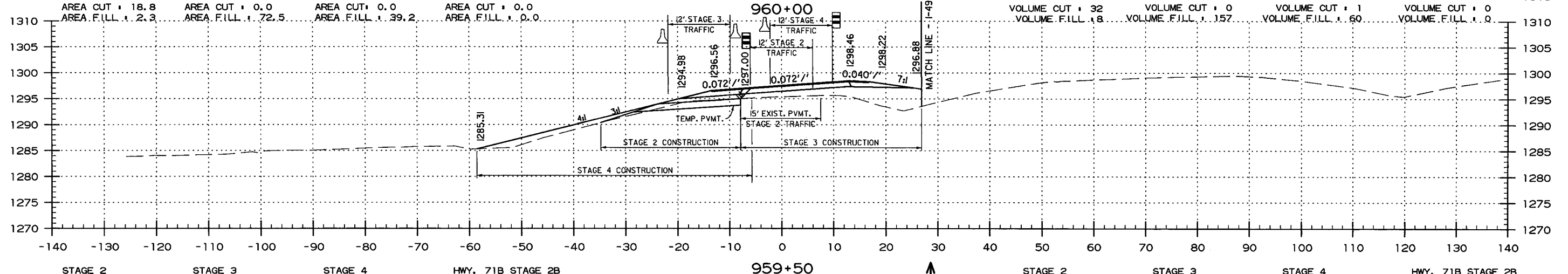
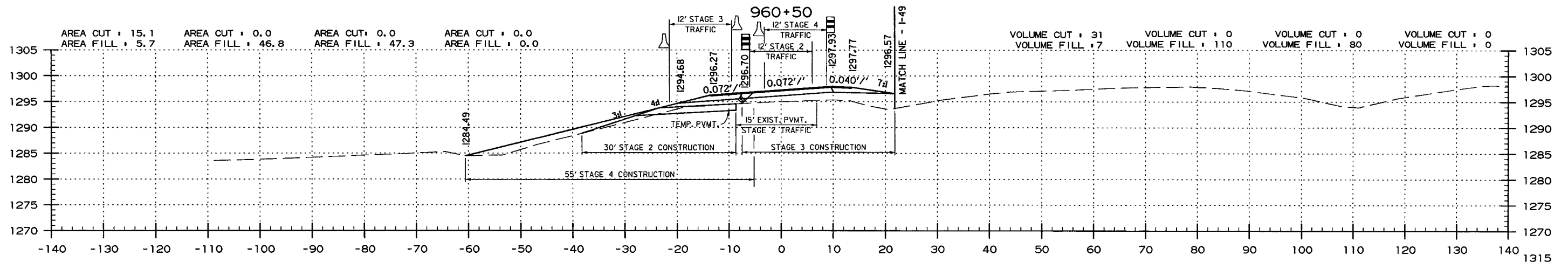
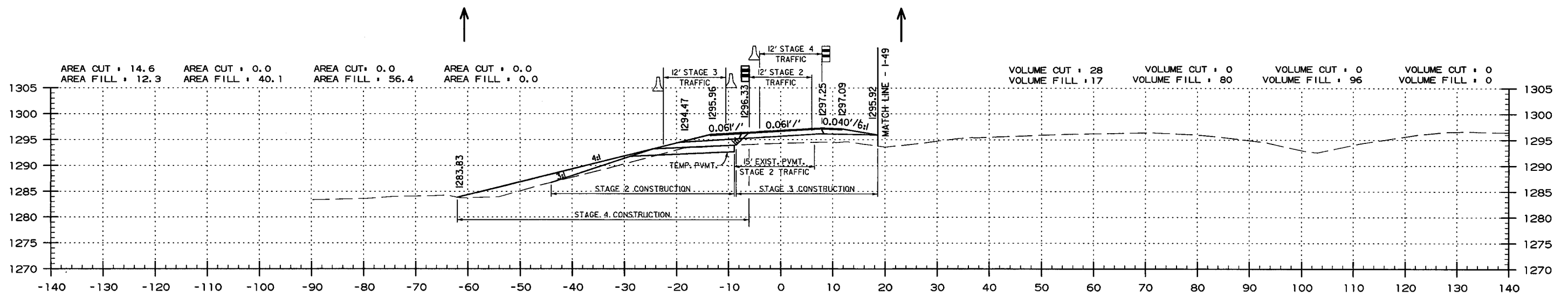
STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B 958+00 STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B

EXISTING RAMP 3
 CROSS SECTION STA. 958+00 TO STA. 959+00

USER: mh514
 DESIGN FILE: G:\201305_Hwy71\hwy71\transp\dgn\sect\BB0903.CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	340	368	

2 CROSS SECTIONS



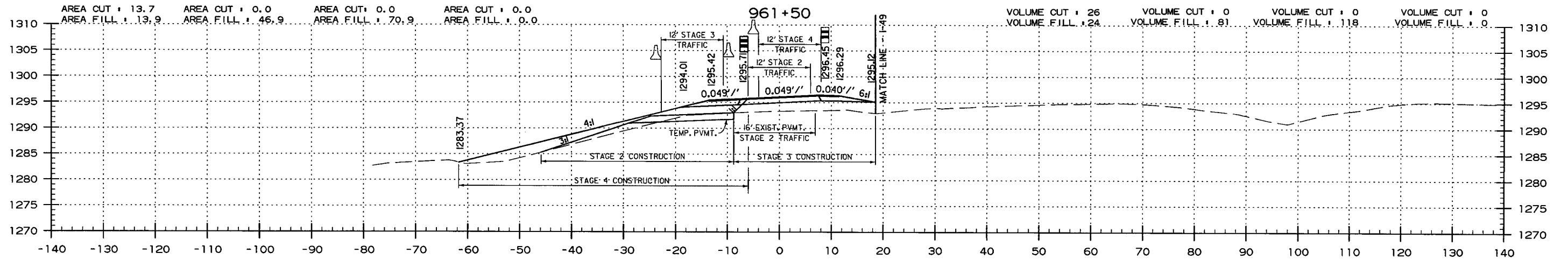
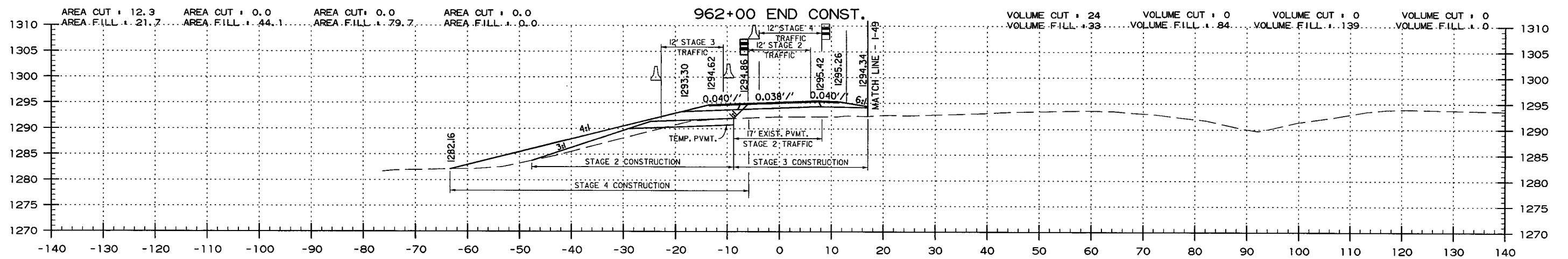
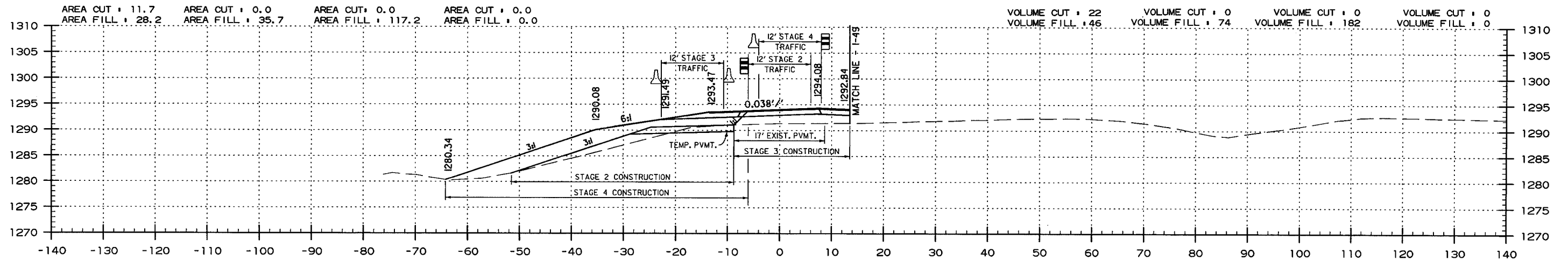
STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B 959+50 STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B

EXISTING RAMP 3
 CROSS SECTION STA. 959+50 TO STA. 960+50

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hwy71\transp\dgn\sect\BB0903_CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	341	368	

2 CROSS SECTIONS



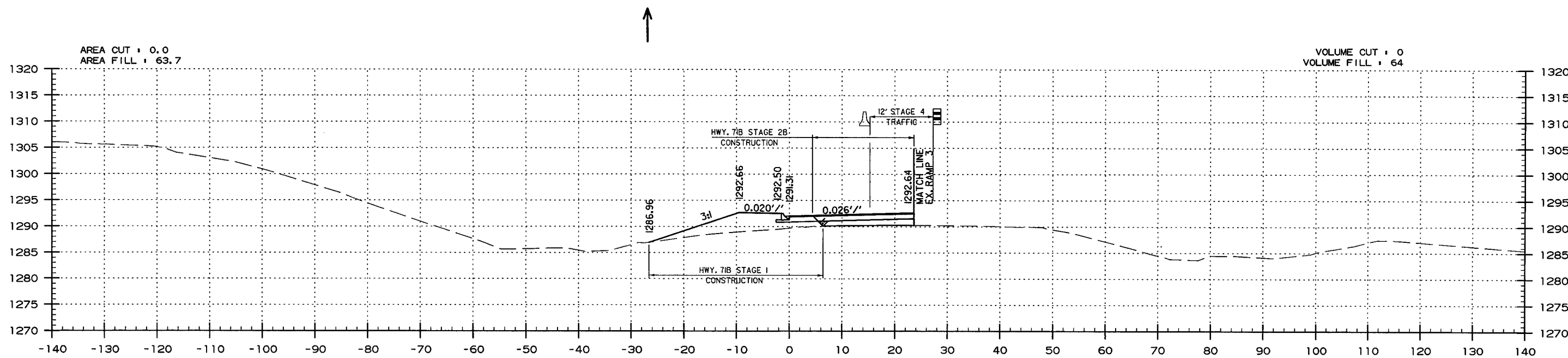
STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B 961+00 STAGE 2 STAGE 3 STAGE 4 HWY. 71B STAGE 2B

EXISTING RAMP 3
 CROSS SECTION STA. 961+00 TO STA. 962+00

USER: mhs14
 DESIGN FILE: G:\2103305.Hwy71\chq\TRANSP\dgn\xsect+r\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

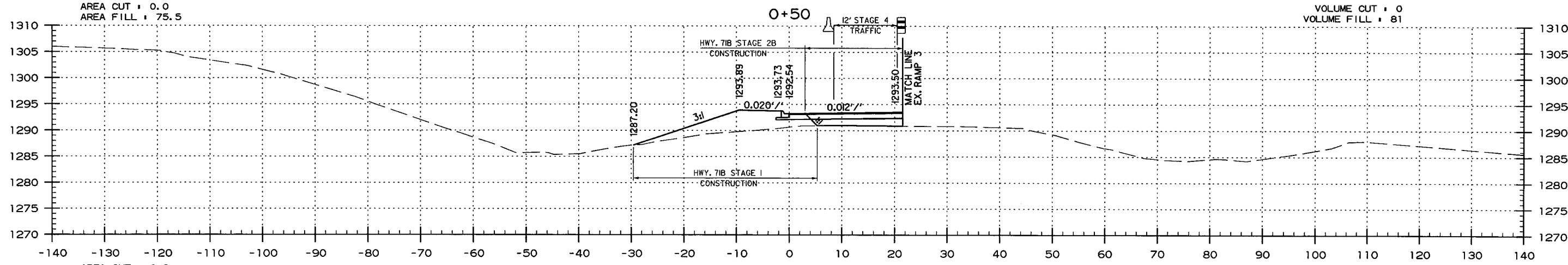
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	342	368	

2 CROSS SECTIONS



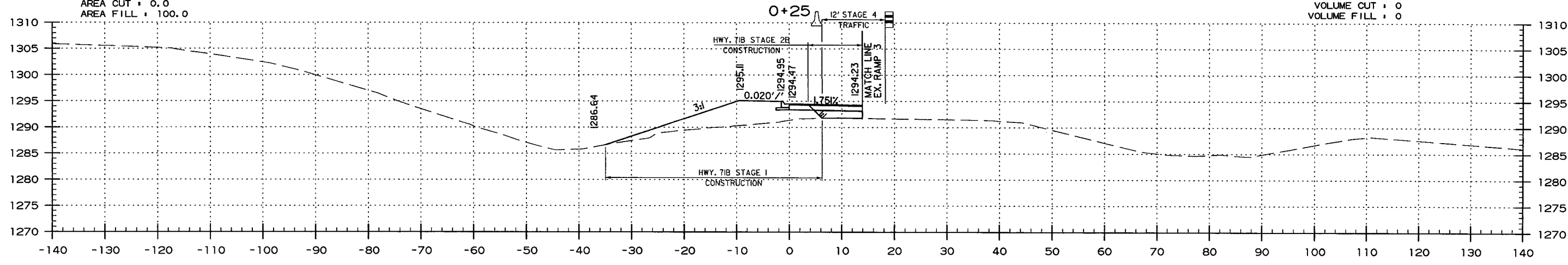
AREA CUT : 0.0
AREA FILL : 63.7

VOLUME CUT : 0
VOLUME FILL : 64



AREA CUT : 0.0
AREA FILL : 75.5

VOLUME CUT : 0
VOLUME FILL : 81



AREA CUT : 0.0
AREA FILL : 100.0

VOLUME CUT : 0
VOLUME FILL : 0

HWY. 71B STAGE 1

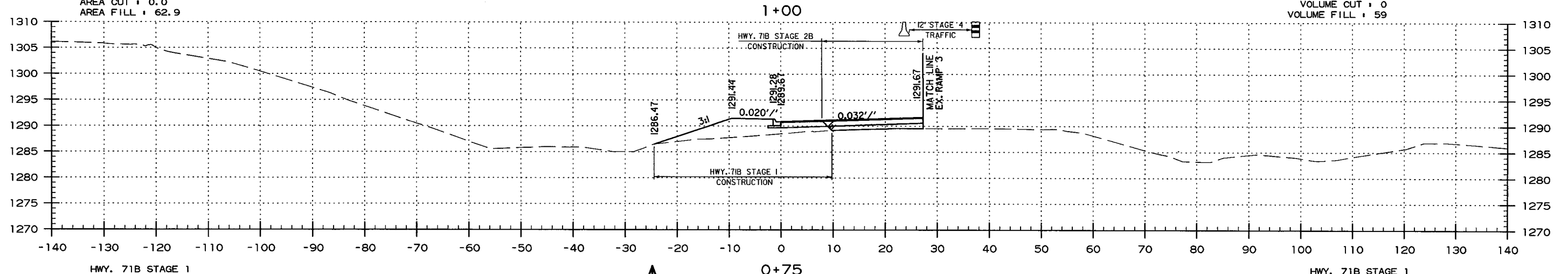
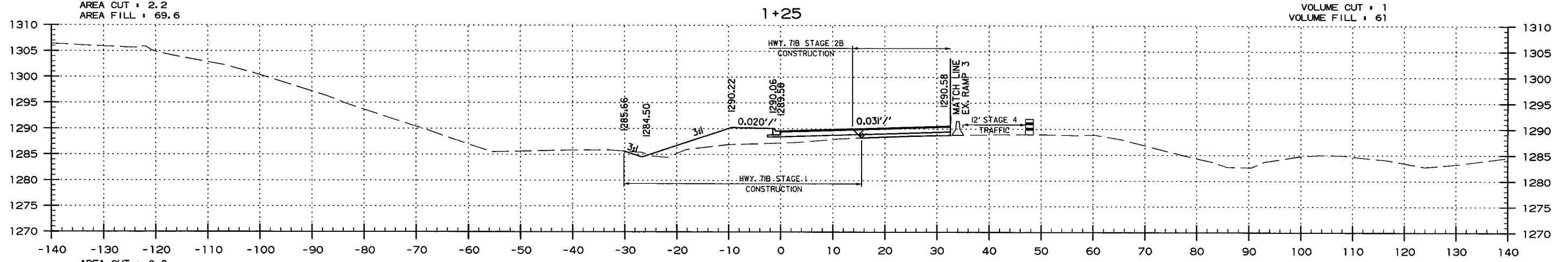
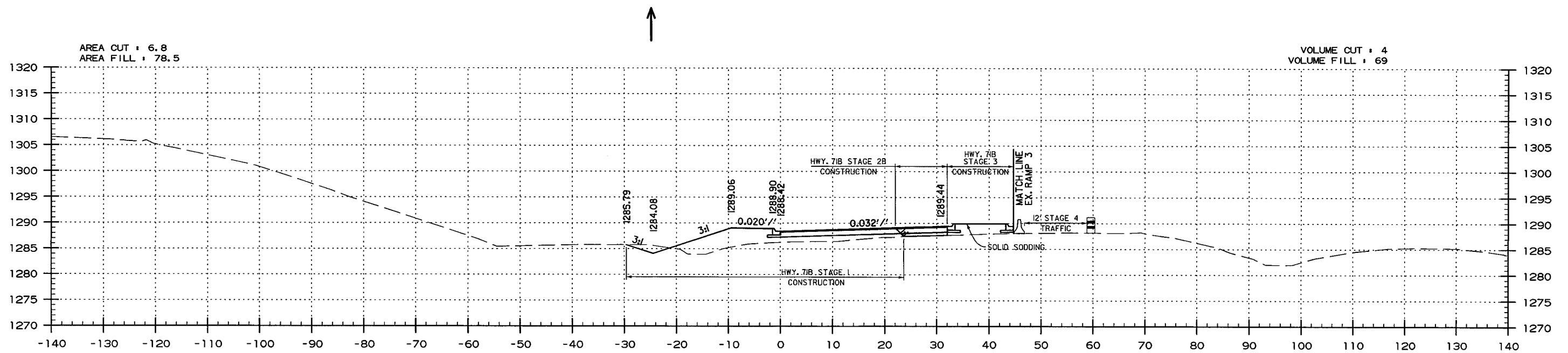
0+00 BEGIN CONST.

HWY. 71B STAGE 1 HWY. 71B STAGE 1

RAMP 3A
CROSS SECTION STA. 0+00 TO STA. 0+50

USER: mhs14
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\sect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	343	368	
				2 CROSS SECTIONS				

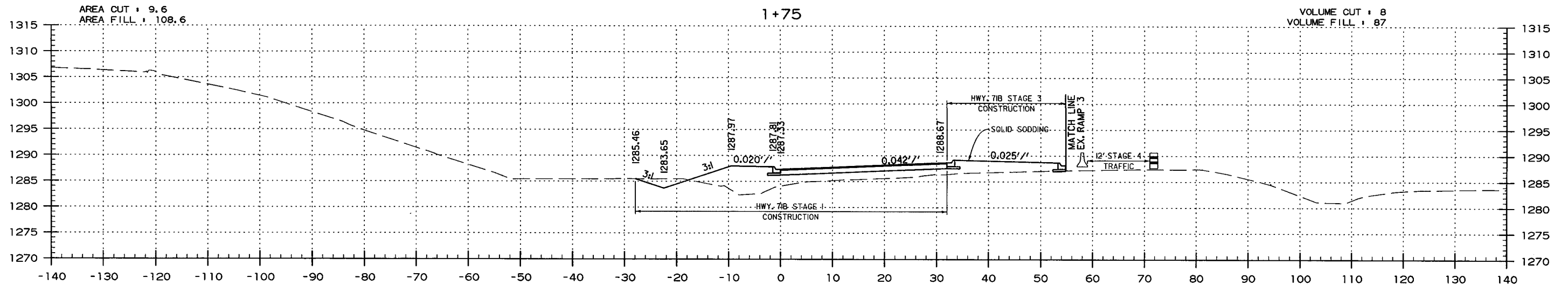
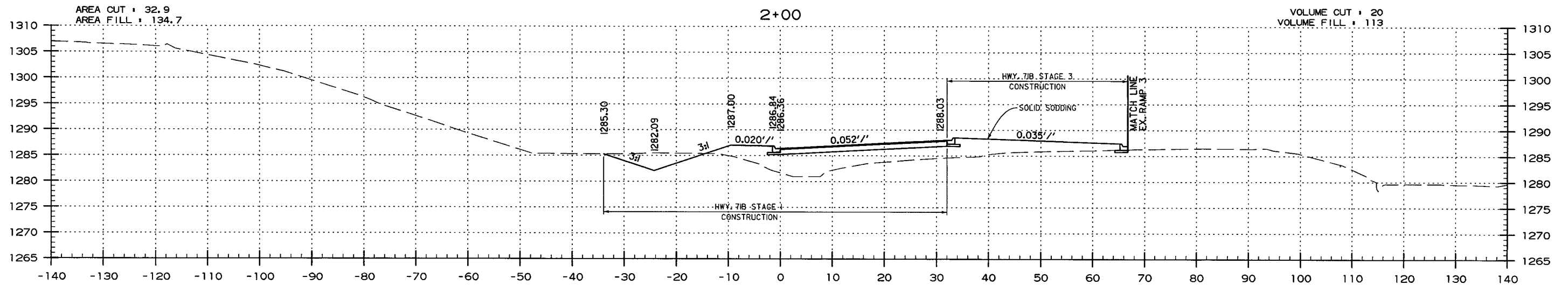
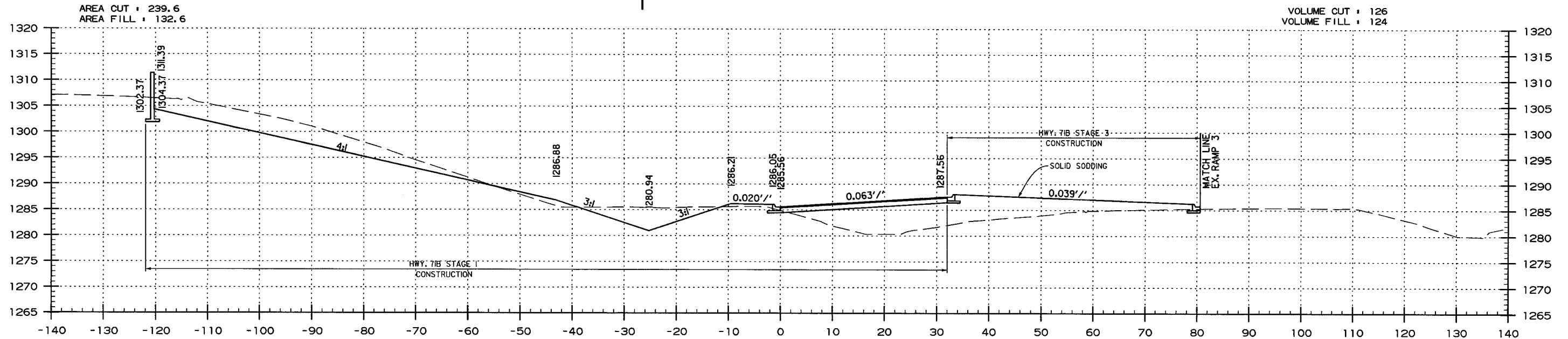


RAMP 3A
CROSS SECTION STA. 0+75 TO STA. 1+25

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hchq\TRANSP\dgn\xsect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	344	368	

2 CROSS SECTIONS



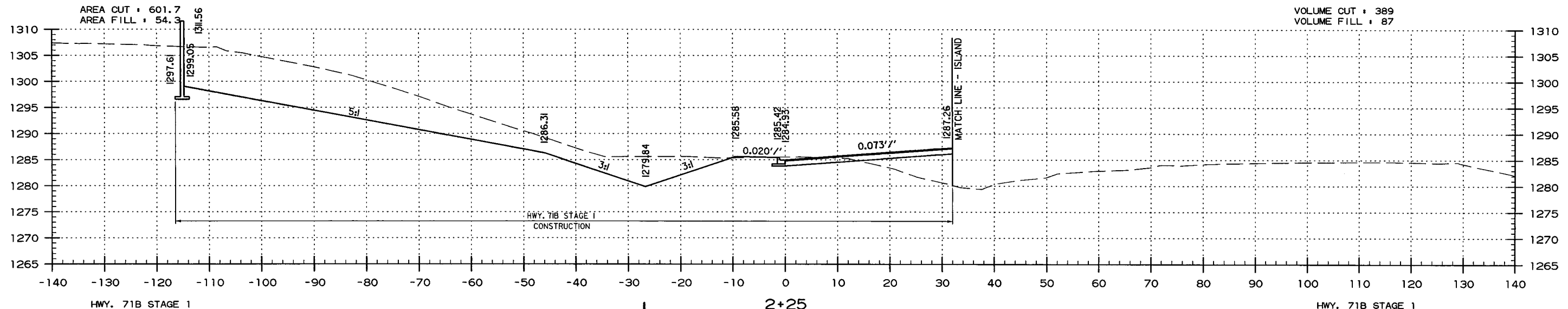
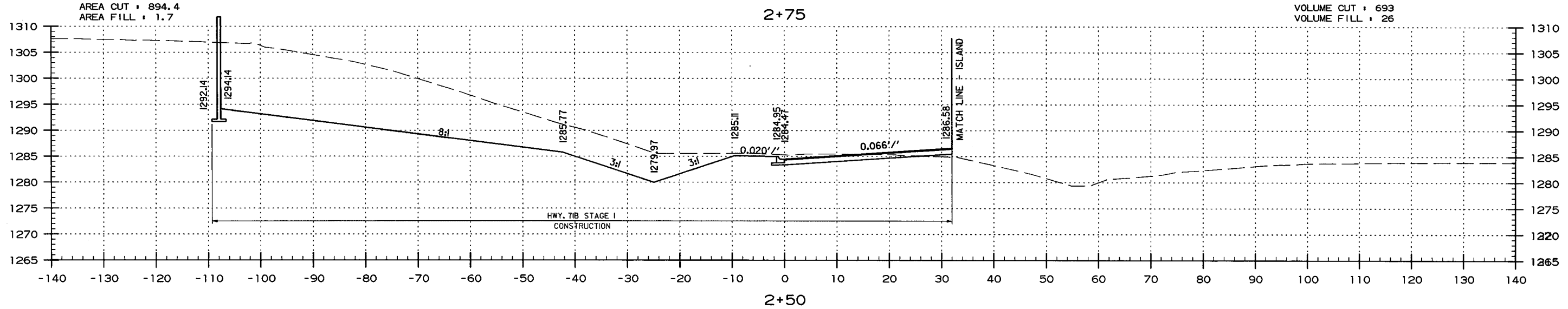
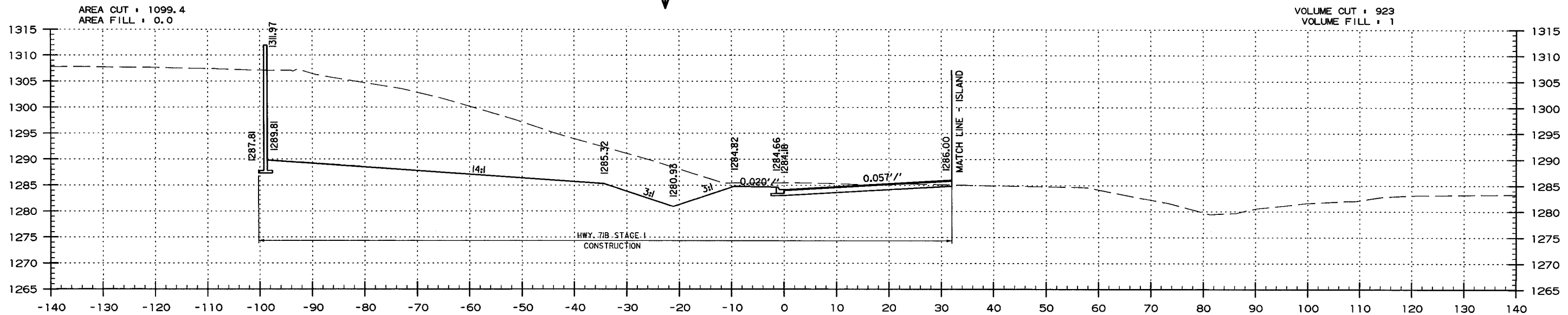
HWY. 71B STAGE 1

1+50

HWY. 71B STAGE 1

RAMP 3A
CROSS SECTION STA. 1+50 TO STA. 2+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	BB0903	345
						2 CROSS SECTIONS		

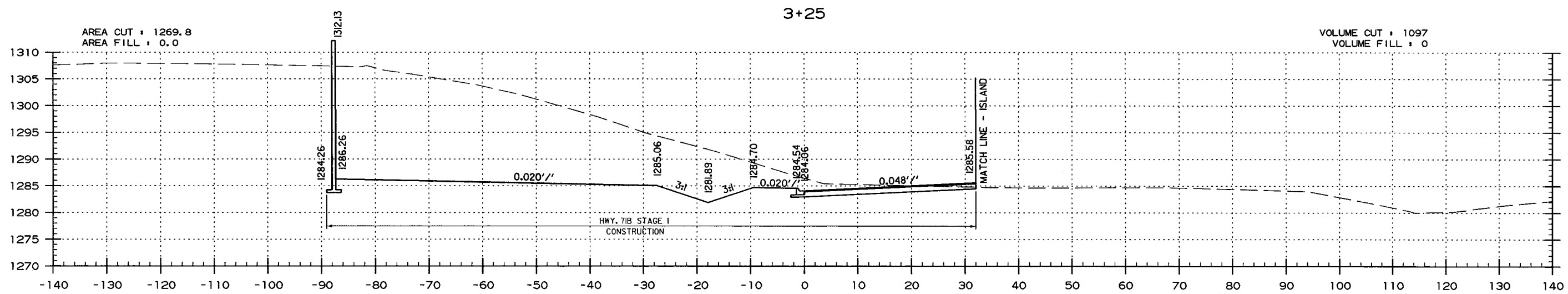
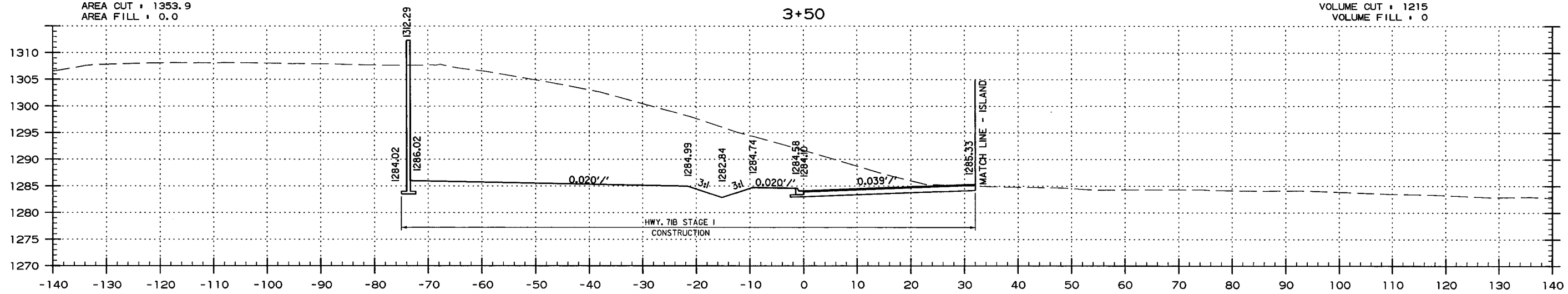
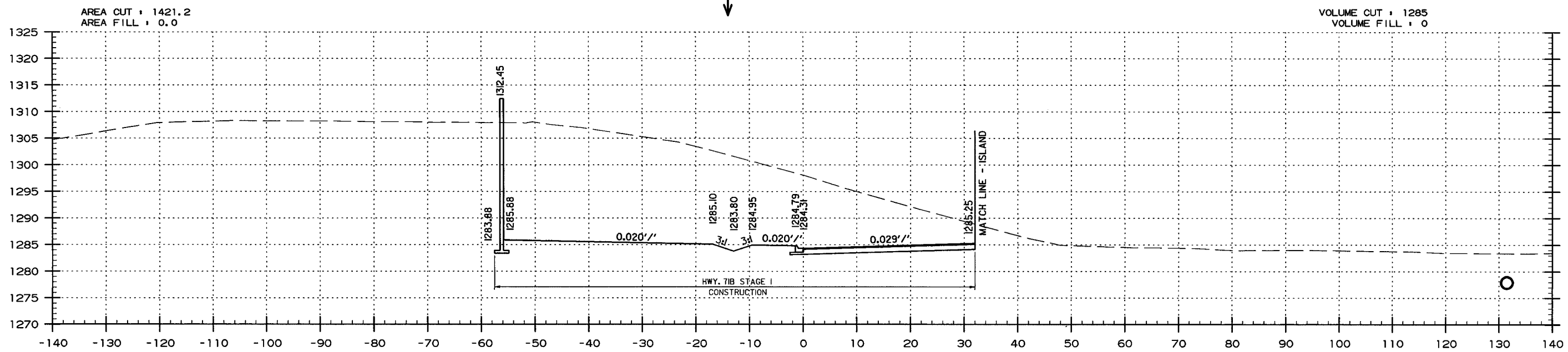


USER: mh514
 DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\xsect\vr\BB0903_CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

RAMP 3A
 CROSS SECTION STA. 2+25 TO STA. 2+75

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		346	368

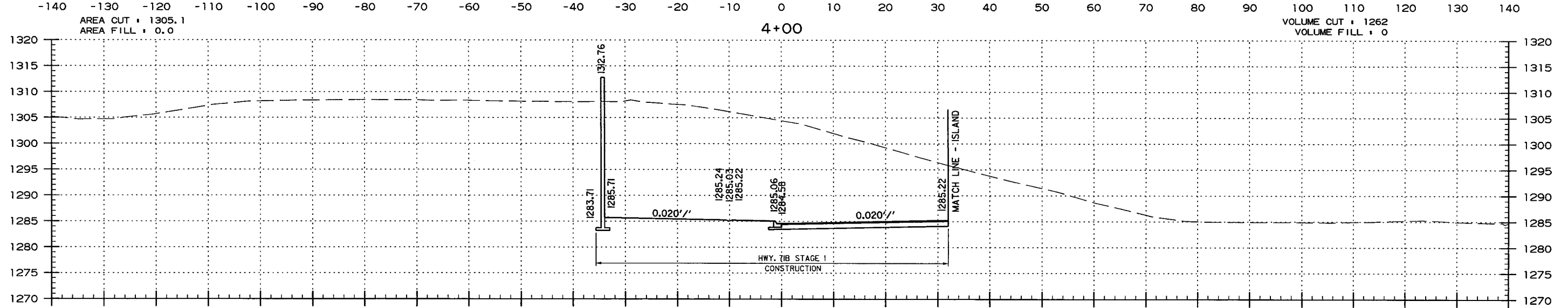
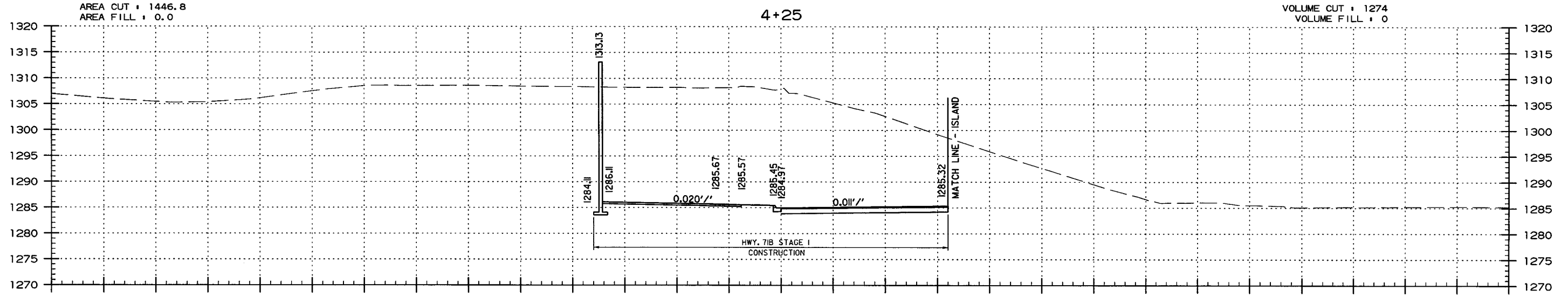
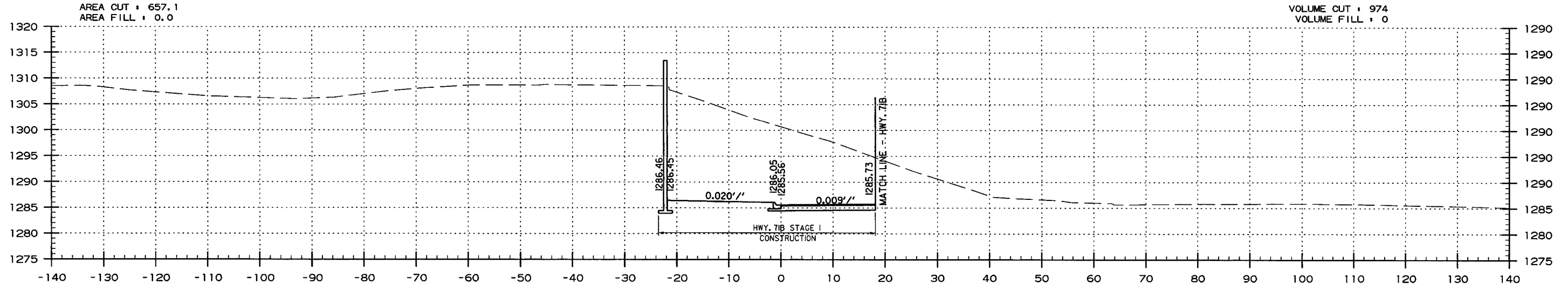
2 CROSS SECTIONS



RAMP 3A
CROSS SECTION STA. 3+00 TO STA. 3+50

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\inchg\TRANSP\dgn\xsect\BB0903_CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	347	368
② CROSS SECTIONS								



USER: mh514
DESIGN FILE: G:\2103305_Hwy71\inchg\TRANSP\dgn\sect\BB0903.CX.HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

HWY. 71B STAGE 1

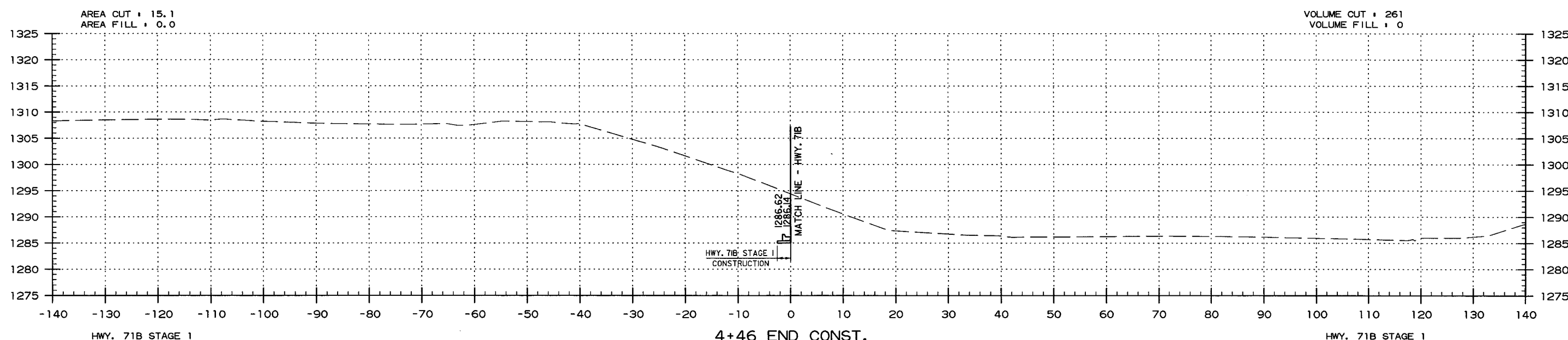
3+75

HWY. 71B STAGE 1

RAMP 3A
CROSS SECTION STA. 3+75 TO STA. 4+25

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0903	348	368

② CROSS SECTIONS

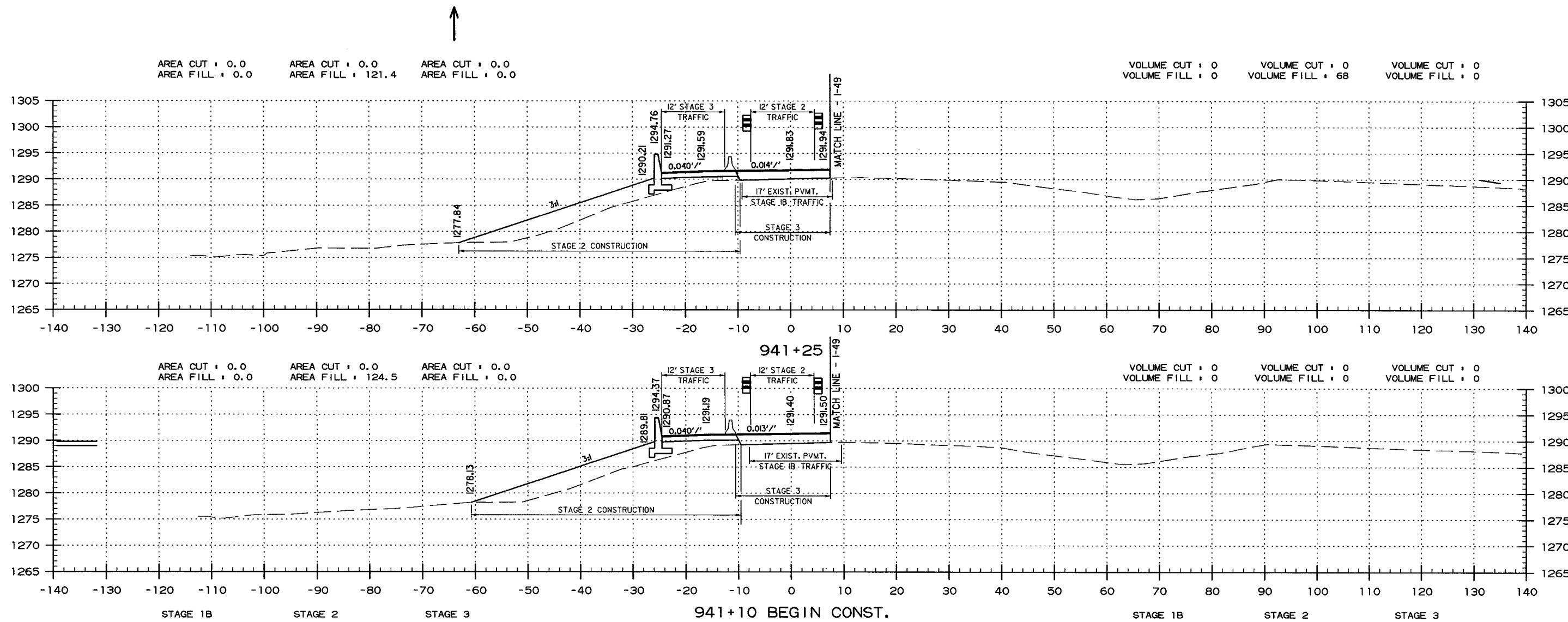


RAMP 3A
CROSS SECTION STA. 4+46 TO STA. 4+46

USER: mh514
DESIGN FILE: G:\2103305_Hwy71\hchg\TRANSP\dgn\xsect\BB0903.CX_HWY71B_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	349	368	

2 CROSS SECTIONS

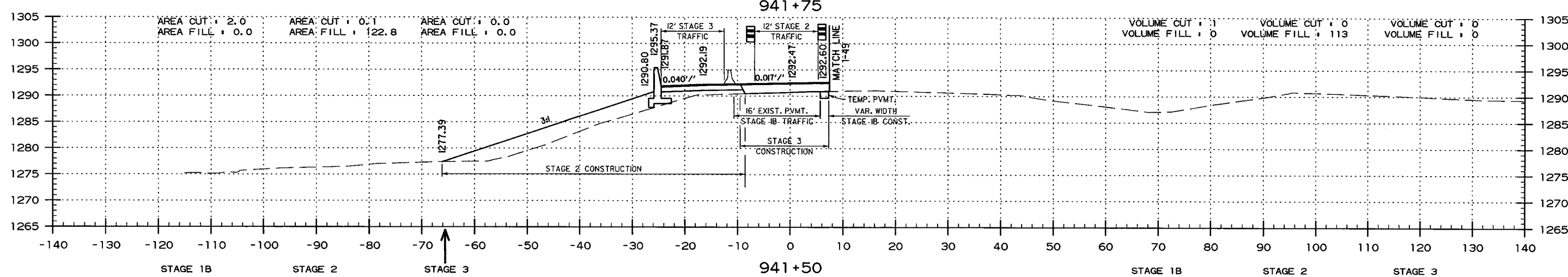
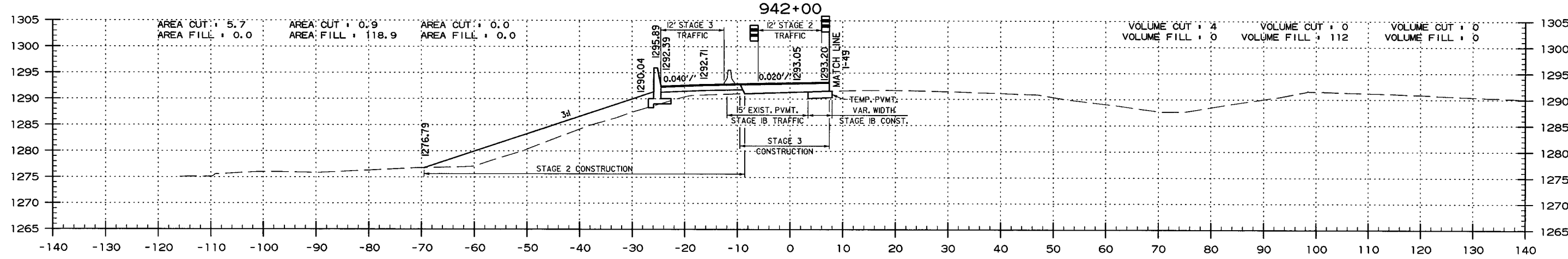
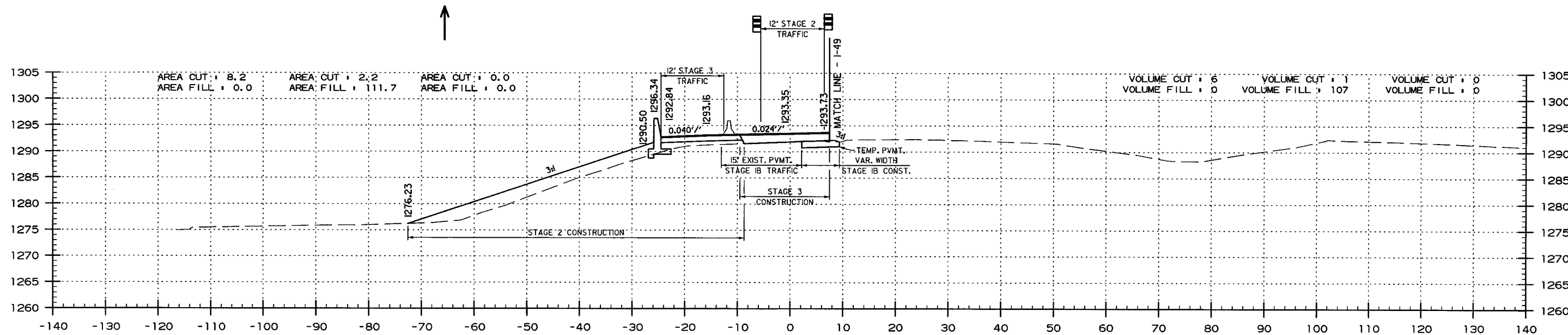


RAMP 4
CROSS SECTION STA. 940+75 TO STA. 941+25

USER: mh514
DESIGN FILE: G:\2103305_Hwy7\Inch\TRANSP\dgn\xsect\BB0903.CX.HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	350	368	

2 CROSS SECTIONS



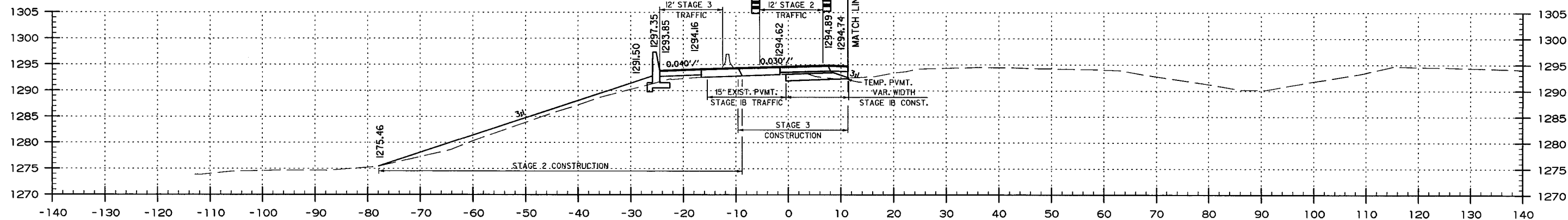
USER: mh514
 DESIGN FILE: G:\2103305.Hwy7\Inchq\TRANSP\dgn\xsect\BB0903.CX.HWY7IB_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

RAMP 4
 CROSS SECTION STA. 941+50 TO STA. 942+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		351	368
				2 CROSS SECTIONS				

AREA CUT : 7.8 AREA CUT : 4.7 AREA CUT : 0.0
 AREA FILL : 0.0 AREA FILL : 52.3 AREA FILL : 5.6

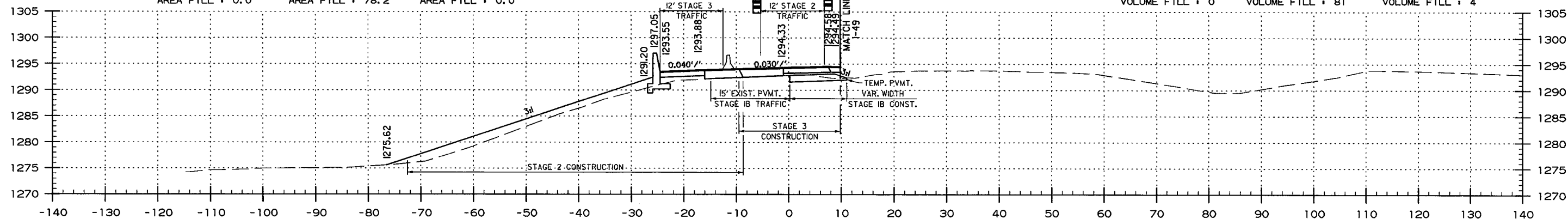
VOLUME CUT : 8 VOLUME CUT : 4 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 60 VOLUME FILL : 5



942+75

AREA CUT : 9.3 AREA CUT : 4.0 AREA CUT : 4.2
 AREA FILL : 0.0 AREA FILL : 78.2 AREA FILL : 0.0

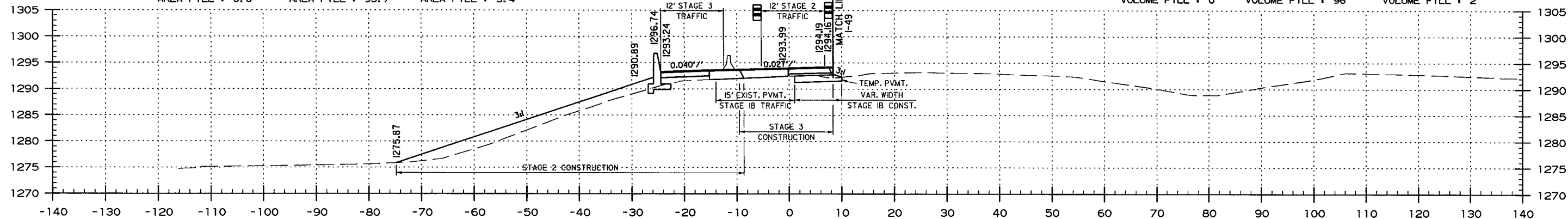
VOLUME CUT : 9 VOLUME CUT : 3 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 81 VOLUME FILL : 4



942+50

AREA CUT : 9.2 AREA CUT : 3.3 AREA CUT : 0.0
 AREA FILL : 0.0 AREA FILL : 95.7 AREA FILL : 3.4

VOLUME CUT : 8 VOLUME CUT : 3 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 96 VOLUME FILL : 2



942+25

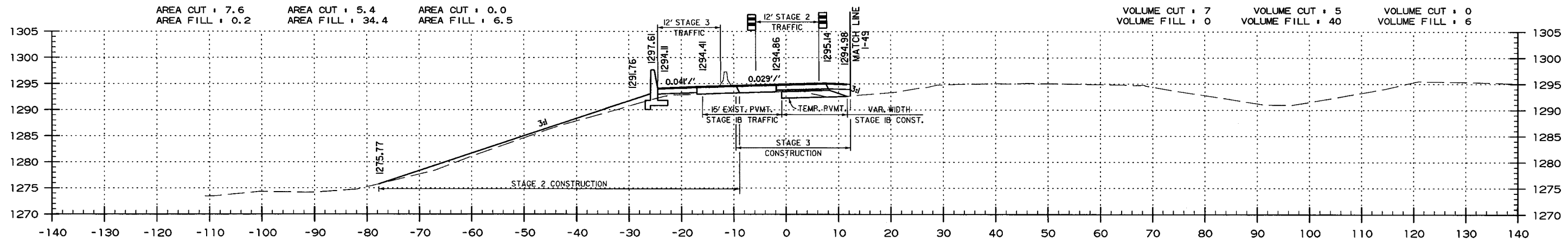
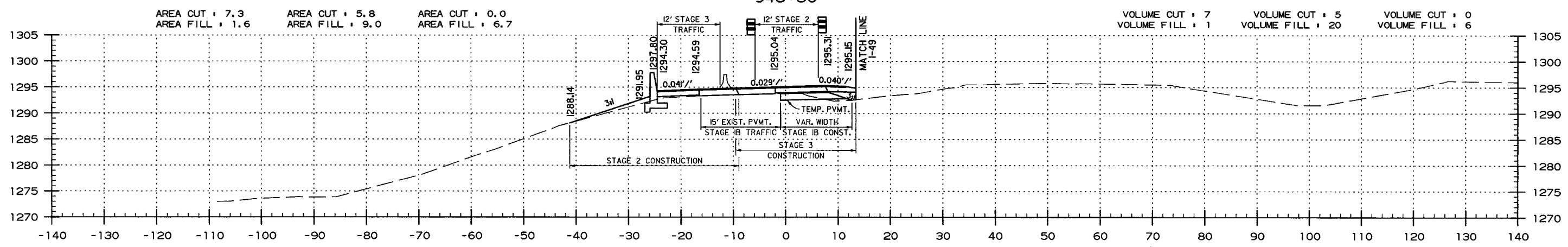
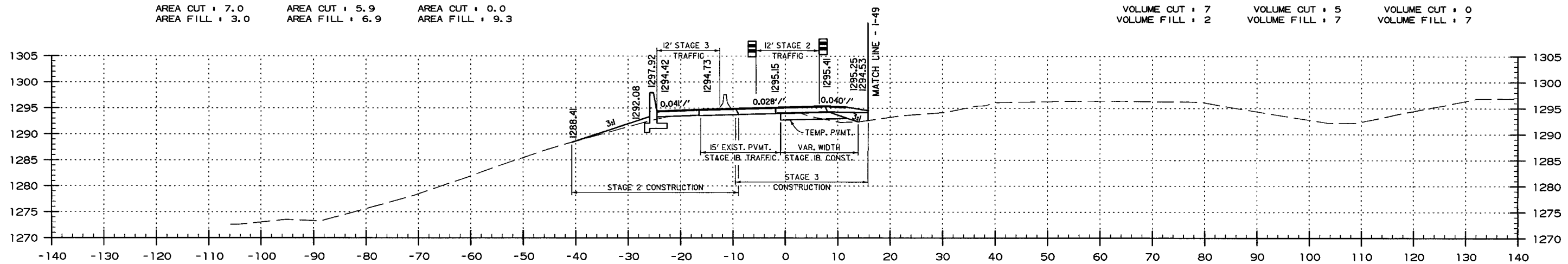
STAGE 1B STAGE 2 STAGE 3

STAGE 1B STAGE 2 STAGE 3

RAMP 4
 CROSS SECTION STA. 942+25 TO STA. 942+75

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	352	368	

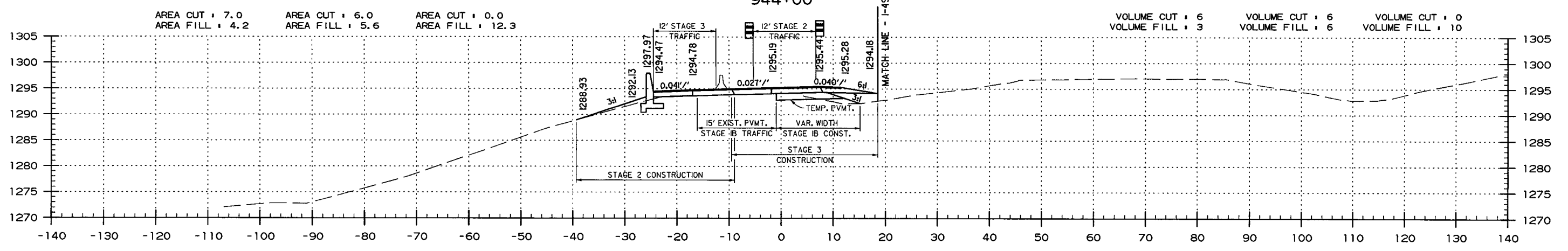
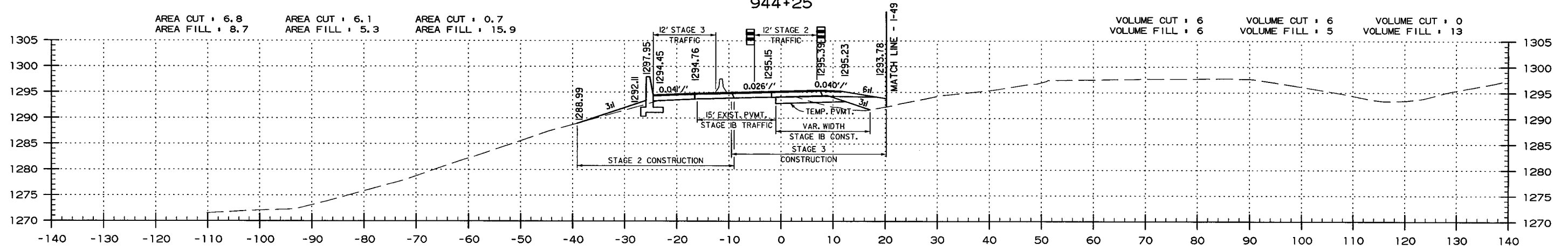
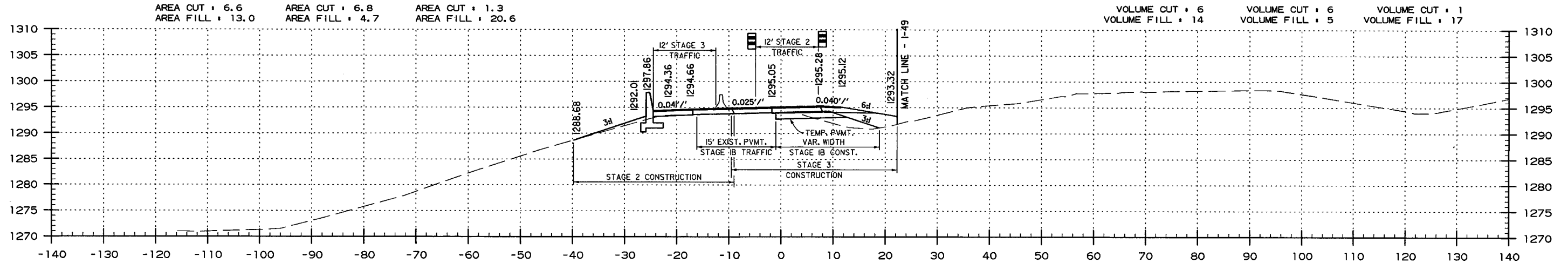
2 CROSS SECTIONS



RAMP 4
CROSS SECTION STA. 943+00 TO STA. 943+50

USER: mh514
DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\sect+r\BB0903_CX_HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	353	368	
				(2) CROSS SECTIONS				

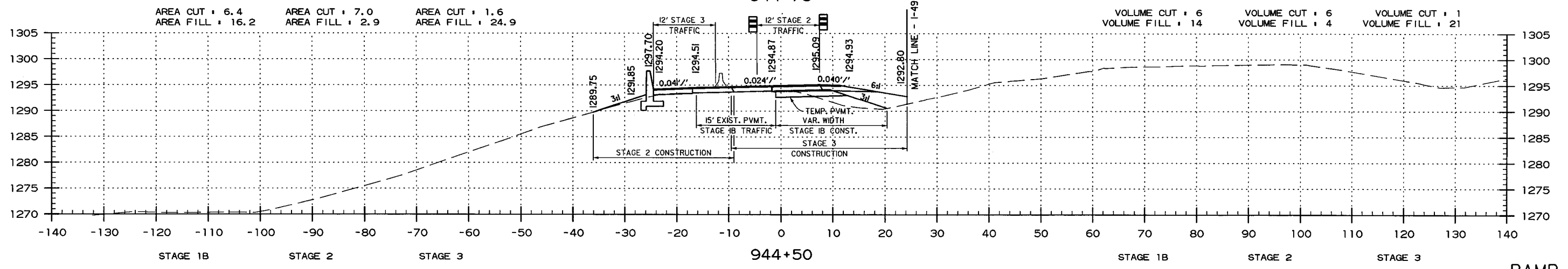
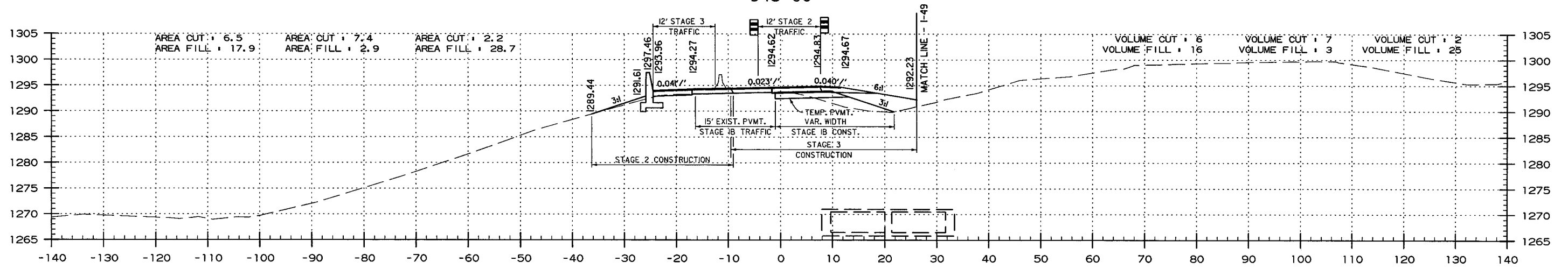
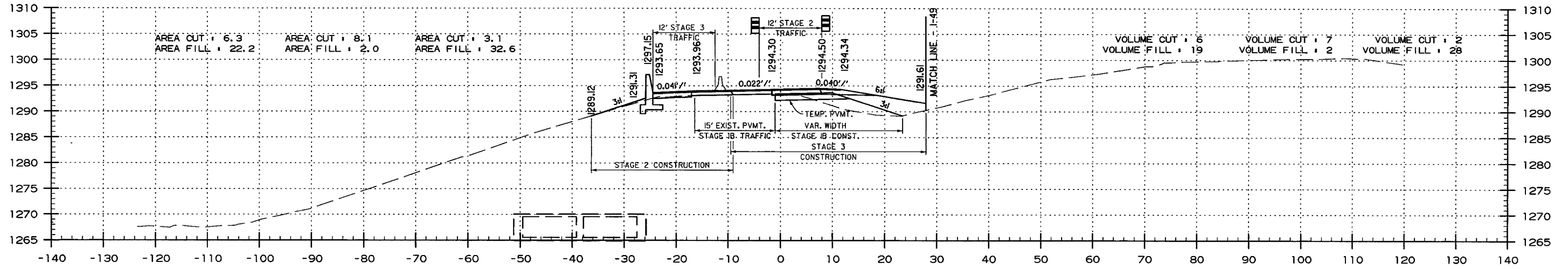


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 DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\sect\vr\BB0903_CX_HWY7IB_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

RAMP 4
CROSS SECTION STA. 943+75 TO STA. 944+25

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	354	368	

2 CROSS SECTIONS

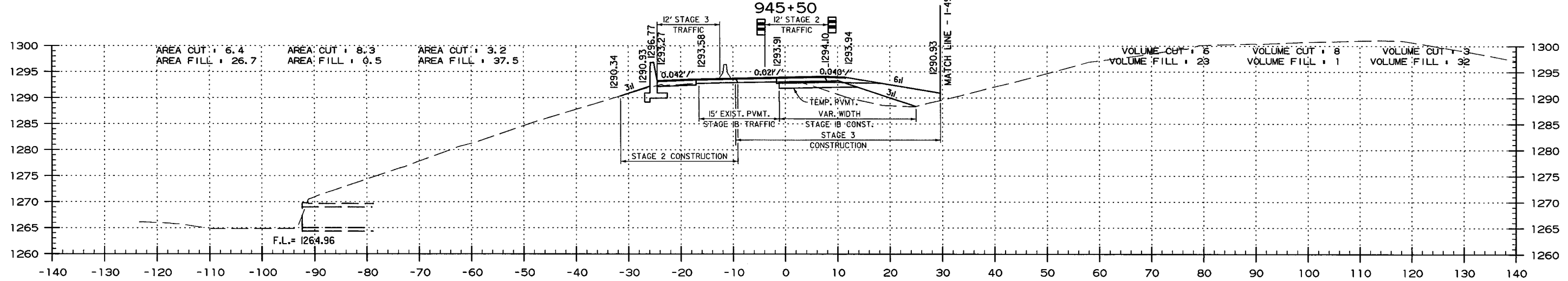
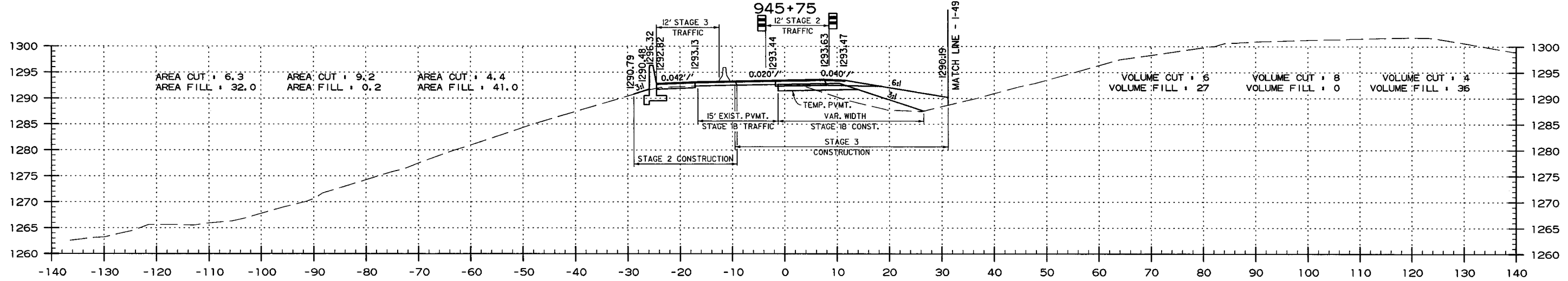
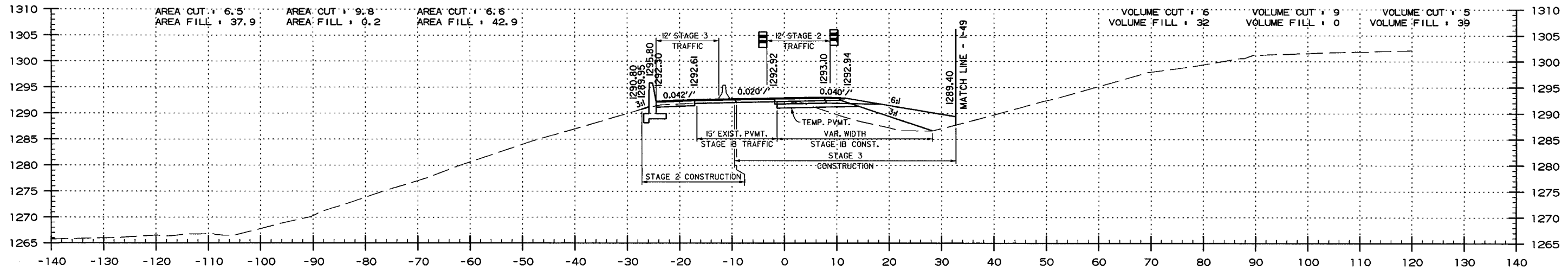


RAMP 4
 CROSS SECTION STA. 944+50 TO STA. 945+00

USER: mh514
 DESIGN FILE: G:\2103305.Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.HWY7IB.01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	355	368	

2 CROSS SECTIONS

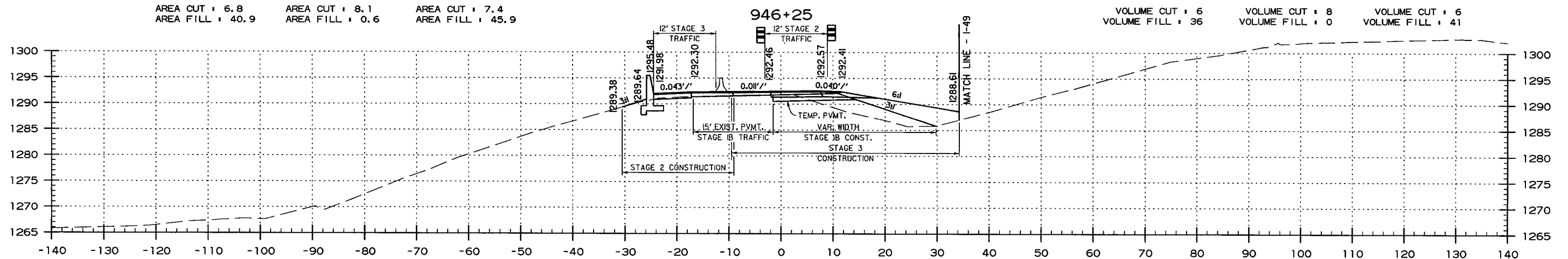
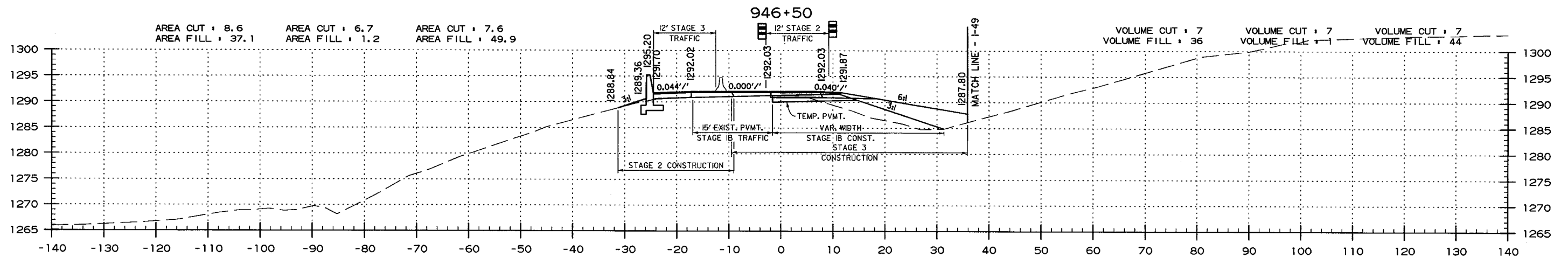
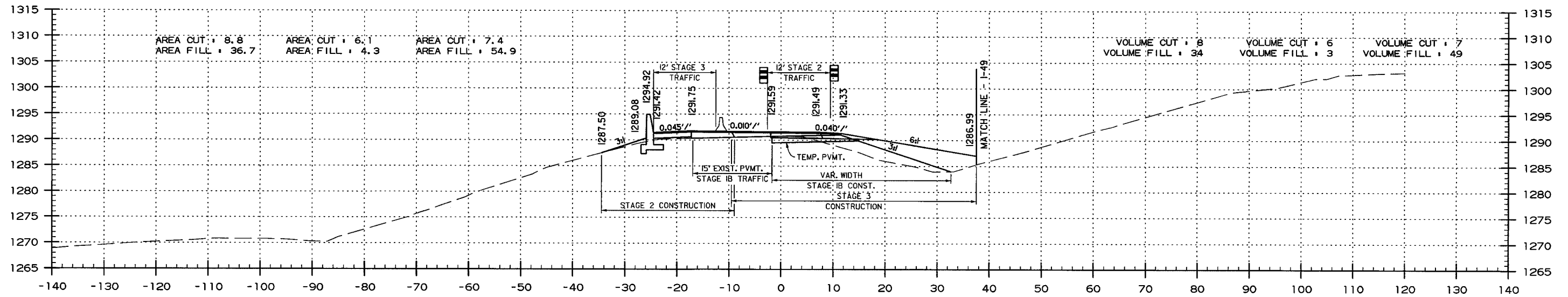


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 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

RAMP 4
 CROSS SECTION STA. 945+25 TO STA. 945+75

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AD. DIST. NO.	STATE	FED. AD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		356	368

2 CROSS SECTIONS

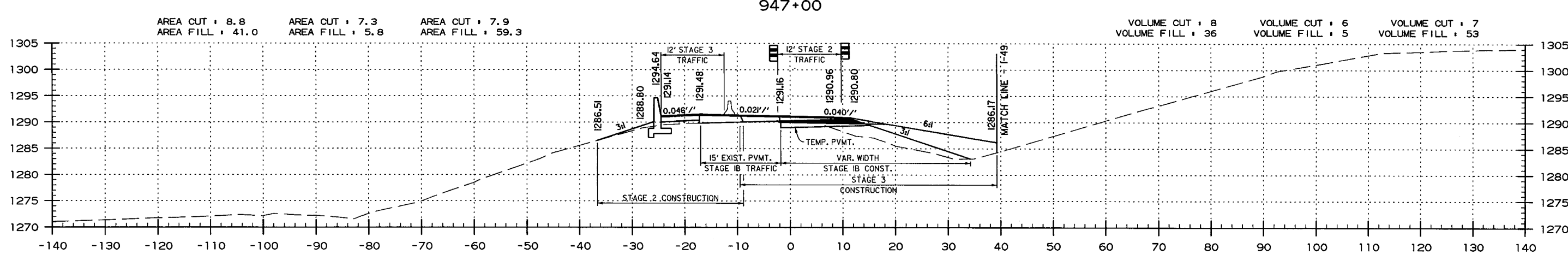
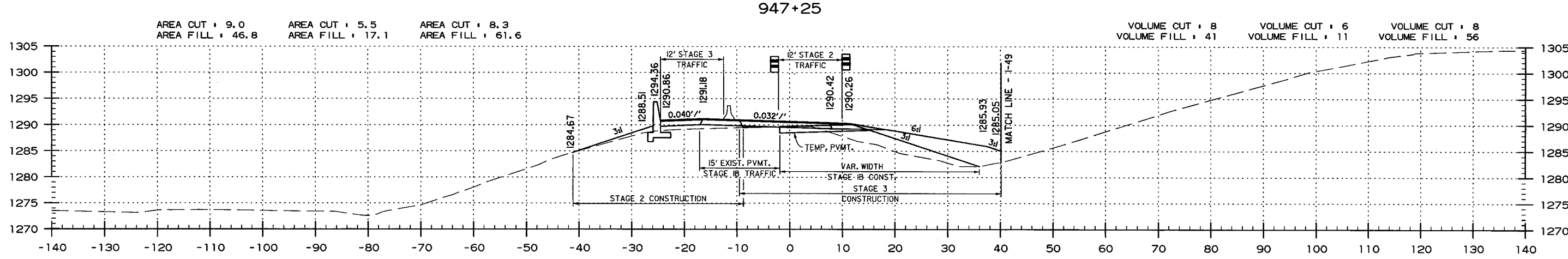
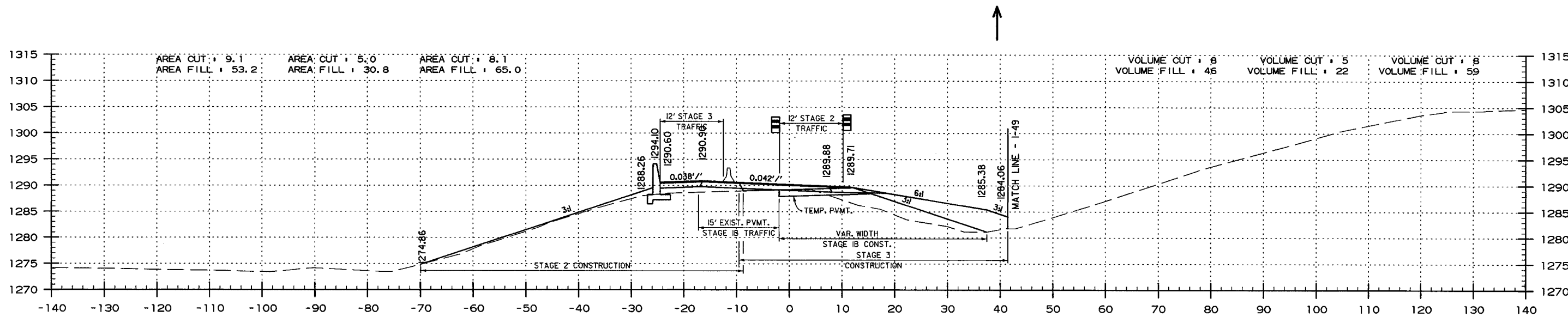


RAMP 4
CROSS SECTION STA. 946+00 TO STA. 946+50

USER: mh514
DESIGN FILE: G:\201305_Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX_HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903		357	368

2 CROSS SECTIONS



STAGE 1B STAGE 2 STAGE 3 STAGE 1B STAGE 2 STAGE 3

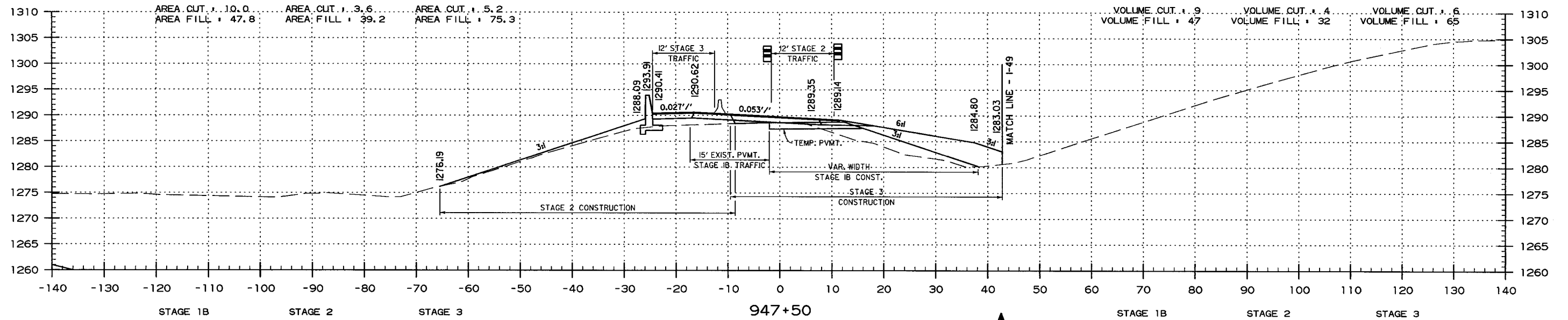
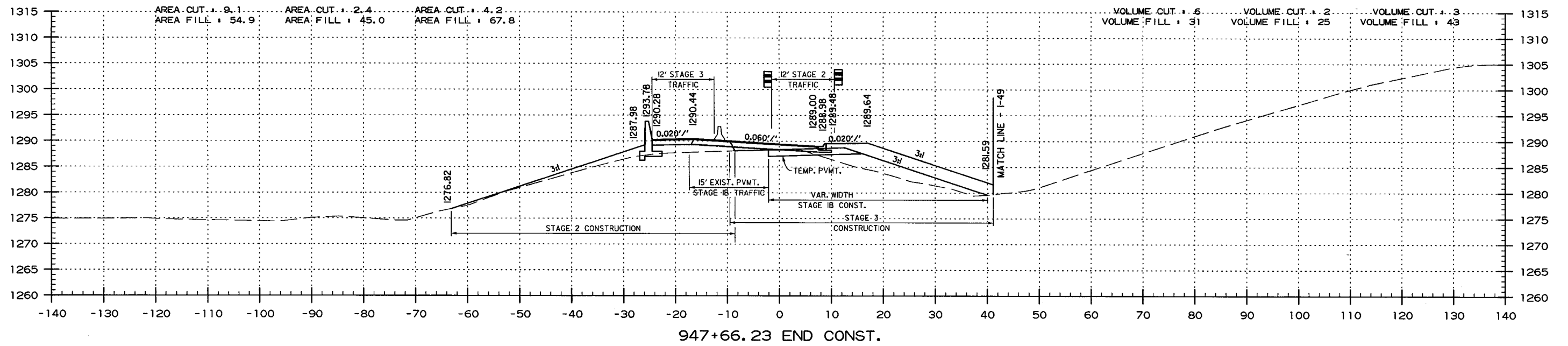
RAMP 4
CROSS SECTION STA. 946+75 TO STA. 947+25

USER: mh5114
 DESIGN FILE: G:\2103305.Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.HWY7IB.01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	358	368	

2 CROSS SECTIONS

STA. 948+00 IN PLACE
18" X 93' R.C. PIPE CULVERT
W/F.E.S. LT.
RETAIN AND MODIFY



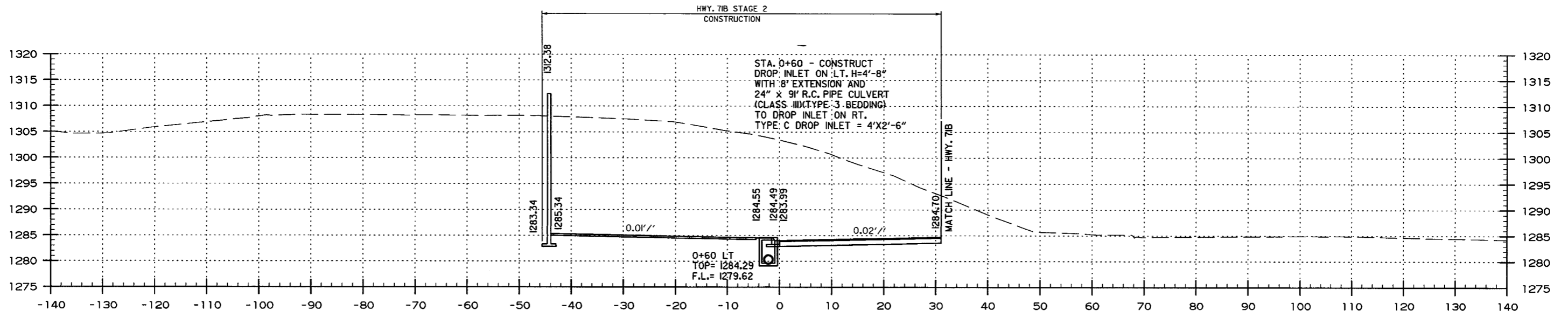
RAMP 4
CROSS SECTION STA. 947+50 TO STA. 947+66

USER: mh514
DESIGN FILE: G:\2103305_Hwy7\Inch\TRANSP\dgn\sect\BB0903.CX.HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	359	368	
2 CROSS SECTIONS								

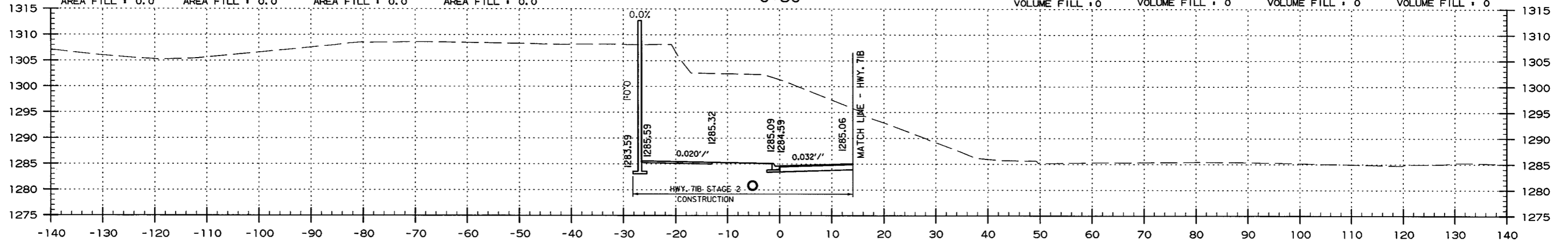
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 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0

VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 1035 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0



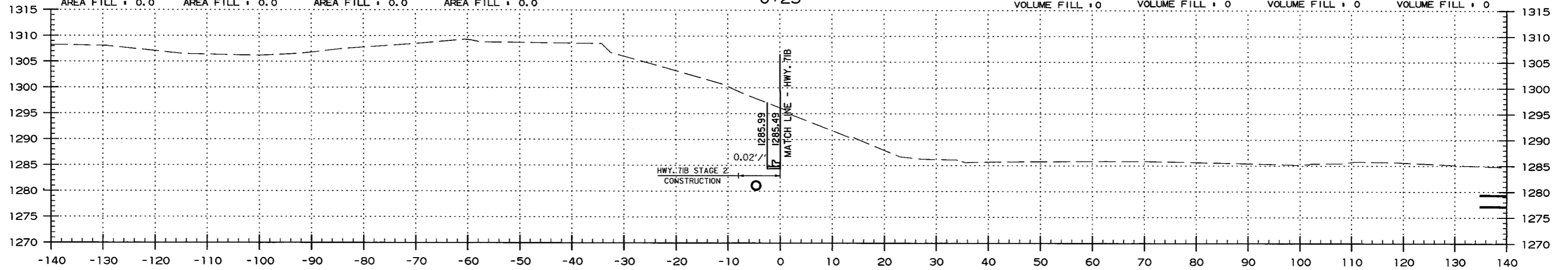
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 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0

VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 362 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0



AREA CUT : 0.0 AREA CUT : 0.0 AREA CUT : 29.8 AREA CUT : 0.0
 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0

VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0



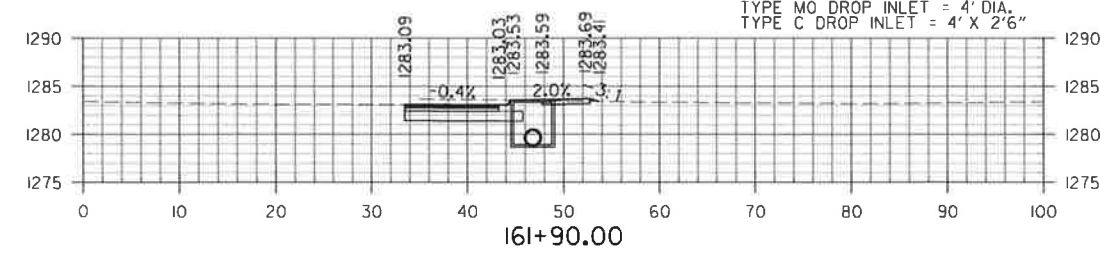
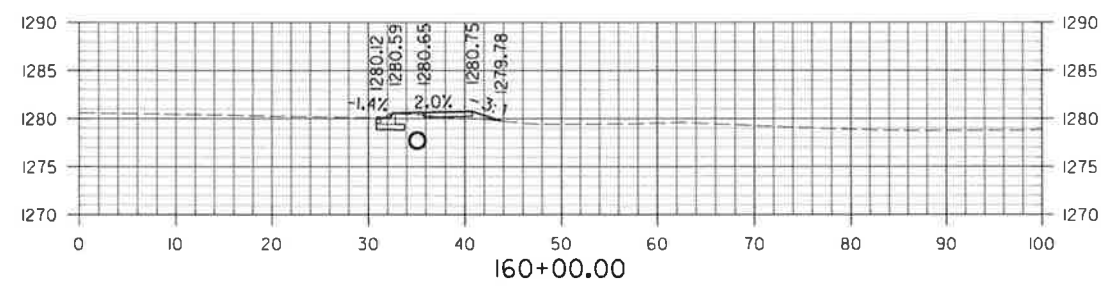
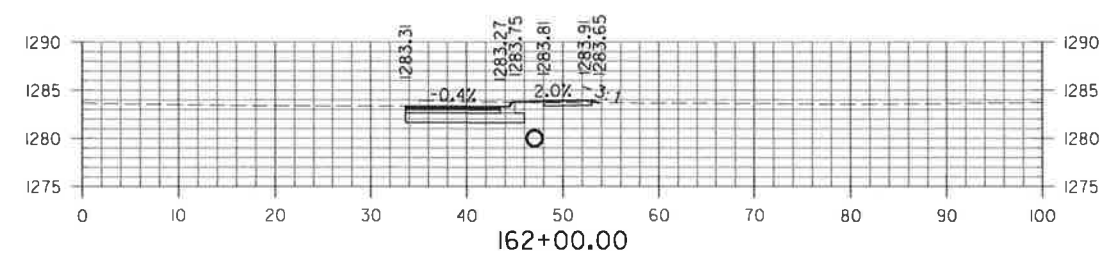
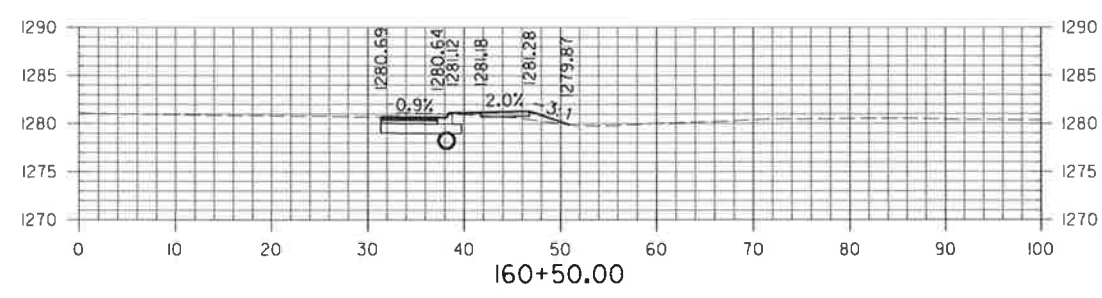
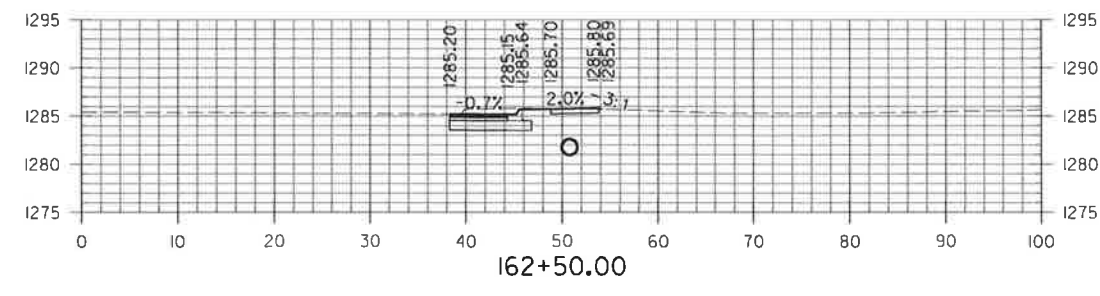
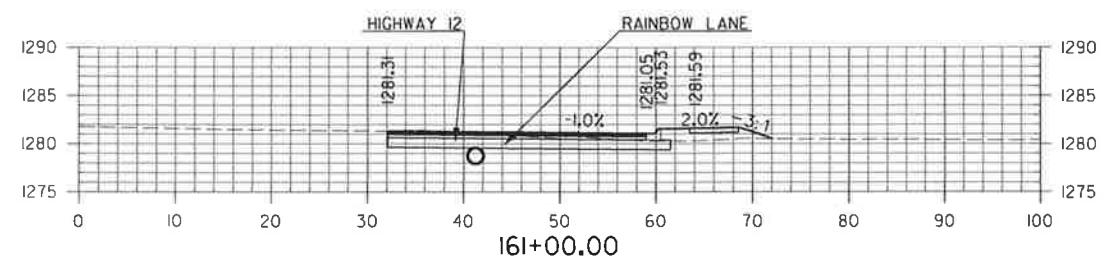
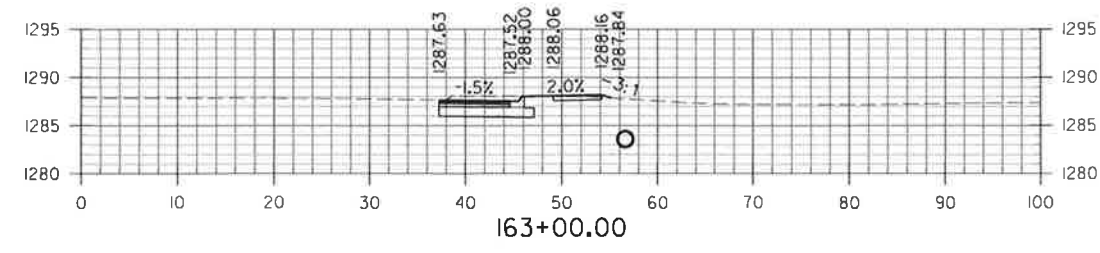
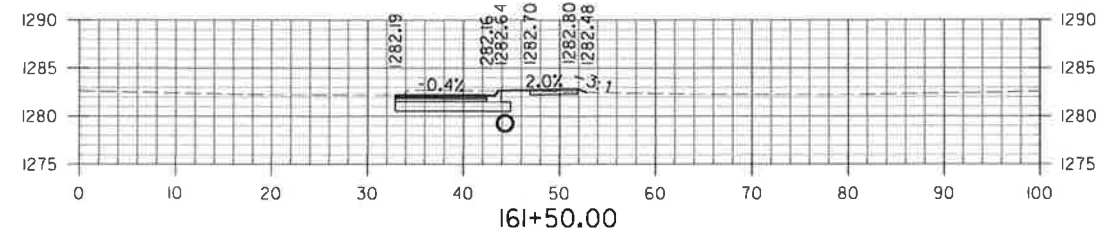
STAGE 1B STAGE 3 HWY. 71B STAGE 2 HWY. 71B STAGE 2B

STAGE 1B STAGE 3 HWY. 71B STAGE 2 HWY. 71B STAGE 2B

RAMP 4A
 CROSS SECTION STA. 0+00 TO STA. 0+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
				JOB NO.	BB0903	359A	359	

2 CROSS SECTIONS

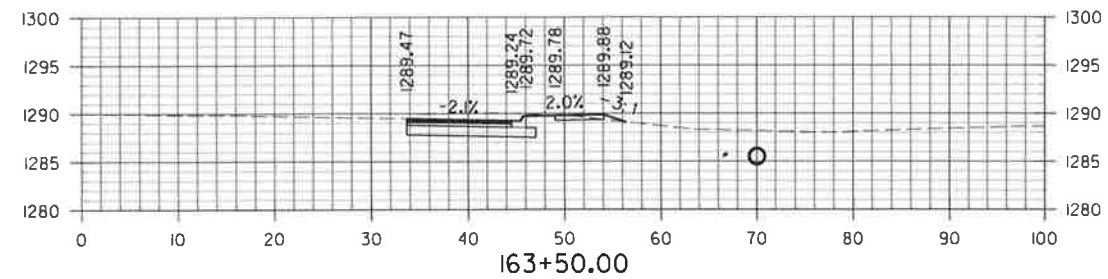
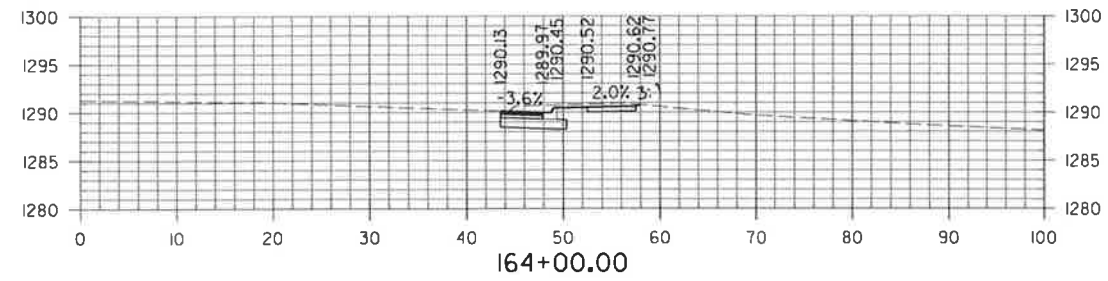
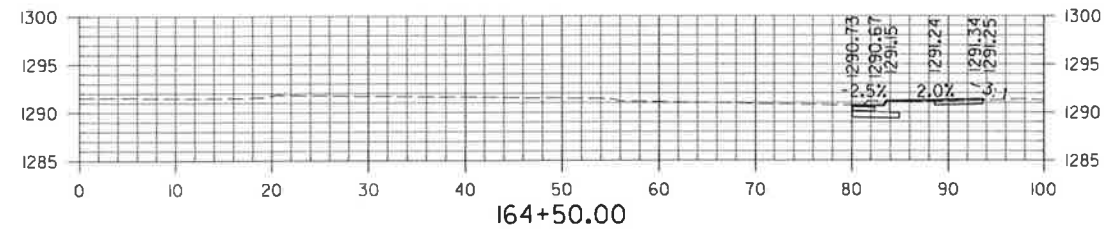
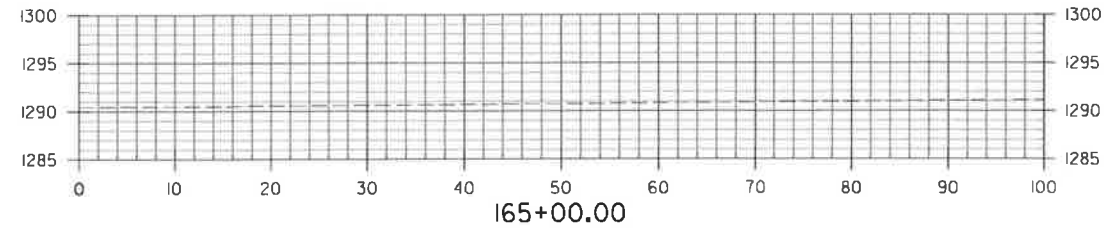


STA. 161+90.00 CONSTRUCT
 DROP INLET ON RT. H=4'6"
 WITH 18" X 20"
 R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING)
 TO DROP INLET ON RT.
 AND WITH 4' EXTENSION AND 18" X 22" R.C. PIPE CULVERT
 CLASS III (TYPE 3 BEDDING) WITH FES ON RT.
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4' X 2'6"

7/5/2018 4:38:54 PM
 WORKSPACE: AHTD
 L:\2008\08053550 - Brivar Hwy 12\Drawings\REF\Waltan Intersection REF\H12.CX.MAIN.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
07/05/18				6	ARK.			
				JOB NO.		BBO903	359B	359

2 CROSS SECTIONS



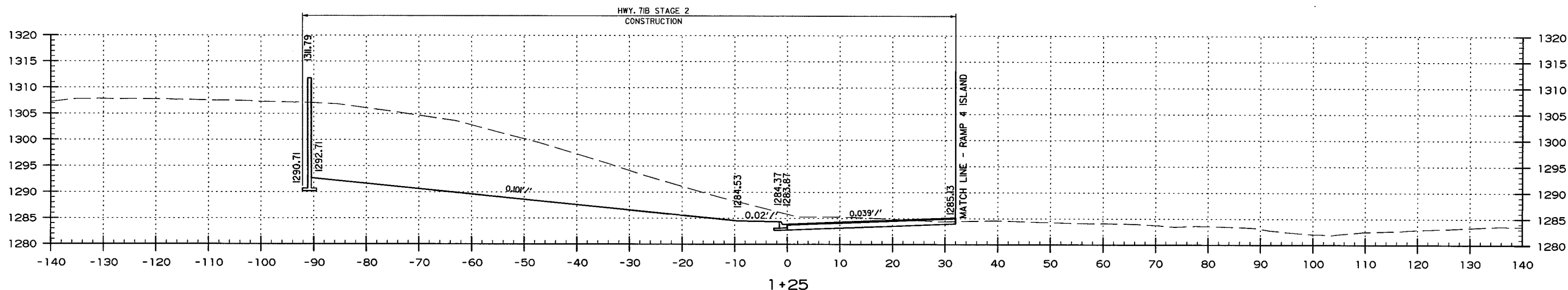
1\mccormick 7/5/2018 4:39:24 PM
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 L:\2008\B05350 - Bnvar Hwy 12\Drawings\REF\Walton Intersection REF.VH2.CX.MAIN.dgn
 REVISED DATE:

STA. 163+50 TO STA. 165+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	360	368	
				2 CROSS SECTIONS				

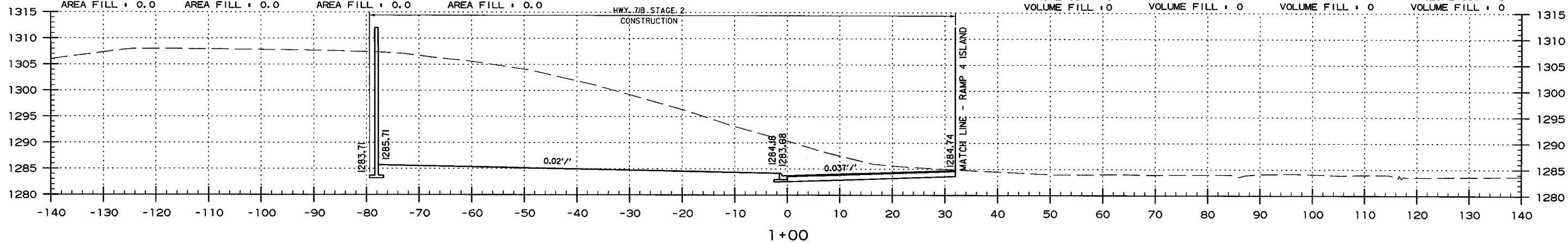
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VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 1085 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0



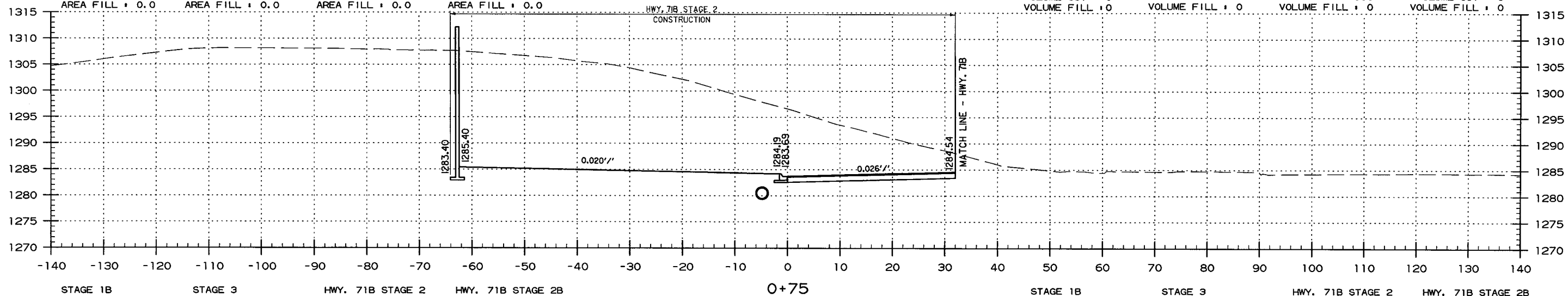
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 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0

VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 1336 VOLUME CUT : 0
 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0 VOLUME FILL : 0



AREA CUT : 0.0 AREA CUT : 0.0 AREA CUT : 1510.8 AREA CUT : 0.0
 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0 AREA FILL : 0.0

VOLUME CUT : 0 VOLUME CUT : 0 VOLUME CUT : 1386 VOLUME CUT : 0
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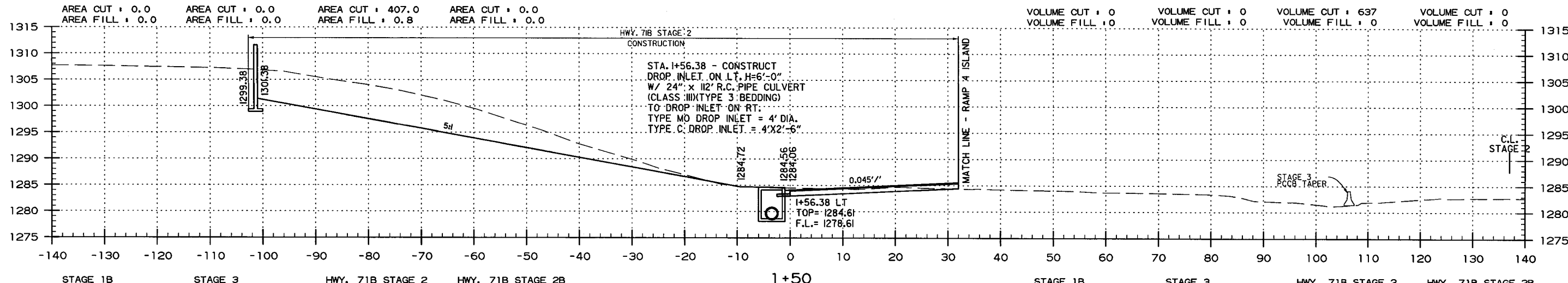
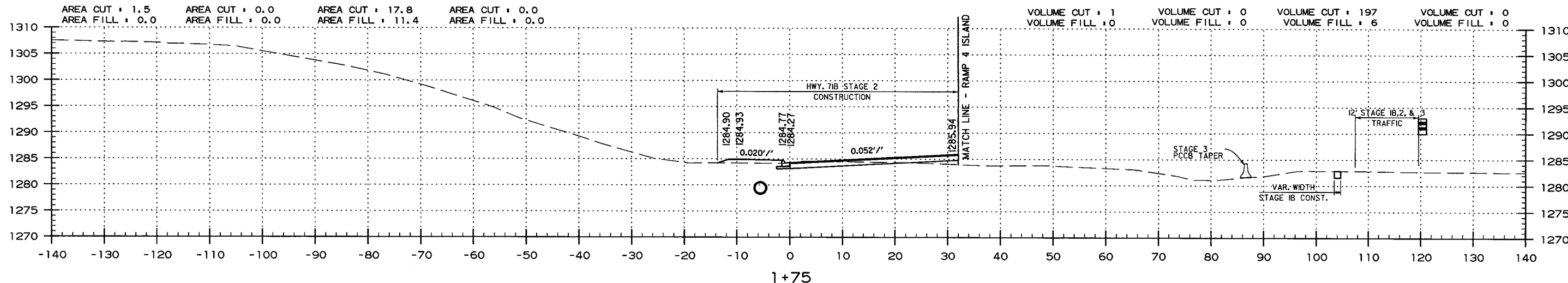
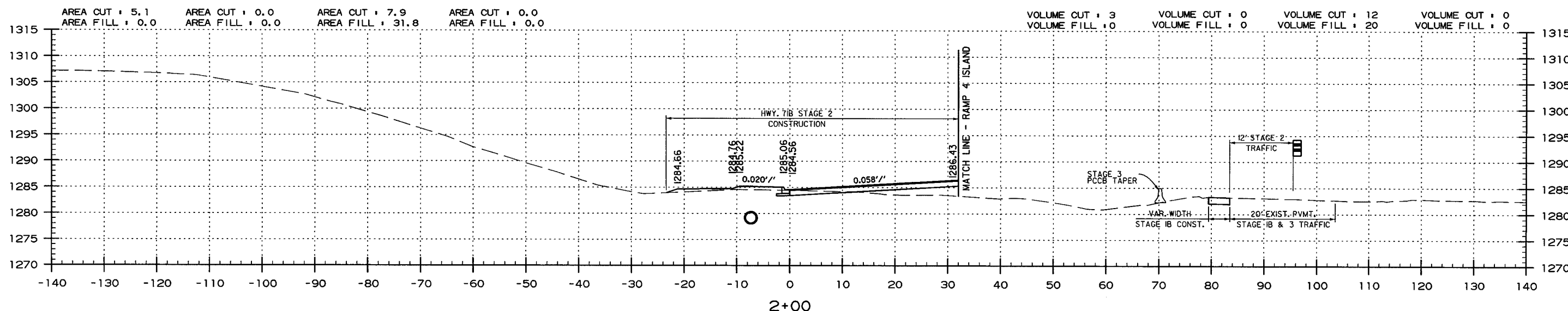
STAGE 1B STAGE 3 HWY. 71B STAGE 2 HWY. 71B STAGE 2B STAGE 1B STAGE 3 HWY. 71B STAGE 2 HWY. 71B STAGE 2B

RAMP 4A
 CROSS SECTION STA. 0+75 TO STA. 1+25

USER: mh514
 DESIGN FILE: G:\2103305.Hwy71\hchg\TRANSP\dgn\sect\vr\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	361	368	

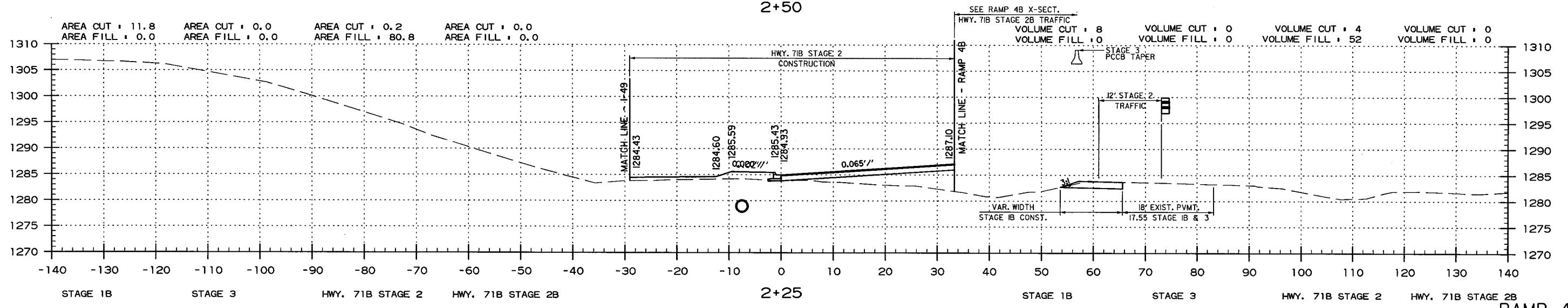
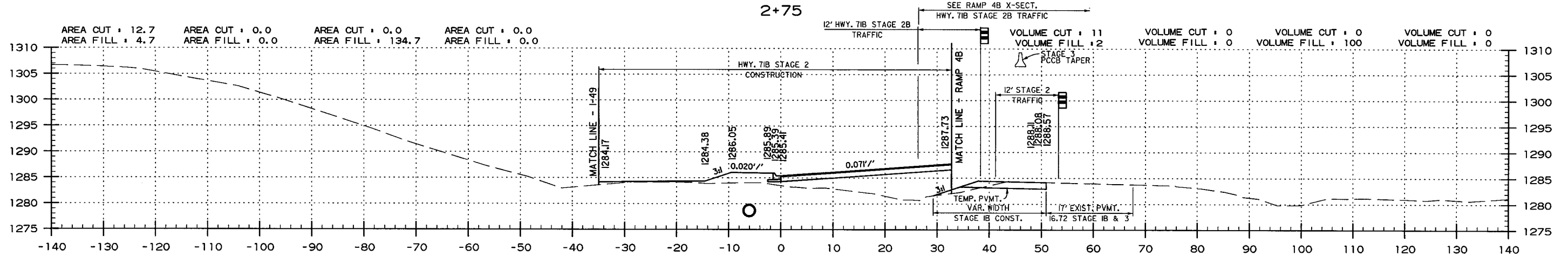
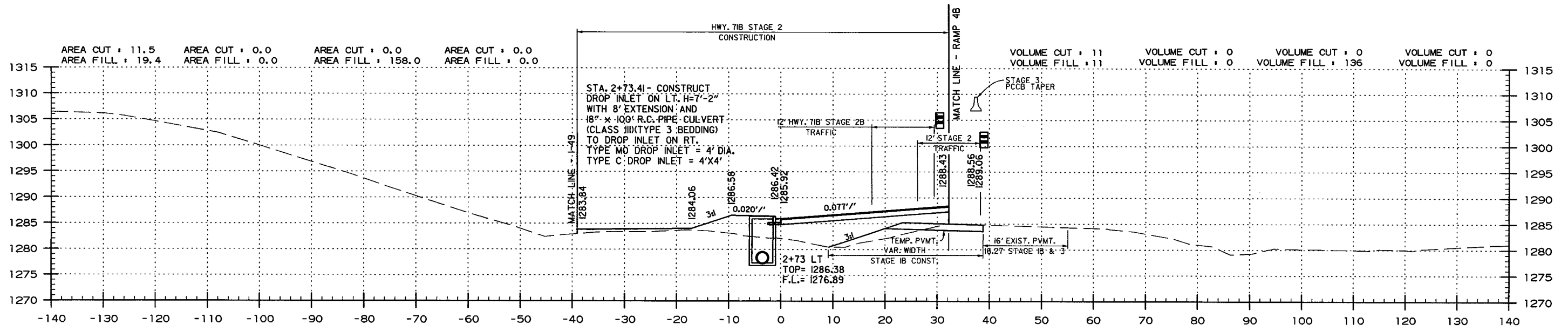
2 CROSS SECTIONS



RAMP 4A
CROSS SECTION STA. 1+50 TO STA. 2+00

USER: mh514
DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\xsect\BB0903_CX_HWY7IB_01.dgn
PLOTTED: 6/6/2018 14:48
SCALE: 1:20

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	BB0903	362	368		
2								CROSS SECTIONS	

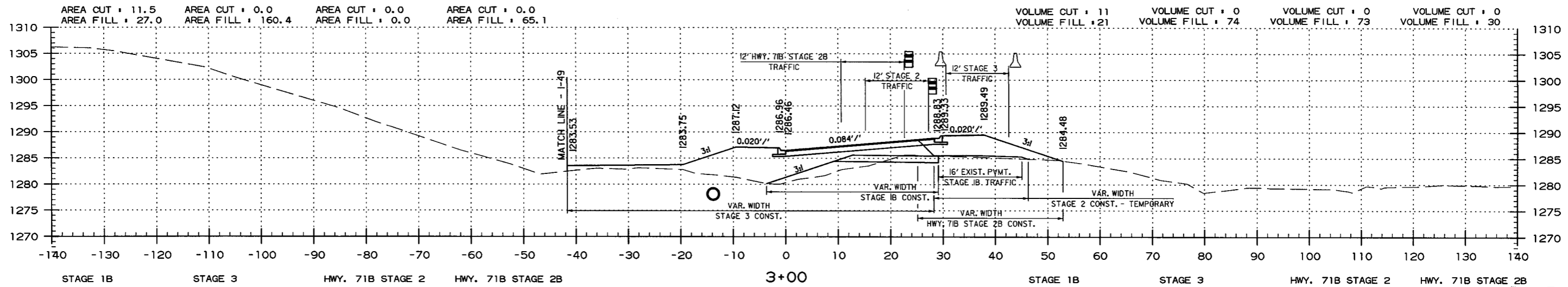
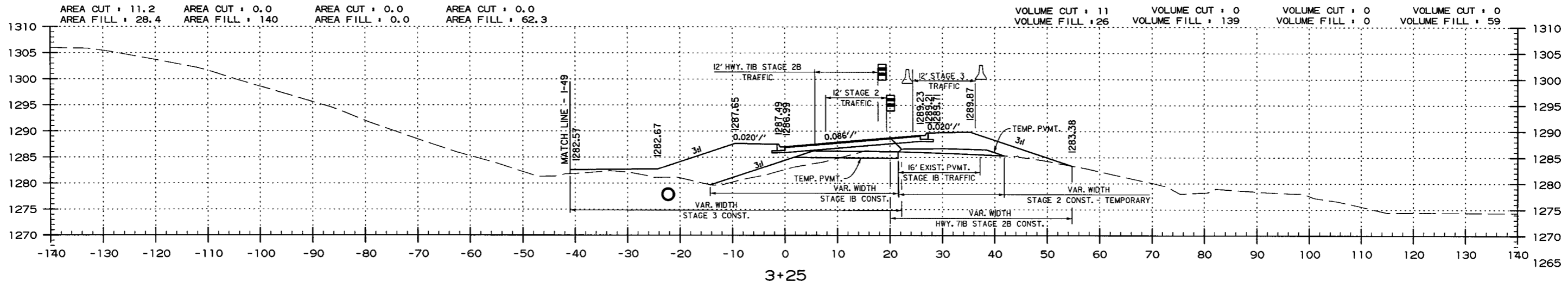
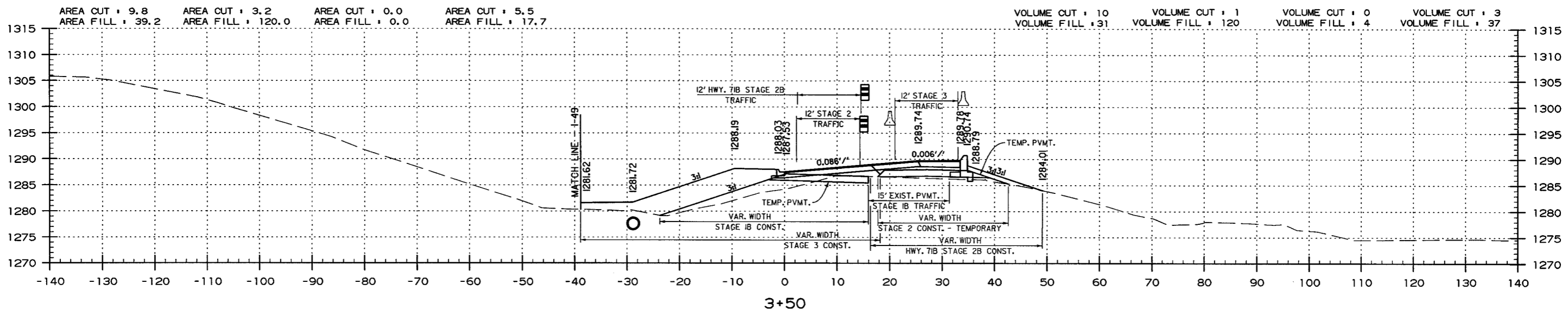


RAMP 4A
CROSS SECTION STA. 2+25 TO STA. 2+75

USER: mh514
 DESIGN FILE: G:\2103305.Hwy71\hwy71\transp\dgn\xsect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	363	368	

2 CROSS SECTIONS

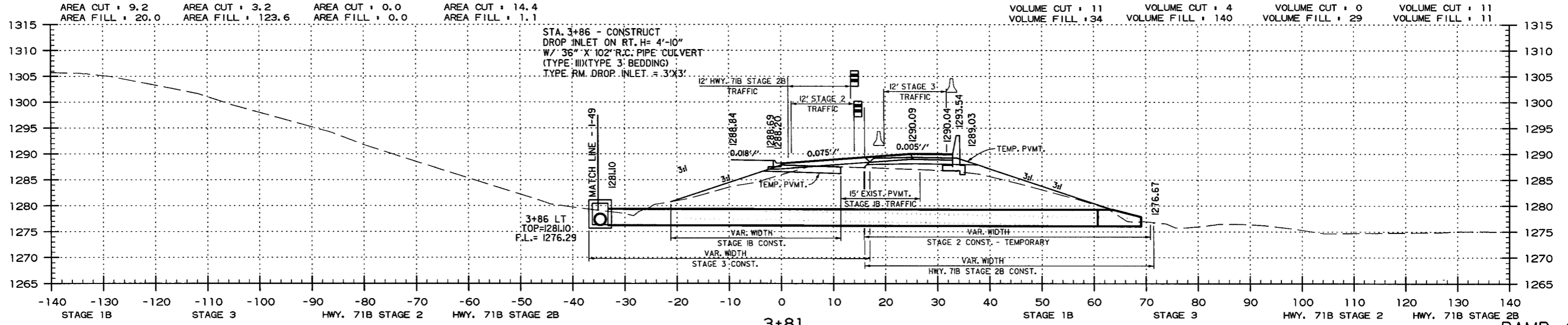
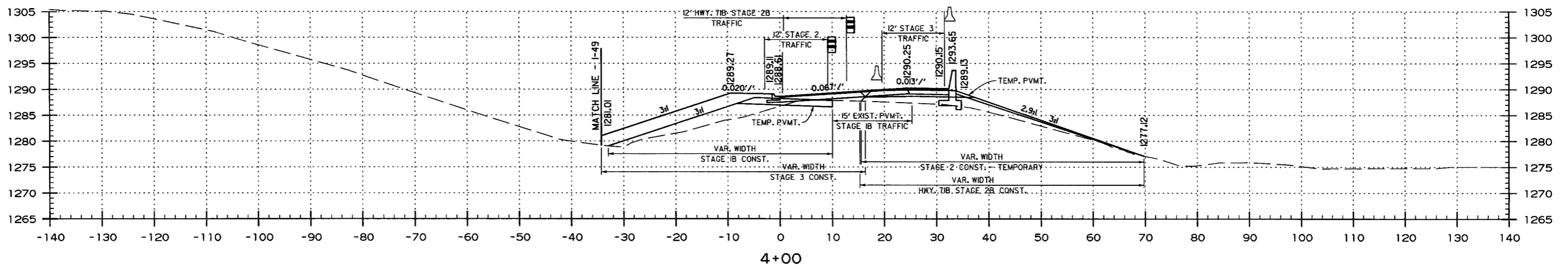
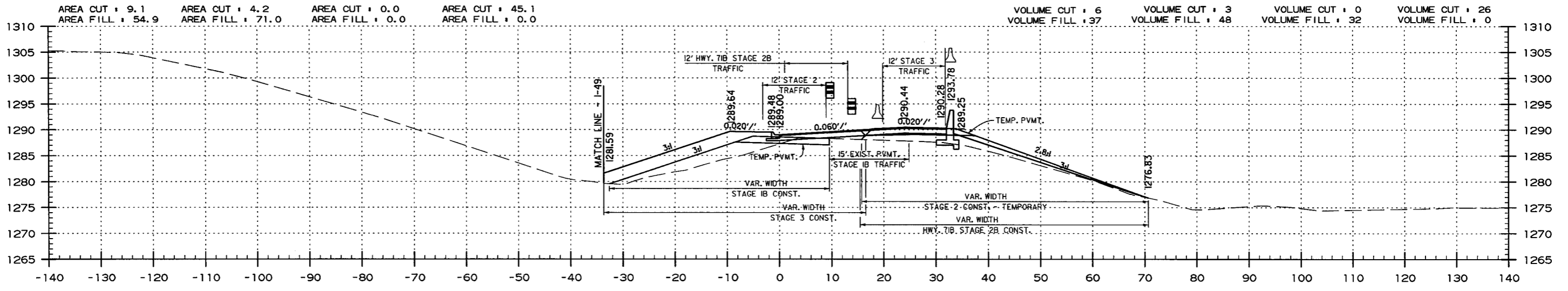


RAMP 4A
 CROSS SECTION STA. 3+00 TO STA. 3+50

USER: mps14
 DESIGN FILE: G:\2103305_Hwy7\Inchq\TRANSP\dgn\sect\BB0903.CX.HWY7IB_01.dgn
 PLOTTED: 6/6/2018 14:48

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. BB0903	364	368

2 CROSS SECTIONS

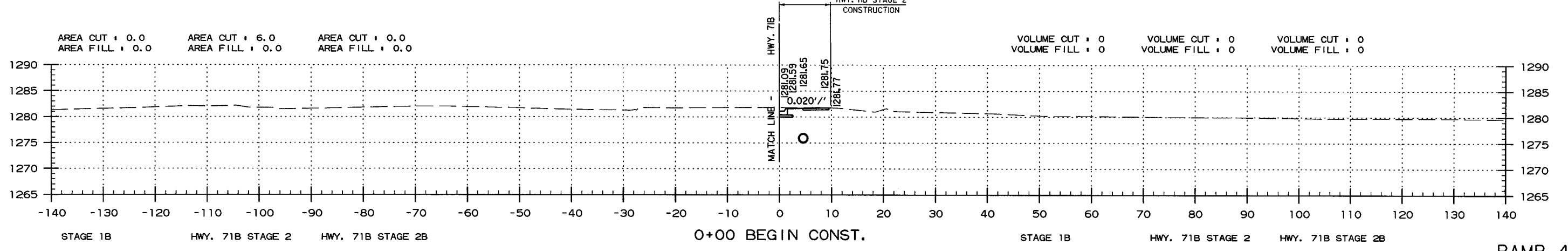
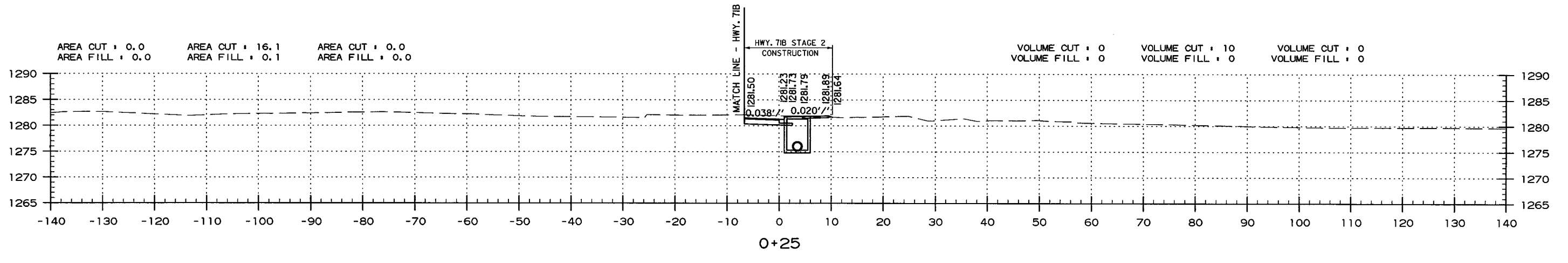
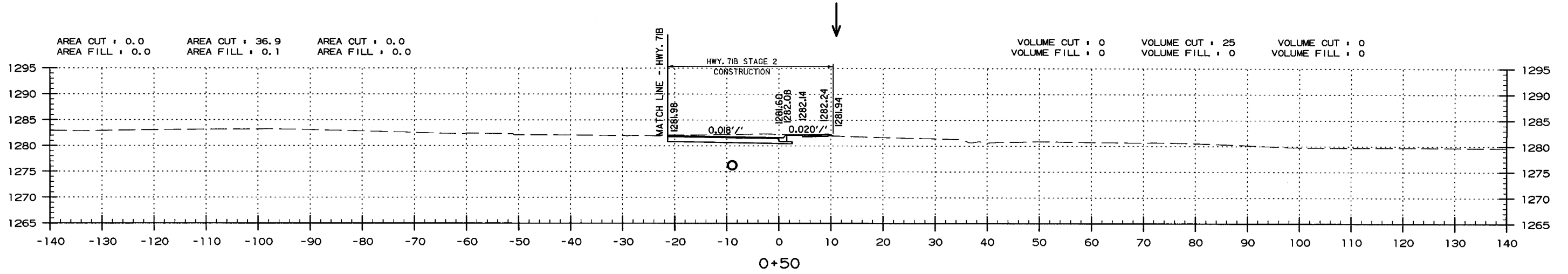


RAMP 4A
 CROSS SECTION STA. 3+75 TO STA. 4+18

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71inchg\TRANSP\dgn\sect\FB0903_CX_HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	365	368	

2 CROSS SECTIONS



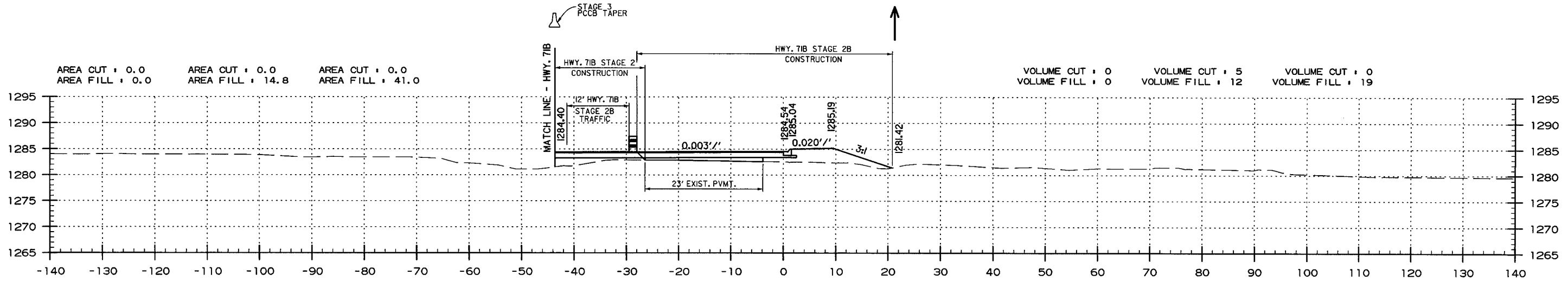
STAGE 1B HWY. 71B STAGE 2 HWY. 71B STAGE 2B STAGE 1B HWY. 71B STAGE 2 HWY. 71B STAGE 2B

RAMP 4B
 CROSS SECTION STA. 0+00 TO STA. 0+50

USER: mh514
 DESIGN FILE: G:\2103305_Hwy71Inchq\TRANSP\dgn\xsect\BB0903.CX.HWY71B_01.dgn
 PLOTTED: 6/6/2018 14:48
 SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BB0903	366	368	

2 CROSS SECTIONS



AREA CUT : 0.0
AREA FILL : 0.0

AREA CUT : 0.0
AREA FILL : 14.8

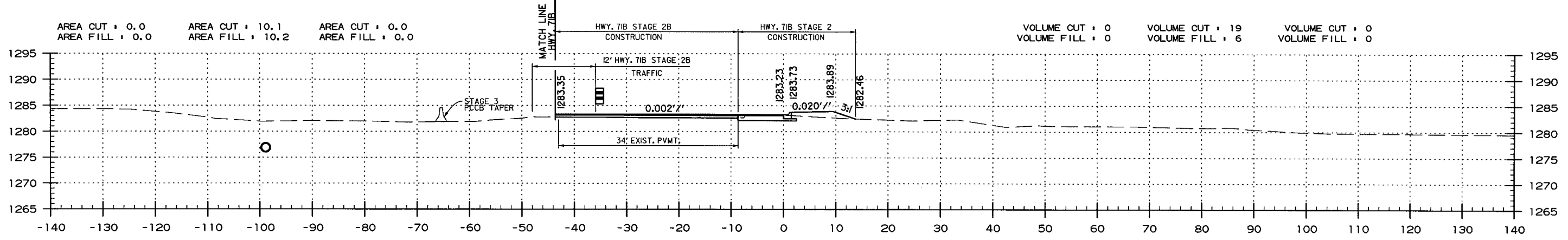
AREA CUT : 0.0
AREA FILL : 41.0

VOLUME CUT : 0
VOLUME FILL : 0

VOLUME CUT : 5
VOLUME FILL : 12

VOLUME CUT : 0
VOLUME FILL : 19

1+25



AREA CUT : 0.0
AREA FILL : 0.0

AREA CUT : 10.1
AREA FILL : 10.2

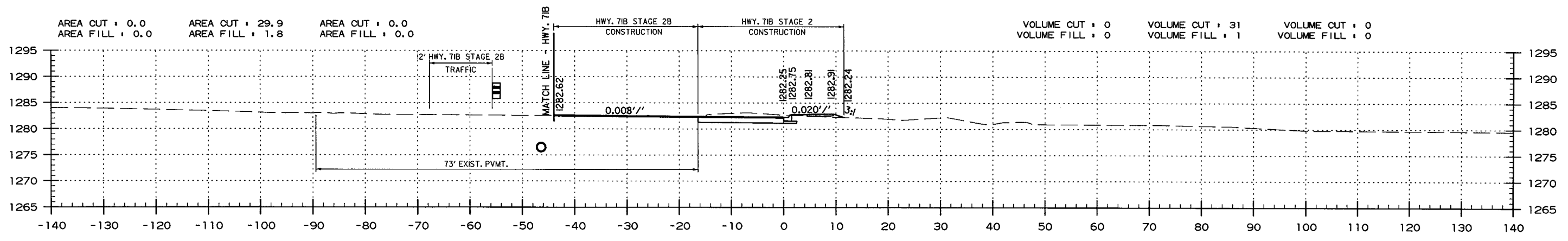
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AREA FILL : 0.0

VOLUME CUT : 0
VOLUME FILL : 0

VOLUME CUT : 19
VOLUME FILL : 6

VOLUME CUT : 0
VOLUME FILL : 0

1+00



AREA CUT : 0.0
AREA FILL : 0.0

AREA CUT : 29.9
AREA FILL : 1.8

AREA CUT : 0.0
AREA FILL : 0.0

VOLUME CUT : 0
VOLUME FILL : 0

VOLUME CUT : 31
VOLUME FILL : 1

VOLUME CUT : 0
VOLUME FILL : 0

0+75

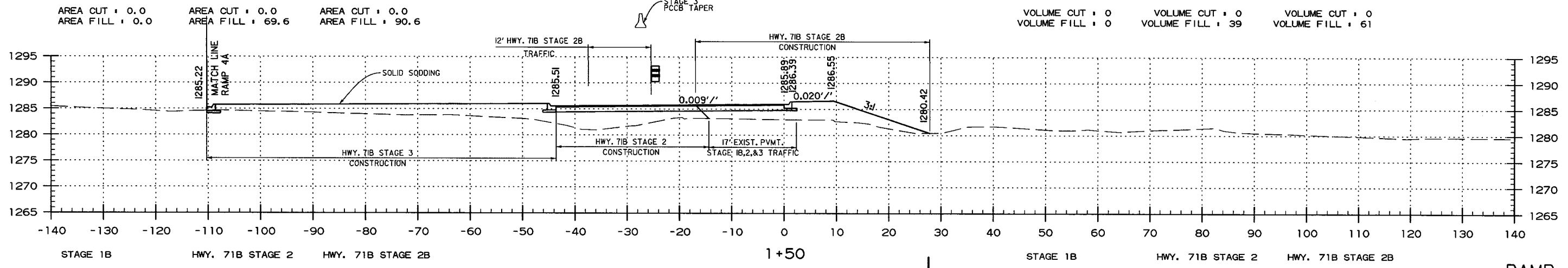
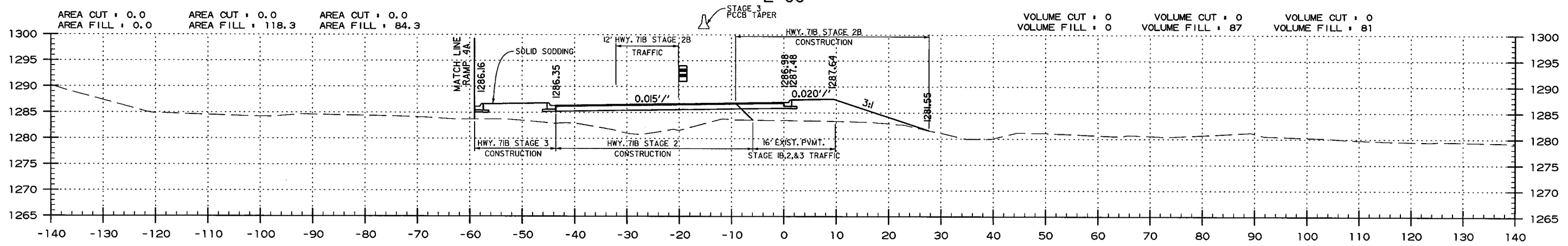
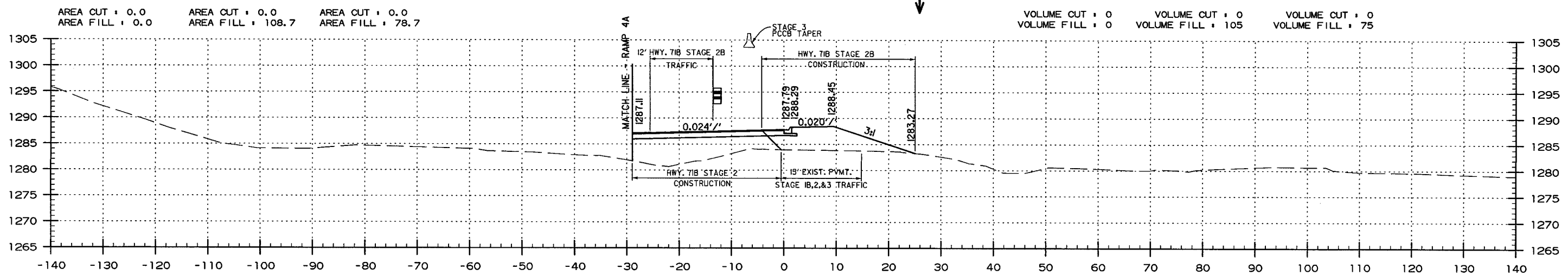
STAGE 1B HWY. 71B STAGE 2 HWY. 71B STAGE 2B STAGE 1B HWY. 71B STAGE 2 HWY. 71B STAGE 2B

RAMP 4B
CROSS SECTION STA. 0+75 TO STA. 1+25

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SCALE: 1:20

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2 CROSS SECTIONS

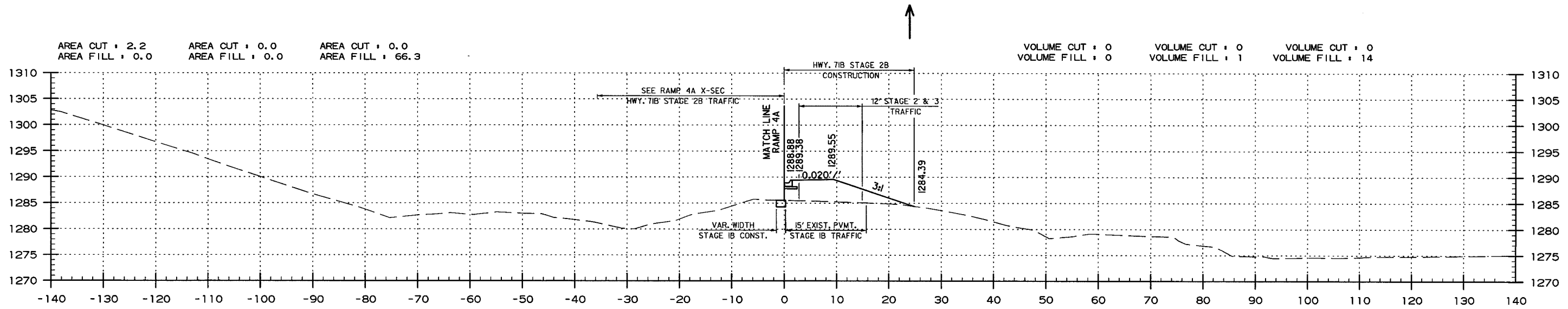


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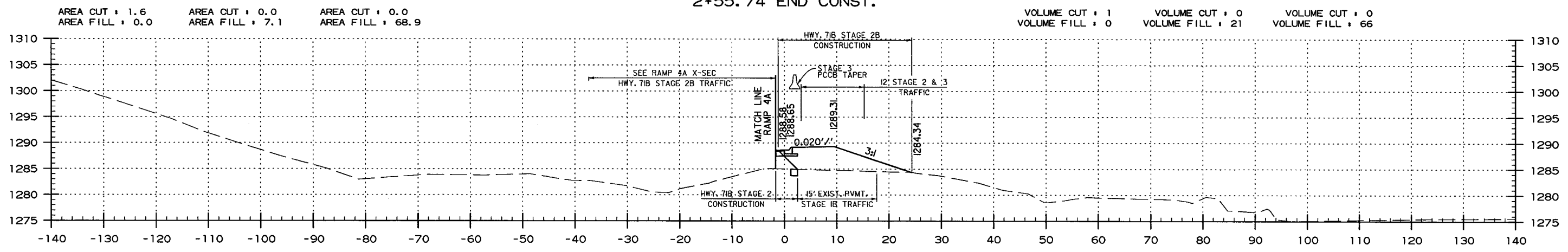
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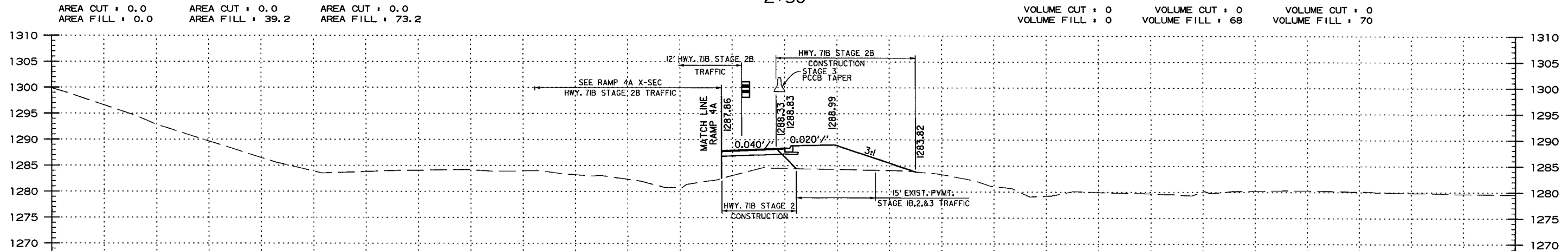
2 CROSS SECTIONS



2+55.74 END CONST.



2+50



2+25

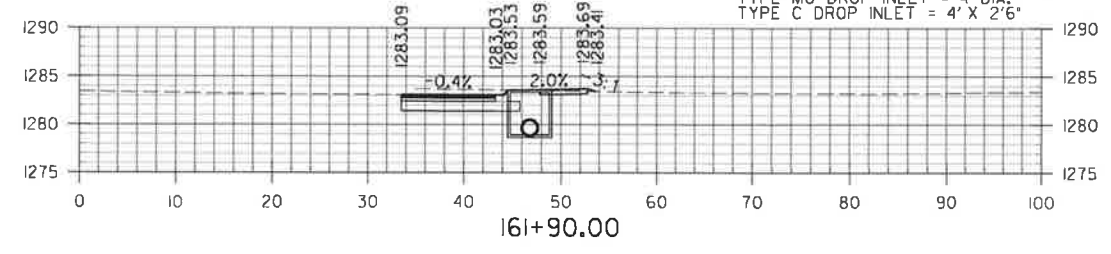
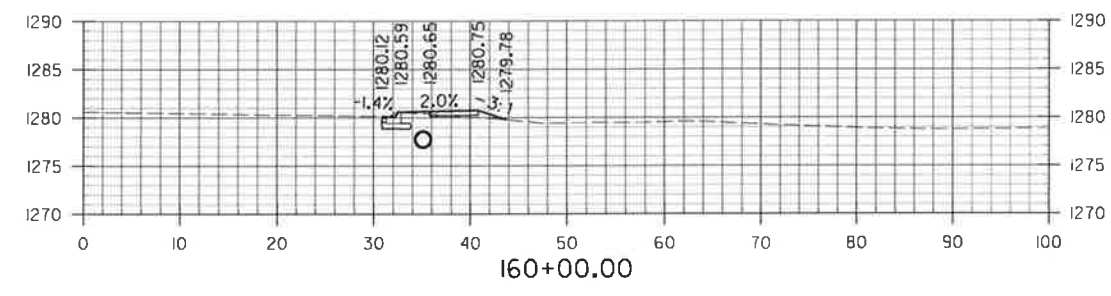
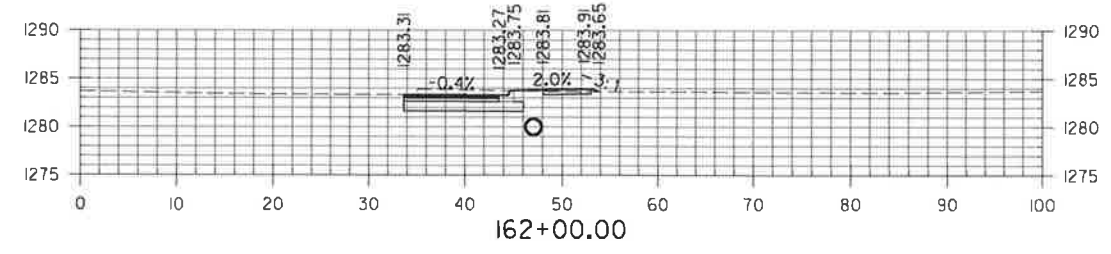
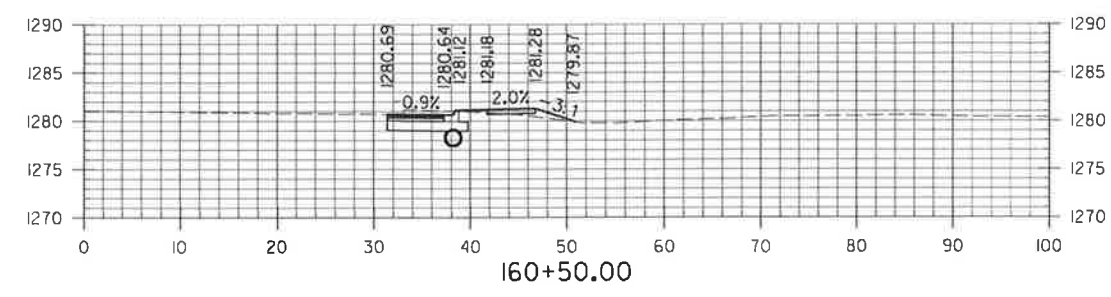
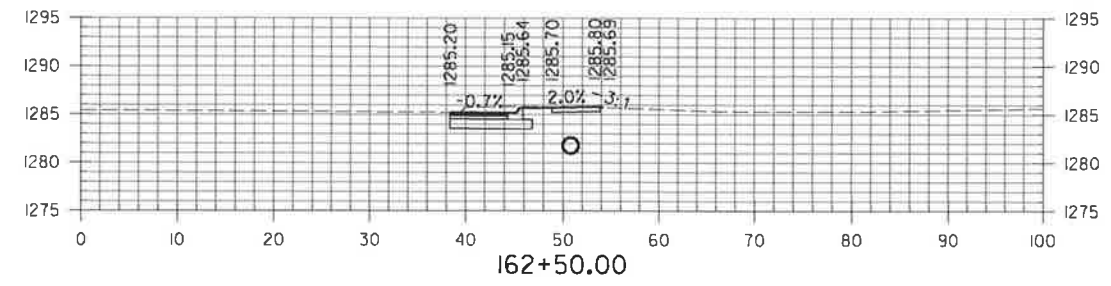
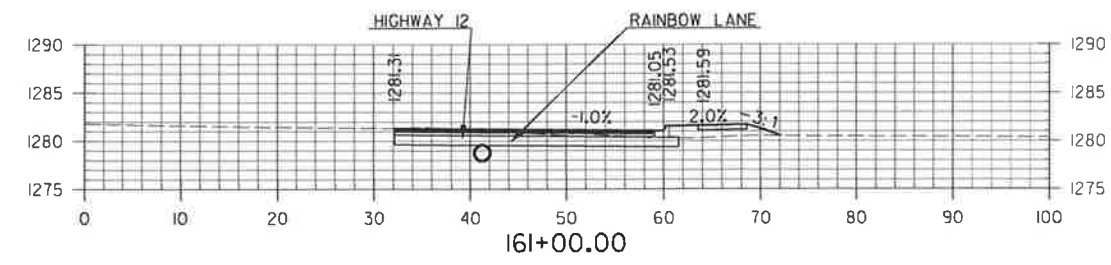
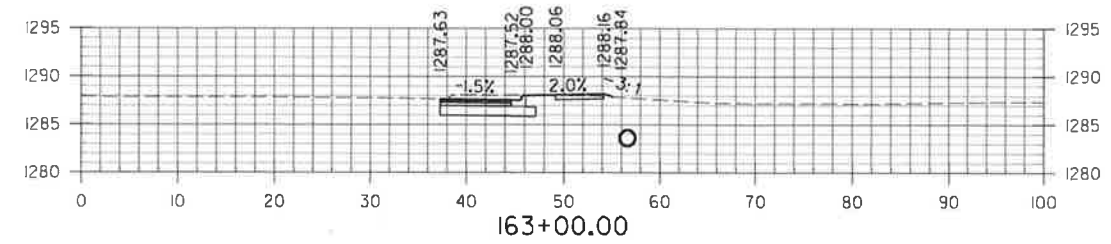
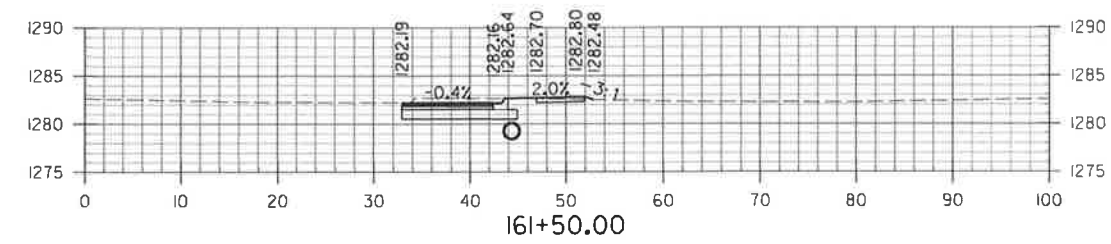
STAGE 1B HWY. 71B STAGE 2 HWY. 71B STAGE 2B STAGE 1B HWY. 71B STAGE 2 HWY. 71B STAGE 2B

RAMP 4B
CROSS SECTION STA. 2+25 TO STA. 2+75

USER: mh514
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07/05/18				6	ARK.			
07/16/18						JOB NO. BB0903	368A	368

2 CROSS SECTIONS



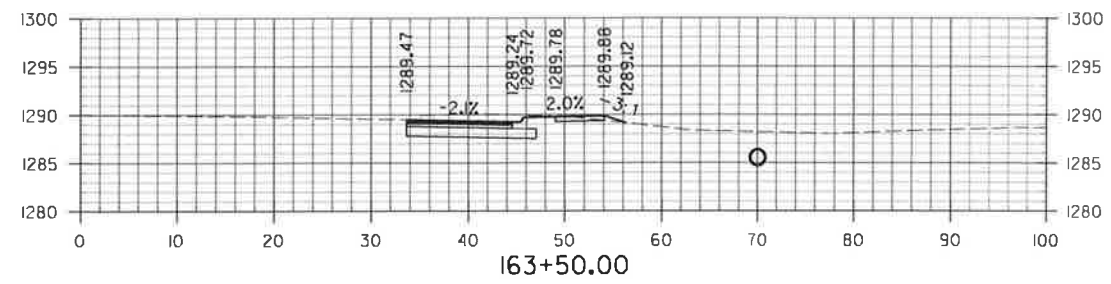
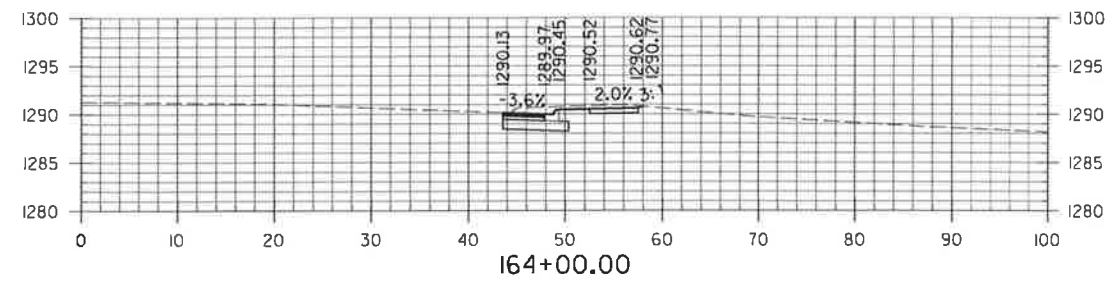
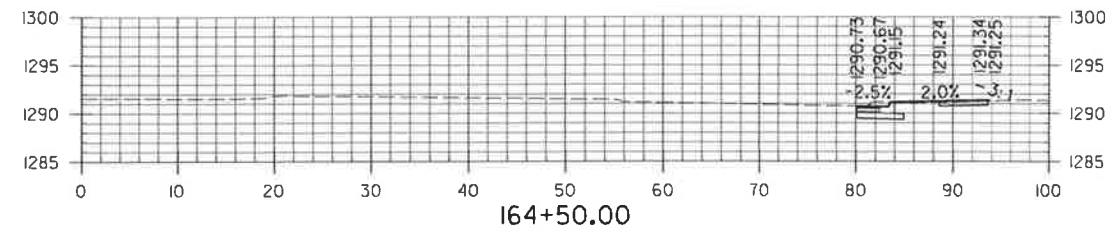
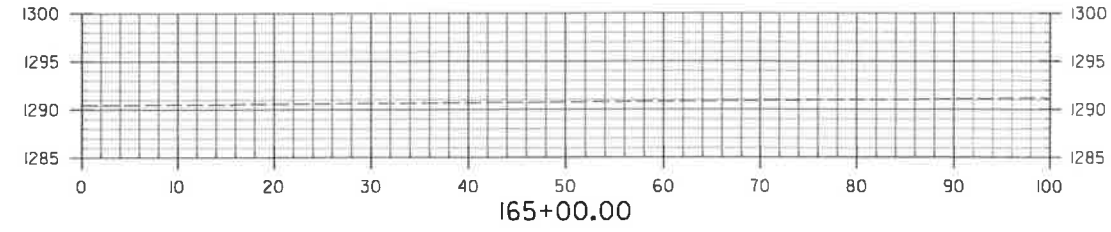
STA. 161+90.00 CONSTRUCT
 DROP INLET ON RT. H=4'6"
 WITH 18" X 20'
 R.C. PIPE CULVERT (CLASS III TYPE 3 BEDDING)
 TO DROP INLET ON RT.
 AND WITH 4' EXTENSION AND 18" X 22' R.C. PIPE CULVERT
 CLASS III TYPE 3 BEDDING WITH FES ON RT.
 TYPE MO DROP INLET = 4' DIA.
 TYPE C DROP INLET = 4' X 2'6"

STA. 160+00 TO STA. 163+00

7/16/2018 3:54:21 PM
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 REVISION DATE:

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07/05/18				6	ARK.			
07/16/18						JOB NO. BB0903	368B	368

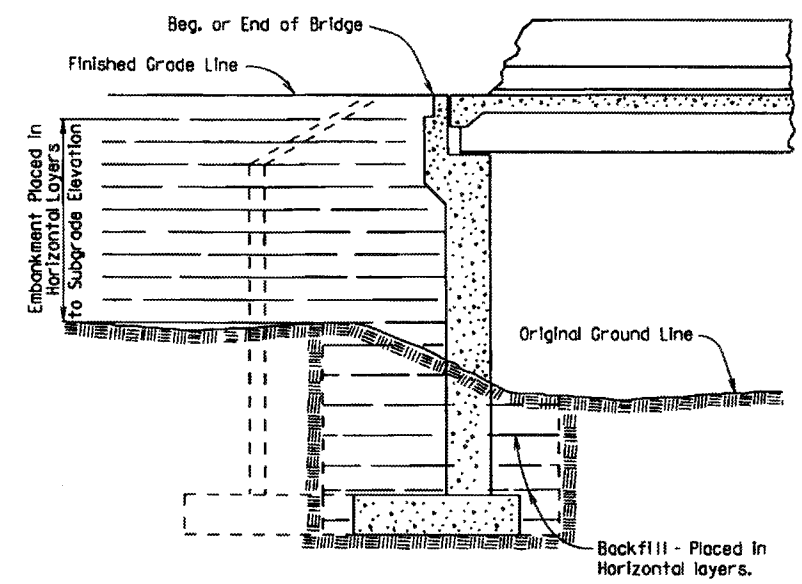
2 CROSS SECTIONS



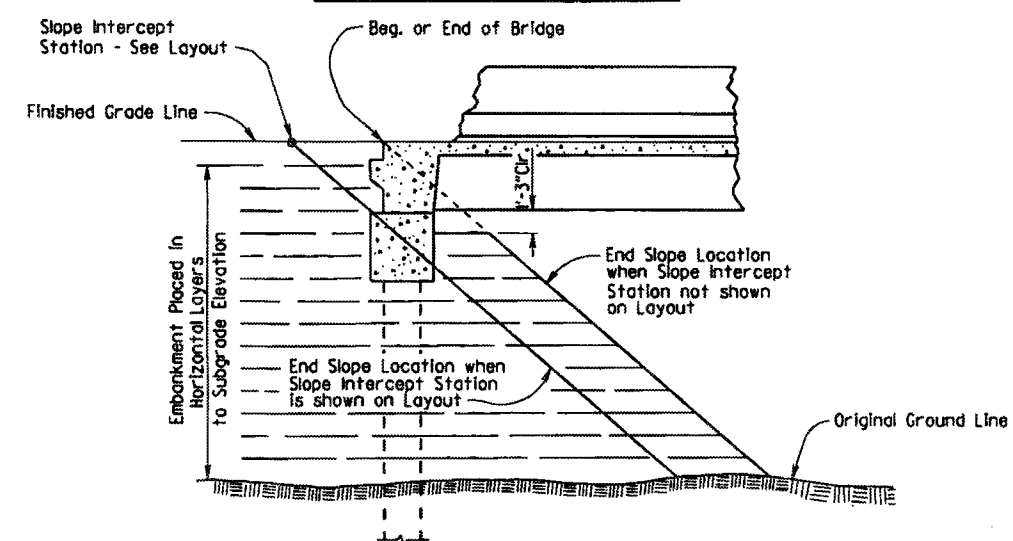
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STA. 163+50 TO STA. 165+00

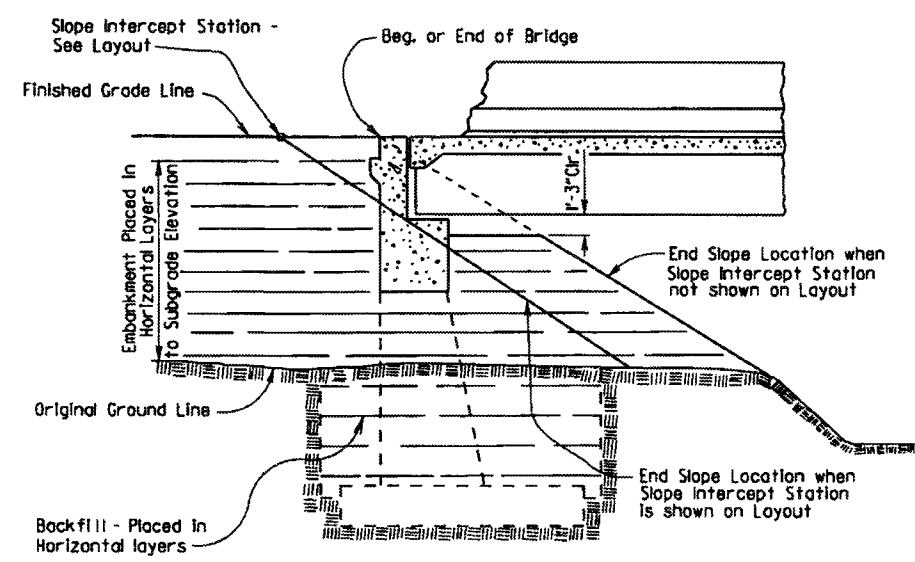
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				5	ARK.			
JOB NO.								
① EMBANKMENT & BACKFILL							55000	



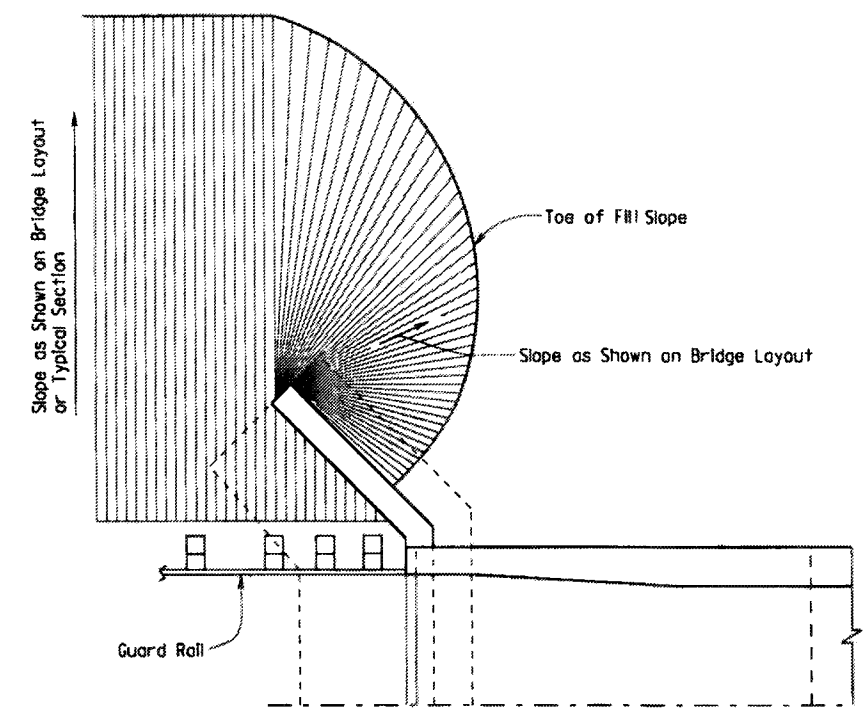
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



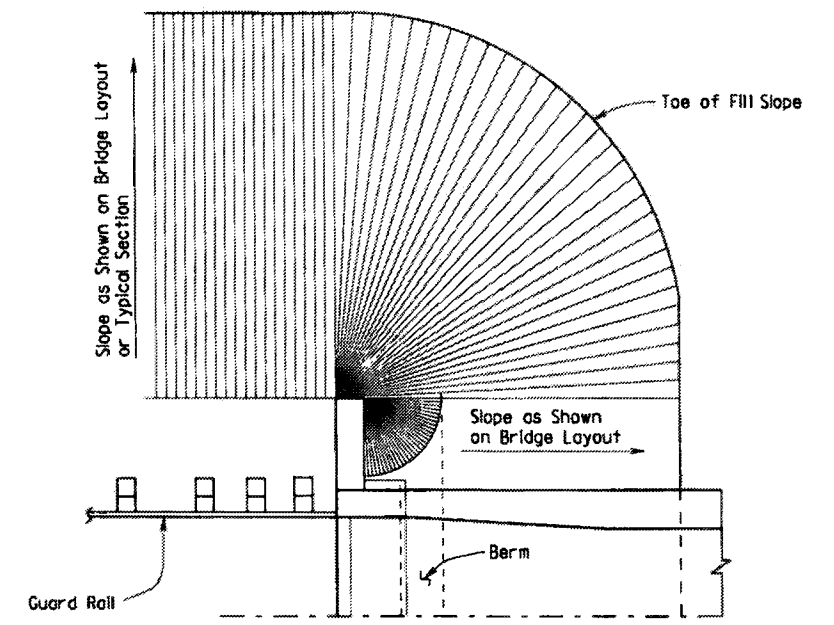
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



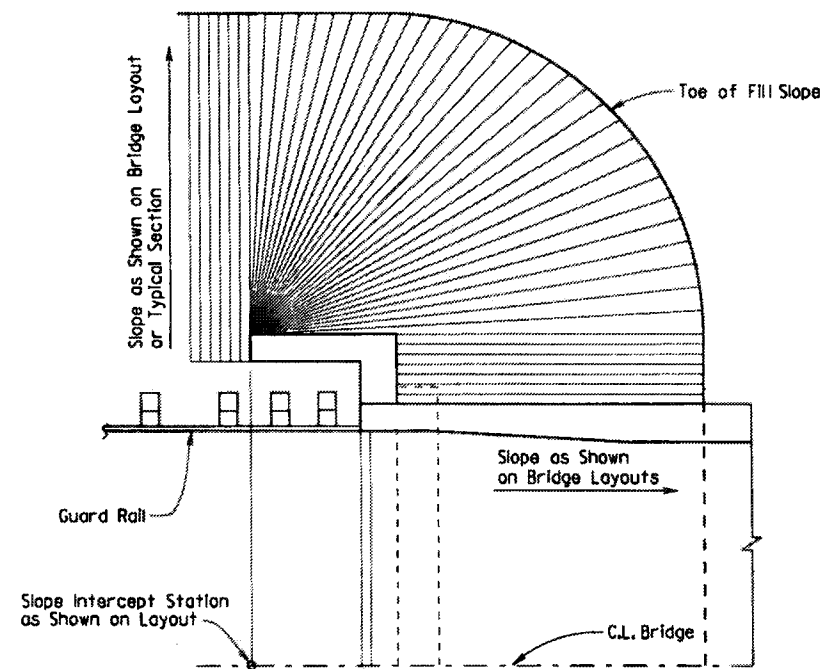
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



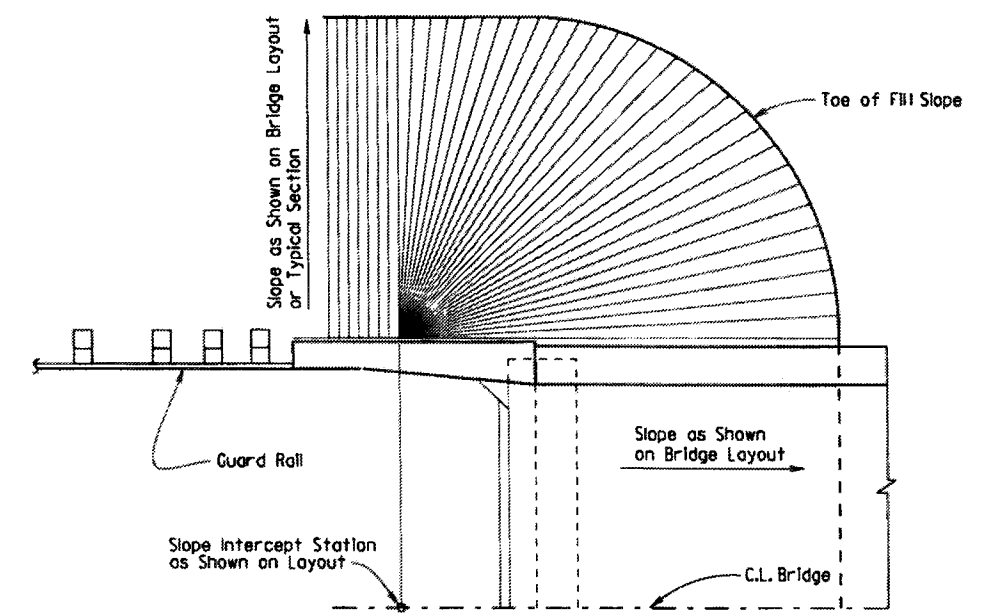
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

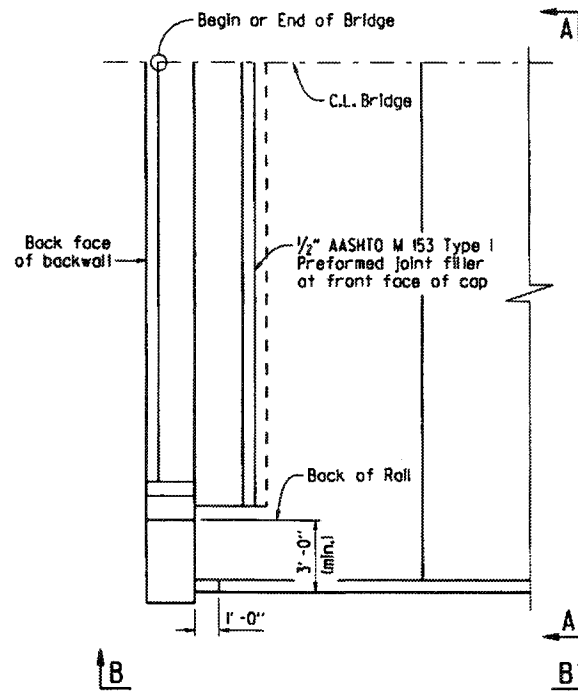
The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 210.09, 210.10 and 801.08 for construction requirements.

STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

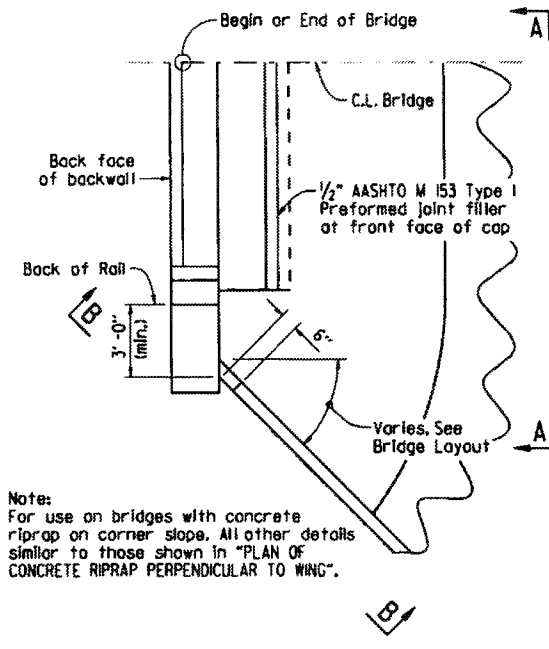
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55000.dgn
 CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
 DESIGNED BY: STD. DATE: -
 DRAWING NO. 55000

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.							CONCRETE RIPRAP	55002

Note:
Sloped surfaces of concrete riprap to be marked off into blocks (construction joints optional) with an approved grooving tool, spacing the grooved lines about 5' apart.

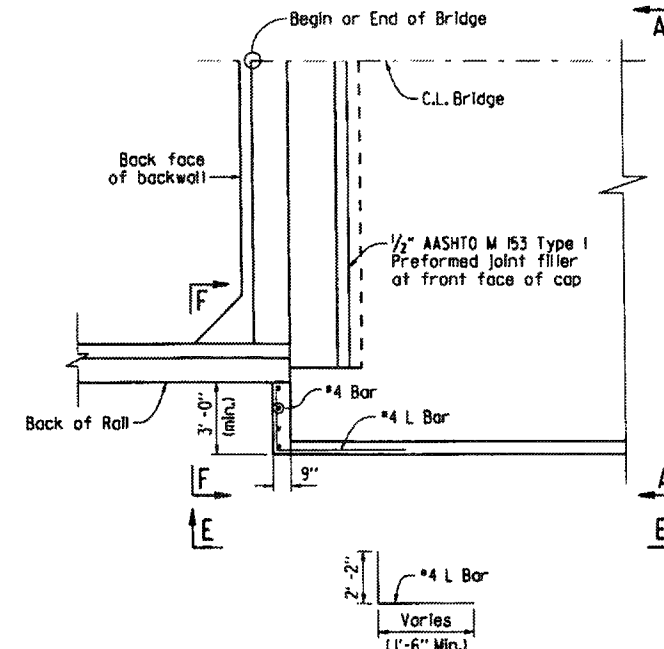


PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING
1/4" = 1'-0"

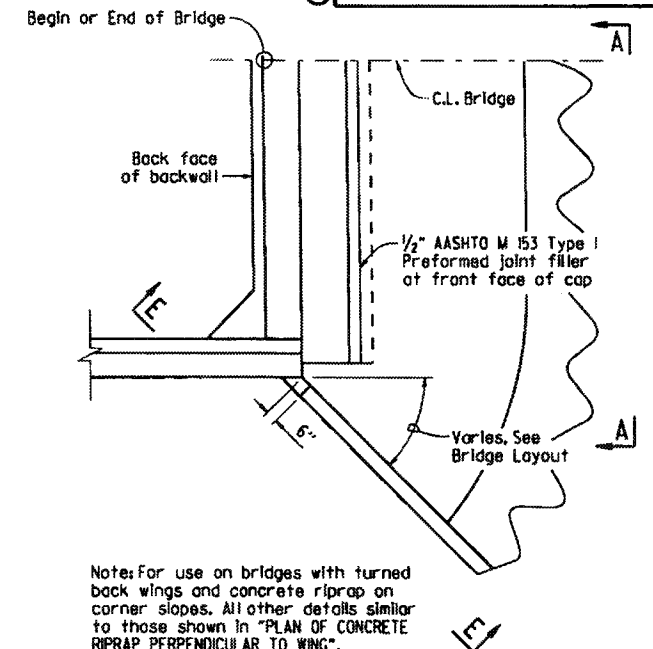


Note:
For use on bridges with concrete riprap on corner slope. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

PLAN OF CONCRETE RIPRAP AT ANGLE TO WING
1/4" = 1'-0"

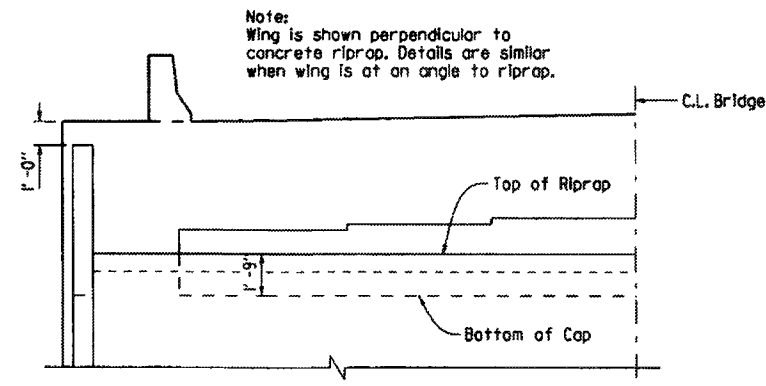


PLAN OF CONCRETE RIPRAP PERPENDICULAR TO TURNED BACK WING
1/4" = 1'-0"

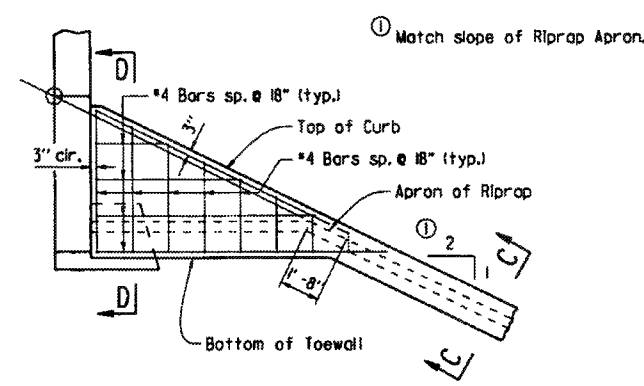


Note: For use on bridges with turned back wings and concrete riprap on corner slopes. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

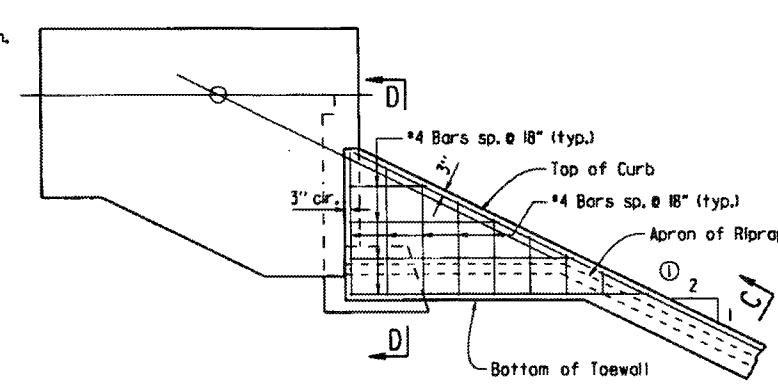
PLAN OF CONCRETE RIPRAP AT ANGLE FROM TURNED BACK WING
1/4" = 1'-0"



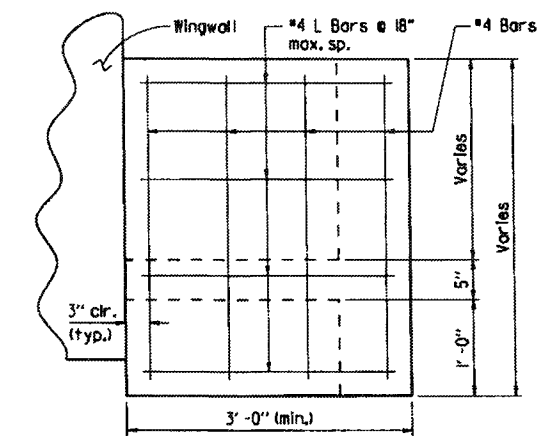
VIEW A-A
1/4" = 1'-0"



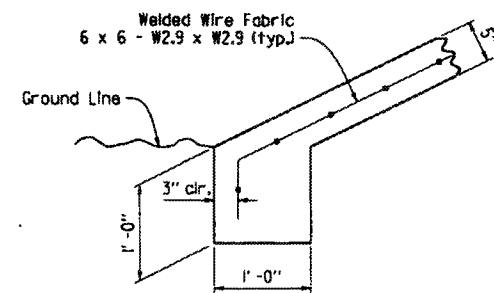
VIEW B-B
1/4" = 1'-0"



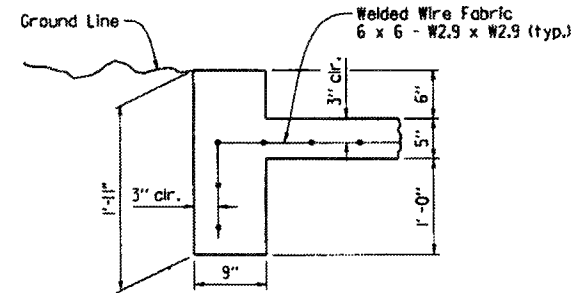
VIEW E-E
1/4" = 1'-0"



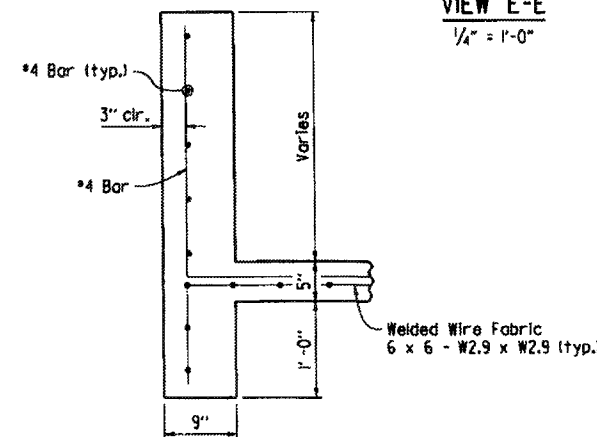
VIEW F-F
1" = 1'-0"



TOE OF CONCRETE RIPRAP
1" = 1'-0"



SECTION C-C
1" = 1'-0"



SECTION D-D
1" = 1'-0"

GENERAL NOTES

All concrete shall be Class A with a minimum compressive strength, $f'_c = 2,000$ psi.

Welded wire fabric shall conform to AASHTO M55 or M221.

STANDARD DETAILS FOR CONCRETE RIPRAP

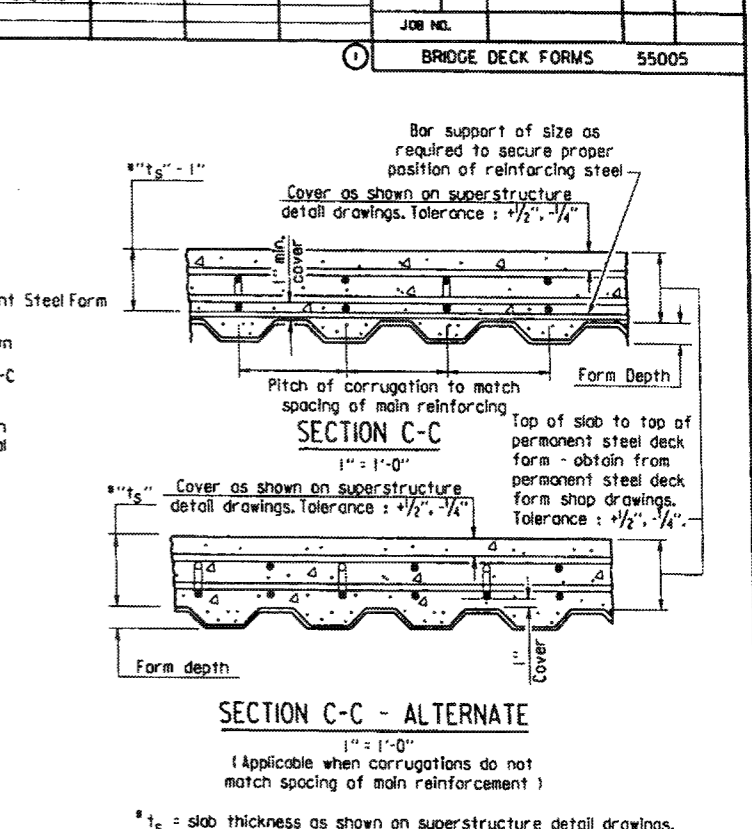
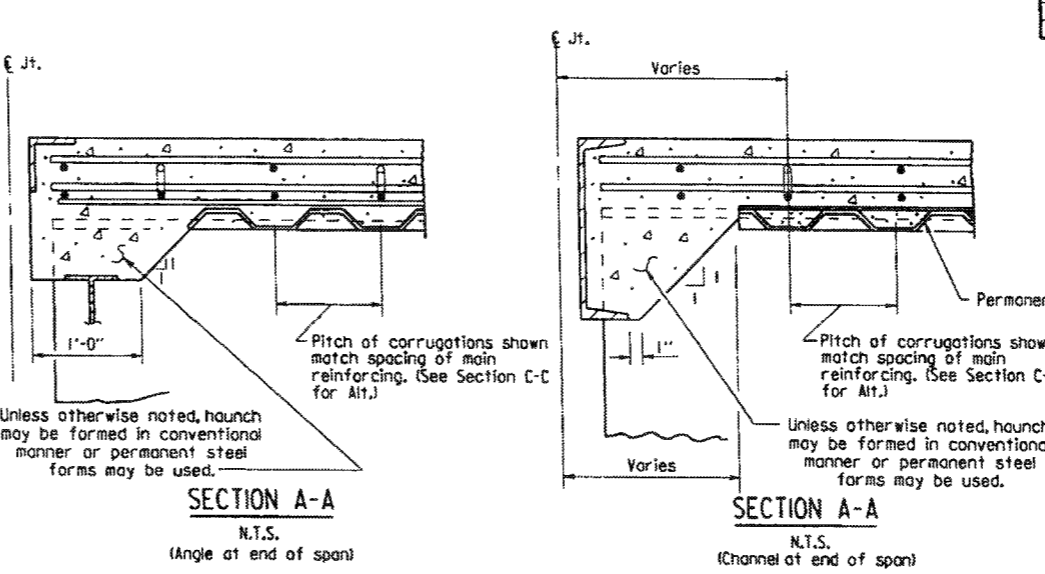
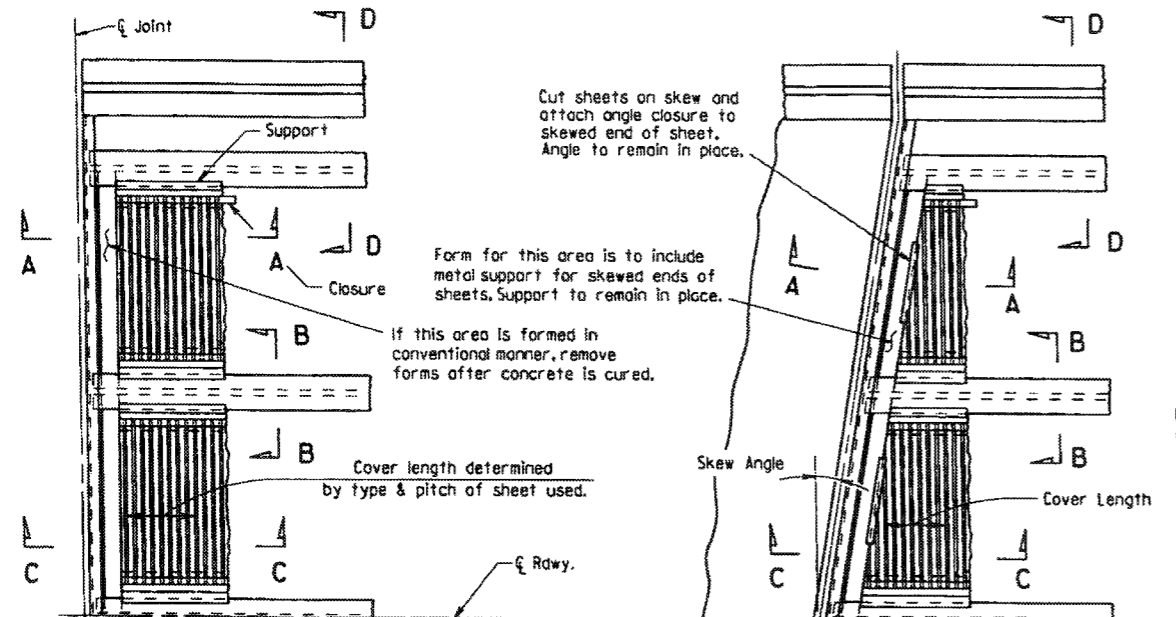
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

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 DESIGNED BY: Std. DATE: ---

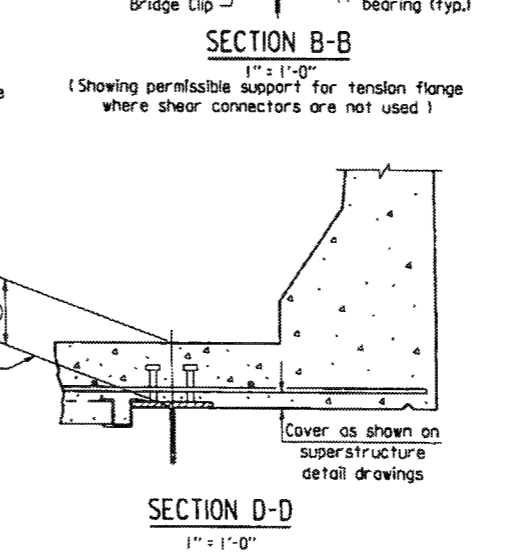
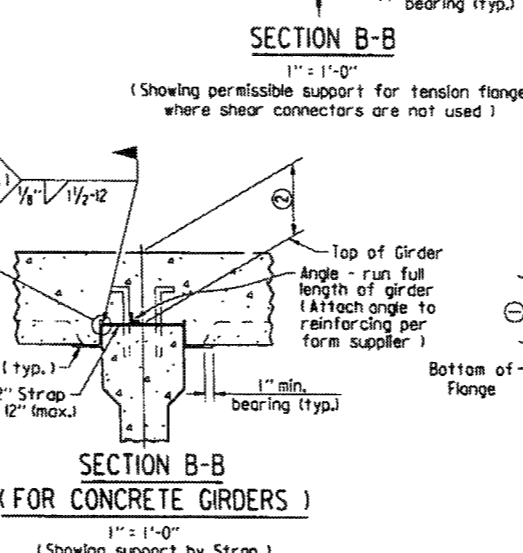
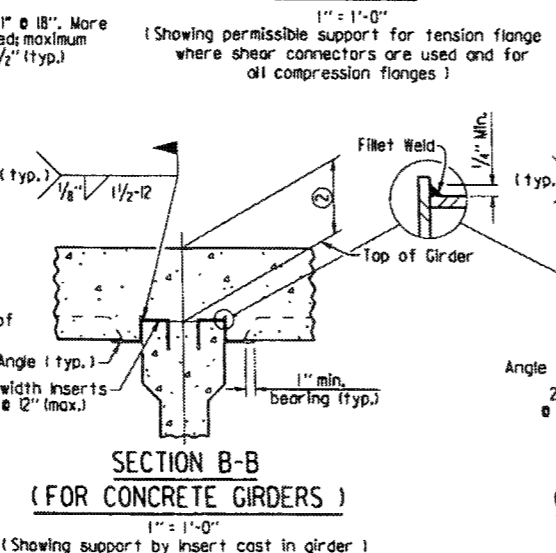
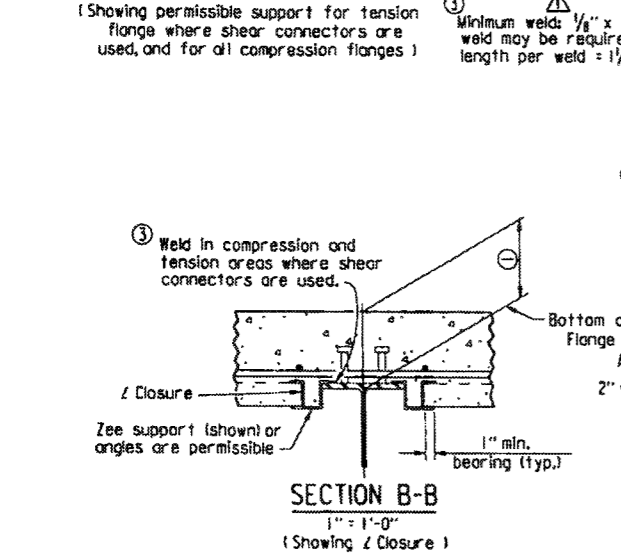
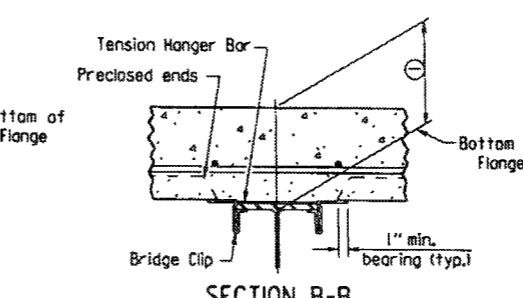
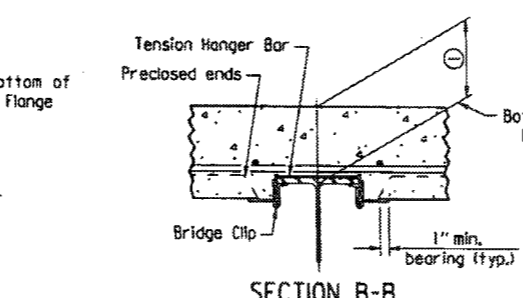
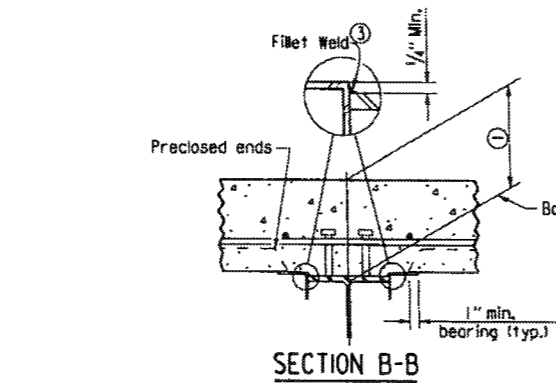
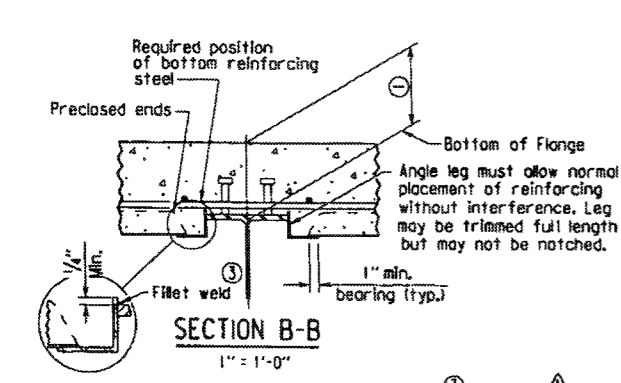
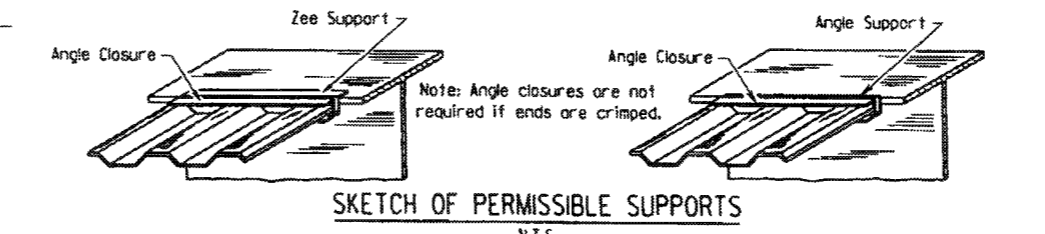
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3/24/16				6	ARK.			
JOB NO.								
BRIDGE DECK FORMS							55005	



PART PLAN - SQUARE SPAN
1/8" = 1'-0"

PART PLAN - SKEWED SPAN
1/8" = 1'-0"



① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances: Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = $t_s + 1/4$ " + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances: Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

③ Weld in compression and tension areas where shear connectors are used.

Note: Only Bottom Reinforcing is shown.

GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to Subsection 802.14(b). Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or L supports to the flange must be approved by the Engineer.

Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition), with applicable Supplemental Specifications and Special Provisions.

STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

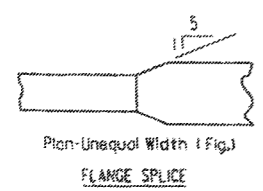
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LITTLE ROCK, ARK.

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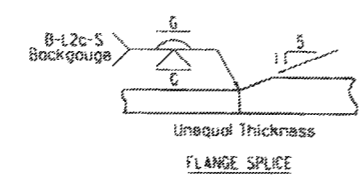
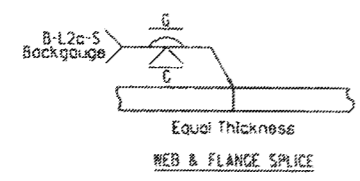
DRAWING NO. 55005

Revised weld dimension by K.W.Y. Ck'd. by BEF, 3/24/16.

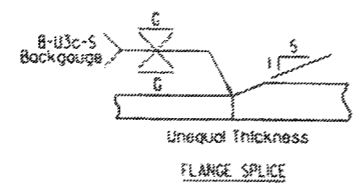
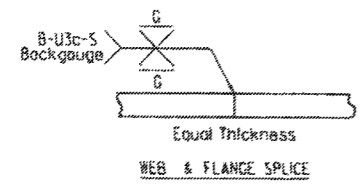
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				G	ARK.			
							1	STEEL BRIDGE STRUCTURES 55007



FLANGE SPLICE AT UNEQUAL BOTTOM FLANGE WIDTHS

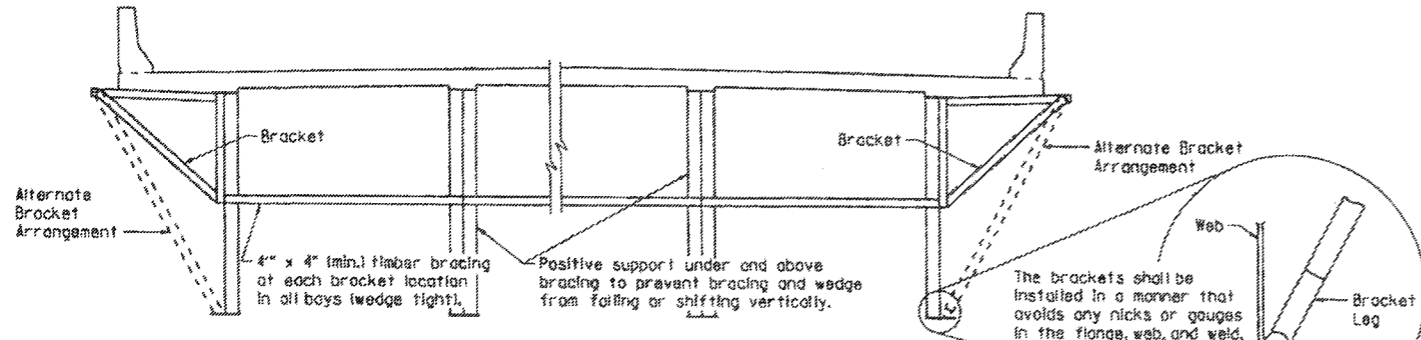


(Use when Base Metal Thickness is Equal to or Less than 2")



(Use when Base Metal Thickness is Greater than 2")

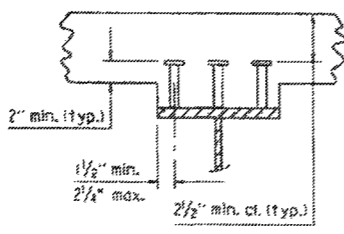
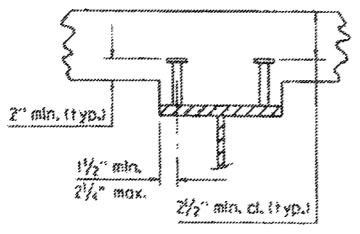
DETAILS OF WELDED SPLICES FOR PLATE GIRDERS



Note:
If a transverse finishing machine is used, the rail shall be supported directly over the exterior girders, or as an alternate, the rail may be supported by the overhang brackets if the above strutting system is used. The strutting system may be omitted if web stiffeners matching the size of the cross-frame connection plates are welded to the insides of the exterior girders at the location of each bracket or if the alternate bracket arrangement shown above is used. The Alternate Bracket arrangement shall extend down to the junction of the web and bottom flange. The stiffener shall conform to the details for cross frame connection plates shown on the plans. No direct payment will be made for brackets, timber bracing, supports, or welded stiffeners. Payment shall be subsidiary to "Structural Steel in Plate Girder Spans ()".

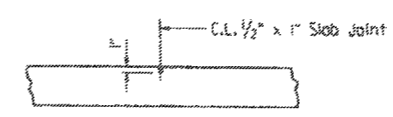
SCREED RAIL SUPPORT FOR PLATE GIRDERS

(USE WHEN WEB DEPTHS ARE 48" OR GREATER)



Stud Shear Connectors shall be automatically and welded to the beam or girder flange in accordance with the recommendations of the Manufacturer. See plan details for number and size.

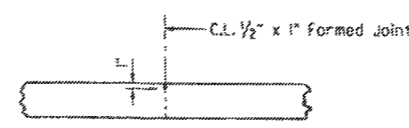
SHEAR CONNECTOR DETAIL



Use Type 3 or 4 Joint Sealer. See Subsections 50L02(h) and 50L05(i). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class SIAE Concrete-Bridge. Slab Joints shall extend to the outside edge of the deck slab and shall align with open joints at the front face of the parapet. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck from gutterline to gutterline.

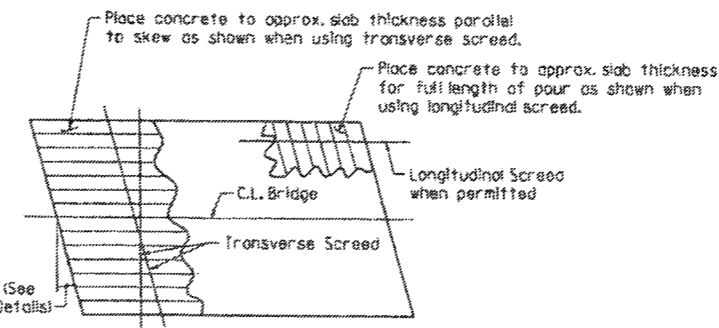
ADDITIONAL NOTES IF SIDEWALKS OR RAISED MEDIANS ARE REQUIRED:
Slab joints shall be installed before the sidewalk or raised median is poured. After installation of the joint in the sidewalk or raised median and prior to pouring the parapet rail, the joint sealer shall be placed extending across the deck slab from gutterline to gutterline and across the top of the sidewalk or raised median to the edge of the slab. No joint sealer shall be placed on the deck slab under the sidewalk or raised median.

TRANSVERSE SLAB JOINT DETAIL



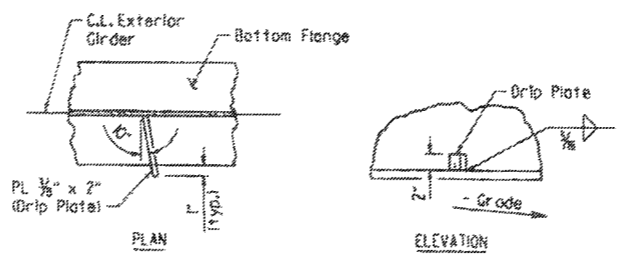
Use 1/2" x 1" Type 3 or 4 Joint Sealer. See Subsections 50L02(h) and 50L05(i). Backer Rod filler will not be required. Joint sealer shall be measured and paid for as Class SIAE Concrete-Bridge. This joint shall be formed. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL CONSTRUCTION JOINT



Note: At the Contractor's option, the transverse screed may be placed parallel to the skew or perpendicular to C.L. Bridge.

CONCRETE PLACEMENT PROCEDURE FOR BRIDGES WITH SKEW



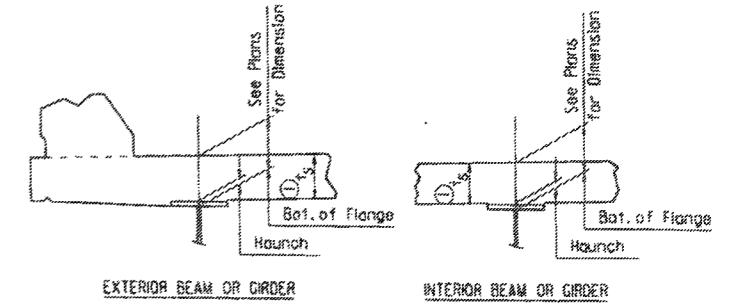
Drip Plate to be welded to the outer side of the bottom flange of the exterior girders.

Locate drip plate 5'-0" from C.L. Bearing on high side of each Bent, unless otherwise noted in the plans.

BOTTOM FLANGE DRIP PLATE

(USE WHEN WEB DEPTHS ARE 54" OR GREATER AND UNIT OR SPAN IS NOT IN LEVEL GRADE)

t_s = slab thickness. See "Typical Roadway Section" in the plans.

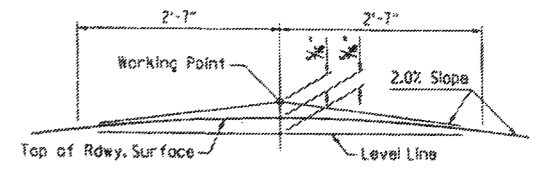


① Tolerance when removable deck forming is used is $\pm 1/2"$ - $1/4"$. Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

NOTES:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum occurs when top flange contacts bottom reinforcing steel; Maximum = top flange thickness plus $1/4"$ unless otherwise noted in the plans. No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE



NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

BRIDGES IN NORMAL CROWN

WELD TABLE

Material Thickness of Thicker Part (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" Inclusive	1/4"	No
Over 3/4"	5/16"	

NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS.

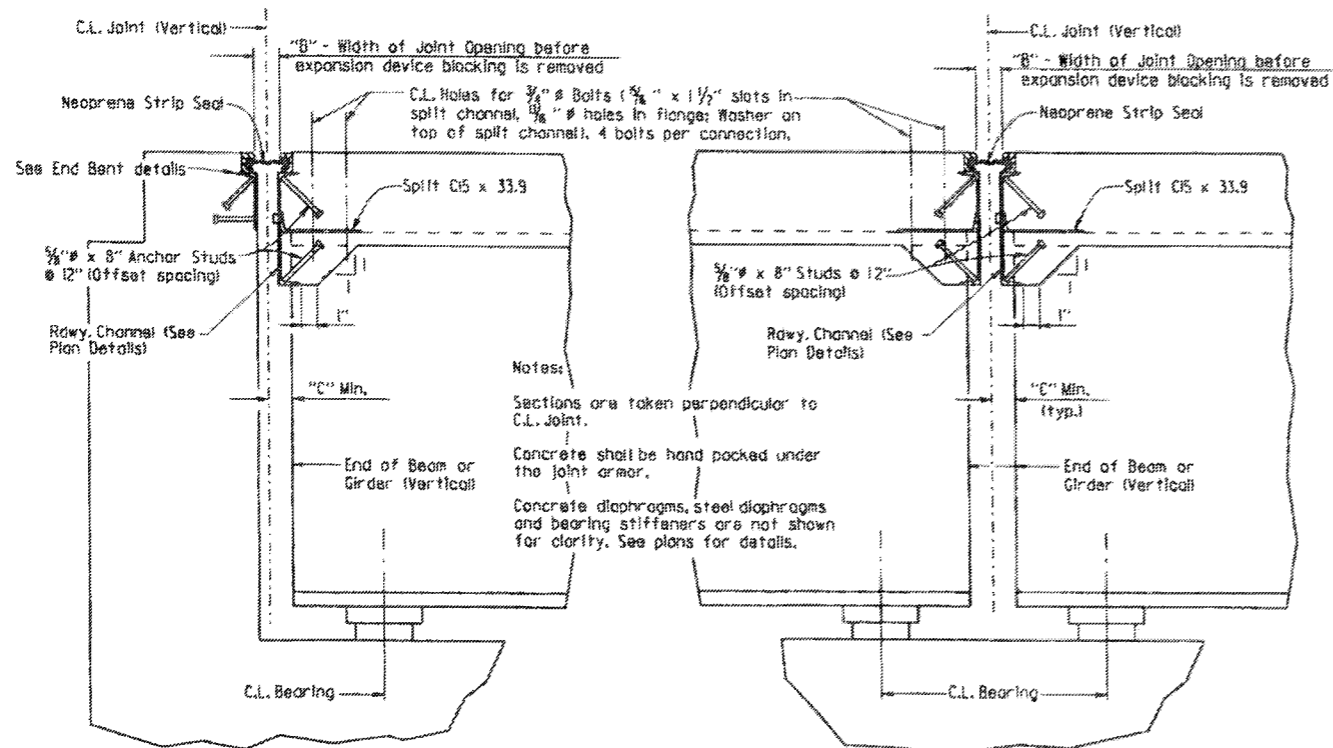
STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 2/11/2016 FILENAME: b55007.dgn
CHECKED BY: AMS DATE: 2/11/2016 SCALE: No Scale
DESIGNED BY: STD. DATE: _____

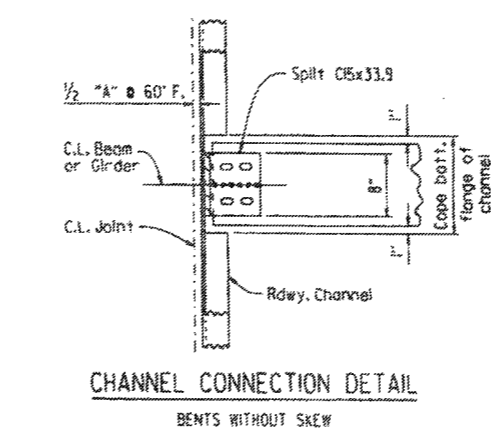
DRAWING NO. 55007

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	CONTRACT NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. STRIP SEAL JOINT								55009

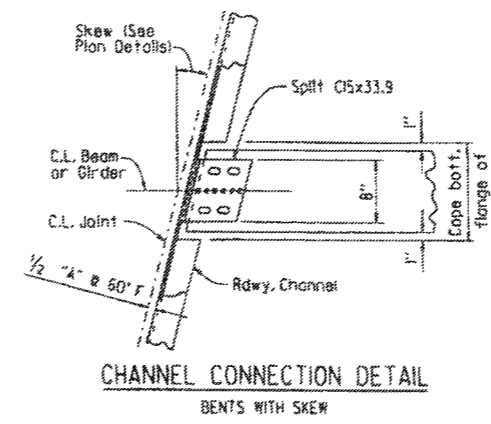


SECTION THRU JOINT AT END BENT

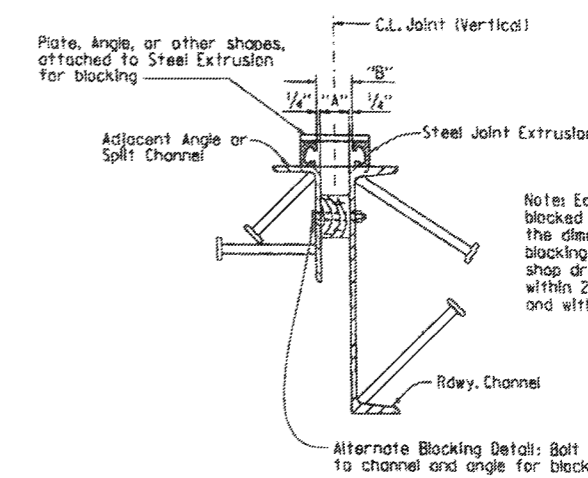
SECTION THRU JOINT AT INTERMEDIATE BENT



CHANNEL CONNECTION DETAIL



CHANNEL CONNECTION DETAIL



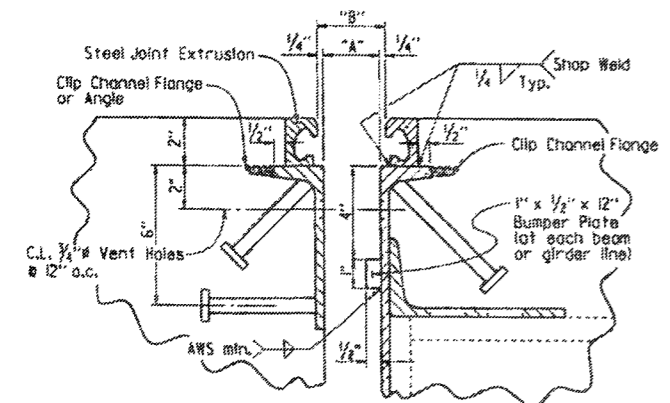
DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

- EXPANSION DEVICE INSTALLATION AT END BENTS:
- The Contractor may elect to install the expansion device using one of the following two alternatives:
- 1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams or girders erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, and the opening adjusted for temperature and grade.
 - 2) The backwall shall be poured to the optional construction joint after beams or girders are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature and grade.

- EXPANSION DEVICE INSTALLATION AT INTERMEDIATE BENTS:
- After all beams or girders on each side of the joint are erected the blocked expansion device shall be installed and adjusted for grade. Deck concrete shall be placed for the entire unit or span on one side of the joint before deck concrete on the other side is placed. Connection bolts for the first side to have deck concrete placed shall be completely bolted. Bolts on the other side shall be loosely installed so that thermal and rotational movements will not be restricted during concrete placement on the first side.
- Connection bolts on the second side shall remain loose until the concrete pour adjacent to the joint is to be placed. Immediately prior to pouring the span concrete on the second side, the blocking shall be removed, the joint adjusted for temperature and grade, and the connection bolts tightened.

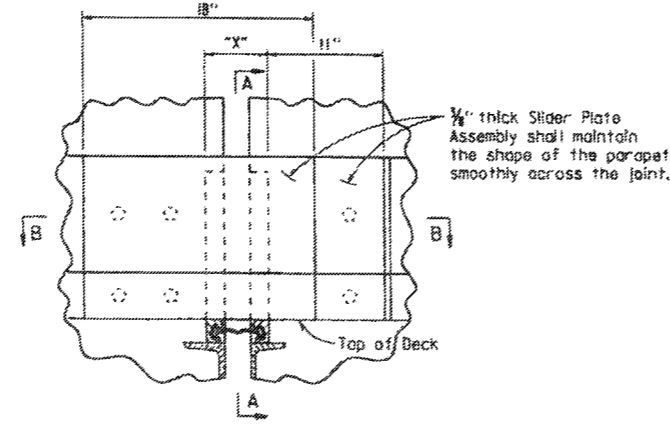
SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS. SEE "TABLE OF STRIP SEAL JOINT DATA" IN PLAN DETAILS FOR VARIABLES "A", "B", AND "C".



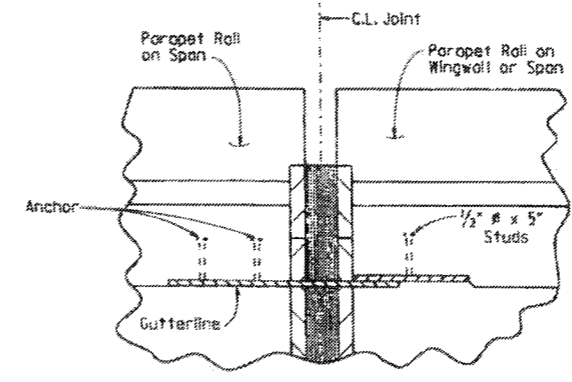
DETAIL OF STRIP SEAL JOINT

Detail shown at End Bent, Details similar at Intermediate Bent



Dimension "X" equals the width of opening in parapet to allow for removal or repair of joint.

DETAIL OF PARAPET SLIDER PLATES

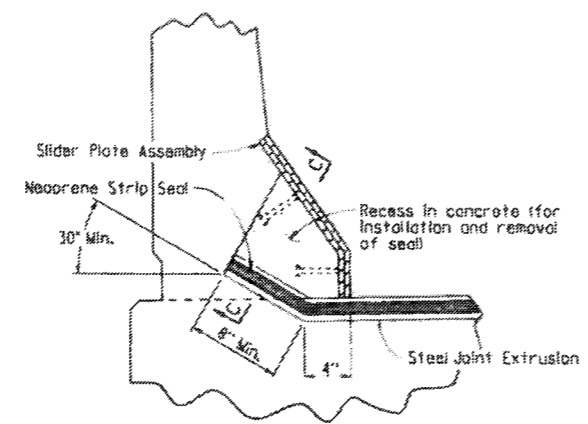


The method of attachment of the slider plate assembly shall allow for removal to provide for future replacement of the neoprene seal. Anchors shall not be bolted directly, but shall be considered subsidiary to the item "Armored Joint with Neoprene Strip Seal".

Method of installation and fabrication shall be determined by the Manufacturer.

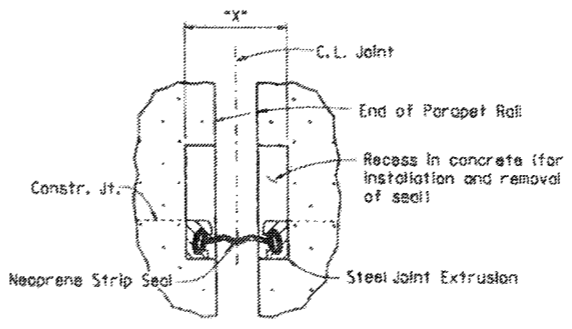
SECTION B-B

BENTS WITHOUT SKEW SHOWN



Details of Joint turn-up in parapet are general and show basic design controls only. See plan details for joint installation at sidewalks.

SECTION A-A



SECTION C-C

GENERAL NOTES FOR NEOPRENE STRIP SEAL JOINTS:

The steel extrusion and neoprene strip seal material and installation shall be in accordance with Section 809.

The expansion device shall provide for the movement ratings shown in the "TABLE OF STRIP SEAL JOINT DATA" in the plan details. The expansion joint shall be capable of sealing the deck surface and parapet area to prevent moisture and other contaminants from descending through the joint.

Details of proposed slider plate assembly shall be submitted to the Engineer for approval prior to the fabrication of any structural steel of the expansion device.

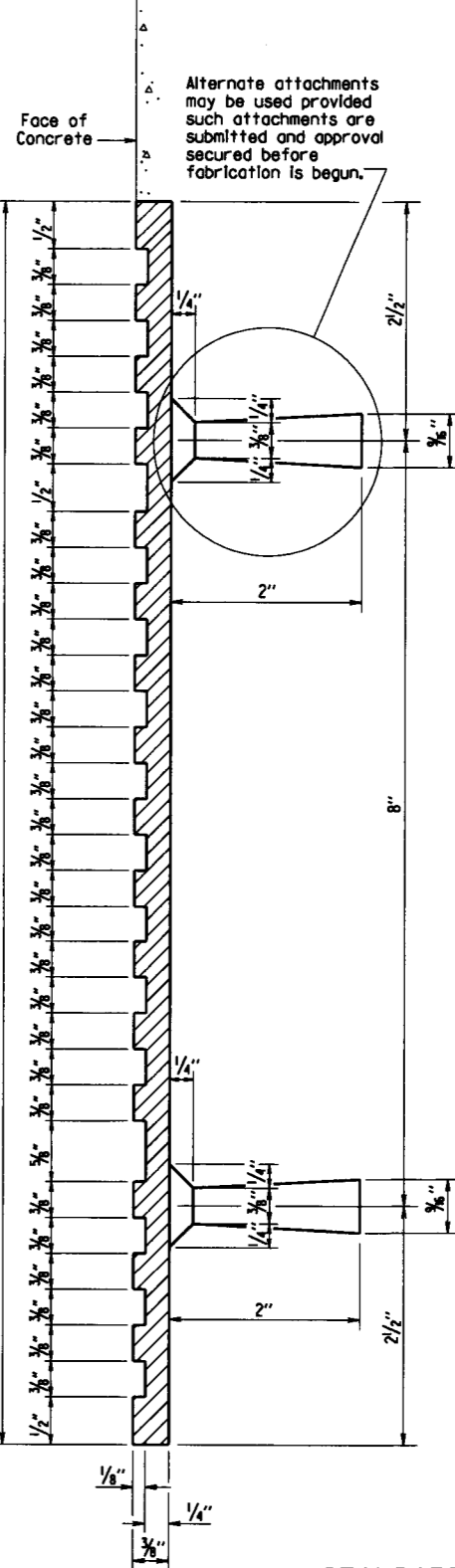
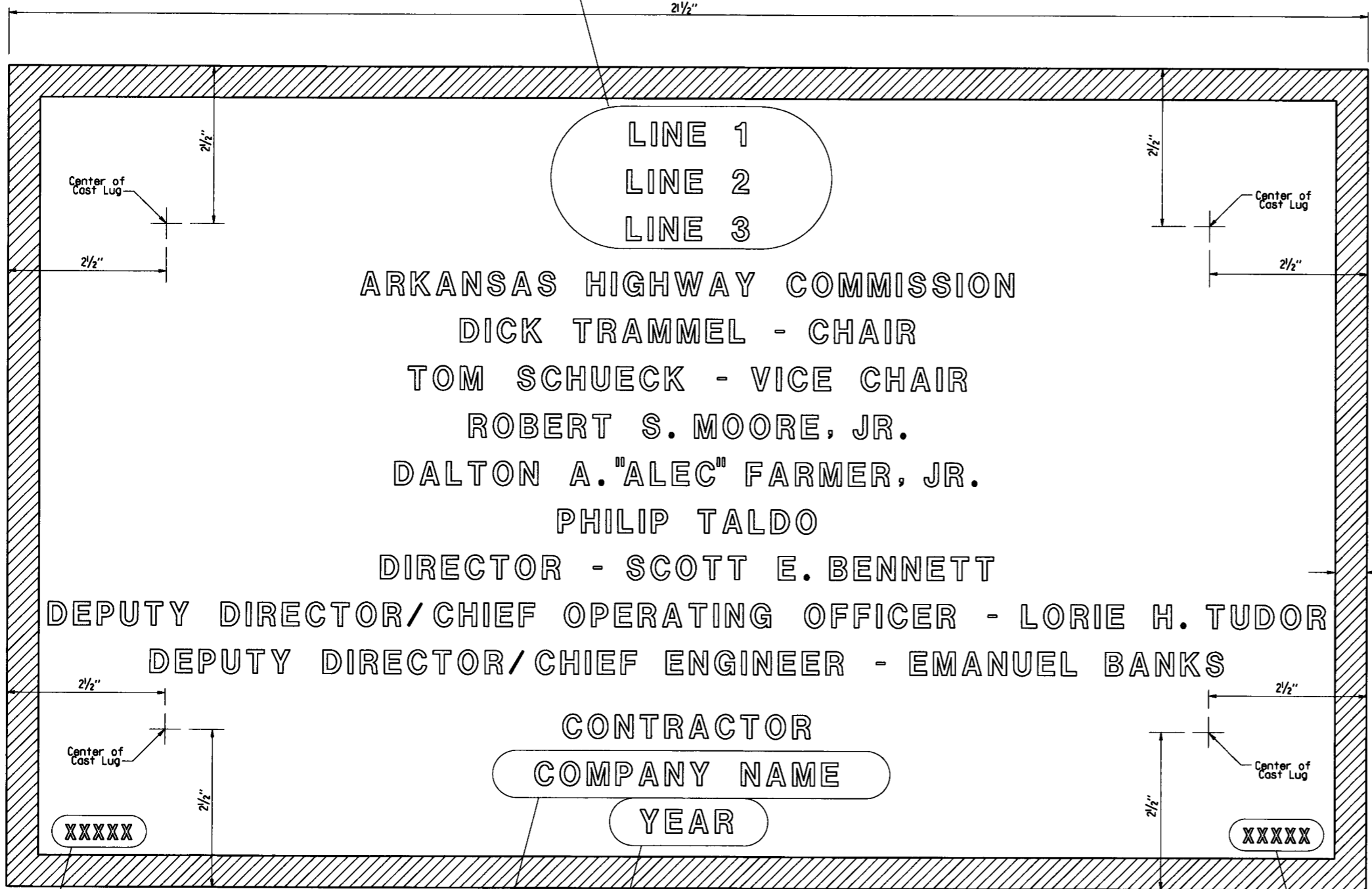
All structural steel shall conform to AASHTO M 270, Grade 50W and all exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). The parapet slider plates and structural steel completely embedded in concrete shall conform to AASHTO M 270, Grade 36, 50 or 50W steel, unless otherwise noted in the plans, all exposed surfaces of the parapet slider plates shall be cleaned and painted in accordance with Section 638. Painting shall not be paid for directly and structural steel completely embedded in concrete need not be painted. Payment for structural steel shall be as specified in the plans.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-1-14				6	ARK.			
1-14-15								
1-17-17								

TYPE D NAME PLATE 5500

The name of the bridge as shown on the plans shall be placed on Lines 1 - 3 using 1/8" raised letters and numerals 3/8" high.

Line	Example 1	Example 2	Example 3	Example 4
Line 1	Red River	Southern	Saline	Highway 5
Line 2	Relief	Railroad	River	
Line 3		Overpass	Relief	



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2014 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

Body of plate shall be 1/4" thick and shall include four tapering cone lugs 3/8" to 5/8" x 2" long. The border and all lettering shall be raised 1/8" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

Place the design live loading here using 1/8" raised letters and numerals 1/4" high. Examples: HS 20 HL-93

Place the Year in which Contract was awarded here using 1/8" raised numerals 3/8" high. Example: 2001

Place the name of the company awarded the construction contract here using 1/8" raised letters and numerals 3/8" high. Example: ABCD CONSTRUCTION, INC.

Place the Bridge number here using 1/8" raised letters and numerals 1/4" high. Examples: A1234 05432

- ▲ Added New Commissioner
1-17-17 KDH Checked By: CRE
- ▲ Revised Chair and Vice Chair
Added New Commissioner
1-14-15 KDH Checked By: CRE
- ▲ Revised Deputy Director/
Chief Engineer
Added Deputy Director/
Chief Operating Officer
12-1-14 KDH Checked By: CRE

**STANDARD DETAILS FOR
TYPE D BRIDGE NAME PLATE**

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn
 CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
 DESIGNED BY: STD. DATE: _____

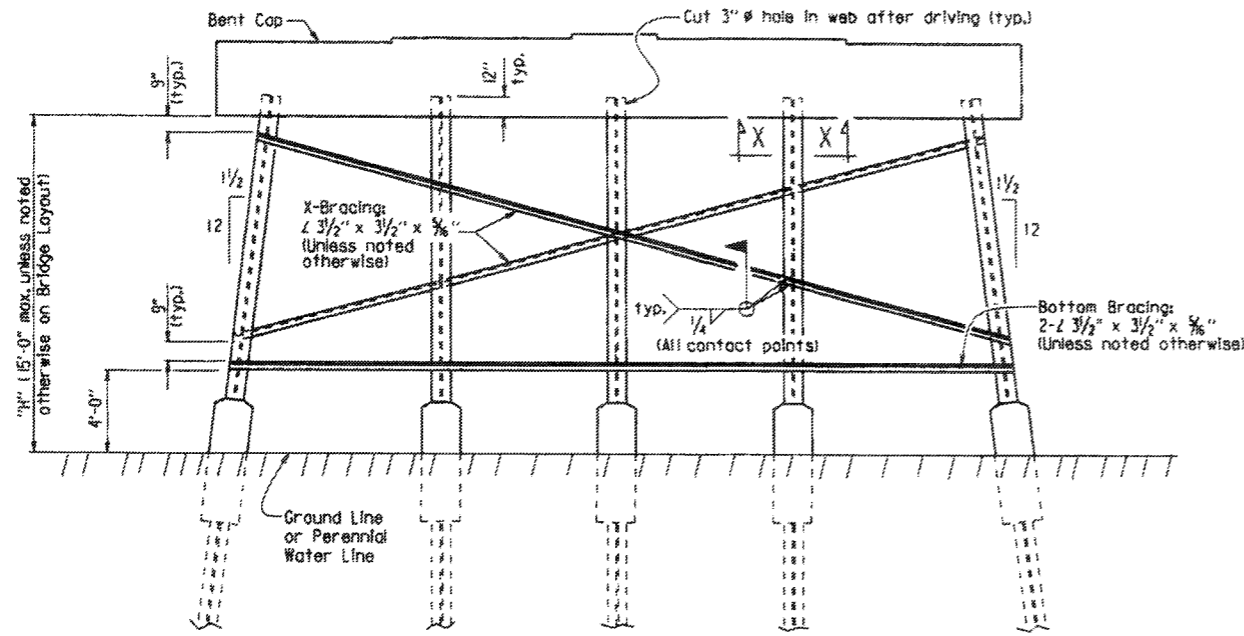
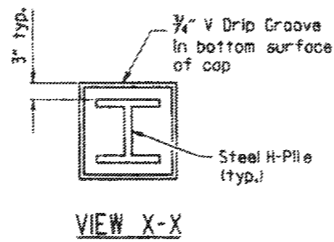
GENERAL NOTES FOR STEEL H-PILES:

Steel H-Piles shall conform to AASHTO M 270, Grade 36 or greater.

See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

Steel H-Piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with Subsection 805.02.

Brackets, lugs, cap plates, pile tips, driving points, pile painting, splicing and welding shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



Notes:

All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment shall be made under item 807.

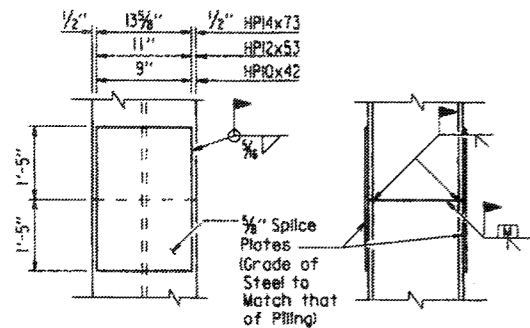
Unless noted otherwise, omit X-Bracing when "H" is less than 8 feet.

Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

When required on the Bridge Layout sheet, pile encasements shall be constructed. See Notes and Details for H-Pile Encasements.

Omit all bracing (and V-groove in cap) when pile encasement is extended to bottom of bent cap.

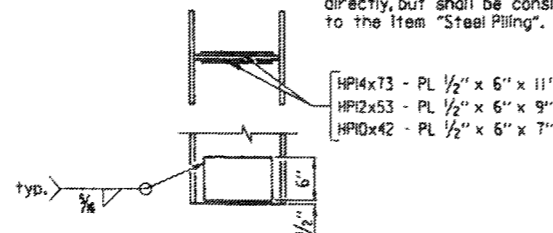
TYPICAL DETAILS OF H-PILE TRESTLE INTERMEDIATE BENT
(Shown with Partial Height Encasement)



The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

TYPICAL SPLICE DETAILS

H-pile splicers manufactured by Associated Pile and Fitting Corporation, LB Foster Piling, Skyline Steel or equivalent may be used in lieu of the "Typical Splice Details" shown. H-pile splicers shall match the same grade of steel specified for the piling and shall be welded to the pile with a 3/8 inch fillet weld around the entire perimeter of the splice. Flanges shall be welded with a complete penetration groove weld complying with AASHTO/AWS Joint Designation B-U4a or B-U4b. All welding shall conform to Subsection 807.26 of the AHTD Standard Specifications for Highway Construction (2014 Edition).



REINFORCING DETAIL FOR STEEL H-PILE TIP

Notes: Steel pile tip reinforcing not required when approved H-Pile driving points are used.

Steel pile tip reinforcing shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".

HPI4x73 - PL 1/2" x 6" x 11"
HPI2x53 - PL 1/2" x 6" x 9"
HPI0x42 - PL 1/2" x 6" x 7"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.			
JOB NO.							STEEL H-PILES	55020

GENERAL NOTES FOR H-PILE ENCASEMENTS:

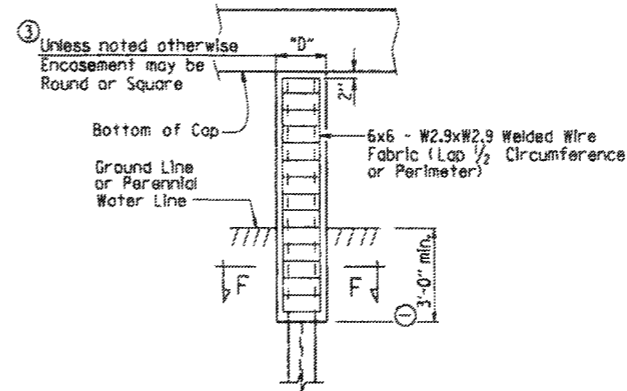
See Bridge Layout for additional notes, any pile encasement restrictions and required location of pile encasements.

All concrete shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.

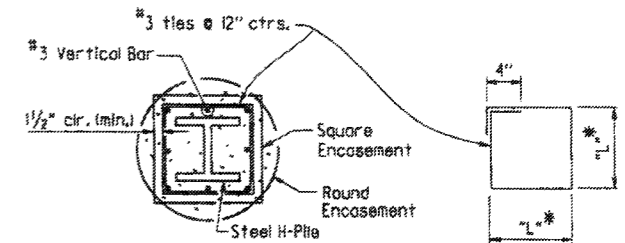
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

Concrete, welded wire fabric or reinforcing steel and galvanized pipe shall not be paid for directly, but shall be considered subsidiary to the item "Pile Encasement".



PILE ENCASEMENT DETAIL FOR STEEL H-PILES

(Shown with Encasement to Bottom of Cap)

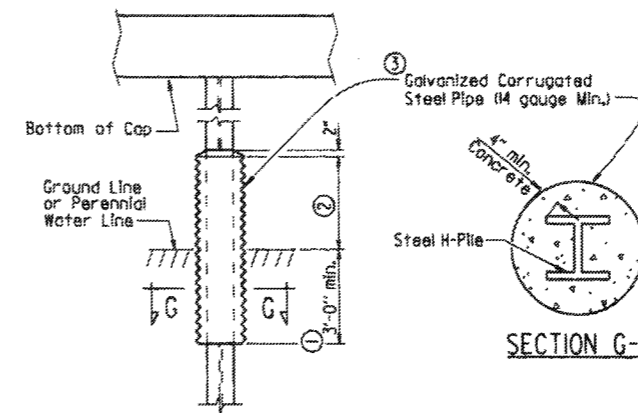


SECTION F-F

* Measured out-to-out of bar.

TABLE OF VARIABLES FOR PILE ENCASEMENT

Pile Size	"D"		"L"*
	Square Encsmt.	Round Encsmt.	
HPI0x42	1'-7"	2'-0"	1'-4"
HPI2x53	1'-8"	2'-2"	1'-5"
HPI4x73	1'-11"	2'-6"	1'-8"

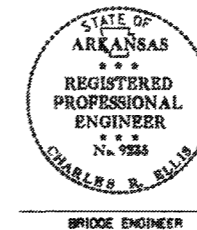


ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL H-PILES

(Shown with Partial Height Encasement)

- ① Unless otherwise noted on Bridge Layout.
- ② 3'-0" minimum or as shown on Bridge Layout.
- ③ Encasement dimensions shall be sized to maintain a minimum concrete cover of 4" from the H-Pile. Reinforcement shall be sized to provide a minimum concrete cover of 1 1/2" and a minimum clearance of 1 1/4" from the pile.
- ④ Alternate pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the Partial Height Encasement detail.

Added alternate method of splicing H-piles and revised pile encasement note. 3/24/2016 AMS



This document was originally issued and sealed by Charles R. Ellis, PE No. 9255, on March 24, 2016. This copy is not a signed and sealed document.

STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION

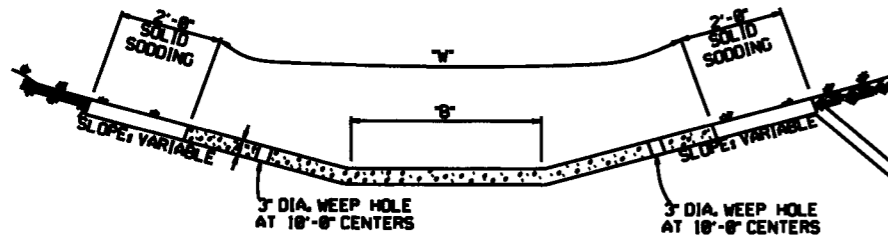
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55020.dgn
CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: -

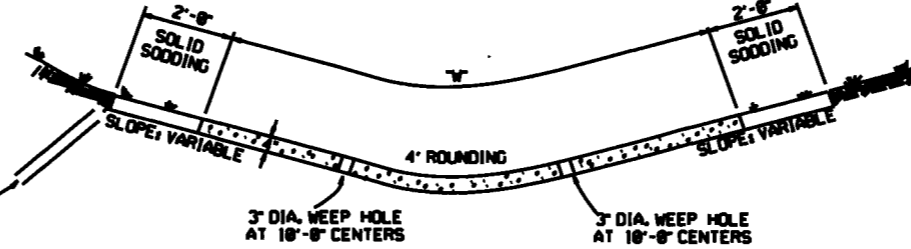
DRAWING NO. 55020

REFER TO TABULATION OF QUANTITIES FOR "W" & "S" DIMENSIONS

REFER TO TABULATION OF QUANTITIES FOR "W" DIMENSIONS



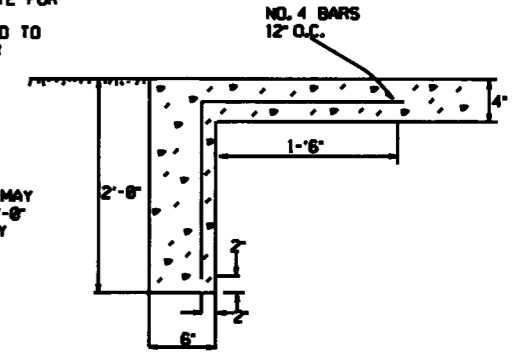
TYPE A



TYPE B

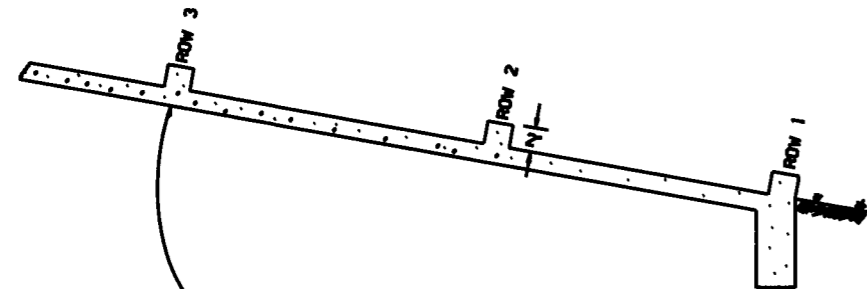
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR "CONCRETE DITCH PAVING."



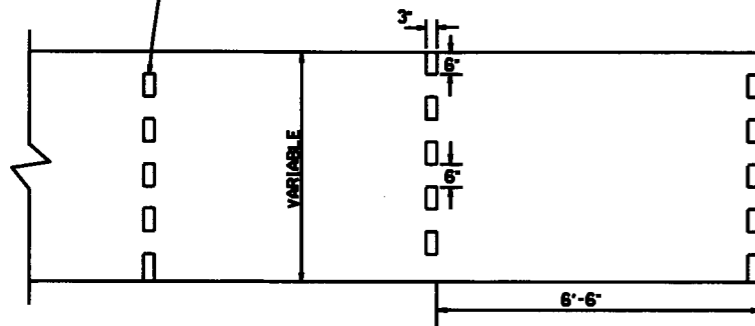
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING EXCEEDS 7%. THE DISSIPATORS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

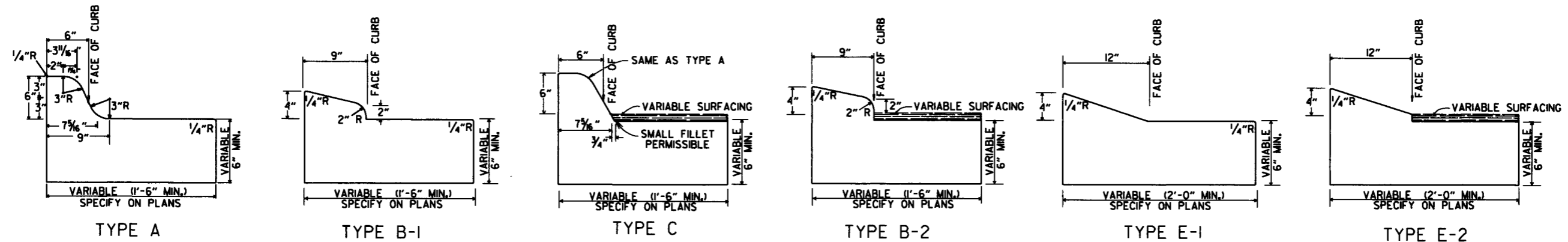
1' WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

NO.	DATE	REVISION	DATE FILM'D
12-2-18		CORRECTED ENERGY DISSIPATOR DRAWING AND NOTE	
10-7-20		ADDED GENERAL NOTE	
5-2-24		ADDED GENERAL NOTE ABOUT SOLID SODDING	
10-2-28		ESTIMATED MIN. ROWS OF ELEMENTS	11-10-39
7-10-38		REVISED DISSIPATOR NOTE	6-20-40-88
7-2-37		REVISED ENERGY DISSIPATOR	6-20-40-87
10-2-37		MODIFIED NOTE ON ENERGY DISS.	6-20-40-87
11-2-35		ADDED NOTE TO ENERGY DISS.	6-20-40-85
10-2-34		ENERGY DISSIPATOR DETAILS	6-20-40-84
		ADDED	
11-1-34		EXCAVATION DETAILS ADDED	
		TYPE A & B	
10-2-72		REVISED AND REDRAWN	808-10-2-72
		DATE	REVISION
			DATE FILM'D

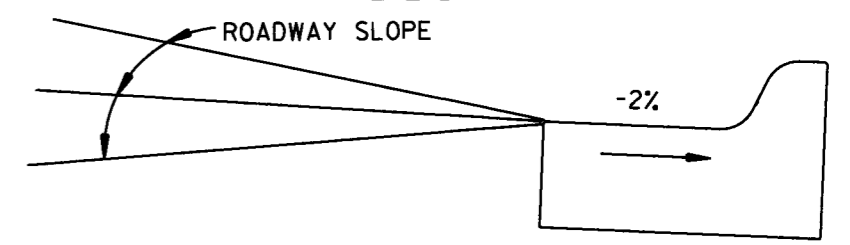
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

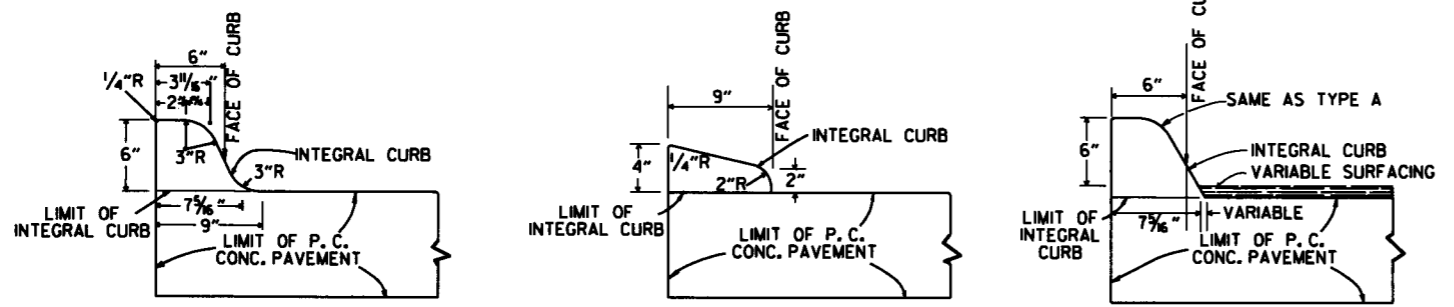
STANDARD DRAWING CDP-1



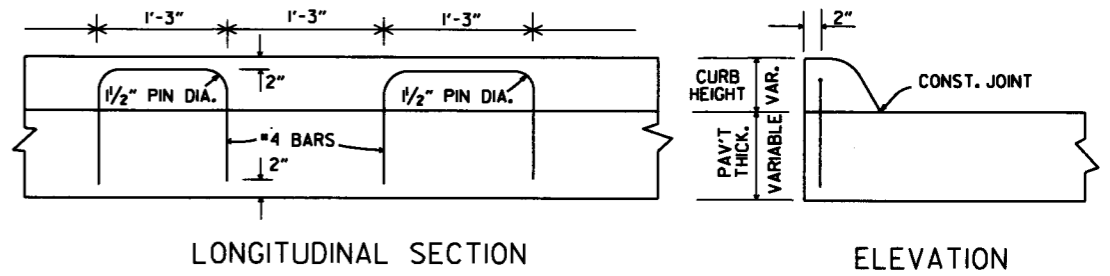
CONCRETE COMBINATION CURB AND GUTTER



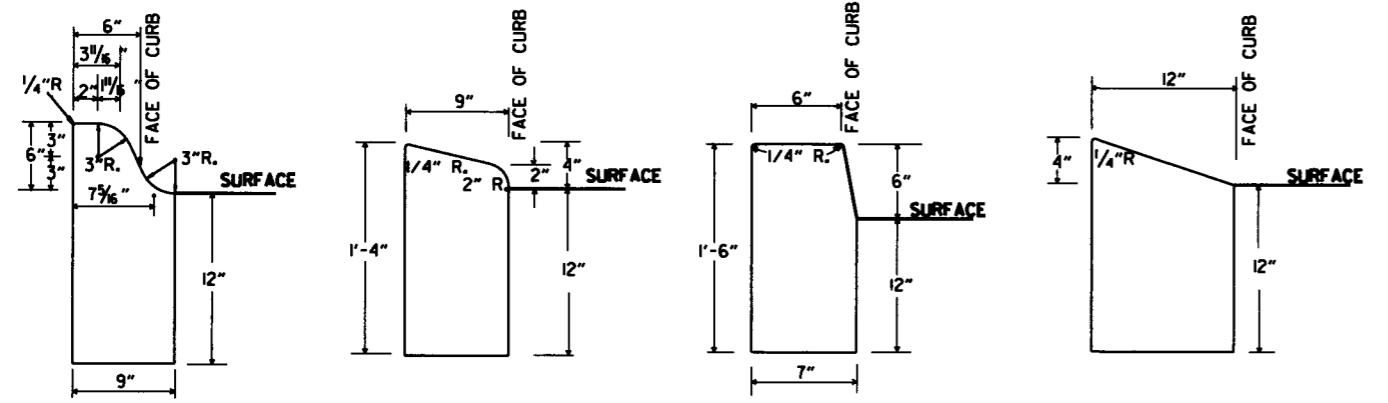
DETAIL OF GUTTER SLOPE
 GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



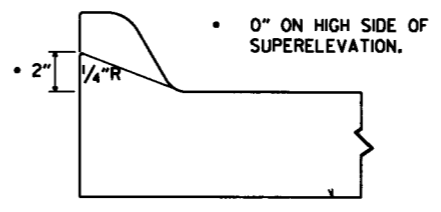
INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

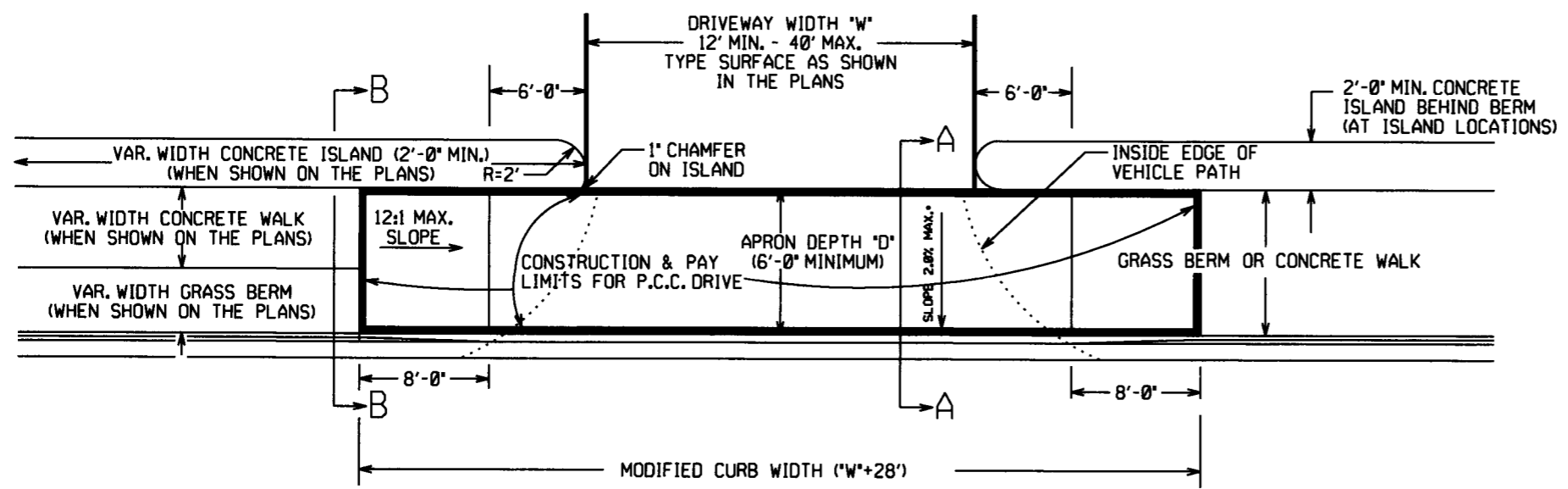
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
8-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
1-10-05	ADDED DETAILS OF TYPE E CURBS	
1-16-01	REVISED CONCRETE CURB TYPE B	
1-18-98	REVISED MODIFIED CURB	
6-2-84	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-1-83	CORRECTED GUTTER SLOPE	8-5-93
10-1-82	ADDED DETAILS OF GUTTER SLOPE	10-1-82
5-24-80	ADDED DETAILS OF MODIFIED CURB	5-24-80
1-10-80	VARIED LENGTH TYPE A & B 1	1-30-88
1-16-88	REVISED MODIFIED CURB	6-30-88
1-1-73	REVISED MODIFIED CURB	500-11-73
10-2-72	REVISED AND REDRAWN	52-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1



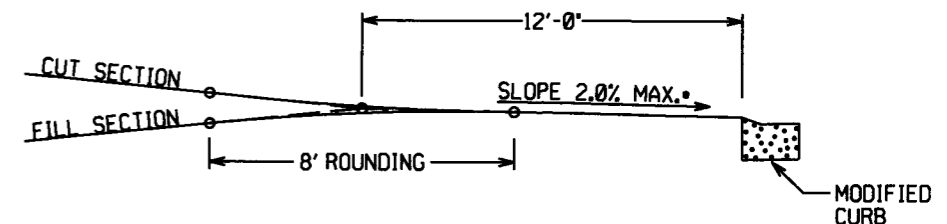
PLAN VIEW

EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

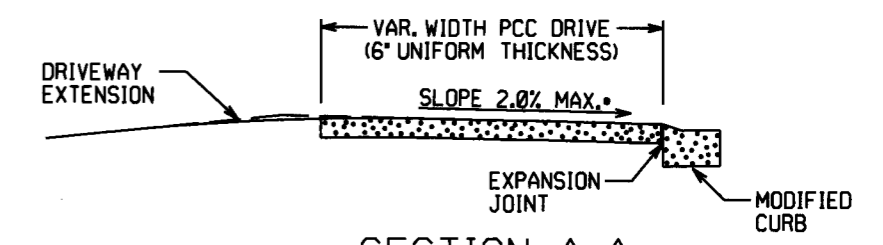
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

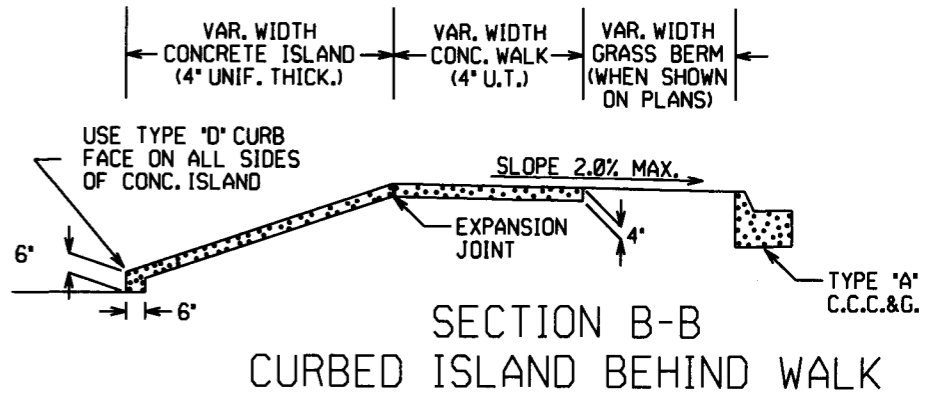


DRIVEWAY VERTICAL ALIGNMENT DETAILS

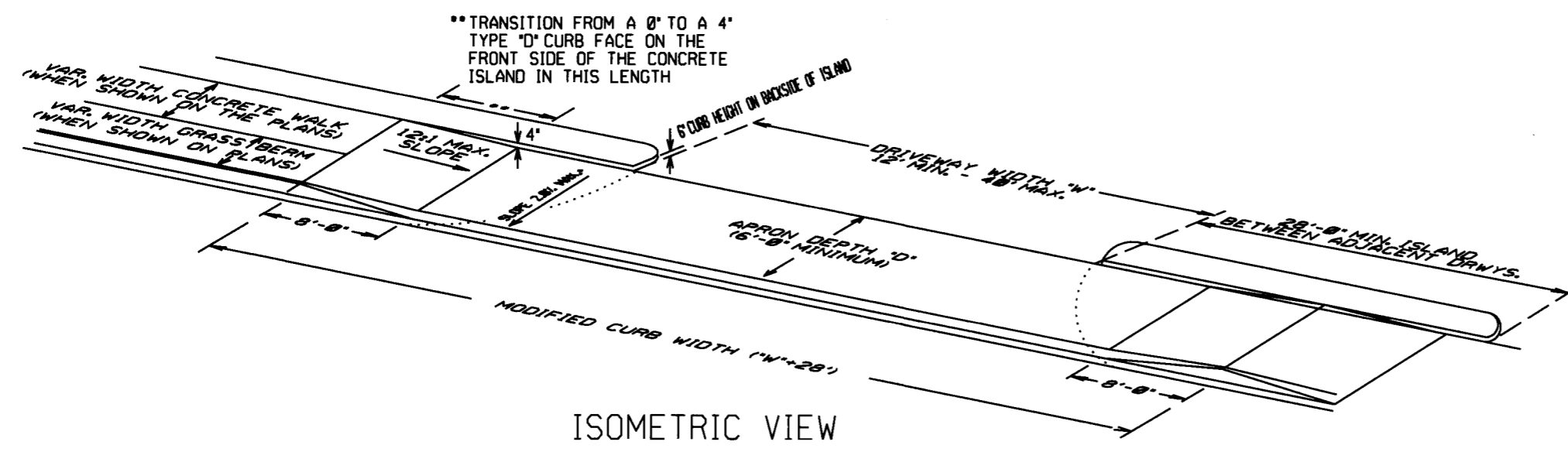
NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A

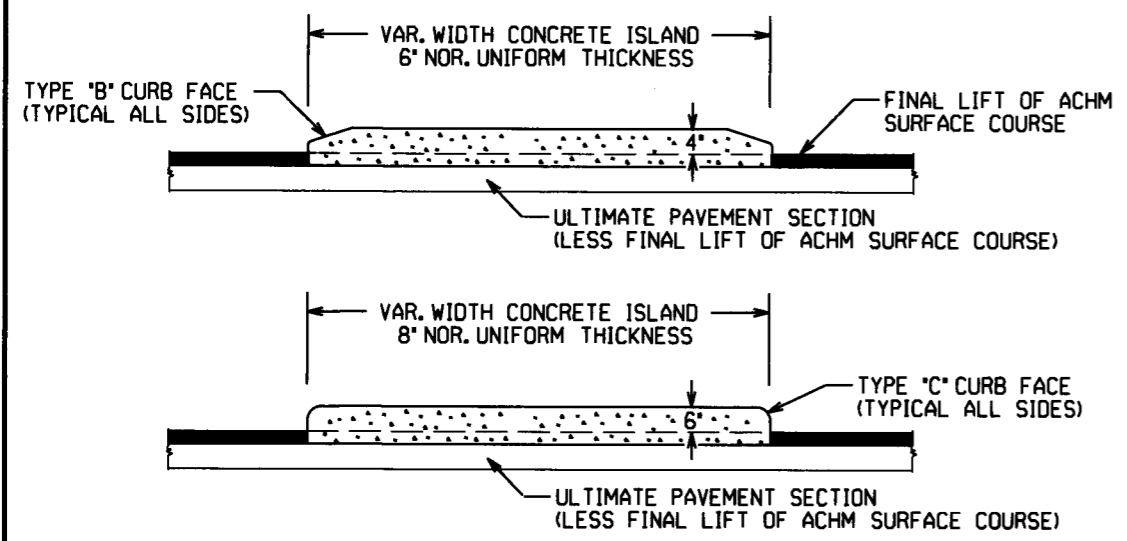


SECTION B-B
CURBED ISLAND BEHIND WALK



ISOMETRIC VIEW

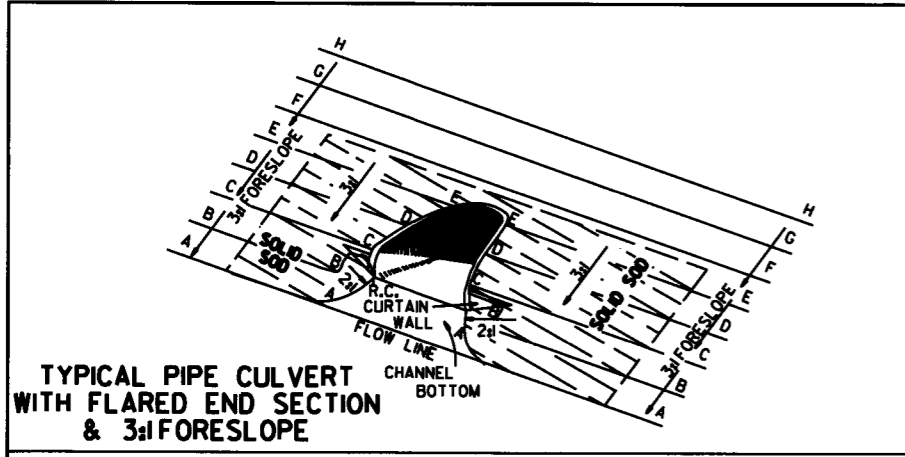
REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 'CONCRETE ISLAND'.



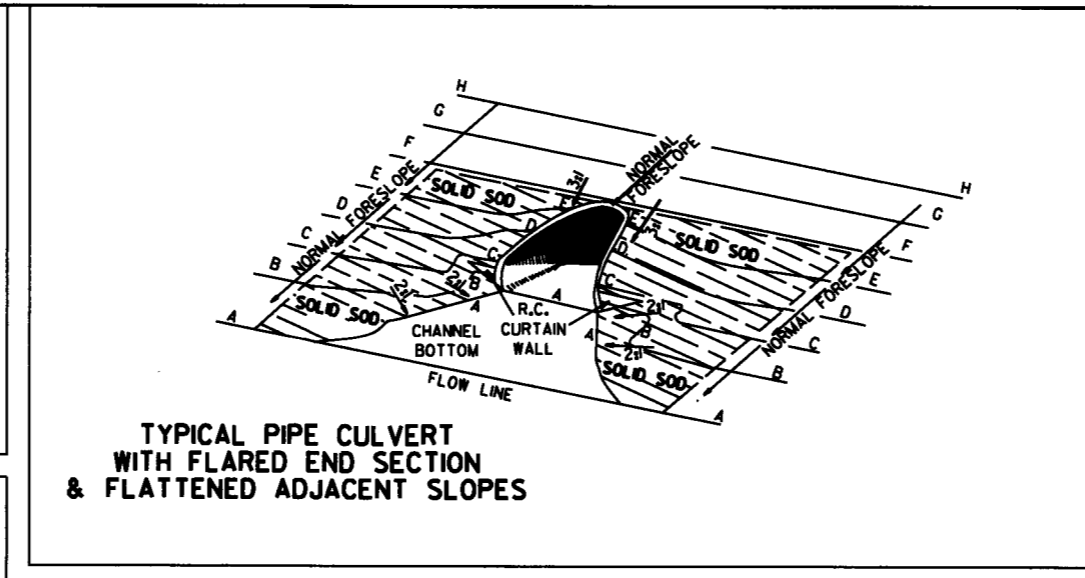
CURBED ISLANDS FOR CHANNELIZATION

DATE	REV	DATE FILMED	DESCRIPTION
2-27-14			REVISED PLAN & ISOMETRIC VIEW
11-29-07			ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05			REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02			ADDED ISLAND DETAILS & NOTES
3-30-00			REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98			REVISED NOTES
11-18-98			REDRAWN AND REISSUED

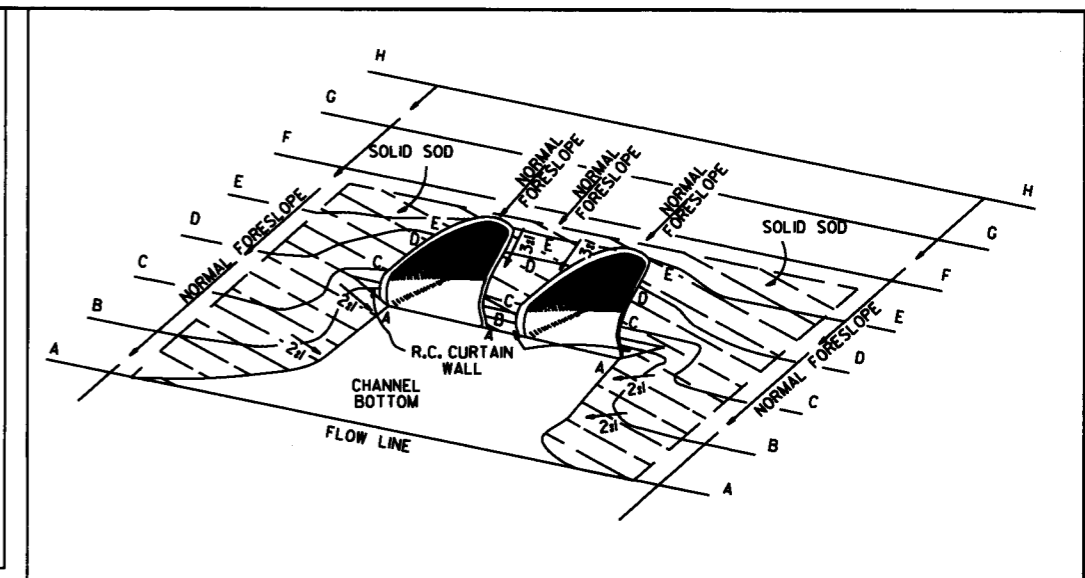
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



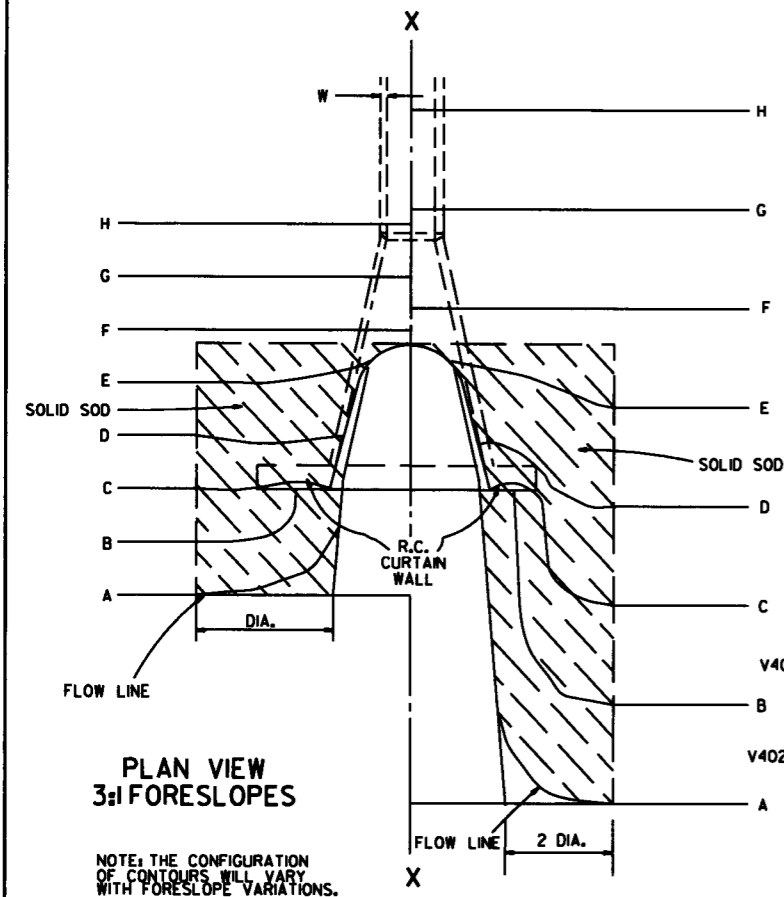
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3:1 FORESLOPES

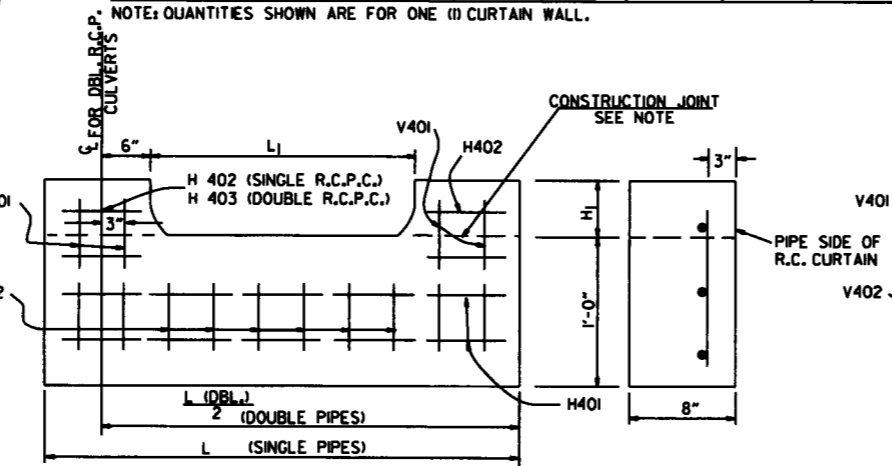
PLAN VIEW FLATTENED FORESLOPES

NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

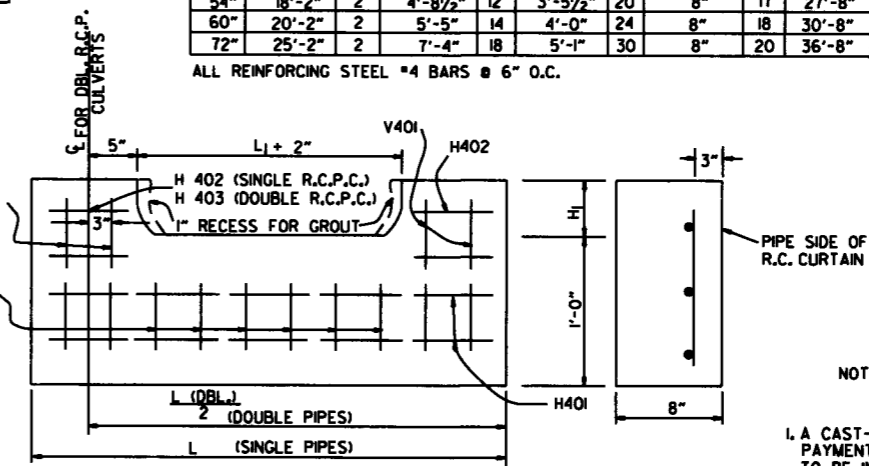
PIPE DIA.	H ₁	L ₁	L	L (DBL.) / 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9 1/2"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



R.C. CURTAIN WALL DETAILS

NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		V401		V402			
L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.			
18"	7'-8"	2	1'-11/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	12	8"	18
30"	10'-8"	2	2'-4 1/2"	4	1'-11/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11/2"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

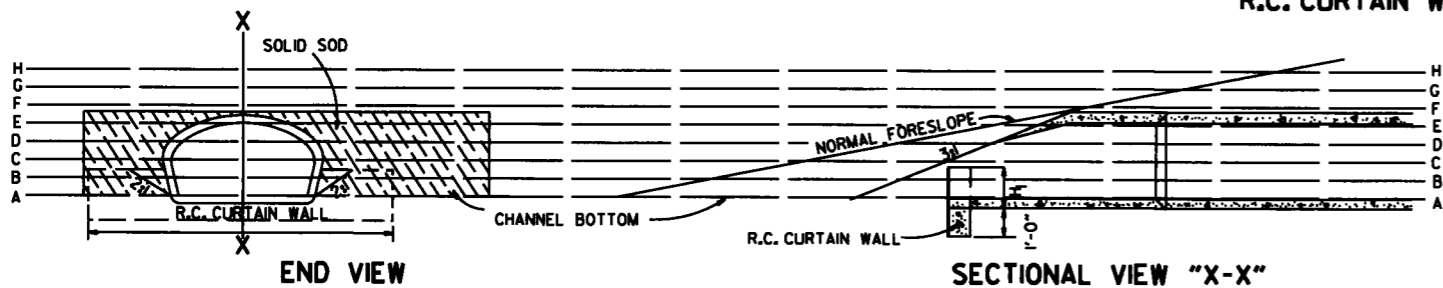
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.			DOUBLE R.C.P.C.		
	3:1	4:1	6:1	3:1	4:1	6:1
	SO. YDS.					
18"	5	12	12	6	8	13
24"	8	18	18	8	11	20
30"	13	26	26	14	19	30
36"	17	34	34	18	26	41
42"	23	45	45	24	37	57
48"	28	54	54	28	46	70
54"	34	67	67	37	59	87
60"	41	82	82	46	71	107
72"	64	126	126	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

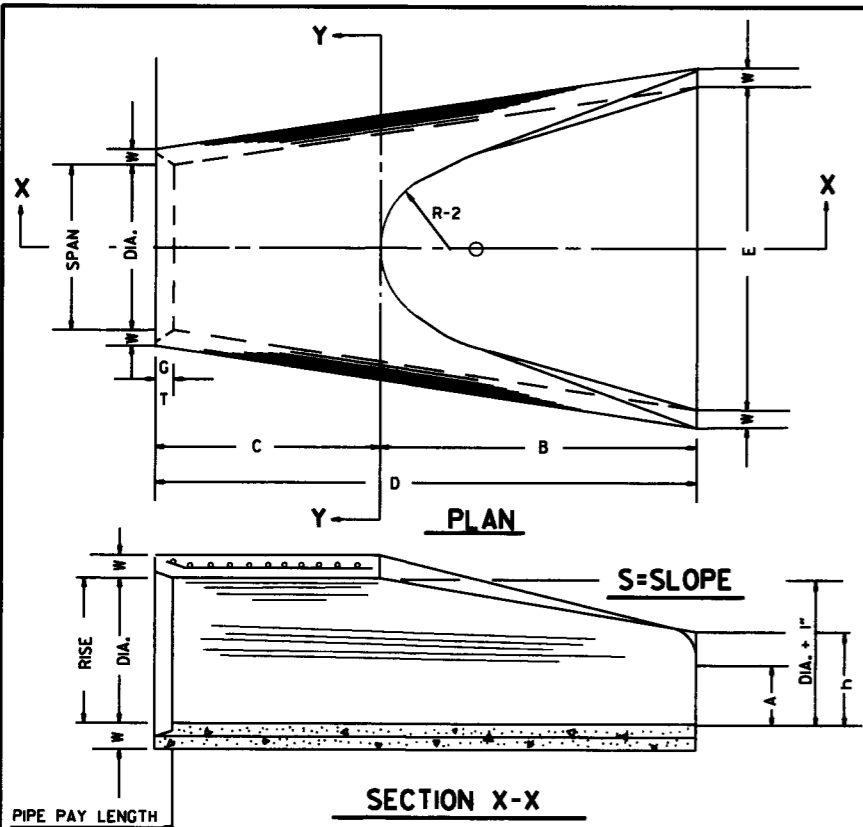
- GENERAL NOTES
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE FOR FORMS, MIXING AND PLACING, FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
 2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
 3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
 4. WELDED WIRE MESH 3 x 3 W/10 x W/10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

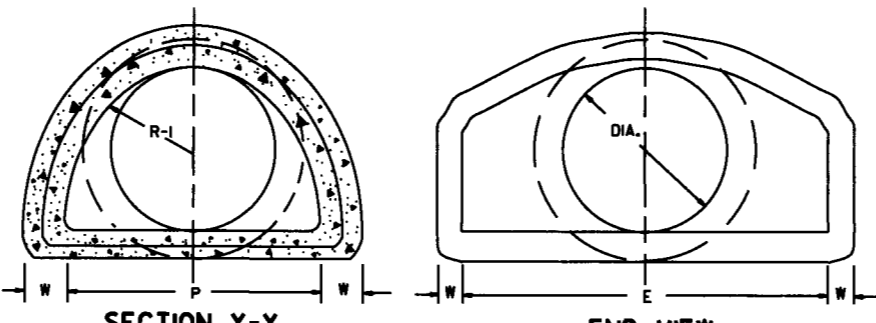
10-18-96 ADDED NOTE TO SOLID SODDING	ARKANSAS STATE HIGHWAY COMMISSION
10-12-95 CORRECTED SPELLING	
11-3-94 ADDED GENERAL NOTE NO. 4	
8-15-91 REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81 ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
15-15-80 ADDED PRECAST WALL & GENERAL NOTES	
10-2-72 REVISED AND REDRAWN	
DATE	REVISION
	FILMED
	STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3sl	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3sl	25"	33 3/4"	16 3/4"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3sl	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 3/8"
36"	4"	1'-3"	5'-3"	2'-10 1/4"	8'-1 1/4"	6'-0"	3sl	37"	47 1/4"	24 1/4"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3sl	43"	53 1/2"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3sl	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3sl	55"	65 1/2"	33 1/4"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3sl	61"	72 1/2"	36 3/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3sl	73"	77 3/4"	38 3/4"	24"	5"	13250	4'-6"

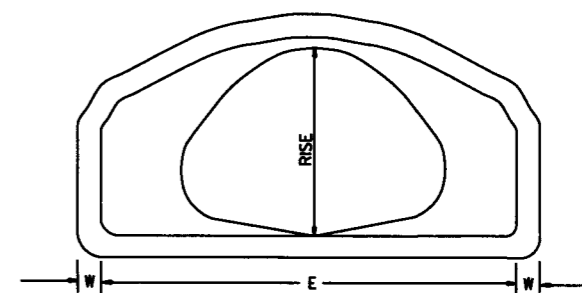


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

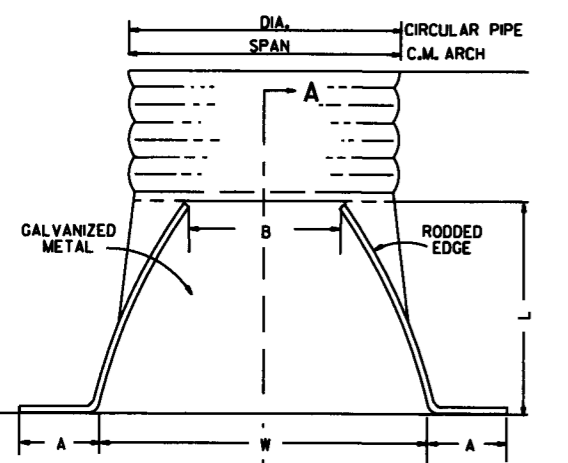
ARCH PIPE

EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2sl
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/4"	13"	2 1/2"	2 1/2sl
21	26	26	15 1/2	16	2 3/4"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34 1/4"	14"	2 1/2"	2 1/2sl
24	28 1/2	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 3/4"	15"	2 1/2"	2 1/2sl
30	36 1/4	36	22 1/2	23	3 1/2"	10"	3'-1"	3'-0 1/2"	6'-1 1/2"	6'-0"	47 1/4"	20"	3"	2 1/2sl
36	43 3/4	44	26 3/4	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 3/4"	22"	3 1/2"	2 1/2sl
42	51 1/8	51	31 3/4	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2sl
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 1/4"	8'-1 1/4"	7'-10"	70 3/4"	24"	4 1/4"	2 1/2sl
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/4"	24"	4 3/4"	2 1/2sl
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 3/4"	24"	5"	2 1/2sl

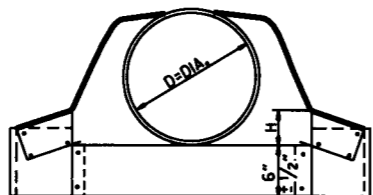
* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



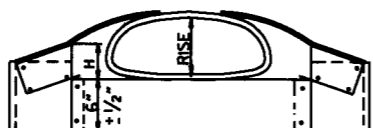
END VIEW CONCRETE ARCH PIPE



SECTION A-A



CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

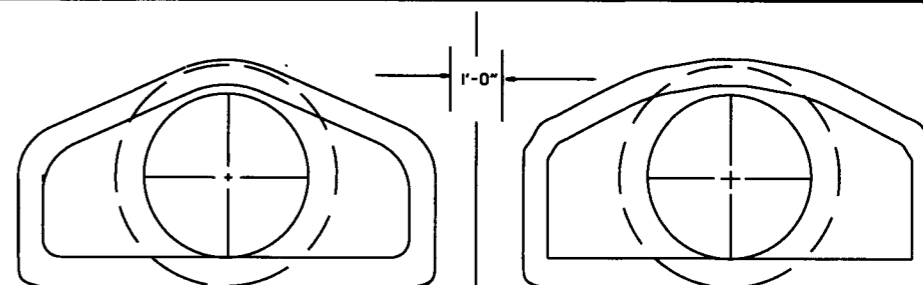
D. DIA.	GAUGE	A	B. MAX.	H	L	W	S
12	16	6	6	6	21	24	2 1/2sl
15	16	7	8	6	26	30	2 1/2sl
18	16	8	10	6	31	36	2 1/2sl
21	16	9	12	6	36	42	2 1/2sl
24	16	10	13	6	41	48	2 1/2sl
30	14	12	16	8	51	60	2 1/2sl
36	14	14	19	9	60	72	2 1/2sl
42	12	16	22	11	69	84	2 1/2sl
48	12	18	27	12	78	90	2 1/2sl
54	12	18	30	12	84	102	2sl
60	12	18	33	12	87	114	1 1/2sl
66	12	18	36	12	87	120	1 1/2sl
72	12	18	39	12	87	126	1 1/2sl

C.M. ARCH PIPE

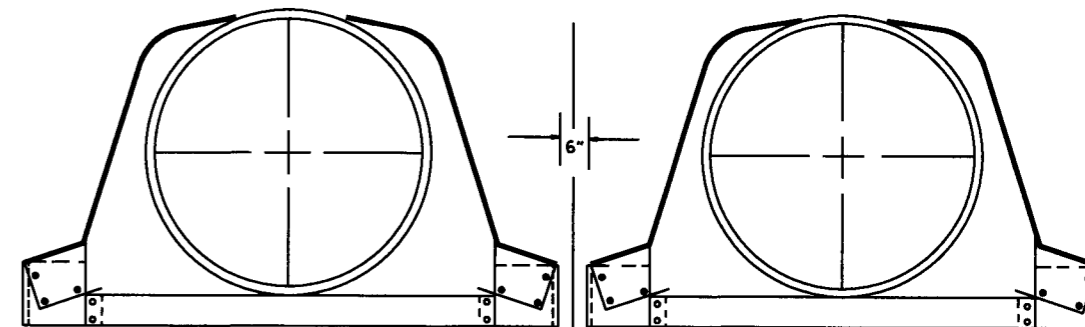
EQUIV. DIA.	SPAN	RISE	A	B. MAX.	H	L	W	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2sl	16
18"	21	15	7	10	6	23	36	2 1/2sl	16
21"	24	18	8	12	6	28	42	2 1/2sl	16
24"	28	20	9	14	6	32	48	2 1/2sl	16
30"	35	24	10	16	6	39	60	2 1/2sl	14
36"	42	29	12	18	8	46	75	2 1/2sl	14
42"	49	33	13	21	9	53	85	2 1/2sl	12
48"	57	38	16	26	12	63	90	2 1/2sl	12
54"	64	43	18	30	12	70	102	2 1/2sl	12
60"	71	47	18	33	12	77	114	2 1/2sl	12

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



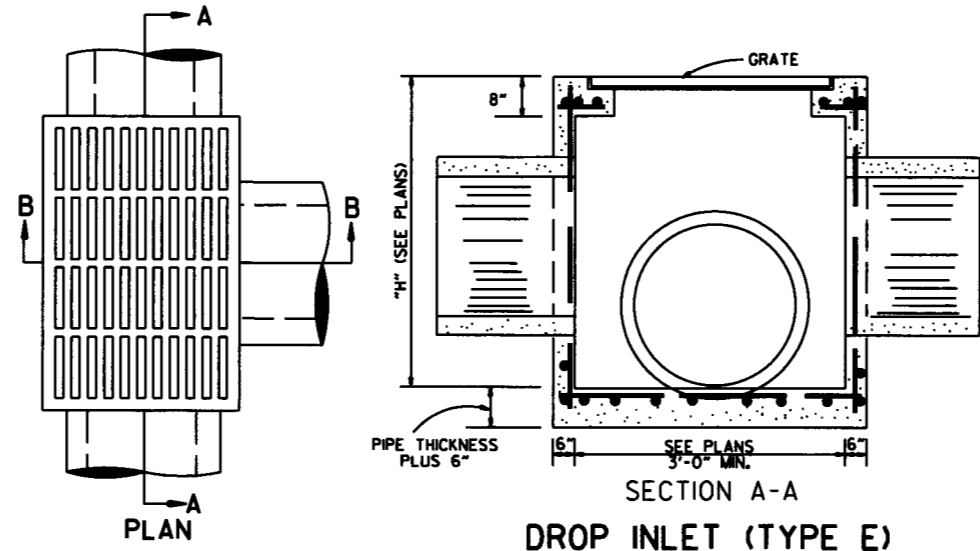
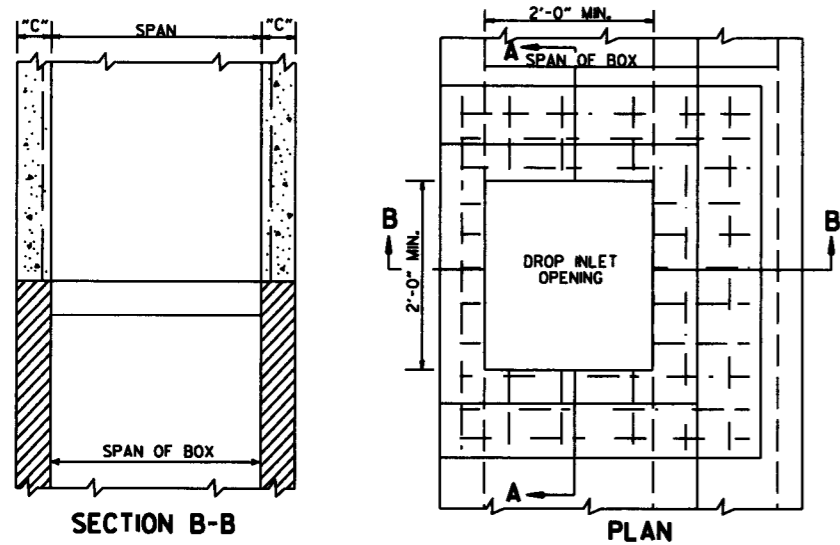
MULTIPLE R.C. PIPE CULVERTS



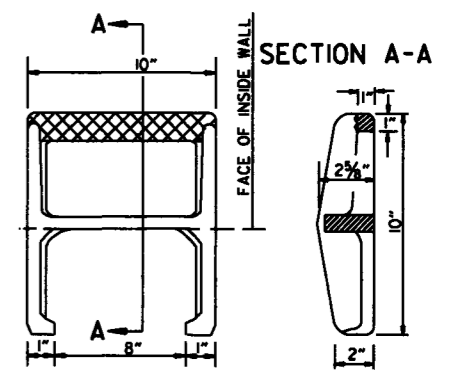
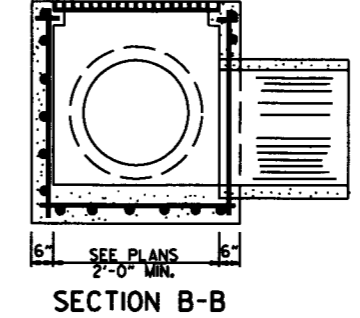
MULTIPLE C.M. PIPE CULVERTS

DATE	REVISION	REVISION
10-18-96	REVISED ASTM REF. TO AASHTO	
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
5-24-73	CMP END SECTION SHOW PIPE PAY LENGTH	627-5-24-73
10-2-72	REVISED AND REDRAWN	760-10-2-72
		ET MEM

ARKANSAS STATE HIGHWAY COMMISSION
FLARED END SECTION
STANDARD DRAWING FES-2

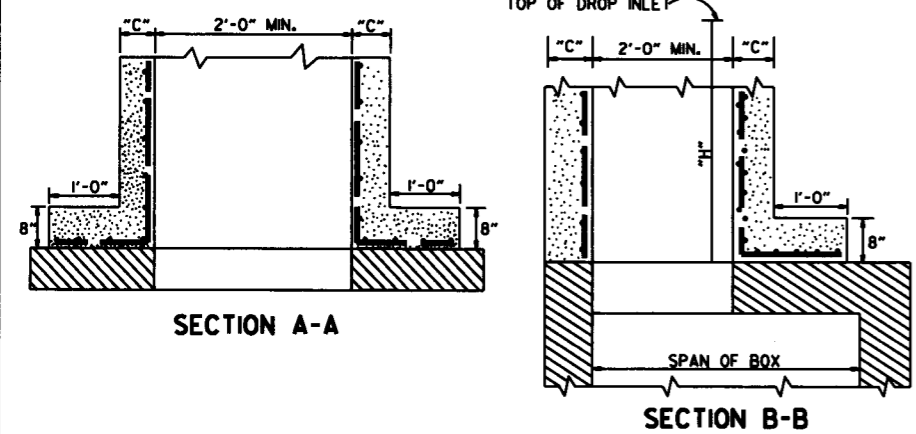


NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

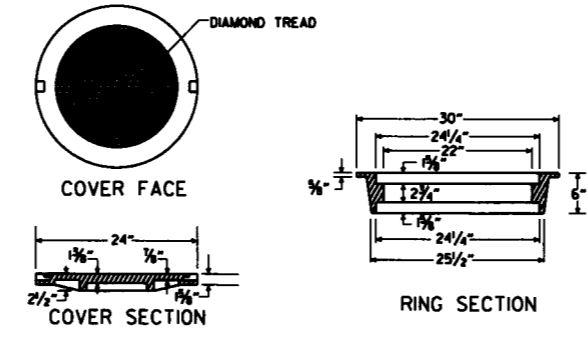


APPROX. WEIGHT = 11 LBS. (CAST IRON)
 PLAN
 NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

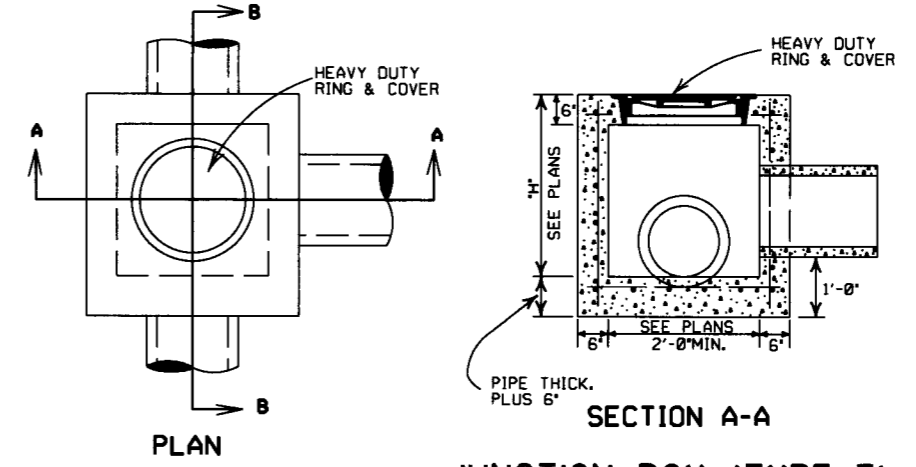
DETAIL OF STEP FOR DROP INLET



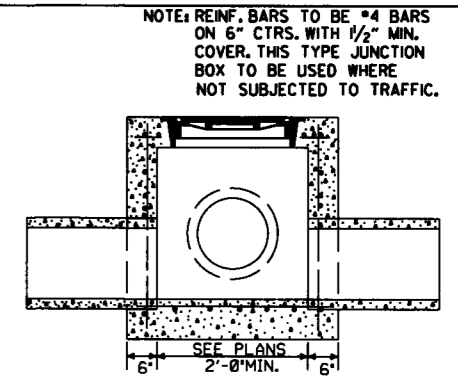
METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



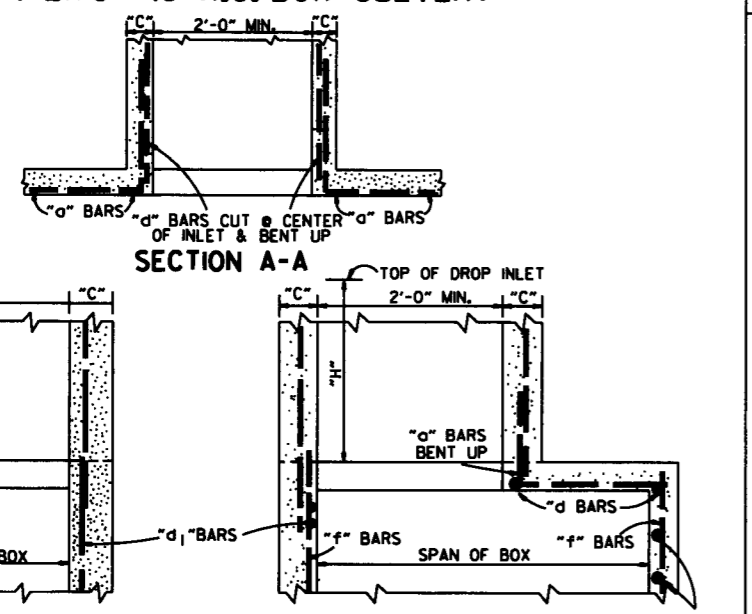
APPROXIMATE TOTAL WEIGHT = 333 LBS.
HEAVY DUTY RING & COVER



JUNCTION BOX (TYPE E)

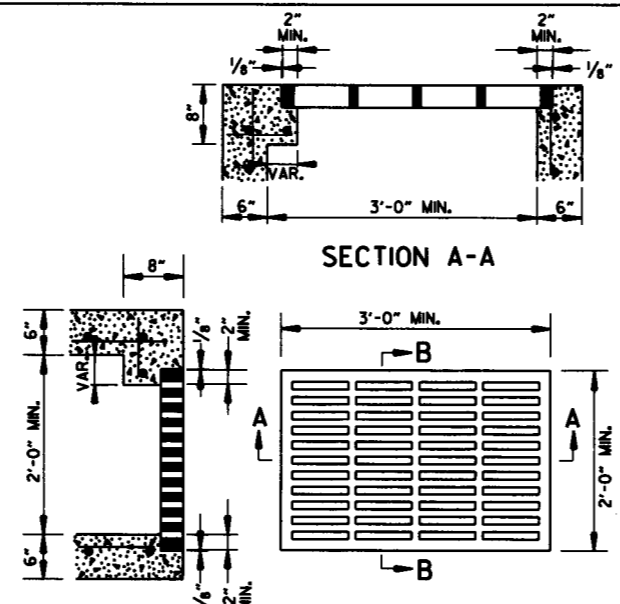


NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

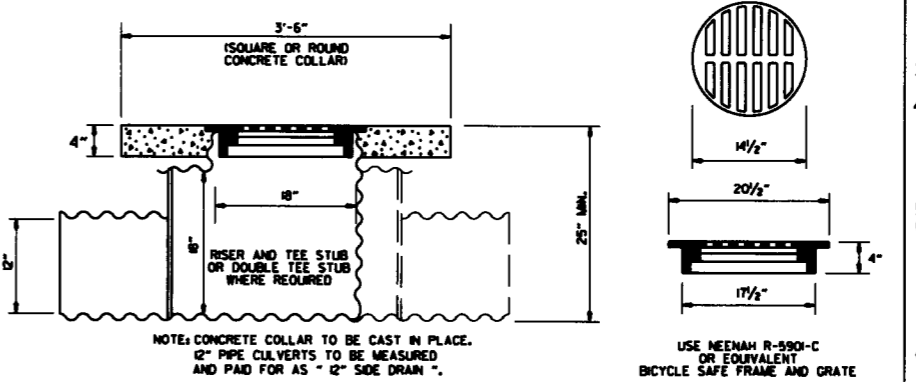


METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.



APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.
GRATE FOR TYPE E DROP INLET

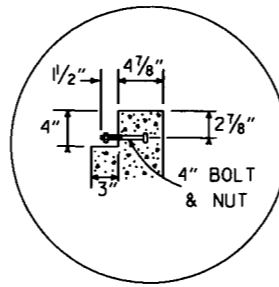
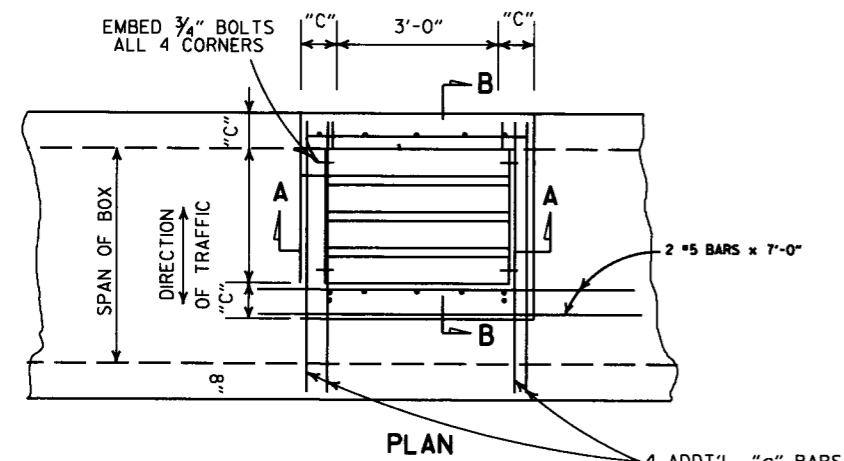


DETAIL OF YARD DRAIN

11-16-01	ADDED NOTE 10		
1-12-00	REVISED HEAVY DUTY RING & COVER		
7-02-98	CHANGED GRATE DETAIL, DELETED D (TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)		
6-26-97	ADDED DIMENSION TO TYPE IV-A		
10-18-96	ADDED DETAIL OF YARD DRAIN		
8-15-91	DELETE TYPE IV GRATE		
7-15-88	REVISED STEP DETAIL		
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)		
2-4-83	ADDED GENERAL NOTE NO. 4		
3-2-81	ADDED TYPE IV-A GRATE		
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)		
10-2-72	REVISED AND REDRAWN		
DATE REV.	REVISION		DATE FILMED

- GENERAL NOTES:
1. ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
 2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
 3. EXPANSION JOINT MATERIAL SHALL BE 3/4" PREFORMED FIBER.
 4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
 5. GRATE AND FRAME SHALL NOT BE PAINTED.
 6. GRATE SHALL BE BICYCLE SAFE.
 7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B & AASHTO M 306.
 9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF DROP INLETS
 & JUNCTION BOXES
 STANDARD DRAWING FPC-9

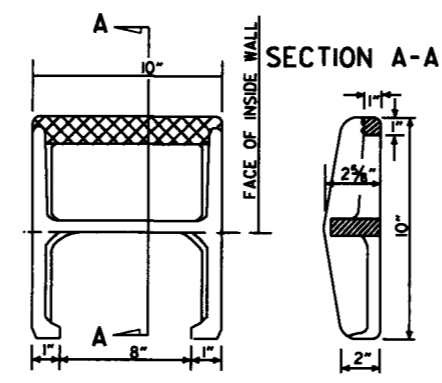
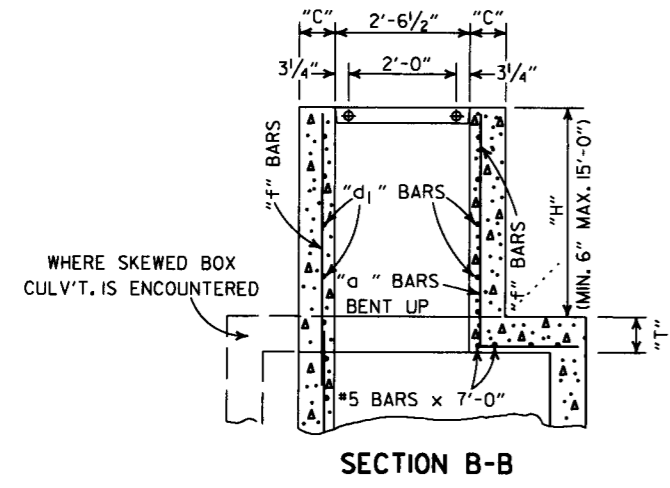
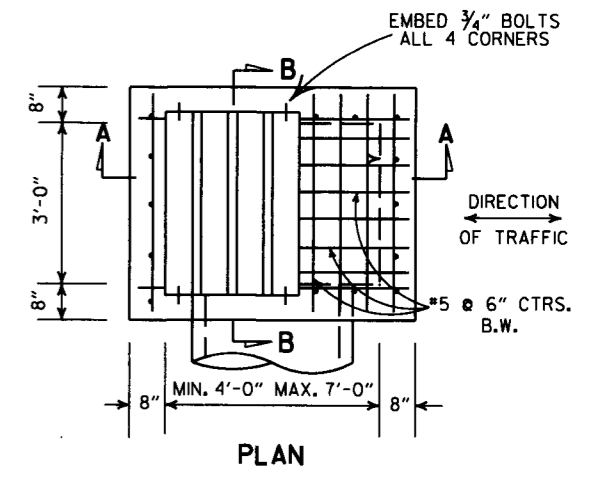
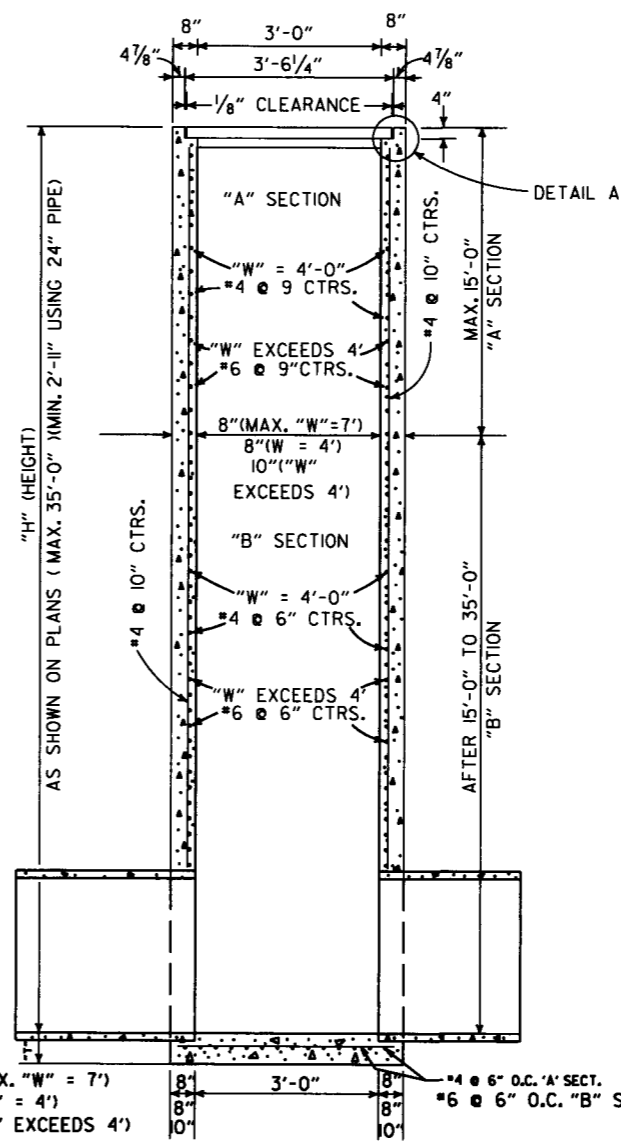
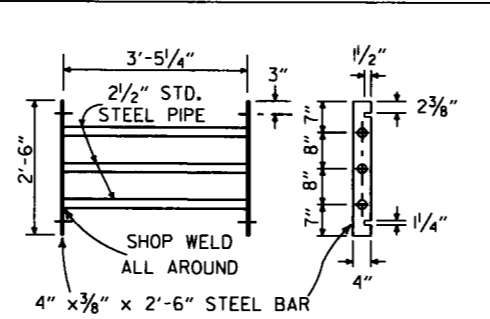
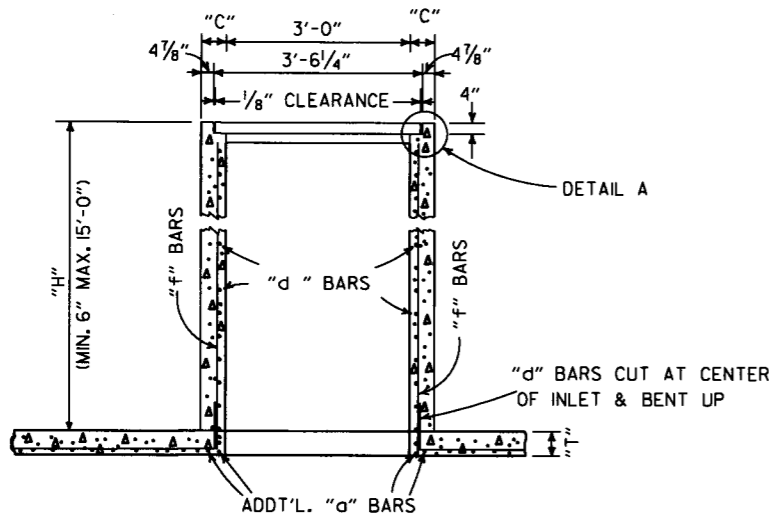


- GENERAL NOTES:**
1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 10R 2, ASTM A307 OR AASHTO M 164.
 2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
 3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
 4. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1/2" COVER. LARGER SIZES TO HAVE 2" COVER.
 6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TABLE OF "W" DIMENSIONS

I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
24"	4'-0"	4'-0"	4'-0"
30"	4'-0"	4'-0"	4'-5"
36"	4'-0"	4'-3"	5'-3"
42"	4'-3"	4'-8"	6'-1"
48"	4'-10"	5'-7"	6'-11"

NOTE: DIMENSIONS SHOWN ABOVE ARE FOR PIPES INTERSECTING DROP INLET ON ONE SIDE ONLY. FOR SKEWED PIPES INTERSECTING BOTH SIDES OF DROP INLET, "W" WILL NEED TO BE INCREASED OR AXIS OF INTERSECTING PIPES WILL NEED TO BE SHIFTED.



NOTE: ADD'L. REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

DIMENSIONS & REINF. BARS FOR D.I. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

DROP INLET TYPE "TM" FOR REINFORCED CONC. BOX CULVERTS

APPROX. WEIGHT = 11 LBS. (CAST IRON)
NOTE: THIS DETAIL IS TYPICAL, OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

"A" SECT. (MAX. "W" = 7')
"B" SECT. ("W" = 4')
"C" SECT. ("W" EXCEEDS 4')

DROP INLET (TYPE RM)

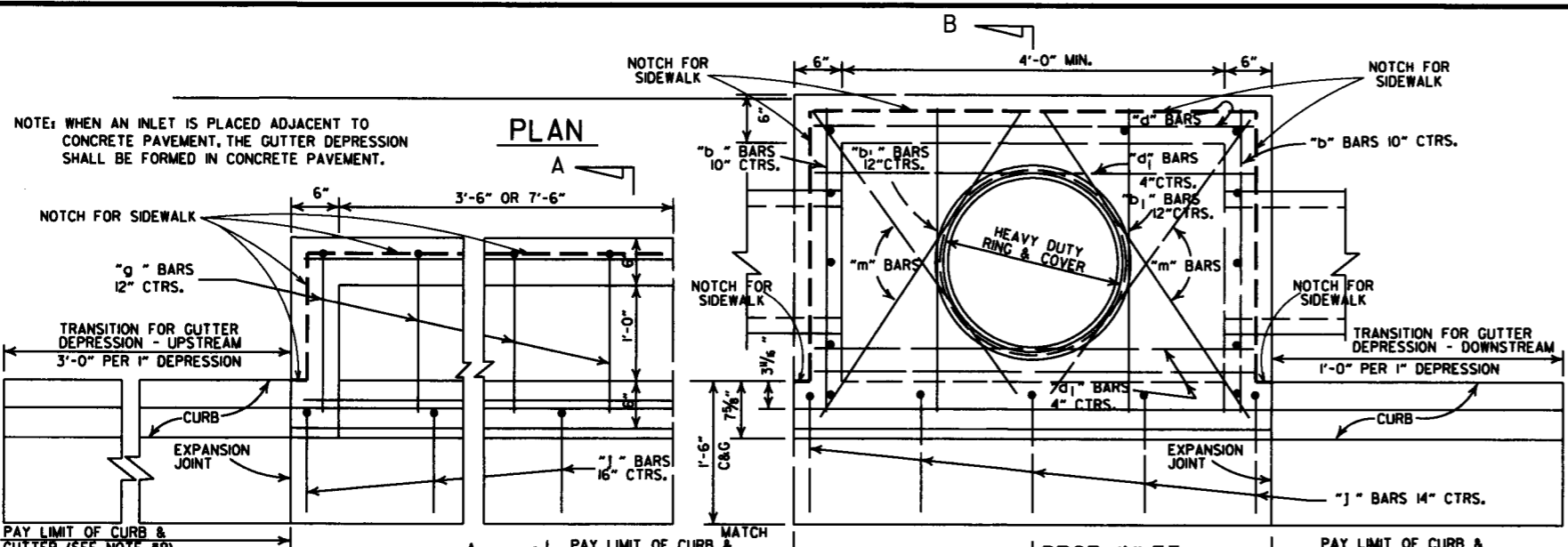
8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE	8-15-91
11-30-89	ALTERED DETAIL A	11-30-89
7-15-88	REVISED STEP DETAIL, TM & RM D.I. & GRATE DETAIL	719-7-15-88
10-2-72	REVISED AND REDRAWN	542-10-2-72
REVISED		DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

STANDARD DRAWING FPC-9D

NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.



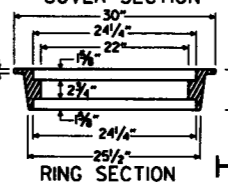
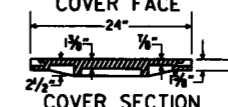
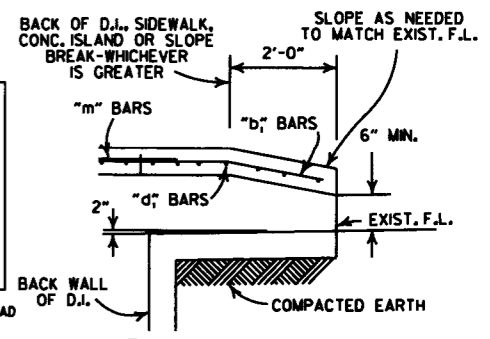
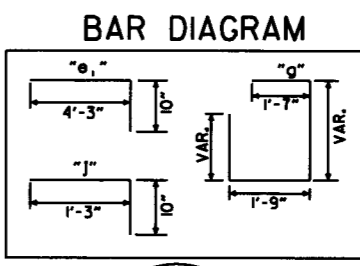
PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0"		PLUS OR MINUS PER LIN. FT. OF HEIGHT		4'-0"		8'-0"	
		CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL
		CU. YDS.	POUNDS	CU. YDS.	POUNDS	CU. YDS.	POUNDS	CU. YDS.	POUNDS
18"	2'-6"	1.77	156	0.28	22	0.58	38	0.87	72
24"	2'-6"	1.79	156	0.28	22				
30"	3'-2"	2.39	205	0.30	26				
36"	3'-8"	2.63	236	0.32	28				
42"	4'-4"	2.95	250	0.34	30				
48"	4'-10"	3.21	265	0.36	32				
						0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

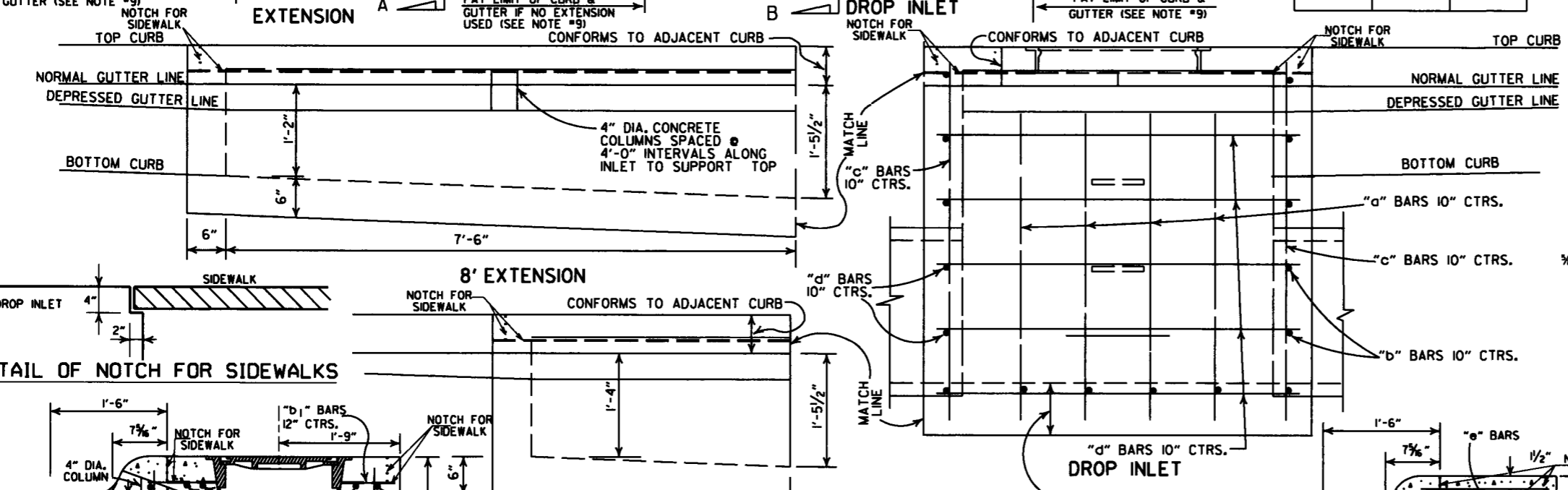
INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8



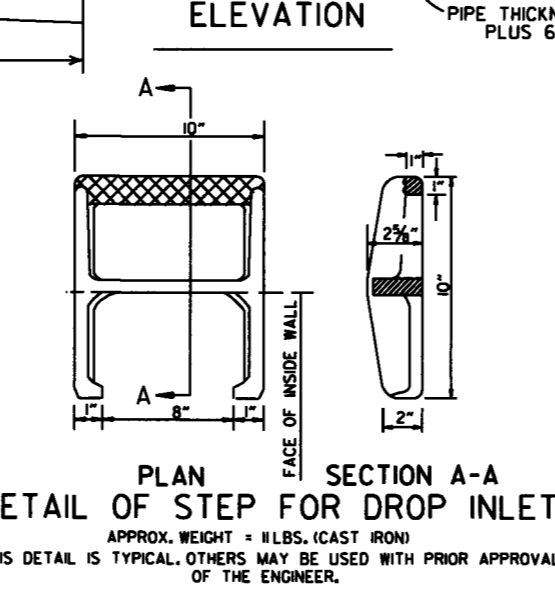
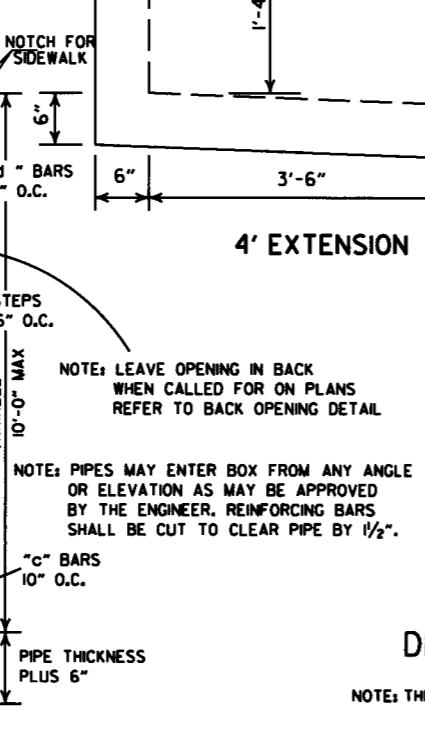
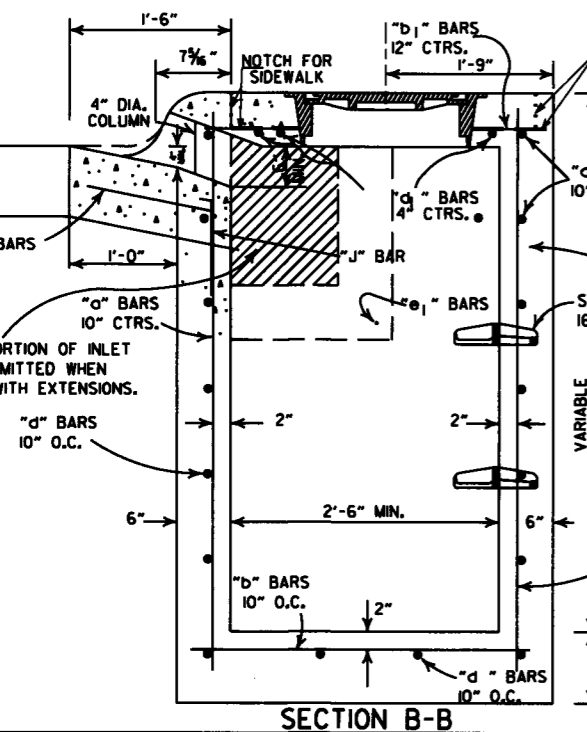
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

- GENERAL NOTES:
- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 - STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS APPROVED BY THE ENGINEER.
 - ALL REINF. BARS SHALL BE #4 AND HAVE 1/2" COVER.
 - DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 - THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
 - WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 - PAYMENT FOR CURB AND/OR GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
 - HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M103 CLASS 35B & AASHTO M306.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - HEAVY DUTY RING SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 - DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

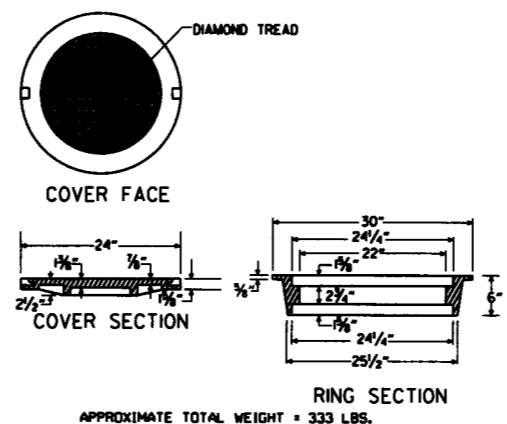
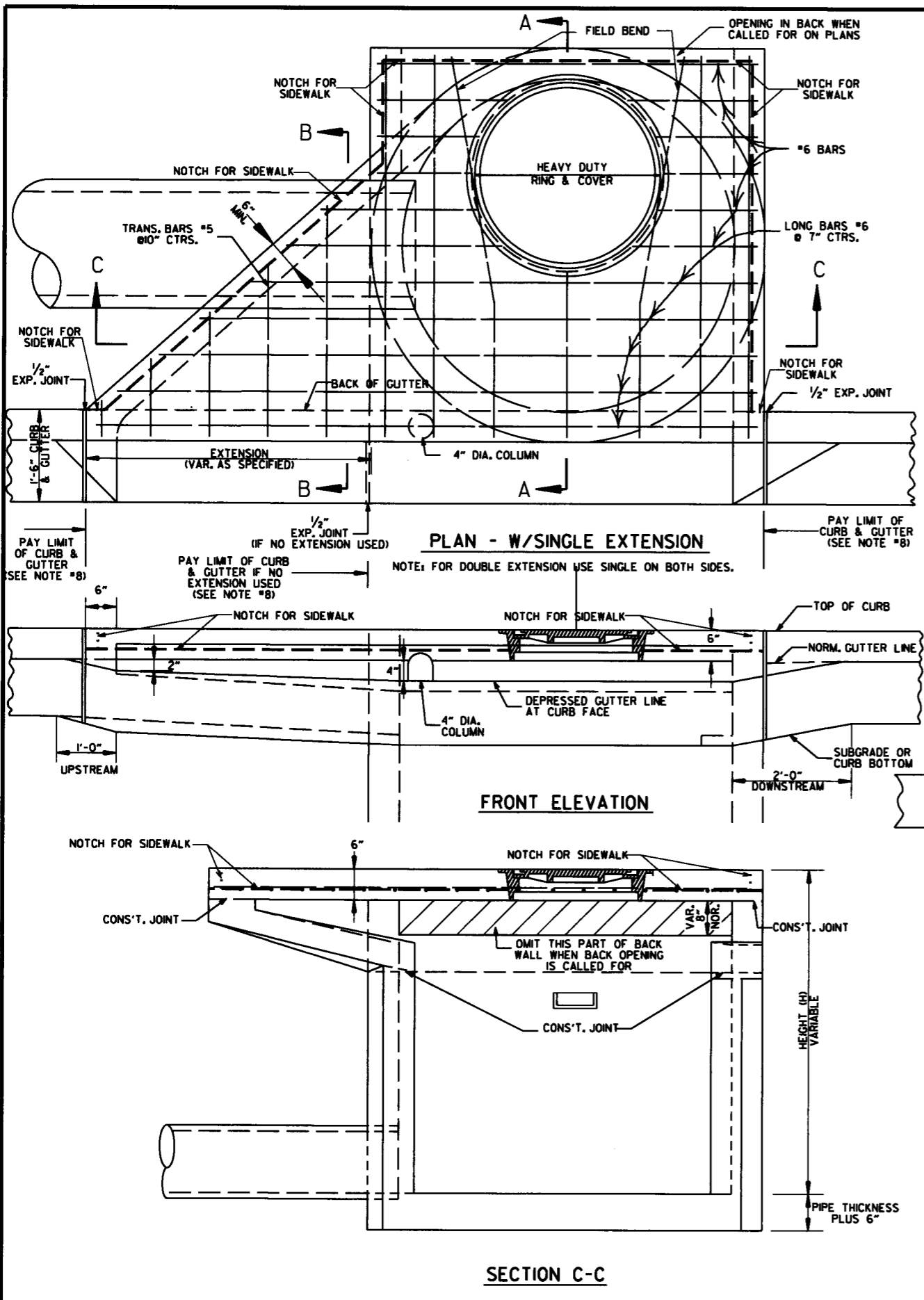


DETAIL OF NOTCH FOR SIDEWALKS



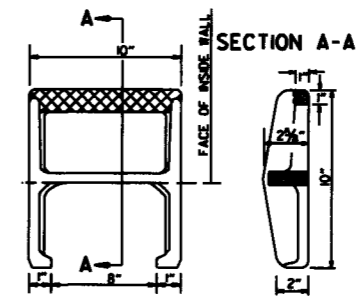
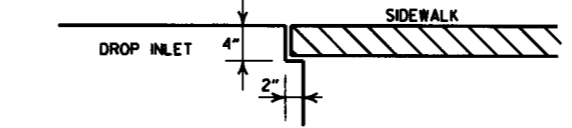
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13, REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER	
	ADDED NOTES 9, 10, 11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4'x8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF DROP INLETS
 (TYPE C)
 STANDARD DRAWING FPC-9E



HEAVY DUTY RING & COVER

1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M103 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.

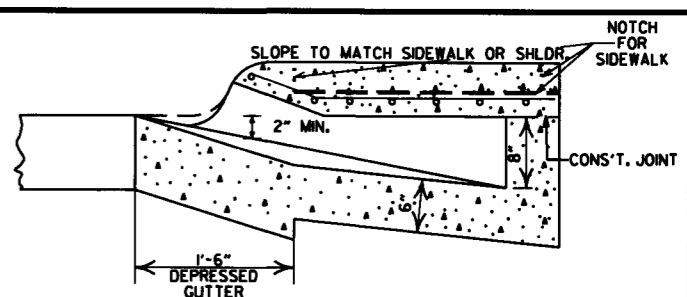
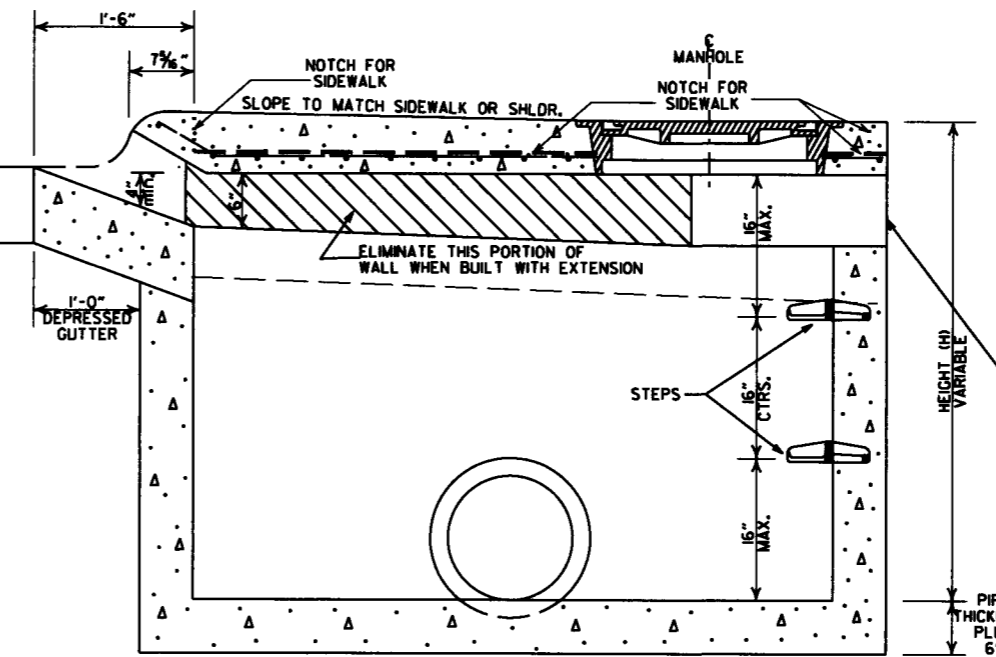


PLAN

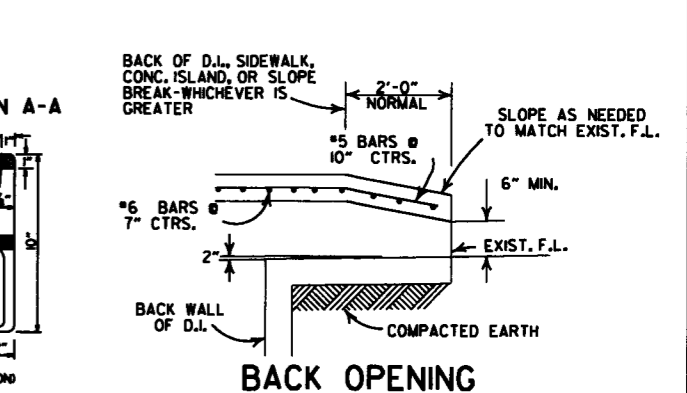
NOTE: THIS DETAIL IS TYPICAL, OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

DETAIL OF NOTCH FOR SIDEWALKS



BACK OPENING



- GENERAL NOTES:**
1. ALL EXPOSED CORNERS TO HAVE 1/4" CHAMFER.
 2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
 3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1/2" COVER.
 4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
 6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
 7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
 8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
 9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
 10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
 11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL.

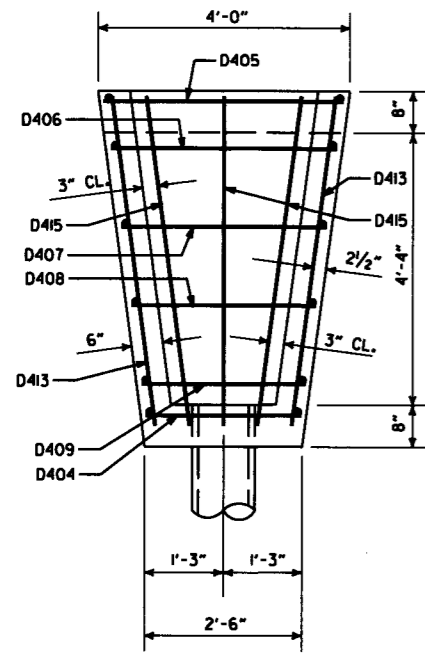
MINIMUM WALL THICKNESS			
DIA. OF D.I.	DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4" I.D.	12" THRU 27"	6"	5"
5" I.D.	30" THRU 42"	8"	6"
6" I.D.	48" THRU 54"	8"	7"

8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
8-16-01	ADDED NOTE 13	
1-2-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REV. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-25-98	ADDED NOTE 8 AND 13	
4-22-98	PROPOSED 2x2 BAR SPACING	
4-22-98	PROPOSED 1/2" DIA. IN BOX	
4-22-98	TYPE C TO MO (OPEN BACK DETAIL)	
4-22-98	REVISED GENERAL NOTES	
4-22-98	REVISED OPEN DETAIL & NOTE	1-4-98
4-22-98	REVISED NOTES #12 & ADDED OPEN DETAIL	4-2-98
4-22-98	ADDED NOTE 12	1-4-98
4-22-98	ADDED NOTE 8 AND MINIMUM WALL THICKNESS	5-13-98
4-22-98	ADDED EXTEND NOTE TO SECTION A-A	8-25-98
4-22-98	MINIMUM WALL THICKNESS	8-25-98
4-22-98	REVISED	8-25-98
DATE	REVISIONS	DATE FILED

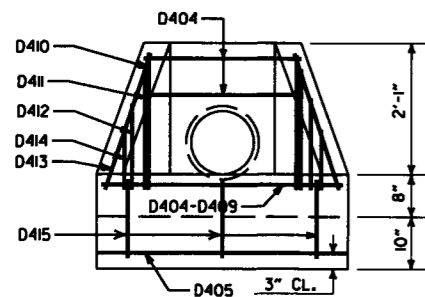
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

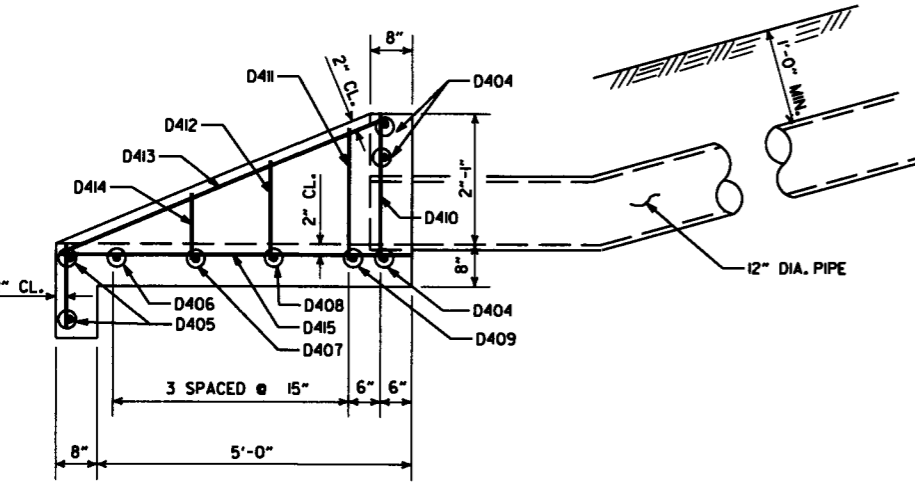
STANDARD DRAWING FPC-9M



PLAN



FRONT ELEVATION



SIDE ELEVATION
CONCRETE SPILLWAY

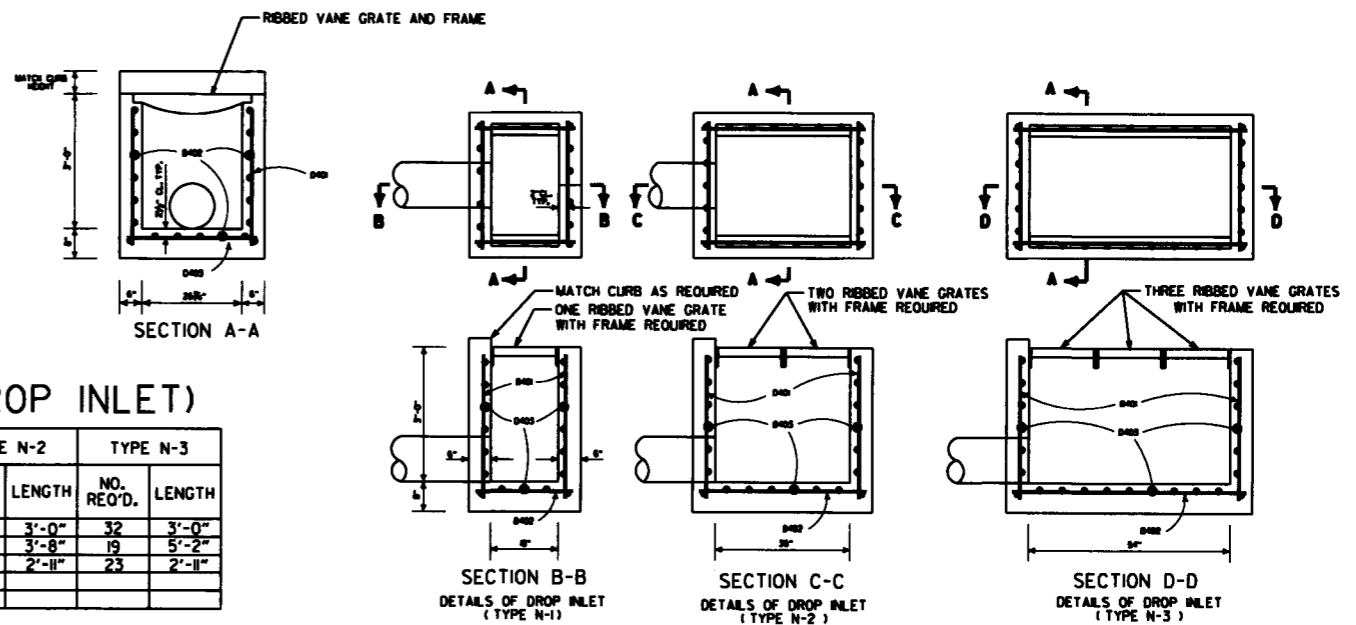
BAR LIST
(CONCRETE SPILLWAY)

MARK	NO. REQ'D.	LENGTH	BENDING DIAGRAM
D404	3	2'-2"	
D405	2	3'-8"	
D406	1	3'-5"	
D407	1	3'-1"	
D408	1	2'-9"	
D409	1	2'-5"	
D410	2	2'-5"	
D411	2	2'-2"	
D412	2	1'-9"	
D413	2	5'-6"	
D414	2	1'-2"	
D415	3	6'-5"	

BAR LIST (DROP INLET)

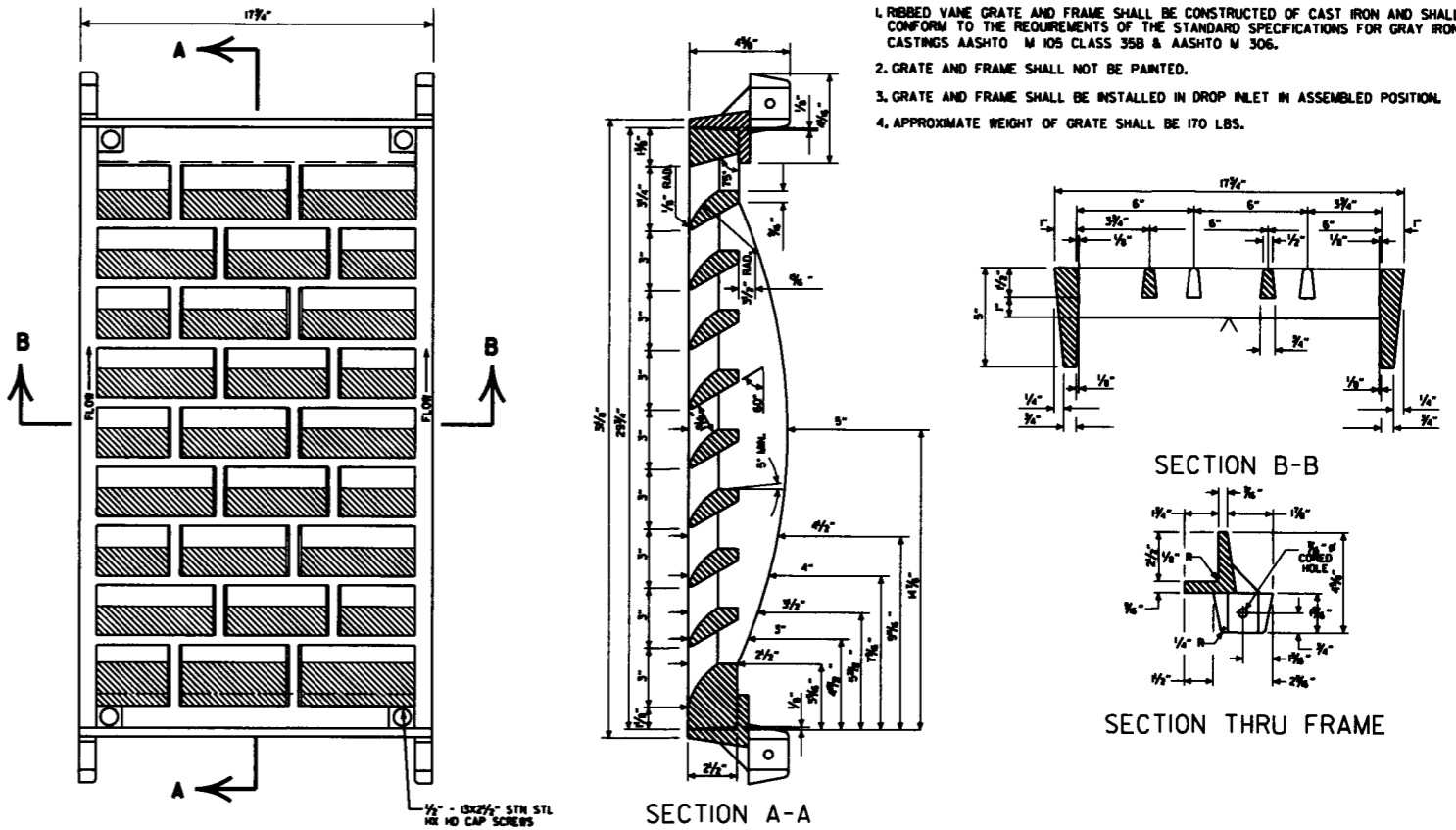
MARK	TYPE N-1		TYPE N-2		TYPE N-3	
	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
D401	20	3'-0"	26	3'-0"	32	3'-0"
D402	19	2'-2"	19	3'-8"	19	5'-2"
D403	17	2'-11"	20	2'-11"	23	2'-11"

ALL BARS #4 @ 6" SPACING



DETAILS OF DROP INLET

- GENERAL NOTES (GRATE & FRAME)
- RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B & AASHTO M 306.
 - GRATE AND FRAME SHALL NOT BE PAINTED.
 - GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
 - APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.

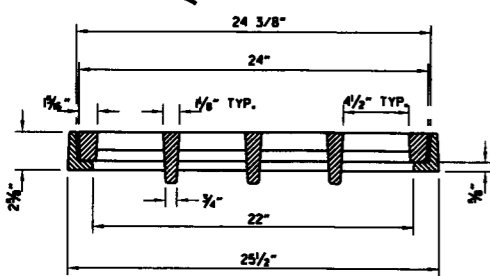
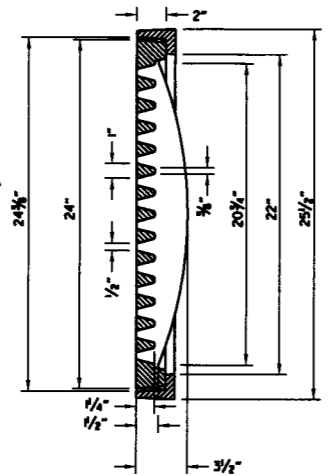
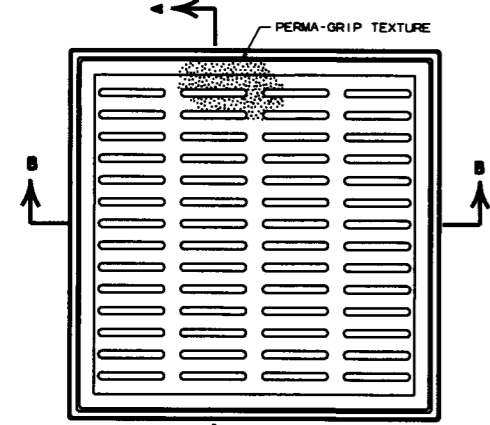


DETAILS OF RIBBED VANE GRATE AND FRAME

DETAILS OF CONCRETE SPILLWAY (TYPE A)

DATE REVISED	DATE FILMED	DESCRIPTION
7-02-98		REVISED SECT. A-A DETAIL OF DROP INLET & ADDED AASHTO REF. TO NOTE L REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
8-15-91		ISSUED

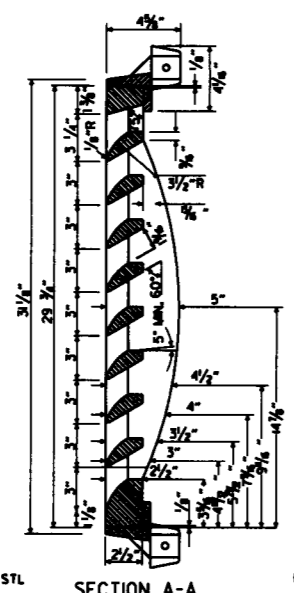
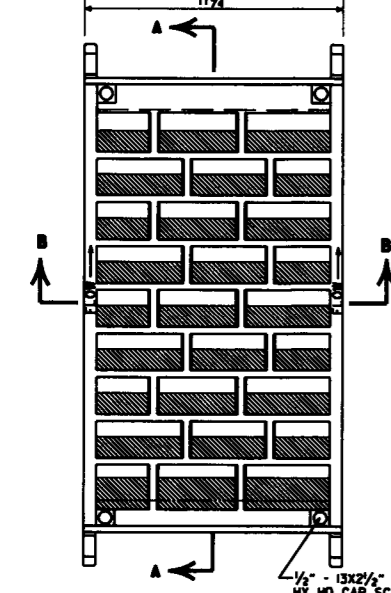
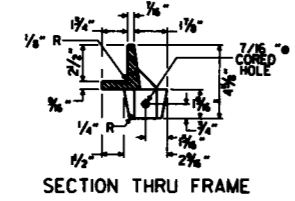
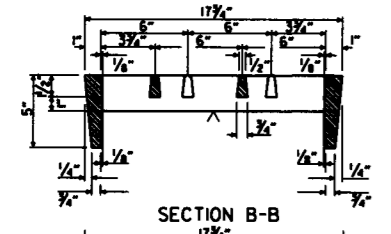
ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF DROP INLETS AND
 SPILLWAY OUTLET
 STANDARD DRAWING FPC-9N



SECTION B-B
DETAILS OF PEDESTRIAN GRATE AND FRAME

SECTION A-A
GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

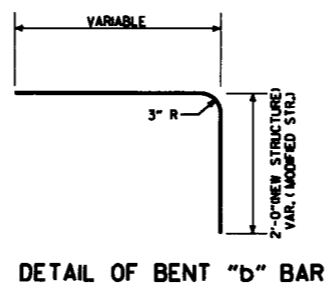
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE $\frac{1}{4}$ " OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 350, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 20 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.



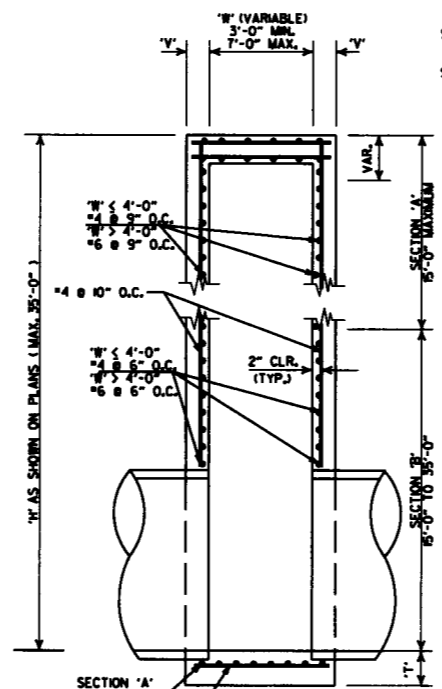
SECTION A-A
DETAILS OF RIBBED VANE GRATE AND FRAME

GENERAL NOTES (RIBBED VANE GRATE & FRAME)

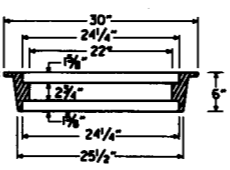
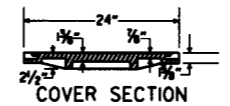
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 350, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.



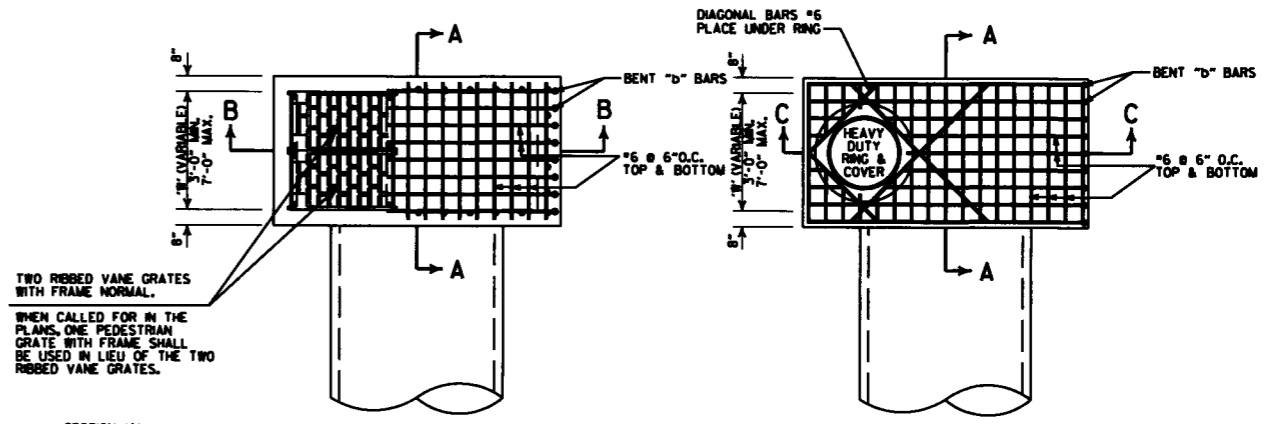
DETAIL OF BENT "b" BAR



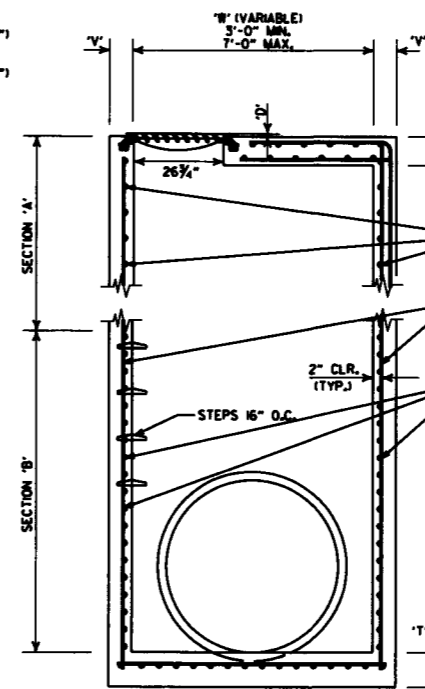
SECTION A-A
DETAILS OF DROP INLET (TYPE ST)



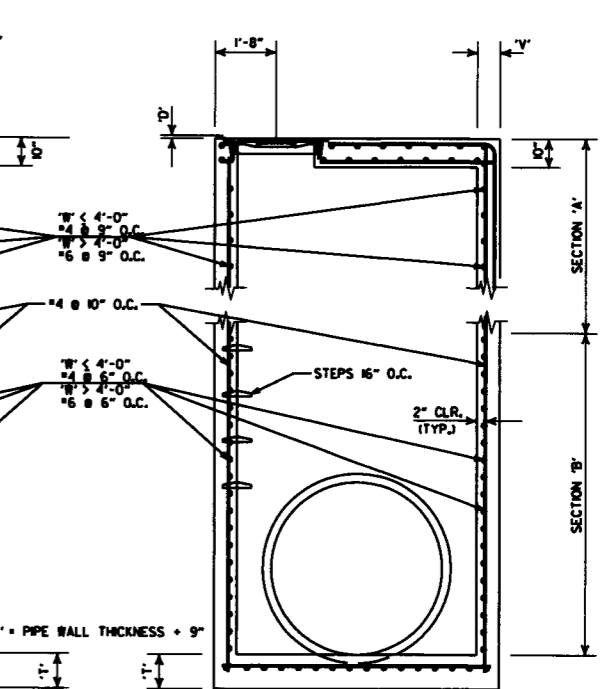
RING SECTION
HEAVY DUTY RING & COVER
APPROXIMATE TOTAL WEIGHT = 333 LBS.



SECTION 'A'
"V" = 8"
SECTION 'B' (W(4'-0")
"V" = 8"
SECTION 'B' (W(2'-0")
"V" = 10"



SECTION B-B



SECTION C-C

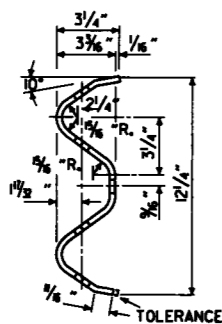
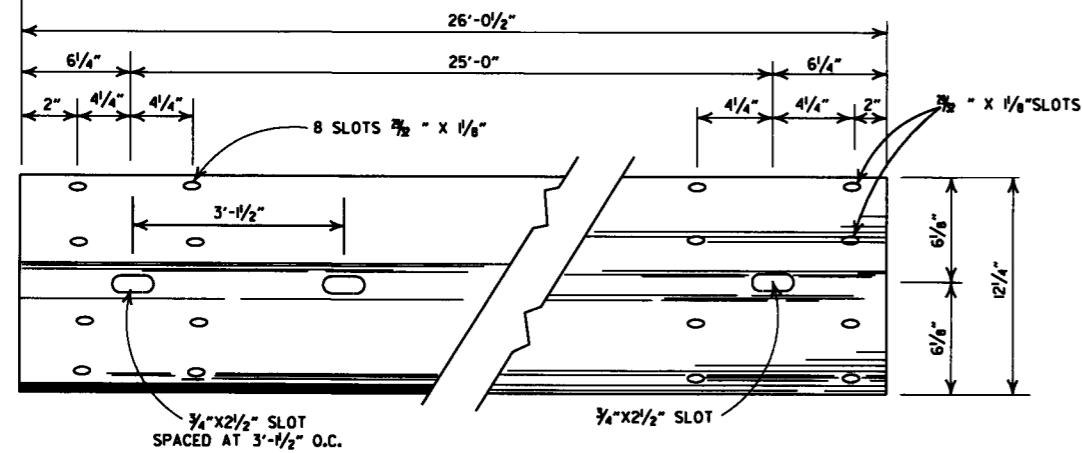
GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

1. THE "D" DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE "H" IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A $\frac{1}{4}$ " CHAMFER.

GENERAL NOTES (HEAVY DUTY RING & COVER)

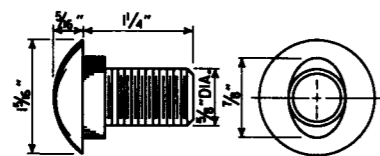
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 350, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER, REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REVISED	DATE FILMED	DESCRIPTION
7-26-12		REMOVED NOTE 4, REVISED "T", REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED

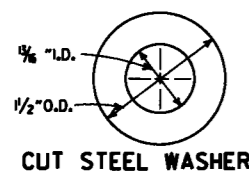


DETAILS OF W-BEAM GUARD RAIL

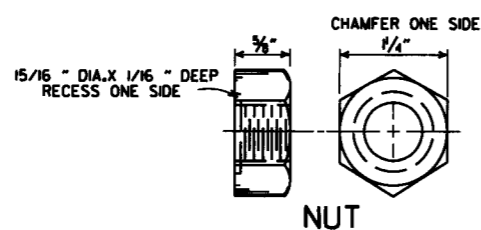
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



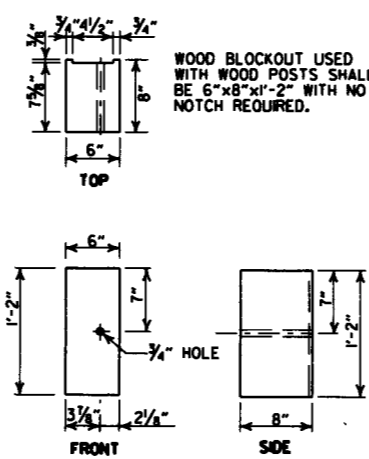
SPLICE BOLT POST BOLT - SAME EXCEPT LENGTH



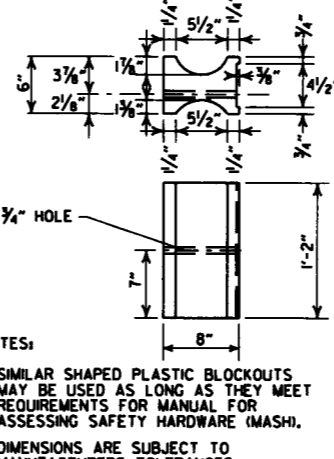
CUT STEEL WASHER



NUT

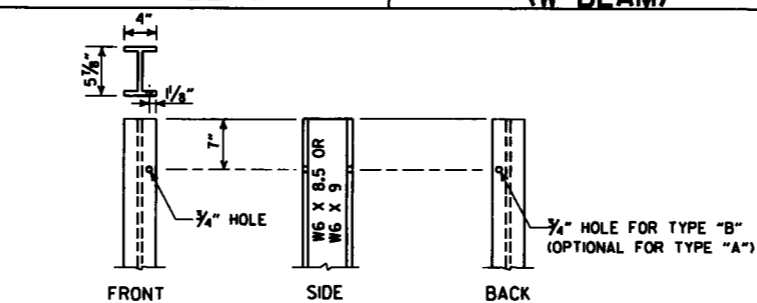


WOOD BLOCKOUT (W-BEAM)

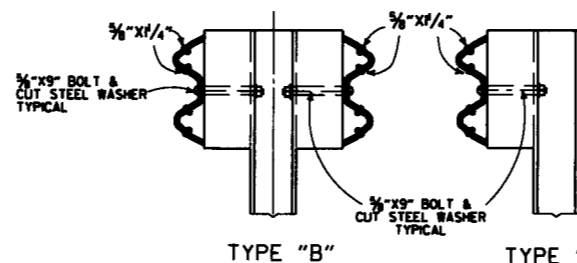


PLASTIC BLOCKOUT (W-BEAM)

NOTES:
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.



STEEL POST



DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

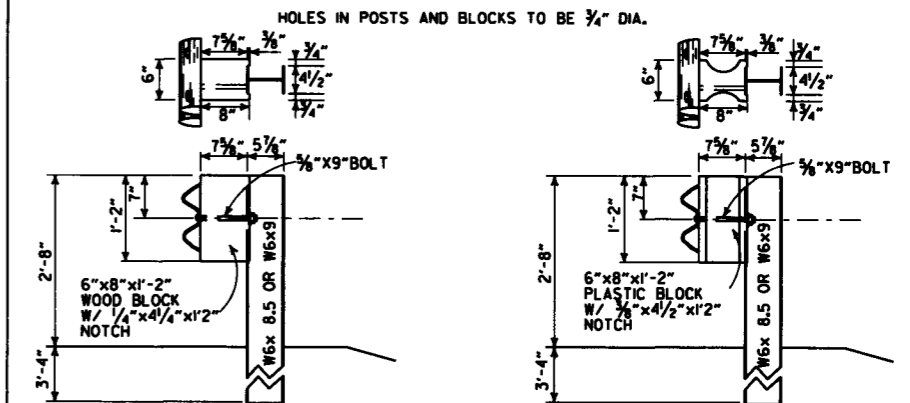
ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.

W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

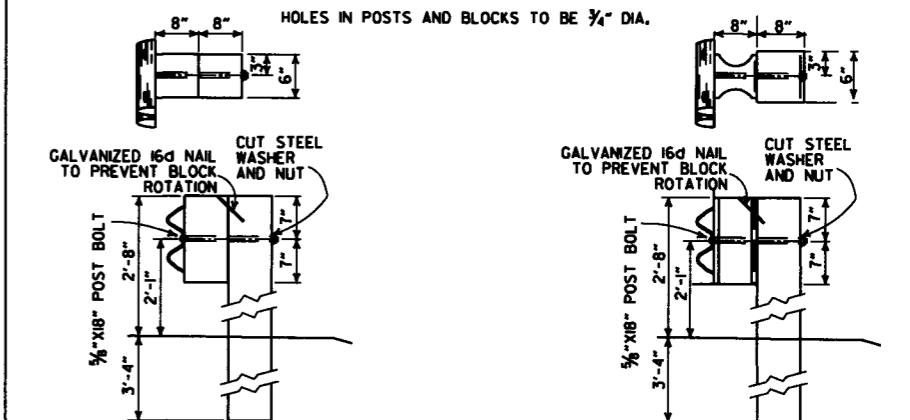
USE W-BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARD RAIL, W-BEAM GUARD RAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.

ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (400 f) OR NO. 1 1350 f SOUTHERN PINE.

CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.



WOOD BLOCKOUT CONNECTIONS PLASTIC BLOCKOUT CONNECTIONS
DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



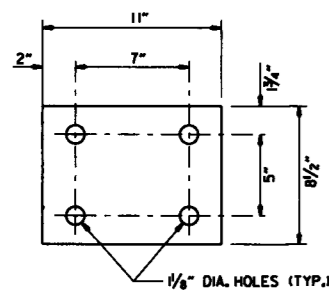
WOOD BLOCKOUT CONNECTIONS PLASTIC BLOCKOUT CONNECTIONS
DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

1-16-17	REVISED GENERAL NOTES AND RAISED GUARD RAIL HEIGHT 3"	
07-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
03-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
01-12-00	ADDED PLASTIC BLOCKOUT	
08-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE. DELETED DET. OF GUARD RAIL REPLACE BEHIND CURB & DET. OF POST PLACE IN SOLID ROCK. ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
04-03-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
06-02-94	ADDED ALT. STEEL POST SIZE	
08-05-93	REVISED STEEL POST SIZE	8-5-93
10-01-92	REDRAWN & REVISED	10-1-92
08-15-91	REVISED WASHER NOTE	8-15-91
08-02-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
07-15-88	REVISED SECTION 3 & GENERAL NOTES	
03-04-88	REV. ANCHOR POST ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-09-87	REDRAWN & REVISED	802-10-9-87
DATE	REVISION	FILED

ARKANSAS STATE HIGHWAY COMMISSION

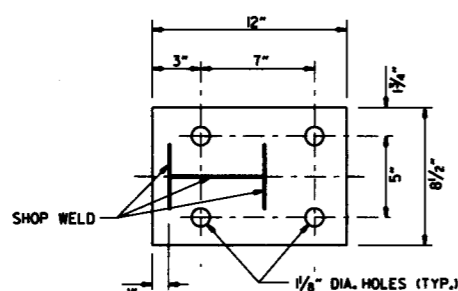
GUARD RAIL DETAILS

STANDARD DRAWING GR-8

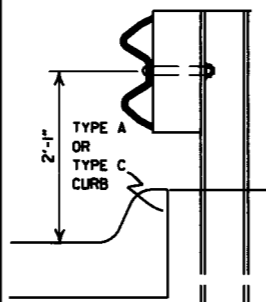


WASHER PLATE

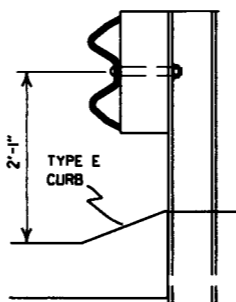
Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.



BASE PLATE



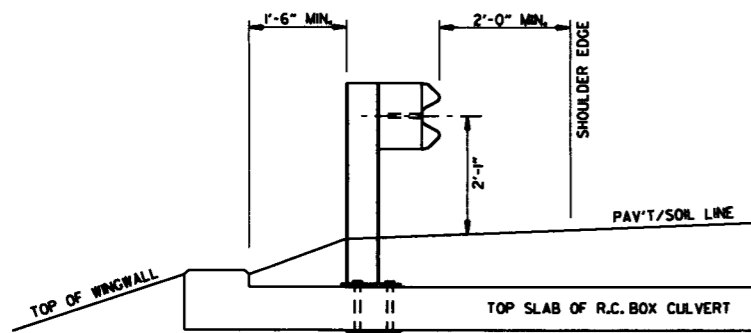
FOR DESIGN SPEEDS OF 50 MPH OR LESS
ALIGN FACE OF GUARD RAIL WITH FACE OF CURB.



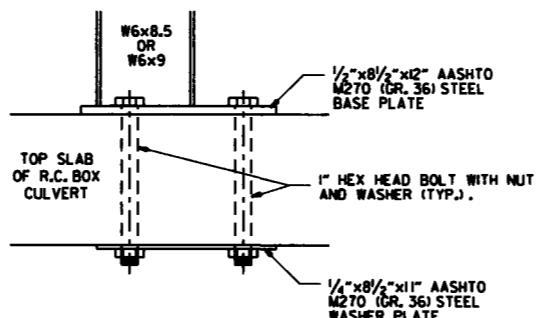
FOR DESIGN SPEEDS OF 55 MPH OR MORE
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

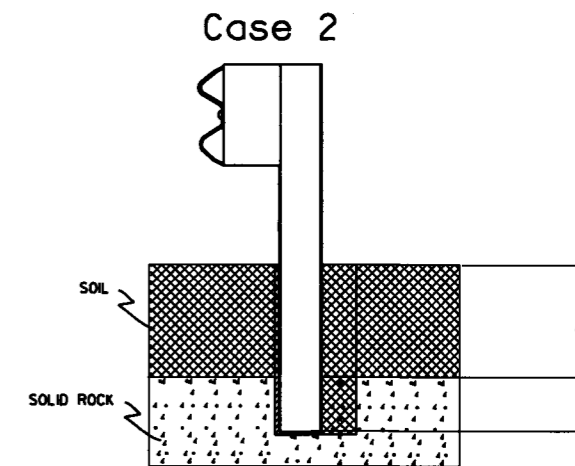
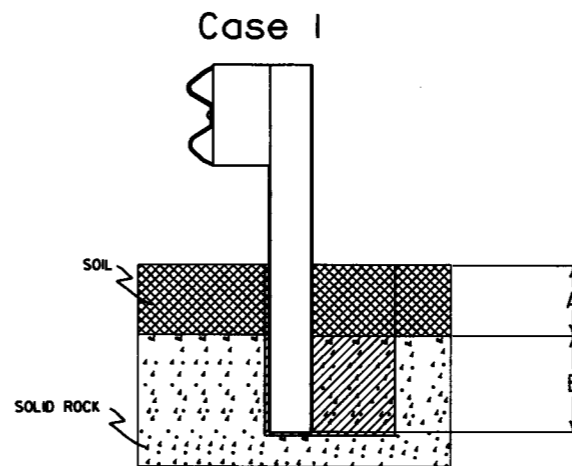
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



SECTION A-A

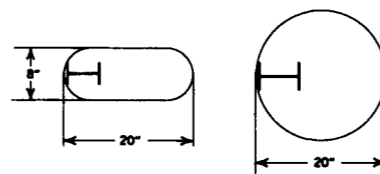


DETAIL OF CONNECTION



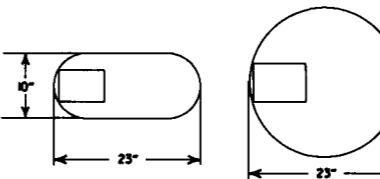
Plan View Steel Posts

Either hole configuration acceptable



Plan View Wood Posts

Either hole configuration acceptable



Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

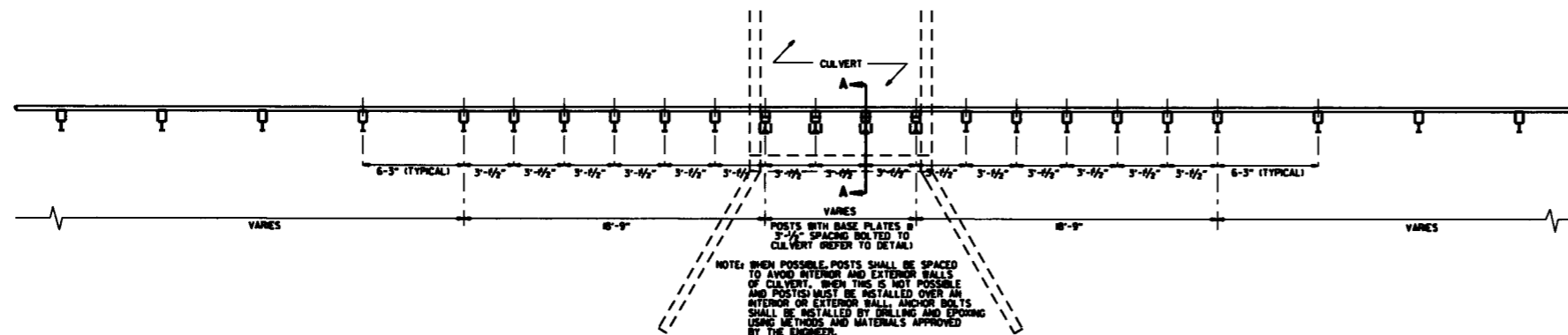
Zone A: Backfill according to Section 617.03(a).

Zone B: Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.

Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.

Zone A & B: Backfill according to Section 617.03(a).

DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)



PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DRWG. GR-8.

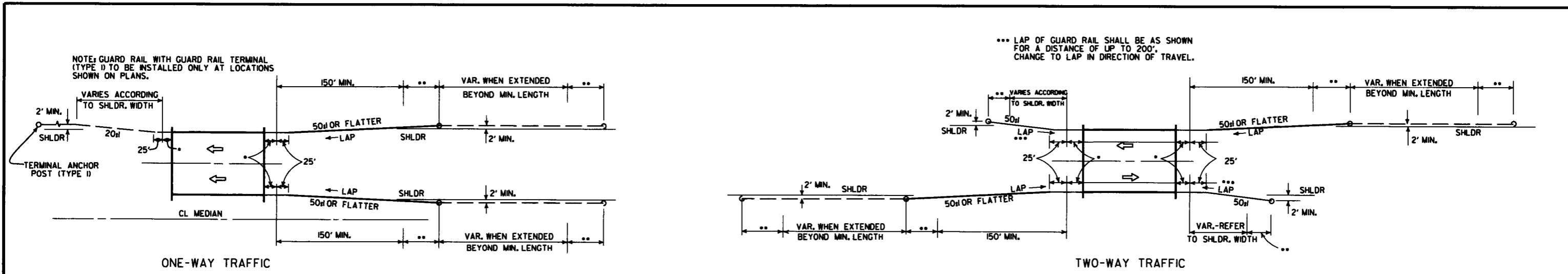
NOTE: WHEN POSSIBLE POSTS SHALL BE SPACED TO AVOID INTERIOR AND EXTERIOR WALLS OF CULVERT. WHEN THIS IS NOT POSSIBLE AND POSTS MUST BE INSTALLED OVER AN INTERIOR OR EXTERIOR WALL, ANCHOR BOLTS SHALL BE INSTALLED BY DRILLING AND EPOXYING USING METHODS AND MATERIALS APPROVED BY THE ENGINEER.

DATE	REVISION	FILMED
1-16-17	REVISED GUARD RAIL HEIGHT	
07-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
04-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS, ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS	
03-30-00	REMOVED CONCRETE INSERT ANCHOR CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT, ADDED DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULV'T., DELETED DET. OF STEEL LINE POST CONN. & ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POSTPLACE. IN SOLID ROCK	
04-03-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-95	REV. ASTM REF. TO AASHTO	
8-22-95	ADDED OPTIONAL HOLES	
06-02-94	REVISED ALTERNATE POST SIZE	
08-05-93	REVISED STEEL POST SIZE	
10-01-92	REDRAWN & REVISED	10-1-92
08-02-90	DEL. WASHER ON ANCHOR ASSEMBLY CONFORMED TO 1988 SPECS	8-2-90
07-15-88	CONFORMED TO 1988 SPECS	
03-04-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-09-87	REDRAWN & REVISED	803-10-9-87

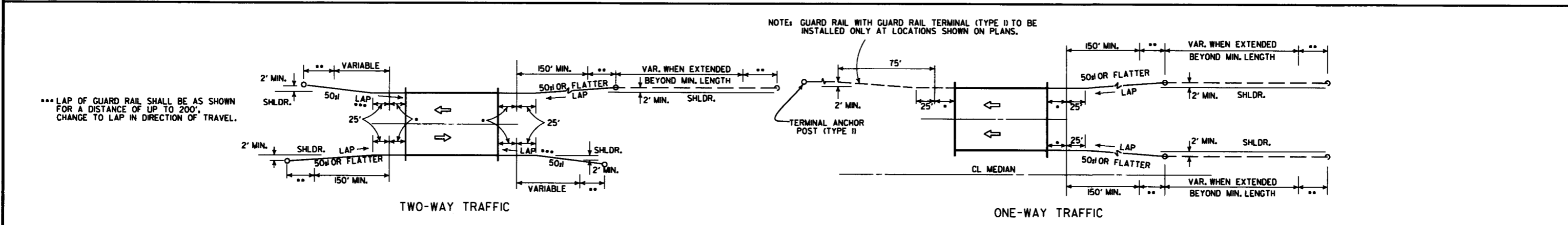
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

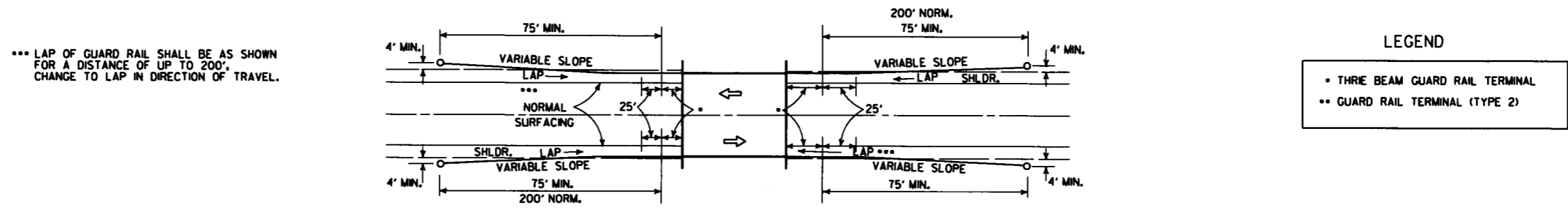
STANDARD DRAWING GR-8A



METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)



METHOD OF INSTALLATION OF GUARD RAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

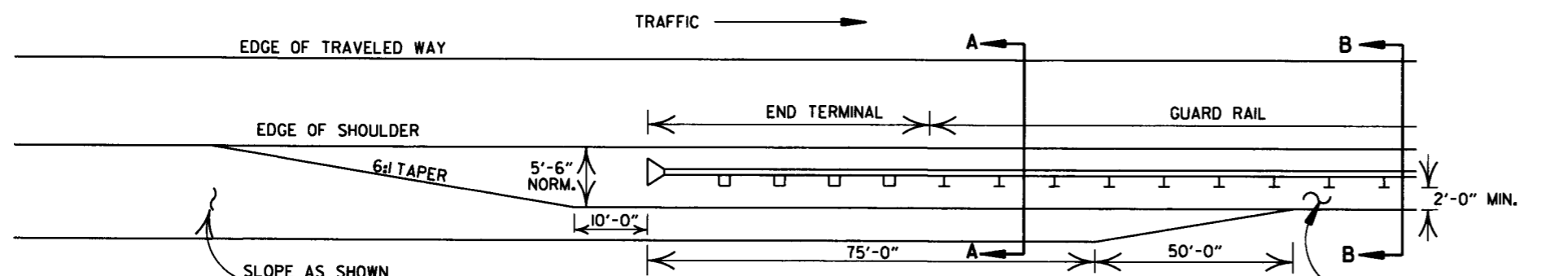


LEGEND

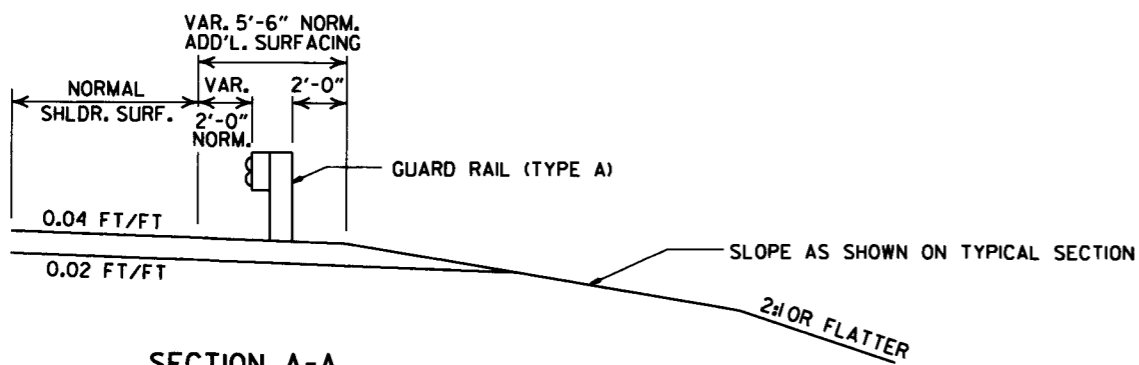
- THREE BEAM GUARD RAIL TERMINAL
- GUARD RAIL TERMINAL (TYPE 2)

METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

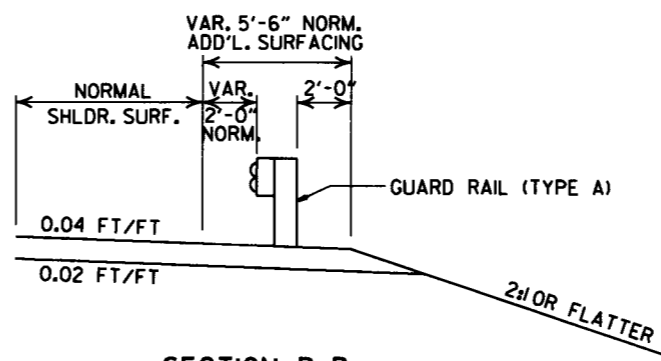
ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GR-9		
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	
DATE	REVISION	DATE FILED



NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

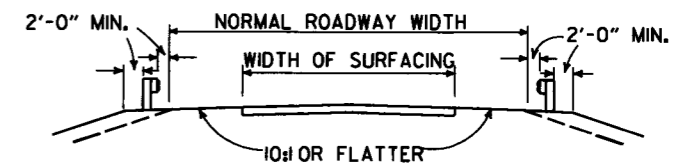


SECTION A-A

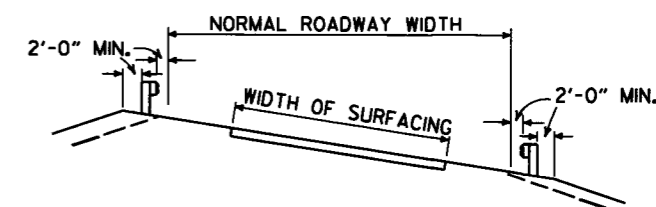


SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

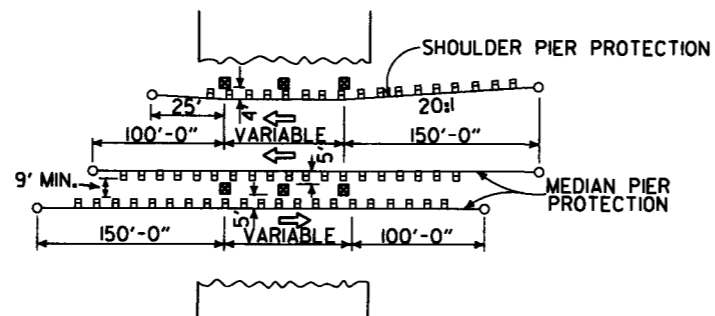


SECTION ON TANGENT



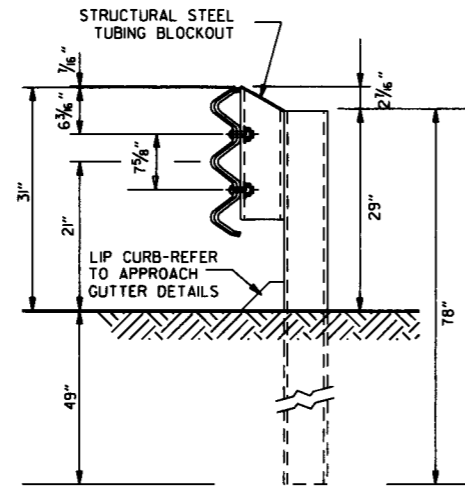
SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

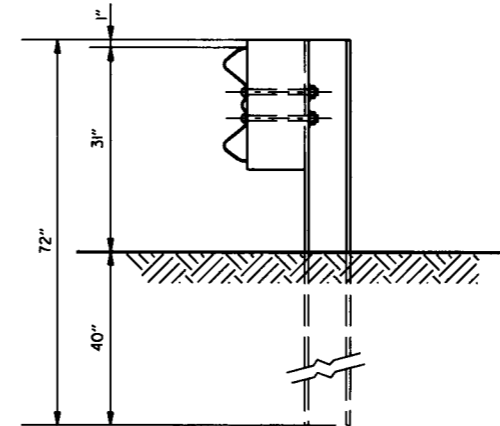


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

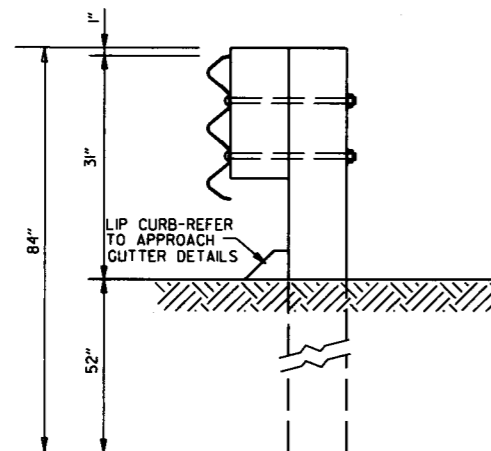
ARKANSAS STATE HIGHWAY COMMISSION			
GUARD RAIL DETAILS			
STANDARD DRAWING GR-9A			
4-17-08	MINOR REVISION		
1-10-05	DRAWN		
DATE	REVISION	DATE	F.L.M.



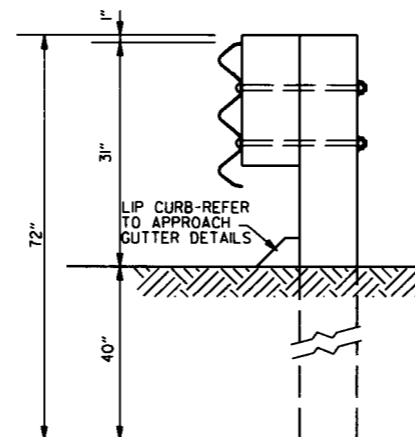
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POST
POSTS 1-7



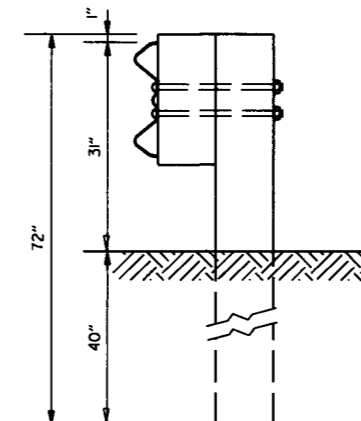
W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8



THRIE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUTS & WOOD POSTS
POSTS 1-6



THRIE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST
POST 7



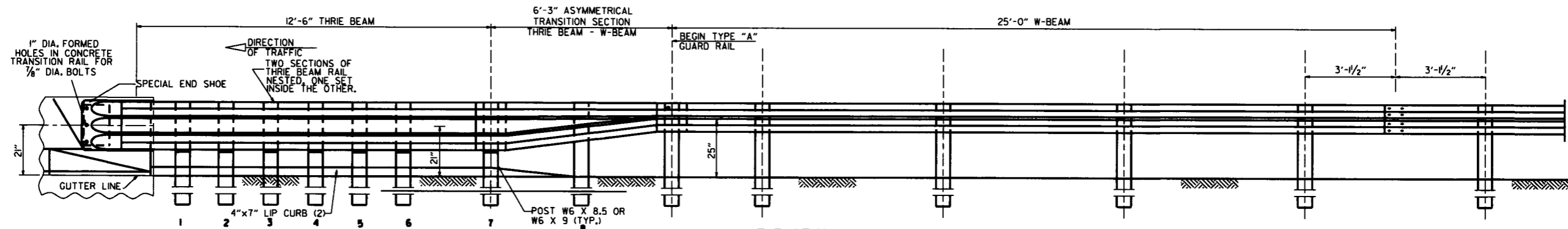
W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST
POST 8

GENERAL NOTES:

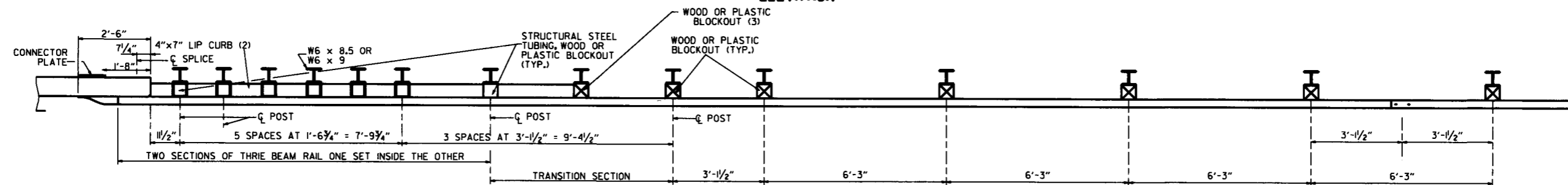
RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

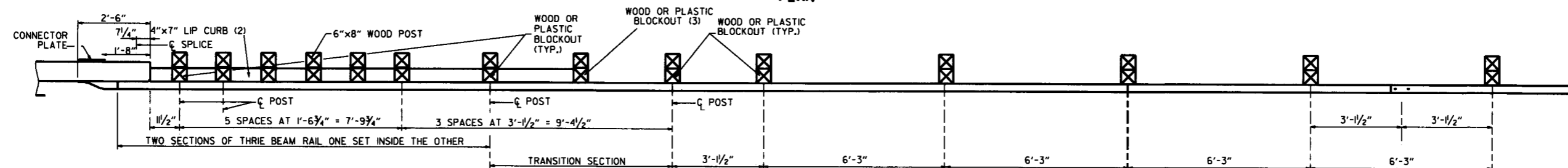
			ARKANSAS STATE HIGHWAY COMMISSION
			GUARD RAIL DETAILS
			STANDARD DRAWING GR-II
11-16-17	REVISED GUARD RAIL HEIGHT, CHANGED STD. DRG. NUMBER FROM GR-10A TO GR-II		
07-14-10	REVISED POST 8 DIMENSIONS		
11-29-07	ADDED PLASTIC BLOCKOUTS		
08-22-02	REVISED LIP CURB NOTE		
03-30-00	DRAWN & ISSUED		
DATE	REVISION		FILMED



ELEVATION



PLAN



PLAN

- (1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
- (2) REFER TO APPROACH GUTTER DETAILS.
- (3) LENGTH OF BLOCKOUT ON POST 8 TO BE MODIFIED TO FIT RAIL WIDTH.

THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-13.

REFER TO STD. DRWG. GR-4 FOR POST DETAILS.

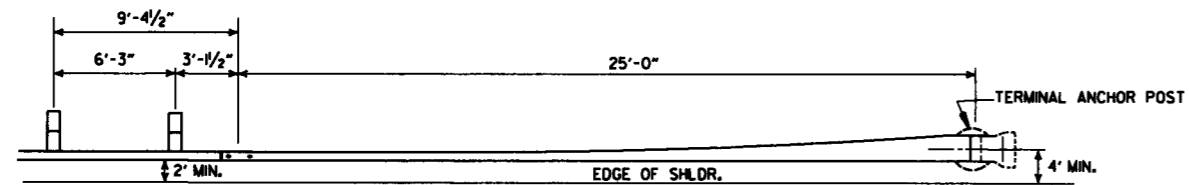
USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

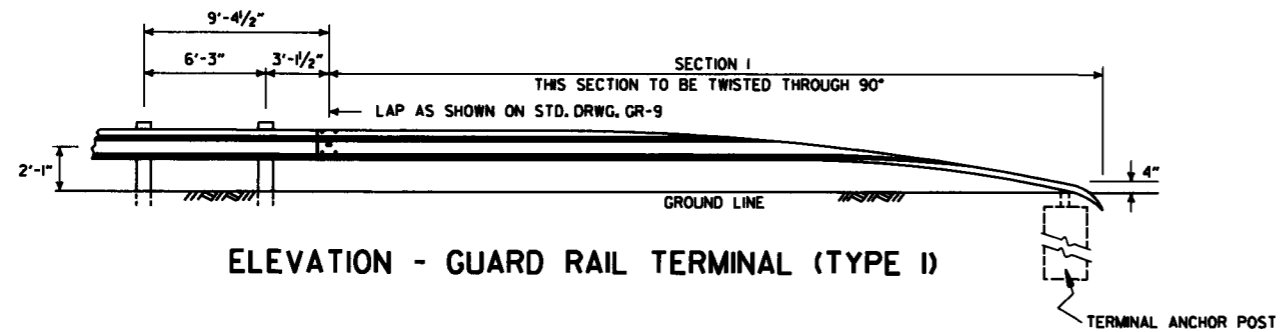
POSTS SHALL BE PLACED AT THE MID-SPAN OF THE W-BEAM.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9,7f (1400 f) OR NO. 1 (350 f) SOUTHERN PINE.

			ARKANSAS STATE HIGHWAY COMMISSION
			GUARD RAIL DETAILS
			STANDARD DRAWING GR-12
1-16-17	RE-DRAWN FROM STD. DWG. GR-10 & ISSUED		
DATE	REVISION	FILMED	

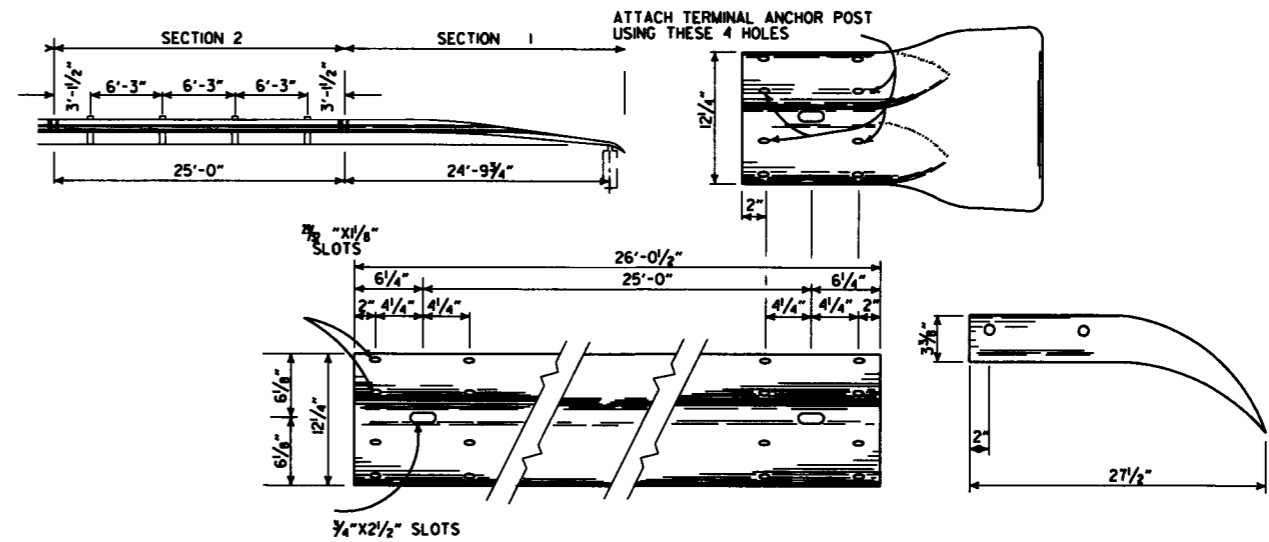


PLAN - GUARD RAIL TERMINAL (TYPE I)



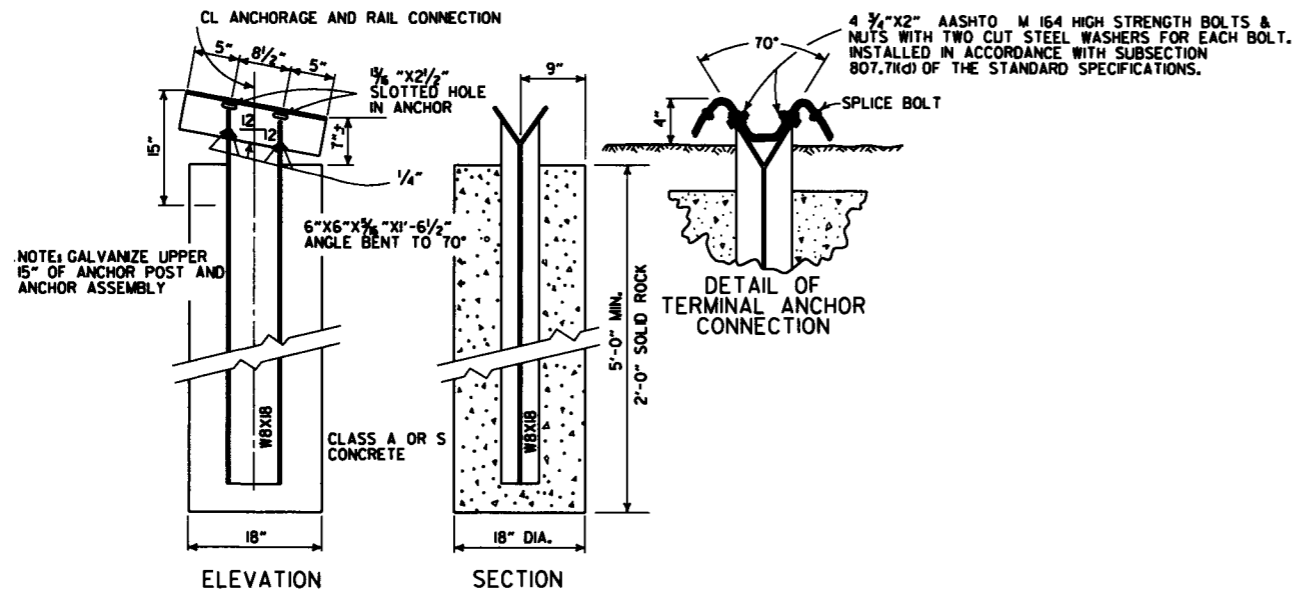
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE: SECTIONS 1 AND 2 OF GUARD RAIL TERMINAL SHALL BE PAID FOR AT THE PRICE BID PER LINEAR FOOT OF THE TYPE OF GUARD RAIL SPECIFIED.



SECTION 1

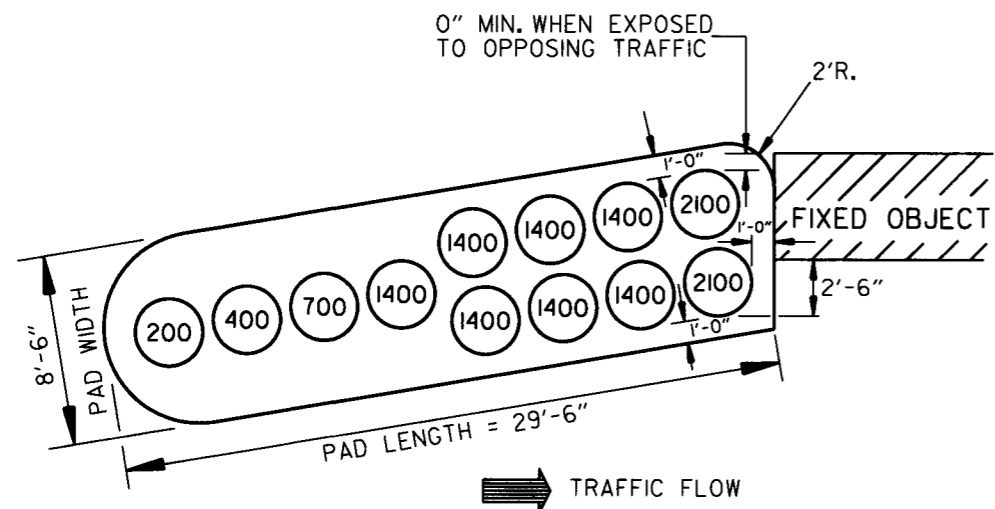
TERMINAL SECTION



DETAIL OF TERMINAL ANCHOR POST (TYPE I)

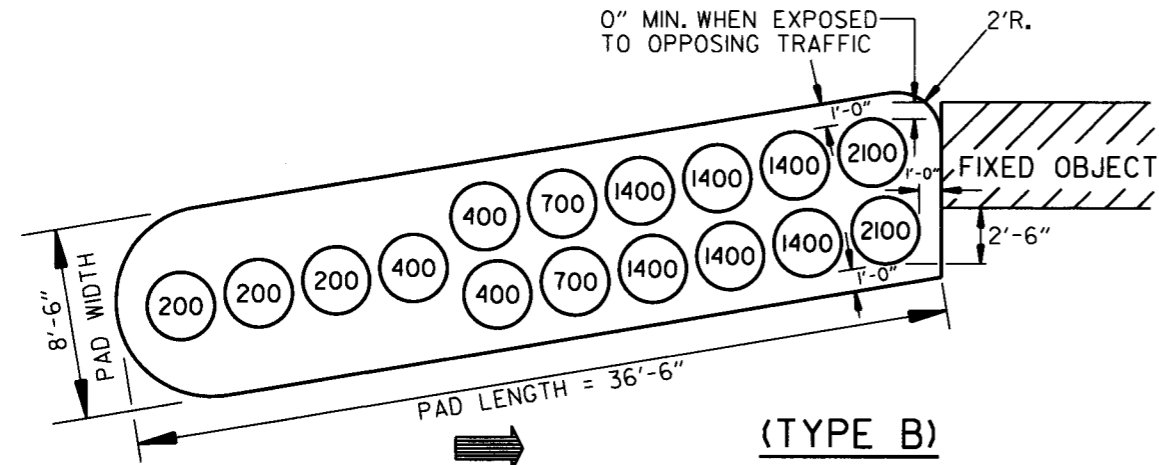
NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 W 17 POST IF CONTRACTOR SO DESIRES.

		ARKANSAS STATE HIGHWAY COMMISSION
11-16-17	REVISED GUARD RAIL HEIGHT AND LOCATION OF POSTS	GUARD RAIL DETAILS
07-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
06-26-97	REVISED LAP NOTE	
10-18-96	REVISED ASYM REF. TO AASHTO	
11-03-94	DIMENSION TERMINAL DETAIL	
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92
10-01-92	DRAWN & ISSUED	10-1-92
DATE	REVISION	FILMED
		STANDARD DRAWING GRT-1



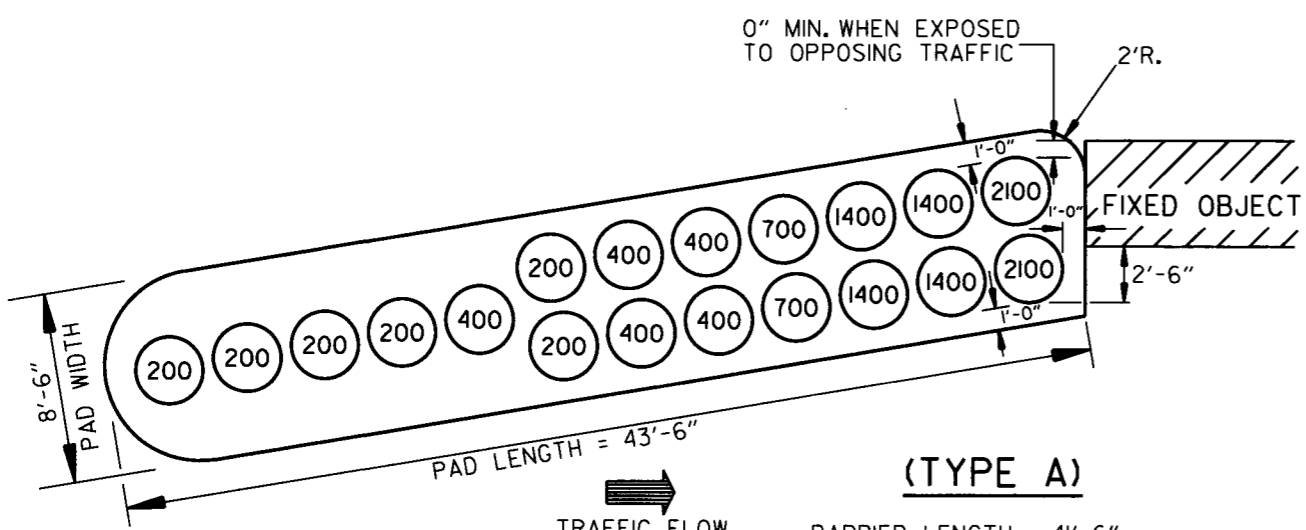
(TYPE C)

BARRIER LENGTH = 27'-6"
 DESIGN IMPACT SPEED = 50 M.P.H. = 73.3 fps



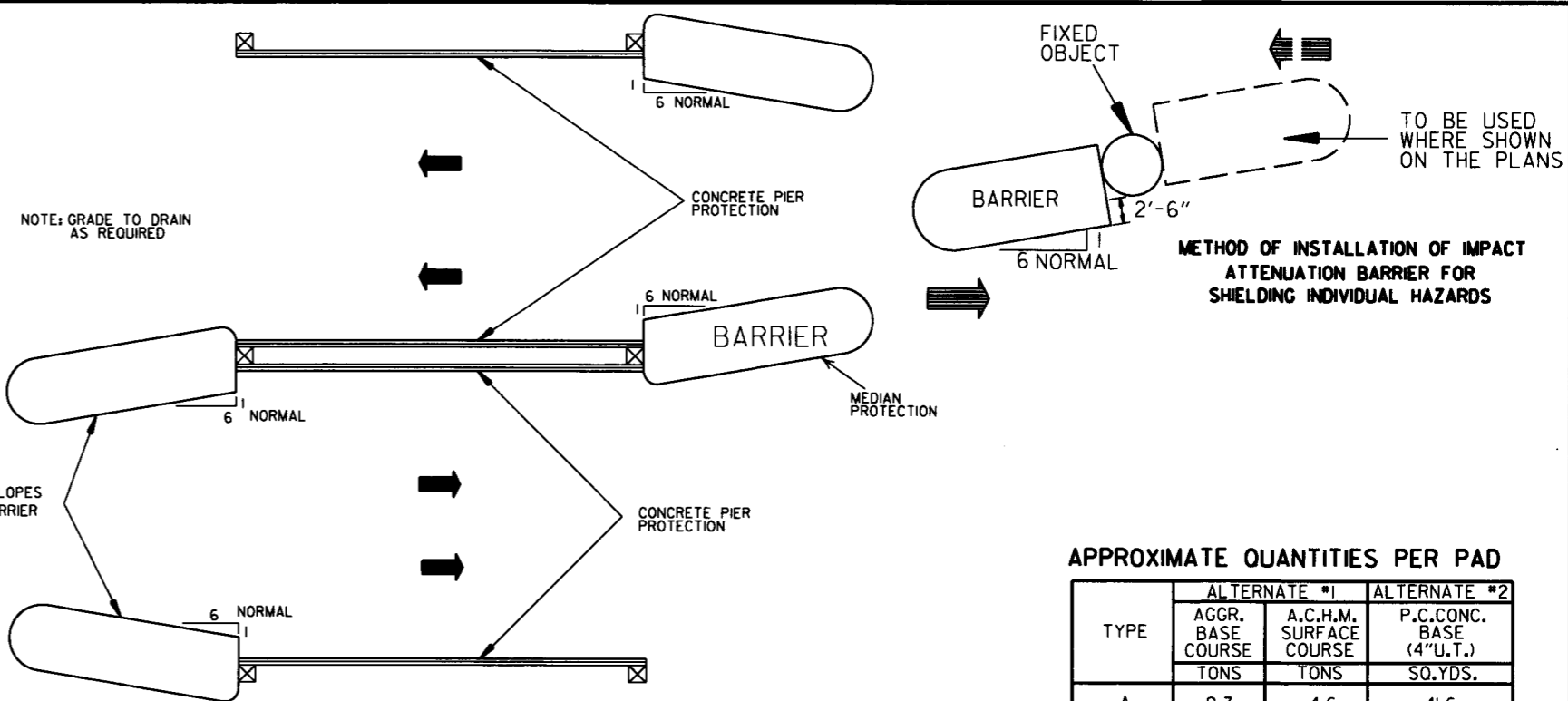
(TYPE B)

BARRIER LENGTH = 34'-6"
 DESIGN IMPACT SPEED = 60 M.P.H. = 88 fps



(TYPE A)

BARRIER LENGTH = 41'-6"
 DESIGN IMPACT SPEED = 70 M.P.H. = 103 fps



METHOD OF INSTALLATION OF IMPACT ATTENUATION BARRIER FOR PIER PROTECTION

GENERAL NOTES

1. DIMENSIONS SHOWN ARE TO TOP OF PLASTIC MODULES.
2. SPACING BETWEEN PLASTIC MODULES SHALL NOT EXCEED 6" AT THE TOP.
3. PLASTIC MODULES SHALL MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

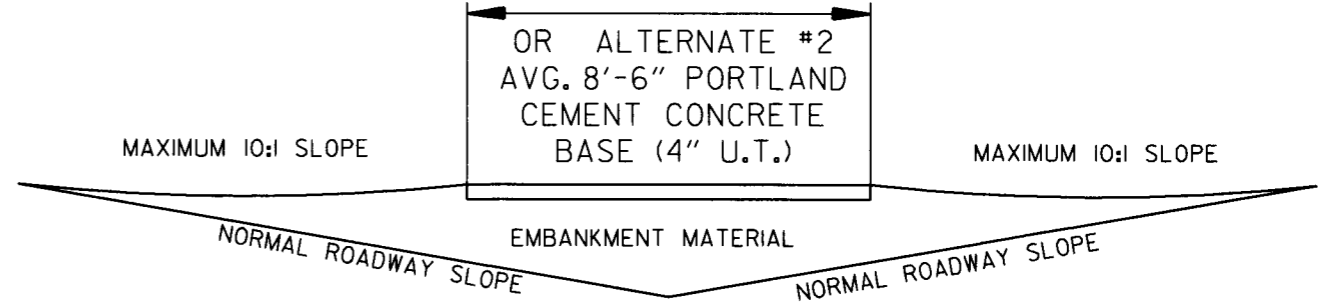
APPROXIMATE QUANTITIES PER PAD

TYPE	ALTERNATE #1		ALTERNATE #2
	AGGR. BASE COURSE TONS	A.C.H.M. SURFACE COURSE TONS	P.C. CONC. BASE (4" U.T.) SQ. YDS.
A	9.7	4.6	41.6
B	8.1	3.8	34.9
C	6.6	3.1	28.3

NOTE: APPROXIMATE QUANTITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. PAYMENT TO BE INCLUDED IN UNIT PRICE BID FOR IMPACT ATTENUATION BARRIER.

ALTERNATE #1
 AVG. 8'-6" A.C.H.M. SURF. COURSE (1/2")
 220 LBS. PER SQ. YD. &
 AGGREGATE BASE COURSE
 (4" COMPACTED DEPTH)

OR ALTERNATE #2
 AVG. 8'-6" PORTLAND
 CEMENT CONCRETE
 BASE (4" U.T.)



DETAIL OF BARRIER PAD

NOTE: BARRIER PAD TO BE SKEWED TOWARD ONCOMING TRAFFIC
 A MAXIMUM OF 6:1 WITH 6:1 BEING NORMAL

DATE	REVISION	DATE FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-29-07	REVISED TY. A & TY. C ARRAYS	
11-19-98	REVISED FIXED OBJECT	
11-18-98	REV. NOTES & TYPE A MOD. WTS.	
10-18-96	REDRAWN	
7-15-88	CONFORMED TO 1988 SPECS	
7-29-87	REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION
IMPACT ATTENUATION BARRIER
 STANDARD DRAWING IB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43¾	44	26¾	27
42	51½	51	31¾	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87¾	87
120	154	154	96¾	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(F)(1).

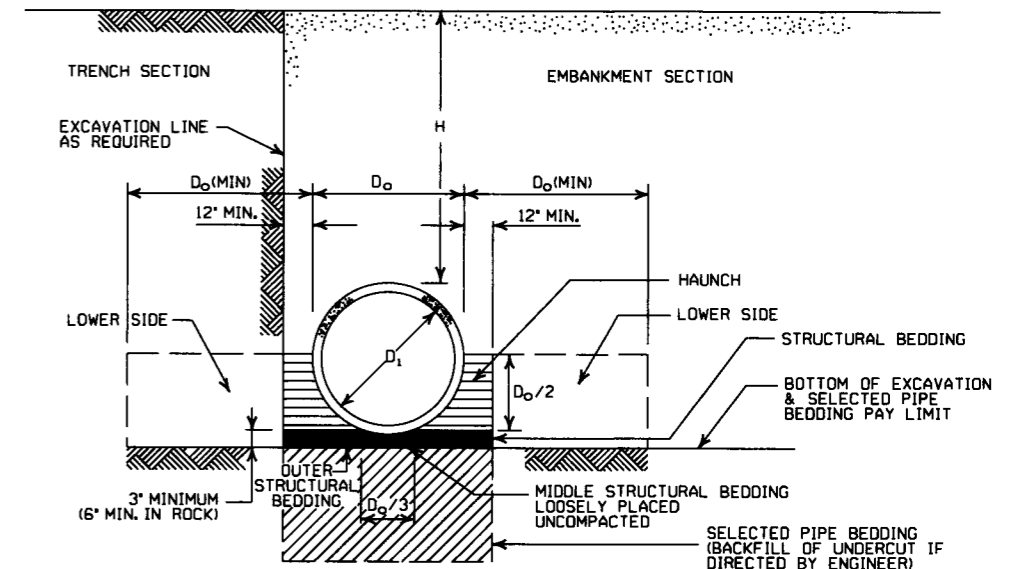
NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

- LEGEND -

- D₁ = NORMAL INSIDE DIAMETER OF PIPE
- D_o = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.
** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS, UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M10, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	73
42	2		43	67	70	
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CONSTRUCTION SEQUENCE

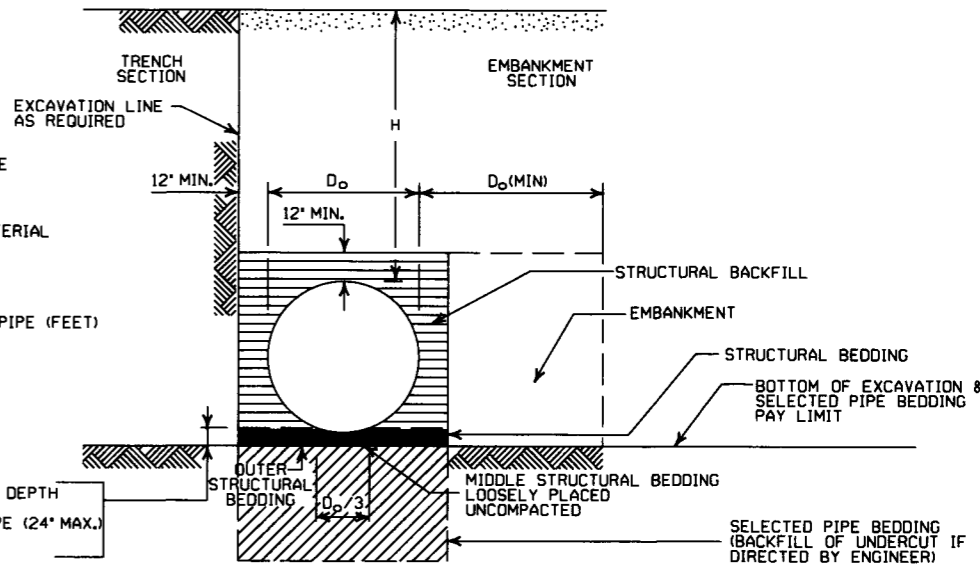
1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

- LEGEND -**
- D_o = OUTSIDE DIAMETER OF PIPE
 - MAX. = MAXIMUM
 - MIN. = MINIMUM
 - [Hatched Pattern] = STRUCTURAL BACKFILL MATERIAL
 - [Diagonal Lines] = UNDISTURBED SOIL
 - EQUIV. DIA. = EQUIVALENT DIAMETER
 - H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/8" x 1/2" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" x 1" OR 5" x 1" CORRUGATION.

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45	52	41	
18	2	30	30	31	32	34
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)			
				REQUIRED	INSTALLATION		REQUIRED	INSTALLATION		
				TYPE 1	TYPE 1		TYPE 1	TYPE 1		
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
15	17x13	3	0.064	2	15	0.060	2	15		
18	21x15	3	0.064	2	15	0.060	2	15		
21	24x18	3	0.064	2,25	15	0.060	2,25	15		
24	28x20	3	0.064	2,5	15	0.075	2,5	15		
30	35x24	3	0.079	3	12	0.075	3	12		
36	42x29	3 1/2	0.079	3	12	0.075	3	12		
42	49x33	4	0.079	3	12	0.105	3	12		
48	57x38	5	0.09	3	13	0.105	3	13		
54	64x43	6	0.109	3	14	0.135	3	14		
60	71x47	7	0.138	3	15	0.135	3	14		
66	77x52	8	0.168	3	15	0.164	3	15		
72	83x57	9	0.168	3	15					
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
			INSTALLATION		INSTALLATION					
			TYPE 2	TYPE 1	TYPE 2	TYPE 1				
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3" x 1/2" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1



INSTALLATION TYPE	** MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	*SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
SM3 WILL NOT BE ALLOWED.
- ** STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/4 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" > OR = 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

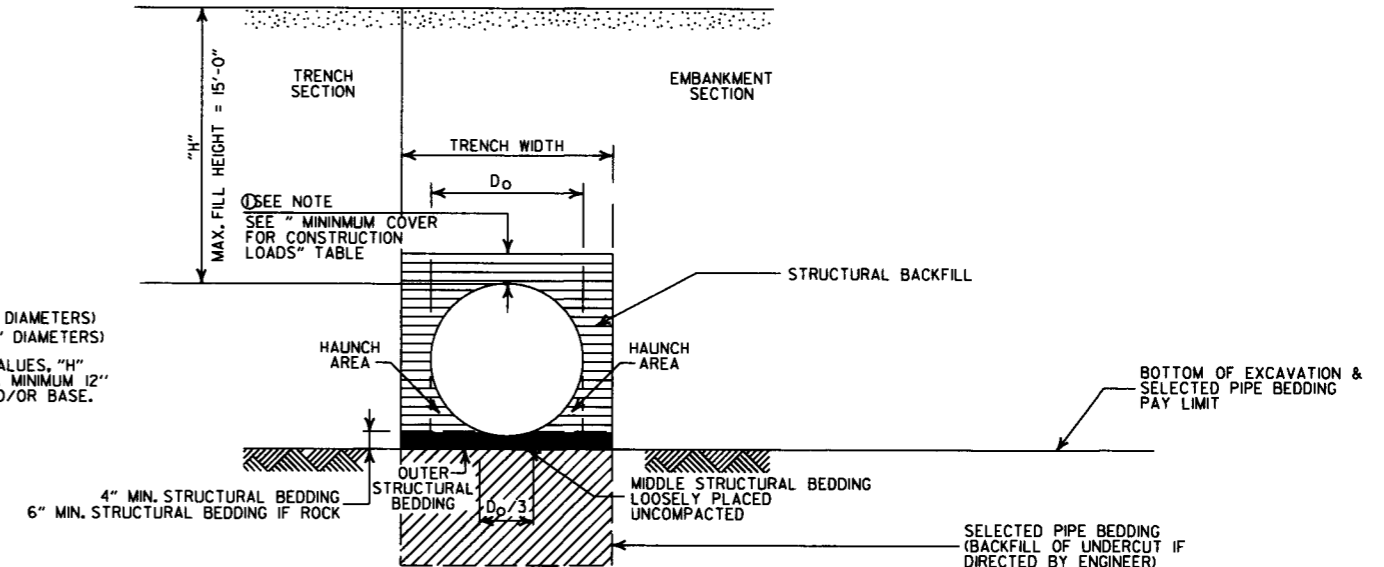
MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

==== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT
(HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1



INSTALLATION TYPE	** MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	*SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

** STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/4 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" > OR = 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

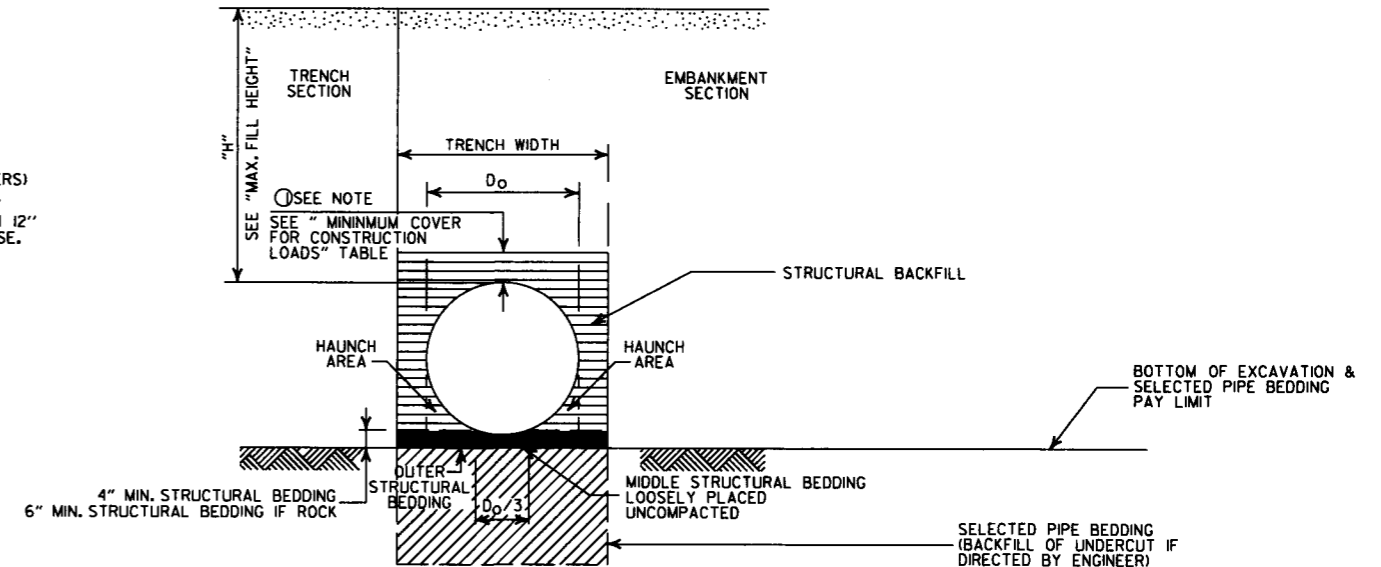
MULTIPLE INSTALLATION OF PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE, "H"
SHALL INCLUDE A MINIMUM 12"
OF PAVEMENT AND/OR BASE.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

==== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE, IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

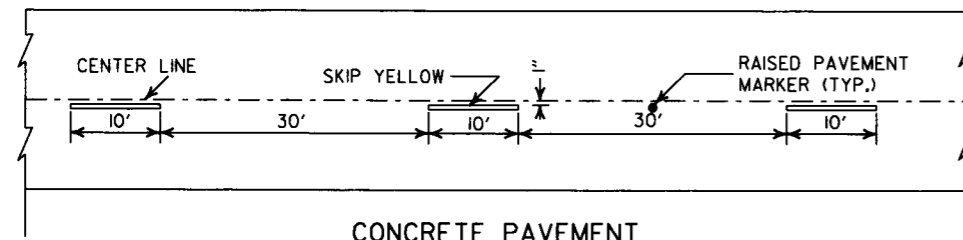
DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

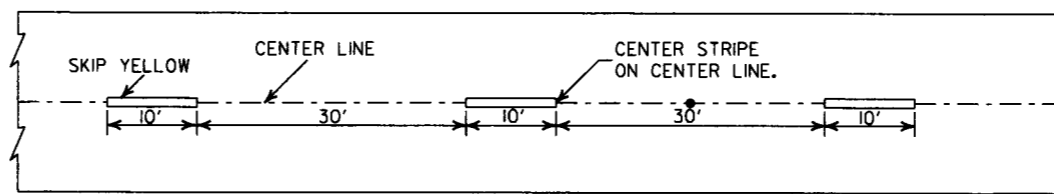
PLASTIC PIPE CULVERT
(PVC F949)

STANDARD DRAWING PCP-2



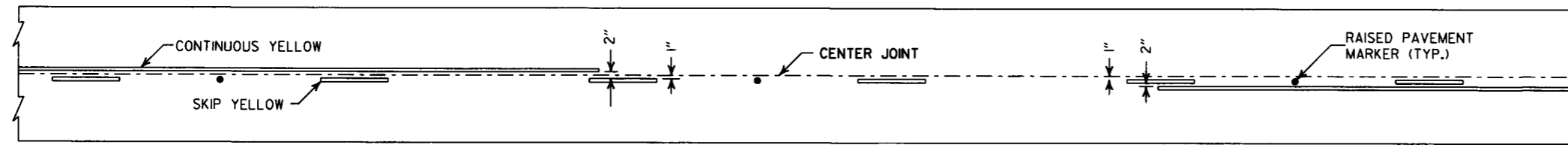


CONCRETE PAVEMENT

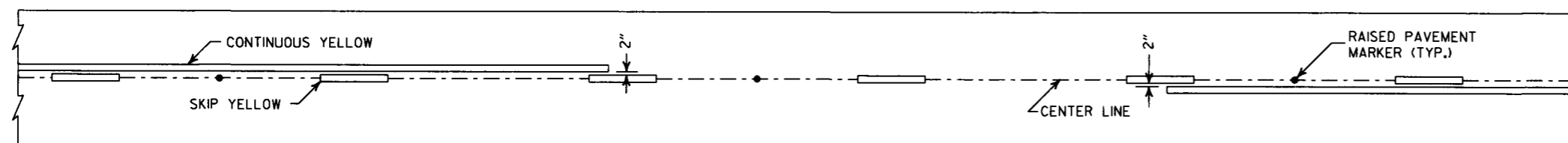


ASPHALT PAVEMENT

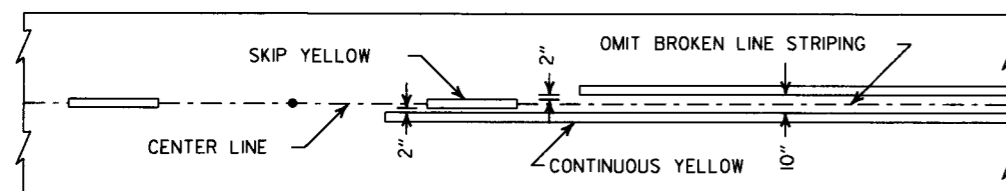
BROKEN LINE STRIPING



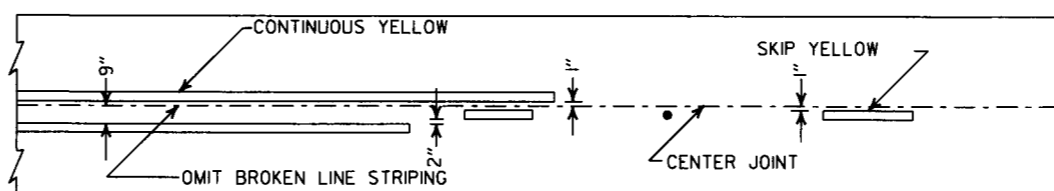
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

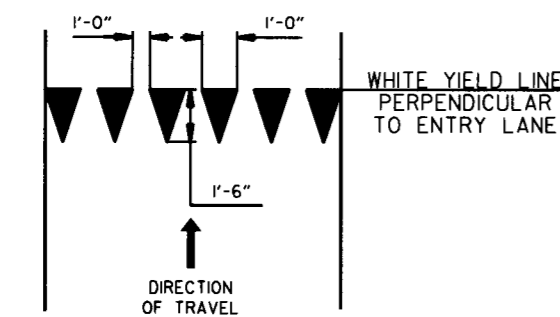


ASPHALT PAVEMENT

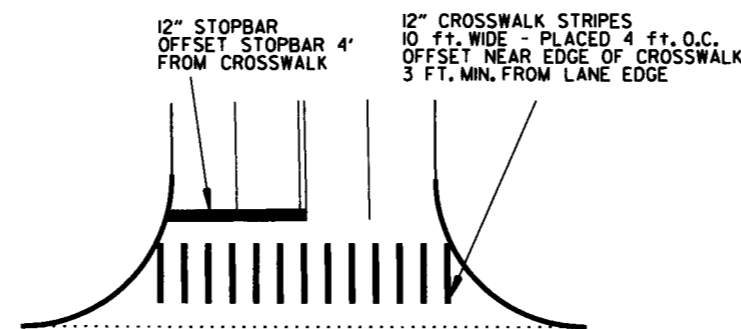


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL

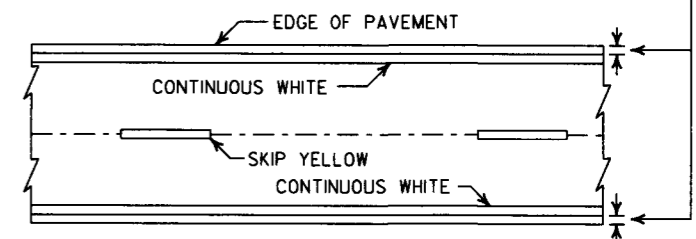


CROSSWALK AND STOPBAR DETAILS

NOTES:

1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

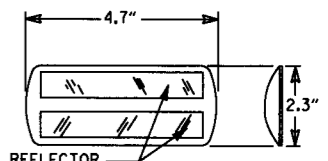
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING

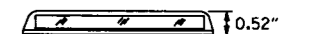
NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



PRISMATIC REFLECTOR

NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PAVT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAVT. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

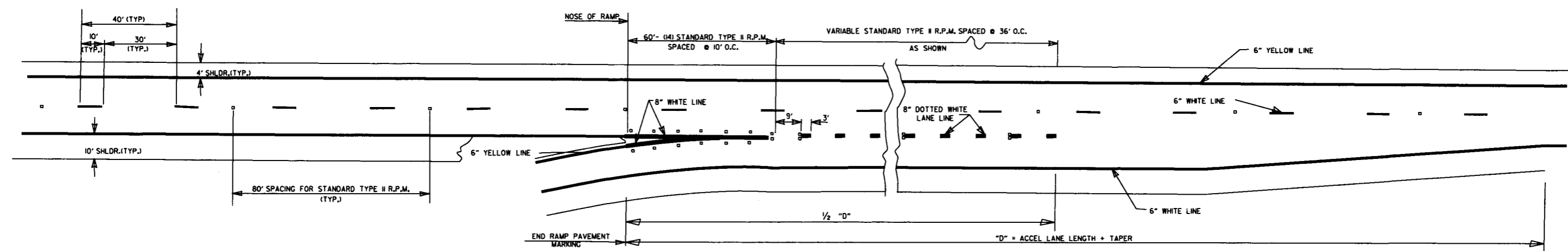
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

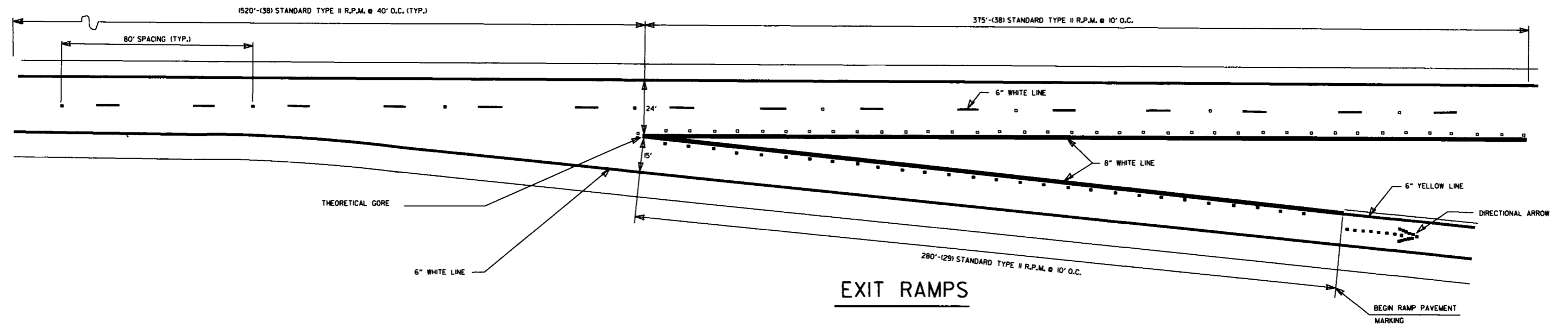
PAVEMENT MARKING QUANTITIES
 (BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP
 8" WHITE = 228 LIN. FT.
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

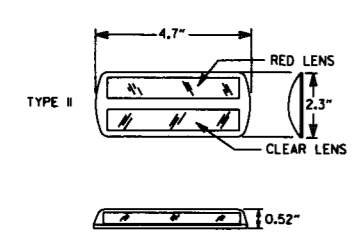
EXIT RAMP
 6" WHITE = 280 LIN. FT.
 8" WHITE = 655 LIN. FT.
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

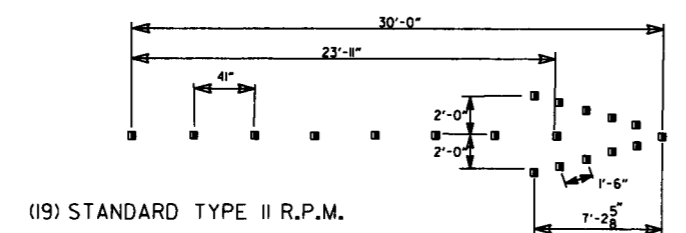


EXIT RAMPS



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

NOTE:
 THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.



(19) STANDARD TYPE II R.P.M.

DIRECTIONAL ARROWS

GENERAL NOTES:
 THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

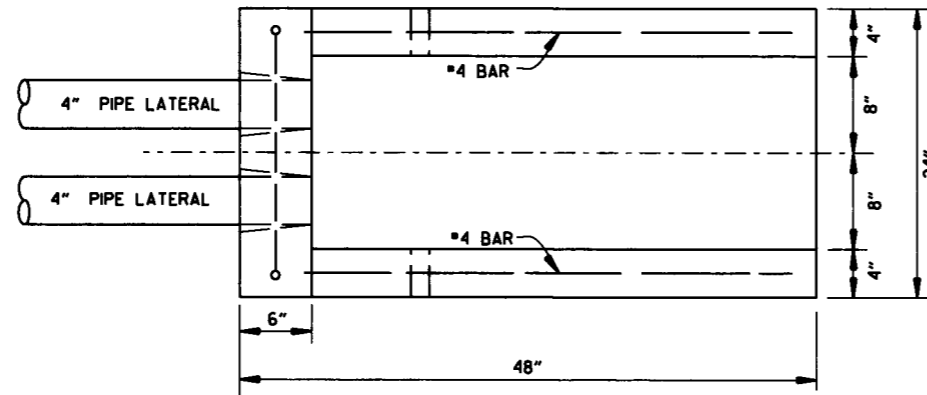
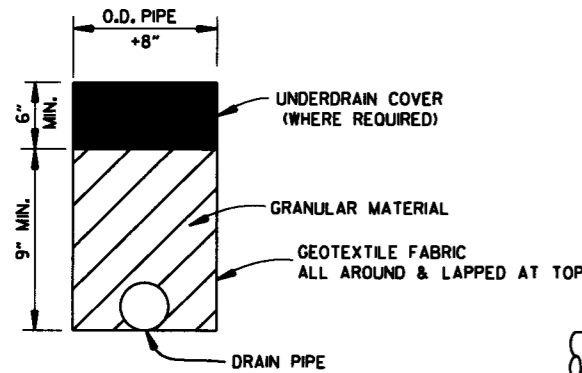
NOTE:
 DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

12-8-16	REVISED RAISED PAV'T MARKERS FOR 80' SPACING; REVISED WIDTH OF STRIPING	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
7-26-12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95
DATE	REVISION	FILMED

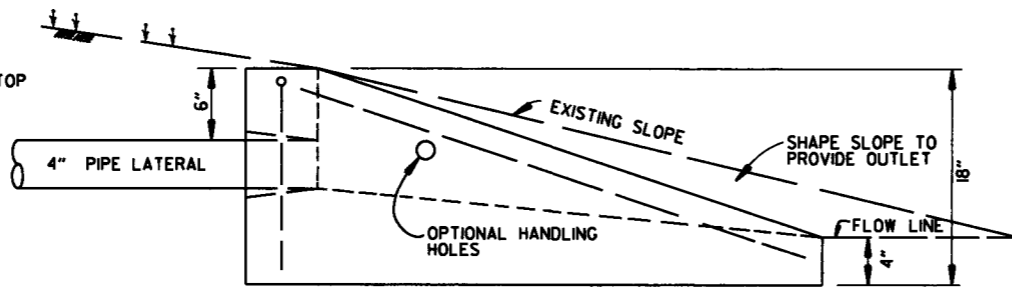
ARKANSAS STATE HIGHWAY COMMISSION
PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS
 STANDARD DRAWING PM-2

NOTE:

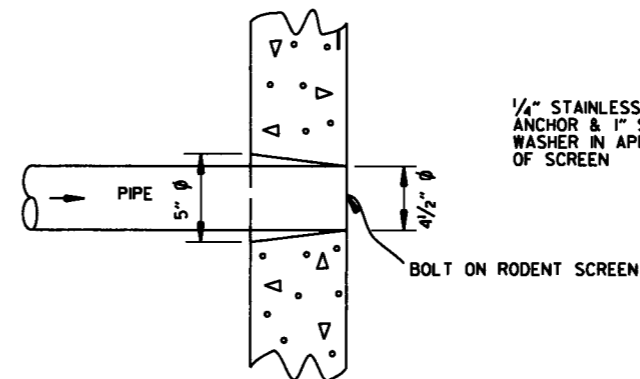
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



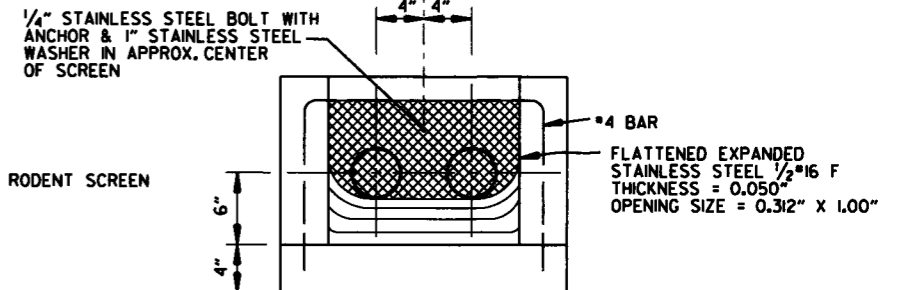
PLAN VIEW



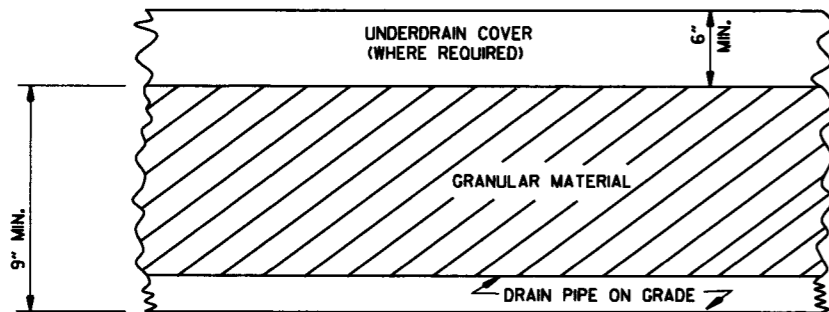
SIDE VIEW



DETAIL OF HOLE FOR 4" PIPE



FRONT VIEW (DETAIL OF RODENT SCREEN)

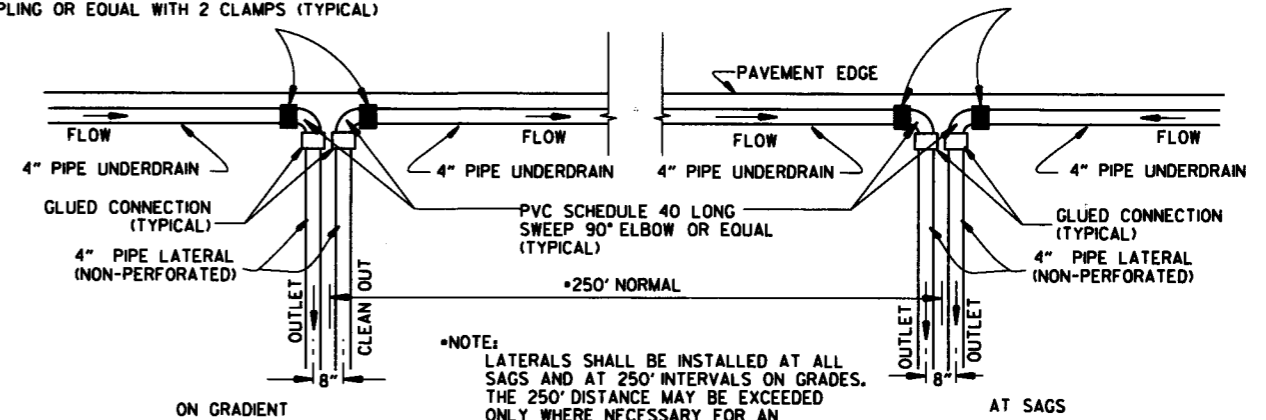


DETAILS OF PIPE UNDERDRAIN

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DIOR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)

UNDERDRAIN OUTLET PROTECTORS

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DIOR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE I. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID PER LIN. FT. FOR "4" PIPE UNDERDRAINS" IN ACCORDANCE WITH SECTION 610 OF THE STANDARD SPECIFICATIONS.
2. 4" NON-PERFORATED SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN HEREON. LATERALS WILL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 610 OF THE STANDARD SPECIFICATIONS.
3. EXISTING 4" PIPE UNDERDRAINS MAY BE CONNECTED TO PROPOSED DROP INLETS OR EXTENDED WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP INLETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS."
4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE II/WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
5. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS."
6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE REMOVED UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS."
7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE.

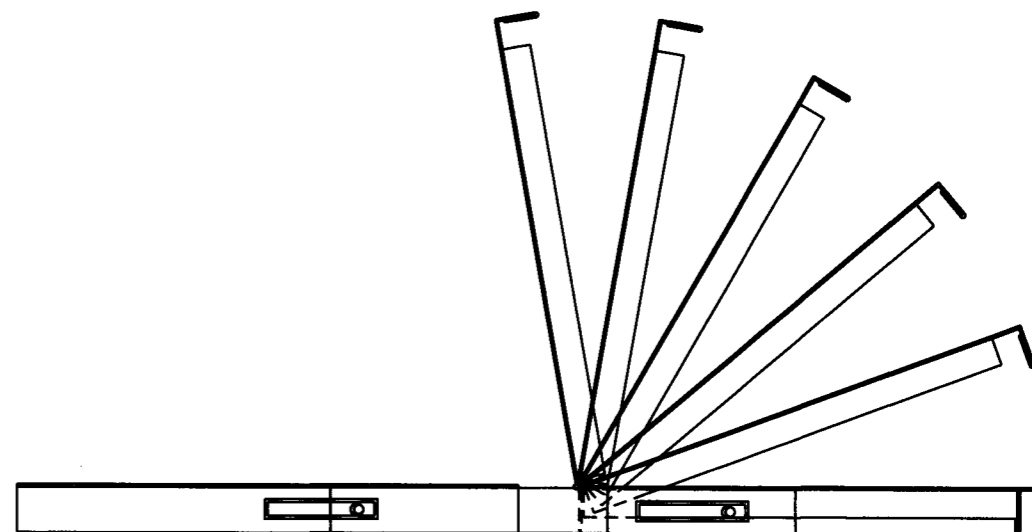
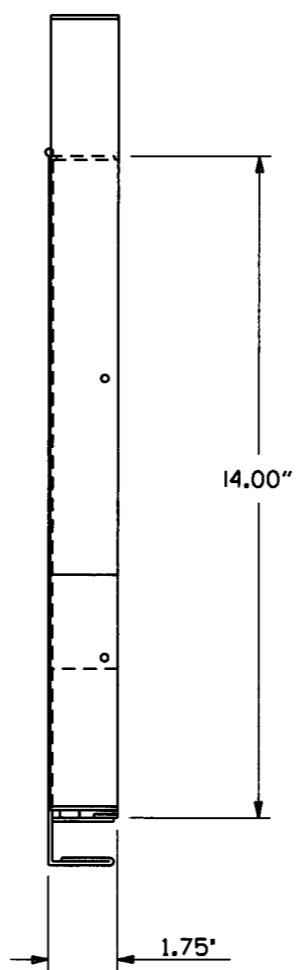
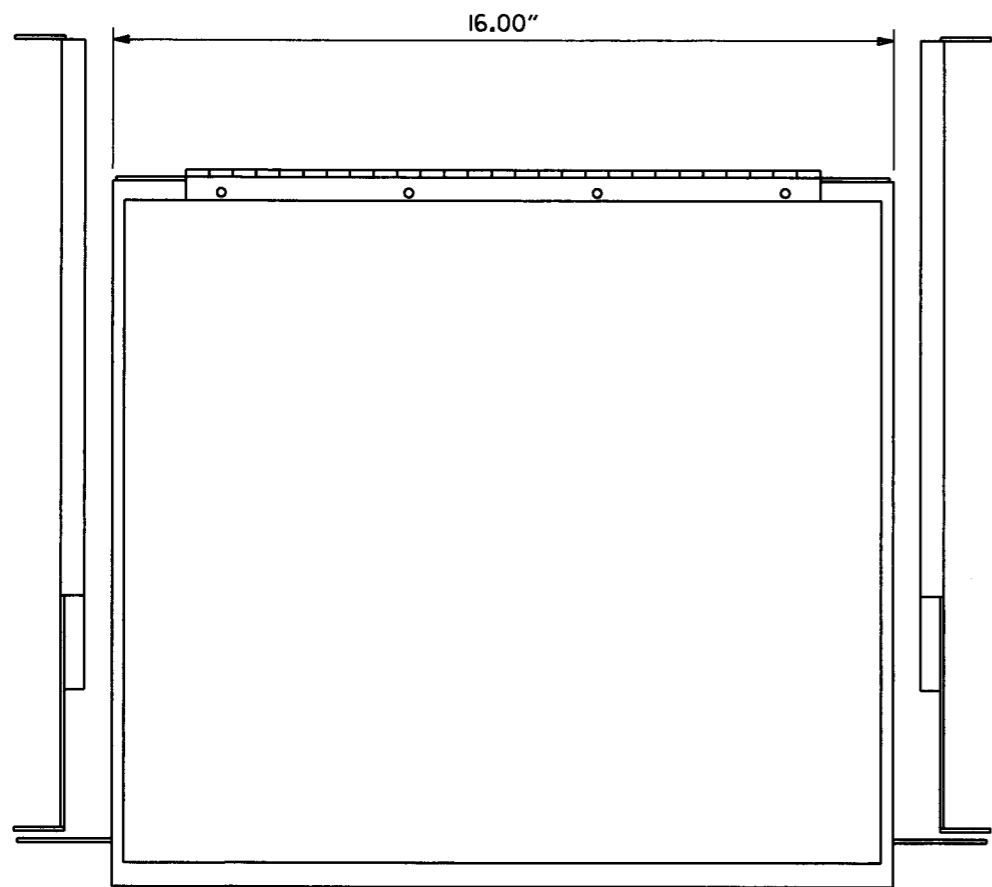
DATE	REVISION	DATE FILMED
12-8-16	ADDED NOTES FOR PIPE UNDERDRAINS, REVISED RODENT SCREEN DETAIL AND NOTES, REMOVED NOTE 1 FOR GRANULAR MATERIAL, ADDED NOTE FOR GEOTEXTILE FABRIC	
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE: 5 1/2" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11-3-94	REVISED FOR DUAL LATERALS	11-3-94
10-1-92	SUBSTITUTED GEOTEXTILE	10-1-92
8-15-91	ADDED POLYETHYLENE PIPE	8-15-91
11-8-90	DELETED ALTERNATE NOTE	11-8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88

ARKANSAS STATE HIGHWAY COMMISSION

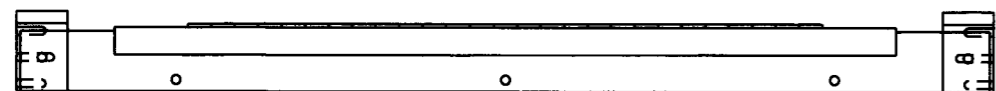
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

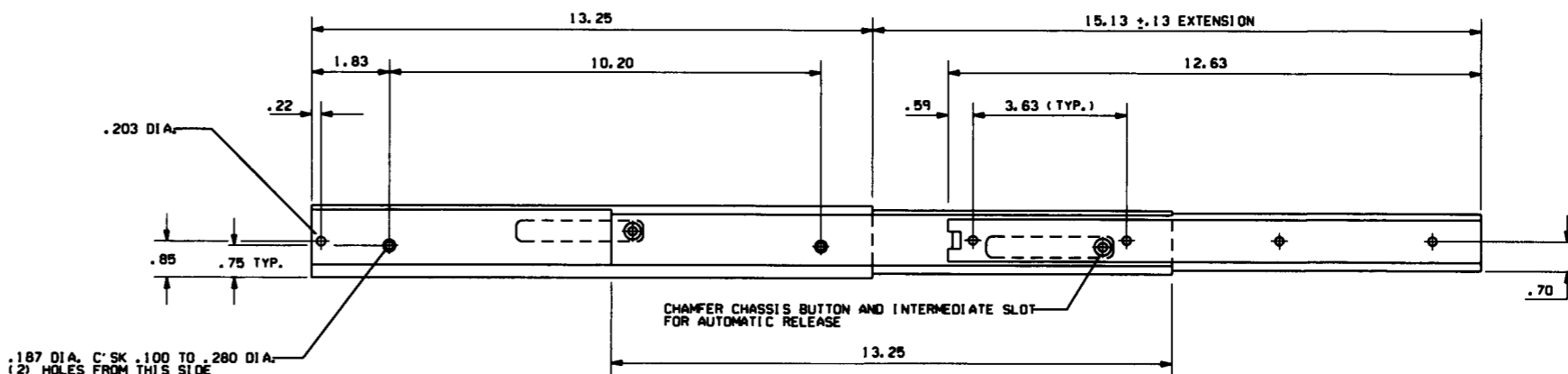
DRAWER PLAN VIEW



- NOTES:
 1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
 2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
 3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



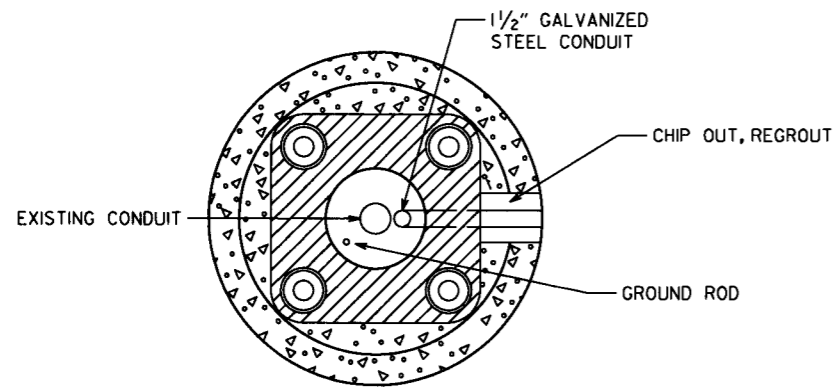
FRONT VIEW



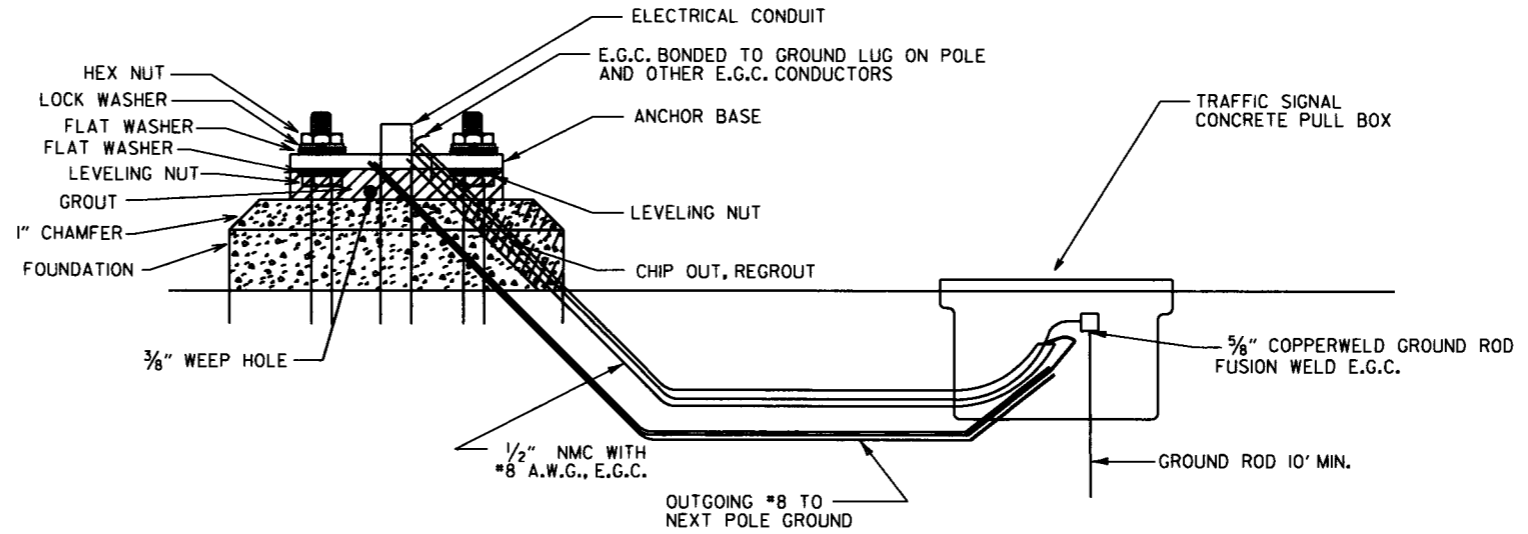
RIGHT SIDE ASSEMBLY

			ARKANSAS STATE HIGHWAY COMMISSION
			CONTROLLER CABINET UTILITY DRAWER
9-12-13	ISSUED AS STANDARD DRAWING		
6-15-05	ISSUED		
DATE	REVISION	DATE FILM	STANDARD DRAWING SD-5

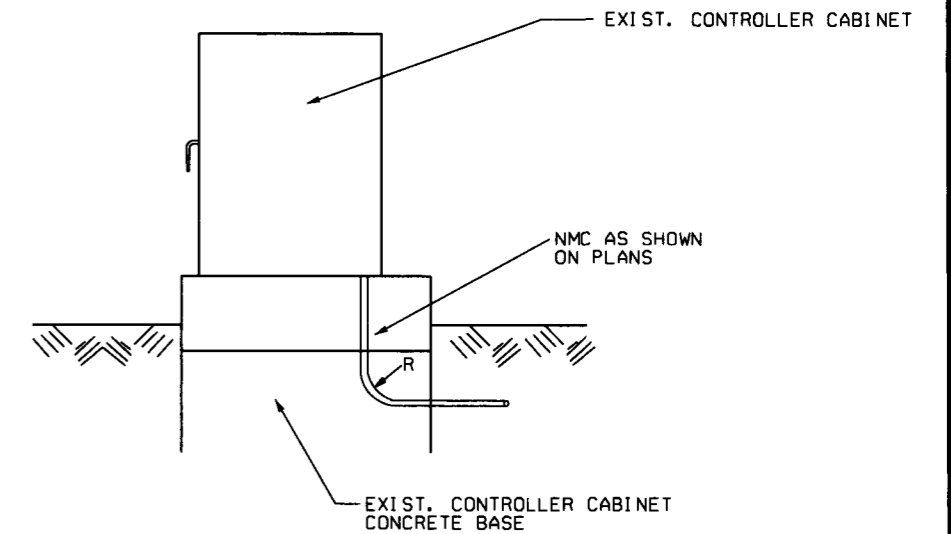
CONDUIT ENTRY TO EXISTING POLE BASE



ANCHOR BASE

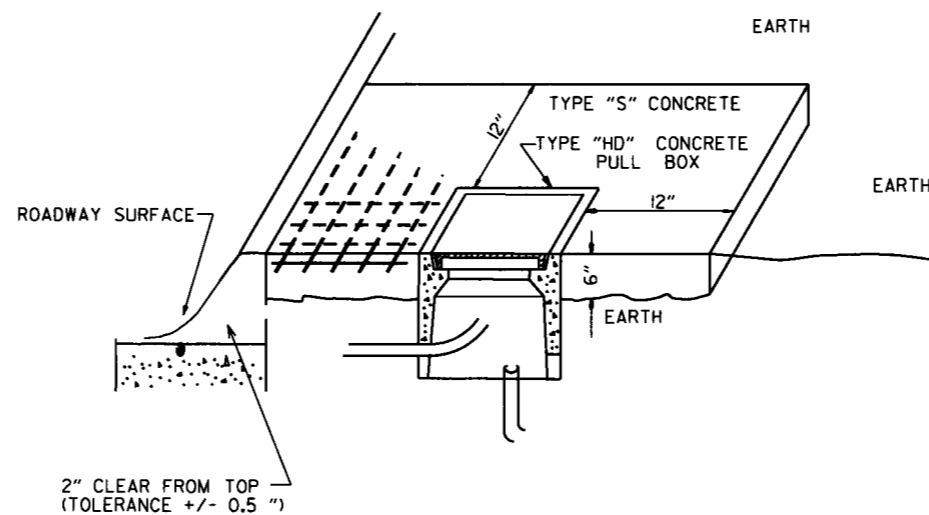


CONDUIT ENTRY TO EXISTING CONTROLLER CABINET

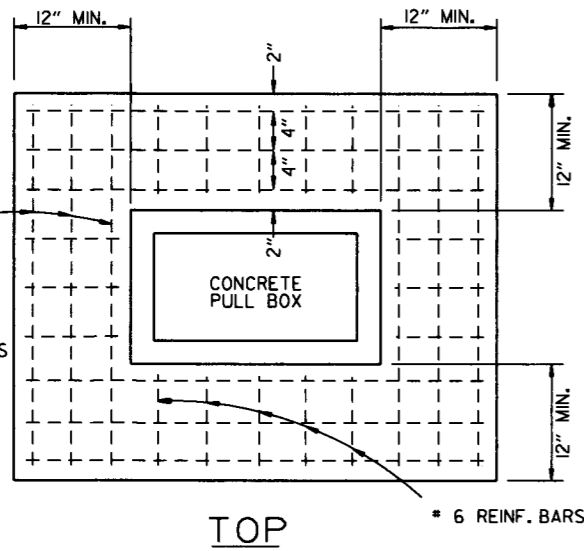


NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

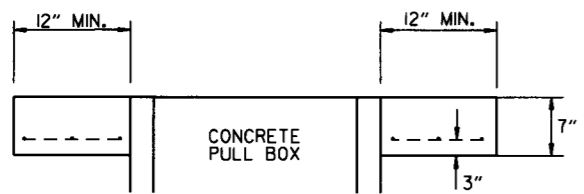
TYPE "HD" CONCRETE PULL BOX DETAIL



NOTE: ALL REINFORCING BARS TO BE GRADE 60



TOP

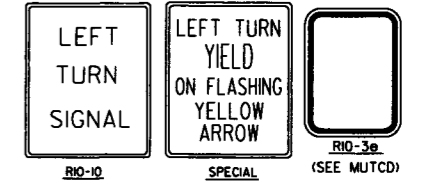
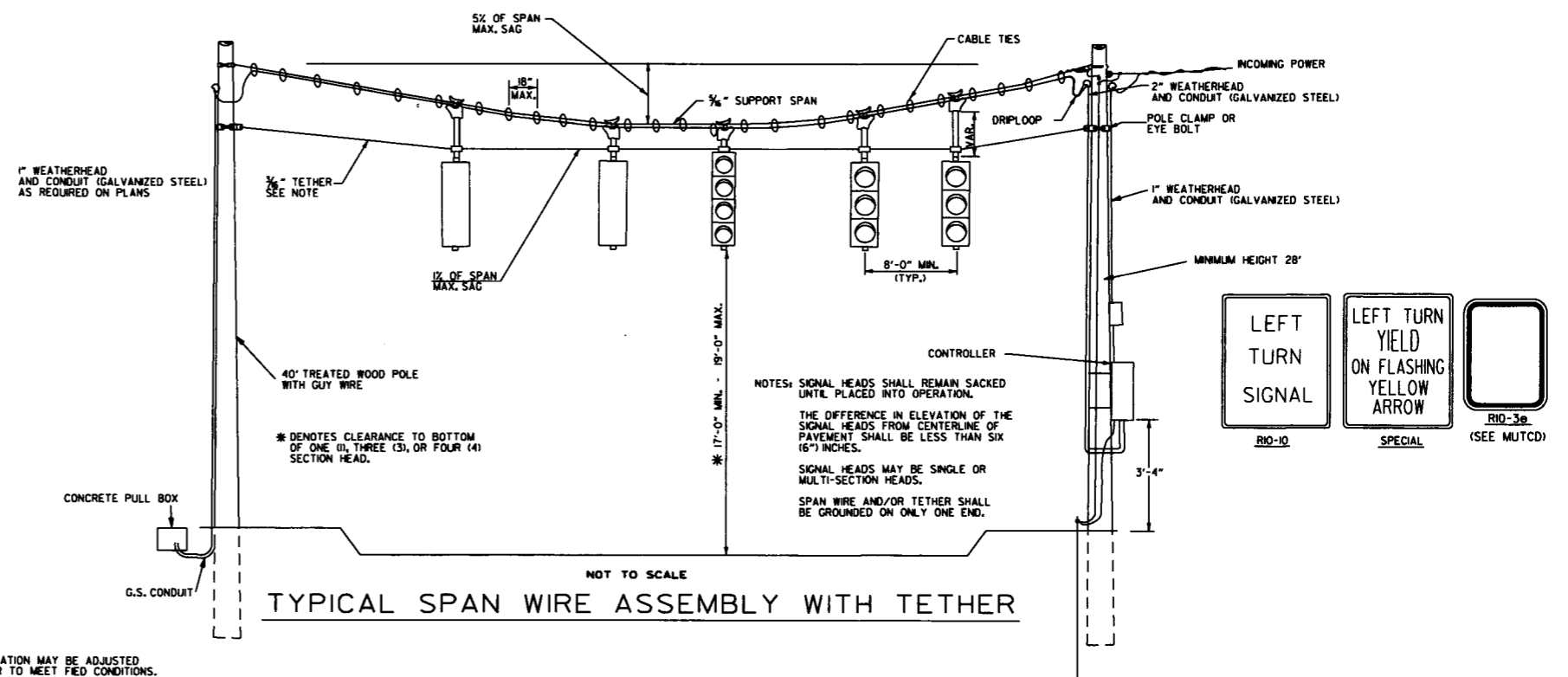
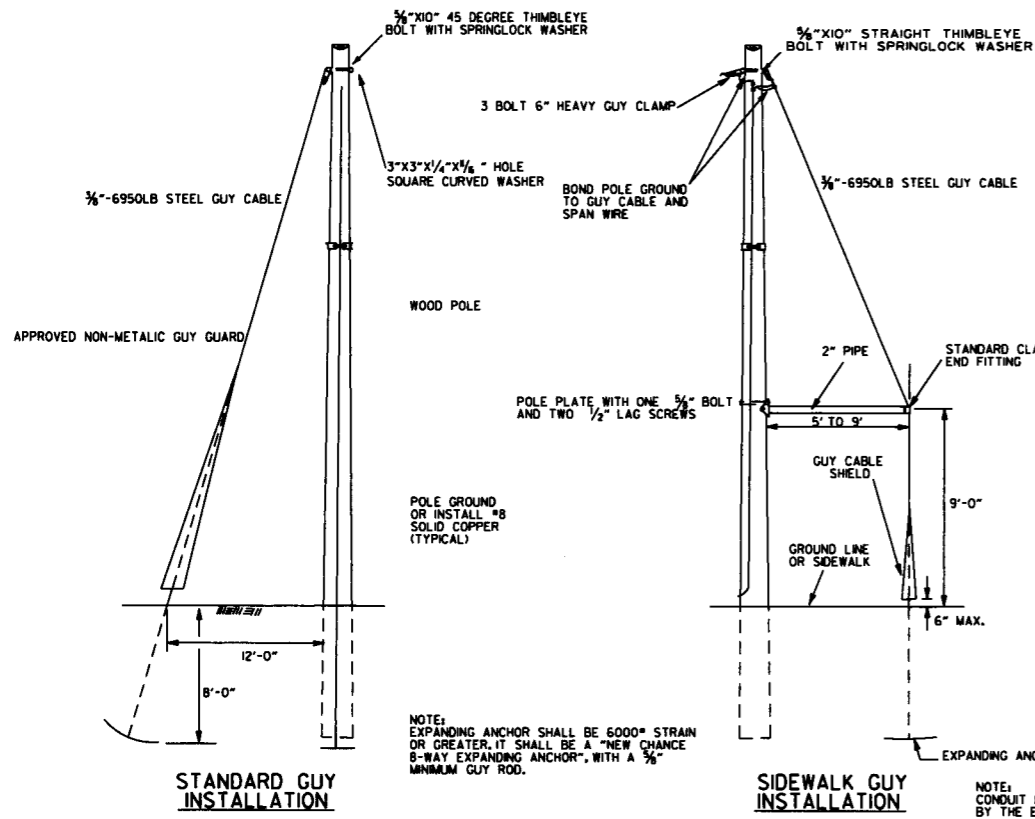


ELEVATION

NOTE: ALL TYPE 1 AND TYPE 2 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 7" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE CONCRETE PULL BOX IS REQUIRED IN CONCRETE.

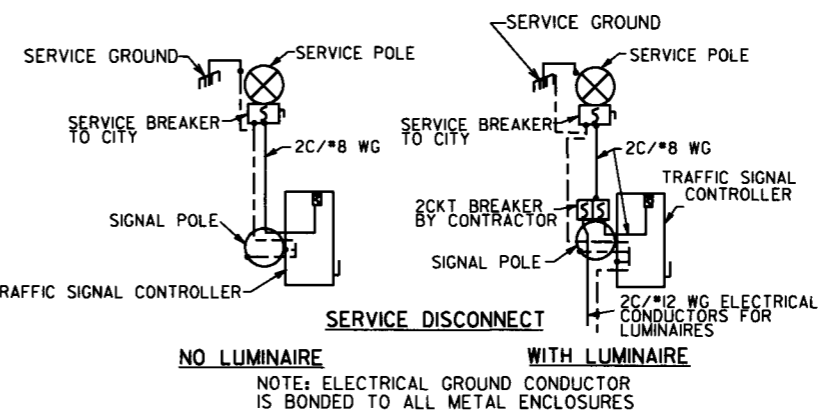
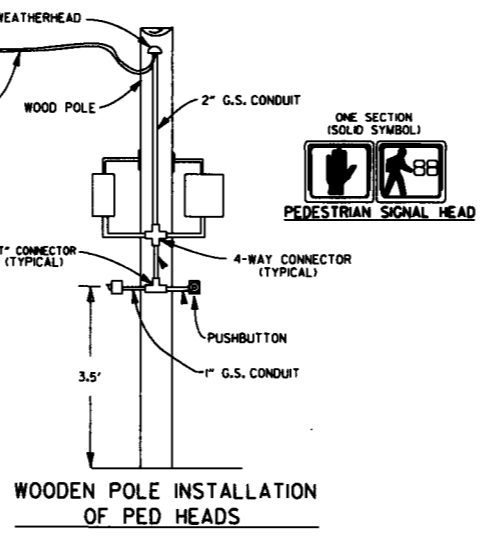
DATE	REVISION	FILMED
11-16-17	REVISED NOTES	
09-02-15	REVISED PULL BOX DEPTH	
09-02-13	ISSUED AS STANDARD DRAWING	
09-21-09	REVISED GROUNDING	
01-21-08	ADDED & REVISED CONDUIT ENTRY	
06-23-04	REVISED CLEARANCE AT CURB ENTRY	
01-04-02	ADDED REINFORCING TO BOX APRON	
01-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION
HEAVY DUTY PULL BOX
STANDARD DRAWING SD-6



NOTES:
SPAN WIRE POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4) FEET BEHIND CURB OR SHOULDER.
SPAN WIRE ASSEMBLIES WILL REQUIRE TETHER UNLESS OTHERWISE NOTED ON PLAN SHEETS.
CABLE TIES SHALL BE SUITABLE FOR OUTSIDE USE (BLACK).

THE CONTROLLER POWER SUPPLY GROUND BUSS SHALL BE BONDED TO THE FOUNDATION GROUND ROD WITH A #8 A.W.G. SOLID COPPER WIRE. ON EXISTING FOUNDATIONS WITH NO GROUND ROD, CONTRACTOR SHALL INSTALL A 10' X 5/8" COPPERWELD GROUND ROD.



NOTES:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., I-WAY)" SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN SIGNAL PLAN NOTES.

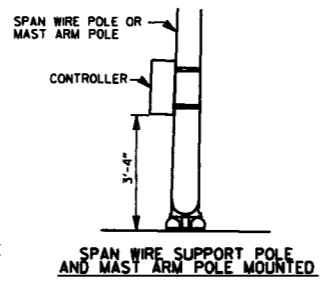
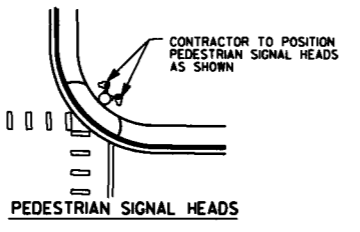
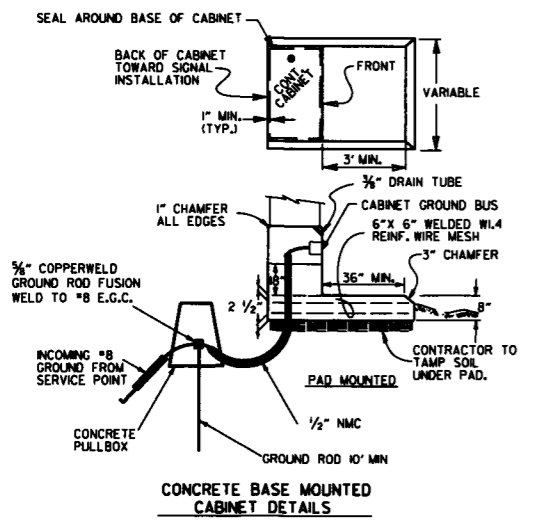
EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., I-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY, SHALL INCLUDE A SIGN (RIO-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

ALL SIGN BLANK SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH A THICKNESS OF 0.100 INCH.

ALL SIGN FACE SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

SIGNAL OPERATION NOTES:
FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

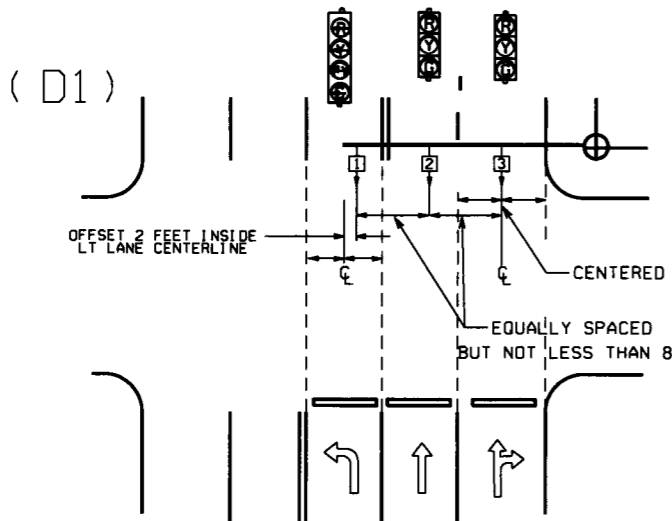
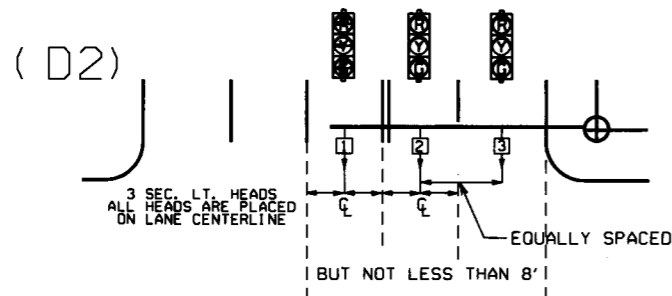
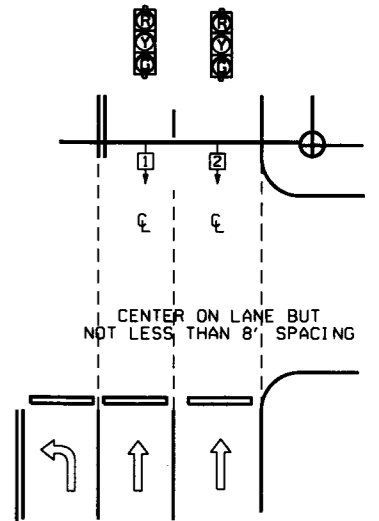
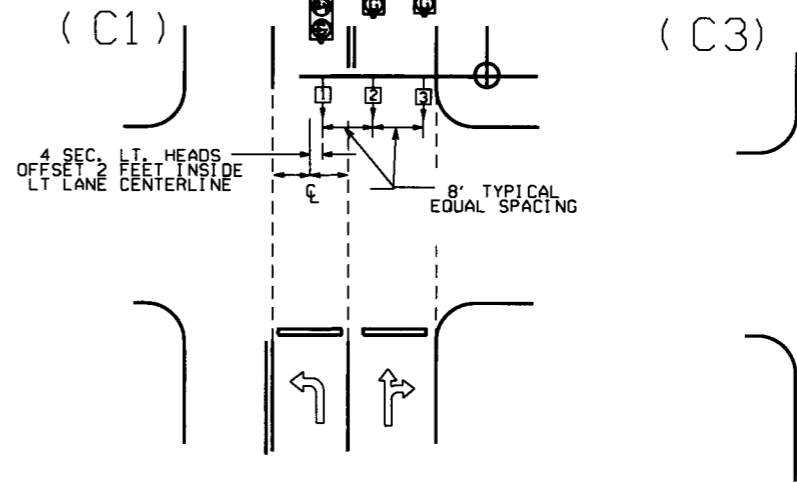
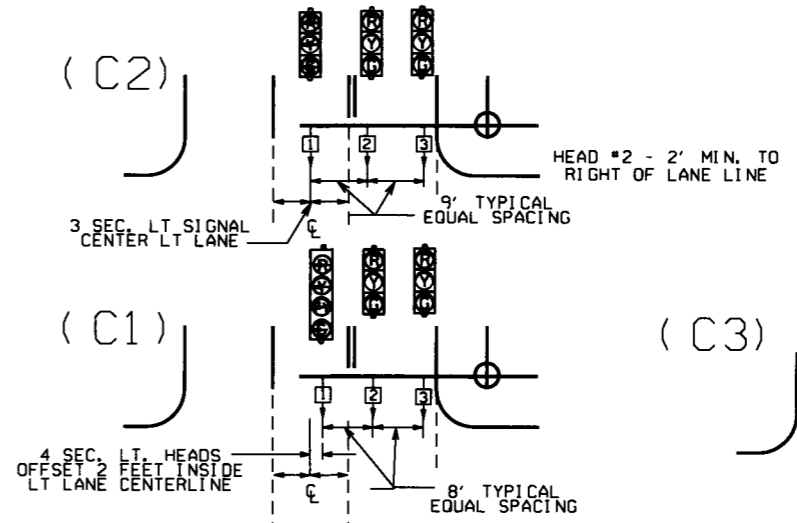
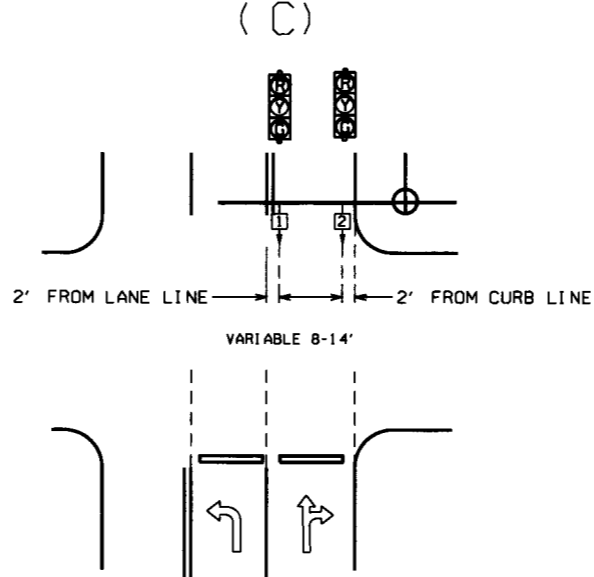
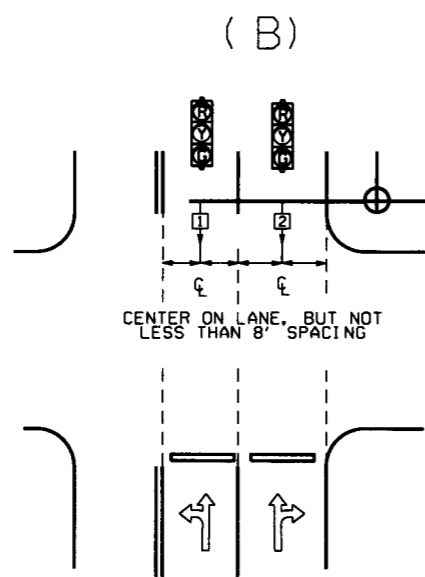
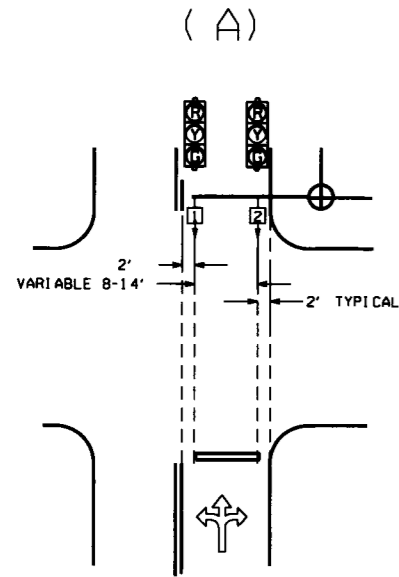


MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.
CONSTRUCTION SPECIFICATIONS: STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
BASE WIND SPEED: 90 MPH
STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

CABINET NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

DATE	REVISION	FILED
11-16-17	REVISED NOTES, ADDED SPAN WIRE SUPPORT POLE DETAIL, ADDED PEDESTRIAN SIGNAL HEAD DETAIL	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED PEDESTRIAN SIGN & GROUNDING	
04-11-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REV. CABINET ORIENTATION & SIGNAL OPERATION	
09-22-02	REV. TYP. SPAN WIRE ASSEMBLY	
12-27-99	REVISED	
11-18-98	REVISION TO NOTES	
11-21-95	ISSUED	

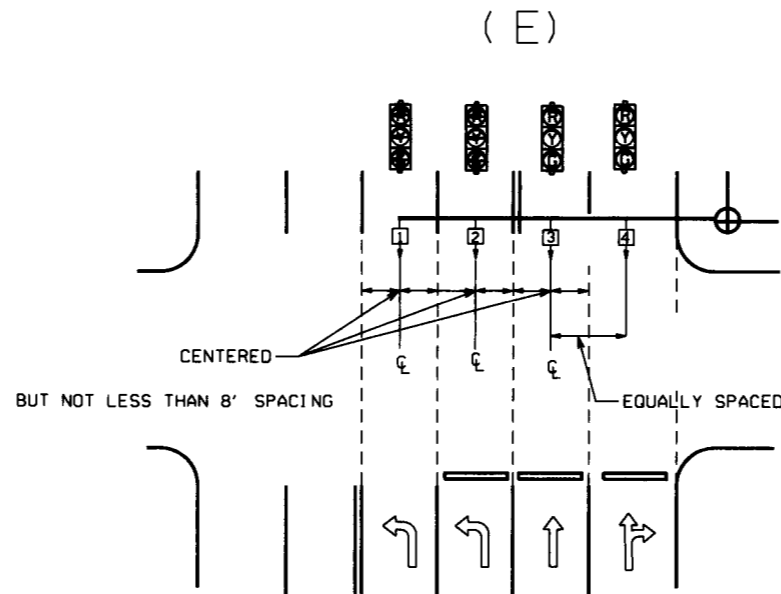
ARKANSAS STATE HIGHWAY COMMISSION
SPAN WIRE ASSEMBLY
WOOD POLE
STANDARD DRAWING SD-7



NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.

GENERAL NOTES:

1. FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
2. THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
3. WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.
4. SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.
5. ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.
6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-5 OF 2009 MUTCD.

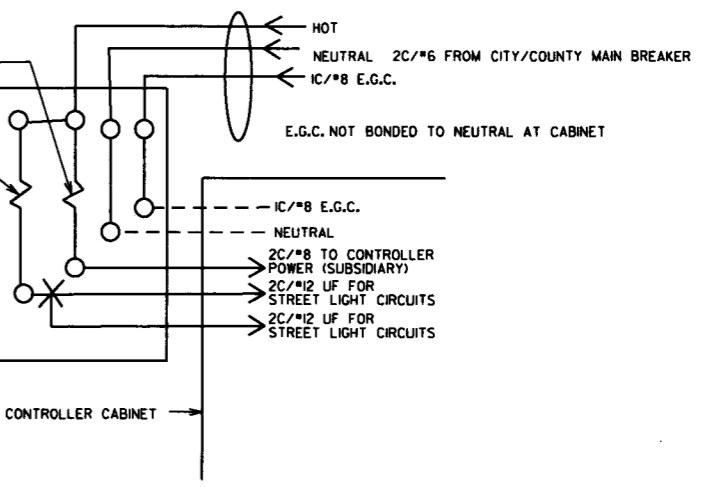
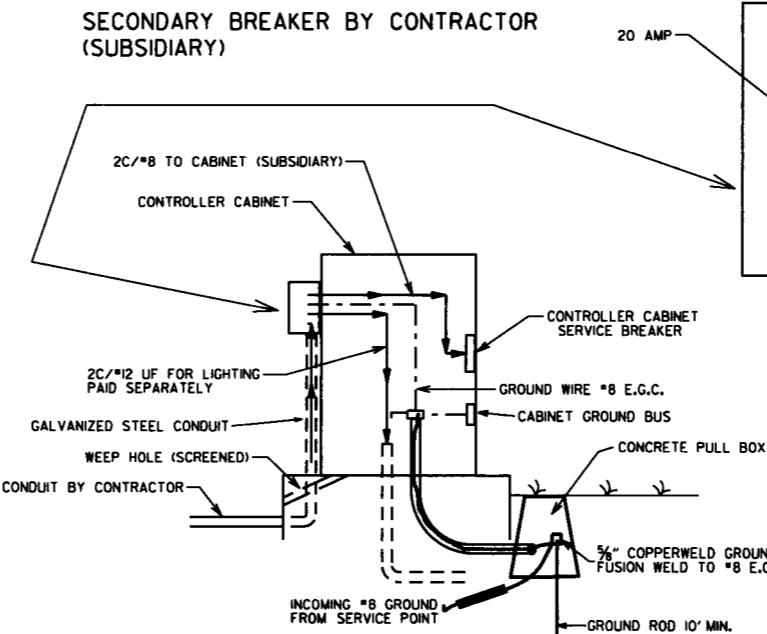
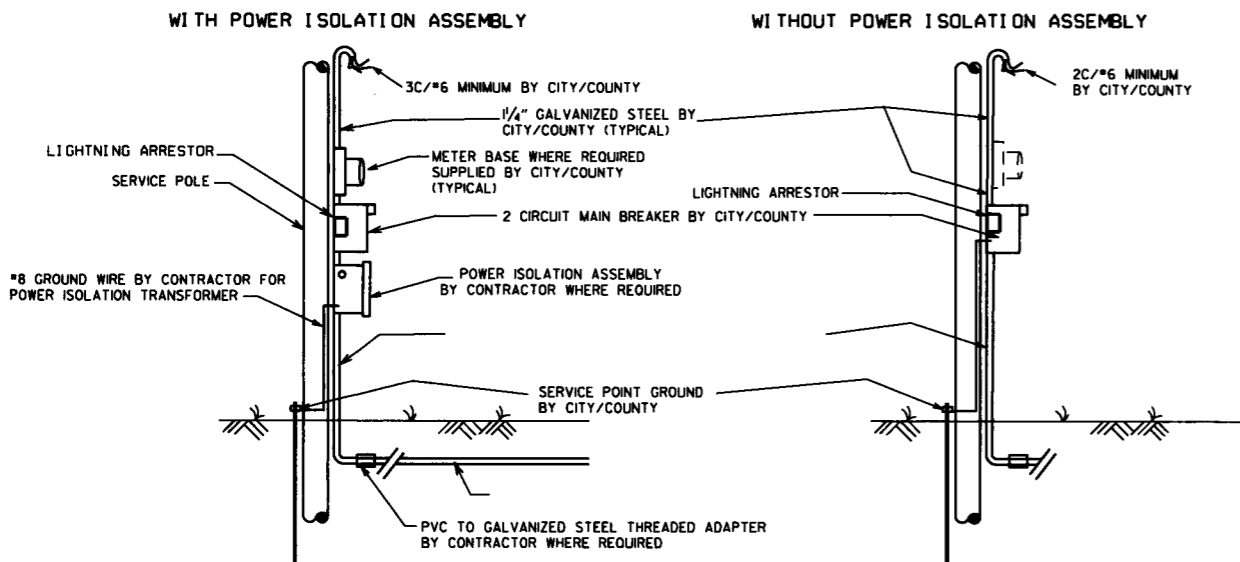


℄ = CENTER OF LANE FROM APPROACH SIDE

			ARKANSAS STATE HIGHWAY COMMISSION
12-8-16	REVISED NOTE 6		SIGNAL HEAD PLACEMENT
9-12-13	ISSUED AS STANDARD DRAWING		
3-11-10	2009 MUTCD		STANDARD DRAWING SD-8
12-9-99	ISSUED		
DATE	REVISION	DATE FILM	

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 701. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.



MAIN BREAKER WIRING (TYPICAL)

SERVICE GROUND IS TYPICALLY TIED TO NEUTRAL AT THE MAIN BREAKER. AS SUCH, CONTROLLER GROUND IS NOT TIED TO NEUTRAL AT SECONDARY BREAKER OR IN CONTROLLER CABINET.

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY):

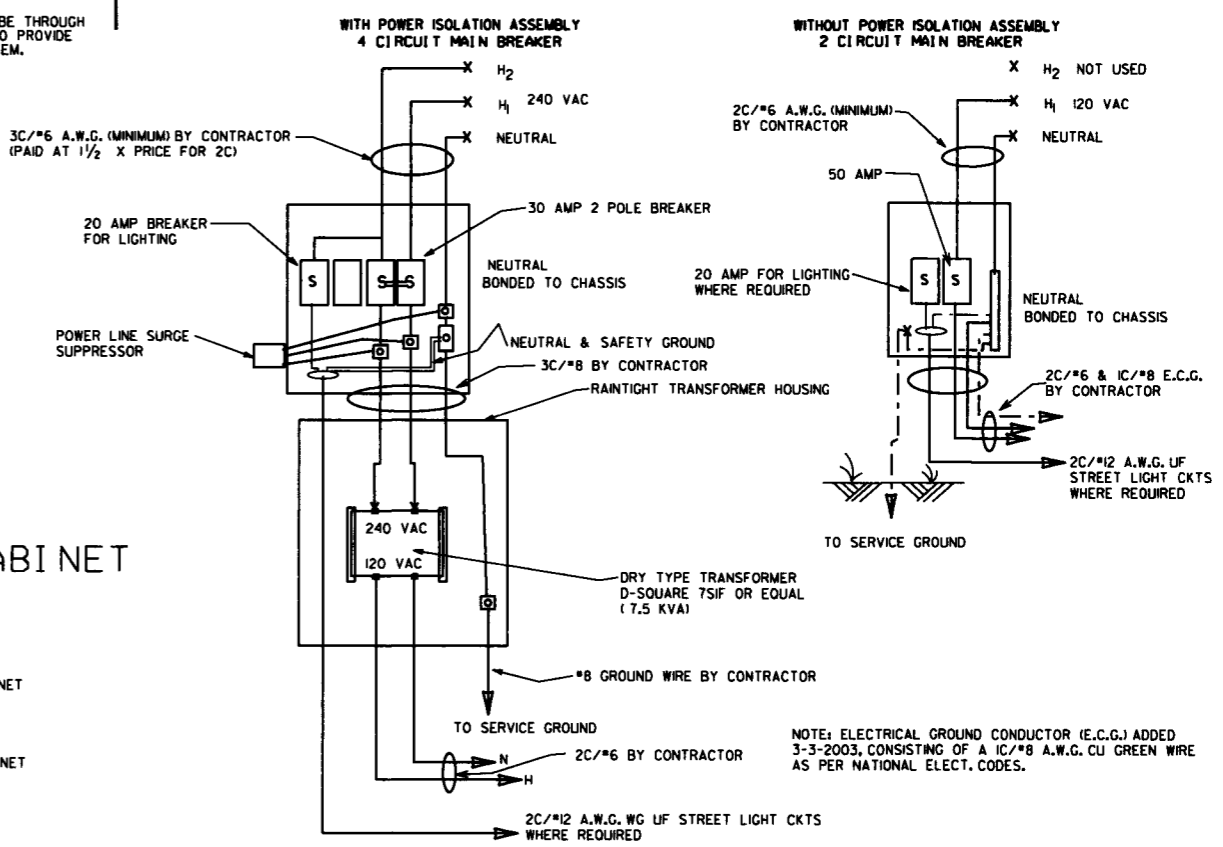
ELECTRICAL SERVICE TYPICALLY FALLS INTO TWO CATEGORIES: MAIN BREAKER NEAR CONTROLLER CABINET; AND MAIN BREAKER NOT NEAR CONTROLLER CABINET. THE CONTRACTOR'S AND THE CITY'S/COUNTY'S RESPONSIBILITY VARIES ACCORDINGLY AS INDICATED ON THESE DETAILS.

ALL SITUATIONS: ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAIN-TIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, LIGHTNING ARRESTOR, POWER ISOLATION ASSEMBLY WHERE REQUIRED, METER LOOP IF REQUIRED BY LOCAL UTILITY COMPANY, ELECTRICAL CONDUCTORS AND WEATHERHEAD. WHERE STREET LIGHTING IS INCLUDED AS PART OF SIGNAL INSTALLATION STREET LIGHTING CIRCUIT (2C/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT SEPARATE FROM THE CIRCUIT SERVING TRAFFIC SIGNAL. SERVICE WIRE AND WIRING FROM THE CONTROLLER TO MAIN BREAKER IS PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT, WIRE AND WIRING FROM MAIN BREAKER, AND CONNECTION TO THE UTILITY IS THE RESPONSIBILITY OF THE CITY/COUNTY.

MAIN BREAKER NOT NEAR CONTROLLER CABINET: THE MAIN BREAKER ASSEMBLY, GALVANIZED STEEL CONDUIT, WEATHERHEAD AND WIRE ABOVE MAIN BREAKER AND CONNECTION TO THE UTILITY SHALL BE PROVIDED BY CITY/COUNTY. CONTRACTOR SHALL PROVIDE AS PART OF CONTRACT SECONDARY BREAKER, CONDUIT, WIRE AND WIRING TO THE MAIN BREAKER.

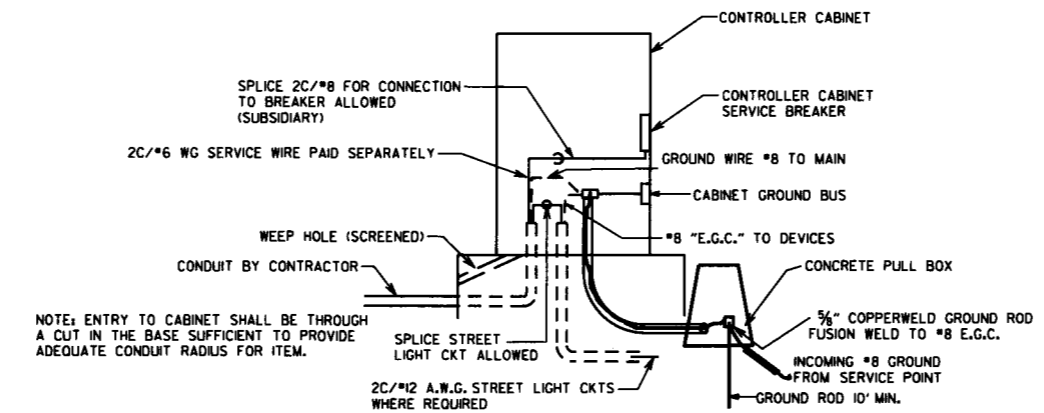
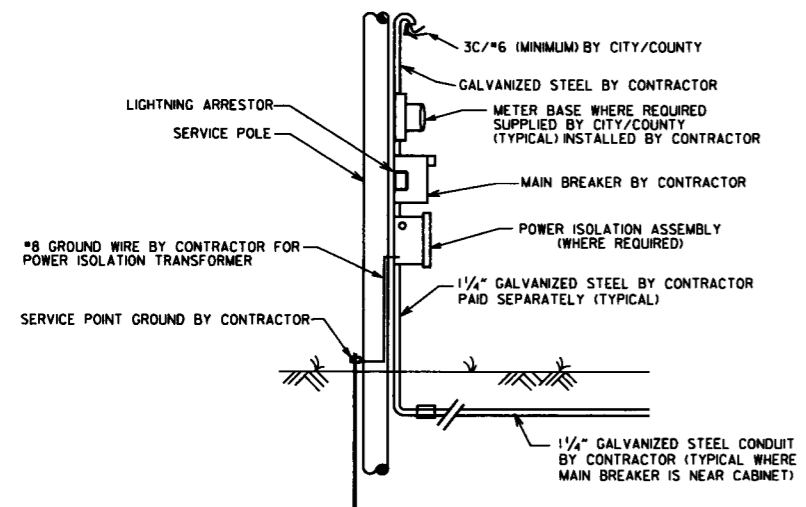
MAIN BREAKER NEAR CONTROLLER CABINET: ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP IS REQUIRED, METER BASE AND HARDWARE IS PROVIDED BY THE CITY/COUNTY AND INSTALLED BY THE CONTRACTOR.

NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.



NOTE: ELECTRICAL GROUND CONDUCTOR (E.G.C.) ADDED 3-3-2003, CONSISTING OF A 1C/#8 A.W.G. CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED



NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

DATE	REVISION	FILED
11-16-17	REVISED NOTES	
09-28-13	ISSUED AS STANDARD DRAWING	
04-18-13	ADDED LIGHTNING ARRESTOR	
08-21-09	REVISED GROUNDING	
07-9-08	REVISED GROUNDING	
03-03-03	ADDED EGC NOTE	
09-26-01	REVISED	
12-27-99	REVISED	
07-28-99	REVISED	
02-05-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SERVICE POINT

STANDARD DRAWING SD-9

NOTES:

PEDESTRIAN AND TRAFFIC SIGNAL HEAD SIGNS: EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (RIO-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE RIO-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.010 INCH.

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS: DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY II FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH MAST ARMS LESS THAN 60' AND ON ROUTES WHERE THE SPEED LIMITS OF 45 MPH AND LESS WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE THE SPEED LIMIT IS 45 MPH AND LESS AND MAST ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHAMPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOADS: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, TWELVE (12") INCH AND HAVE FIVE (5") INCH BACK PLATES:

SIGNAL HEADS AT THE END OF MAST ARM - ONE 4 SEC., 85 LB., 14.5 SQ. FT., ONE SIGN MOUNTED 3 FEET FROM SIGNAL HEAD (2'-0" X 2'-6" 20 LB.) REMAINING SIGNAL HEADS SPACED AT 8 FT. (3 SEC., 56 LB., 8.3 SQ. FT.); DESIGN TO ACCOMMODATE:
2 SIGNAL HEADS FOR MAST ARMS 10 FT. TO 16 FT.
3 SIGNAL HEADS FOR MAST ARMS 18 FT. TO 24 FT.
4 SIGNAL HEADS FOR MAST ARMS OVER 26 FT.

STREET NAME SIGN - 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT.
ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) - VARIABLE ARM LENGTH (MAX. WT. 75 LB., 3.3 SQ. FT.)
PEDESTRIAN SIGNALS - TWO 1 SEC., 12 INCH MOUNTED 8 FT. FROM BASE OF POLE, POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

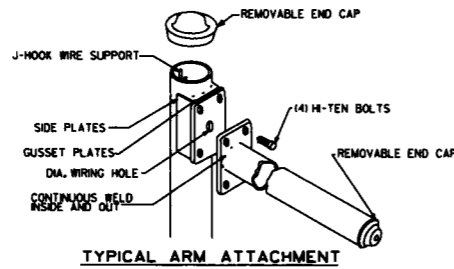
4. POLE/MAST ARM CAP - POLE AND MAST ARM CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE - HAND HOLES SHALL BE 4 IN. X 6 IN. FOR STANDARD, AND 3 IN. X 5 IN. FOR PED POLES. MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21 FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENTS) SHALL INCLUDE A HAND HOLE WITHIN 12 INCHES OF MAST ARMS ATTACHMENTS.

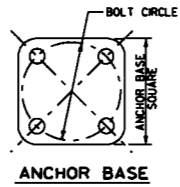
6. POLE/MAST ARM TAPER SLOPE - AVERAGE TAPER OF SIGNAL MAST ARMS AND POLE SHAFT SHALL BE 0.125 TO 0.15 INCHES PER FOOT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE MAST ARM SHALL MAINTAIN A POSITIVE SLOPE AFTER IT IS PLACED UNDER LOAD.

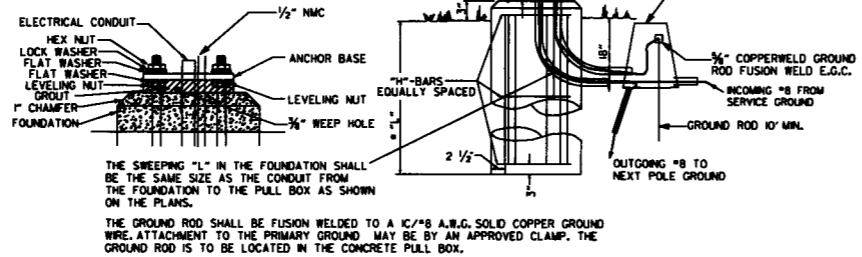
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



TYPICAL ARM ATTACHMENT

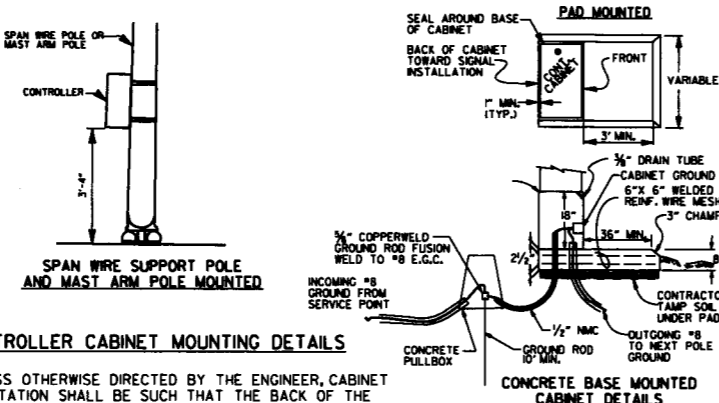


ANCHOR BASE



TYPICAL FOUNDATION DETAILS
POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FOUNDATION DIAMETER	DEPTH "L"*	STEEL		
			VERTICAL	HORIZONTAL	O.C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' TO 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
OVER 12' TO 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
OVER 20' TO 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
OVER 35' TO 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
OVER 50' TO 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
TWINS TO 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
TWINS OVER 20' TO 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
TWINS OVER 44' TO 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
TWINS OVER 50' TO 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



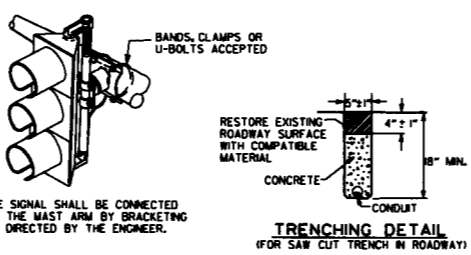
CONTROLLER CABINET MOUNTING DETAILS

NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X 3/8" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 707 FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPARATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUDED WITH A 1/2" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS "S" OR GREATER.

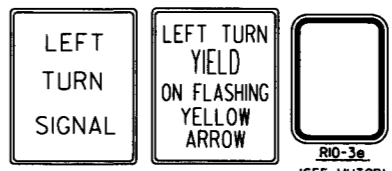
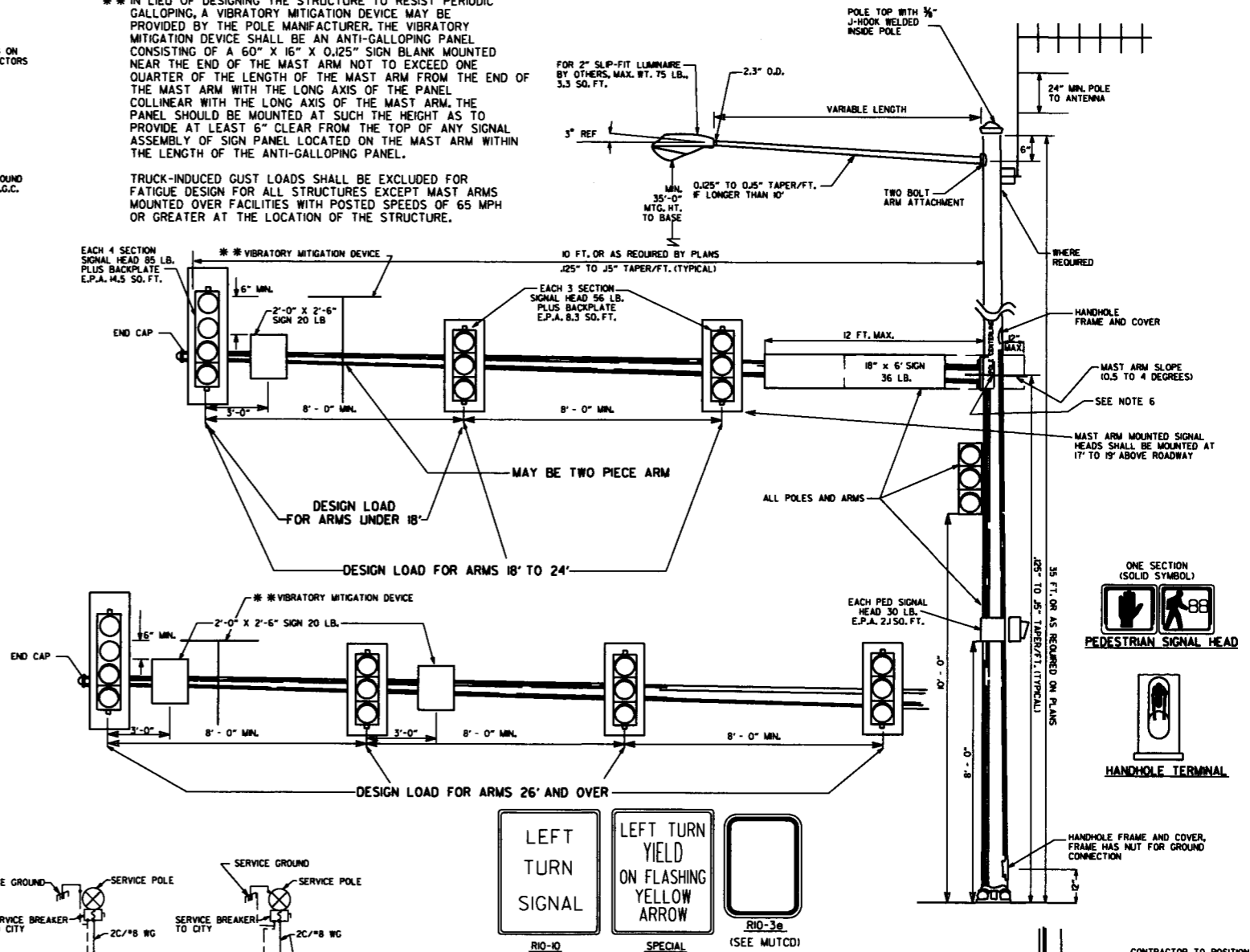


TRENCHING DETAIL (FOR SAW CUT TRENCH IN ROADWAY)

* WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS.

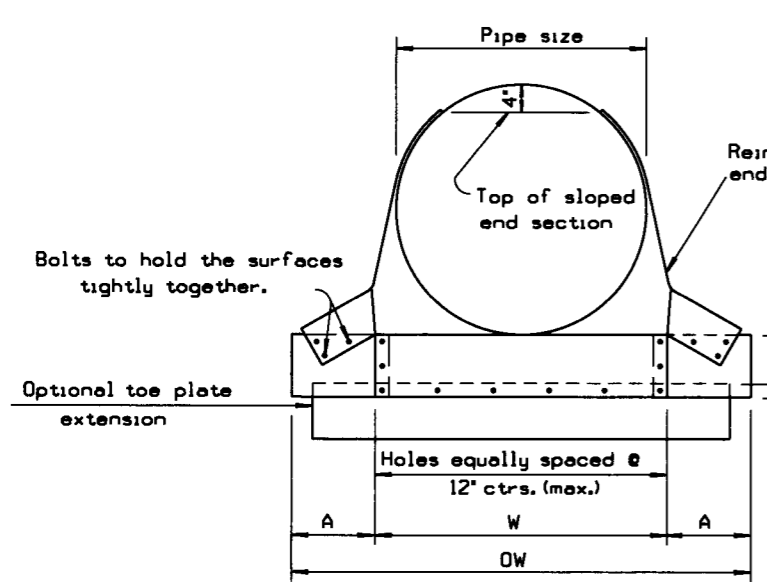
** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60" X 16" X 0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH THE HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OF SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.

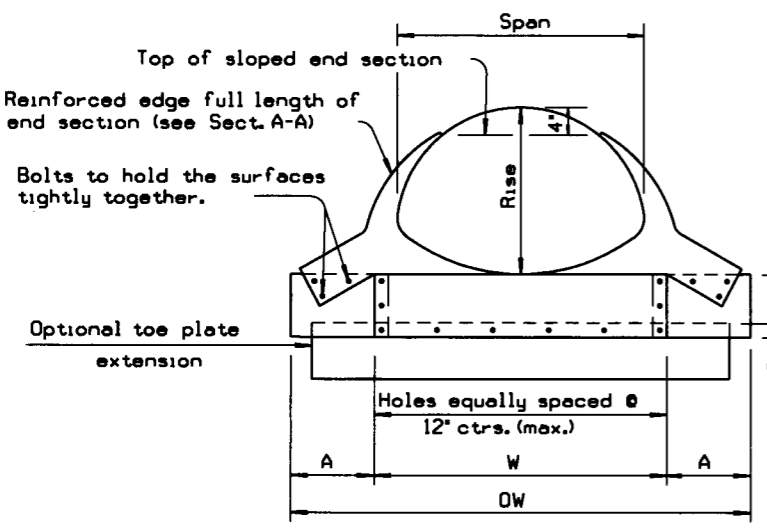


DATE	REVISION	FILMED
11-16-17	REVISED NOTES, ADDED PEDESTRIAN SIGNAL HEAD DETAIL, ADDED HANDHOLE TERMINAL DETAIL, ADDED TRENCHING DETAIL	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
12-08-16	REVISED NOTES	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED VMD, SIGNAL HEADS	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
04-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
04-18-08	REVISED AASHTO NOTES	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
06-23-04	REVISED	
02-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
06-11-01	REV. NOTES & POLE MAST ARM SLOPE	
04-11-01	REVISED POLE TAPERS	
04-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	

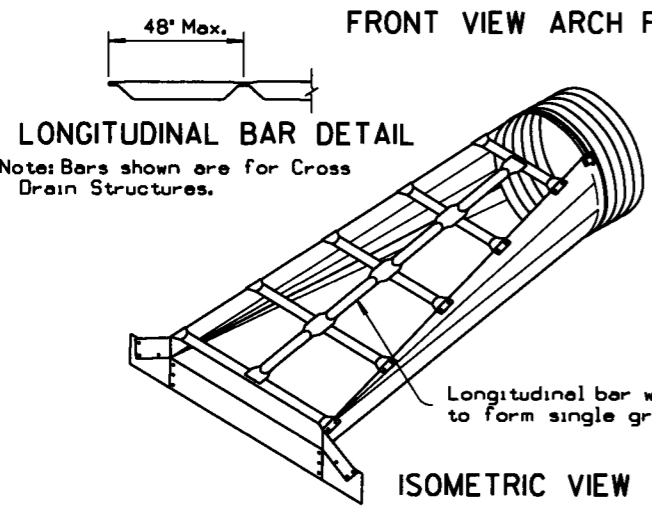
ARKANSAS STATE HIGHWAY COMMISSION
STEEL POLE WITH MAST ARM
STANDARD DRAWING SD-11



FRONT VIEW CIRCULAR PIPE



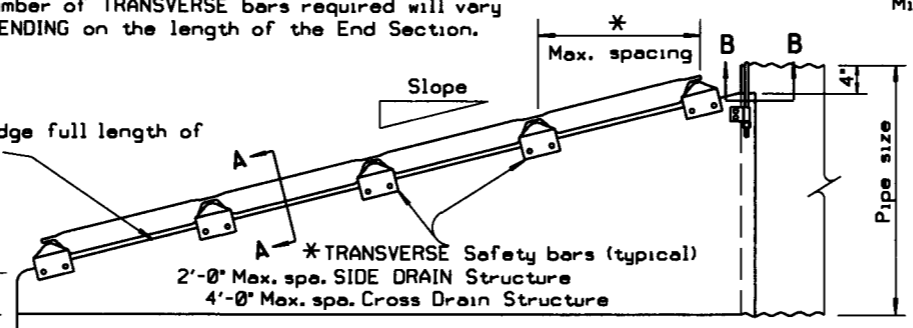
FRONT VIEW ARCH PIPE



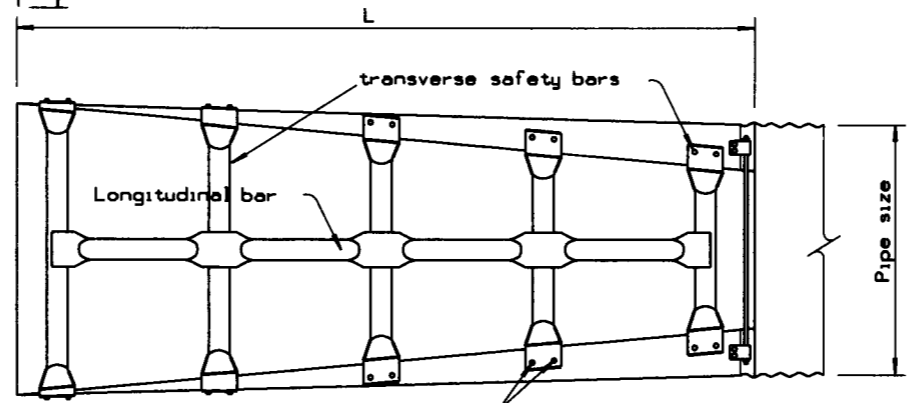
LONGITUDINAL BAR DETAIL
Note: Bars shown are for Cross Drain Structures.

ISOMETRIC VIEW

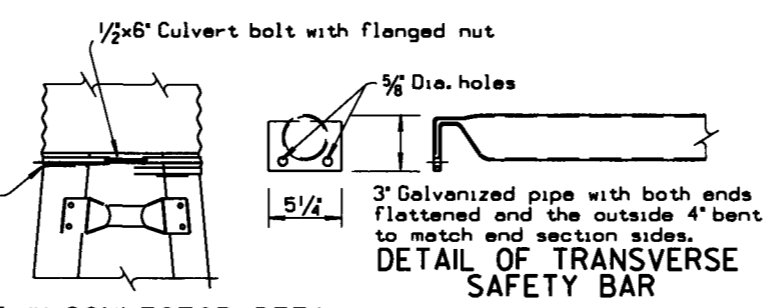
*Number of TRANSVERSE bars required will vary DEPENDING on the length of the End Section.



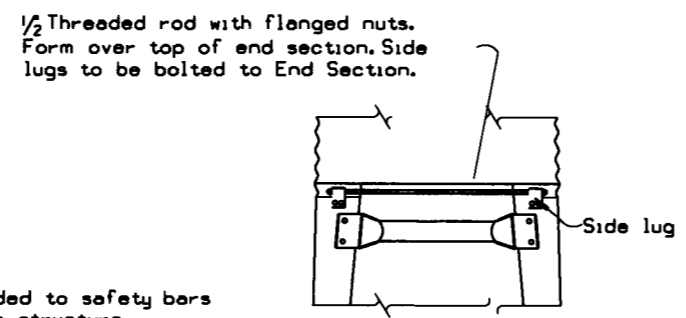
SIDE ELEVATION CIRCULAR OR ARCH SECTION



TOP VIEW CIRCULAR OR ARCH SECTION



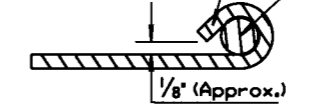
TYPE #1 CONNECTOR DETAIL
For 15' thru 24' pipe



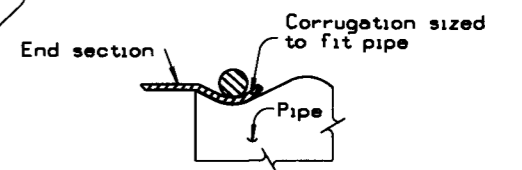
TYPE #2 CONNECTOR DETAIL
For 30\"/>

Minimum 1/8\"/>

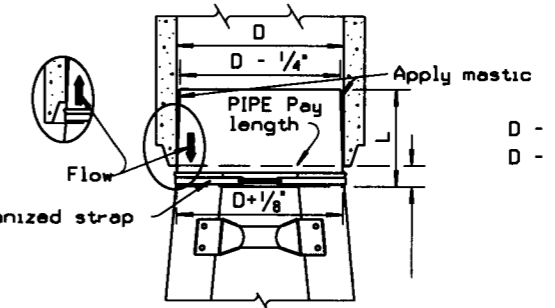
Edge of sidewall sheet rolled snugly against steel rod.



SECTION A-A



SECTION B-B



Note: Metal end section to be firmly wedged INTO PIPE END BEFORE BACKFILLING PIPE.
(Tapered sleeve to be 12 Ga. smooth galvanized steel in accordance with AASHTO M 218.)
STEEL END SECTION FOR CONCRETE PIPE
(Alternate for Concrete End Section)



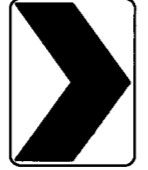



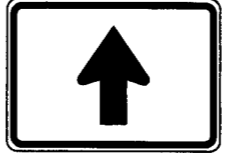






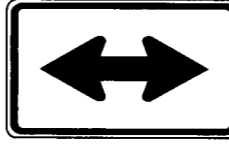


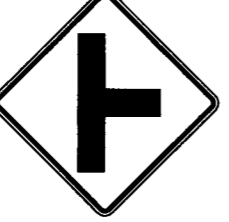






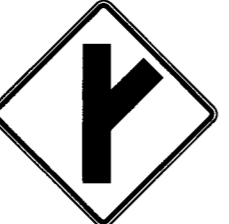


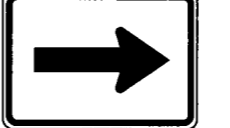
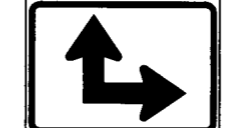

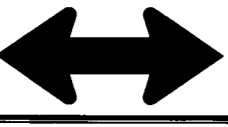


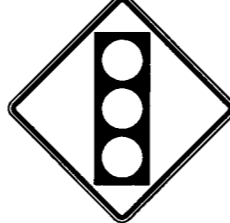



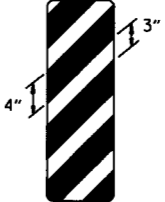
GENERAL NOTES

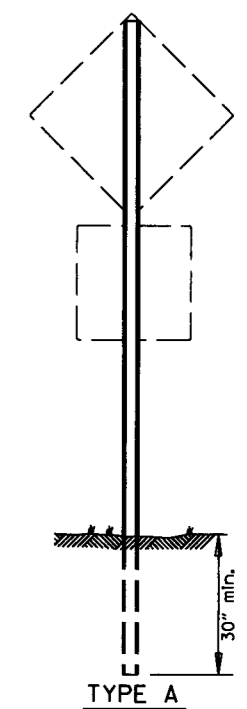
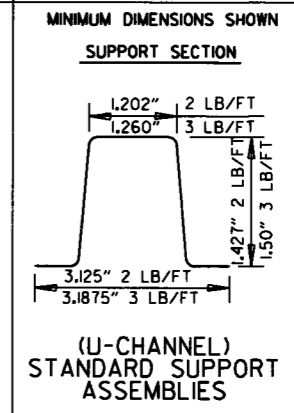
End sections shall be fabricated from galvanized steel meeting the requirements of SUBSECTION 606.02(c)(1) OF THE STANDARD SPECIFICATIONS. When specified optional toe plate extension shall be punched and bolted to end section apron lip with 3/8\"/>

SAFETY END SECTIONS FOR ARCH PIPES											SAFETY END SECTIONS FOR CIRCULAR PIPES											
Equiv. Dia.	Nom. W.W. Area Sq Ft.	Pipe Arch		Min. Gauge End Sect.	Dimensions in Inches				Slope	L (in.)	Slope	L (in.)	Pipe Dia.	Min. Gauge Ends	Dimensions in Inches				L Dimensions in Inches			
		Span (in.)	Rise (in.)		A	H	W	OW							A 1\"/>							
18"	1.6	21	15	16	8	6	27	43	4:1	20	6:1	30	15"	16	8	6	21	37	4:1	20	6:1	30
21"	2.2	24	18	16	8	6	30	46	4:1	32	6:1	48	18"	16	8	6	24	40	4:1	32	6:1	48
24"	2.9	28	20	16	8	6	34	50	4:1	40	6:1	60	21"	16	8	6	27	43	4:1	44	6:1	66
30"	4.5	35	24	14	12	9	41	65	4:1	56	6:1	84	24"	16	8	6	30	46	4:1	56	6:1	84
36"	6.5	42	29	12	12	9	48	72	4:1	76	6:1	114	30"	12	12	9	36	60	4:1	80	6:1	120
42"	8.9	49	33	12	16	12	55	87	4:1	92	6:1	138	36"	12	12	9	42	66	4:1	104	6:1	156
48"	11.6	57	38	12	16	12	63	95	4:1	112	6:1	168	42"	12	16	12	48	80	4:1	128	6:1	192
54"	14.7	64	43	12	16	12	70	102	4:1	132	6:1	198	48"	12	16	12	54	86	4:1	152	6:1	228
60"	18.1	71	47	12	16	12	77	109	4:1	148	6:1	222	54"	12	16	12	60	92	4:1	176	6:1	264
72"	26.0	83	57	12	16	12	89	121	4:1	188	6:1	282	60"	12	16	12	66	98	4:1	200	6:1	300

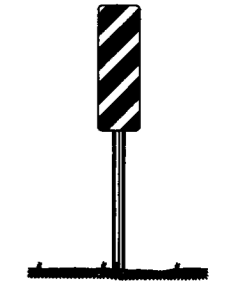
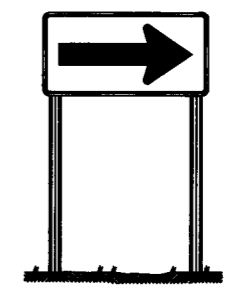
10-18-96 REVISED ASTM REF. TO AASHTO
8-15-91 DRAWN & ISSUED
DATE REVISION DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION
SAFETY END SECTION FOR CIRCULAR AND ARCH PIPES
STANDARD DRAWING SES-1

 RI-1 30"x30"	 WI-3 30"x30" (LT. OR RT.)	 WI-8 18"x24"	 W2-5 30"x30"	 W3-1 36"x36"	 W5-1 36"x36"	 M6-3 21"x15"
 RI-2 36"x36"x36"	 WI-4 30"x30" (LT. OR RT.)	 W2-1 30"x30"	 SI-1 36"x36"	 W3-2 36"x36"	 County Route Marker MI-6 24"x24"	 M6-4 21"x15"
 R2-1 24"x30"	 WI-5 30"x30" (LT. OR RT.)	 W2-2 30"x30"	 W5-2 36"x36"	 W8-3 36"x36"	<p>NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.</p>  RI-3P 18"x6"	 M6-5 21"x15"
 WI-1 30"x30" (LT. OR RT.)	 WI-6 48"x24"	 W2-3 30"x30" (LT. OR RT.)	 W5-3 36"x36"	 W13-IP 18"x18"	 M6-1 21"x15"	 M6-6 21"x15"
 WI-2 30"x30" (LT. OR RT.)	 WI-7 48"x24"	 W2-4 30"x30"	 W10-1 36" DIAMETER	 W3-3 36"x36"	 M6-2 21"x15"	 S4-3P 24"x8"
					 S4-2P 24"x10"	 OM-3 12"x36" (LT. OR RT.)



NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.

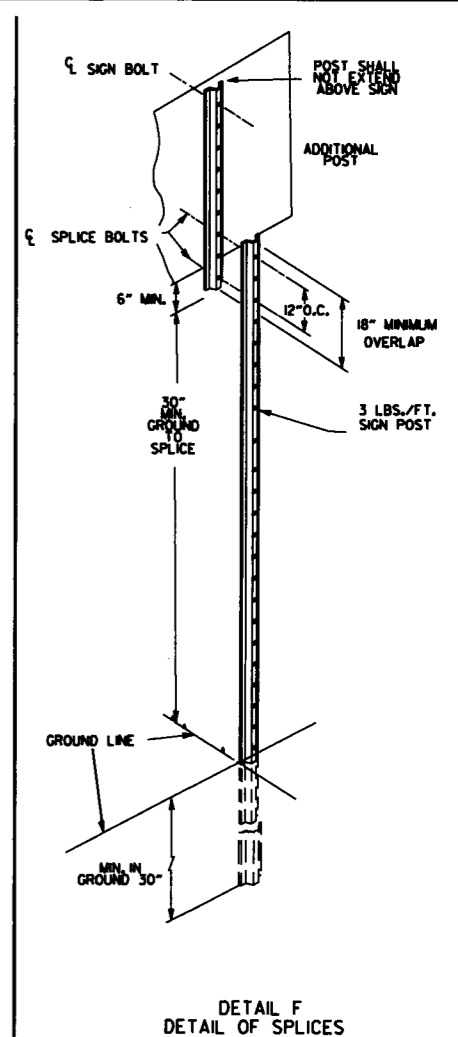
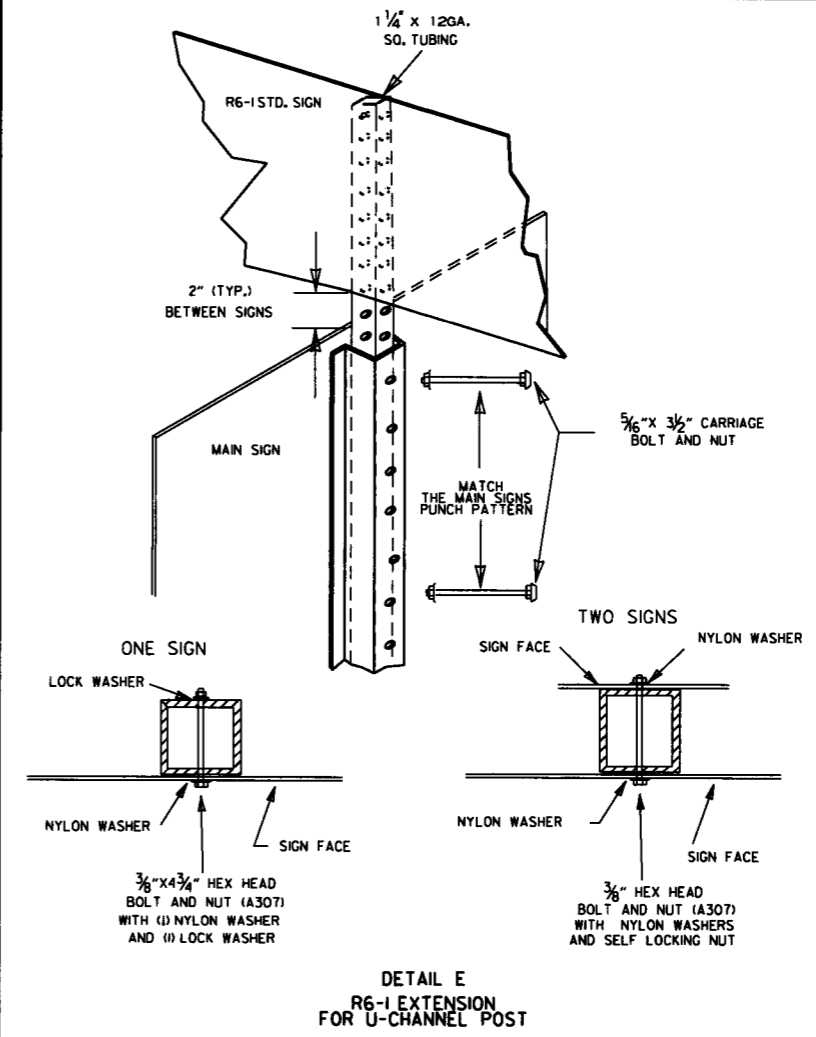
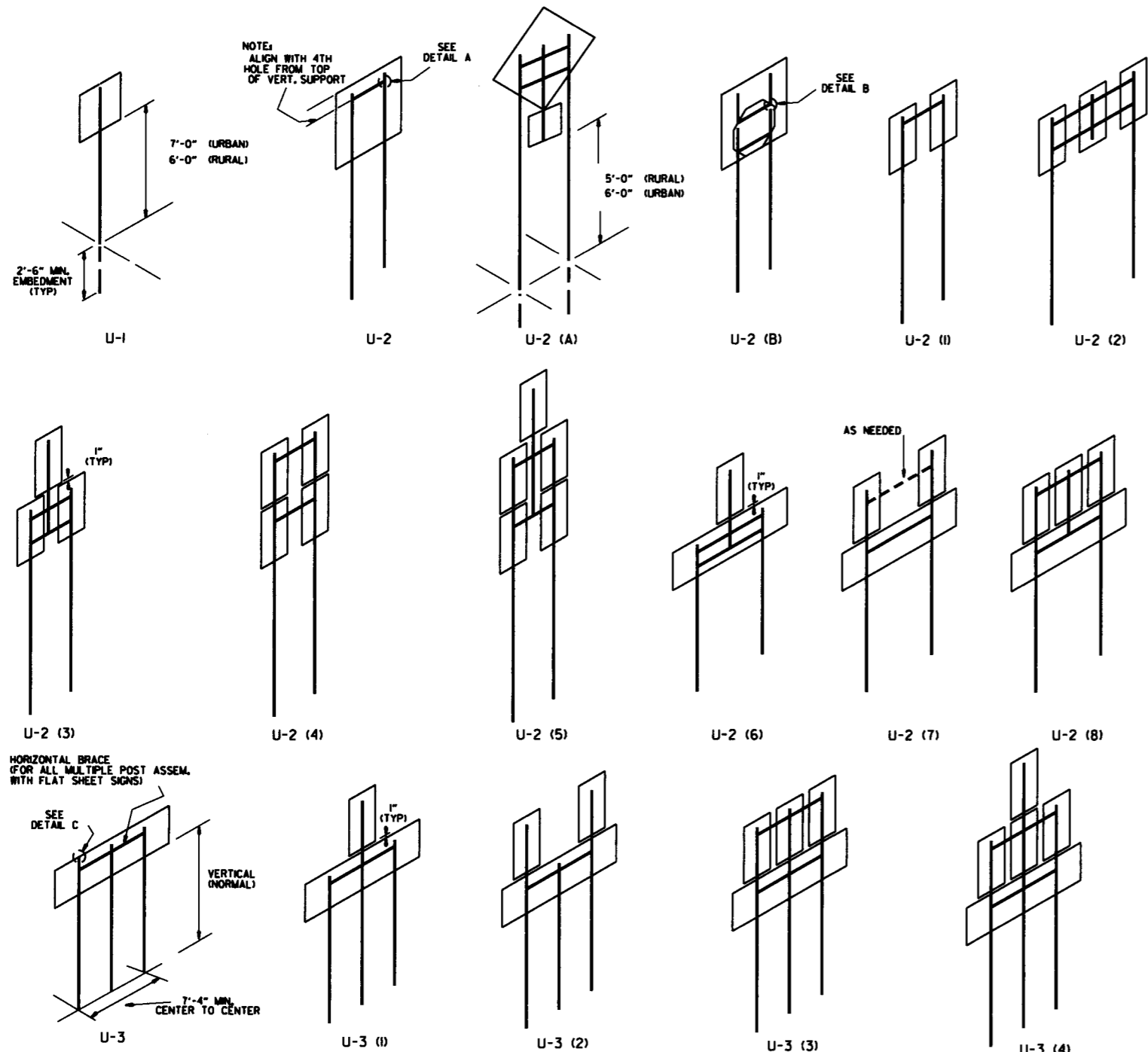


MINIMUM WEIGHT
TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

STANDARD HIGHWAY SIGNS

SUPPORT ASSEMBLIES
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES
STANDARD DRAWING SHS-1

9-12-13	DELETED JOB NO. BLOCK REVISED RI-3 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3, ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED WI-4-1	877-9-15-78
9-2-76	POST WT.	623-9-1-76
5-3-76	STEEL POST WT. FROM 2" TO 3" ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2, 3, 4, 5, 6	500-12-21-72
12-1-72	ISSUED	562-12-1-72
DATE	REVISION	DATE FILMED



NOTES:

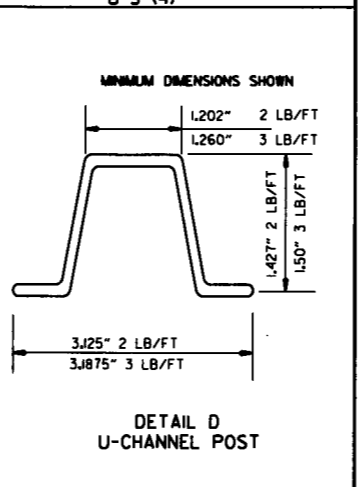
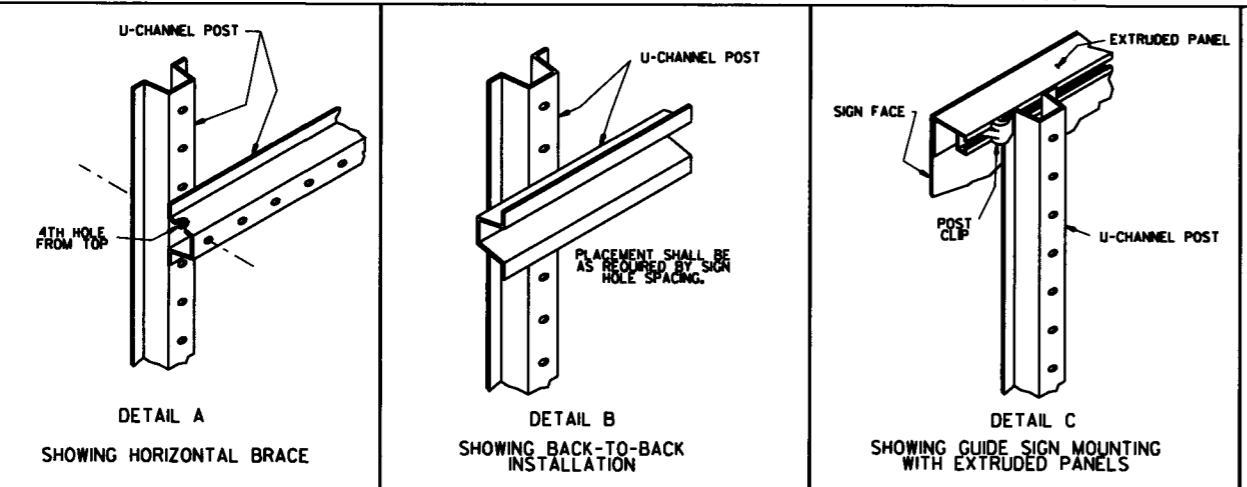
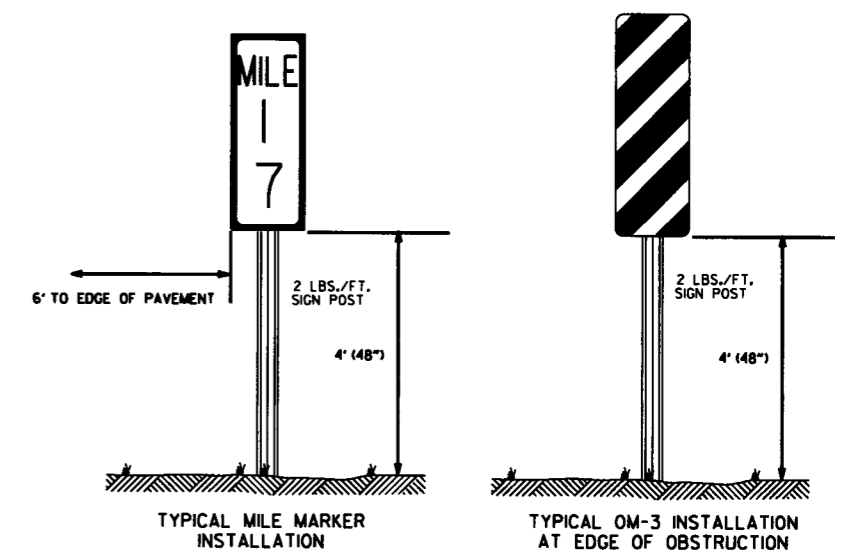
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (F).

NORMAL INSTALLATIONS WILL REQUIRE 3/8" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.

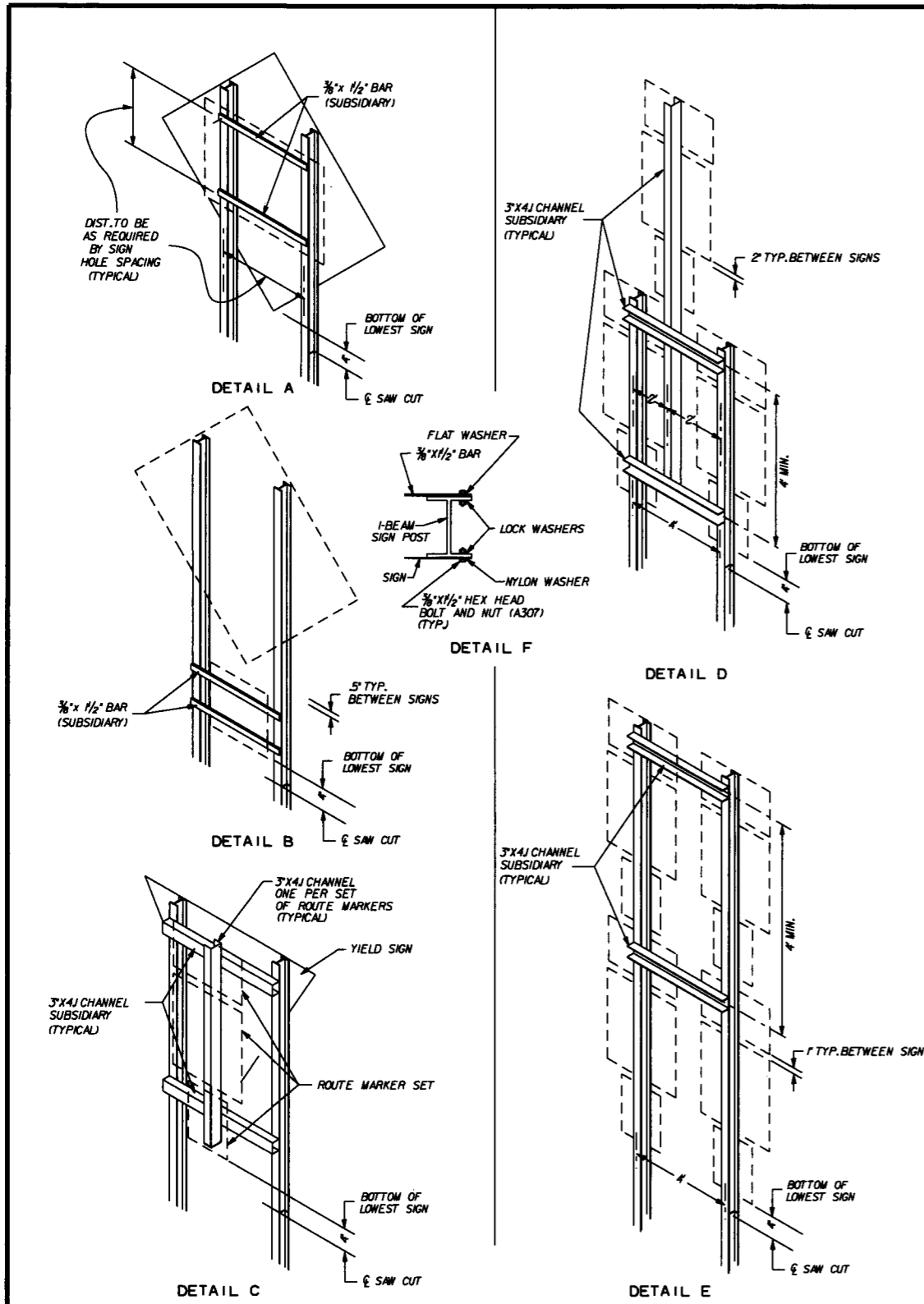


DATE	REVISION	FILED
2-27-14	REVISED NOTES.	
9-12-13	REVISED U-2(13), U-2(16), U-3(4), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95
		FILMED

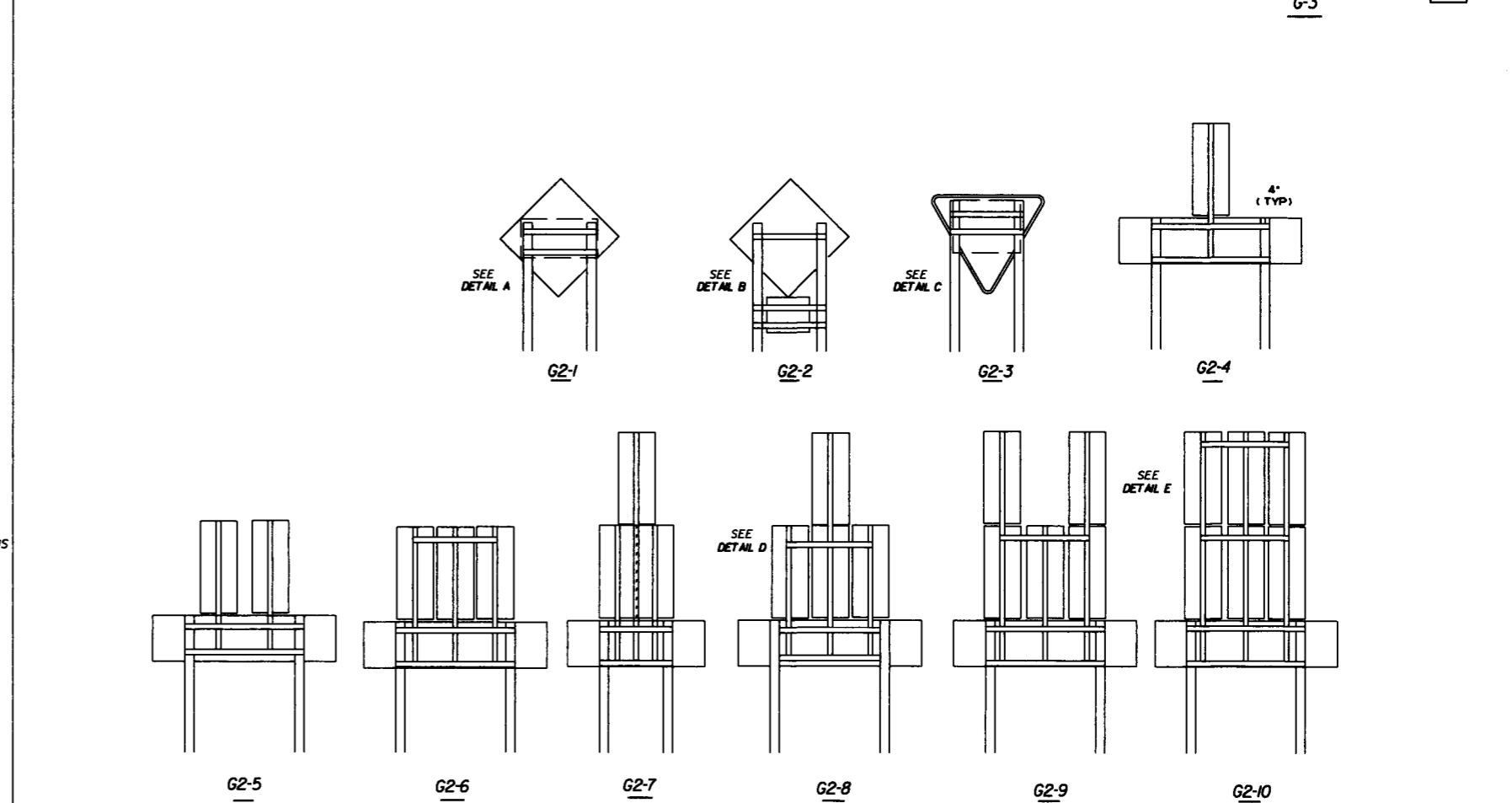
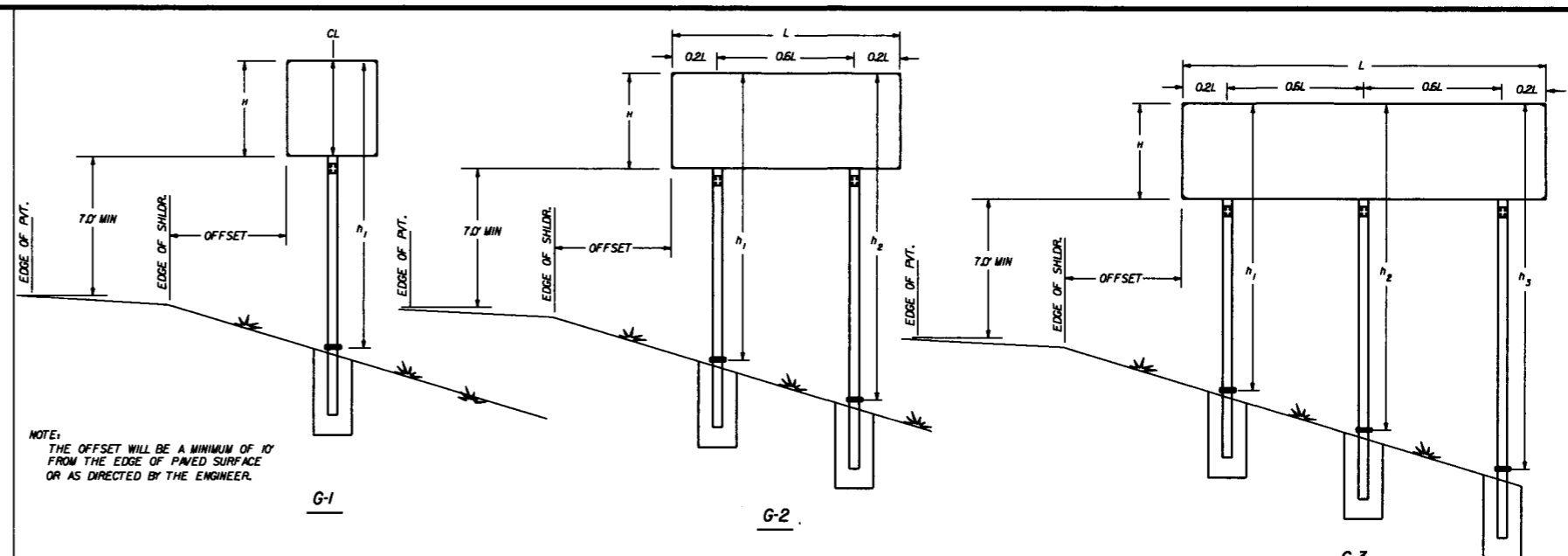
ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

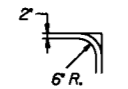
STANDARD DRAWING SHS-2



NOTE
 ALL ADDITIONAL MOUNTING HARDWARE, BOLTS, NUTS, CHANNELS AND BAR STRAPS REQUIRED TO MOUNT SECONDARY SIGNS WILL BE CONSIDERED TO BE SUPPLEMENTAL TO THE MAIN SIGN SUPPORT SPECIFIED. PAYMENT WILL BE CONSIDERED SUBSIDIARY TO THE MAIN SUPPORT.
 THE GALVANIZED STEEL CHANNEL AND BAR SUPPORTS MAY BE ASTM A-36.
 REFER TO THE P.C. RUTLEDGE FORMULA ON PAGE 58 OF THE AASHTO PUBLICATION "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."
 ALL BOLT HOLES SHALL BE 1/8" DIA. UNLESS OTHERWISE SHOWN.

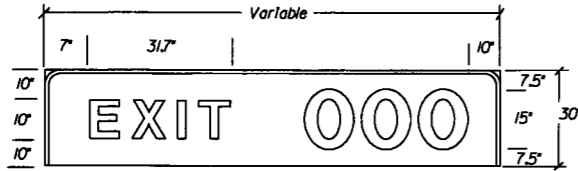


ARKANSAS STATE HIGHWAY COMMISSION		
DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS		
9-12-13 DATE	ISSUED	FILMED
	REVISION	
STANDARD DRAWING SHS-4		



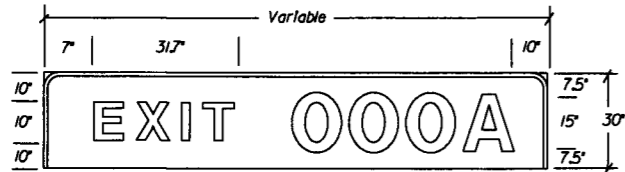
TYPICAL DETAIL

TYPE A



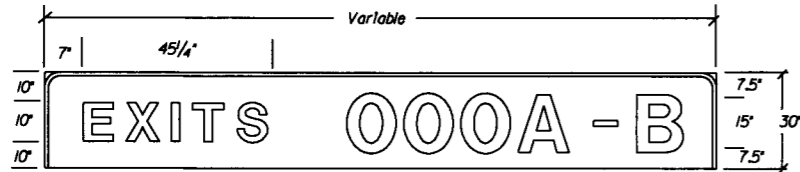
EXIT WITH 1 DIGIT 84"X30"-17.50 SF
 EXIT WITH 2 DIGITS 96"X30"-20.0 SF
 EXIT WITH 3 DIGITS 114"X30"-23.57 SF

TYPE B



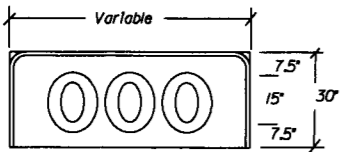
EXIT WITH 1 DIGIT PLUS 'A' OR 'B' 96"X30"-20.0 SF
 EXIT WITH 2 DIGITS PLUS 'A' OR 'B' 114"X30"-23.57 SF
 EXIT WITH 3 DIGITS PLUS 'A' OR 'B' 126"X30"-26.25 SF

TYPE C



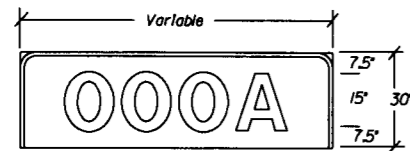
EXITS WITH 1 DIGIT PLUS 'A' & 'B' 132"X30"-27.50 SF
 EXITS WITH 2 DIGITS PLUS 'A' & 'B' 150"X30"-31.25 SF
 EXITS WITH 3 DIGITS PLUS 'A' & 'B' 168"X30"-35.00 SF

TYPE D



1 DIGIT 24"X30"-5.0 SF
 2 DIGITS 42"X30"-8.75 SF
 3 DIGITS 60"X30"-12.50 SF

TYPE E

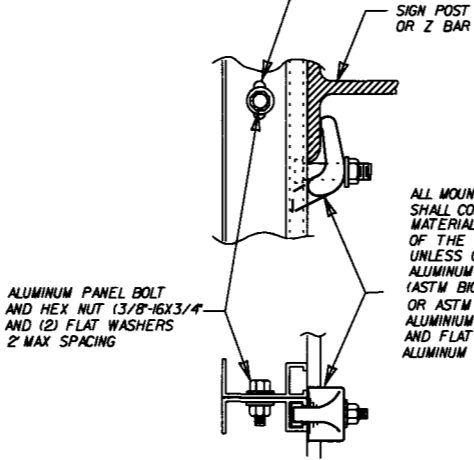


1 DIGIT PLUS 'A' OR 'B' 42"X30"-8.75 SF
 2 DIGITS PLUS 'A' OR 'B' 60"X30"-12.50 SF
 3 DIGITS PLUS 'A' OR 'B' 78"X30"-16.25 SF

EXIT PANEL DETAILS

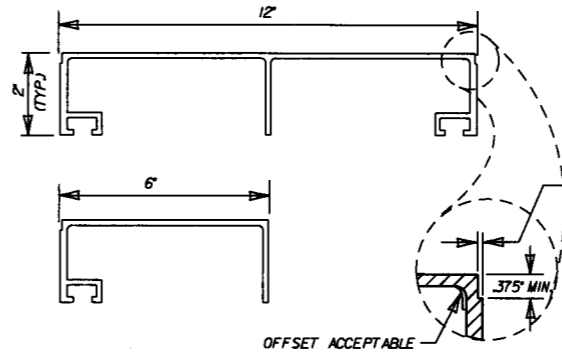
NOTE: EXIT NUMBER PANELS SHALL HAVE WHITE LEGENDS AND BORDERS. THE BACKGROUND COLOR WILL BE AS USE SPECIFIES. SHEETING TYPE WILL BE THE SAME AS THE GUIDE SIGN WHICH THE EXIT PANEL IS ATTACHED OR AS SPECIFIED IN THE PLANS. PAYMENT FOR ALL POST CLIPS, BOLTS, AND ANGLES SHALL BE SUBSIDIARY TO THE ITEM 'EXIT NUMBER PANEL'.

SLOTTED HOLES (7/16" X 7/8")
 DRILLED OR PUNCHED @ 12" O.C.
 BEGINNING 6" FROM ONE END



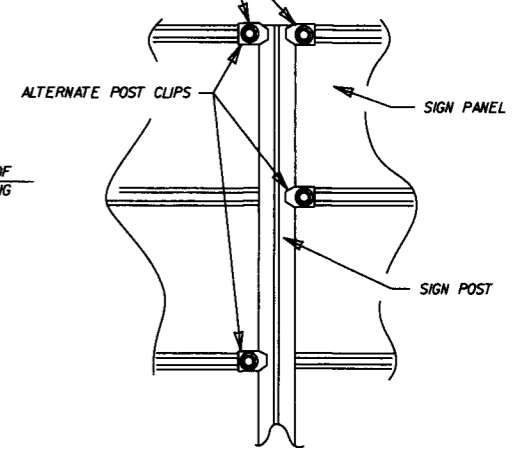
ALL MOUNTING HARDWARE SHALL COMPLY WITH THE MATERIALS SECTION OF 724 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
 ALUMINUM POST CLIP (ASTM B108 ALLOY 356-T6) OR ASTM B26 ALLOY 356-T6
 ALUMINUM POST CLIP BOLT AND FLAT WASHER (3/8"-16X1 1/4")
 ALUMINUM STOP NUT

ALUMINUM PANEL BOLT AND HEX NUT (3/8"-16X3/4") AND (2) FLAT WASHERS 2" MAX SPACING

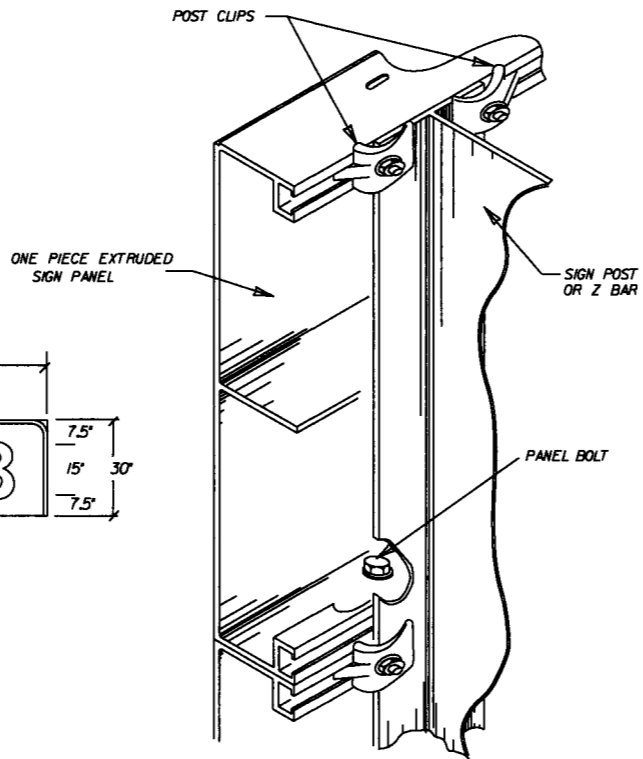


ONE PIECE EXTRUDED SIGN PANELS

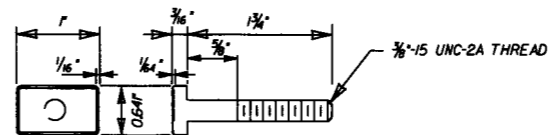
USE DOUBLE POST CLIPS AT TOP AND BOTTOM OF SIGN



POST CLIP PLACEMENT

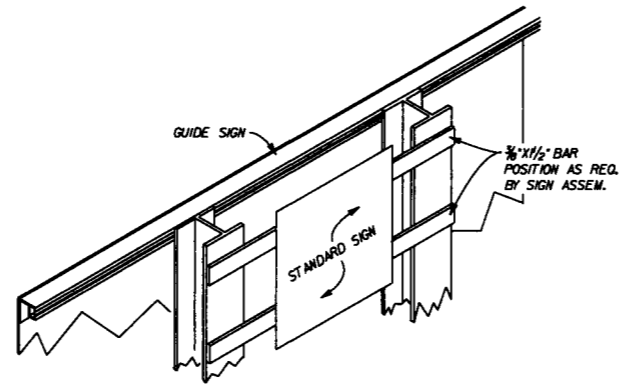
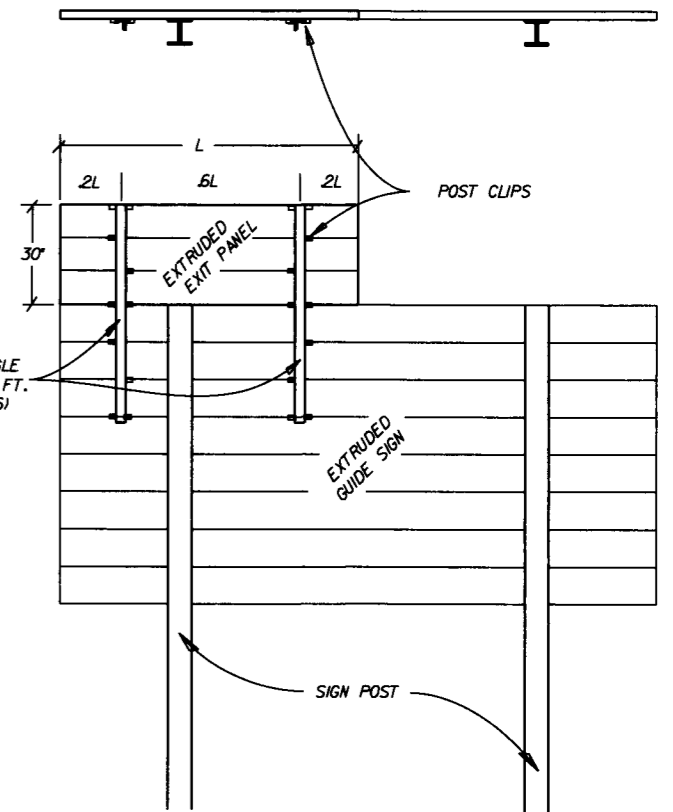


MOUNTING HARDWARE



POST CLIP BOLT

2 1/2" X 2 1/2" X 1/4" ANGLE 5'-8" LONG 1.4" PER FT. (ALUM. ALLOY 6061-T6)

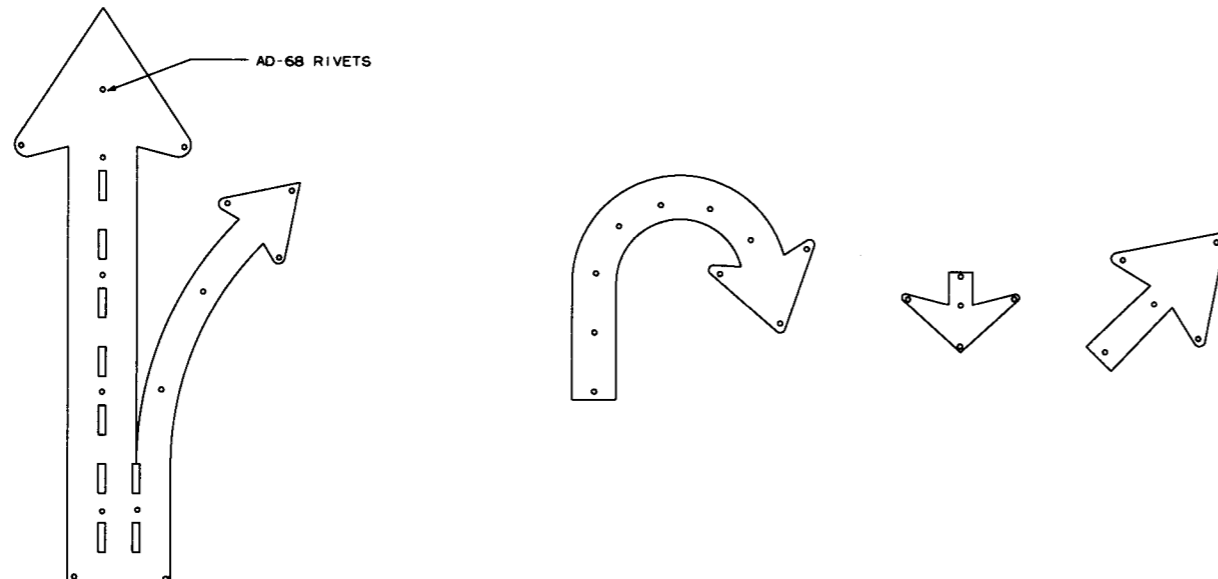
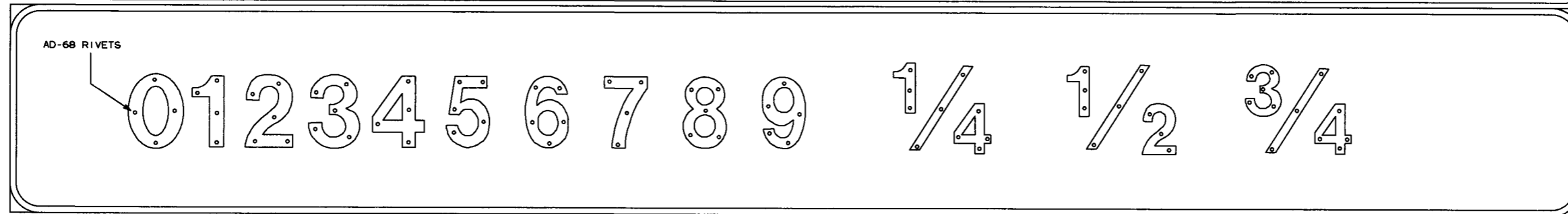
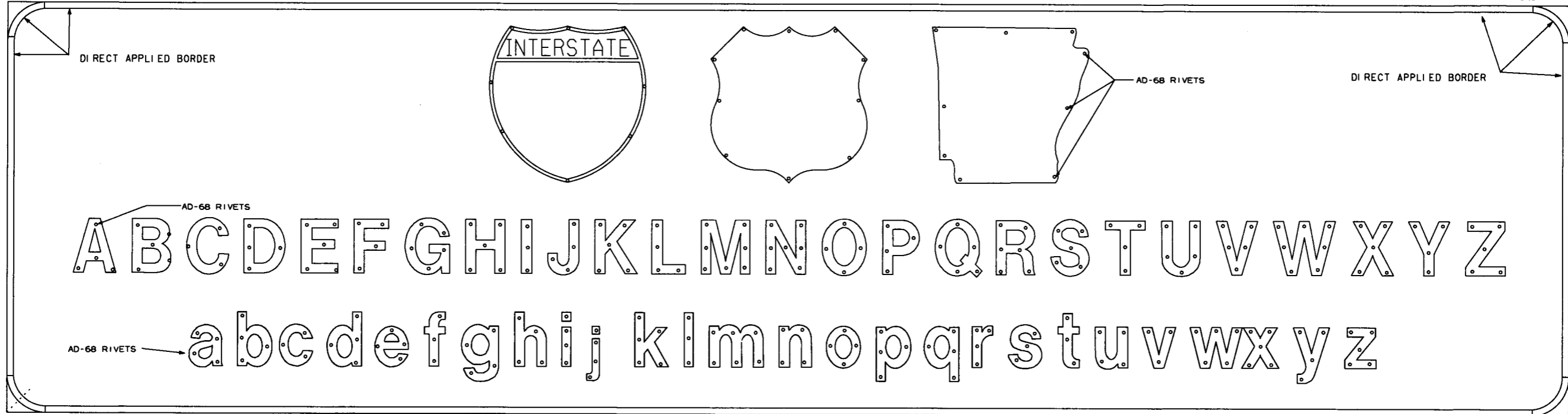


SECONDARY SIGN INSTALLATION ON BACKSIDE OF GUIDE SIGN

ARKANSAS STATE HIGHWAY COMMISSION			
DETAILS OF GUIDE SIGN PANELS			
STANDARD DRAWING SHS-5			
9-12-13	ISSUED	REVISION	FILMED
DATE			

THE CONTRACTOR SHALL DRILL AND POP-RIVET LEGEND, SHIELDS, ARROWS, OR OTHER COPY AS SHOWN.

MOUNTING DETAILS FOR DEMOUNTABLE
LEGEND ON GUIDE SIGNS



NOTES:

LEGEND ON GUIDE SIGNS ON THE MAIN LANES SHALL BE DEMOUNTABLE LEGEND. LEGEND ON GUIDE SIGNS ON CROSS ROADS AND RAMPS SHALL BE DIRECT APPLIED. THE DEMOUNTABLE AND DIRECT APPLIED LEGENDS SHALL BE TYPE IX SHEETING.

THE BACKGROUND ON ALL GUIDE SIGNS AND STANDARD SIGNS SHALL BE CONSTRUCTED USING TYPE III SHEETING.

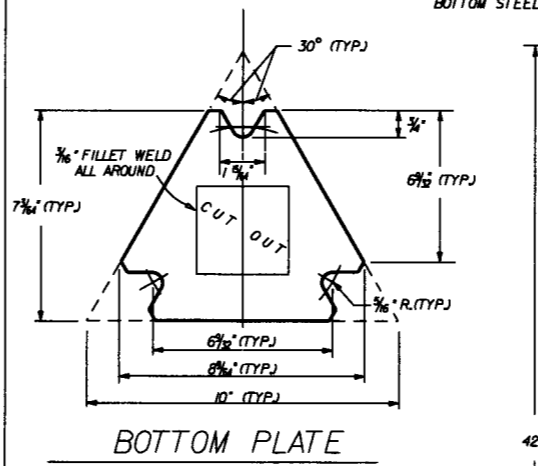
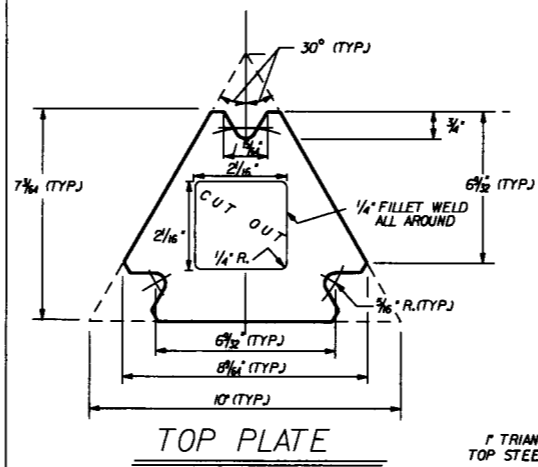
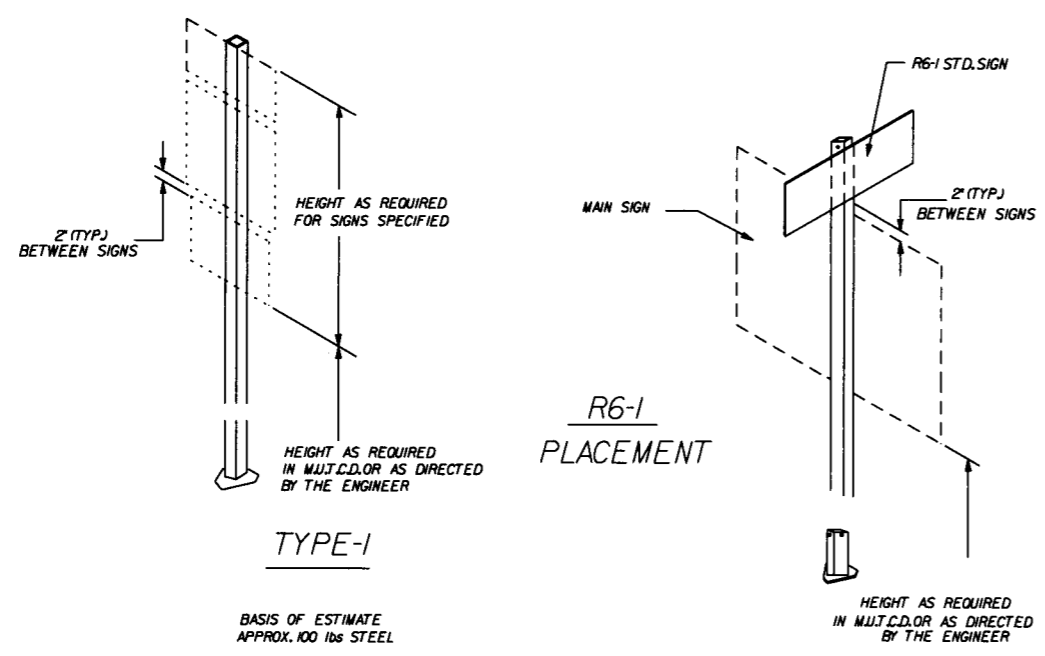
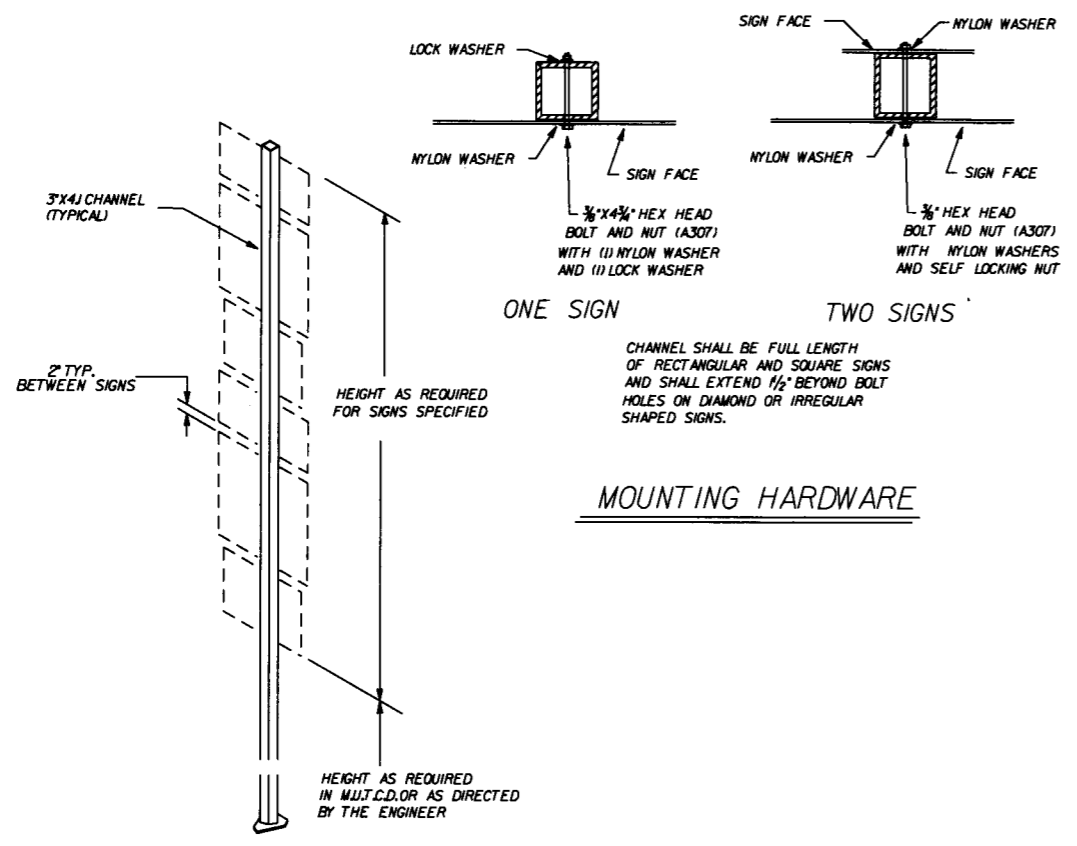
TYPE IX SHEETING FOR BORDER, LEGEND, SHIELDS, ARROWS, OR OTHER COPY SHALL BE ORIENTED VERTICALLY AS PER MANUFACTURERS' DATUM MARKS, ORIENTATION MARKS, OR OTHER RECOMMENDATIONS.

SIGN LEGEND, SHIELDS, ARROWS OR OTHER COPY SHALL BE APPLIED WITH RIVETS ONLY.

NO OTHER METHOD OF APPLYING CHARACTERS IS ALLOWED.

ARKANSAS STATE HIGHWAY COMMISSION			
MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS			
9-12-13	ISSUED	REVISION	FILMED
DATE			

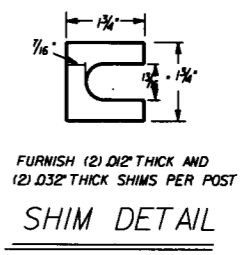
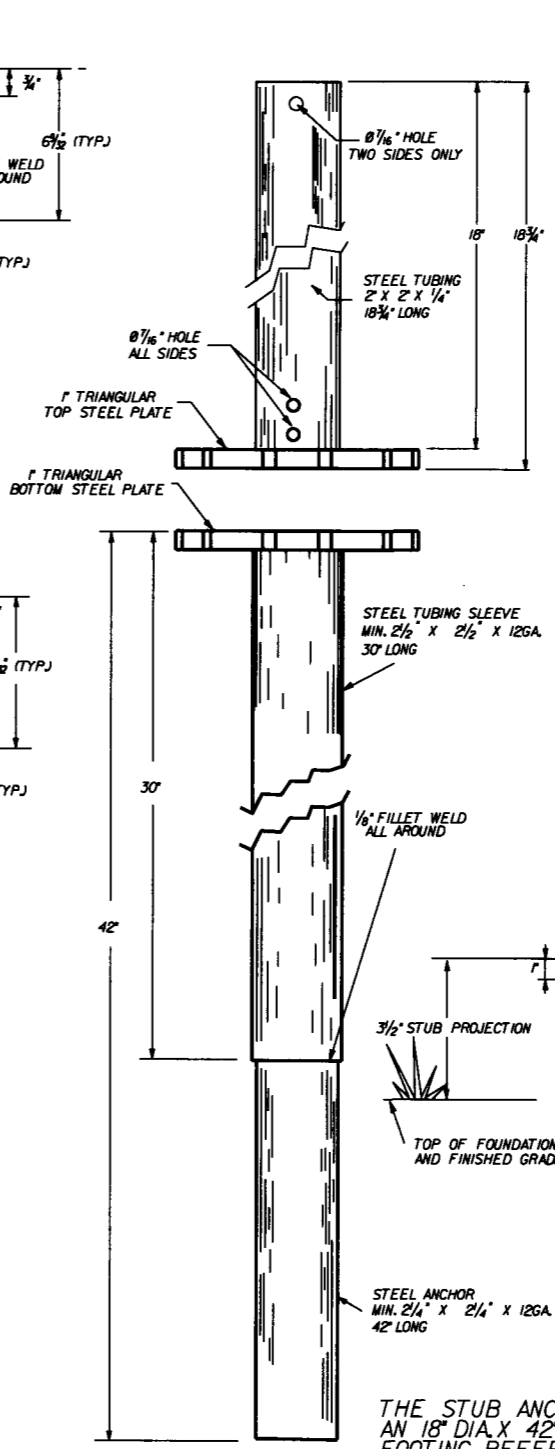
STANDARD DRAWING SHS-6



GENERAL NOTES:
THE TOP PLATE OF TRIANGULAR SLIP BASES SHALL HAVE THE SAME EXTERIOR DIMENSIONS AS THE BOTTOM PLATE.

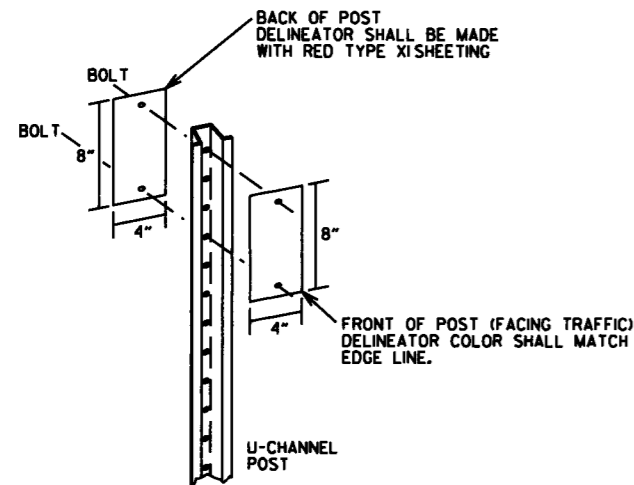
INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS SHOWN. THE BEVEL END SHALL BE TANGENT TO THE BOLT HOLE. ANY MISALIGNMENT SHALL BE REMOVED BY GRINDING. FACE OF BEVEL SHALL BE FINISHED TO A MINIMUM SMOOTHNESS OF 1-500.

OTHER WASH COMPLIANT BREAKAWAY SIGN SUPPORTS THAT HAVE THE SAME TOP PLATE DIMENSIONS AND SUPPORT 2 1/2" X 2 1/4" SQUARE TUBE SIGN POSTS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

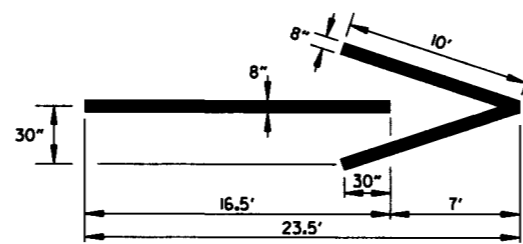


THE STUB ANCHOR SHALL BE SET IN AN 18" DIA. X 42" DEEP CONCRETE FOOTING. REFER TO STD. DRWG. SHS-3 FOR THE FOOTING DETAILS.

ARKANSAS STATE HIGHWAY COMMISSION			
DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS			
STANDARD DRAWING SHS-7			
9-12-13	ISSUED	REVISION	FILMED
DATE			

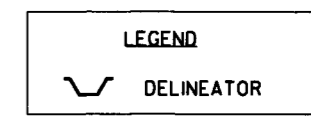


TYPE 2 DELINEATOR DETAILS

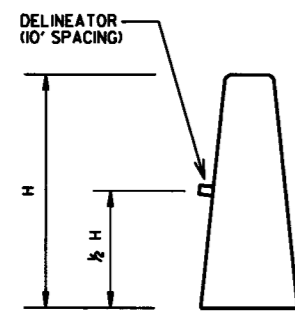


THERMOPLASTIC WRONG-WAY PAVEMENT ARROWS

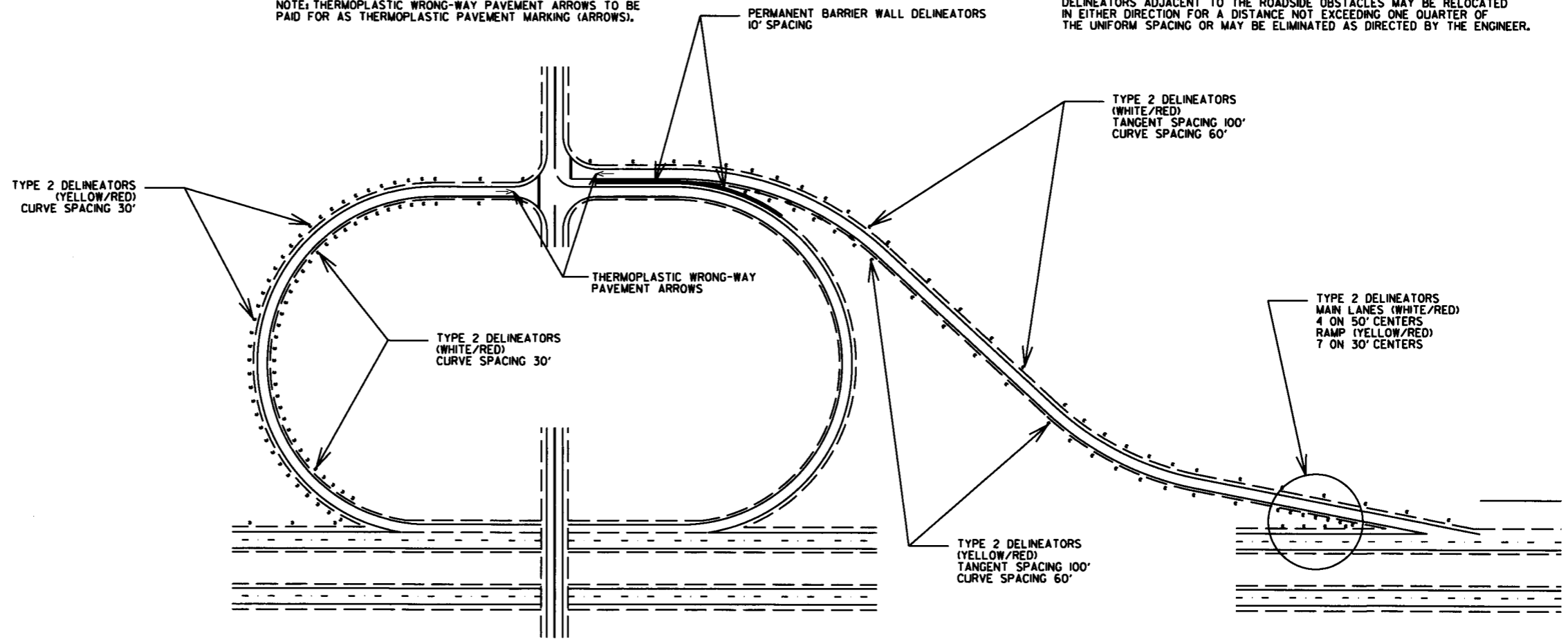
NOTE: THERMOPLASTIC WRONG-WAY PAVEMENT ARROWS TO BE PAID FOR AS THERMOPLASTIC PAVEMENT MARKING (ARROWS).



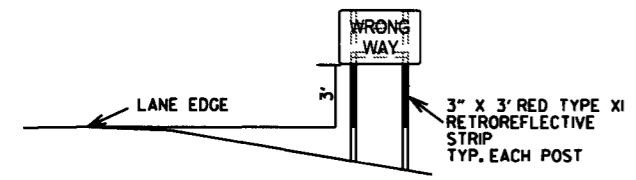
NOTE: WHEN UNIFORM SPACING IS INTERRUPTED BY ROADSIDE OBSTACLES, DELINEATORS ADJACENT TO THE ROADSIDE OBSTACLES MAY BE RELOCATED IN EITHER DIRECTION FOR A DISTANCE NOT EXCEEDING ONE QUARTER OF THE UNIFORM SPACING OR MAY BE ELIMINATED AS DIRECTED BY THE ENGINEER.



PERMANENT BARRIER WALL DELINEATOR DETAIL

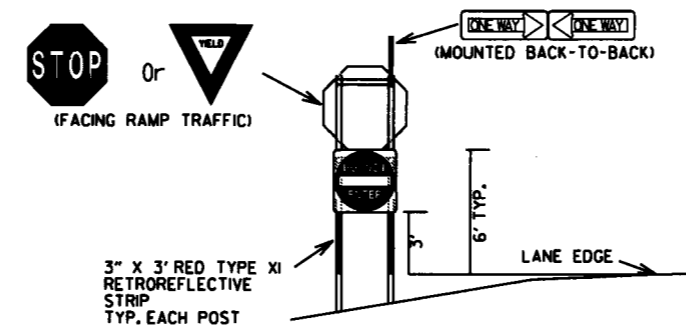


TYPICAL EXIT RAMP DELINEATOR PLACEMENT



WRONG-WAY SIGN ASSEMBLY DETAILS

NOTES
 1. WRONG-WAY SIGNS MAY BE MOUNTED ON THE BACK SIDE OF EXISTING SIGN SUPPORTS WHERE POSSIBLE.
 2. WRONG-WAY SIGNS ARE NORMALLY GATED, BUT MAY BE OFFSET WHEN BARRIER WALLS ARE PRESENT ON THE INSIDE SHOULDER. IN SUCH CASES, THE SIGN ON THE INSIDE SHOULDER SIDE MAY BE LOCATED PAST THE END OF THE BARRIER WALL. IN RARE CASES WHERE THE BARRIER WALL EXTENDS TO OR NEAR THE MAIN LANES, BOTH SIGNS MAY BE LOCATED ON THE OUTSIDE SHOULDER SIDE OF THE RAMP, WITH APPROXIMATELY 300' SPACING BETWEEN THE SIGNS.



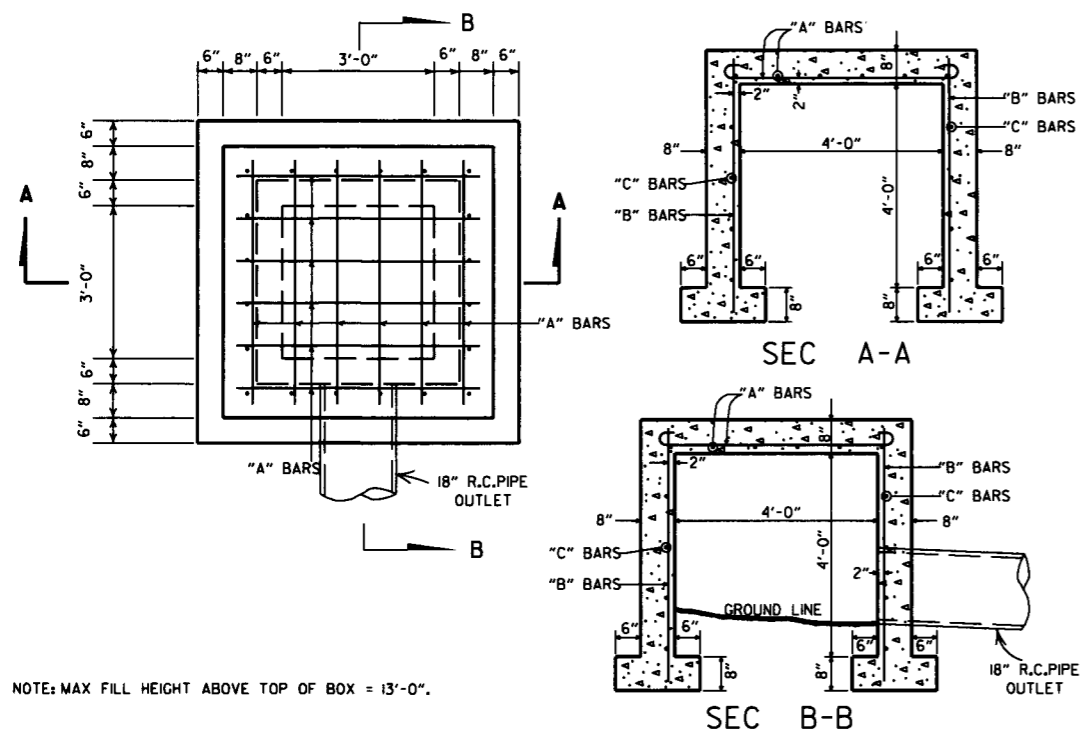
RAMP INTERSECTION SIGN ASSEMBLY DETAILS

THE DELINEATORS SHALL BE PLACED AT A 4' HEIGHT MEASURED FROM THE PAVEMENT EDGE TO THE BOTTOM OF THE DELINEATOR. DELINEATOR POSTS SHALL BE PLACED 2 TO 8 FT. OUTSIDE THE OUTER EDGE OF THE SHOULDER, OR IF APPROPRIATE, IN LINE WITH THE ROADSIDE BARRIER THAT IS 8 FT. OR LESS OUTSIDE THE OUTER EDGE OF THE SHOULDER.

DELINEATOR SPACING IN CURVES SHALL BE REDUCED TO 30' WHEN THE RAMP ADVISORY SPEED IS 30 MPH OR LESS.

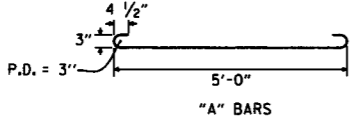
IF MULTIPLE LANES EXIST AT THE RAMP TERMINAL, THE THERMOPLASTIC WRONG-WAY ARROW SHALL BE PLACED AS CLOSE TO THE RAMP TERMINAL TURNOUT AS POSSIBLE.

		ARKANSAS STATE HIGHWAY COMMISSION	
		TYPICAL EXIT RAMP SIGN AND DELINEATOR DETAILS	
		STANDARD DRAWING SHS-8	
11-16-17	ADDED NOTES		
06-01-17	RE-DRAWN		
09-12-13	ISSUED AS STANDARD DRAWING		
DATE	REVISION		FILED



NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

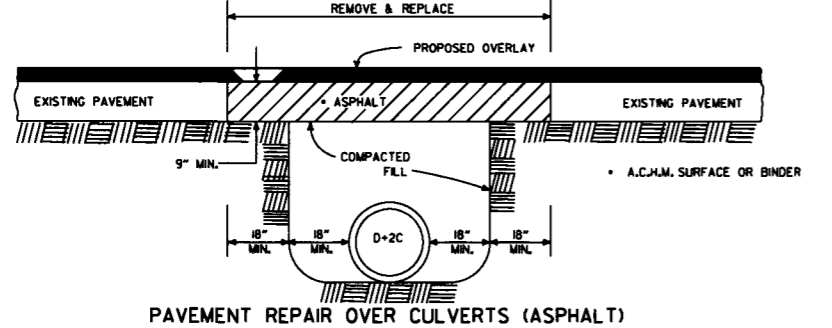
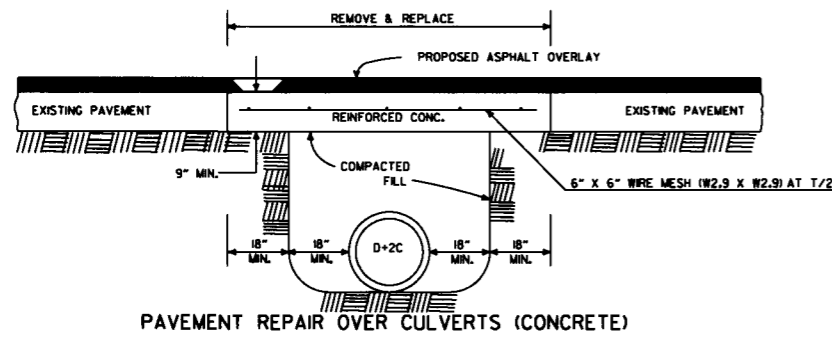
STEEL SCHEDULE			
BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"



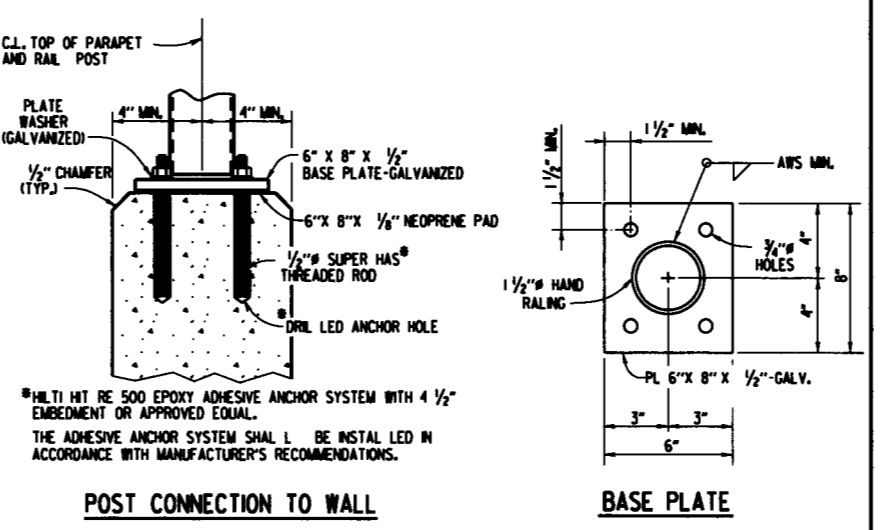
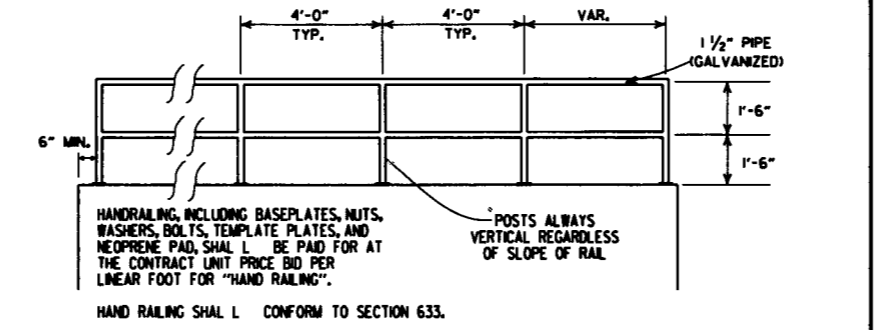
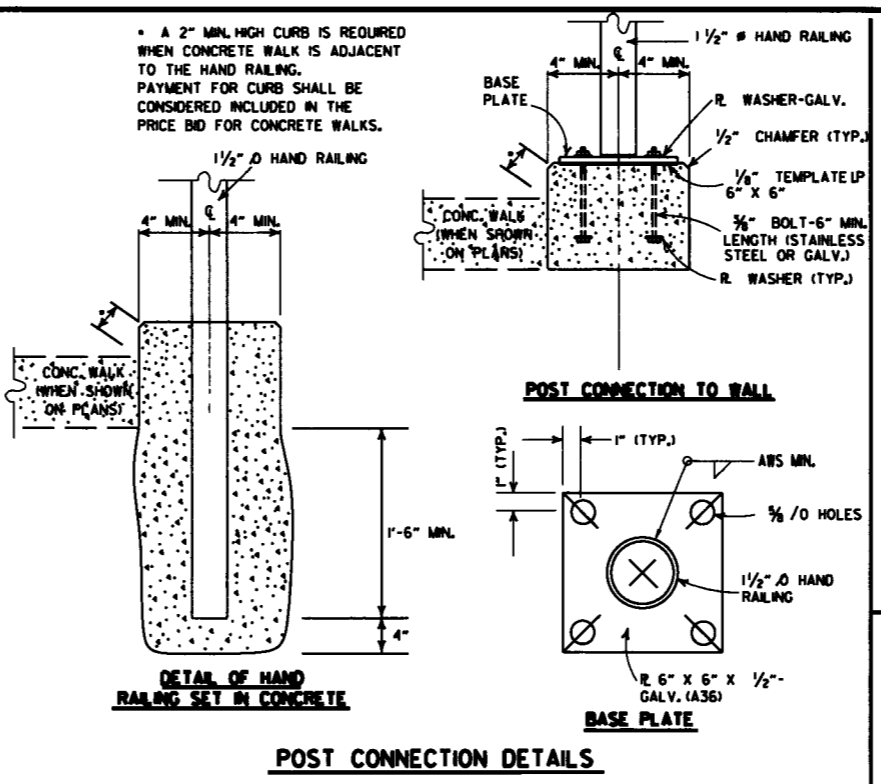
QUANTITIES
CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

GENERAL NOTE:
THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

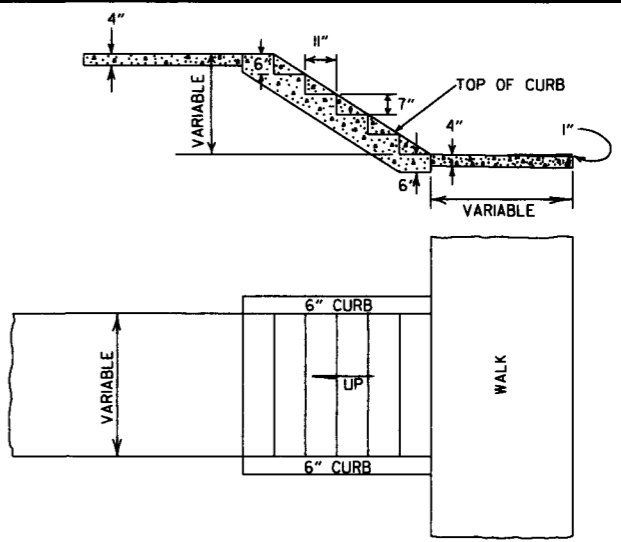
REINFORCED CONCRETE SPRING BOX



DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS



DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)



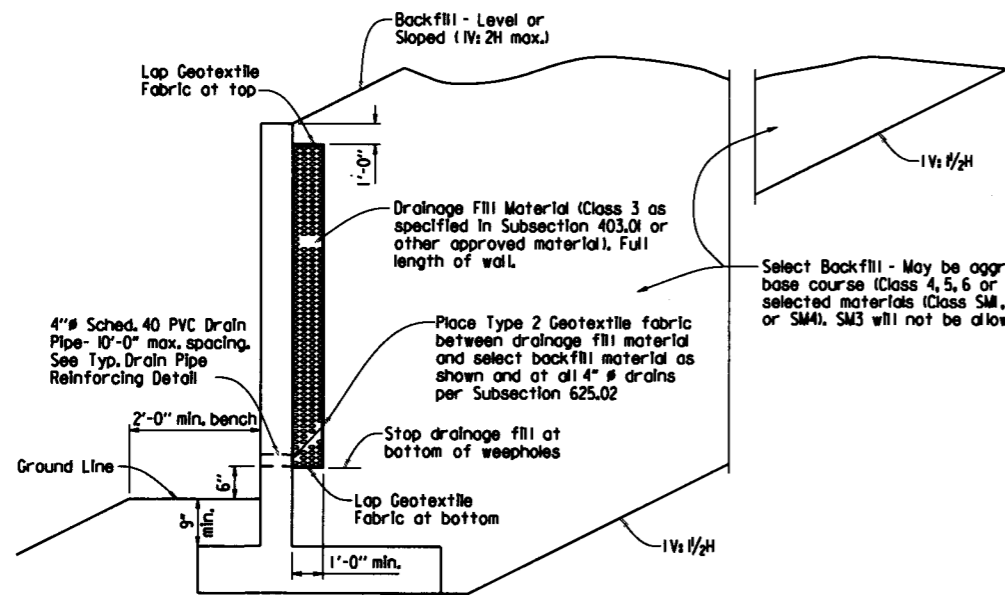
DETAILS OF CONCRETE STEPS & WALKS

GENERAL NOTES
1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DATE	REVISION	DATE FILMED
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC. SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	10-1-92
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	8-15-91
8-15-91	DELETED HDWL MODIFICATION DETAIL	11-8-90
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-30-89
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	665-11-17-88
11-17-88	V. BARS BEHIND ARROW	649-7-15-88
7-15-88	REV. PAVEMENT REPAIR	
11-1-84	ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	510-11-1-84
1-4-83	REV. TRENCH FOR PIPE UNDERDRAIN	682-1-4-83
3-2-81	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	721-3-2-81
4-20-79	SPELLING OF "UNDERDRAIN"	674-4-20-79
2-2-76	REV. UNDERDRAIN DET. & PAVEMENT REPAIR	919-2-2-76
4-10-75	12" MIN. GRAN. MAT'L. OVER PIPE	568-4-10-75-853
5-22-74	REV. SPECS. FOR GRAN. MAT'L.	567-5-22-74-740
10-2-72	GRANULAR MAT'L. TO BE SB-3	564-10-16-72
	REVISED AND REDRAWN	

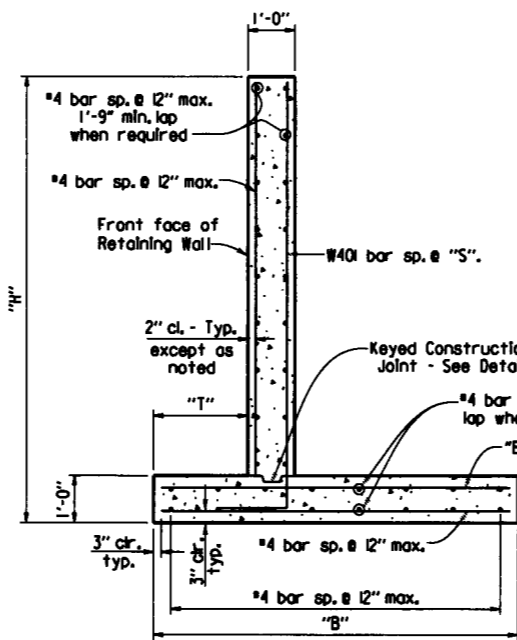
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS



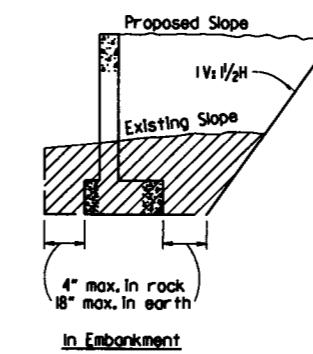
TYPICAL DRAINAGE & BACKFILL DETAILS

N.T.S.

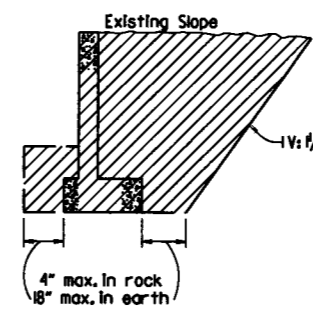


TYPICAL SECTION

N.T.S.



In Embankment

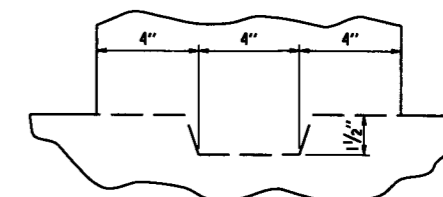


In Excavation

NOTE: Hatched area denotes maximum limits of pay excavation.

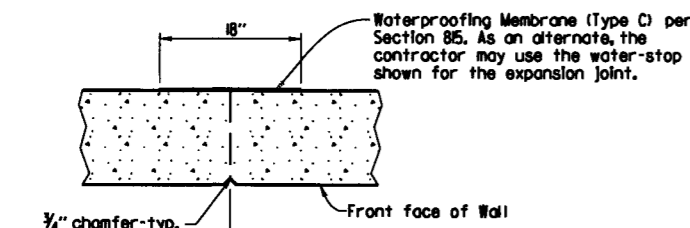
DETAILS OF EXCAVATION

N.T.S.



KEYED CONSTRUCTION JOINT DETAIL

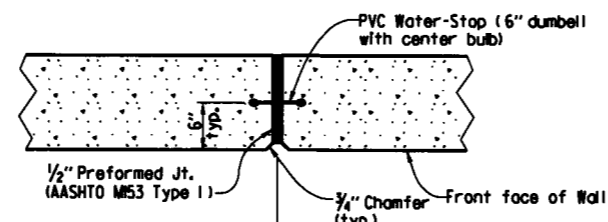
N.T.S.



TYPICAL CONTRACTION JOINT DETAIL

N.T.S.

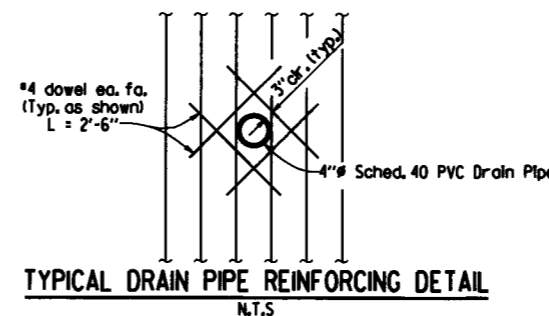
Note: 20'-0" Max. Spacing between Contraction Joints. Horizontal reinforcement shall be continuous through Contraction joints.



TYPICAL EXPANSION JOINT DETAIL

N.T.S.

Note: 60'-0" Max. Spacing between Expansion Joints. Horizontal reinforcing shall stop 2\"/>



TYPICAL DRAIN PIPE REINFORCING DETAIL

N.T.S.

SEISMIC ZONE: These walls have been designed for the following site adjusted peak ground accelerations (A_g):
 Level Backfill - $A_g \leq .40g$
 Sloped Backfill (1V:2H max.) - $A_g \leq .30g$

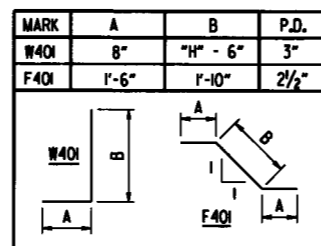
TABLE OF RETAINING WALL VARIABLES (LEVEL BACKFILL)

"H"	"T"	"B"	"S"	"Bar A" Size & Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-0"	12"	#4 @ 12"
6'-0"	9"	4'-6"	12"	#4 @ 12"
7'-0"	9"	5'-6"	12"	#4 @ 10"
8'-0"	9"	6'-0"	12"	#5 @ 10"
9'-0"	1'-0"	7'-0"	12"	#5 @ 6 1/2"

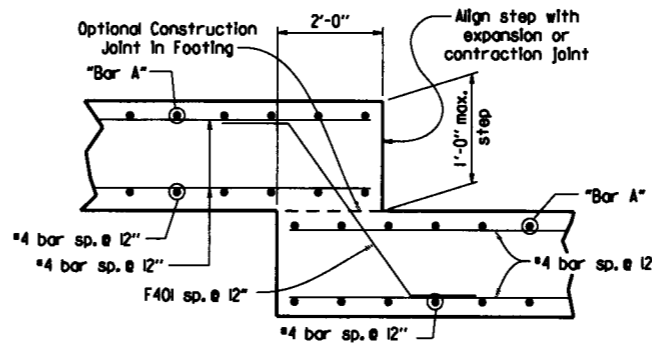
TABLE OF RETAINING WALL VARIABLES (SLOPED BACKFILL) (1V:2H MAX.)

"H"	"T"	"B"	"S"	"Bar A" Size & Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-6"	12"	#4 @ 12"
6'-0"	9"	5'-6"	12"	#4 @ 6"
7'-0"	9"	6'-6"	12"	#5 @ 6 1/2"
8'-0"	1'-6"	8'-0"	7 1/2"	#6 @ 6"
9'-0"	1'-11"	9'-6"	5"	#8 @ 6"

BENDING DIAGRAMS



Dimensions are out to out of bars.



FOOTING STEP DETAIL

N.T.S.


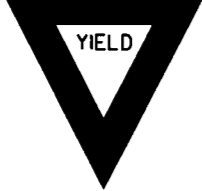




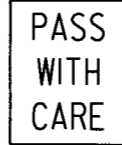


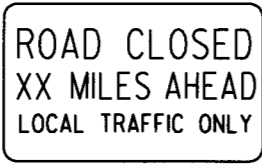
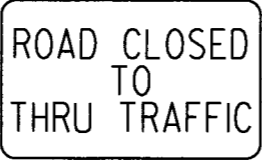









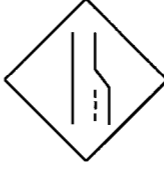


















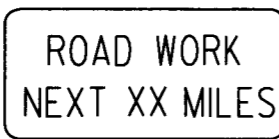
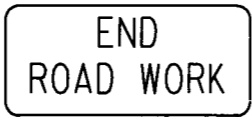
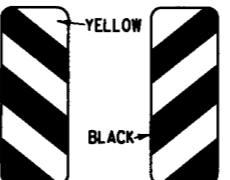


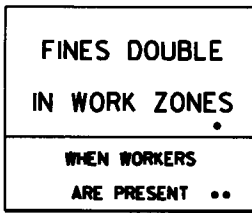
DATE	REVISION	DATE FILMED
5-12-16	REVISED SLOPES FOR SELECT BACKFILL	
2-27-14	REVISED GENERAL NOTES	
7-26-12	DRAWING ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE
 RETAINING WALL
 (WITHOUT LIVE LOAD SURCHARGE)

STANDARD DRAWING SI - 2



<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>W21-5a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>500 FEET 24" W20-7b</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>

ADVANCE DISTANCES
(XXXX)

500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

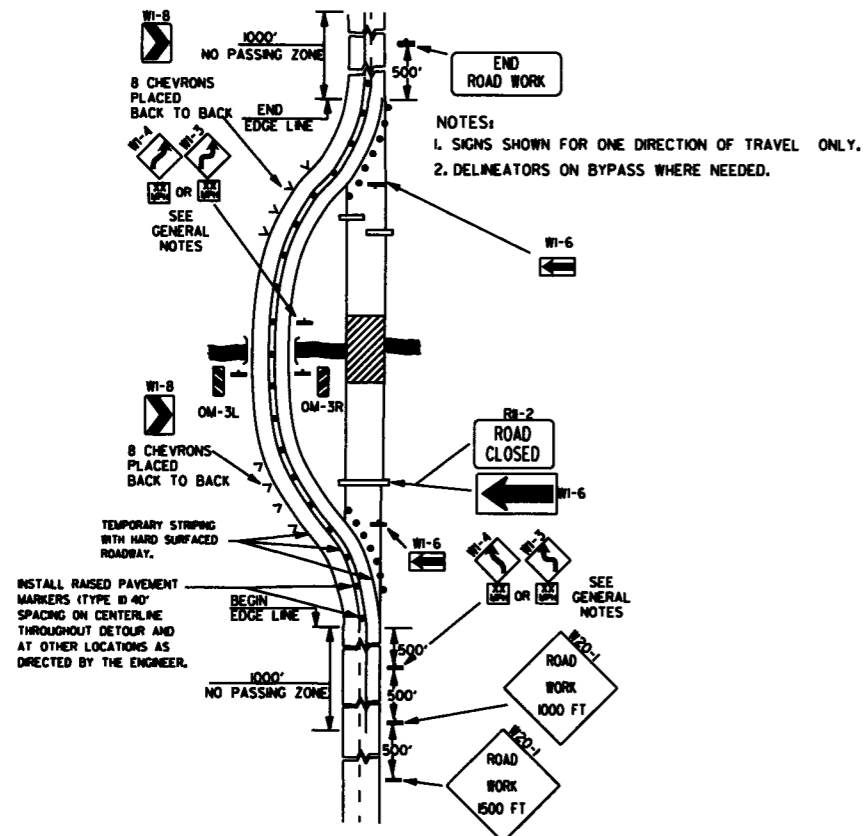
GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACTED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SO. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

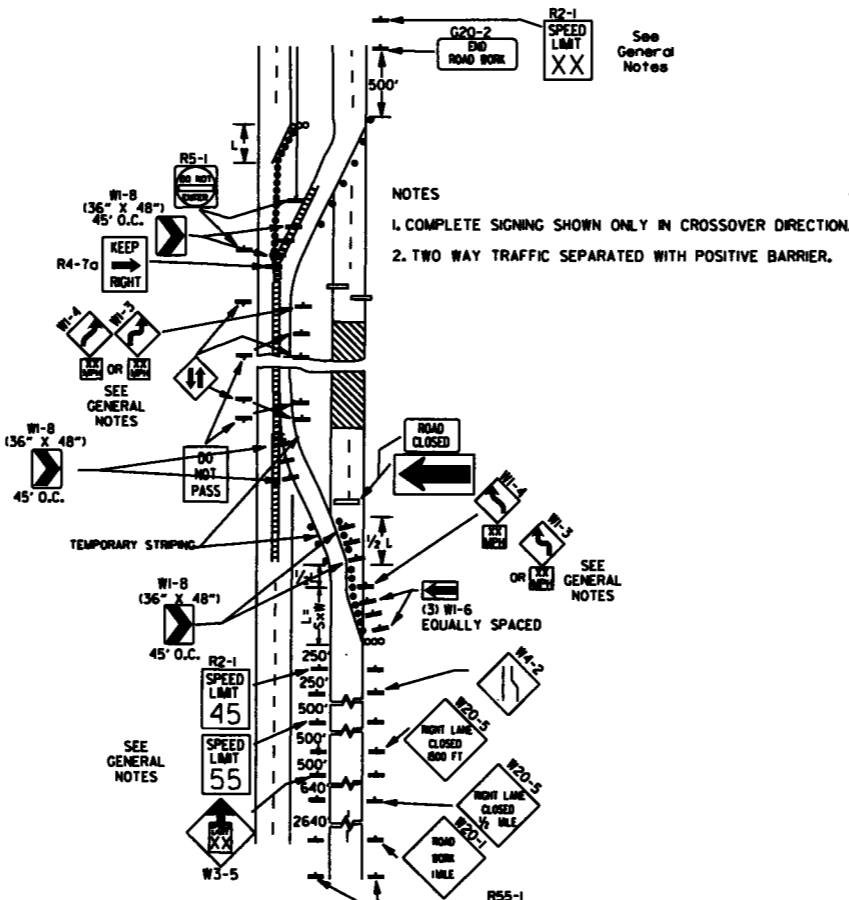
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-1	REVISED W24-1	
1-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
1-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
	DATE	REVISION

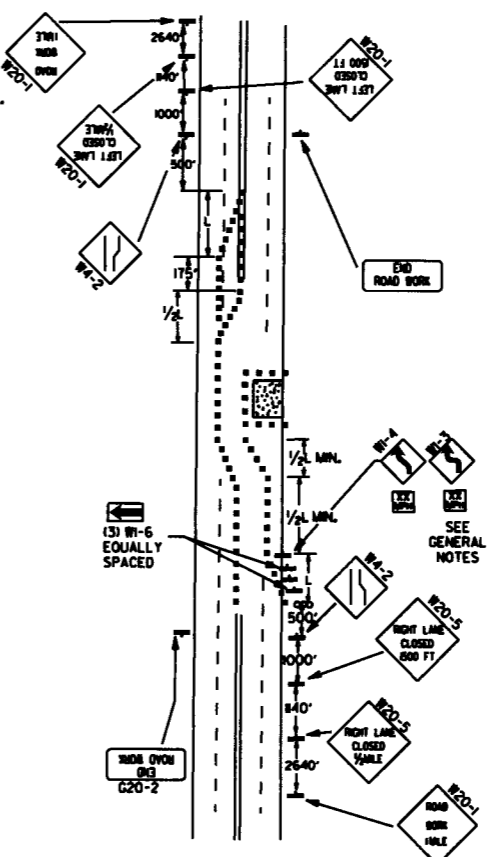
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



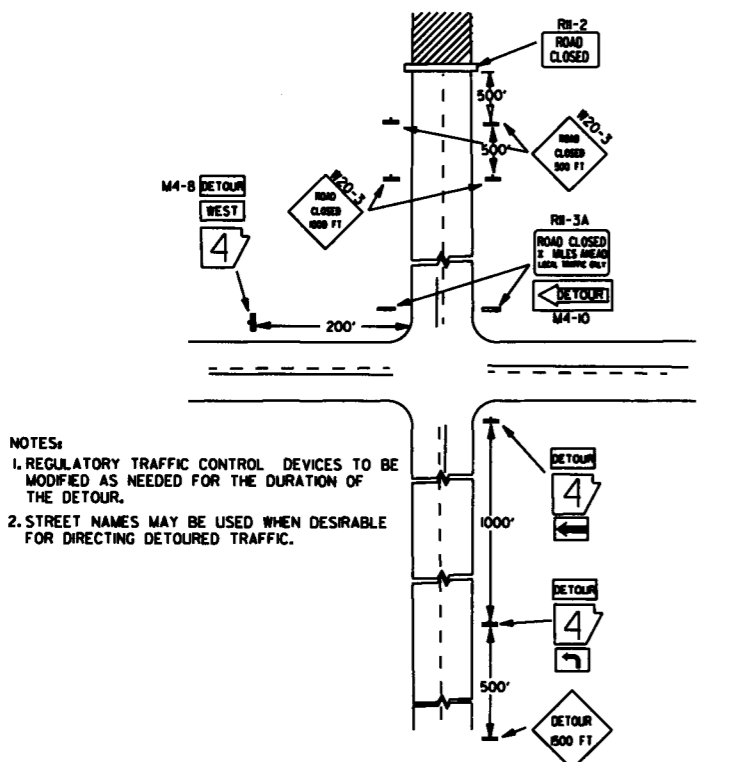
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



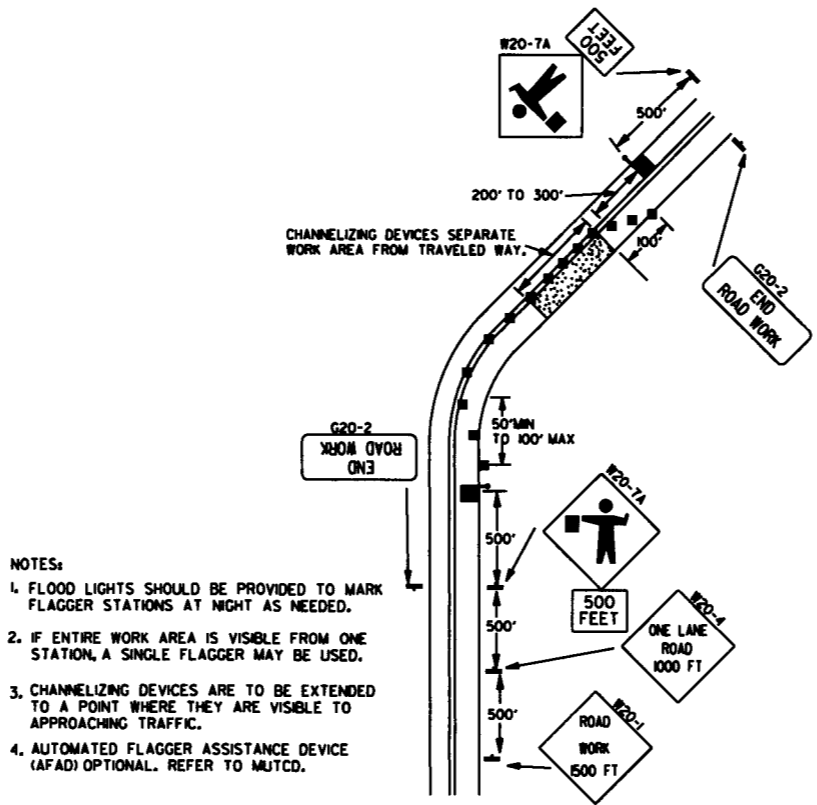
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



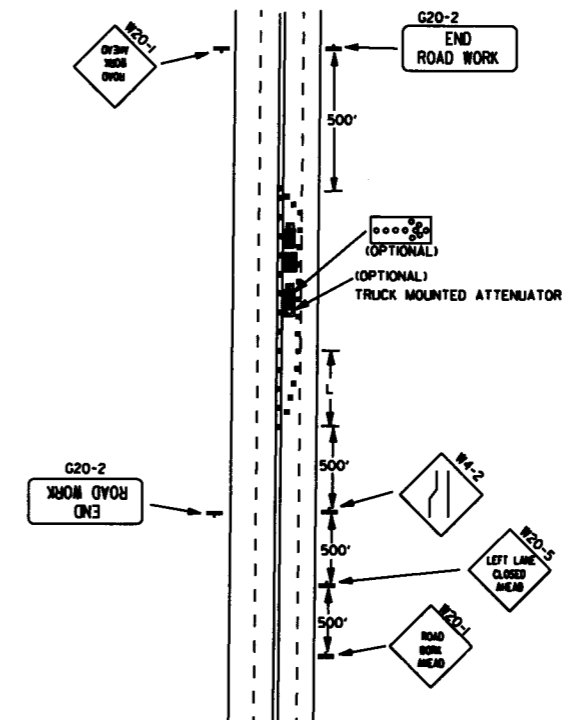
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.

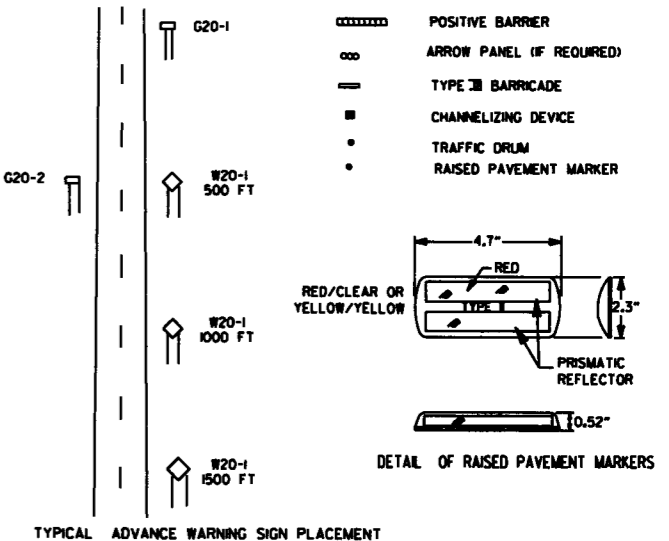


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

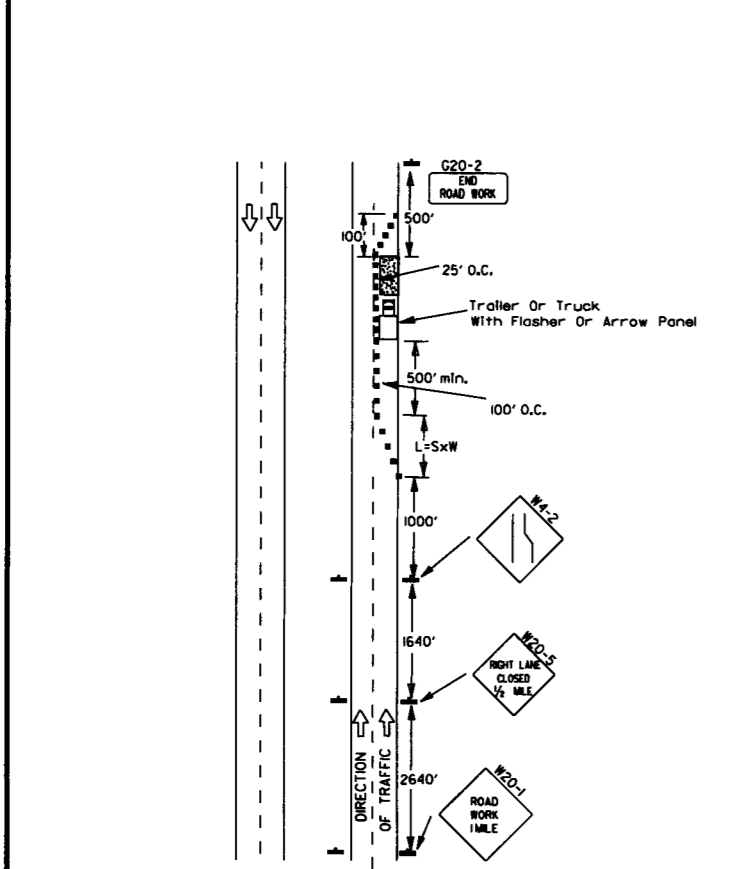
- KEY:
- FLAGGER
 - POSITIVE BARRIER
 - ARROW PANEL (IF REQUIRED)
 - TYPE III BARRICADE
 - CHANNELIZING DEVICE
 - TRAFFIC DRUM
 - RAISED PAVEMENT MARKER



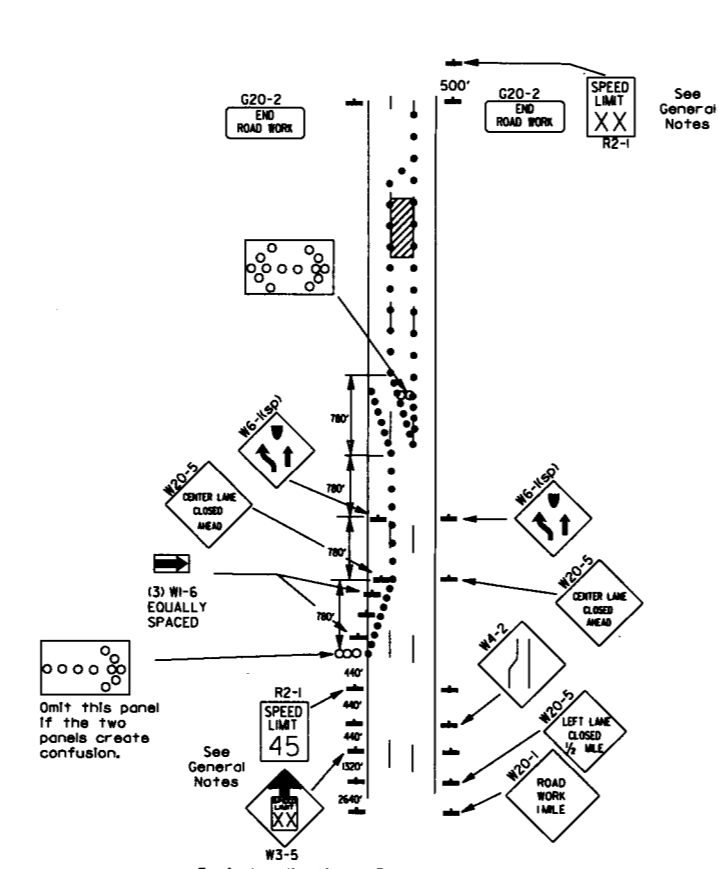
TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W = WIDTH OF OFFSET.

- GENERAL NOTES:
1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(K5) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45MPH) SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-KXX SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-K(45) SHALL BE OMITTED. ADDITIONAL R2-1(55MPH) SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-KXX SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
 8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

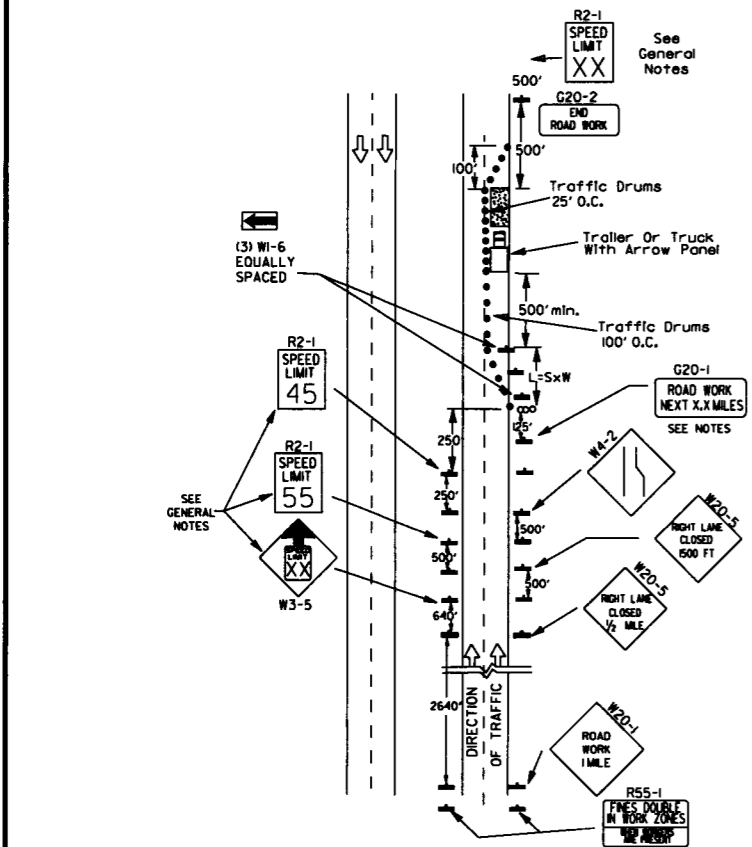
DATE	REVISION	FILED
9-2-85	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-83	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-80	ADDED (AFAD)	
8-20-08	REVISED SIGN DESIGNATIONS	
1-8-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	



(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.



(B) Typical application - 3-lane oneway roadway where center lane is closed.



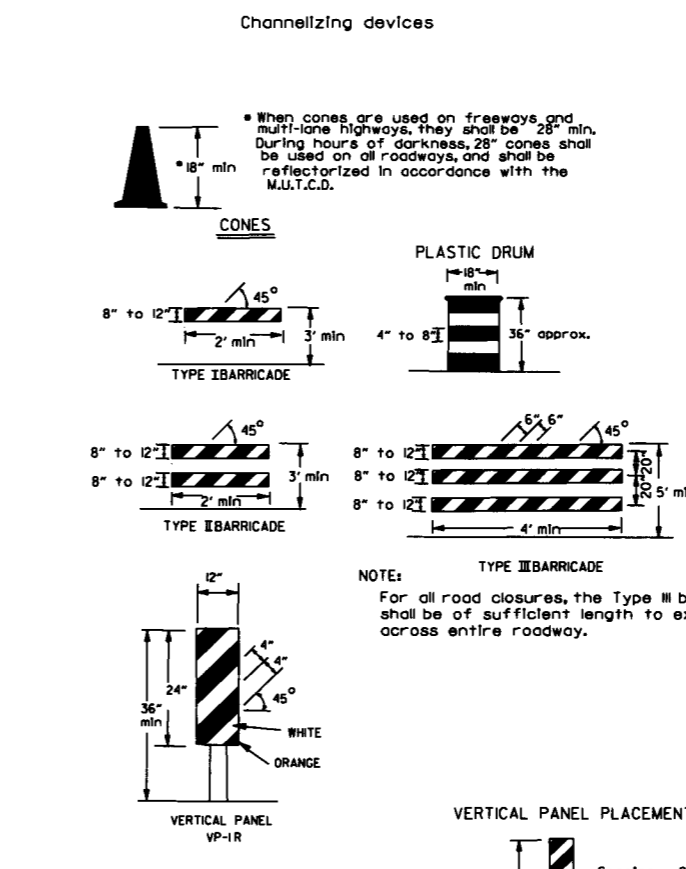
(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.

KEY:

- Arrow Panel (if Required)
- Channelizing Device
- Traffic drum

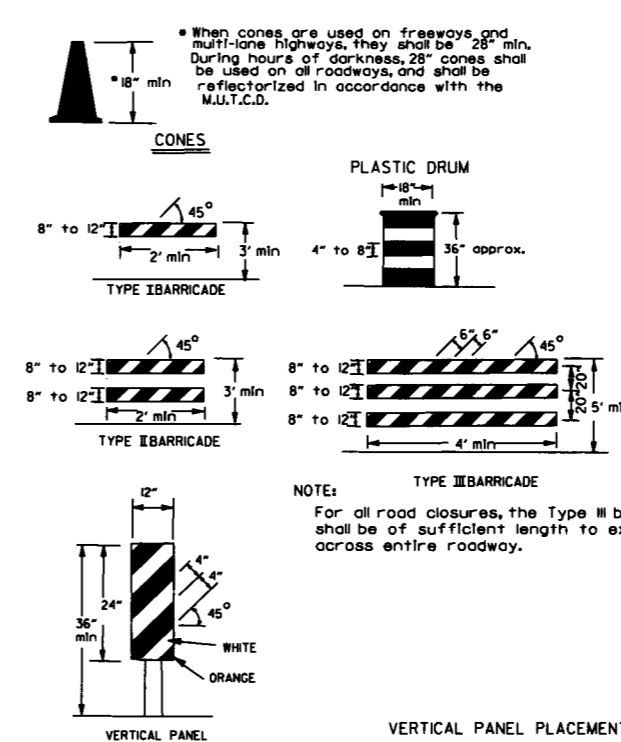
GENERAL NOTES:

- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
- When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1(45) speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
- When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-1(55) speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
- The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
- Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
- Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
- The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1(1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
- Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
- All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
- Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



(D) Typical application - closing multiple lanes of a multilane highway.

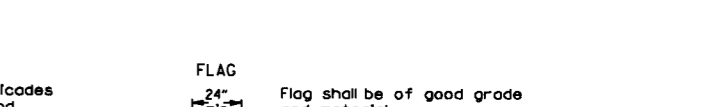
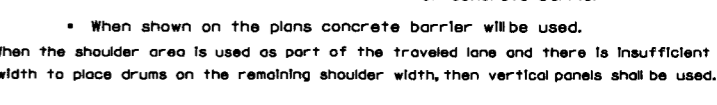
Channelizing devices



TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

* When shown on the plans concrete barrier will be used.
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

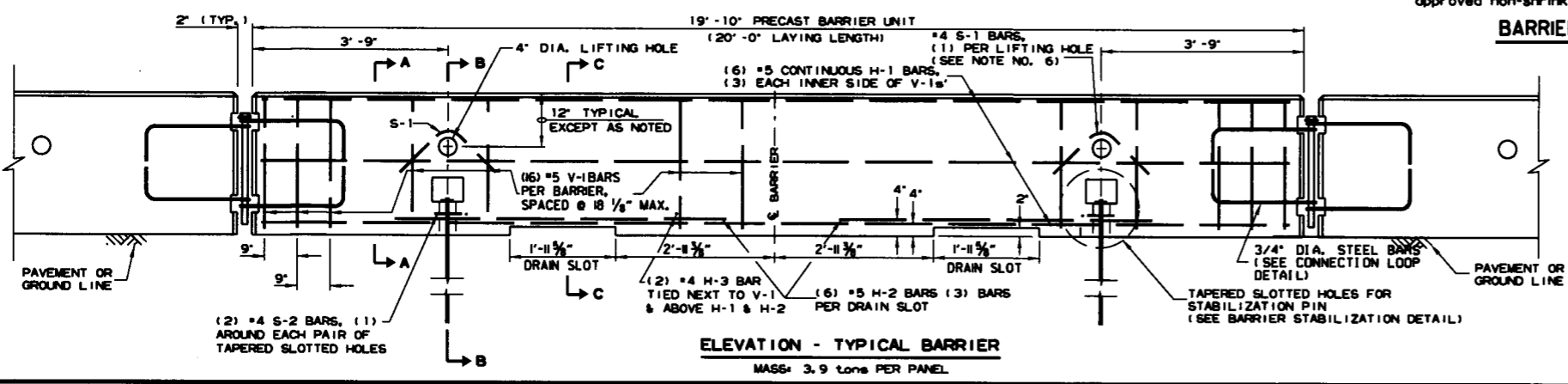
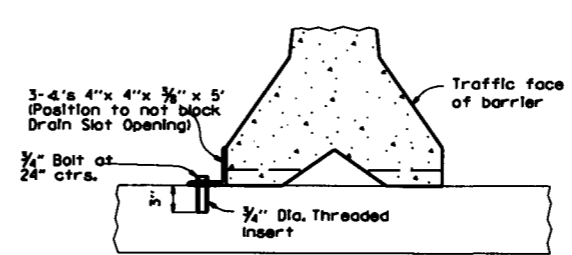
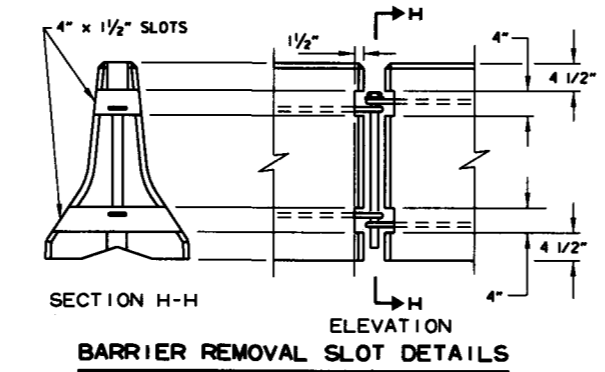
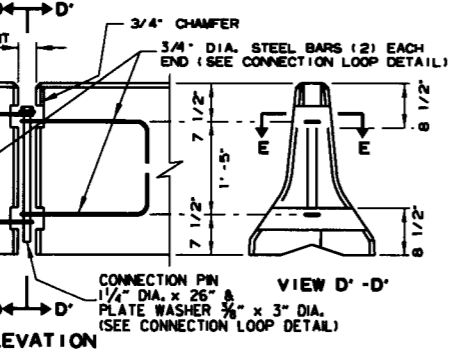
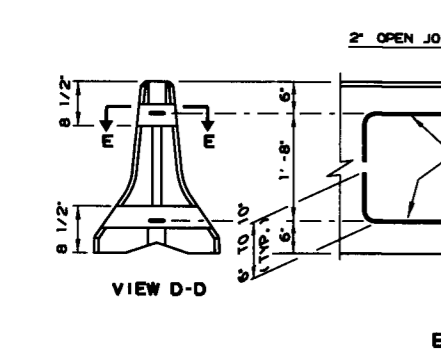
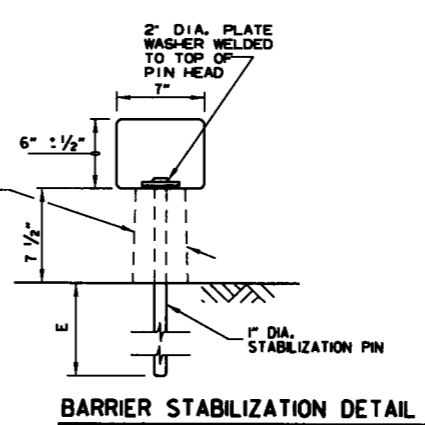
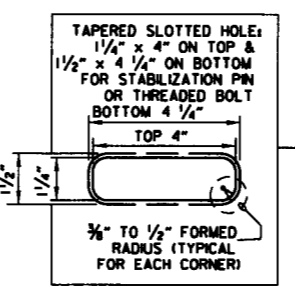
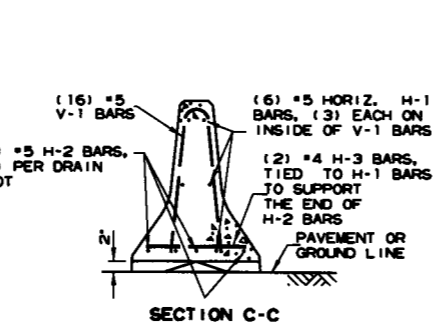
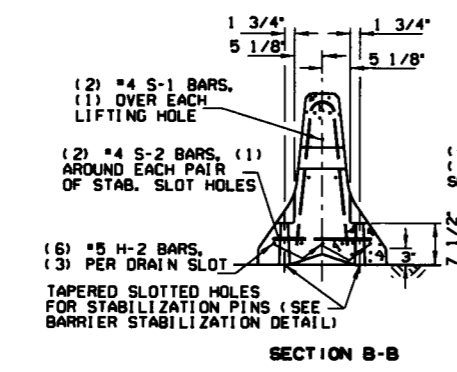
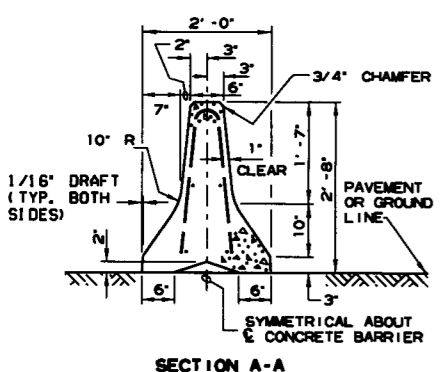
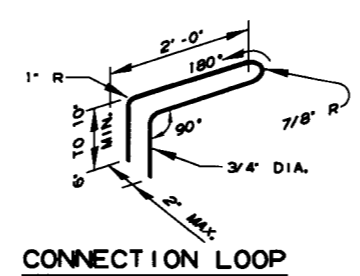
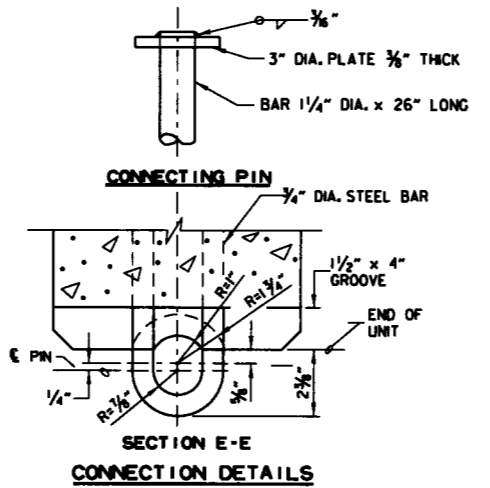


NOTES:

- USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)
- NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.
- SIGN POSTS SHALL BE PAINTED GREEN. SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
1-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

REINFORCING BAR TABLE PER BARRIER UNIT			
MARK	LOCATION	BAR SIZE	(NO. BARS)
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)
S-1	OVER LIFT HOLES	#4	(2)
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S & DRAIN SLOTS	#4	(2)
V-1	VERTICAL IN BARRIER (3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)



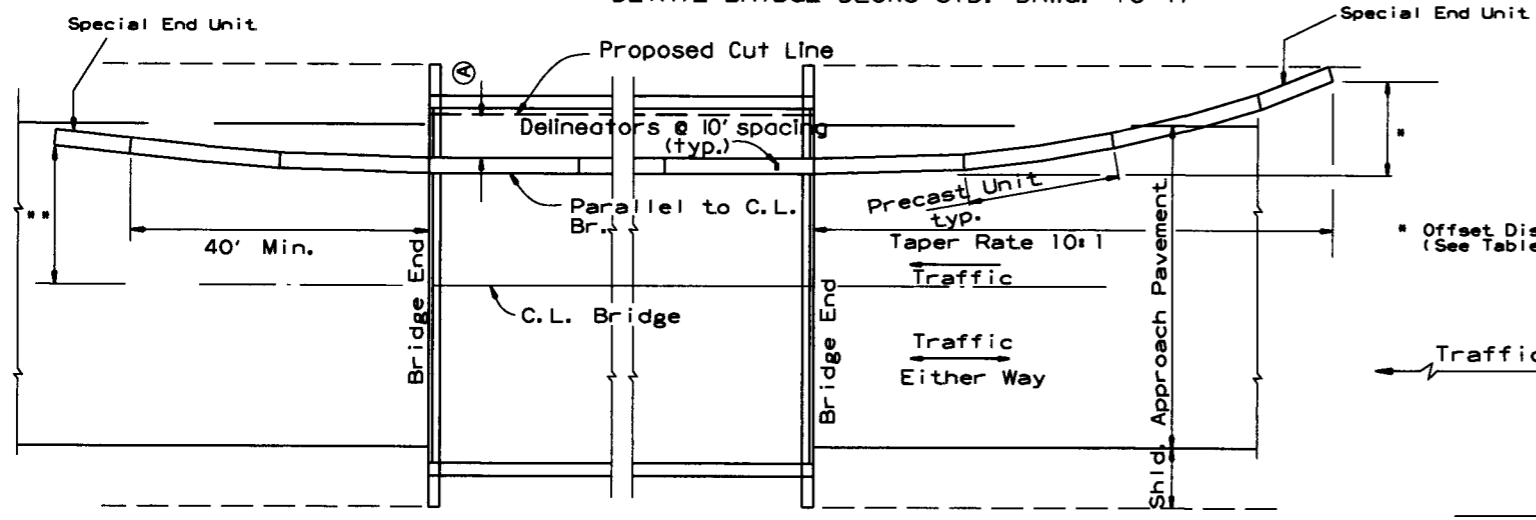
- General Notes**
- The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
 - Materials shall meet the following minimum requirements:
Concrete: 2500 psi compressive strength at 28 days.
Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

In applications where barrier walls within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers. Delineator color shall be in accordance with the Manual Uniform Traffic Control Devices. Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.
 - Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.
 - Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.
 - Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.
 - A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

DATE	REVISION	FILED
2-27-4	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
8-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
8-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER
STANDARD DRAWING TC-4

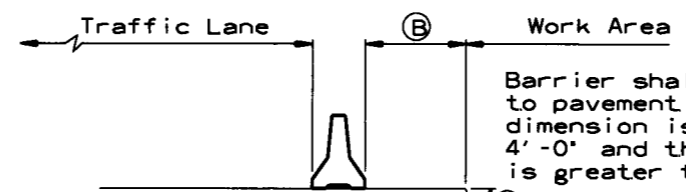
(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

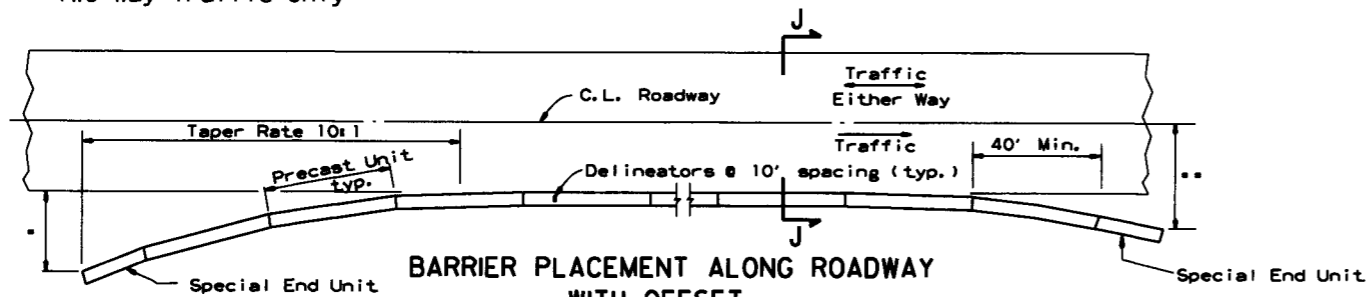
** Offset Distance for Two Way Traffic Only



SECTION J-J

No Scale

Barrier shall be doweled to pavement when the (B) dimension is less than 4'-0" and the (C) dimension is greater than 24 inches.



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

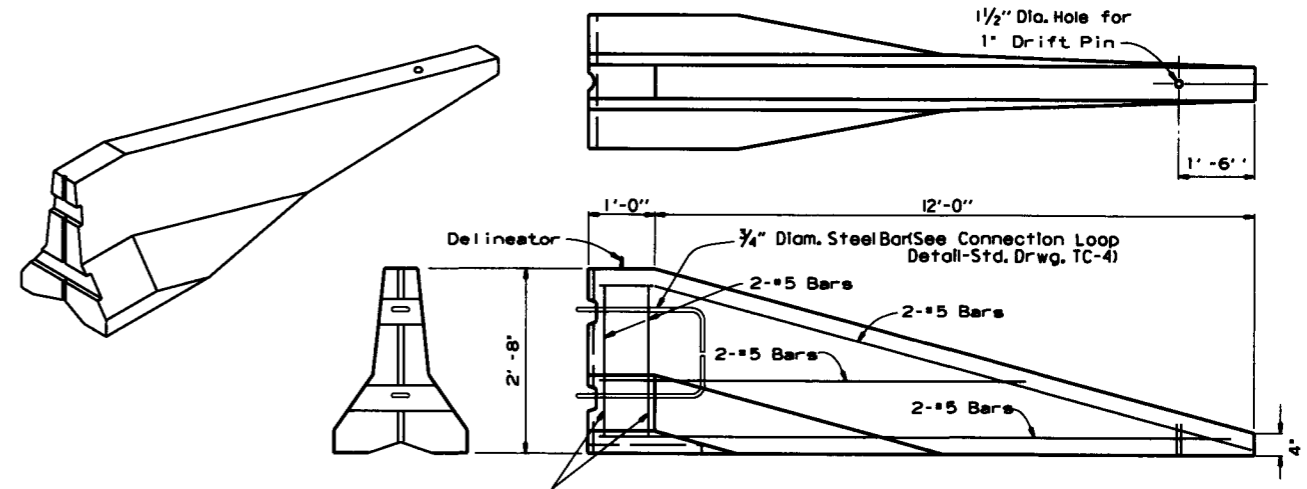
No Scale

** Offset Distance For Two Way Traffic Only

• Offset Distance (See Table)

Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.

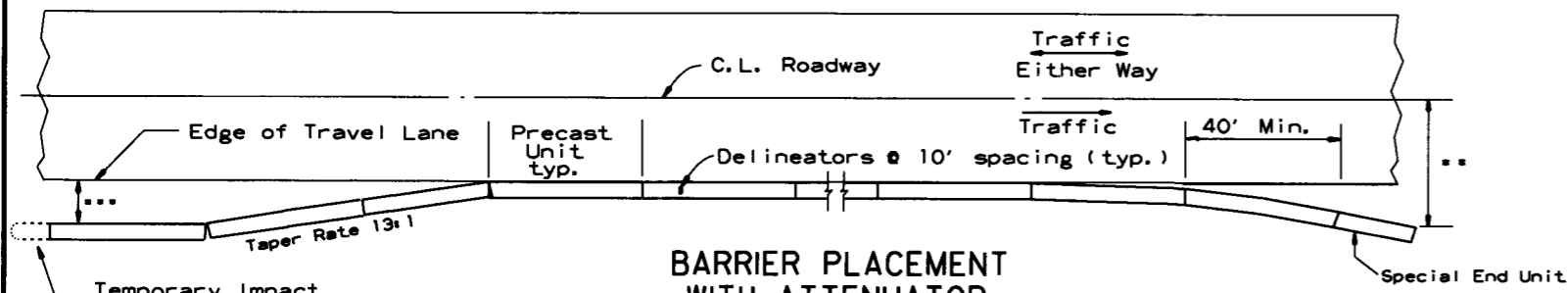


SPECIAL END UNIT

No Scale

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."



BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

*** Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

DATE	REVISION	FILED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

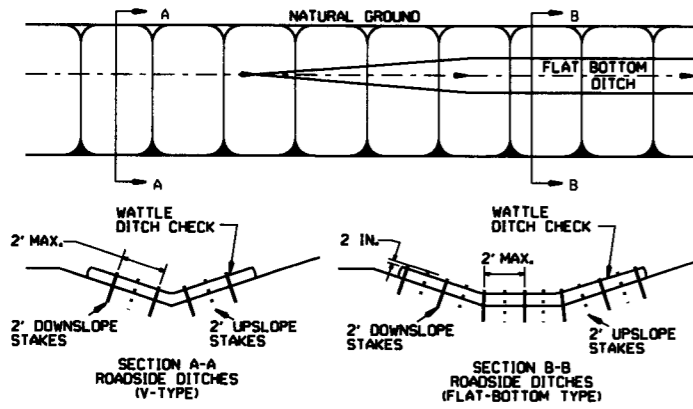
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5

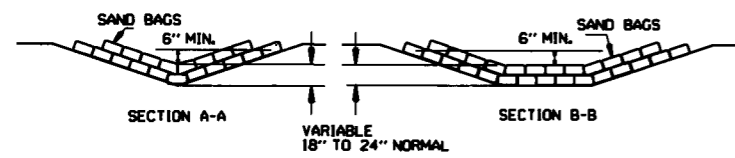
GENERAL NOTES

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

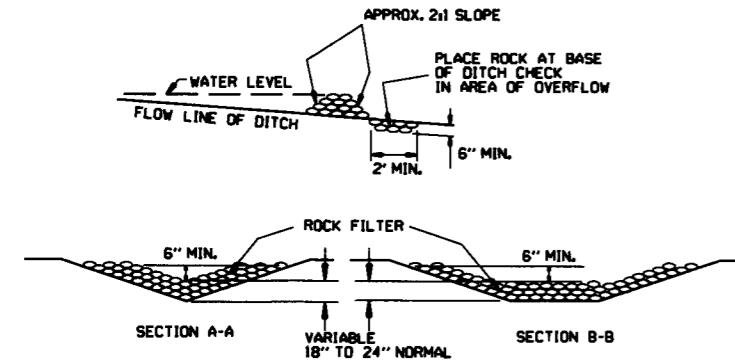


WATTLE DITCH CHECK (E-1)

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS. PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW.

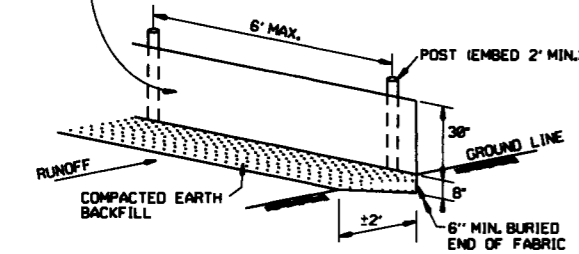


SAND BAG DITCH CHECK (E-5)

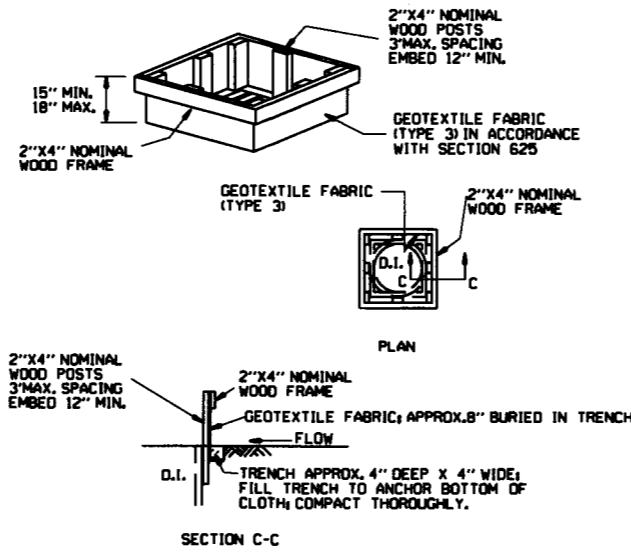


ROCK DITCH CHECK (E-6)

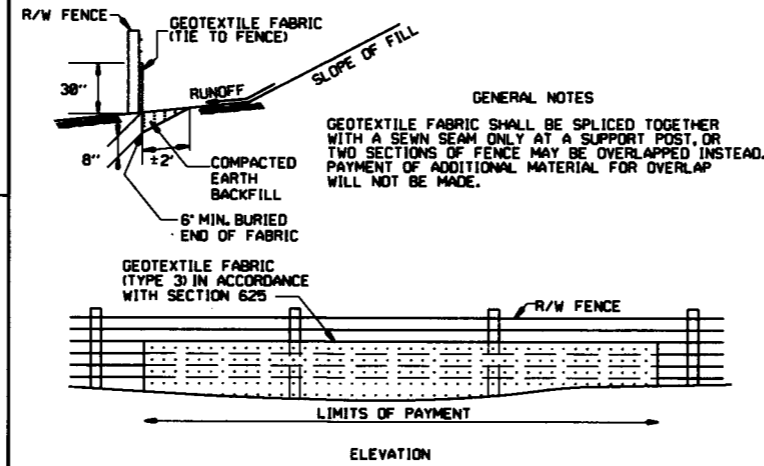
GENERAL NOTES
 GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)

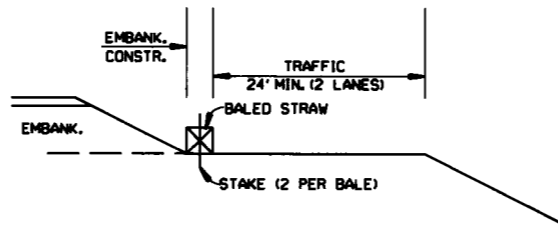


DROP INLET SILT FENCE (E-7)

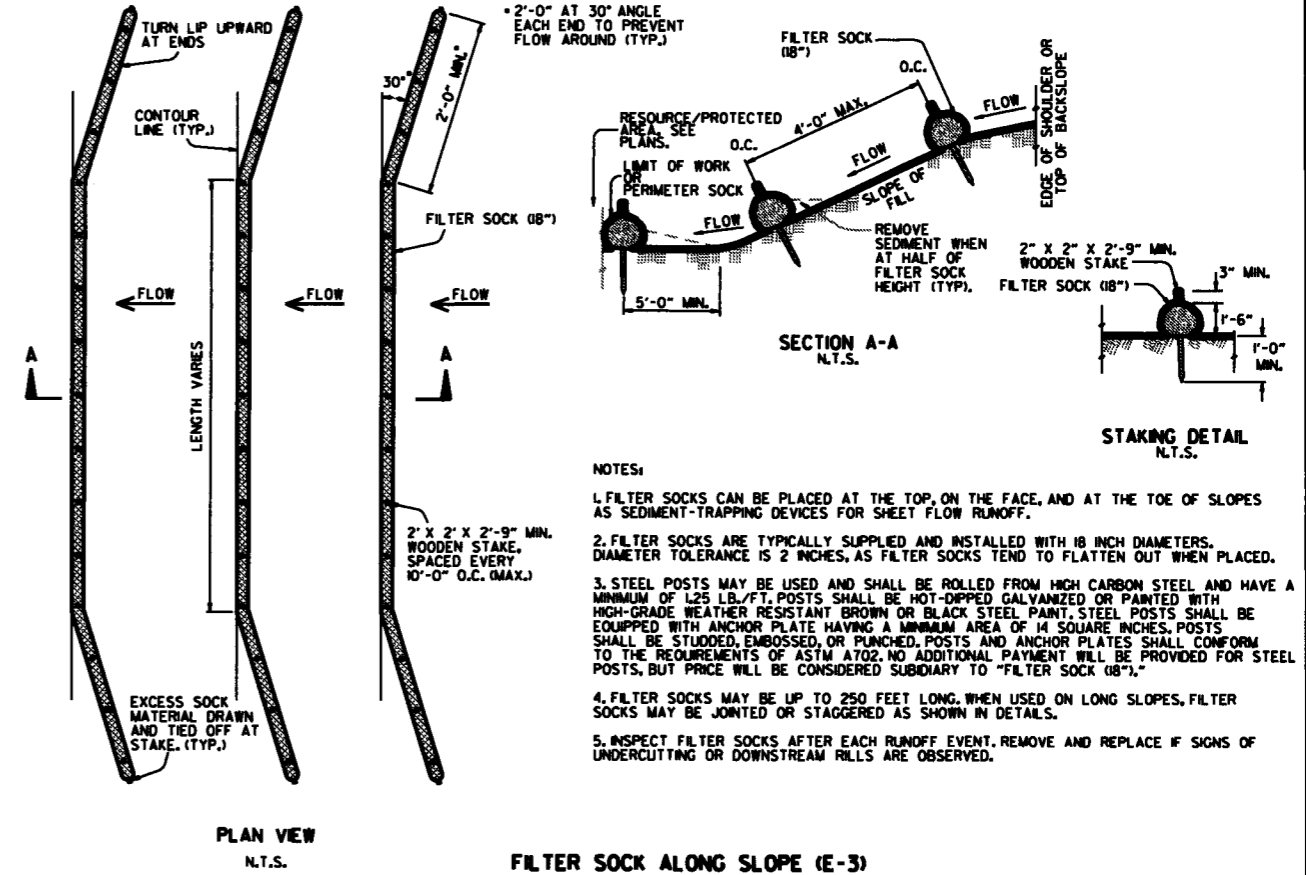


SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES
 1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 36 INCHES IN LENGTH.
 2. NO GAPS SHALL BE LEFT BETWEEN BALES.
 3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.

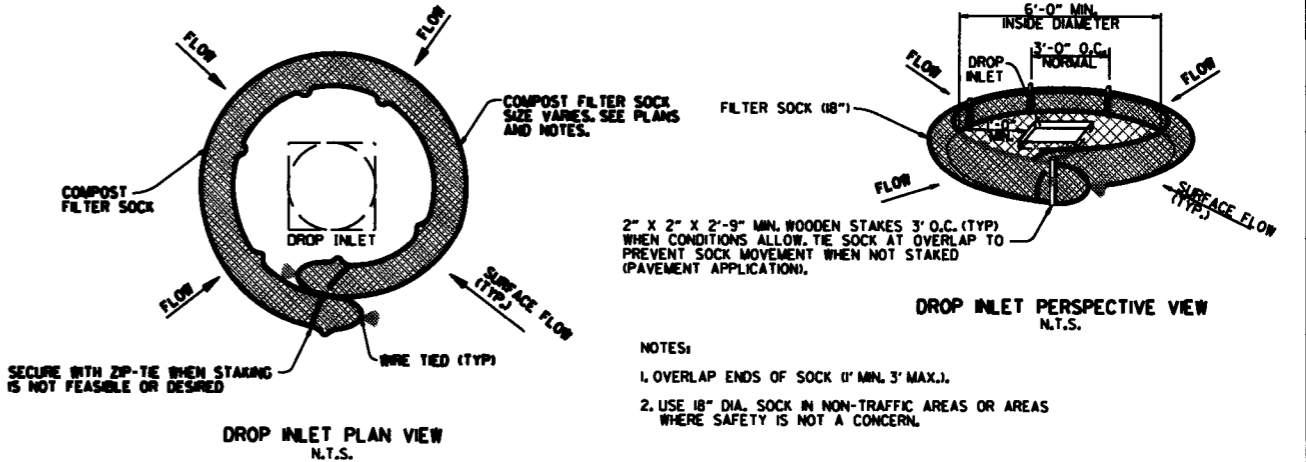


BALED STRAW FILTER BARRIER (E-2)



FILTER SOCK ALONG SLOPE (E-3)

NOTES:
 1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.
 2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.
 3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 125 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBSIDIARY TO "FILTER SOCK (18")."
 4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.
 5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

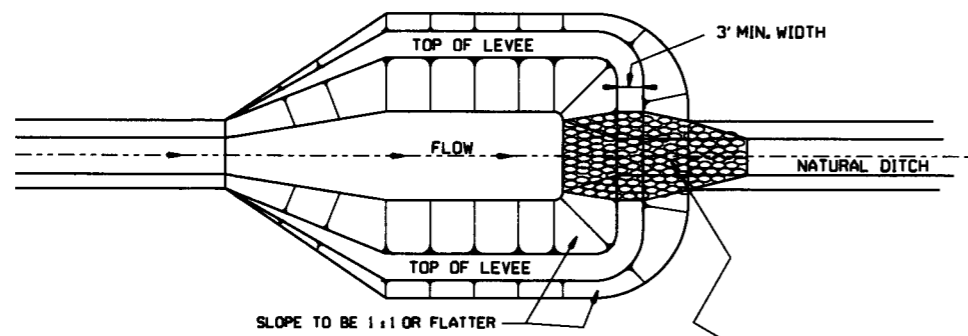


COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

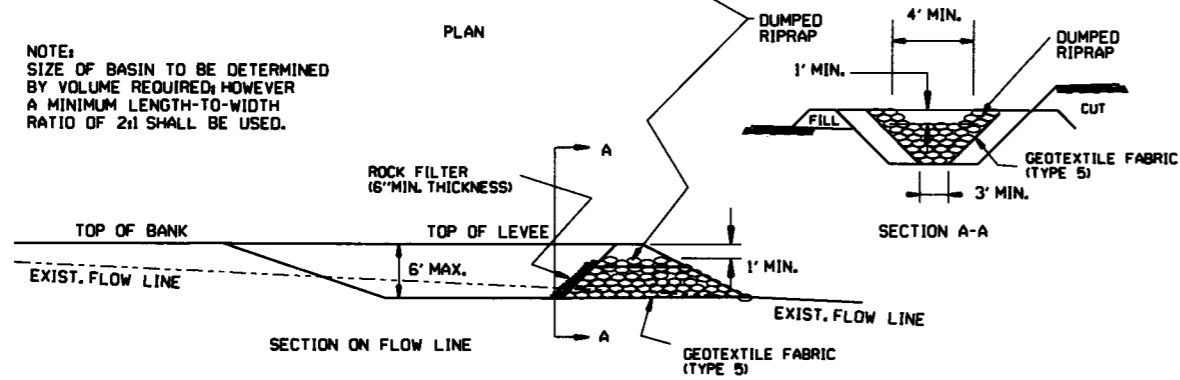
NOTES:
 1. OVERLAP ENDS OF SOCK 1" MIN. 3" MAX.
 2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

DATE	REVISION
8-16-17	ADDED FILTER SOCK E-3 AND E-13
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK
1-18-98	ADDED NOTES
07-12-98	ADDED BALED STRAW FILTER BARRIER (E-2)
07-20-95	REVISED SILT FENCE E-4 AND E-11
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC
06-02-94	REVISED E-1, 4, 7 & 8 DELETED E-2 & 3
04-01-93	REDRAWN
10-01-92	REDRAWN
08-02-76	ISSUED R.D.M.
	298-T-28-76
	FILED

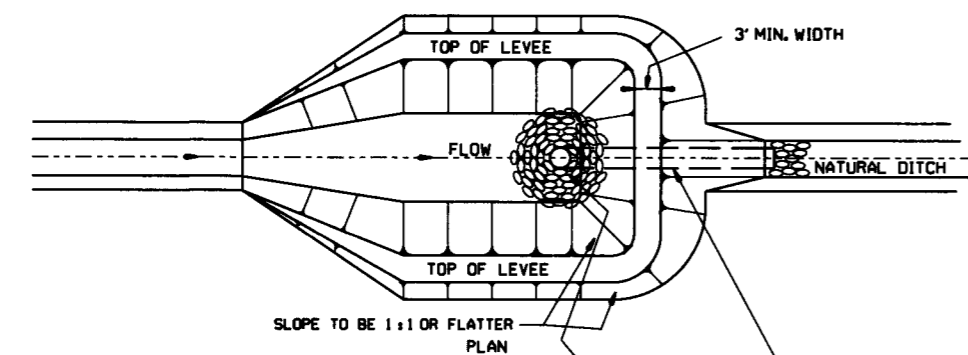
ARKANSAS STATE HIGHWAY COMMISSION
 TEMPORARY EROSION CONTROL DEVICES
 STANDARD DRAWING TEC-1



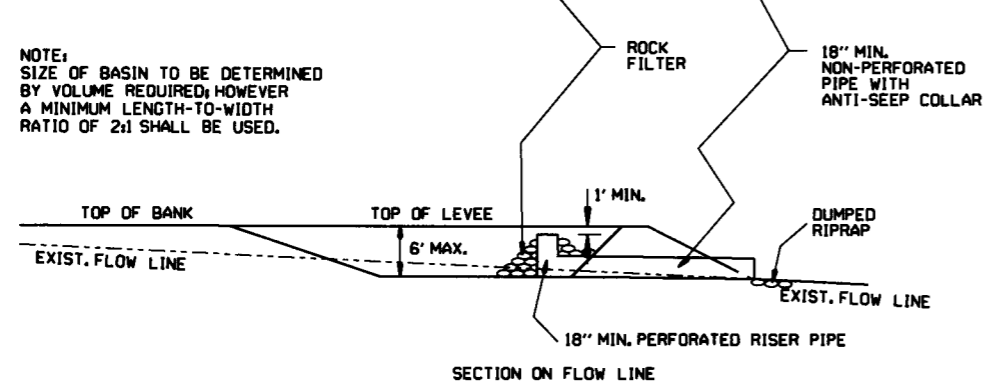
NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.



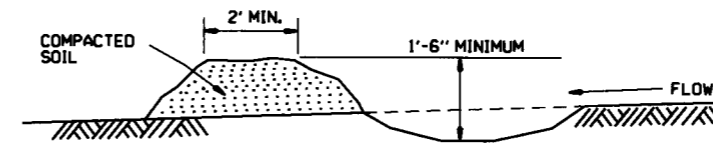
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



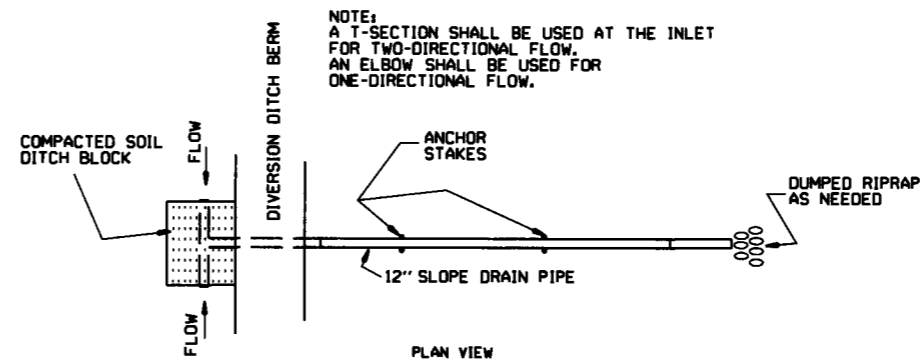
NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.



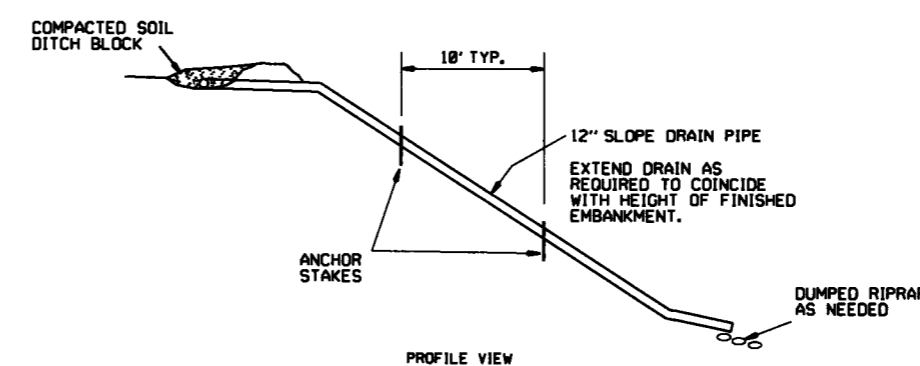
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



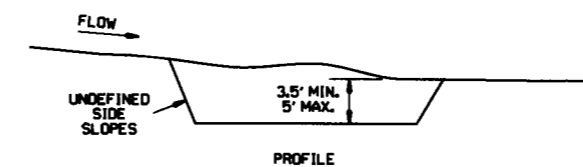
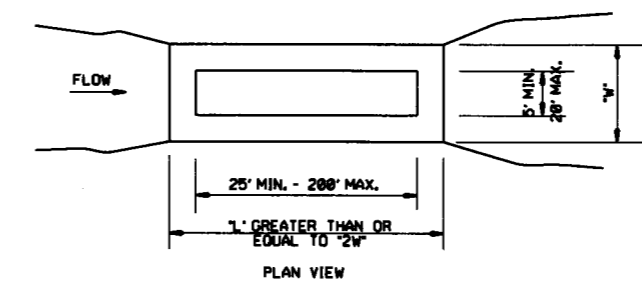
DIVERSION DITCH (E-8)



NOTE:
A T-SECTION SHALL BE USED AT THE INLET
FOR TWO-DIRECTIONAL FLOW.
AN ELBOW SHALL BE USED FOR
ONE-DIRECTIONAL FLOW.



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

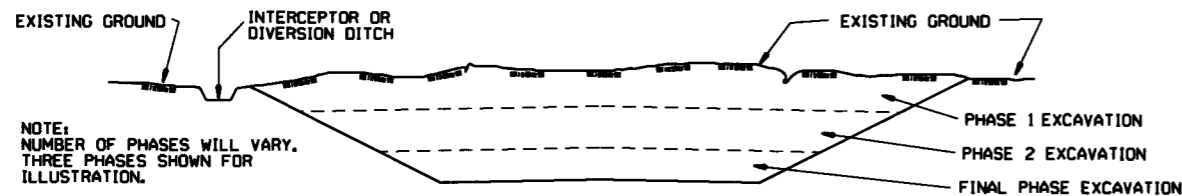
ARKANSAS STATE HIGHWAY COMMISSION		
TEMPORARY EROSION CONTROL DEVICES		
STANDARD DRAWING TEC-2		
6-2-94	Revised E-8 & E-12 Added E-14 & Deleted E-13	
4-1-93	ISSUED	
DATE	REVISION	FILMED

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

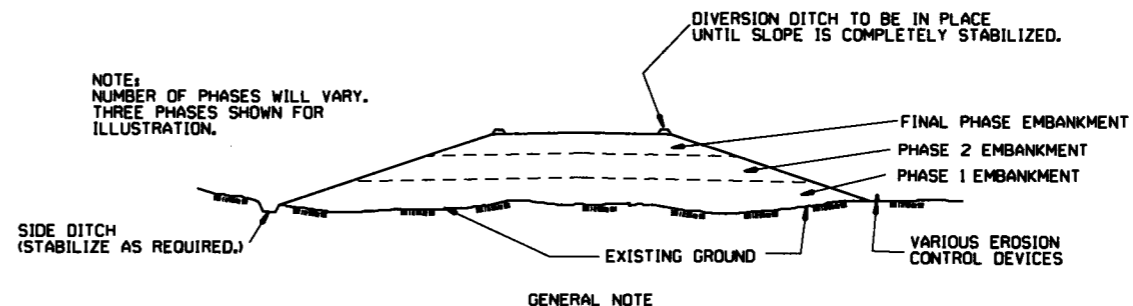
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES, CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

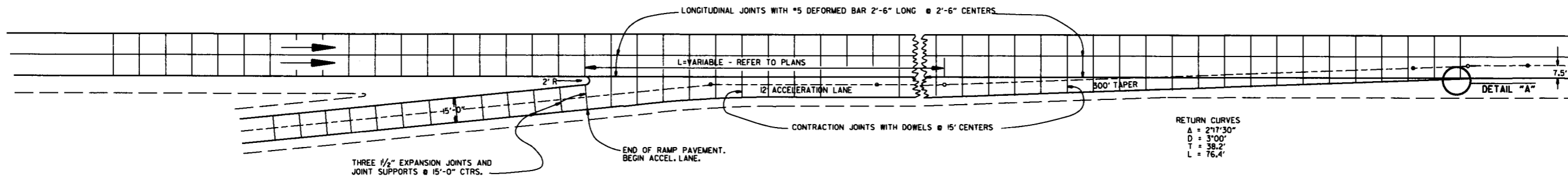
GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

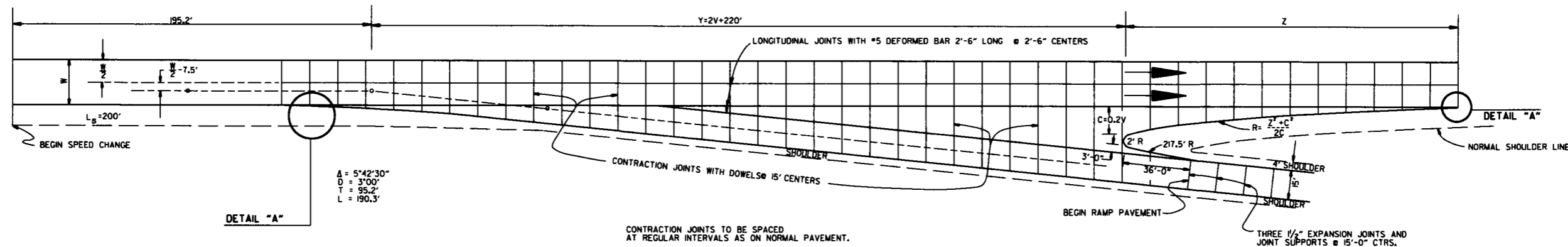
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

ARKANSAS STATE HIGHWAY COMMISSION		
TEMPORARY EROSION CONTROL DEVICES		
STANDARD DRAWING TEC-3		
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94
DATE	REVISION	FILMED



ENTRANCE RAMP

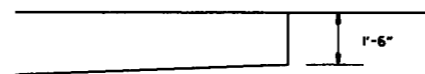
NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO THESE JOINT LAYOUTS. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.



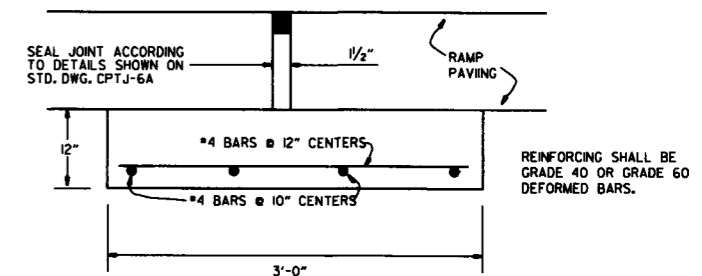
EXIT RAMP

EXIT RAMP

DESIGN SPEED V	X Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADDITIONAL SURFACING SQ. YDS.
40	300.0	8.0	96.0	580.0	602.43
50	320.0	10.0	120.0	725.0	687.25
60	340.0	12.0	168.0	1182.0	790.55
70	360.0	14.0	210.0	1582.0	902.27



DETAIL 'A'

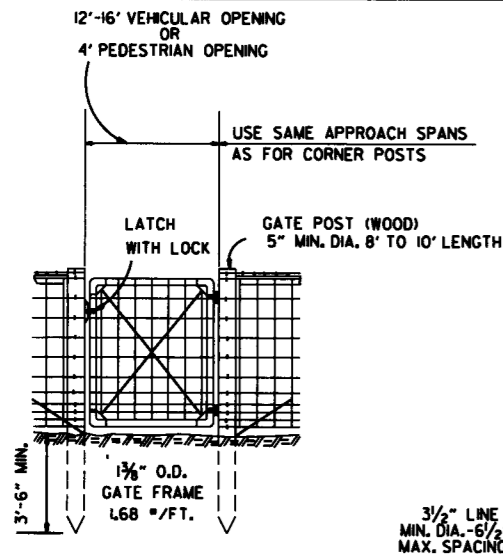


DETAIL OF EXPANSION JOINT & JOINT SUPPORT

NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED. THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE USED. ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.

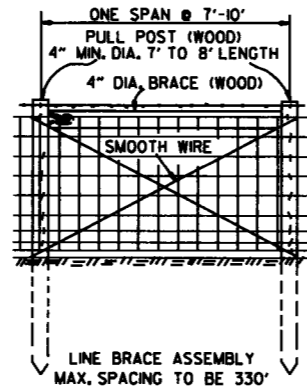
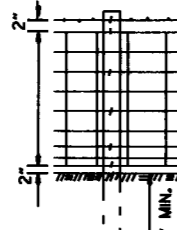
DATE	REVISION	DATE FILMD
8-22-02	DELETED NOTE	
11-16-01	CORRECTED SPELLING ON ENTRANCE RAMP NOTE	
5-13-99	ADDED, EDITED AND DELETED NOTES	
11-03-94	ADDED NOTE RE: REINF. BARS	
10-1-92	ADDED DETAIL A & OTHER MINOR CHANGES	10-1-92
1-25-90	REVISED EXPANSION JOINT	1-25-90
7-15-88	CONFORM D TO 1988 SPECIFICATIONS	8-7-15-88
3-2-81	ISSUED	11-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD TURNOUT
FOR
ENTRANCE & EXIT RAMPS (NON-REINFORCED)
STANDARD DRAWING TR-1A

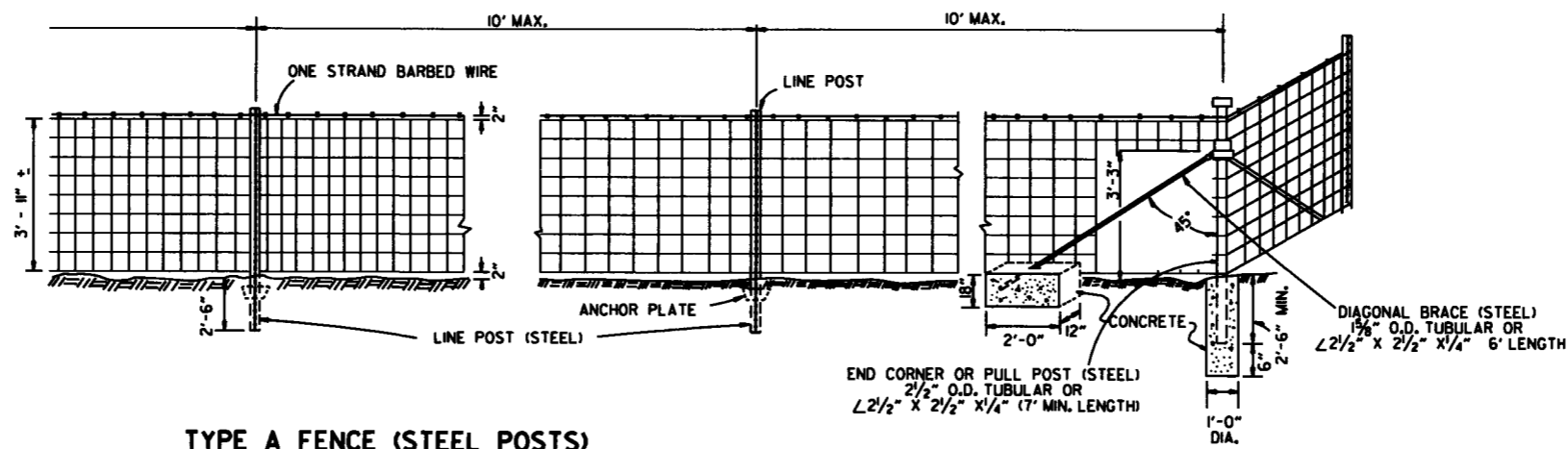
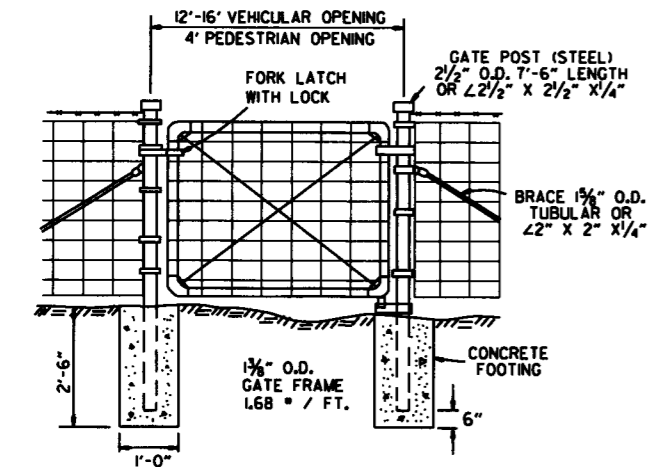
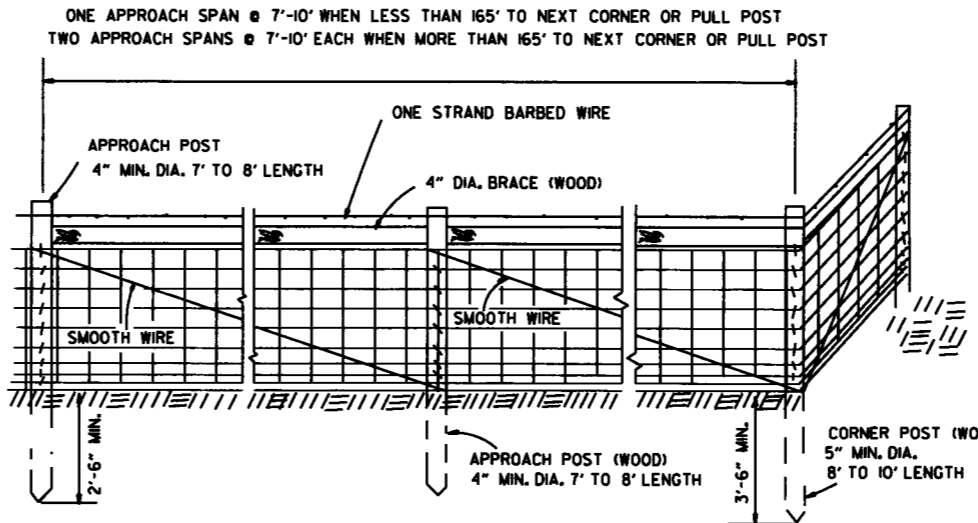


3/2" LINE POST (WOOD)
MIN. DIA. - 5" TO 7" LENGTH
MAX. SPACING TO BE 10'-0"

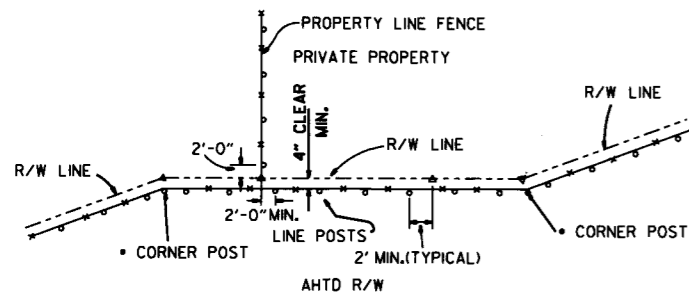
NOTE: STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.



TYPE A FENCE (WOOD POSTS)



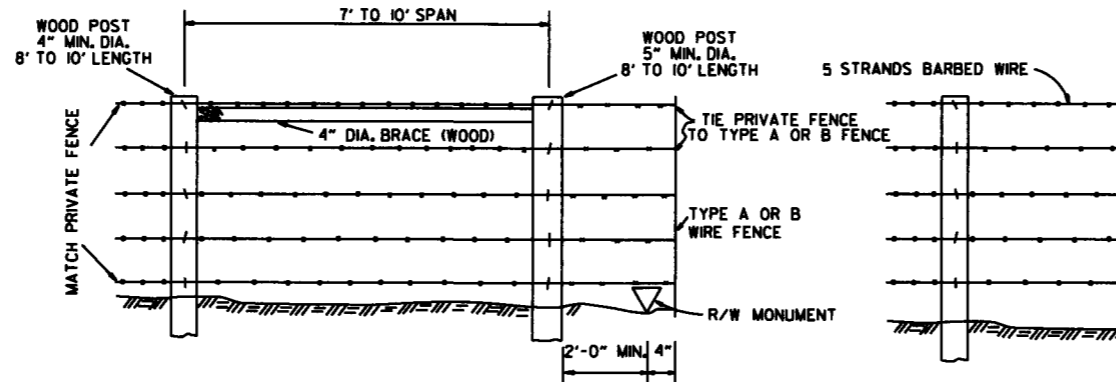
TYPE A FENCE (STEEL POSTS)



NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

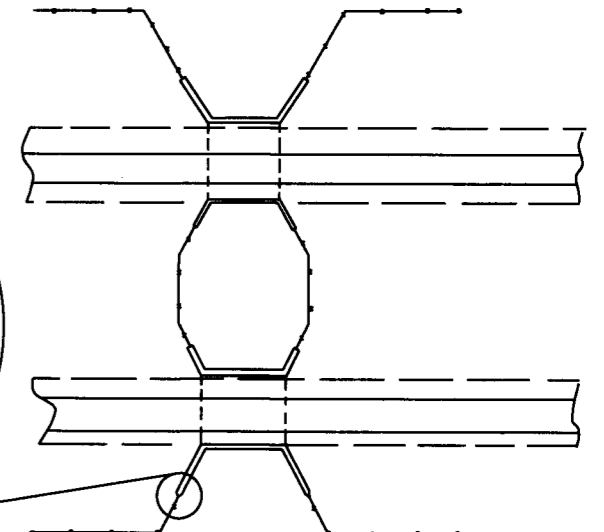
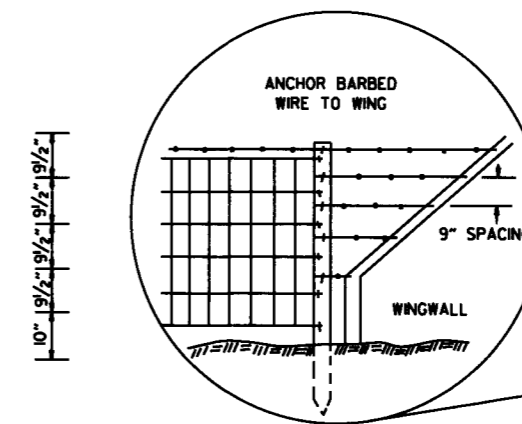
△ - R/W MONUMENTS
○ - FENCE POSTS

RIGHT-OF-WAY FENCE LOCATION



WHERE EXISTING PRIVATE FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN WITH TYPE A FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.

PRIVATE FENCE TERMINAL INSTALLATION



DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

TYPE B FENCE

SPACING AND SIZE OF POSTS FOR TYPE B FENCE SHALL BE THE SAME AS TYPE A FENCE.

DATE	REVISION	DATE FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	ADDED CORNER POST NOTE	6-2-94
8-5-93	REVISED R-O-W LOCATION DETAIL	8-5-93
10-1-92	ADDED STAPLE NOTE	
8-2-90	REV'D PULL POST LENGTH	
11-30-89	DELETED CLASS CONC.	
7-15-88	ADDED SPLICE NOTES	
7-15-88	ADDED HEIGHT DIMENSION	
4-3-87	REVISED VARIOUS NOTES AND GENERAL NOTES	
11-1-84	MAX. POST SPACING	
1-4-83	MIN. DIA. LINE POST	
10-2-72	REVISED & REDRAWN	

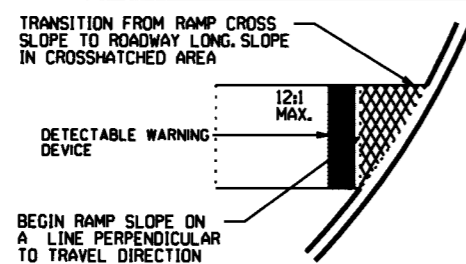
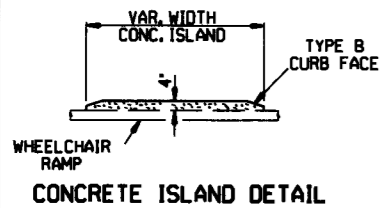
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
TYPE A AND B

STANDARD DRAWING WF-1

GENERAL NOTES:

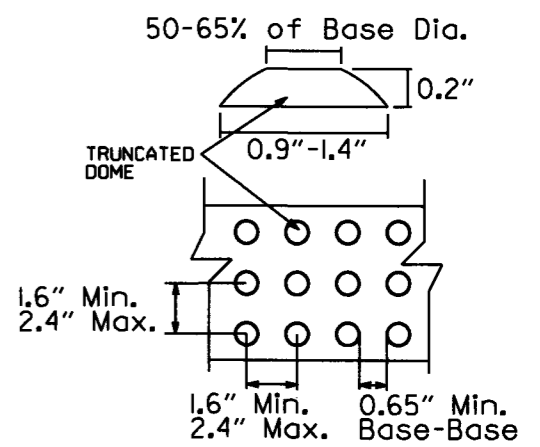
- STEEL LINE POSTS SHALL BE GALVANIZED, 7 FT. IN LENGTH.
- TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK).
- THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF WOOD LINE POSTS OF 7' LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.
- GATE HINGES AND LATCHES WITH LOCKS TO BE OF A TYPE APPROVED BY THE ENGINEER. DRIVEWAY GATES, EITHER SINGLE 12' OR 16' OR DOUBLE 6' TO 8' OPENINGS OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE FOR USE BY MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER.
- AT STREAM CROSSINGS THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF BANK TO THE BRIDGE STRUCTURE, A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO THE BRIDGE ABUTMENTS OR CULVERT WINGWALLS.
- SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.
- SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD" AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRE A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.



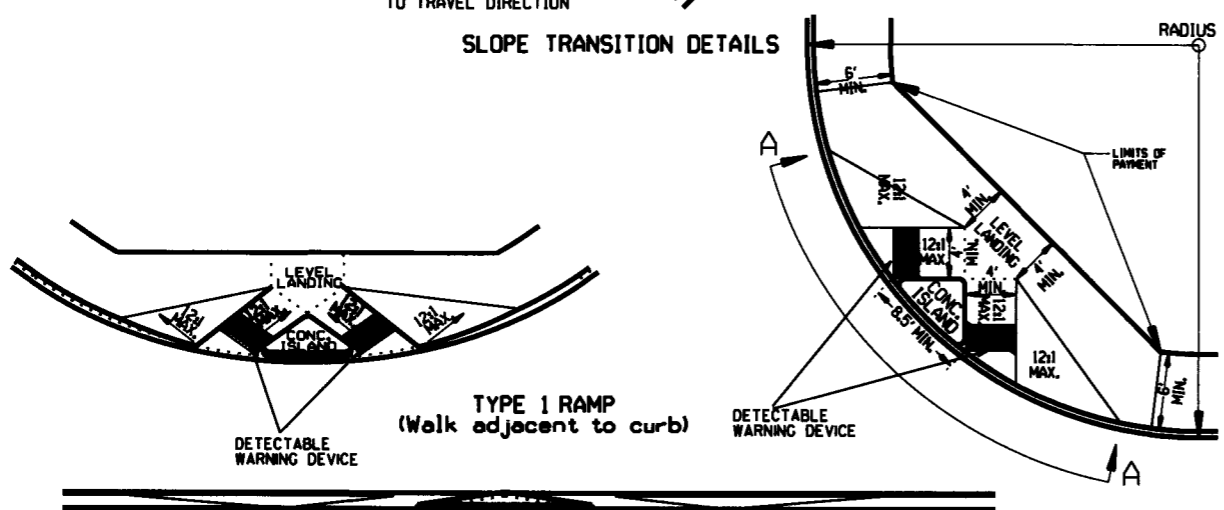
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R"	DISTANCE "X"	DISTANCE "Y"	LENGTH "L"	RAMP AREA "A"
FEET	FEET	FEET	FEET	SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80

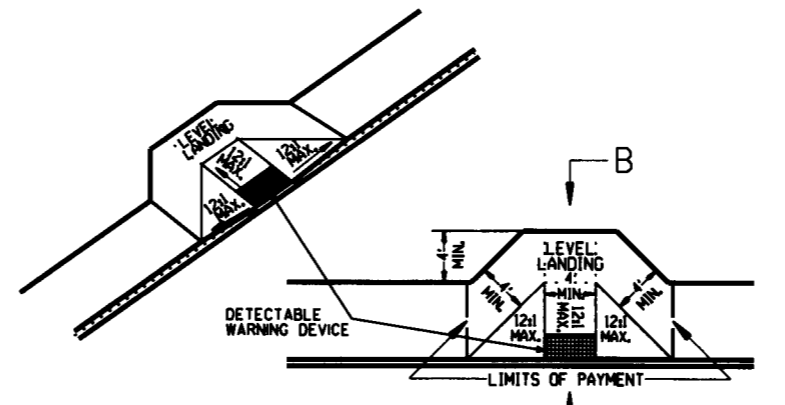
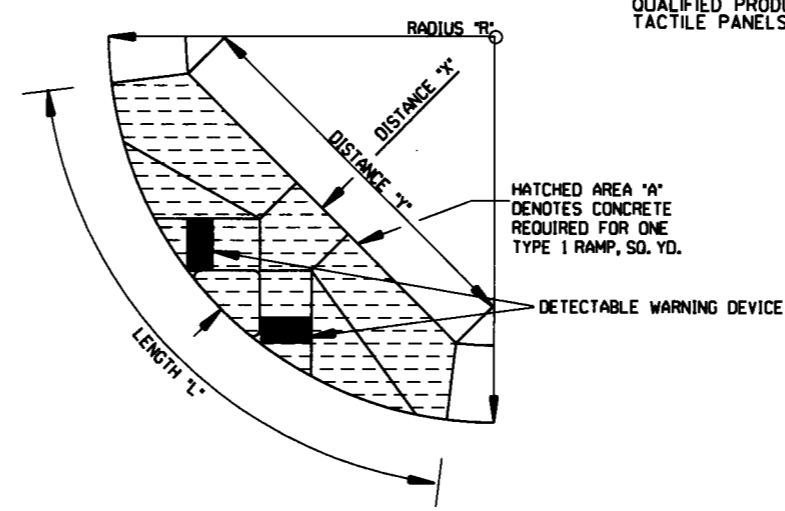
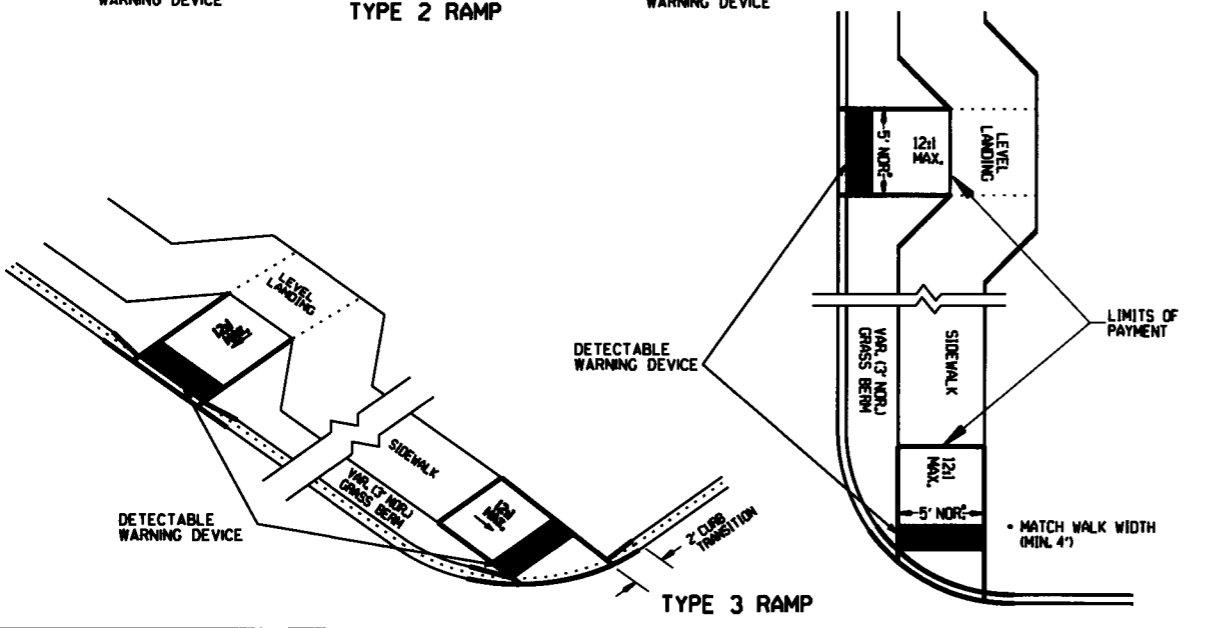
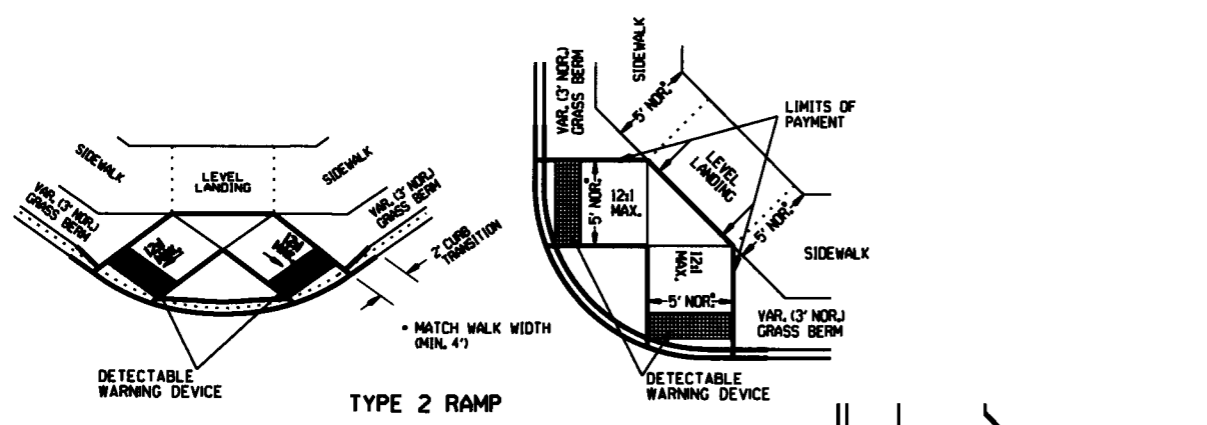
GENERAL NOTES FOR DETECTABLE WARNING DEVICES
 THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB. TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



DETECTABLE WARNING DEVICE DETAIL



NOTE: THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.



GENERAL NOTES:

- IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
- IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
- THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
- THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4". THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
- RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
- THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

RAMP SELECTION CRITERIA

CHOICE	TYPE	LOCATION
FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED. AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	ISSUED/REVISED	REVISION	DATE FILED
1-10-05	REVISED TO NEW SIDEWALK POLICY		
10-9-03	REVISED GEN. NOTES & ADDED NOTE		
4-10-03	REV. DETECTABLE WARNING DEVICES		
8-22-02	ADD DETECTABLE WARNING DEVICES		
3-30-00	ADD SLOPE TRANS. & REV. ISL. DIMS.		
4-8-98	REVISED NOTES		
5-2-98	REVISED TEXTURE		
7-02-98	REORGAN & REDISSUED		
10-8-96	CORRECTED DIMENSIONS		10-8-96
3-24-90	FROM 10:1 MAX. SLOPE		3-24-90
7-8-88	ADJUSTED MAX. SLOPE		682-7-8-88
7-14-88	INCL. CONC. ISLAND IN PAY ITEM		
6-02-76	ISSUED P.H.D.		299-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

**WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS**

STANDARD DRAWING WR-1