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.		BB0302	1	74
				(2)	HWY. 67 - WEST OF RED RIVER (S)			

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

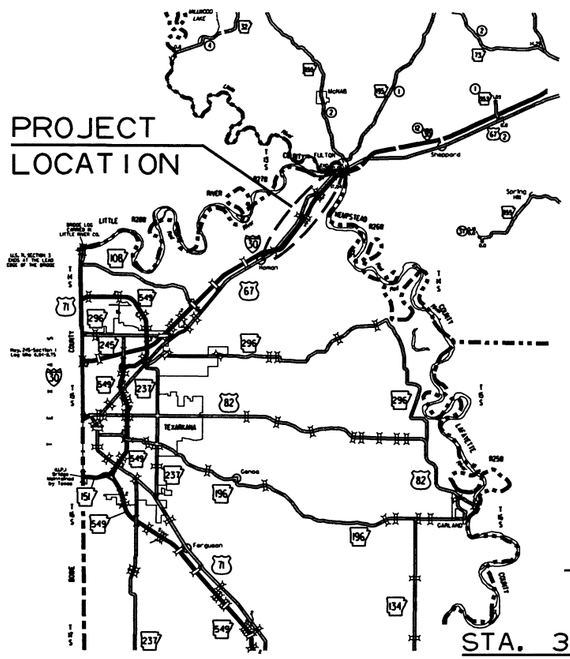
HWY. 67 - WEST OF RED RIVER (S)

MILLER COUNTY

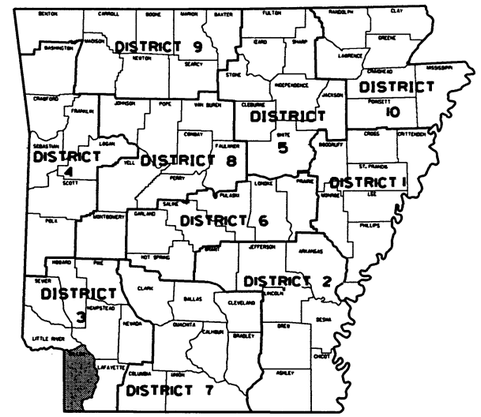
ROUTE 30 SECTION II

JOB BB0302

FED. AID PROJ. NHPP-HSIP-30-1(153)12

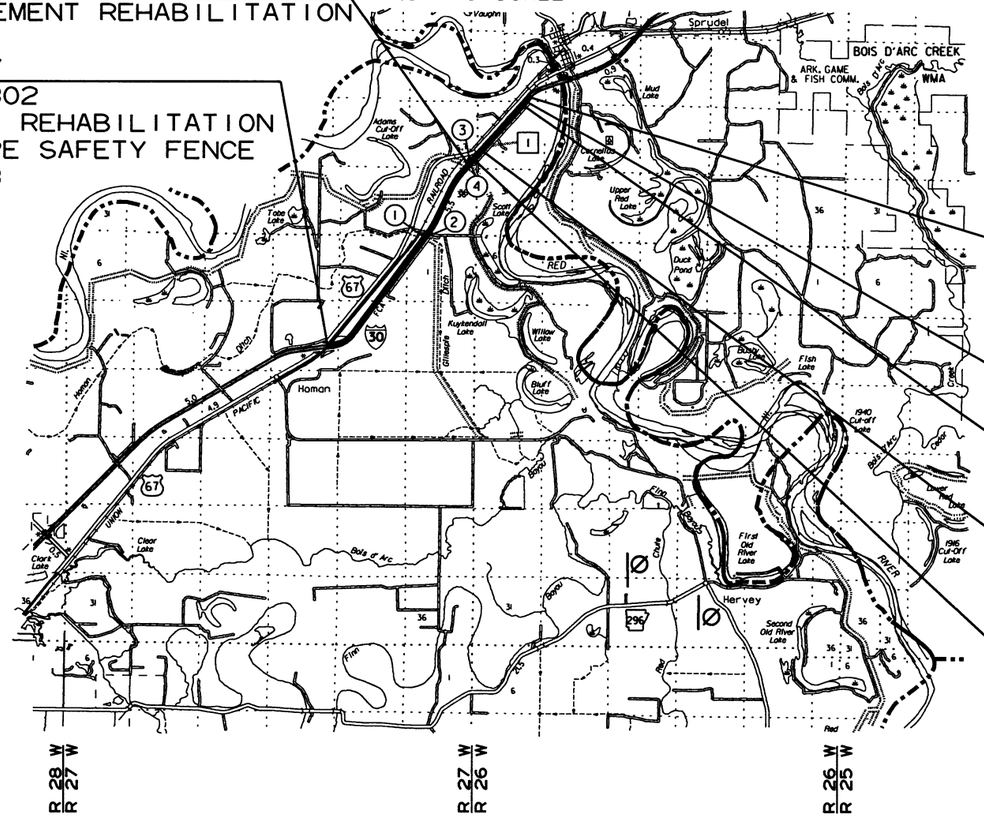


VICINITY MAP



ARK. HWY. DIST. NO. 3

NOT TO SCALE



T 13 S
T 14 S

T 14 S
T 15 S

R 28 W
R 27 W

R 27 W
R 26 W

R 26 W
R 25 W

N

STA. 574+67.50
END PAVEMENT REHABILITATION

STA. 391+72.87
BEGIN JOB BB0302
BEGIN PAVEMENT REHABILITATION
BEGIN WIRE ROPE SAFETY FENCE
LOG MILE 11.63

STA. 637+23.93
END WRSF
END JOB BB0302
LOG MILE 16.28

STA. 637+00.00
END FULL DEPTH CONSTRUCTION

STA. 631+50.00
END RUBBLIZE AND OVERLAY
BEGIN FULL DEPTH CONSTRUCTION

STA. 581+80.50
END FULL DEPTH CONSTRUCTION
BEGIN RUBBLIZE AND OVERLAY

STA. 576+30.50
BEGIN FULL DEPTH CONSTRUCTION

DESIGN TRAFFIC DATA

DESIGN YEAR	2036
2016 ADT	30,000
2036 ADT	40,000
2036 DHV	4,400
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	47%
DESIGN SPEED	70 MPH

BRIDGE DATA

(1) STA. 507+18.50 BR. END
75'-0" R.C. SLAB SPAN
BR. NO. A3797
40'-0" CLEAR RDWY.
STA. 507+93.50 BR. END
POLYMER OVERLAY

(2) STA. 507+34.50 BR. END
75'-0" R.C. SLAB SPAN
BR. NO. B3797
40'-0" CLEAR RDWY.
STA. 508+09.50 BR. END
POLYMER OVERLAY

(3) STA. 575+04.00 BR. END
90'-0" R.C. SLAB SPAN
BR. NO. A3971
40'-0" CLEAR RDWY.
STA. 575+94.00 BR. END
POLYMER OVERLAY

(4) STA. 575+04.00 BR. END
90'-0" R.C. SLAB SPAN
BR. NO. B3971
40'-0" CLEAR RDWY.
STA. 575+94.00 BR. END
POLYMER OVERLAY

STATION EQUATIONS

[1] STA. 591+15.00 BK. =
STA. 590+60.00 AHD.

APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7836
M.E. BANES

10-4-16

DEPUTY DIRECTOR
AND CHIEF ENGINEER

BEGINNING OF PROJECT	MID POINT OF PROJECT	END OF PROJECT
LATITUDE = N 33°33'00" LONGITUDE = W 93°52'23"	LATITUDE = N 33°34'30" LONGITUDE = W 93°50'48"	LATITUDE = N 33°36'05" LONGITUDE = W 93°49'23"

GROSS LENGTH OF PROJECT		24606.06	FEET	OR	4.660	MILES
NET	"	ROADWAY	24441.06	"	4.629	"
NET	"	BRIDGES	165.00	"	0.031	"
NET	"	PROJECT	24441.06	"	4.660	"

1/27/2016

RBB0302.DGN

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.		BB0302	2	74

(2) INDEX OF SHEETS, GOV. SPECS., & GEN. NOTES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG.NO.	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES			
3 - 7	TYPICAL SECTIONS OF IMPROVEMENT			
8 - 15	SPECIAL DETAILS			
16 - 28	TEMPORARY EROSION CONTROL DETAILS			
29 - 37	MAINTENANCE OF TRAFFIC DETAILS			
38	PERMANENT PAVEMENT MARKING DETAILS			
39 - 44	QUANTITIES			
45	SUMMARY OF QUANTITIES AND REVISIONS			
46 - 54	PLAN SHEETS			
55	LAYOUT OF BRIDGES OVER GILLESPIE'S DITCH (FOR INFORMATION ONLY)	3797AR & 3797BR	33976	
56	LAYOUT OF OVERPASSES COUNTY ROAD 111 (FOR INFORMATION ONLY)	3971AR & 3971BR	33979	
57	CONCRETE DITCH PAVING		CDP-1	11-17-10
58	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)		CPTJ-6A	5-25-06
59	GUARD RAIL DETAILS		GR-8	7-14-10
60	GUARD RAIL DETAILS		GR-8A	7-14-10
61	GUARD RAIL DETAILS		GR-9	4-17-08
62	GUARD RAIL DETAILS		GR-9A	4-17-08
63	GUARD RAIL DETAILS		GR-10	7-14-10
64	GUARD RAIL DETAILS		GR-10A	7-14-10
65	GUARD RAIL DETAILS		GRT-1	7-14-10
66	PAVEMENT MARKING DETAILS		PM-1	5-12-16
67	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS		PM-2	9-12-13
68	DETAILS OF PIPE UNDERDRAIN		PU-1	4-10-03
69	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-1	9-02-15
70	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-2	9-02-15
71	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3	9-02-15
72	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-4	2-27-14
73	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-5	10-15-09
74	TEMPORARY EROSION CONTROL DEVICES		TEC-1	12-15-11

GENERAL NOTES

1. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
2. 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.
3. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
4. 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.
5. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.

GOVERNING SPECIFICATIONS

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

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 BB0302
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
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
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
620-1	MULCH COVER
JOB BB0302	BIDDING REQUIREMENTS AND CONDITIONS
JOB BB0302	BORROW
JOB BB0302	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS
JOB BB0302	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB BB0302	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB BB0302	CARGO PREFERENCE ACT REQUIREMENTS
JOB BB0302	CONCRETE DITCH PAVING
JOB BB0302	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB BB0302	COORDINATION OF WORK
JOB BB0302	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB BB0302	EMPLOYMENT REPORTING
JOB BB0302	FILTER SOCKS
JOB BB0302	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB BB0302	HIGH PERFORMANCE PAVEMENT MARKING
JOB BB0302	MAINTENANCE OF TRAFFIC
JOB BB0302	MANDATORY ELECTRONIC CONTRACT
JOB BB0302	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB BB0302	MOTORIST ASSISTANCE PATROL
JOB BB0302	PARTNERING REQUIREMENTS
JOB BB0302	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB BB0302	POLYMER OVERLAY
JOB BB0302	PROSECUTION AND PROGRESS - CALENDAR DAY CONTRACT WITH CPM
JOB BB0302	REMOVAL AND DISPOSAL OF PLOWABLE PAVEMENT MARKERS
JOB BB0302	REMOVAL AND DISPOSAL OF PORTLAND CEMENT CONCRETE PAVEMENT GRINDING RESIDUE
JOB BB0302	ROADWAY CONSTRUCTION CONTROL
JOB BB0302	RUMBLE STRIP REMOVAL
JOB BB0302	SEQUENCE OF CONSTRUCTION
JOB BB0302	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB BB0302	SPECIAL CLEARING
JOB BB0302	STORM WATER POLLUTION PREVENTION PLAN
JOB BB0302	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB BB0302	THERMOPLASTIC RUMBLE BAR
JOB BB0302	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB BB0302	UNDERDRAIN FLUSHING AND REHABILITATION
JOB BB0302	UTILITY ADJUSTMENTS
JOB BB0302	VALUE ENGINEERING
JOB BB0302	VERY EARLY STRENGTH CONCRETE
JOB BB0302	WARM MIX ASPHALT
JOB BB0302	WIRE ROPE SAFETY FENCE (POST REPAIR)
JOB BB0302	WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS
JOB BB0302	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS

10/4/2016

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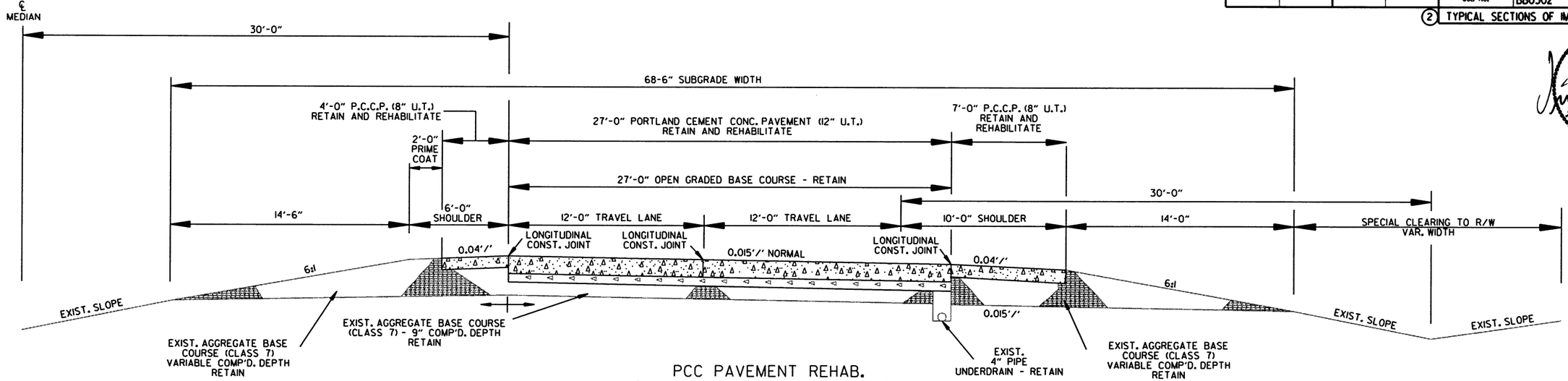
INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES

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.		BB0302	3	74

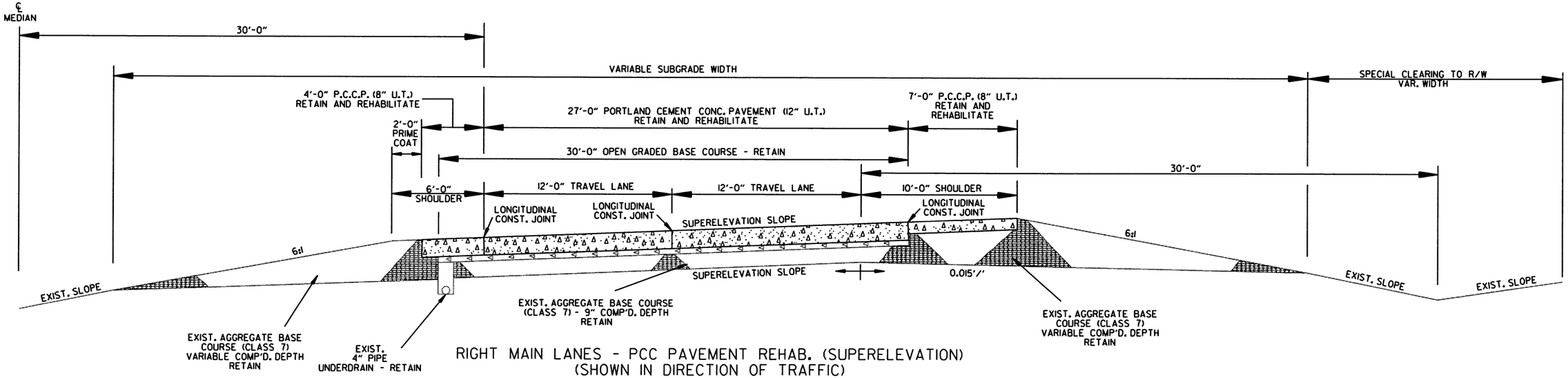
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



PCC PAVEMENT REHAB.
(SHOWN IN DIRECTION OF TRAFFIC)

RIGHT MAIN LANES	LEFT MAIN LANES
STA. 391+72.87 TO STA. 392+02.87	STA. 392+70.64 TO STA. 393+00.64
STA. 506+68.00 TO STA. 506+98.00	STA. 506+52.00 TO STA. 506+82.00
STA. 508+46.00 TO STA. 511+08.00	STA. 508+30.00 TO STA. 508+60.00
STA. 574+37.50 TO STA. 574+67.50	STA. 574+37.50 TO STA. 574+67.50



RIGHT MAIN LANES - PCC PAVEMENT REHAB. (SUPERELEVATION)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 511+08.00 TO STA. 513+75.00

10/3/2016

RBB0302.DGN

TYPICAL SECTIONS OF IMPROVEMENT

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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
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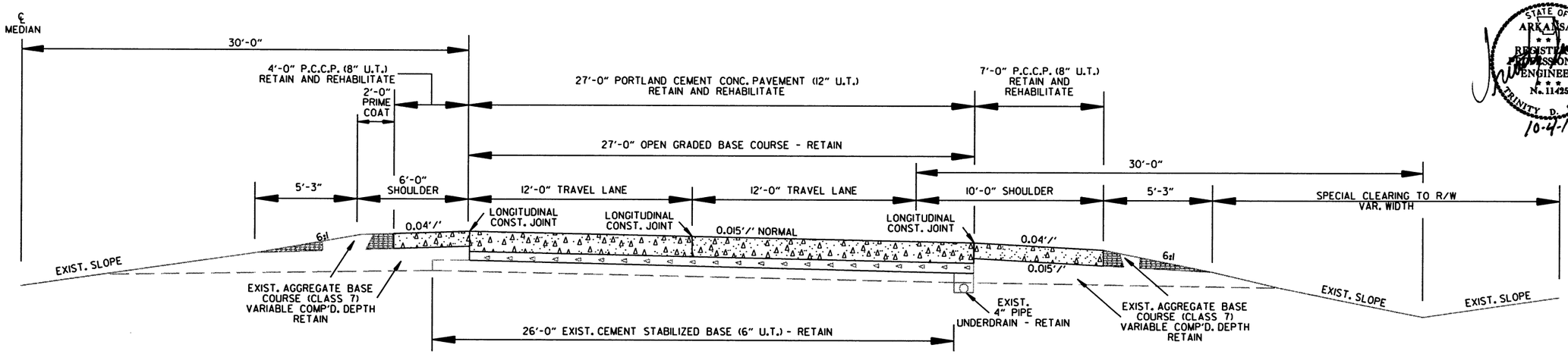
TRINITY D. SMITH
10-4-16



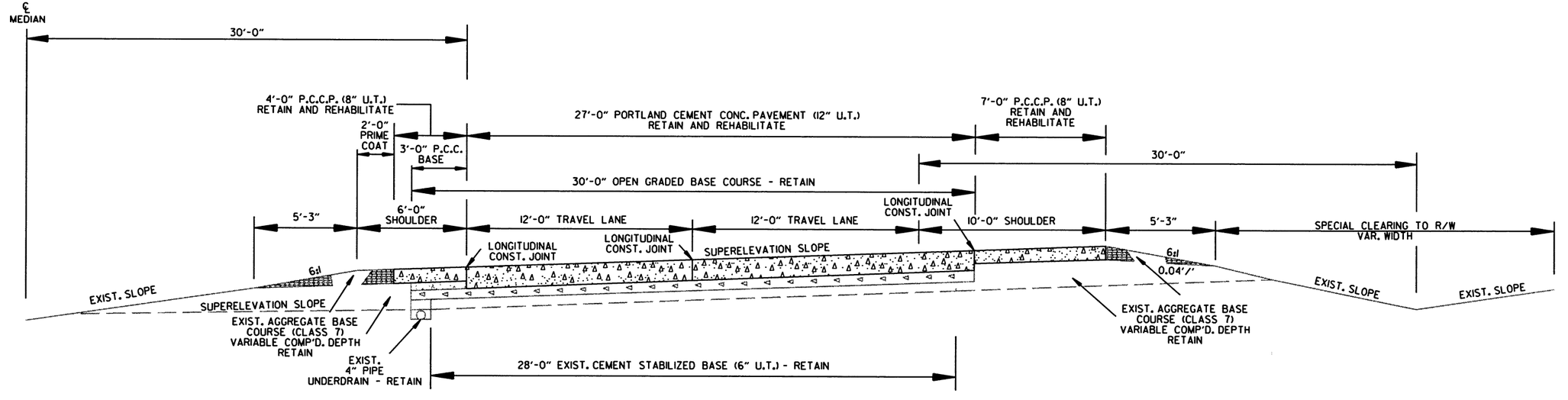
PCC PAVEMENT REHAB.
(SHOWN IN DIRECTION OF TRAFFIC)

RIGHT MAIN LANES

STA. 392+02.87 TO STA. 393+90.00
STA. 413+32.00 TO STA. 506+68.00
STA. 523+55.00 TO STA. 574+37.50

LEFT MAIN LANES

STA. 393+00.64 TO STA. 506+52.00
STA. 508+60.00 TO STA. 547+29.00
STA. 564+62.00 TO STA. 574+37.50



PCC PAVEMENT REHAB. (SUPERELEVATION)
(SHOWN IN DIRECTION OF TRAFFIC)

RIGHT MAIN LANES

STA. 393+90.00 TO STA. 413+32.00
STA. 513+75.00 TO STA. 523+55.00

LEFT MAIN LANES

STA. 547+29.00 TO STA. 564+62.00

10/3/2016

RBB0302.DGN

TYPICAL SECTIONS OF IMPROVEMENT

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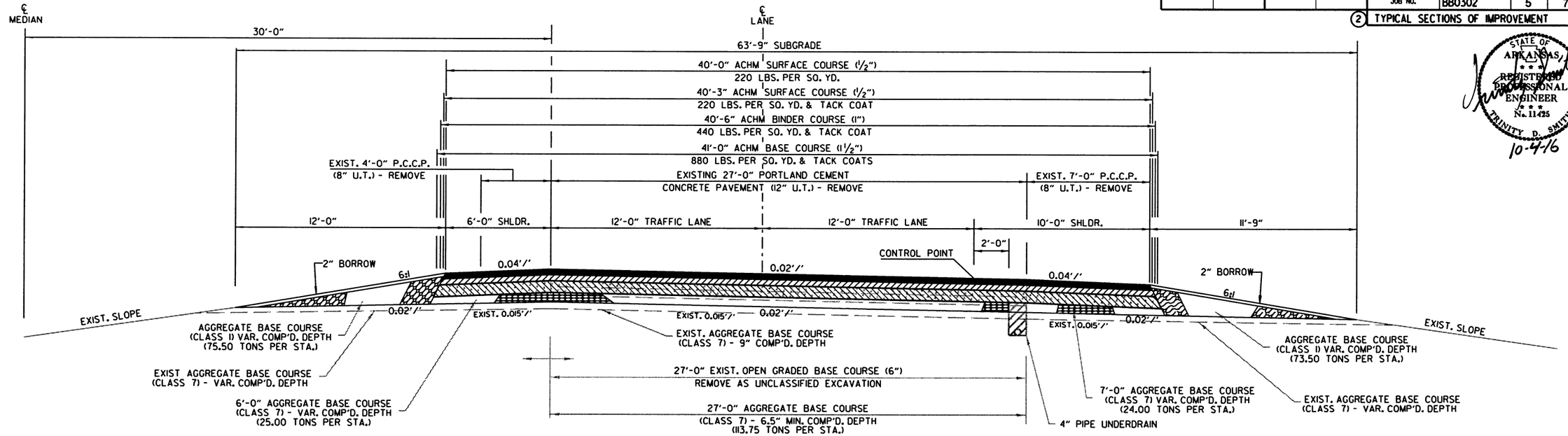
				6	ARK.			
				JOB NO.		BB0302	5	74

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



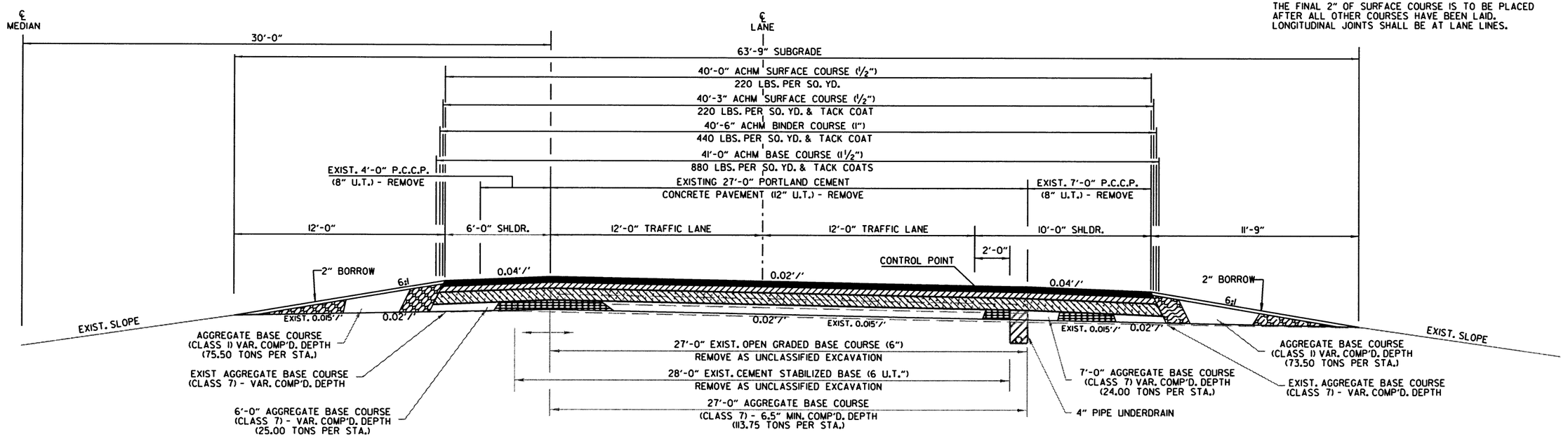
FULL DEPTH RECONSTRUCTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 576+30.50 TO STA. 576+60.50

NOTES:

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.



FULL DEPTH RECONSTRUCTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 576+60.50 TO STA. 581+80.50

TYPICAL SECTIONS OF IMPROVEMENT

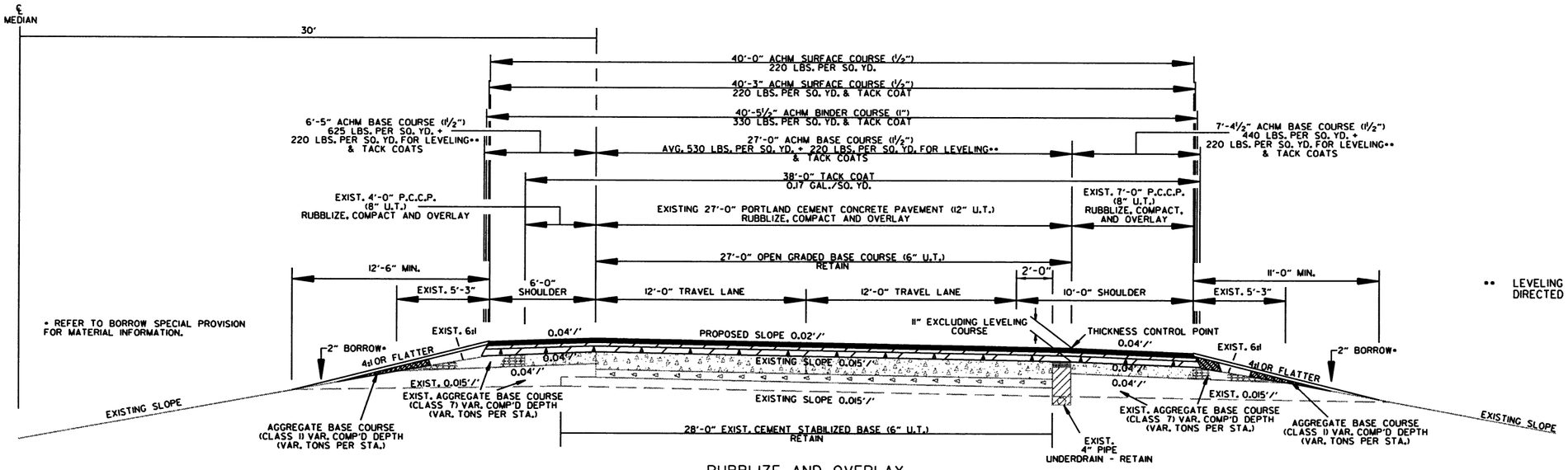
10/3/2016

RBB0302.DGN

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.		BB0302	6	74

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



RUBBLIZE AND OVERLAY
TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 581+80.50 TO STA. 620+00.00

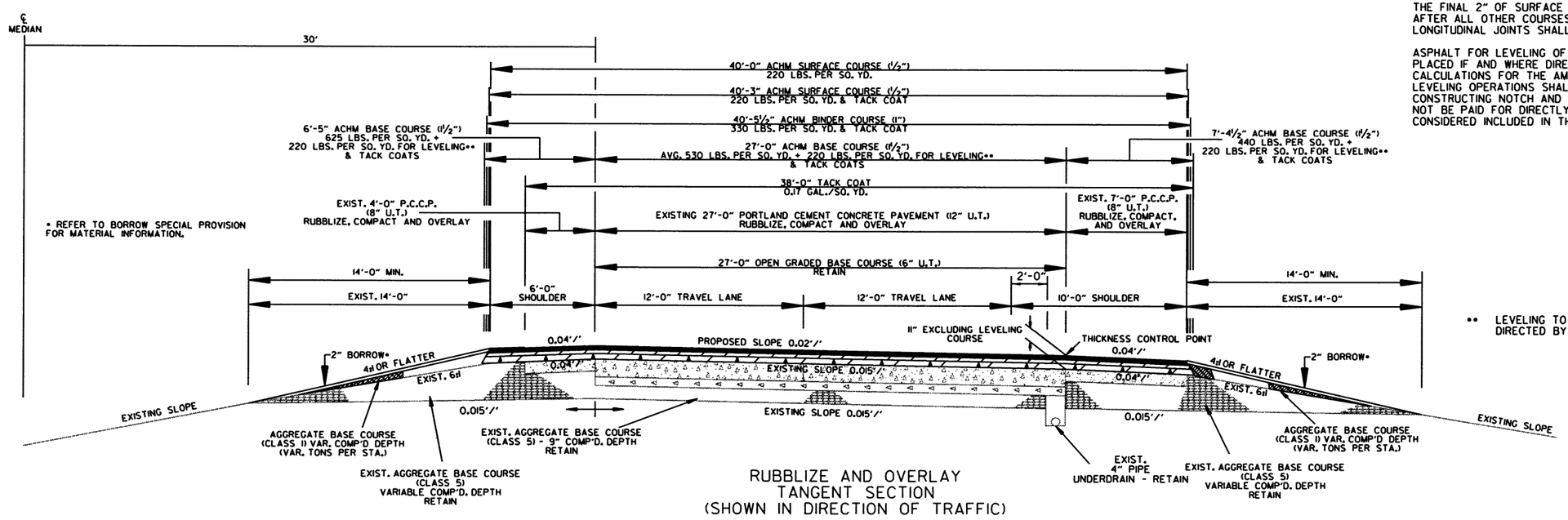
•• LEVELING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

NOTES:

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.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED 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.



RUBBLIZE AND OVERLAY
TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 620+00.00 TO STA. 628+00.00

•• LEVELING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

10/3/2016

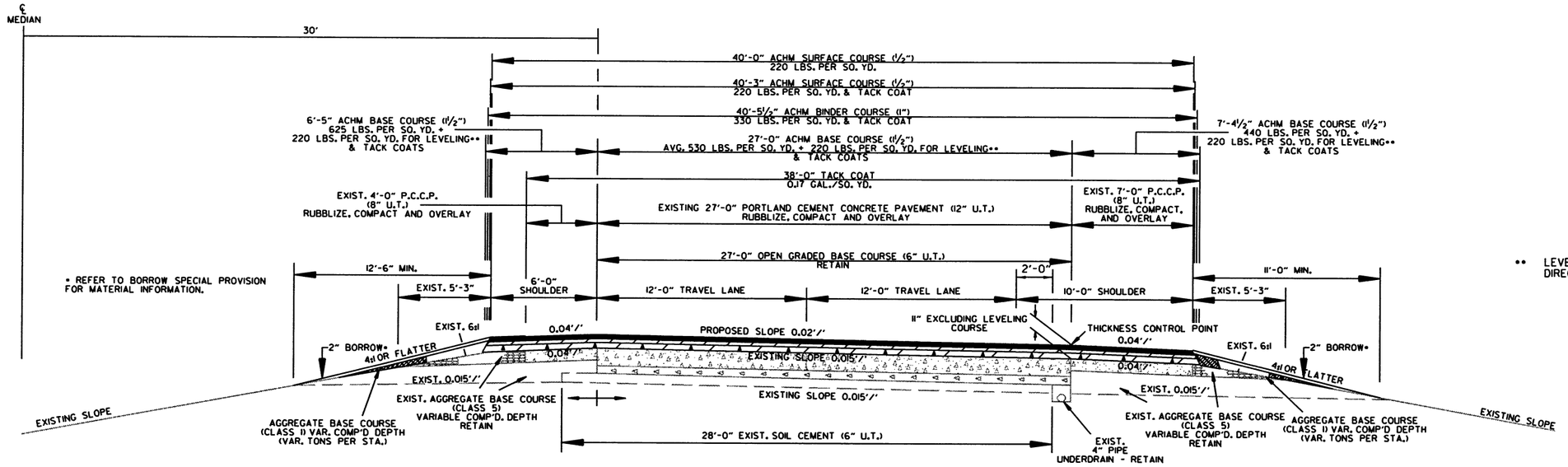
RBB0302.DGN

TYPICAL SECTIONS OF IMPROVEMENT

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.		BB0302	7	74

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-7-16



* REFER TO BORROW SPECIAL PROVISION FOR MATERIAL INFORMATION.

** LEVELING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

RUBBLIZE AND OVERLAY
TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

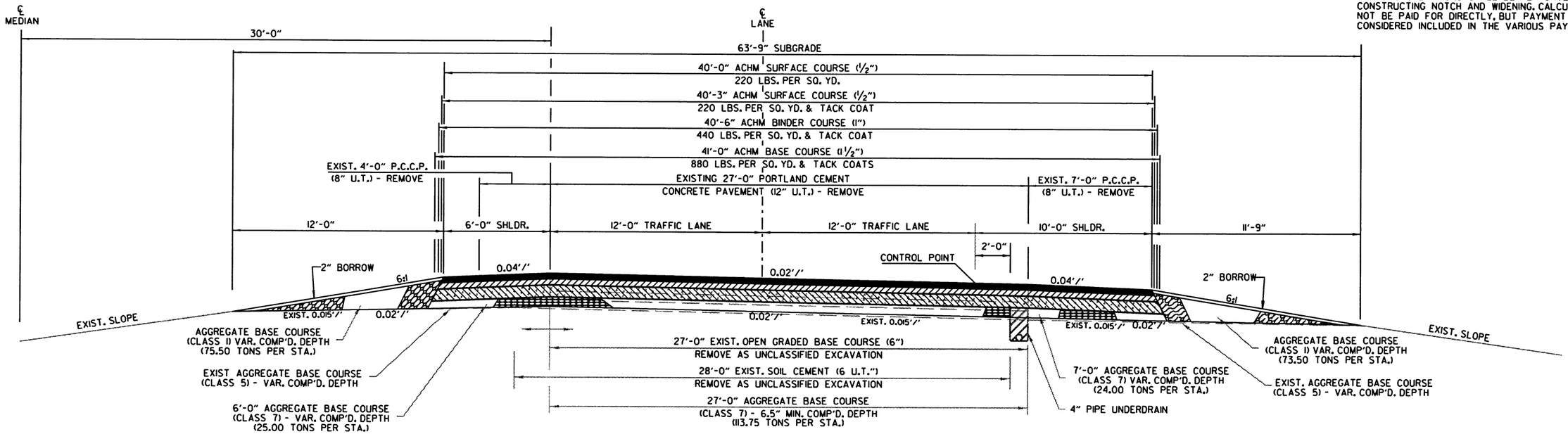
STA. 628+00.00 TO STA. 631+50.00

NOTES:

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.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED 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.



FULL DEPTH RECONSTRUCTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 631+50.00 TO STA. 637+00.00

10/3/2016

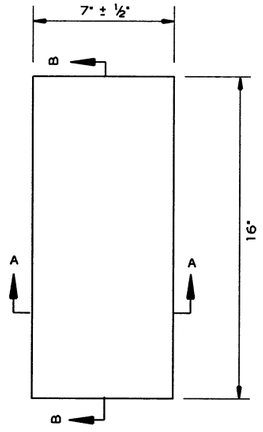
RBB0302.DGN

TYPICAL SECTIONS OF IMPROVEMENT

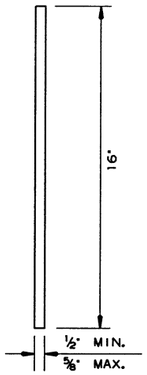
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0302	8	74

(2) SPECIAL DETAILS

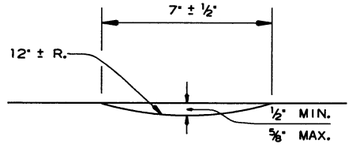
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



PLAN

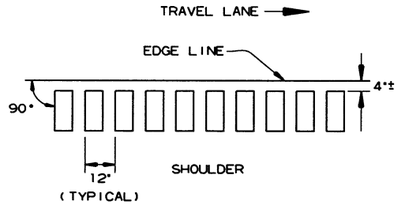


SECTION B-B



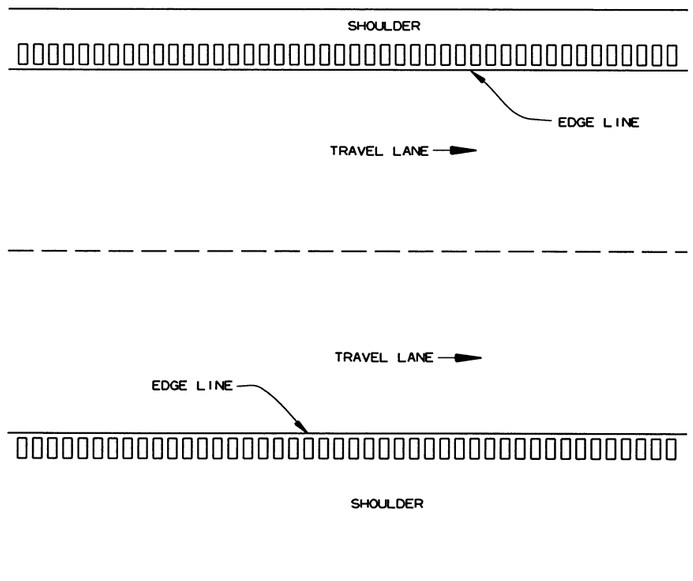
SECTION A-A

DETAILS OF RUMBLE STRIPS



LOCATION PLAN OF RUMBLE STRIPS

LEFT OR RIGHT SHOULDER



PLAN VIEW

NOTES:

1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE.
2. THE ½" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.

10/3/2016

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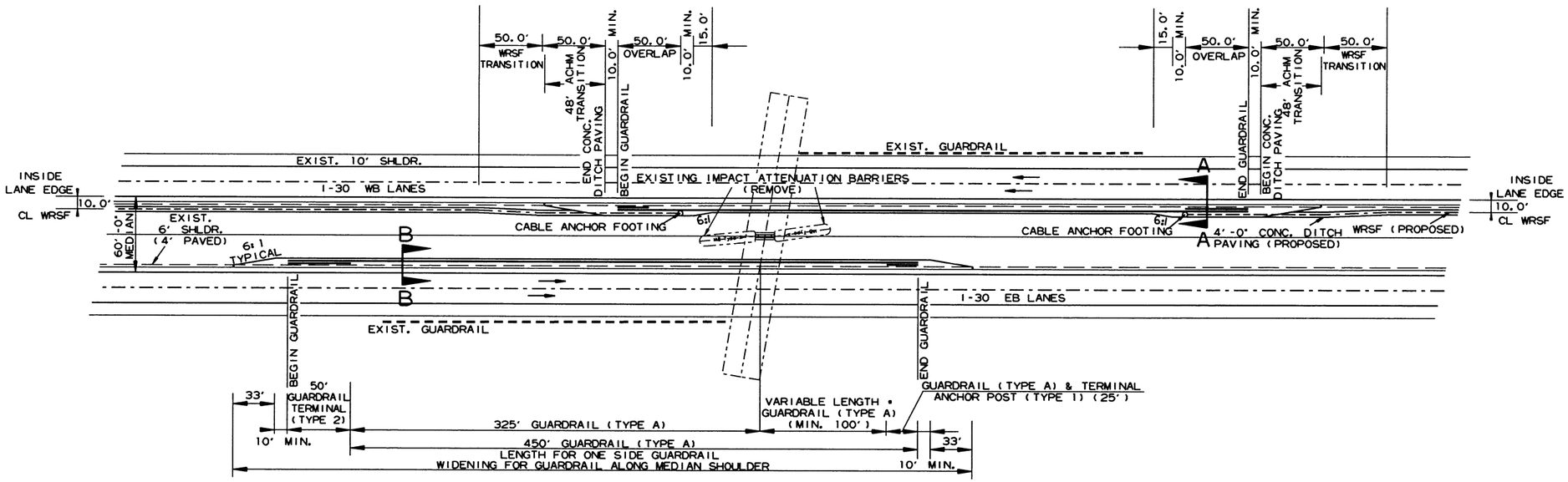
SPECIAL DETAILS

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.		BB0302	9	74

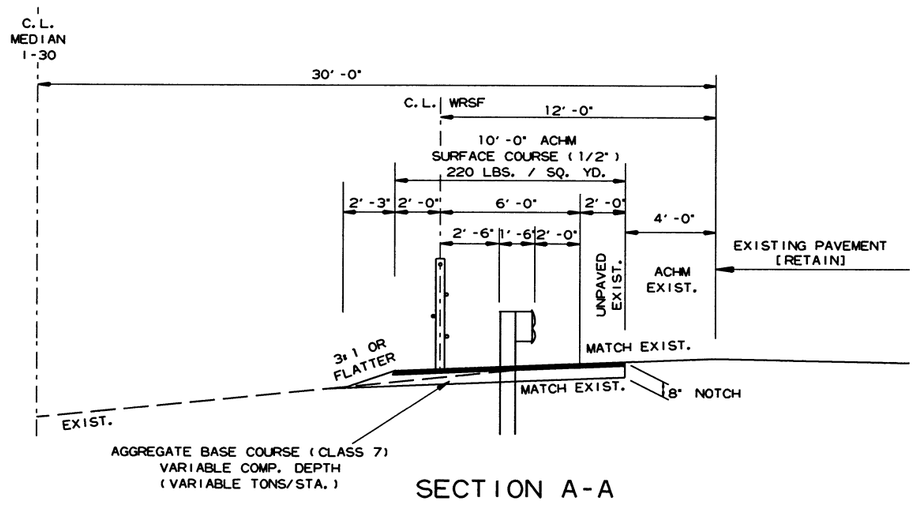
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

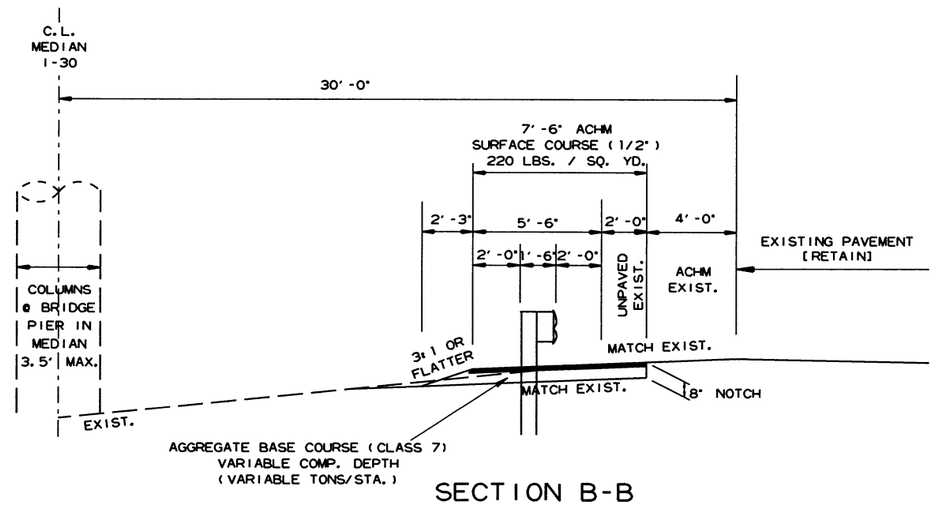


DETAIL AT OVERPASSES

NOTE: REFER TO PLAN SHEETS FOR PLACEMENT OF WIRE ROPE SAFETY FENCE ON EASTBOUND OR WESTBOUND FORESLOPES.



SECTION A-A



SECTION B-B

DETAILS OF SHOULDER WIDENING FOR GUARDRAIL AND OVERLAPS WITH ENDS OF WIRE ROPE SAFETY FENCE

10/3/2016

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				6	ARK.			
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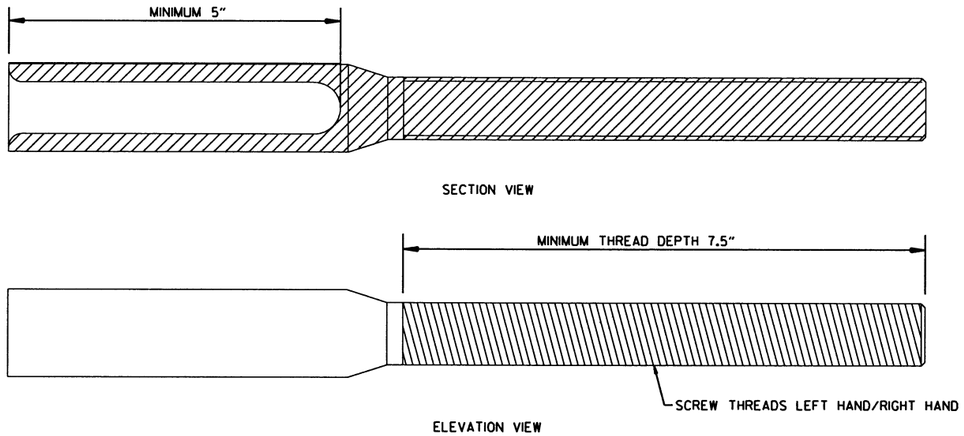
(2) SPECIAL DETAILS

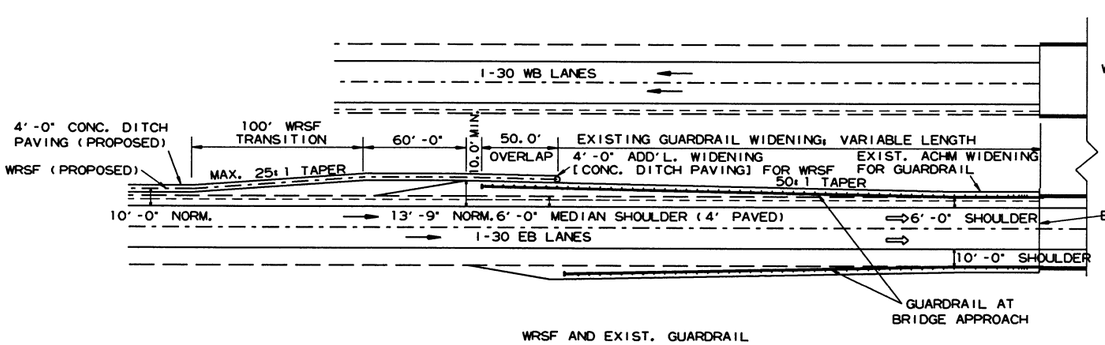
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



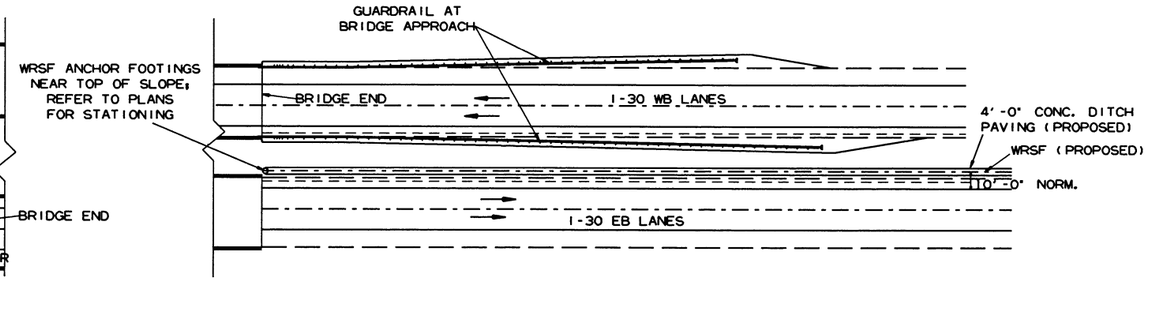
NOTE:

REFER TO "WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS" SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.

THREADED TERMINAL DETAIL



WRSF AND EXIST. GUARDRAIL ON SAME SIDE OF MEDIAN



WRSF AND EXIST. GUARDRAIL ON OPPOSITE SIDES OF MEDIAN

DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS

REFER TO PLANS FOR RELATIVE PLACEMENT OF GUARDRAIL AND WIRE ROPE SAFETY FENCE AT EACH BRIDGE END

10/3/2016

RBB0302.DGN

SPECIAL DETAILS

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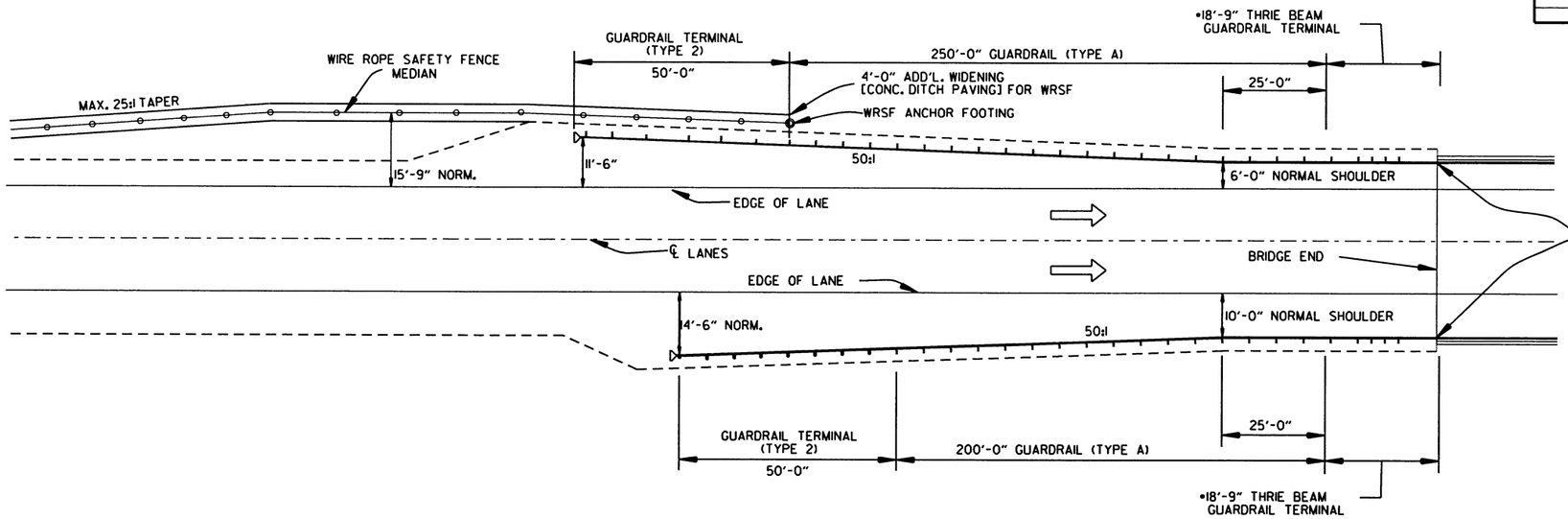
				6	ARK.			
				JOB NO.		BB0302	11	74

(2) SPECIAL DETAILS

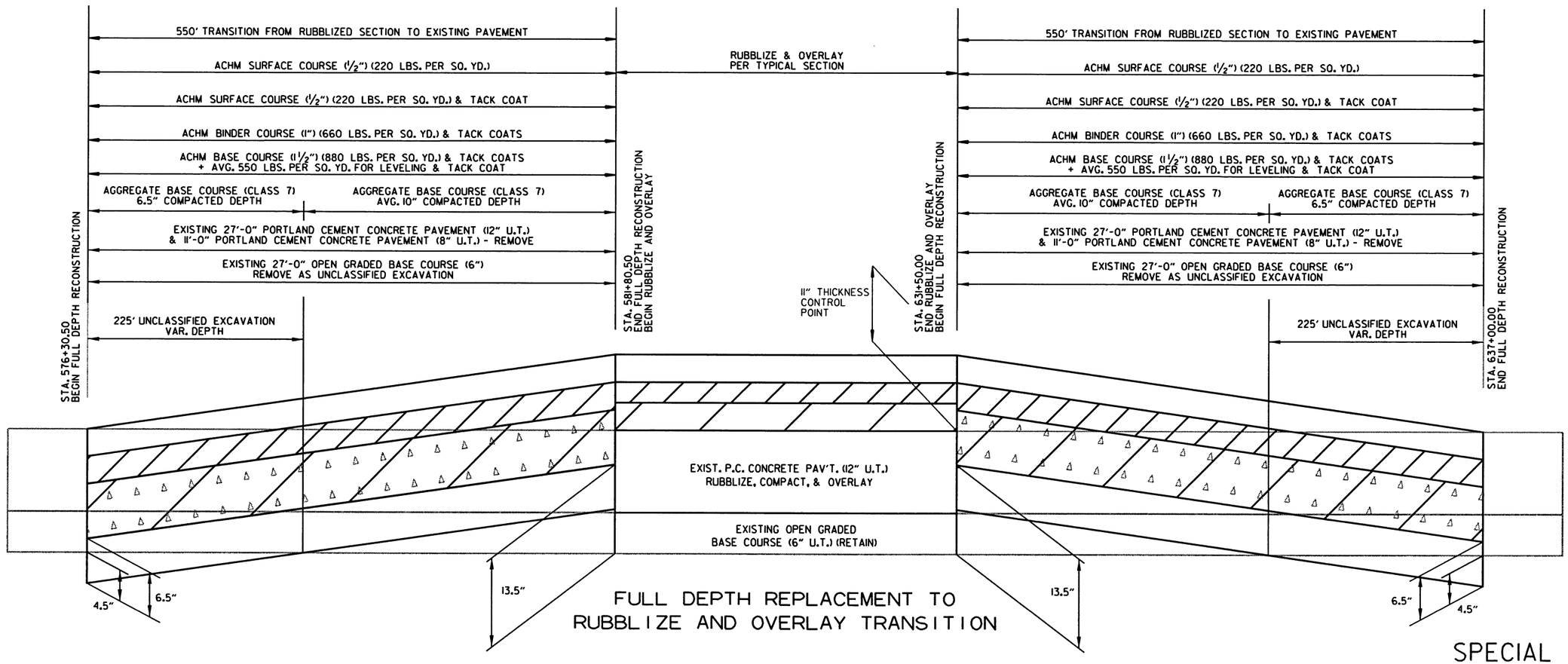
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



THRIE BEAM GUARDRAIL CONNECTION AT BRIDGE END. SEE STD. DWG. GR-10.

* THE CONTRACTOR SHALL DRILL 1" DIA. HOLES FOR THE NEW THRIE BEAM CONNECTION BOLTS IN THE EXISTING TRANSITION RAIL. CARE SHALL BE EXERCISED TO AVOID THE EXISTING REINFORCING STEEL IN THE RAIL. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS. SEE STANDARD DRAWING GR-10 FOR ADDITIONAL DETAILS.

TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS



FULL DEPTH REPLACEMENT TO RUBBLIZE AND OVERLAY TRANSITION

10/3/2016

RBB0302.DGN

SPECIAL DETAILS

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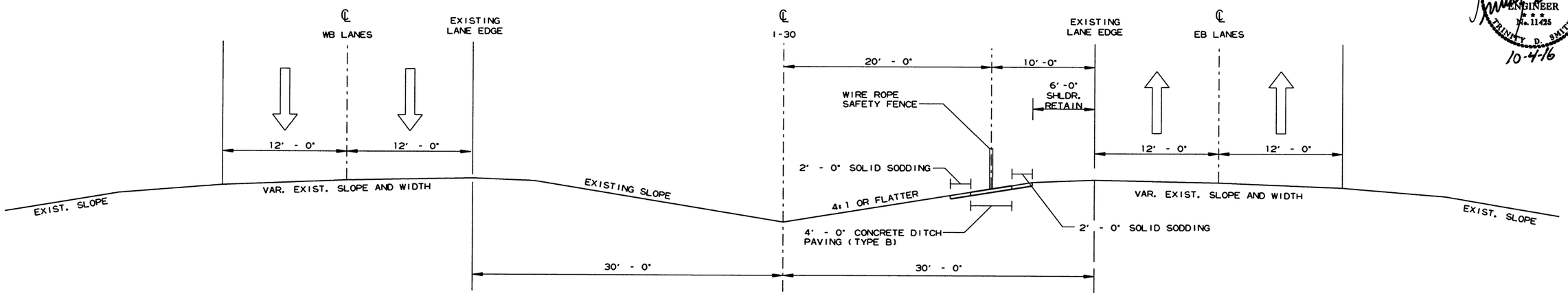
				6	ARK.			
				JOB NO.		BB0302	12	74

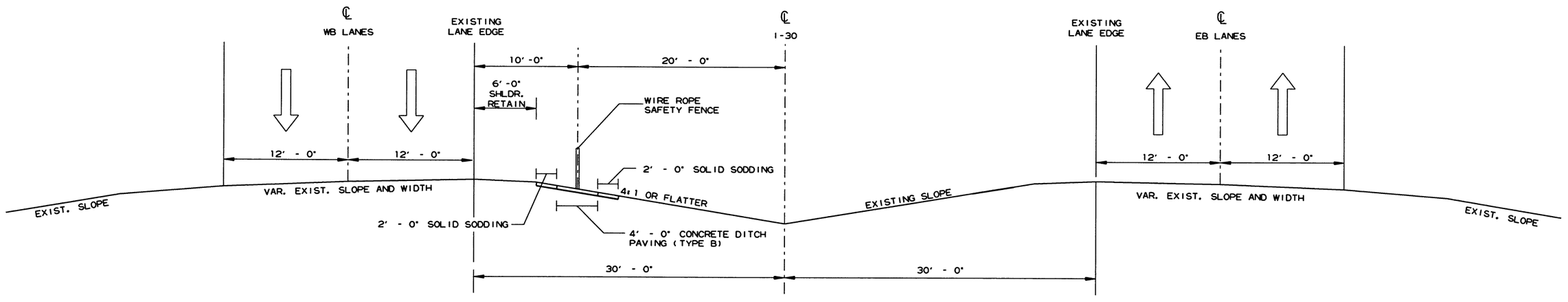
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



TYPICAL SECTION OF IMPROVEMENT
FOR WIRE ROPE SAFETY FENCE RIGHT OF CENTERLINE

STA. 122+97.38 TO STA. 196+24.44
STA. 200+13.10 TO STA. 328+23.81



TYPICAL SECTION OF IMPROVEMENT
FOR WIRE ROPE SAFETY FENCE LEFT OF CENTERLINE

STA. 328+41.81 TO STA. 379+84.68

10/3/2016

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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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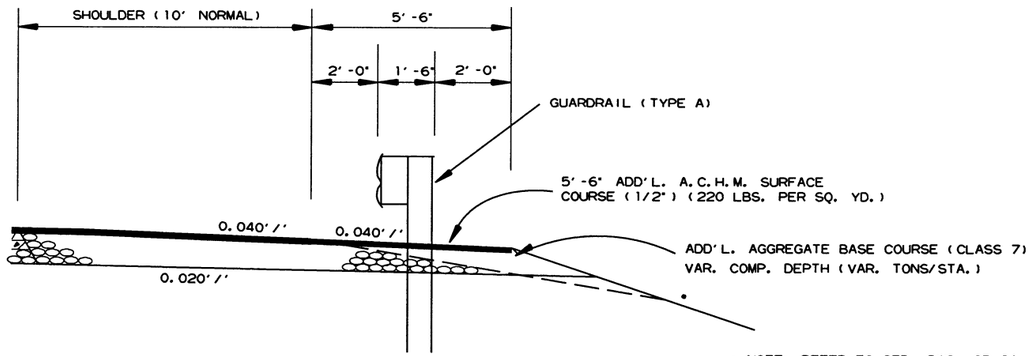
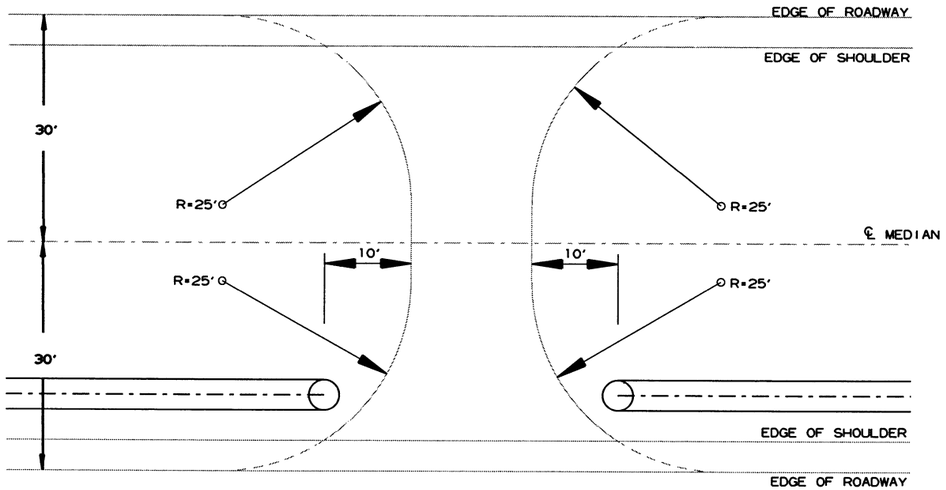
				JOB NO.		BB0302	13	74

(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

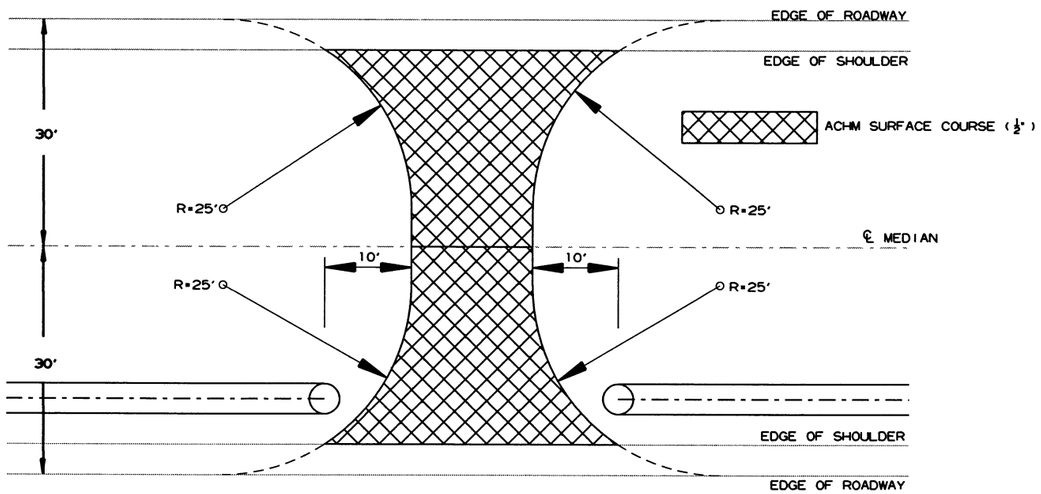


WIDENING FOR GUARDRAIL



DETAIL OF EXISTING MEDIAN CROSSING

STA. 546+63



DETAIL OF PROPOSED MEDIAN CROSSING

STA. 630+78

NOTE: EXISTING MEDIAN CROSSOVER MUST BE REMOVED PRIOR TO CONSTRUCTION OF PROPOSED MEDIAN CROSSOVER.

ELEVATION OF PROPOSED MEDIAN CROSSOVER WILL MATCH ELEVATION OF RUBBLIZE AND OVERLAY SECTION OF PAVEMENT.

10/3/2016

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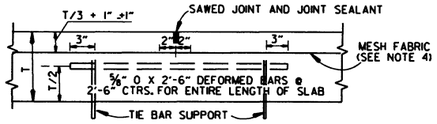
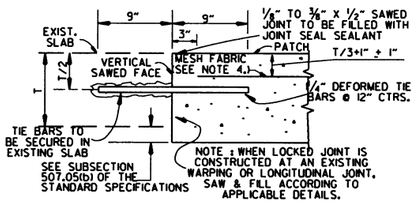
SPECIAL DETAILS

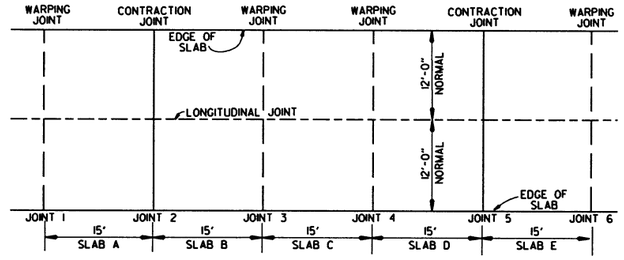
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0302	14	74



SECTION A-A
TIED LONGITUDINAL JOINT

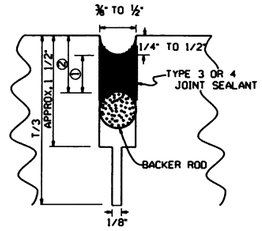


SECTION D-D
LOCKED JOINT



PLAN OF PAVEMENT REPAIR
(FULL SLABS)

LOCKED JOINTS ARE TO BE CONSTRUCTED AT RECONSTRUCTED SLABS.



DETAIL OF SAWED CONTRACTION JOINT

② SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
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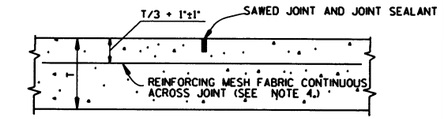
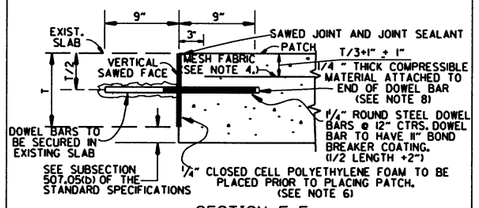
10-4-16



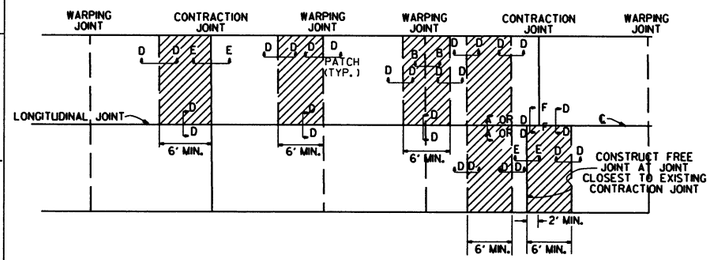
SECTION B-B

WARPING JOINT

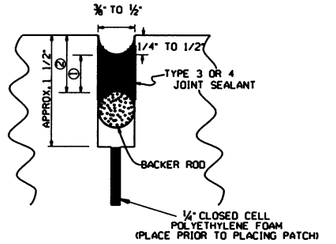


SECTION E-E

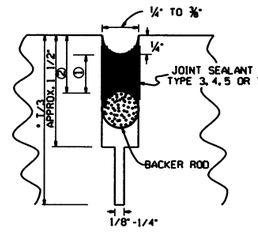
FREE TRANSVERSE JOINT



PLAN OF PAVEMENT REPAIR
(PARTIAL SLABS)

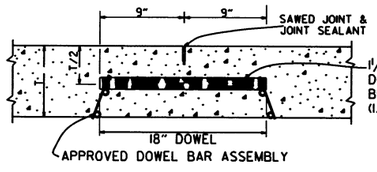


DETAIL OF SAWED FREE TRANSVERSE & FREE LONGITUDINAL JOINT

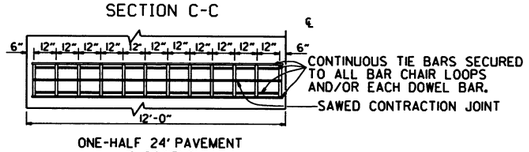


*NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED
TIED LONGITUDINAL JOINT
AND WARPING JOINT



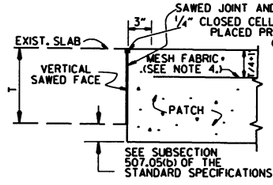
SECTION C-C



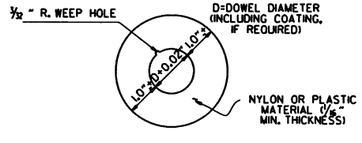
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN - CONTRACTION JOINT

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



SECTION F-F
FREE LONGITUDINAL JOINT



DETAIL OF EPOXY
RETENTION DISK

NOTE: EPOXY RETENTION DISK SHALL BE SLIPPED TIGHTLY OVER TIE BARS AND FIRMLY AGAINST THE SLAB FACE AFTER INSERTING TIE BAR AND EPOXY INTO HOLE

JOINT CONFIGURATION FOR
TYPE 3 OR 4 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½

JOINT CONFIGURATION FOR
TYPE 5 OR 7 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	⅜	¾
⅜	¾	½	1

NOTES FOR PAVEMENT REPAIR

1. EXACT SIZE AND LOCATION OF AREA TO BE REPAIRED SHALL BE DETERMINED BY THE ENGINEER. ALL PATCHES SHALL EXTEND ACROSS THE FULL WIDTH OF THE SLAB AS SHOWN IN THESE DETAILS.
2. THE FINAL SURFACE FINISH FOR PATCHES SHALL MATCH THAT OF THE EXISTING PAVEMENT.
3. WHEN AREA TO BE REPAIRED INCLUDES AN EXISTING JOINT, THE JOINT SHALL BE RECONSTRUCTED TO THE CONFIGURATION SHOWN IN THESE DETAILS.
4. ALL REPAIRED AREAS SHALL BE REINFORCED WITH MESH FABRIC AS SHOWN. DEPTH OF MESH PLACEMENT SHALL HAVE A TOLERANCE OF ±1 INCH. MESH FABRIC SHALL BE 12 x 12 - W4 x W4 WELDED WIRE FABRIC (MINIMUM WIRE SIZE). LAPS SHALL BE MINIMUM 6" IN EACH DIRECTION.
5. FORMS FOR PAVEMENT REPAIR SHALL BE METAL UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. CLOSED CELL POLYETHYLENE FOAM SHALL BE SECURED TO SAWED FACE OF EXISTING P.C.C. PAVEMENT WITH ADHESIVE OR ADHESIVE TAPE AS APPROVED BY THE ENGINEER AND TRIMMED FLUSH WITH TOP OF EXISTING SLAB TO PREVENT DISPLACEMENT WHEN THE PATCH IS BEING PLACED.
7. WHEN THE PATCH IS PLACED OVER GRANULAR BASE, REMOVE ANY LOOSE BASE MATERIAL, COMPACT REMAINING BASE AS NECESSARY AND PLACE PATCH. WHEN PATCH IS PLACED OVER TREATED BASE, REMOVE ANY LOOSE BASE MATERIAL AND PLACE PATCH.
8. ¼" THICK COMPRESSIBLE MATERIAL SHALL BE ATTACHED TO THE ENDS OF DOWEL BARS AT ALL FREE TRANSVERSE JOINTS (SEE SECTION E-E). THE MATERIAL SHALL BE THE SAME DIAMETER AS THE DOWEL BAR. A PLASTIC CAP OR OTHER TYPE OF DEVICE MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
9. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS 1" WILL BE ALLOWED FOR VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW.

DETAILS OF PORTLAND CEMENT
CONCRETE PAVEMENT PATCHING
(MAIN LANES)

SPECIAL DETAILS

10/3/2016

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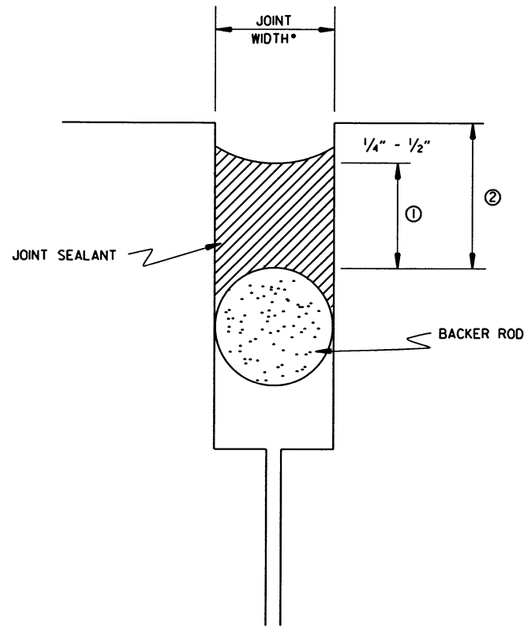
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

JOINT CONFIGURATION FOR TYPE 3 & 4 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
	INCHES		
1/4	1/4	3/8	1/2
3/8	1/4	1/2	1/2
1/2	1/4	5/8	1/2
5/8	5/16	3/4	9/16
3/4	3/8	7/8	7/8
7/8	7/16	1	11/16
1	1/2	1 1/4	3/4
1 TO 1 1/2	1/2	1 1/4 +	3/4

NOTE: JOINTS GREATER THAN 1 1/2" IN WIDTH SHALL BE SEALED WITH TYPE 5 JOINT SEALANT.



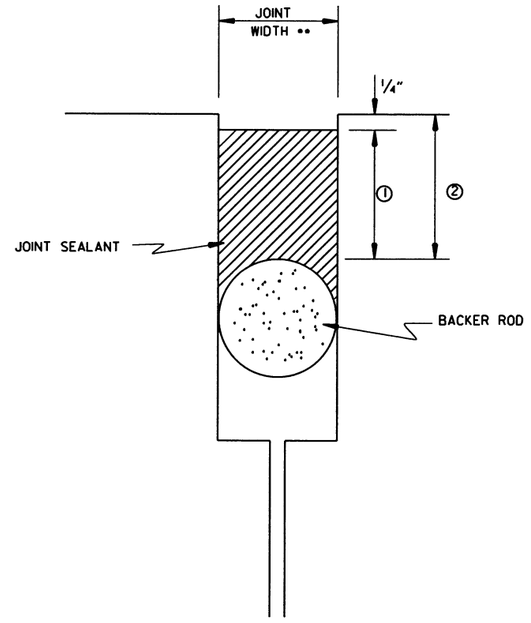
DETAILS OF TYPE A OR TYPE B JOINT REHABILITATION

• CONTRACTION JOINTS SHALL BE SAWED TO MIN. WIDTH OF 3/8".

WARPING & LONGITUDINAL JOINTS SHALL BE SAWED TO MIN. WIDTH OF EXISTING WIDTH +1/8" (1/16" ON EACH SIDE).

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	APPROX. WIDTH TO DEPTH RATIO	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES		INCHES		
1/4	1:2	1/2	3/8	3/4
3/8		3/4	1/2	1
1/2		1	5/8	1 1/4
5/8		1 1/4	3/4	1 1/2
3/4	1:1.75	1 3/8	7/8	1 5/8
7/8		1 1/2	1	1 3/4
1	1:1.6	1 5/8	1 1/4	1 7/8
1 TO 3		1 5/8 +	1 1/4 +	1 7/8 +



DETAILS OF TYPE B JOINT REHABILITATION

•• WARPING & LONGITUDINAL JOINTS SHALL BE SAWED TO MIN. WIDTH OF EXISTING WIDTH +1/8" (1/16" ON EACH SIDE).

NOTE:

FOR JOINTS WIDER THAN 1 1/2", THE CONTRACTOR SHALL HAVE THE OPTION OF COMPLETELY FILLING THE JOINT IN LIEU OF USING A BACKER ROD.

REFER TO SECTION 509 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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				JOB NO.		BB0302	16	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

HWY. 67
MANDEVILLE RD.
MO. PAC. R.R.
3796 AR
3796 BR
390
395
400
405
410
415
420

STA. 391+72.87
BEGIN JOB BB0302
BEGIN PAVEMENT REHABILITATION
LOG MILE 11.63

BR. END STA. 392+34.14
STA. 392+70.64
P.C. 394+50.08
N 83° 55' 00" E
STA. 391+72.87
BR. END STA. 391+36.37

STA. 397+00 - IN PLACE
DROP INLET IN MEDIAN
18" x 130' R.C. PIPE CULVERT TO RT.
RETAIN

STA. 402+00 - IN PLACE
DROP INLET IN MEDIAN
18" x 102' R.C. PIPE CULVERT TO RT.
RETAIN

I-30 CENTERLINE
PI = 404+12.30
Δ = 45°33'00" LT.
D = 2°30'00"
T = 962.22'
L = 1822.00'
PC = 394+50.08
PT = 412+72.08
MATCH EXISTING SUPER

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

REVISIONS

DATE OF REVISION	REVISION

D = 2°30'00"
T = 962.22'
L = 1822.00'
PC = 394+50.08
PT = 412+72.08
MATCH EXISTING SUPER

LEGEND

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

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STA. 412+37.01
BEGIN WRSF
P.T. 412+72.08
P.I. 404+12.30
N 38° 22' 00" E

STA. 406+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 86' R.C. PIPE CULVERT TO RT.
RETAIN

STA. 409+00 - IN PLACE
DROP INLET IN MEDIAN
DBL. 5' x 3' x 176' R.C. BOX CULVERT
RETAIN

10/4/2016

RBB0302.DGN

PAVEMENT REHABILITATION
TEMPORARY EROSION CONTROL DETAILS

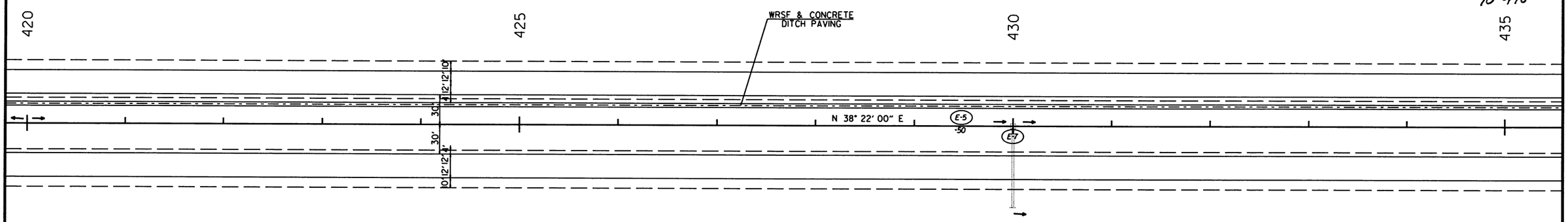
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0302	17	74

(2) TEMPORARY EROSION CONTROL DETAILS

STA. 430+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 80' R.C. PIPE CULVERT TO RT.
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



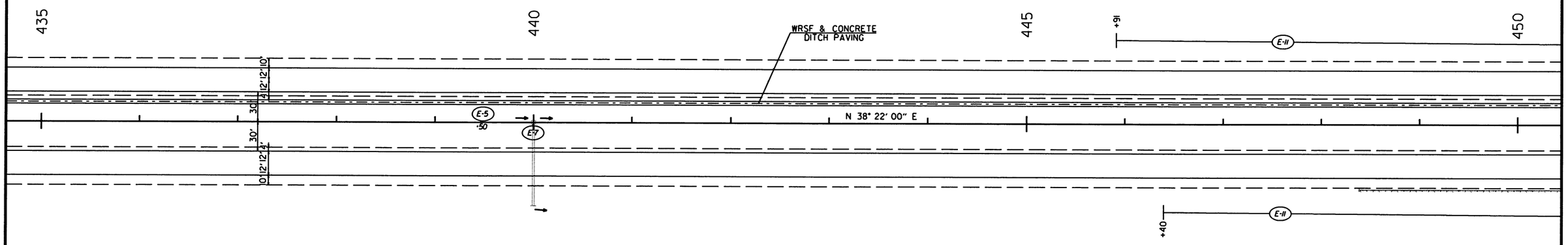
REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.



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STA. 440+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 82' R.C. PIPE CULVERT TO RT.
RETIAN

PAVEMENT REHABILITATION
TEMPORARY EROSION CONTROL DETAILS

STA. 451+15 - IN PLACE
DROP INLET IN MEDIAN
DBL. 6' x 3' x 180' R.C. BOX CULVERT
15°RT. FWD. SKEW
RETAIN

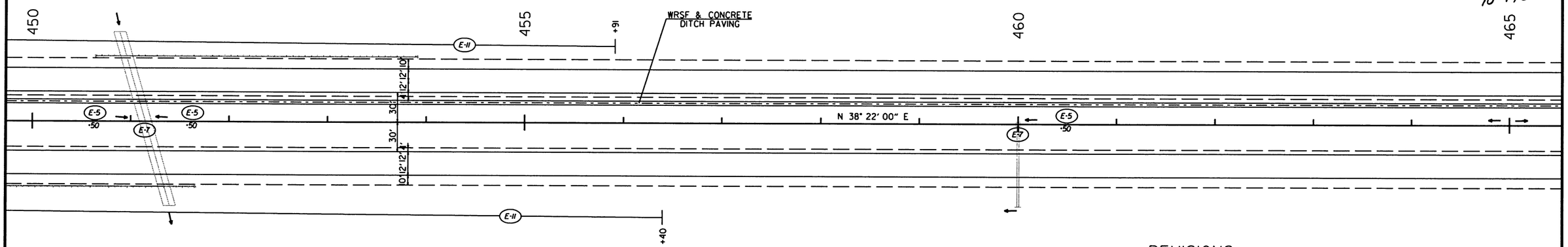
STA. 460+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 82' R.C. PIPE CULVERT TO RT.
RETAIN

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.		BB0302	18	74

(2) TEMPORARY EROSION CONTROL DETAILS

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

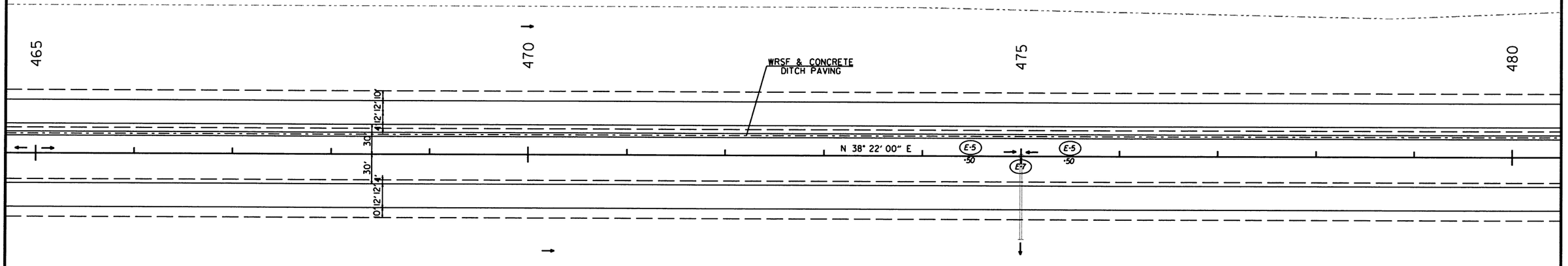


LEGEND

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

REVISIONS

DATE OF REVISION	REVISION



10/4/2016

RBB0302.DGN

PAVEMENT REHABILITATION
TEMPORARY EROSION 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.		BB0302	19	74

(2) TEMPORARY EROSION CONTROL DETAILS

STA. 489+00 - IN PLACE
DROP INLET IN MEDIAN
DBL. 36" x 79' R.C. PIPE CULVERT TO LT.
DBL. 36" x 82' R.C. PIPE CULVERT TO RT.
AT 15° RT. FWD. SKEW
RETAIN

STA. 489+30 - IN PLACE FR. RD
DBL. 36" x 32' R.C. PIPE CULVERT
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
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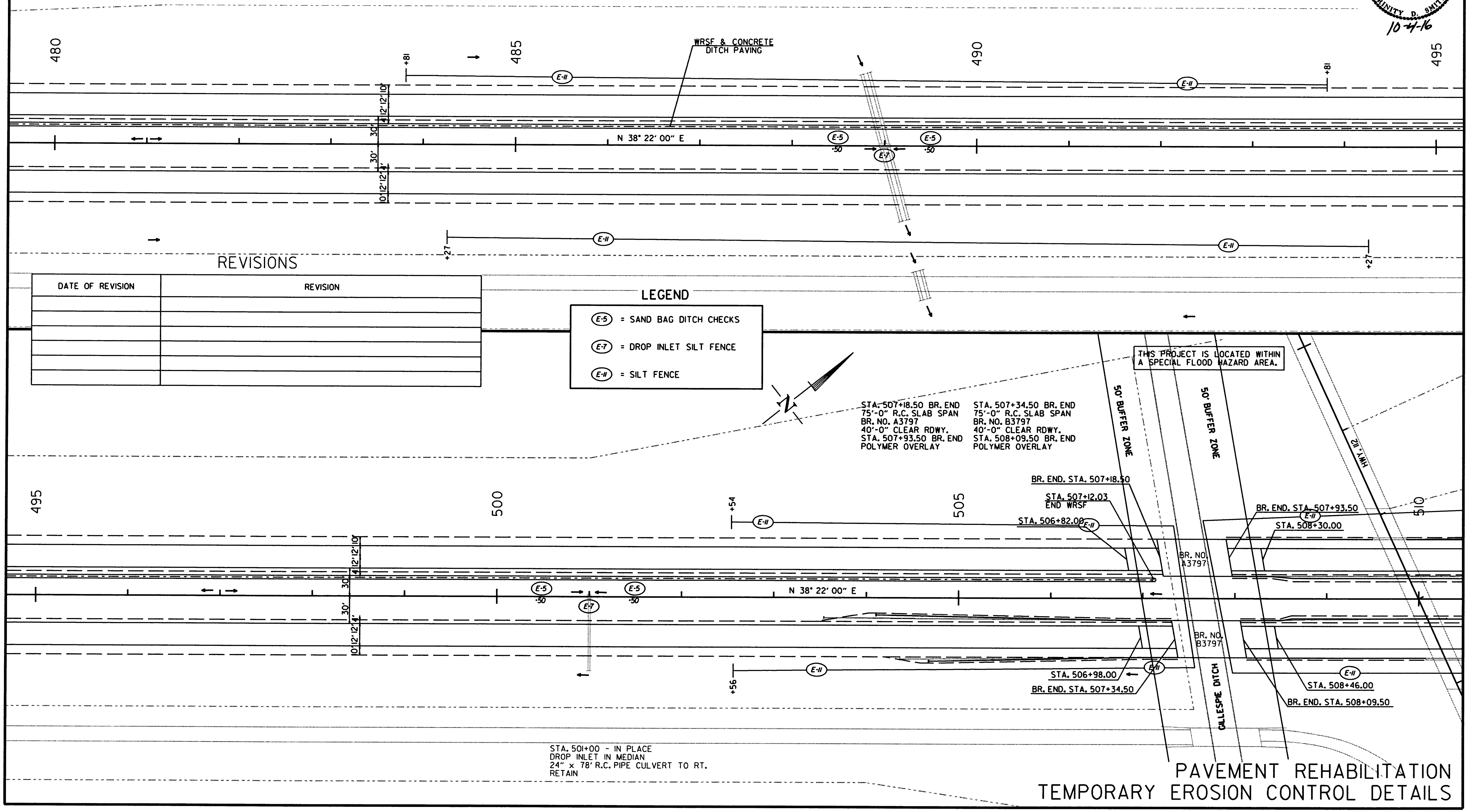

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

STA. 507+18.50 BR. END
75'-0" R.C. SLAB SPAN
BR. NO. A3797
40'-0" CLEAR RDWY.
STA. 507+93.50 BR. END
POLYMER OVERLAY

STA. 507+34.50 BR. END
75'-0" R.C. SLAB SPAN
BR. NO. B3797
40'-0" CLEAR RDWY.
STA. 508+09.50 BR. END
POLYMER OVERLAY

STA. 501+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 78' R.C. PIPE CULVERT TO RT.
RETAIN

PAVEMENT REHABILITATION
TEMPORARY EROSION CONTROL DETAILS

10/4/2016
RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	20	74

(2) TEMPORARY EROSION CONTROL DETAILS

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
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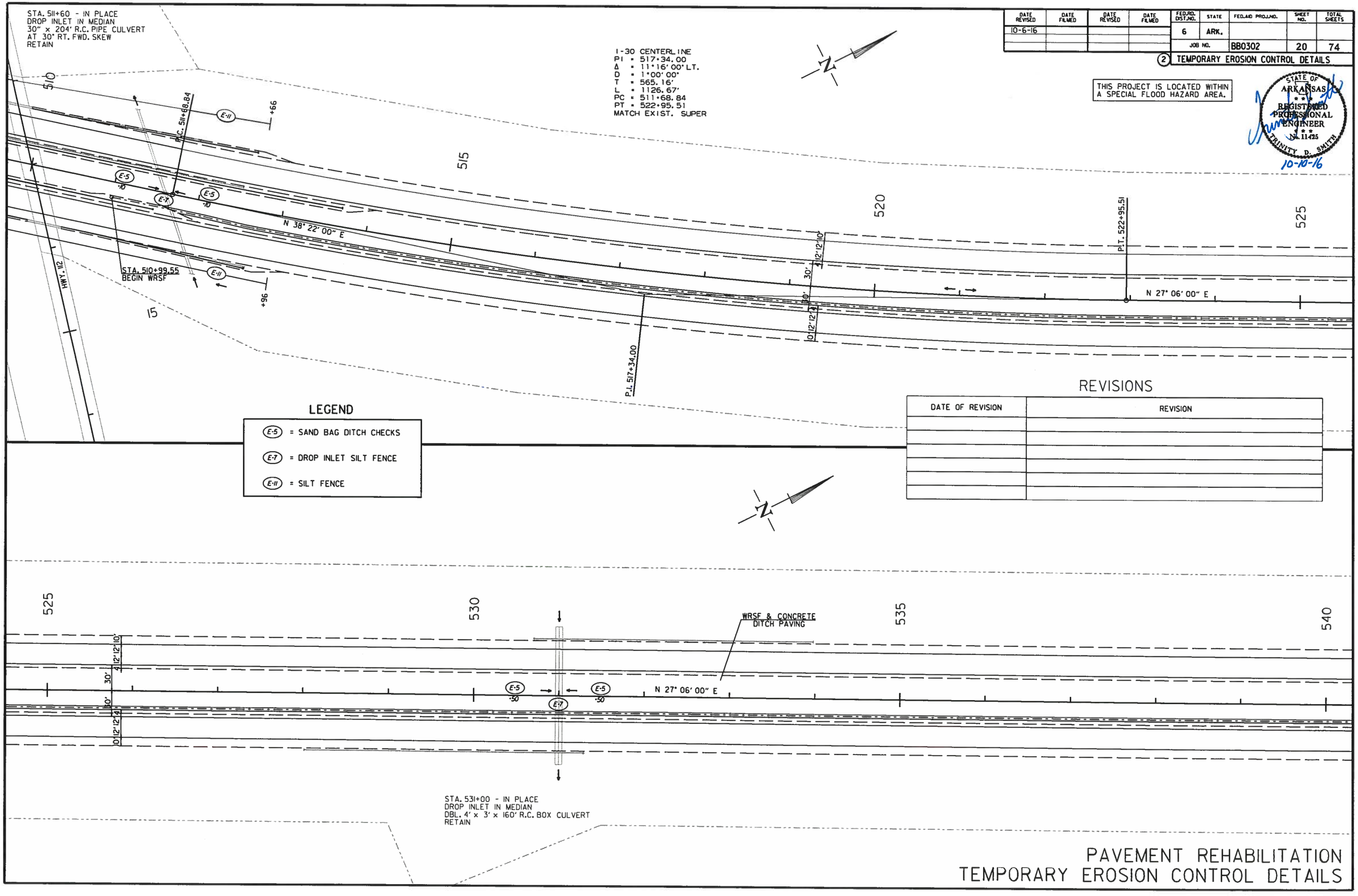
10-10-16

STA. 511+60 - IN PLACE
DROP INLET IN MEDIAN
30" x 204' R.C. PIPE CULVERT
AT 30° RT. FWD. SKEW
RETAIN

I-30 CENTERLINE
PI = 517+34.00
Δ = 11°16'00" LT.
D = 1°00'00"
T = 565.16'
L = 1126.67'
PC = 511+68.84
PT = 522+95.51
MATCH EXIST. SUPER



LEGEND

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

REVISIONS

DATE OF REVISION	REVISION

STA. 531+00 - IN PLACE
DROP INLET IN MEDIAN
DBL. 4' x 3' x 160' R.C. BOX CULVERT
RETAIN

10/6/2016

RBB0302.DGN

PAVEMENT REHABILITATION
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0302	21	74

(2) TEMPORARY EROSION CONTROL DETAILS

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
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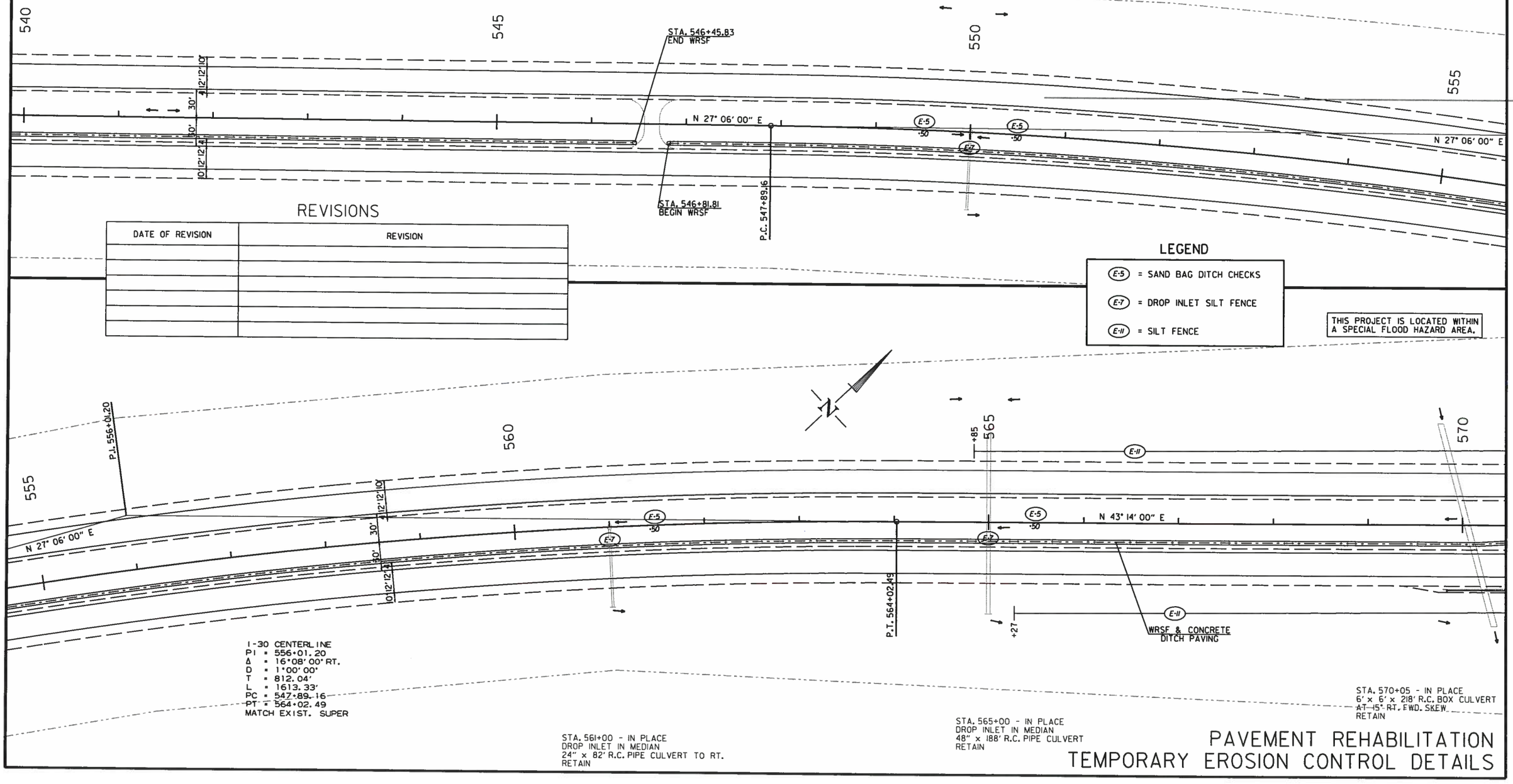
TRINITY D. SMITH
10-10-16

STA. 550+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 80' R.C. PIPE CULVERT TO RT.
RETAIN

I-30 CENTERLINE
PI = 556+01.20
Δ = 16°08' 00" RT.
D = 1°00' 00"
T = 812.04'
L = 1613.33'
PC = 547+89.16
PT = 564+02.49
MATCH EXIST. SUPER



REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-5 = SAND BAG DITCH CHECKS

E-7 = DROP INLET SILT FENCE

E-11 = SILT FENCE

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STA. 561+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 82' R.C. PIPE CULVERT TO RT.
RETAIN

STA. 565+00 - IN PLACE
DROP INLET IN MEDIAN
48" x 188' R.C. PIPE CULVERT
RETAIN

STA. 570+05 - IN PLACE
6' x 6' x 218' R.C. BOX CULVERT
AT 15° RT. FWD. SKEW
RETAIN

PAVEMENT REHABILITATION
TEMPORARY EROSION CONTROL DETAILS

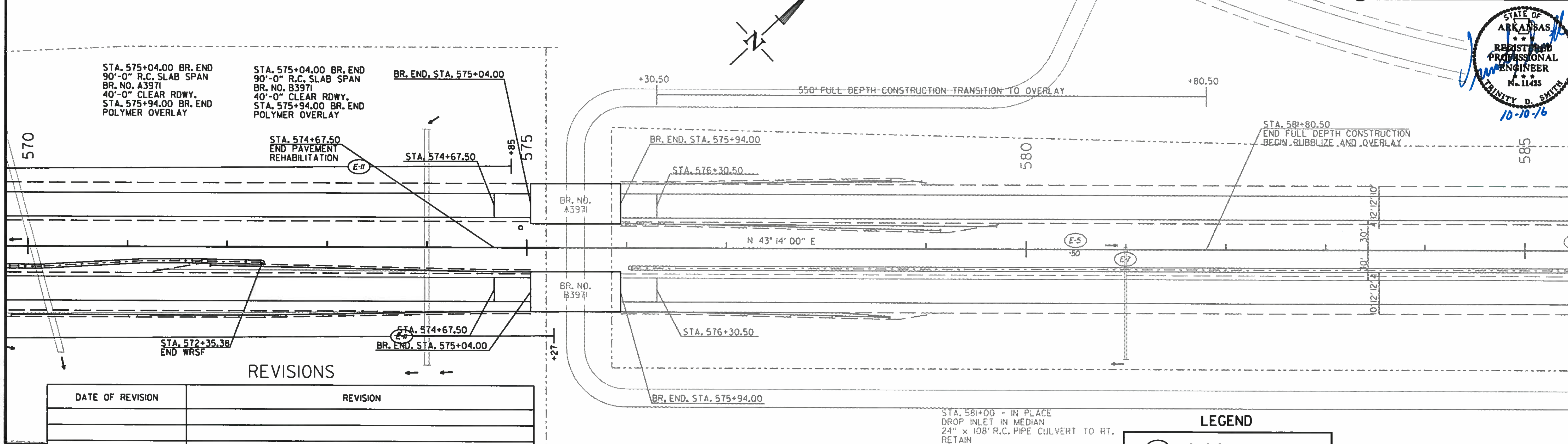
10/6/2016

RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.	BB0302		22	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



N
570
575
580
585
STA. 575+04.00 BR. END
90'-0" R.C. SLAB SPAN
BR. NO. A3971
40'-0" CLEAR RDWY.
STA. 575+94.00 BR. END
POLYMER OVERLAY
STA. 575+04.00 BR. END
90'-0" R.C. SLAB SPAN
BR. NO. B3971
40'-0" CLEAR RDWY.
STA. 575+94.00 BR. END
POLYMER OVERLAY
BR. END. STA. 575+04.00
STA. 574+67.50
END PAVEMENT
REHABILITATION
STA. 574+67.50
+85
+27
BR. NO. A3971
BR. NO. B3971
+30.50
+80.50
550' FULL DEPTH CONSTRUCTION TRANSITION TO OVERLAY
BR. END. STA. 575+94.00
STA. 576+30.50
STA. 581+80.50
END FULL DEPTH CONSTRUCTION
BEGIN RUBBLIZE AND OVERLAY
N 43° 14' 00" E
E-11
E-5
E-7
-50
30'
30'
STA. 572+35.38
END WRSF
STA. 574+67.50
BR. END. STA. 575+04.00
STA. 576+30.50
BR. END. STA. 575+94.00
STA. 581+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 108' R.C. PIPE CULVERT TO RT.
RETAIN

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

PAVEMENT REHABILITATION
TEMPORARY EROSION CONTROL DETAILS

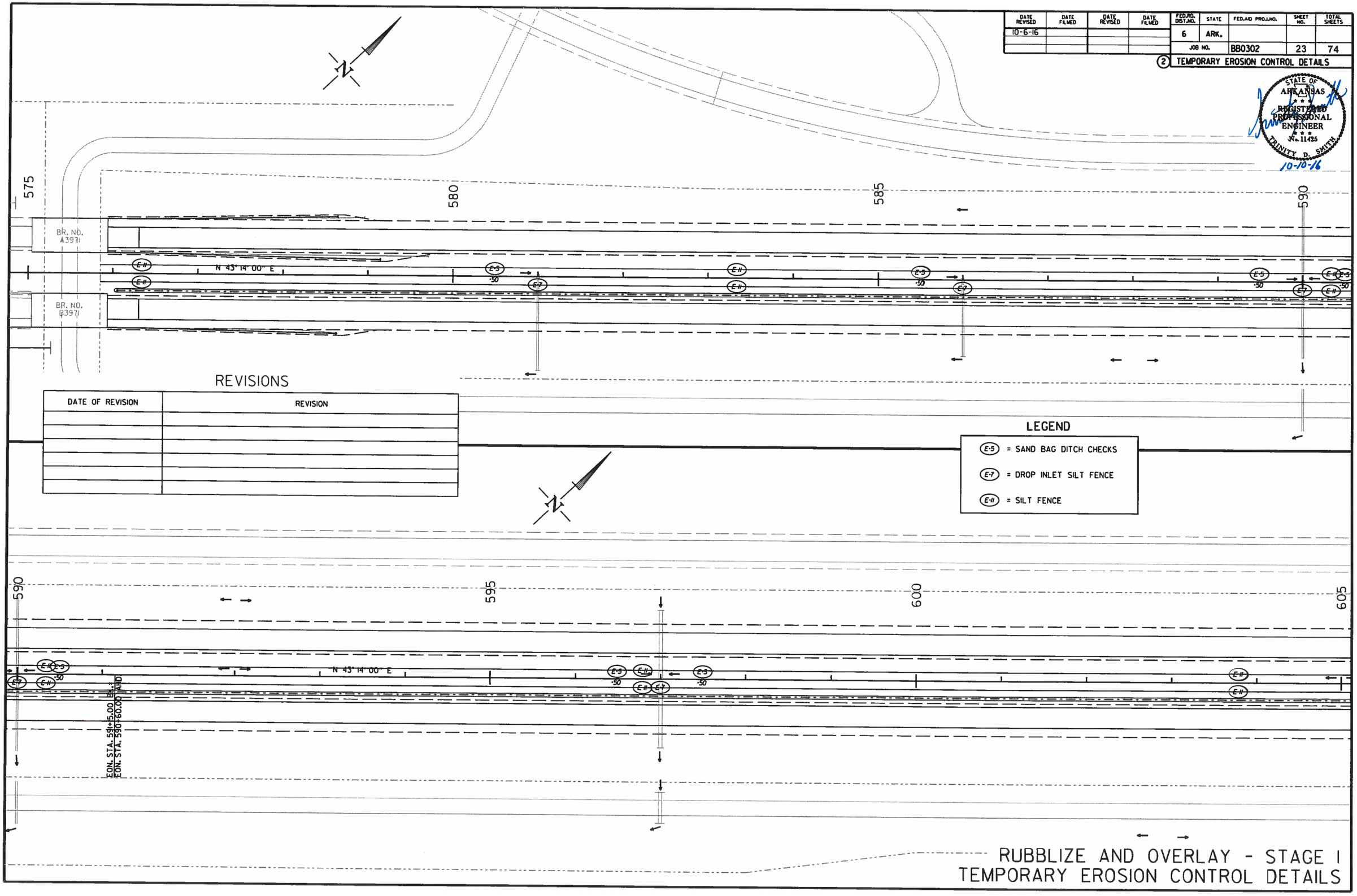
10/10/2016

RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		B80302	23	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

10/6/2016

R80302.DGN

RUBBLIZE AND OVERLAY - STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0302	24	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

605 610 615 620

N 43° 14' 00" E

E-11 E-11 E-5 ·50 E-7 E-5 ·50 E-11 E-11

REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-5 = SAND BAG DITCH CHECKS

E-7 = DROP INLET SILT FENCE

E-11 = SILT FENCE

620 625 630 635

N 43° 14' 00" E

E-11 E-11 E-5 ·50 E-7 E-5 ·50 E-11 E-11 E-11 E-11

10/6/2016

RBB0302.DGN

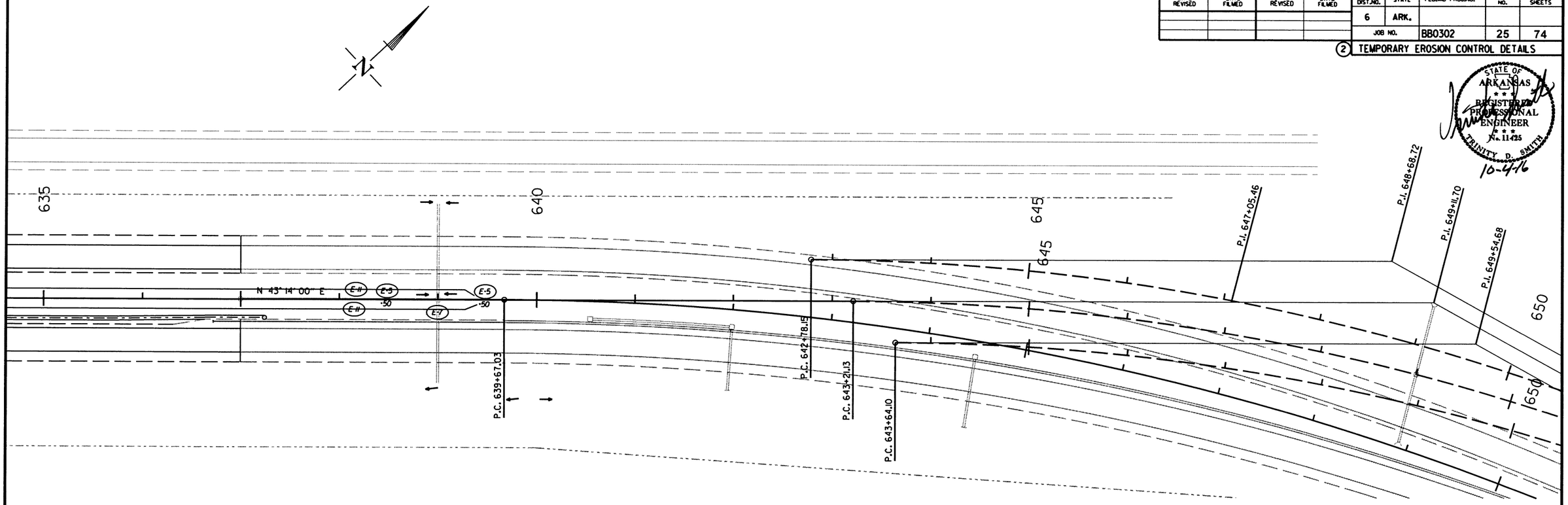
RUBBLIZE AND OVERLAY - STAGE I
TEMPORARY EROSION CONTROL DETAILS

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.		BB0302	25	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5) = SAND BAG DITCH CHECKS

(E-7) = DROP INLET SILT FENCE

(E-11) = SILT FENCE

10/4/2016

RBB0302.DGN

RUBBLIZE AND OVERLAY - STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		B80302	26	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

575 580 585 590

BR. NO. A3971

BR. NO. B3971

N 43° 14' 00" E

E-11 E-5 .50 E-7

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- E-5 = SAND BAG DITCH CHECKS
- E-7 = DROP INLET SILT FENCE
- E-11 = SILT FENCE

590 595 600 605

CON. STA. 591+5.00 BK =
CON. STA. 590+60.00 AHD

N 43° 14' 00" E

10/6/2016

R880302.DGN

RUBBLIZE AND OVERLAY - STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0302	27	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
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TRINITY D. SMITH
10-10-16

605 610 615 620

N 43° 14' 00" E

E-5 ·50 E-7 E-5 ·50 E-11

620 625 630 635

N 43° 14' 00" E

E-5 ·50 E-7 E-5 ·50 E-11

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- E-5 = SAND BAG DITCH CHECKS
- E-7 = DROP INLET SILT FENCE
- E-11 = SILT FENCE

10/6/2016

RBB0302.DGN

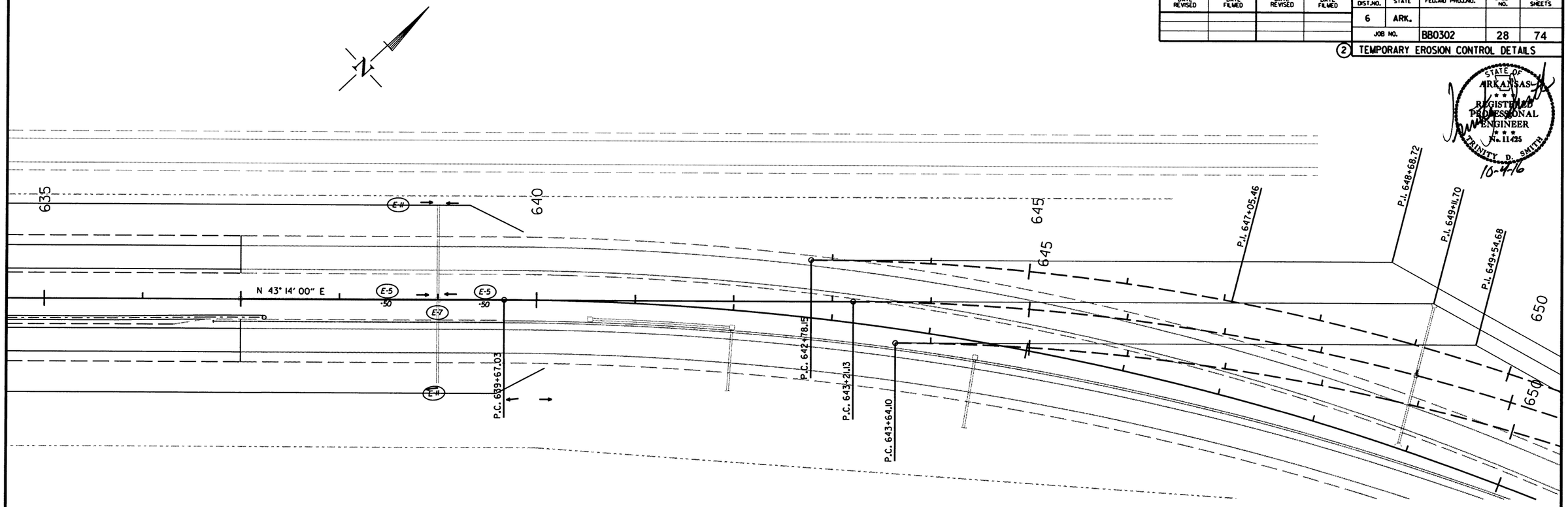
RUBBLIZE AND OVERLAY - STAGE 2
TEMPORARY EROSION CONTROL DETAILS

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.		BB0302	28	74

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

10/4/2016

RBB0302.DGN

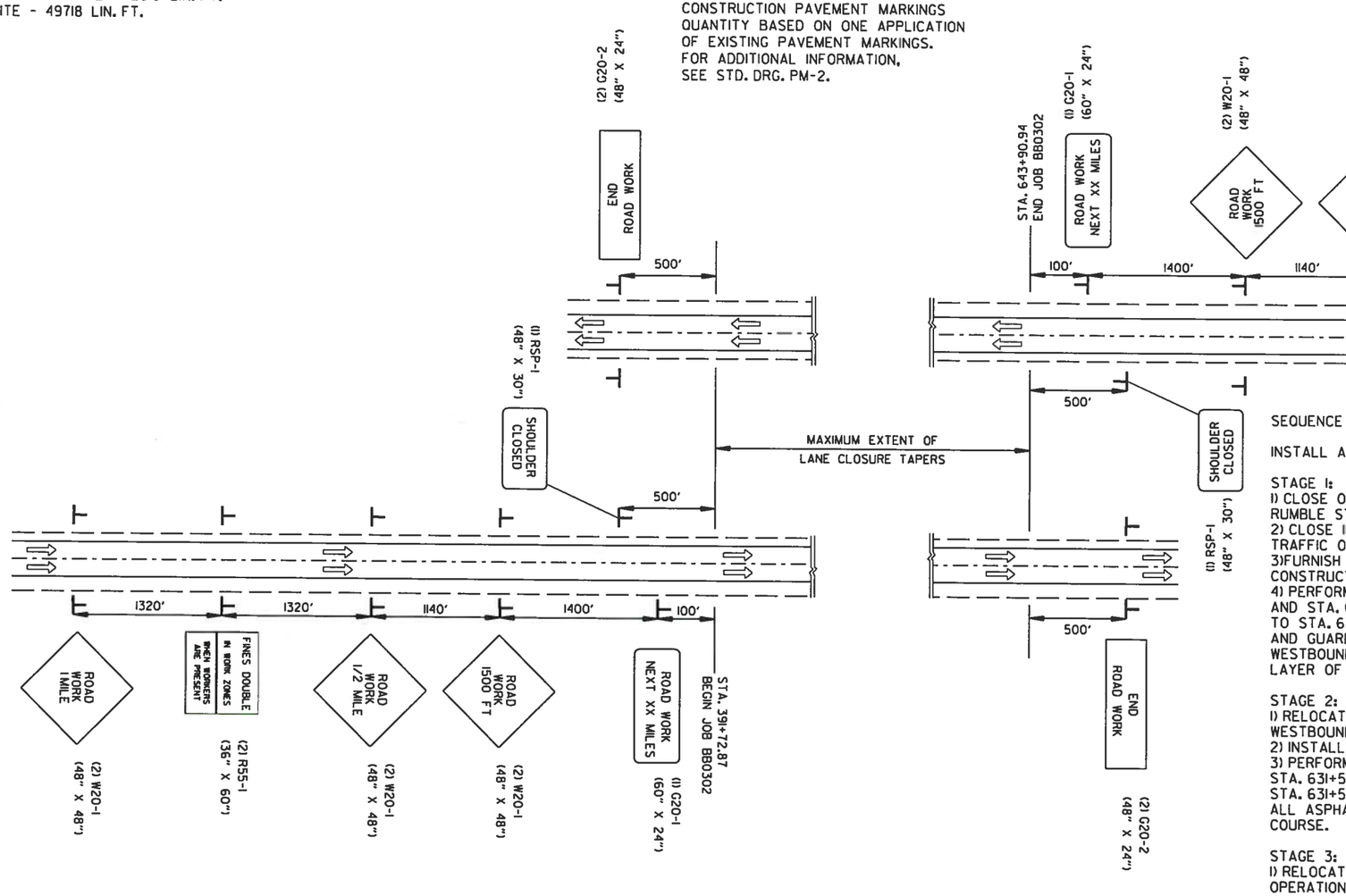
RUBBLIZE AND OVERLAY - STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	29	74

(2) MAINTENANCE OF TRAFFIC DETAILS

CONSTRUCTION PAVEMENT MARKINGS:
APPLY CONSTRUCTION PAVEMENT MARKINGS
ACCORDING TO STD. DWG. PM-2
4" YELLOW - 49718 LIN. FT.
4" (SKIP LINE) WHITE - 12610 LIN. FT.
4" WHITE - 49718 LIN. FT.

NOTE:
CONSTRUCTION PAVEMENT MARKINGS
QUANTITY BASED ON ONE APPLICATION
OF EXISTING PAVEMENT MARKINGS.
FOR ADDITIONAL INFORMATION,
SEE STD. DRG. PM-2.



STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
10-10-16

SEQUENCE OF CONSTRUCTION. - RUBBLIZE AND OVERLAY OPERATIONS

INSTALL ADVANCE WARNING SIGNS

STAGE I:
1) CLOSE OUTSIDE LANE ON EASTBOUND AND WESTBOUND DIRECTIONS OF I-30 AND REMOVE RUMBLE STRIPS IN OUTSIDE SHOULDER.
2) CLOSE INSIDE LANE ON EASTBOUND AND WESTBOUND DIRECTIONS OF I-30, MAINTAIN TRAFFIC ON THE OUTSIDE LANES.
3)FURNISH AND INSTALL PRECAST CONCRETE BARRIER AND INSTALL REMOVABLE AND CONSTRUCTION PAVEMENT MARKINGS AS SHOWN.
4) PERFORM FULL DEPTH RECONSTRUCTION BETWEEN STA. 576+30.50 TO STA. 581+80.50 AND STA. 631+50.00 TO STA. 637+00.00, RUBBLIZE AND OVERLAY BETWEEN STA. 581+80.50 TO STA. 631+50.00, BRIDGE POLYMER OVERLAY BETWEEN STA. 574+67.50 - STA. 576+30.50, AND GUARDRAIL RETROFITTING OPERATIONS FOR THE OUTSIDE LANE IN THE EASTBOUND AND WESTBOUND LANES. ALL ASPHALT PAVEMENT SHALL BE CONSTRUCTED THROUGH THE FIRST LAYER OF SURFACE COURSE.

STAGE 2:
1) RELOCATE PRECAST CONCRETE BARRIER SHIFT TRAFFIC TO INSIDE LANES IN EASTBOUND AND WESTBOUND DIRECTIONS.
2) INSTALL REMOVABLE AND CONSTRUCTION PAVEMENT MARKINGS AS SHOWN.
3) PERFORM FULL DEPTH RECONSTRUCTION BETWEEN STA. 576+30.50 TO STA. 581+80.50 AND STA. 631+50.00 TO STA. 637+00.00, RUBBLIZE AND OVERLAY BETWEEN STA. 581+80.50 TO STA. 631+50.00, AND BRIDGE POLYMER OVERLAY BETWEEN STA. 574+67.50 - STA. 576+30.50. ALL ASPHALT PAVEMENT SHALL BE CONSTRUCTED THROUGH THE FIRST LAYER OF SURFACE COURSE.

STAGE 3:
1) RELOCATE PRECAST CONCRETE BARRIER AND RETURN TRAFFIC TO NORMAL OPERATION.
2) PLACE FINAL 2" OF ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS AS DETAILED ON THE PERMANENT PAVEMENT MARKING DETAILS.
3) PERFORM GUARDRAIL RETROFITTING BETWEEN STA. 575+94.00 - STA. 519+12.75 FOR INSIDE AND OUTSIDE LANES WHILE PROTECTING BRIDGE ENDS WITH PRECAST CONCRETE BARRIER.
4) INSTALL WIRE ROPE SAFETY FENCE BETWEEN STA. 576+04.00 - STA. 637+23.93.

SEQUENCE OF CONSTRUCTION FOR PAVEMENT REHABILITATION OPERATIONS

DURING ALL STAGES OF RUBBLIZE AND OVERLAY OPERATIONS, THE FOLLOWING CONSTRUCTION ACTIVITIES WILL BE PERMITTED.

1) P.C.C.P. PATCHING BETWEEN STA. 391+30.50 TO STA. STA. 574+67.50
2) WIRE ROPE SAFETY FENCE INSTALLATION BETWEEN STA. 412+37.01 TO STA. 572+35.38.
3) GUARDRAIL RETROFITTING BETWEEN STA. 504+12.22 AND STA. 575+04.00.
4) BRIDGE, APPROACH SLAB, AND GUTTER POLYMER OVERLAY OPERATIONS BETWEEN STA. 506+82.00 AND STA. 508+46.00.
5) SPECIAL CLEARING BETWEEN STA. 391+00 AND STA. 575+00.

GRINDING OPERATIONS MAY BEGIN ONCE ALL P.C.C.P. PATCHING FOR A GIVEN SET OF LANES HAS BEEN COMPLETED.

ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAILS

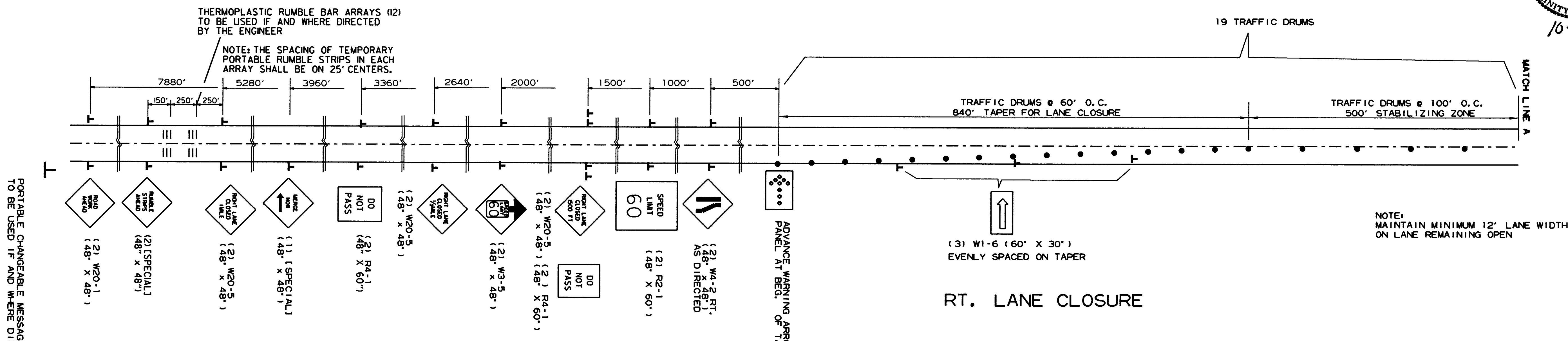
10/6/2016

RBB0302.DGN

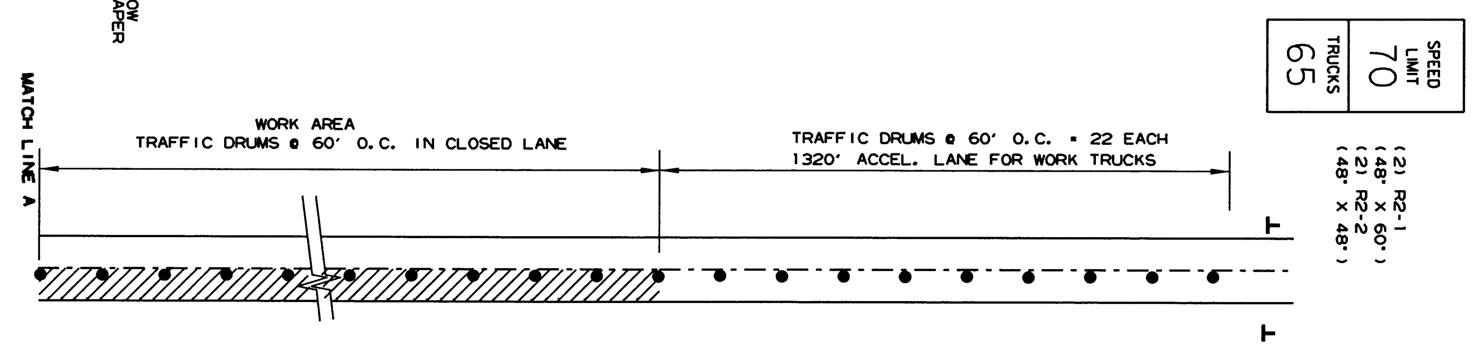
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0302	30	74

(2) MAINTENANCE OF TRAFFIC DETAILS

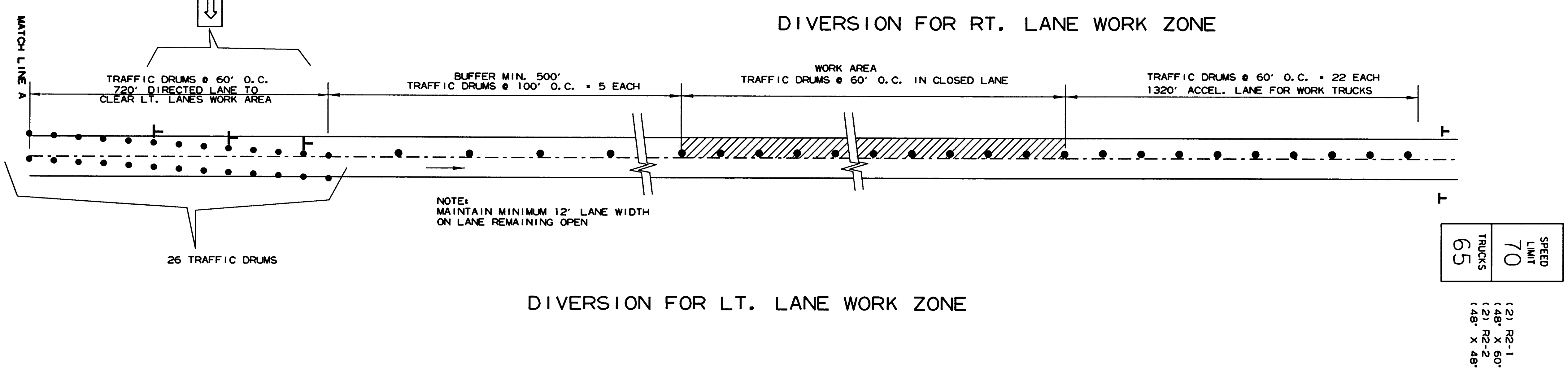
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
10-4-16



RT. LANE CLOSURE



DIVERSION FOR RT. LANE WORK ZONE



DIVERSION FOR LT. LANE WORK ZONE

LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

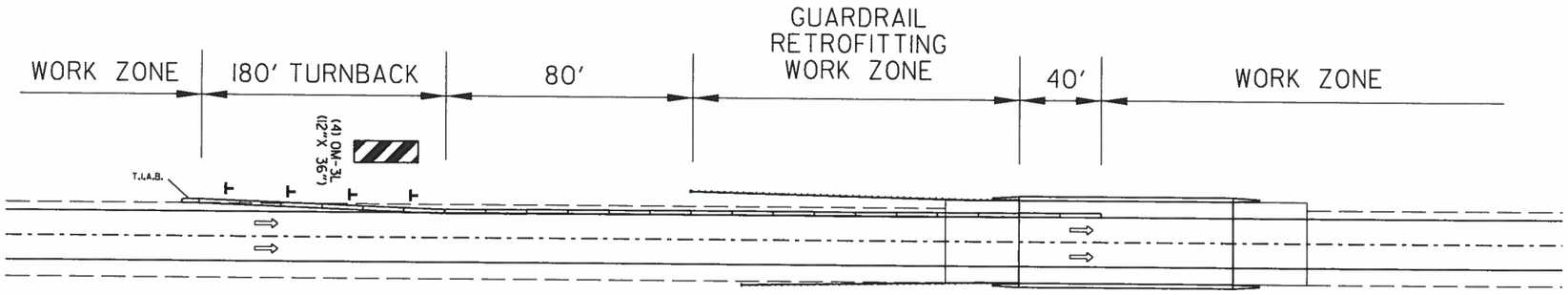
10/3/2016

RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	31	74
				(2) MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

PRECAST CONCRETE BARRIER WALL LT. LANE AND SHLDR. (1 LOCATION PER SIDE)
(1) FURNISH AND INSTALL = 900 LIN. FT. AT 1 LOCATION (NORTH OF BR. NO. A3797)
(1) RELOCATE = 640 LIN. FT. TOTAL (1 LOCATION)
640 LIN. FT. (SOUTH OF BR. NO. B3797)



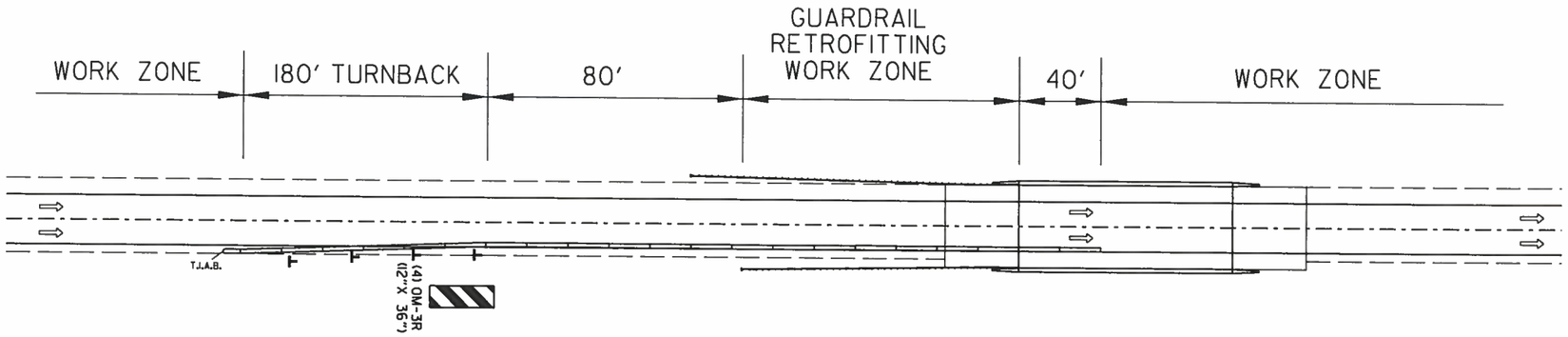
NOTE: OM-3L SIGNS SHALL BE EQUALLY SPACED ALONG P.C.C.B. TURNBACK.

REFER TO STANDARD DRAWING TC-5
FOR DETAILS OF PLACEMENT OF P.C.C.B. TURNBACKS.

DIVERSION FOR LT. LANE GUARDRAIL RETROFIT

2 SETS OF THIS NEEDED FOR JOB BB0302.

PRECAST CONCRETE BARRIER WALL RT. LANE AND SHLDR. (2 LOCATIONS PER SIDE)
(2) RELOCATE = 1400 LIN. FT. TOTAL (4 LOCATIONS)
800 LIN. FT. (NORTH OF BR. NO. A3797)
600 LIN. FT. (SOUTH OF BR. NO. B3797)



NOTE: OM-3R SIGNS SHALL BE EQUALLY SPACED ALONG P.C.C.B. TURNBACK.

REFER TO STANDARD DRAWING TC-5
FOR DETAILS OF PLACEMENT OF P.C.C.B. TURNBACKS.

DIVERSION FOR RT. LANE GUARDRAIL RETROFIT

2 SETS OF THIS NEEDED FOR JOB BB0302.

10/6/2016

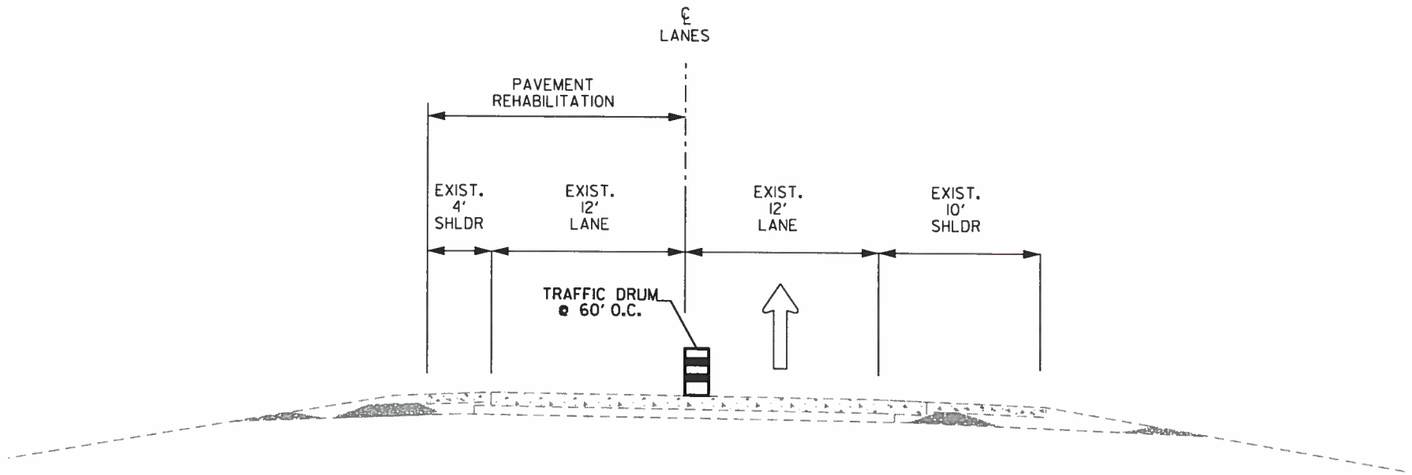
RBB0302.DGN

WORK ZONE - BRIDGE DECK REHABILITATION
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
10-6-16				6	ARK.			
				JOB NO.		BB0302	31A	74

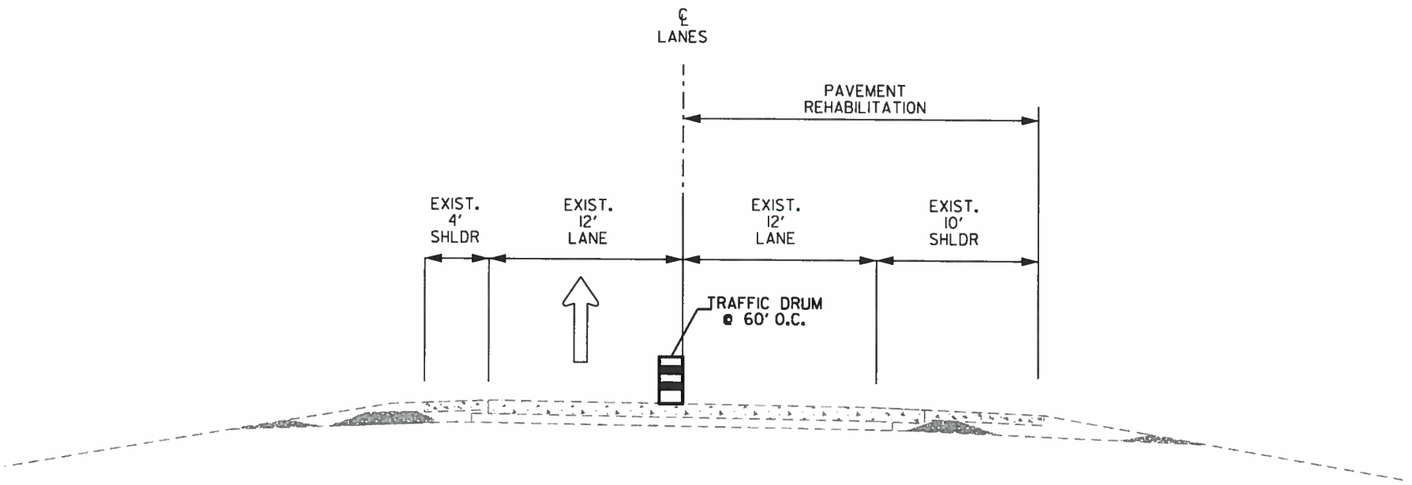
(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



LOCATION OF TRAFFIC DRUM FOR MAINTENANCE OF TRAFFIC SHOWN IN DIRECTION OF TRAFFIC

DETAIL OF TRAFFIC DEVICES FOR PAVEMENT REHABILITATION ON INSIDE LANE AND SHOULDER



LOCATION OF TRAFFIC DRUM FOR MAINTENANCE OF TRAFFIC SHOWN IN DIRECTION OF TRAFFIC

DETAIL OF TRAFFIC DEVICES FOR PAVEMENT REHABILITATION ON OUTSIDE LANE AND SHOULDER

SEQUENCE OF CONSTRUCTION FOR PAVEMENT REHABILITATION OPERATIONS

DURING ALL STAGES OF RUBBLIZE AND OVERLAY OPERATIONS, THE FOLLOWING CONSTRUCTION ACTIVITIES WILL BE PERMITTED.

1) P.C.C.P. PATCHING BETWEEN STA. 391+30.50 TO STA. STA. 574+67.50
2) WIRE ROPE SAFETY FENCE INSTALLATION BETWEEN STA. 412+37.01 TO STA. 572+35.38.
3) GUARDRAIL RETROFITTING BETWEEN STA. 504+12.22 AND STA. 575+04.00.
4) BRIDGE, APPROACH SLAB, AND GUTTER POLYMER OVERLAY OPERATIONS BETWEEN STA. 506+82.00 AND STA. 508+46.00.
5) SPECIAL CLEARING BETWEEN STA. 391+00 AND STA. 575+00.

GRINDING OPERATIONS MAY BEGIN ONCE ALL P.C.C.P. PATCHING FOR A GIVEN SET OF LANES HAS BEEN COMPLETED.

10/6/2016

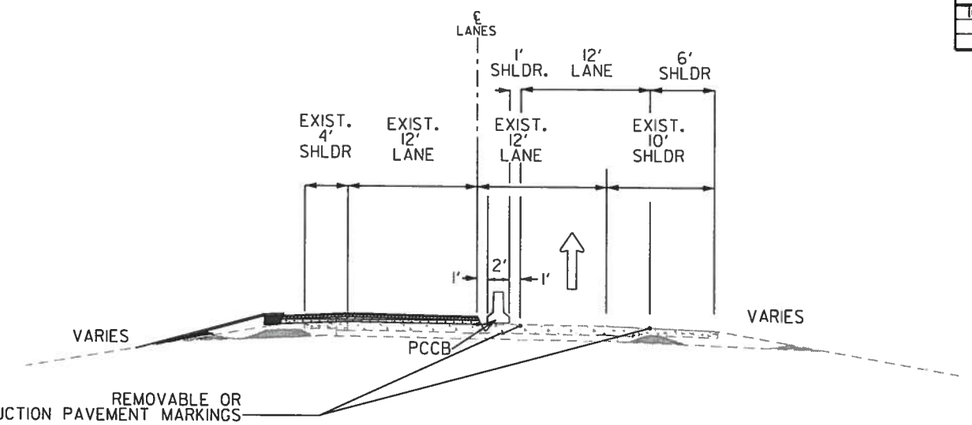
RBB0302.DGN

TRAFFIC DEVICES - PAVEMENT REHABILITATION MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.NO. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		B80302	31B	74

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



LOCATION OF TEMPORARY PRECAST CONCRETE BARRIER WALL FOR MAINTENANCE OF TRAFFIC - SHOWN IN DIRECTION OF TRAFFIC

SEQUENCE OF CONSTRUCTION. - RUBBLIZE AND OVERLAY OPERATIONS

INSTALL ADVANCE WARNING SIGNS

STAGE I:
CLOSE OUTSIDE LANE ON EASTBOUND AND WESTBOUND DIRECTIONS OF I-30 AND REMOVE RUMBLE STRIPS IN OUTSIDE SHOULDER.

CLOSE INSIDE LANE ON EASTBOUND AND WESTBOUND DIRECTIONS OF I-30, MAINTAIN TRAFFIC ON THE OUTSIDE LANES.

FURNISH AND INSTALL PRECAST CONCRETE BARRIER AND INSTALL REMOVABLE AND CONSTRUCTION PAVEMENT MARKINGS AS SHOWN.

PERFORM FULL DEPTH RECONSTRUCTION BETWEEN STA. 576+30.50 TO STA. 581+80.50 AND STA. 631+50.00 TO STA. 637+00.00, RUBBLIZE AND OVERLAY BETWEEN STA. 581+80.50 TO STA. 631+50.00, BRIDGE POLYMER OVERLAY BETWEEN STA. 574+67.50 - STA. 576+30.50, AND GUARDRAIL RETROFITTING OPERATIONS FOR THE OUTSIDE LANE IN THE EASTBOUND AND WESTBOUND LANES. ALL ASPHALT PAVEMENT SHALL BE CONSTRUCTED THROUGH THE FIRST LAYER OF SURFACE COURSE.

STAGE I QUANTITIES:

SIGNS = 12 SQ. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 13560 LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS = 5262 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS = 24498 LIN. FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 16560 LIN. FT.

QUANTITIES ARE FOR RUBBLIZE AND OVERLAY, BRIDGE NO. 3971AR POLYMER OVERLAY, AND BRIDGE NO. 3971BR POLYMER OVERLAY OPERATIONS ONLY.

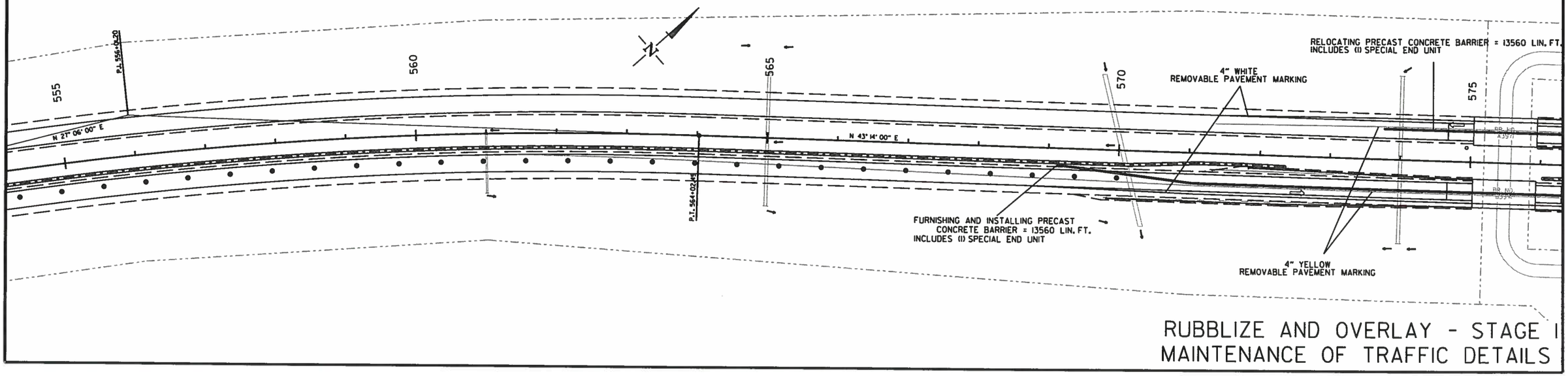
SEQUENCE OF CONSTRUCTION FOR PAVEMENT REHABILITATION OPERATIONS

DURING ALL STAGES OF RUBBLIZE AND OVERLAY OPERATIONS, THE FOLLOWING CONSTRUCTION ACTIVITIES WILL BE PERMITTED.

1) P.C.C.P. PATCHING BETWEEN STA. 391+30.50 TO STA. STA. 574+67.50
2) WIRE ROPE SAFETY FENCE INSTALLATION BETWEEN STA. 412+37.01 TO STA. 572+35.38.
3) GUARDRAIL RETROFITTING BETWEEN STA. 504+12.22 AND STA. 575+04.00.
4) BRIDGE, APPROACH SLAB, AND GUTTER POLYMER OVERLAY OPERATIONS BETWEEN STA. 506+82.00 AND STA. 508+46.00.
5) SPECIAL CLEARING BETWEEN STA. 391+00 AND STA. 575+00.

GRINDING OPERATIONS MAY BEGIN ONCE ALL P.C.C.P. PATCHING FOR A GIVEN SET OF LANES HAS BEEN COMPLETED.

NOTE: CONSTRUCTION PAVEMENT MARKINGS ARE TO BE USED IN RUBBLIZE AND OVERLAY AND FULL DEPTH SECTIONS. REMOVABLE PAVEMENT MARKINGS ARE TO BE USED ON EXISTING CONCRETE PAVEMENT.



RUBBLIZE AND OVERLAY - STAGE I
MAINTENANCE OF TRAFFIC DETAILS

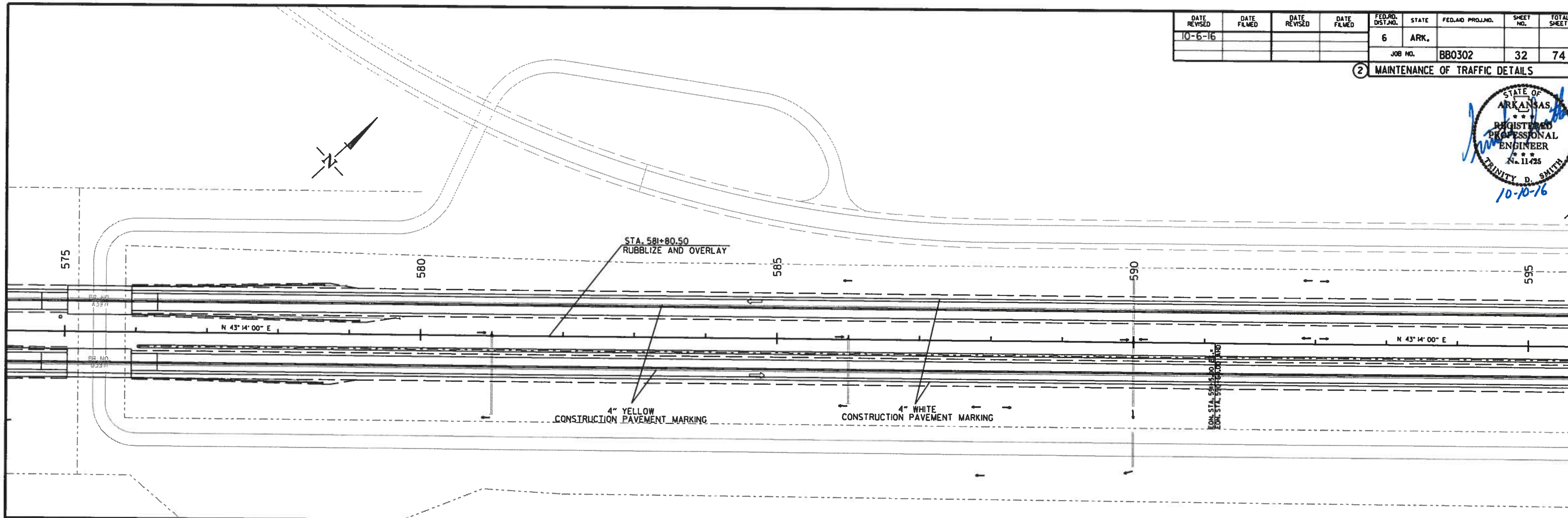
10/6/2016

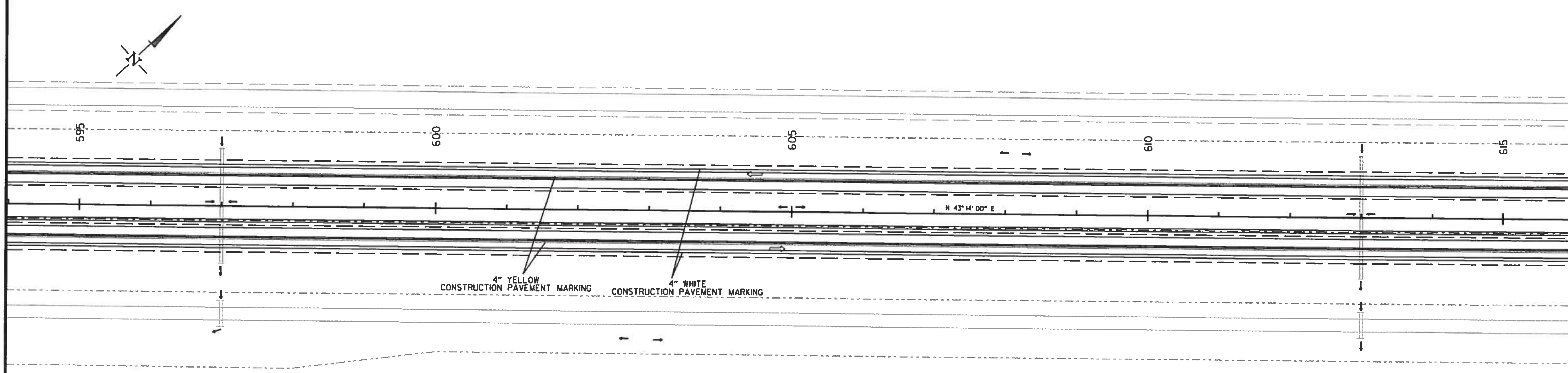
R880302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	32	74

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
10-10-16





RUBBLIZE AND OVERLAY - STAGE I
MAINTENANCE OF TRAFFIC DETAILS

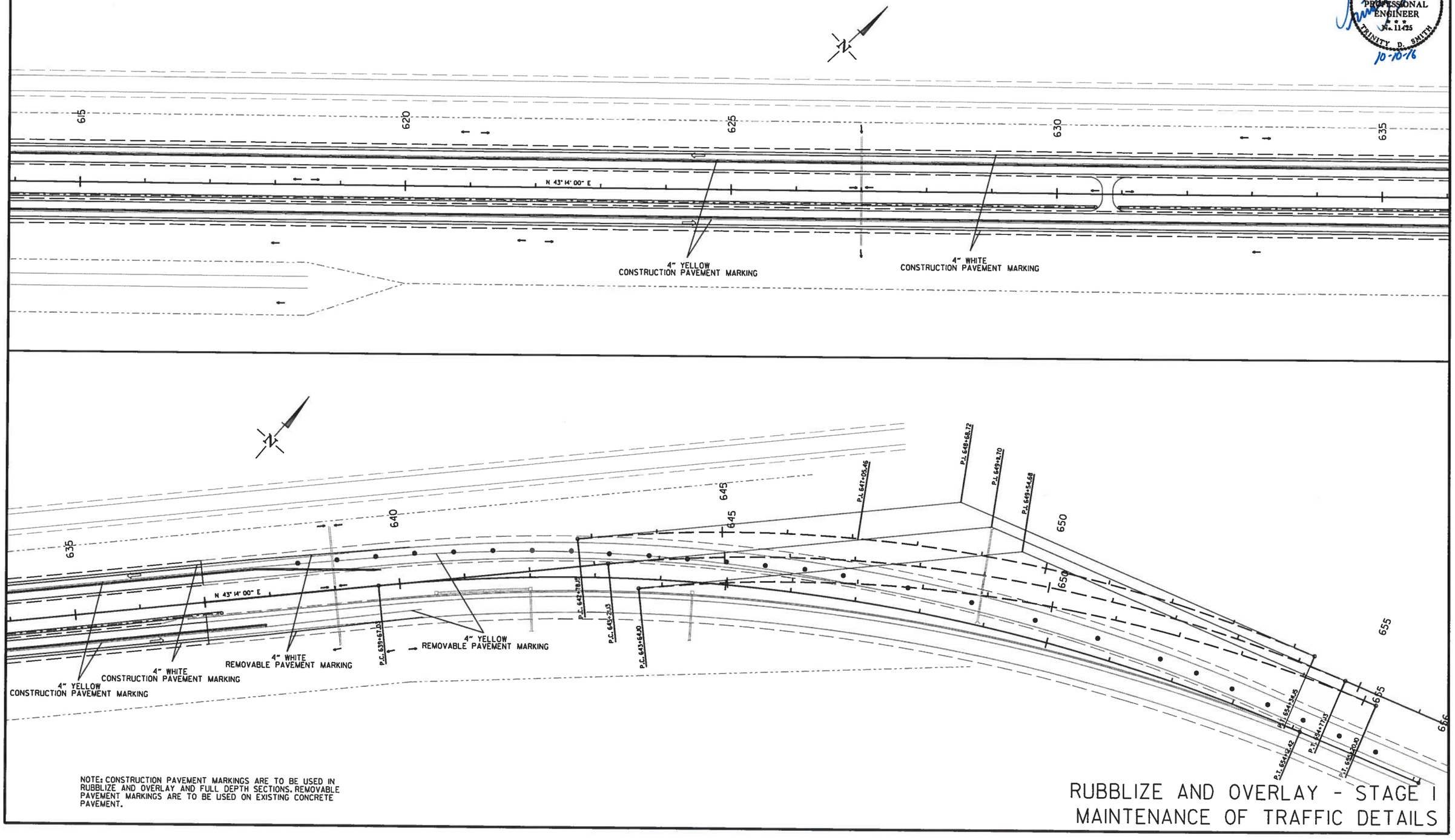
10/6/2016
RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0302	33	74

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



NOTE: CONSTRUCTION PAVEMENT MARKINGS ARE TO BE USED IN RUBBLIZE AND OVERLAY AND FULL DEPTH SECTIONS. REMOVABLE PAVEMENT MARKINGS ARE TO BE USED ON EXISTING CONCRETE PAVEMENT.

10/6/2016

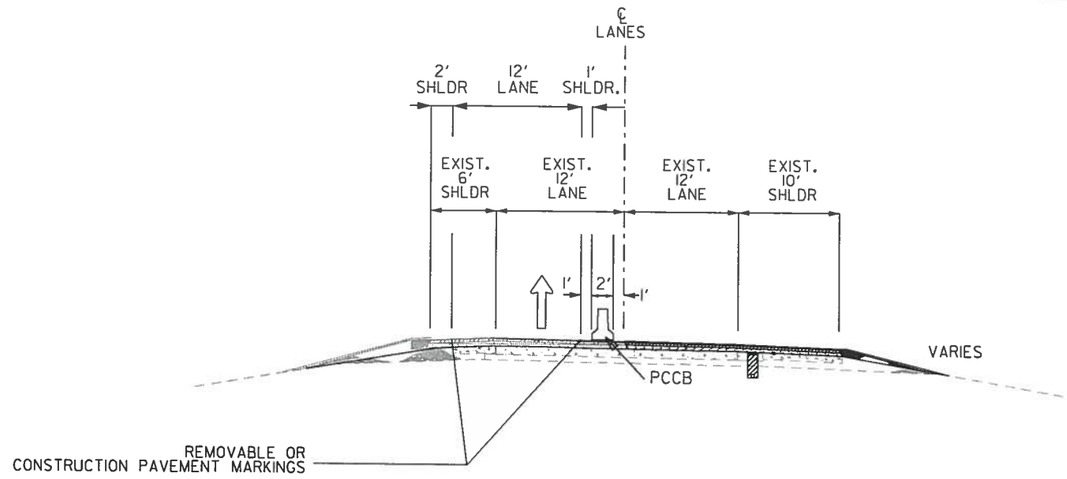
RBB0302.DGN

RUBBLIZE AND OVERLAY - STAGE I
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
10-6-16				6	ARK.			
				JOB NO.		BB0302	34	74

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



LOCATION OF TEMPORARY PRECAST CONCRETE BARRIER WALL FOR MAINTENANCE OF TRAFFIC - SHOWN IN DIRECTION OF TRAFFIC

STAGE 2:

RELOCATE PRECAST CONCRETE BARRIER SHIFT TRAFFIC TO INSIDE LANES IN EASTBOUND AND WESTBOUND DIRECTIONS.

INSTALL REMOVABLE AND CONSTRUCTION PAVEMENT MARKINGS AS SHOWN.

PERFORM FULL DEPTH RECONSTRUCTION BETWEEN STA. 576+30.50 TO STA. 581+80.50 AND STA. 631+50.00 TO STA. 637+00.00, RUBBLIZE AND OVERLAY BETWEEN STA. 581+80.50 TO STA. 631+50.00, AND BRIDGE POLYMER OVERLAY BETWEEN STA. 574+67.50 - STA. 576+30.50. ALL ASPHALT PAVEMENT SHALL BE CONSTRUCTED THROUGH THE FIRST LAYER OF SURFACE COURSE.

STAGE 2 QUANTITIES:

SIGNS = 12 SQ. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 200 LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER = 13560 LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS = 5582 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS = 24578 LIN. FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 200 LIN. FT.

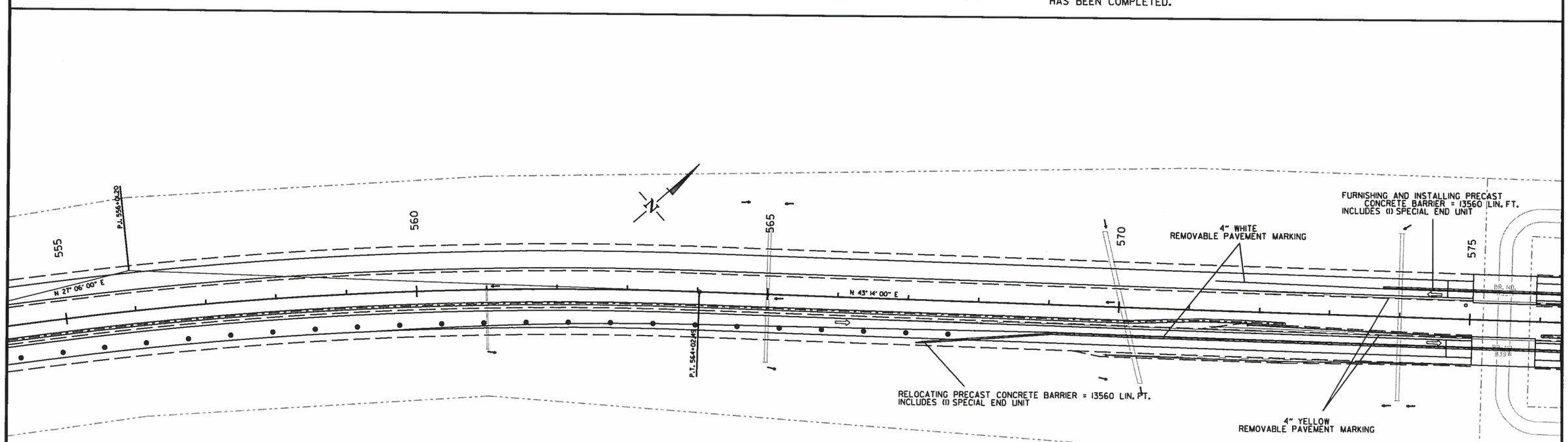
QUANTITIES ARE FOR RUBBLIZE AND OVERLAY, BRIDGE NO. 3971AR POLYMER OVERLAY, AND BRIDGE NO. 3971BR POLYMER OVERLAY OPERATIONS ONLY.

SEQUENCE OF CONSTRUCTION FOR PAVEMENT REHABILITATION OPERATIONS

DURING ALL STAGES OF RUBBLIZE AND OVERLAY OPERATIONS, THE FOLLOWING CONSTRUCTION ACTIVITIES WILL BE PERMITTED.

1) P.C.C.P. PATCHING BETWEEN STA. 391+30.50 TO STA. STA. 574+67.50
2) WIRE ROPE SAFETY FENCE INSTALLATION BETWEEN STA. 412+37.01 TO STA. 572+35.38.
3) GUARDRAIL RETROFITTING BETWEEN STA. 504+12.22 AND STA. 575+04.00.
4) BRIDGE, APPROACH SLAB, AND GUTTER POLYMER OVERLAY OPERATIONS BETWEEN STA. 506+82.00 AND STA. 508+46.00.
5) SPECIAL CLEARING BETWEEN STA. 391+00 AND STA. 575+00.

GRINDING OPERATIONS MAY BEGIN ONCE ALL P.C.C.P. PATCHING FOR A GIVEN SET OF LANES HAS BEEN COMPLETED.



NOTE: CONSTRUCTION PAVEMENT MARKINGS ARE TO BE USED IN RUBBLIZE AND OVERLAY AND FULL DEPTH SECTIONS. REMOVABLE PAVEMENT MARKINGS ARE TO BE USED ON EXISTING CONCRETE PAVEMENT.

RUBBLIZE AND OVERLAY - STAGE 2 MAINTENANCE OF TRAFFIC DETAILS

10/6/2016

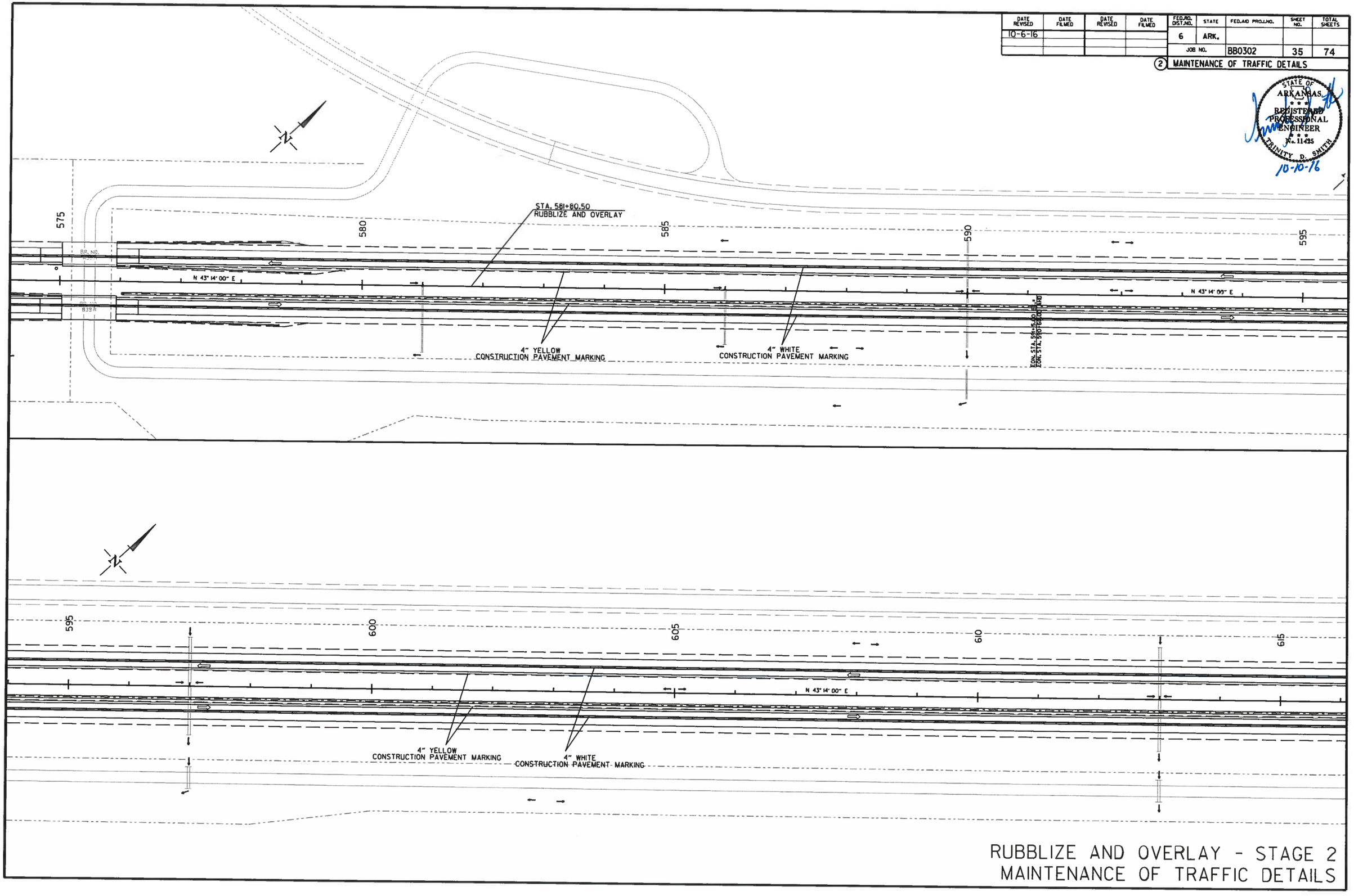
RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0302	35	74

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



10/6/2016

RBB0302.DGN

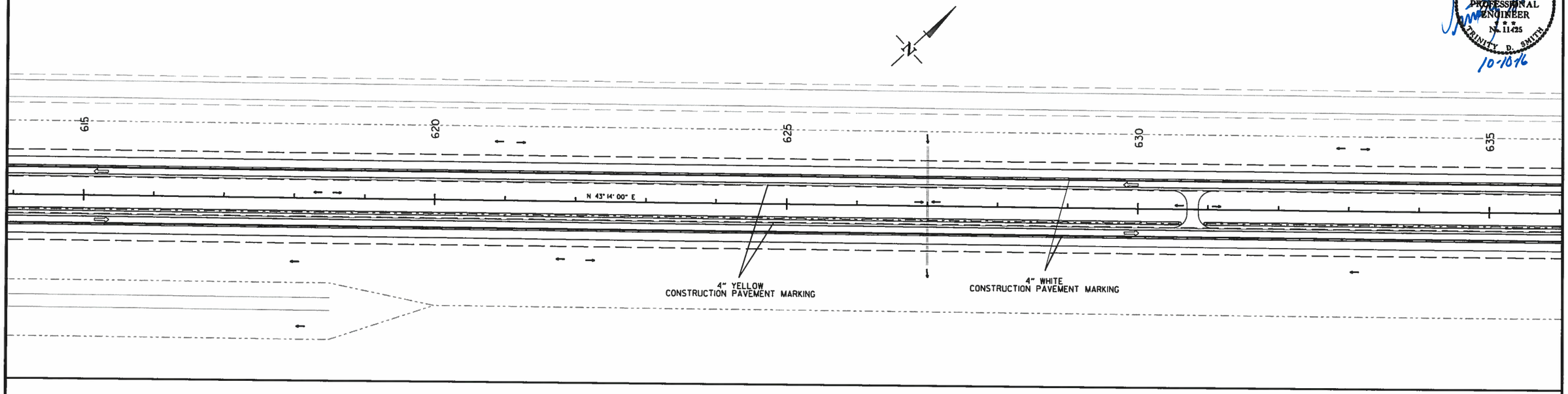
RUBBLIZE AND OVERLAY - STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

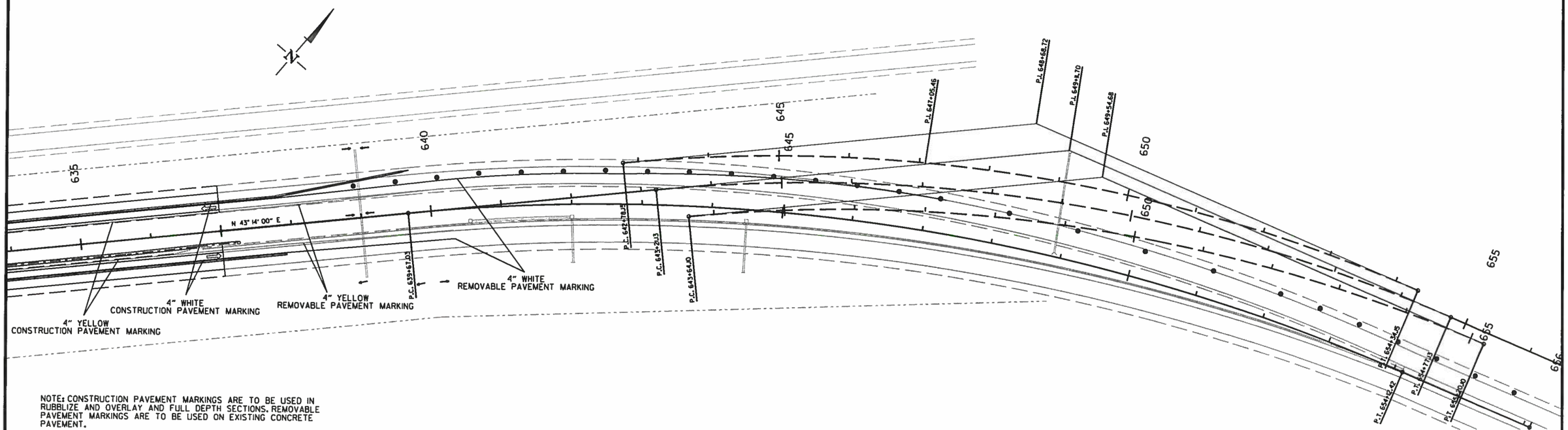
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0302	36	74

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16





NOTE: CONSTRUCTION PAVEMENT MARKINGS ARE TO BE USED IN RUBBLIZE AND OVERLAY AND FULL DEPTH SECTIONS. REMOVABLE PAVEMENT MARKINGS ARE TO BE USED ON EXISTING CONCRETE PAVEMENT.

10/6/2016

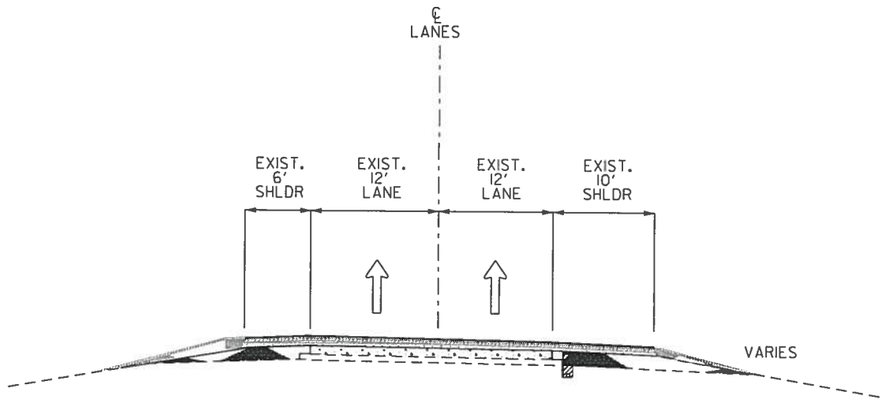
RBB0302.DGN

RUBBLIZE AND OVERLAY - 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
10-6-16				6	ARK.			
				JOB NO.		BB0302	37	74

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



STAGE 3 CONSTRUCTION SEQUENCE:

RELOCATE PRECAST CONCRETE BARRIER AND RETURN TRAFFIC TO NORMAL OPERATION.

PLACE FINAL 2" OF ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS AS DETAILED ON THE PERMANENT PAVEMENT MARKING DETAILS.

PERFORM GUARDRAIL RETROFITTING BETWEEN STA. 575+94.00 - STA. 519+12.75 FOR INSIDE AND OUTSIDE LANES WHILE PROTECTING BRIDGE ENDS WITH PRECAST CONCRETE BARRIER.

INSTALL WIRE ROPE SAFETY FENCE BETWEEN STA. 576+04.00 - STA. 637+23.93.

STAGE 2 QUANTITIES:

SIGNS = 24 SQ. FT.
RELOCATING PRECAST CONCRETE BARRIER = 1360 LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER = 3 EACH
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR) = 3 EACH
CONSTRUCTION PAVEMENT MARKINGS = 27313 LIN. FT.

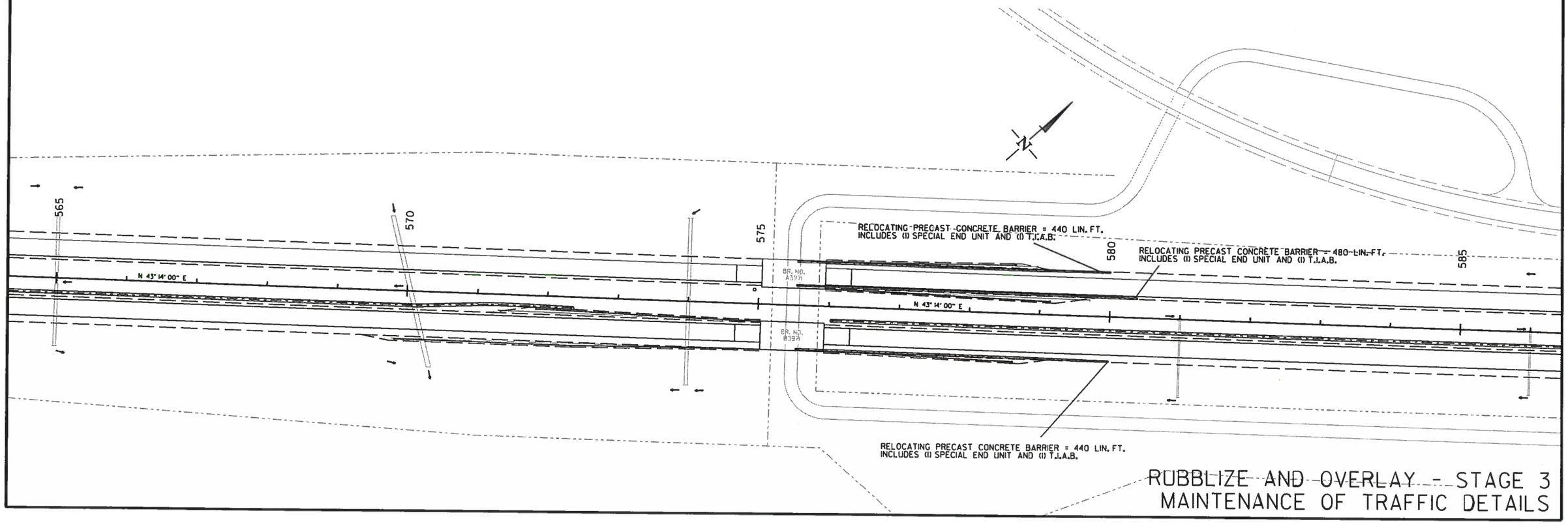
QUANTITIES ARE FOR RUBBLIZE AND OVERLAY, BRIDGE NO. 3971AR POLYMER OVERLAY, AND BRIDGE NO. 3971BR POLYMER OVERLAY OPERATIONS ONLY.

SEQUENCE OF CONSTRUCTION FOR PAVEMENT REHABILITATION OPERATIONS

DURING ALL STAGES OF RUBBLIZE AND OVERLAY OPERATIONS, THE FOLLOWING CONSTRUCTION ACTIVITIES WILL BE PERMITTED.

1) P.C.C.P. PATCHING BETWEEN STA. 391+30.50 TO STA. STA. 574+67.50
2) WIRE ROPE SAFETY FENCE INSTALLATION BETWEEN STA. 412+37.01 TO STA. 572+35.38.
3) GUARDRAIL RETROFITTING BETWEEN STA. 504+12.22 AND STA. 575+04.00.
4) BRIDGE, APPROACH SLAB, AND GUTTER POLYMER OVERLAY OPERATIONS BETWEEN STA. 506+82.00 AND STA. 508+46.00.
5) SPECIAL CLEARING BETWEEN STA. 391+00 AND STA. 575+00.

GRINDING OPERATIONS MAY BEGIN ONCE ALL P.C.C.P. PATCHING FOR A GIVEN SET OF LANES HAS BEEN COMPLETED.



RUBBLIZE AND OVERLAY - STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

10/6/2016

RBB0302.DGN

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.		BB0302	38	74

(2) PERMANENT PAVEMENT MARKING DETAILS

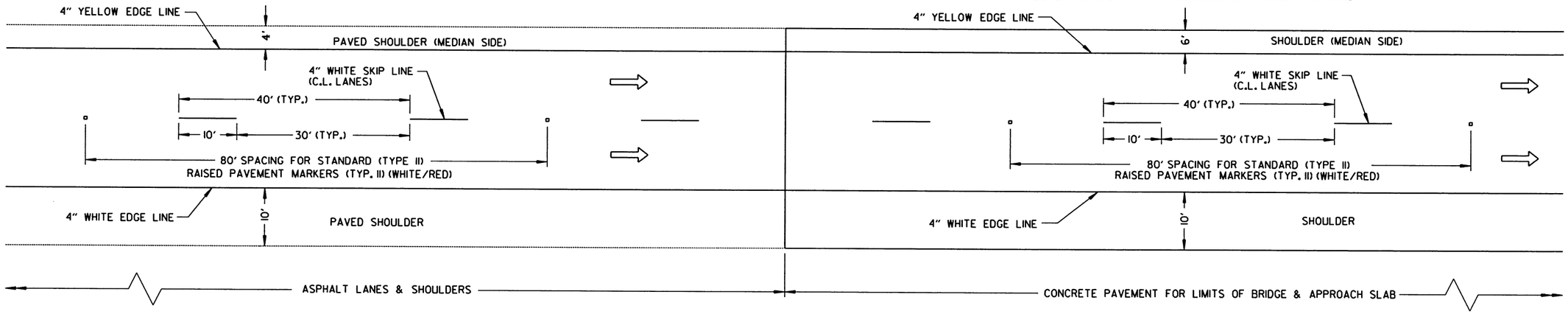
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

ASPHALT ROADWAY

HIGH PERFORMANCE PAVEMENT MARKINGS:
SKIP LINE - INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (4") ALT. NO. 1
OR HIGH PERFORMANCE MARKING (SKIP LINE) WHITE (4") TAPE ALT. NO. 2
EDGE LINES - INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING ALT. NO. 1
OR HIGH PERFORMANCE MARKING TAPE ALT. NO. 2
REFER TO SPECIAL PROVISION - HIGH PERFORMANCE PAVEMENT MARKING

CONCRETE APPROACH SLAB & BRIDGE DECK

HIGH PERFORMANCE PAVEMENT MARKINGS:
SKIP LINE - INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") ALT. NO. 1
OR HIGH PERFORMANCE CONTRAST MARKING TAPE (WHITE) (4") ALT. NO. 2
EDGE LINES - INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING ALT. NO. 1
OR HIGH PERFORMANCE MARKING TAPE ALT. NO. 2
REFER TO SPECIAL PROVISION - HIGH PERFORMANCE PAVEMENT MARKING



PERMANENT PAVEMENT MARKING DETAILS

NOTE: REFER TO PM-2 FOR PERMANENT PAVEMENT MARKINGS AT INTERCHANGE.

PERMANENT PAVEMENT MARKINGS:
APPLY PERMANENT PAVEMENT MARKINGS
ACCORDING TO STD. DWG. PM-2
- 4" YELLOW = 49718 LIN. FT.
- 4" WHITE CONTRAST = 150 LIN. FT.
- 4" (SKIP LINE) WHITE - 12460 LIN. FT.
- 4" WHITE = 49718 LIN. FT.
- RAISED PAV'T MARKINGS TYPE II (WHITE/RED) = 623 EACH
- 80' SPACING (EXCEPT WHERE SHOWN ON STD. DWG. PM-2)

10/3/2016

RBB0302.DGN

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
10-6-16				6	ARK.			
				JOB NO.	B80302		39	74

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	RUBBLIZE AND OVERLAY			END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	HIGH PERFORMANCE PAVEMENT MARKING		
	STAGE 1	STAGE 2	STAGE 3					TYPE II (WHITE/RED)	4" WHITE	4" WHITE	4" WHITE (SKIP LINE)	4" YELLOW
	LIN. FT. - EACH				LIN. FT.		LIN. FT.	EACH	LIN. FT.	LIN. FT.		
REMOVAL OF PERMANENT PAVEMENT MARKINGS	16560	200			16760							
CONSTRUCTION PAVEMENT MARKINGS	24498	24578	27313	84733		161122						
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	5262	5582					10844					
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)				623				623				
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")				150					150			
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")				49718						49718		
HIGH PERFORMANCE PAVEMENT MARKING (SKIP LINE) WHITE (4")				12460							12460	
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")				49718								49718
TOTALS:					**16760**	**161122**	**10844**	**623**	**150**	**49718**	**12460**	**49718**

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.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	ALL STAGES	RUBBLIZE AND OVERLAY STAGE 1	RUBBLIZE AND OVERLAY STAGE 2	RUBBLIZE AND OVERLAY STAGE 3	ENTIRE PROJECT	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED NO.	TOTAL SIGNS REQUIRED SQ. FT.	TRAFFIC DRUMS	FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN	THERMOPLASTIC RUMBLE BAR
				LIN. FT. - EACH					NO.	SQ. FT.	EACH	LIN. FT.		EACH		DAY	WEEK	LIN. FT.
W20-1	ROAD WORK 1 MILE	48"x48"	4				4	4	4	64.0								
W20-1	ROAD WORK 1/2 MILE	48"x48"	4				4	4	4	64.0								
W20-1	ROAD WORK 1500 FT.	48"x48"	4				4	4	4	64.0								
W20-1	ROAD WORK AHEAD	48"x48"	4				4	4	4	64.0								
G20-2	END ROAD WORK	48"x24"	4				4	4	4	32.0								
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2				2	2	2	20.0								
R55-1	FINES DOUBLE IN WORK ZONES	36"X60"	4				4	4	4	60.0								
W20-5	RIGHT LANE CLOSED 1 MILE	48"x48"	4				4	4	4	64.0								
W20-5	RIGHT LANE CLOSED 1/2 MILE	48"x48"	4				4	4	4	64.0								
W20-5	RIGHT LANE CLOSED 1500 FT.	48"x48"	4				4	4	4	64.0								
SPECIAL	MERGE NOW W/ ARROW	48"x48"	2				2	2	2	32.0								
W3-5	REDUCED SPEED AHEAD	48"X48"	4				4	4	4	64.0								
W1-6	LARGE ARROW	48"X24"	12				12	12	12	96.0								
R4-1	DO NOT PASS	48"X60"	4				4	4	4	80.0								
RSP-1	SHOULDER CLOSED	48"X30"	2				2	2	2	20.0								
R2-1	SPEED LIMIT 60 MPH	48"X60"	9				4	4	4	80.0								
R2-1	SPEED LIMIT 70 MPH	48"X60"	4				4	4	4	80.0								
W4-2 RT.	MERGE RIGHT	48"x48"	4				4	4	4	64.0								
OM-3R	OBJECT MARKER	12"X36"	4		4	4	4	4	4	12.0								
OM-3L	OBJECT MARKER	12"X36"	4	4		4	4	4	4	12.0								
	TRAFFIC DRUMS		482				482	482			482							
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		900	13560	200		14660	14660				14660						
	RELOCATING PRECAST CONCRETE BARRIER		2040		13560	1360	16960	16960					16960					
	TEMPORARY IMPACT ATTENUATION BARRIER		4			3		7						7				
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		4			3		7							7			
	ADVANCE WARNING ARROW PANEL		2				2	2								402		
	PORTABLE CHANGEABLE MESSAGE SIGN		4				4	4									116	
	THERMOPLASTIC RUMBLE BAR		144				144	144										144
TOTALS:										**1100.0**	**482**	**14660**	**16960**	**7**	**7**	**402**	**116**	**144**

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

NOTE: THE QUANTITY OF TRAFFIC DRUMS PROVIDED IS FOR A LANE CLOSURE FOR THE FULL EXTENT OF THE JOB LIMITS IN ONE DIRECTION. HOWEVER, THE INSTALLATION OF TRAFFIC DRUMS SHALL NEVER EXCEED THE ACTUAL WORK AREA BY MORE THAN 1/4 MILE, UNLESS APPROVED BY THE ENGINEER.

10/10/2016

RB80302.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	40	74

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

REMOVAL OF RUMBLE STRIPS

STATION	STATION	LOCATION	RUMBLE STRIPS
			LIN. FT.
576+31.00	591+15.00	RT. OF RT. MAIN LANES	1484
590+60.00	637+00.00	RT. OF RT. MAIN LANES	4640
576+31.00	591+15.00	LT. OF LT. MAIN LANES	1484
590+60.00	637+00.00	LT. OF LT. MAIN LANES	4640
TOTAL:			12248

REMOVAL AND DISPOSAL OF GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL
			LIN. FT.
503+55.97	507+30.97	LT. OF RT. MAIN LANES	375
504+38.03	507+38.03	RT. OF RT. MAIN LANES	300
507+89.97	509+49.97	LT. OF LT. MAIN LANES	160
507+97.03	512+47.03	RT. OF LT. MAIN LANES	450
508+05.97	510+30.97	LT. OF RT. MAIN LANES	225
508+13.03	510+08.03	RT. OF RT. MAIN LANES	195
509+87.08	511+87.08	LT. OF LT. MAIN LANES	200
510+48.38	512+68.38	RT. OF RT. MAIN LANES	220
569+79.00	575+04.00	LT. OF RT. MAIN LANES	525
571+29.00	575+04.00	RT. OF RT. MAIN LANES	375
575+94.00	578+64.00	RT. OF RT. MAIN LANES	270
575+94.00	578+94.00	LT. OF LT. MAIN LANES	300
575+94.00	579+69.00	LT. OF RT. MAIN LANES	375
TOTAL:			3970

RUBBLIZING & REMOVAL OF PORTLAND CEMENT CONCRETE PAVEMENT

STATION	STATION	LOCATION	LENGTH	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT		RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT	
				WIDTH		WIDTH	
			LIN. FT.	FEET	SQ. YD.	FEET	SQ. YD.
576+30.50	581+80.50	LT. MAIN LANE (12' U.T.)	550	27	1650.00		
581+80.50	591+15.00	LT. MAIN LANE (12' U.T.)	934.5			27	2803.50
590+60.00	631+50.00	LT. MAIN LANE (12' U.T.)	4090			27	12270.00
631+50.00	637+00.00	LT. MAIN LANE (12' U.T.)	550	27	1650.00		
576+30.50	581+80.50	RT. MAIN LANE (12' U.T.)	550	27	1650.00		
581+80.50	591+15.00	RT. MAIN LANE (12' U.T.)	934.5			27	2803.50
590+60.00	631+50.00	RT. MAIN LANE (12' U.T.)	4090			27	12270.00
631+50.00	637+00.00	RT. MAIN LANE (12' U.T.)	550	27	1650.00		
576+30.50	581+80.50	OUTSIDE SHOULDER - RT. MAIN LANES (8")	550	7	427.78		
581+80.50	591+15.00	OUTSIDE SHOULDER - RT. MAIN LANES (8")	934.5			7	726.83
590+60.00	631+50.00	OUTSIDE SHOULDER - RT. MAIN LANES (8")	4090			7	3181.11
631+50.00	637+00.00	OUTSIDE SHOULDER - RT. MAIN LANES (8")	550	7	427.78		
576+30.50	581+80.50	OUTSIDE SHOULDER - LT. MAIN LANES (8")	550	7	427.78		
581+80.50	591+15.00	OUTSIDE SHOULDER - LT. MAIN LANES (8")	934.5			7	726.83
590+60.00	631+50.00	OUTSIDE SHOULDER - LT. MAIN LANES (8")	4090			7	3181.11
631+50.00	637+00.00	OUTSIDE SHOULDER - LT. MAIN LANES (8")	550	7	427.78		
576+30.50	581+80.50	INSIDE SHOULDER - RT. MAIN LANES (8")	550	4	244.44		
581+80.50	591+15.00	INSIDE SHOULDER - RT. MAIN LANES (8")	934.5			4	415.33
590+60.00	631+50.00	INSIDE SHOULDER - RT. MAIN LANES (8")	4090			4	1817.78
631+50.00	637+00.00	INSIDE SHOULDER - RT. MAIN LANES (8")	550	4	244.44		
576+30.50	581+80.50	INSIDE SHOULDER - LT. MAIN LANES (8")	550	4	244.44		
581+80.50	591+15.00	INSIDE SHOULDER - LT. MAIN LANES (8")	934.5			4	415.33
590+60.00	631+50.00	INSIDE SHOULDER - LT. MAIN LANES (8")	4090			4	1817.78
631+50.00	637+00.00	INSIDE SHOULDER - LT. MAIN LANES (8")	550	4	244.44		
TOTALS:					9288.88		42429.10

JOINT REHABILITATION

STATION	STATION	LOCATION	JOINT REHABILITATION			
			NUMBER OF JOINTS	LENGTH	TYPE A	TYPE B
					LIN. FT.	
391+72.87	506+98.00	I-30 EASTBOUND LANES	768	27	20736	34575
508+46.00	574+67.50	I-30 EASTBOUND LANES	441	27	11907	19865
392+70.64	506+82.00	I-30 WESTBOUND LANES	761	27	20547	34234
508+30.00	574+67.50	I-30 WESTBOUND LANES	443	27	11961	19913
TOTALS:					65151	108587

GRINDING PORTLAND CEMENT CONCRETE PAVEMENT

STATION	STATION	LOCATION	LENGTH	WIDTH	GRINDING PORTLAND CEMENT CONCRETE PAVEMENT
			FEET		SQ. YD.
391+72.87	506+98.00	I-30 EASTBOUND LANES	11525.13	27	34575.39
508+46.00	574+67.50	I-30 EASTBOUND LANES	6621.50	27	19864.50
392+70.64	506+82.00	I-30 WESTBOUND LANES	11411.36	27	34234.08
508+30.00	574+67.50	I-30 WESTBOUND LANES	6637.50	27	19912.50
TOTAL:					108586.47

CONCRETE DITCH PAVING FOR WIRE ROPE SAFETY FENCE

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
412+37.01	507+12.03	RIGHT OF LEFT MAIN LANES	9475.02	4	4211.12	4211.12	53.06
511+69.32	546+45.83	LEFT OF RIGHT MAIN LANES	3476.51	4	1545.12	1545.12	19.47
546+81.81	572+35.38	LEFT OF RIGHT MAIN LANES	2553.57	4	1134.92	1134.92	14.30
576+04.00	591+15.00	LEFT OF RIGHT MAIN LANES	1511.00	4	671.56	671.56	8.46
590+60.00	630+60.30	LEFT OF RIGHT MAIN LANES	4000.30	4	1777.91	1777.91	22.40
630+96.30	637+23.93	LEFT OF RIGHT MAIN LANES	627.63	4.00	278.95	278.95	3.51
TOTALS:					9619.58	9619.58	121.20

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

EARTHWORK

	STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
				CU. YD.	
	503+45	507+31	LT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3797 BR	60	
	504+20	507+38	RT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3797 BR	30	
	507+90	509+50	LT. OF LT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3797 AR AND HWY. 112 OVERPASS	10	
	507+97	514+18	RT. OF LT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3797 AR AND HWY. 112 OVERPASS	110	
	508+06	512+07	LT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3797 BR AND HWY. 112 OVERPASS	70	
	508+13	510+08	RT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3797 BR AND HWY. 112 OVERPASS	10	
	509+87	513+05	LT. OF LT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT HWY. 112 OVERPASS	30	
	510+48	513+16	RT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT HWY. 112 OVERPASS	30	
	569+36	575+04	RT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3971 BR	60	
	571+18	575+04	LT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3971 BR	60	
	575+94	579+12	RT. OF RT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. BR3971	30	
	575+94	579+12	LT. OF LT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3971 AR	30	
	575+94	579+80	RT. OF LT. MAIN LANES SHLDR. WIDENING FOR GUARDRAIL AT BR. NO. 3971 AR	60	
	630+78		MEDIAN CROSSOVER	95	200
	576+31	581+81	EXCAVATION FOR TRANSITION - LT. MAIN LANES	795	
	576+31	581+81	EXCAVATION FOR TRANSITION - RT. MAIN LANES	795	
	631+50	637+00	EXCAVATION FOR TRANSITION - LT. MAIN LANES	795	
	631+50	637+00	EXCAVATION FOR TRANSITION - RT. MAIN LANES	795	
*	ENTIRE	PROJECT	TO BE USED IF AND WHERE		300*
			DIRECTED BY THE ENGINEER		
	TOTALS:			3865	500

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

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.

10/6/2016

RBB0302.DGN

QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 10-4-16

PCCP PATCHING (I-30 EASTBOUND) (BOX 1 OF 2)

STA.	STA.	LOCATION	LENGTH	WIDTH	REM. & DISP. CONC. PVMT. FOR PATCHING	P.C.C.P PATCHING (8" U.T.)	P.C.C.P PATCHING (12" U.T.)
			FEET		SQ. YD.	SQ. YD.	SQ. YD.
392+61	392+74	OUTSIDE LANE	13	15	21.7		21.7
395+28	395+41	OUTSIDE LANE	13	15	21.7		21.7
395+50	395+56	OUTSIDE LANE	6	15	10.0		10.0
397+77	397+84	INSIDE LANE	7	12	9.3		9.3
397+92	397+98	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
401+04	401+16	OUTSIDE LANE	12	15	20.0		20.0
401+41	401+47	OUTSIDE LANE	6	15	10.0		10.0
401+71	401+78	OUTSIDE LANE	7	15	11.7		11.7
401+95	402+01	OUTSIDE LANE	6	15	10.0		10.0
402+25	402+31	OUTSIDE LANE	6	15	10.0		10.0
403+77	403+83	OUTSIDE LANE	6	15	10.0		10.0
403+83	403+98	OUTSIDE SHOULDER	15	7	11.7	11.7	
403+98	404+04	OUTSIDE LANE	6	15	10.0		10.0
404+68	404+74	OUTSIDE LANE	6	15	10.0		10.0
405+05	405+11	INSIDE LANE	6	12	8.0		8.0
407+41	407+47	OUTSIDE SHOULDER	6	7	4.7	4.7	
409+99	410+05	OUTSIDE LANE	6	15	10.0		10.0
411+72	411+87	OUTSIDE LANE	15	15	25.0		25.0
412+26	412+32	OUTSIDE LANE	6	15	10.0		10.0
413+09	413+15	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
413+55	413+61	OUTSIDE LANE	6	15	10.0		10.0
416+49	416+55	INSIDE LANE	6	12	8.0		8.0
417+46	417+76	OUTSIDE LANE	30	15	50.0		50.0
417+46	417+82	INSIDE LANE	36	12	48.0		48.0
417+91	417+97	OUTSIDE LANE	6	15	10.0		10.0
417+91	418+12	INSIDE LANE	21	12	28.0		28.0
418+06	418+12	OUTSIDE LANE	6	15	10.0		10.0
418+46	418+52	INSIDE LANE	6	12	8.0		8.0
418+60	418+66	INSIDE LANE	6	12	8.0		8.0
418+81	418+87	OUTSIDE LANE	6	15	10.0		10.0
418+81	418+96	INSIDE LANE	15	12	20.0		20.0
419+05	419+11	INSIDE LANE	6	12	8.0		8.0
422+13	422+19	OUTSIDE LANE	6	15	10.0		10.0
422+13	422+20	INSIDE LANE	7	12	9.3		9.3
422+36	422+44	INSIDE LANE	8	12	10.7		10.7
423+02	423+17	INSIDE AND OUTSIDE LANE	15	27	45.0		45.0
423+56	423+62	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
423+71	423+77	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
428+07	428+13	INSIDE LANE	6	12	8.0		8.0
429+72	431+29	OUTSIDE LANE	157	15	261.7		261.7
429+87	429+93	INSIDE LANE	6	12	8.0		8.0
430+16	430+24	INSIDE LANE	8	12	10.7		10.7
430+53	430+59	INSIDE LANE	6	12	8.0		8.0
431+76	431+82	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
432+20	432+35	INSIDE LANE	15	12	20.0		20.0
432+20	432+35	INSIDE SHOULDER	15	4	6.7	6.7	
432+42	432+48	INSIDE LANE	6	12	8.0		8.0
432+71	432+77	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
432+94	433+00	INSIDE LANE	6	12	8.0		8.0
433+09	433+15	OUTSIDE LANE	6	15	10.0		10.0
433+24	433+30	OUTSIDE LANE	6	15	10.0		10.0
433+54	433+60	OUTSIDE LANE	6	15	10.0		10.0
433+54	433+69	INSIDE LANE	15	12	20.0		20.0
434+13	434+19	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
438+64	438+70	INSIDE LANE	6	12	8.0		8.0
439+32	439+38	OUTSIDE LANE	6	15	10.0		10.0
439+62	439+68	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
439+84	439+90	OUTSIDE SHOULDER	6	7	4.7	4.7	
439+84	439+98	INSIDE SHOULDER	14	4	6.2	6.2	
440+13	440+19	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
441+04	441+10	OUTSIDE SHOULDER	6	7	4.7	4.7	
441+28	441+34	INSIDE AND OUTSIDE SHOULDER	6	11	7.3	7.3	
441+19	441+34	OUTSIDE LANE	15	15	25.0		25.0
441+88	442+09	OUTSIDE LANE	21	15	35.0		35.0
442+17	442+23	OUTSIDE SHOULDER	6	7	4.7	4.7	
442+84	442+90	INSIDE LANE	6	12	8.0		8.0
442+84	443+06	OUTSIDE LANE	22	15	36.7		36.7
459+64	459+70	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
460+10	460+16	OUTSIDE SHOULDER	6	7	4.7	4.7	
460+18	460+24	OUTSIDE LANE	6	15	10.0		10.0
460+18	460+30	INSIDE LANE	12	12	16.0		16.0
460+35	460+41	OUTSIDE LANE	6	15	10.0		10.0
460+53	460+59	INSIDE LANE	6	12	8.0		8.0
460+56	460+62	OUTSIDE LANE	6	15	10.0		10.0
461+28	461+34	INSIDE LANE	6	12	8.0		8.0
463+73	463+79	OUTSIDE SHOULDER	6	7	4.7	4.7	
464+10	464+25	INSIDE LANE	15	12	20.0		20.0
464+19	464+25	OUTSIDE SHOULDER	6	7	4.7	4.7	
464+34	464+40	INSIDE LANE	6	12	8.0		8.0
465+98	466+04	OUTSIDE SHOULDER	6	7	4.7	4.7	
467+33	467+39	OUTSIDE SHOULDER	6	7	4.7	4.7	
467+94	468+00	OUTSIDE SHOULDER	6	7	4.7	4.7	
472+06	472+21	INSIDE SHOULDER	15	4	6.7	6.7	
472+14	472+20	OUTSIDE SHOULDER	6	7	4.7	4.7	
473+05	473+11	OUTSIDE SHOULDER	6	7	4.7	4.7	
488+41	488+47	OUTSIDE LANE	6	15	10.0		10.0
489+30	489+36	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
490+74	490+80	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
497+41	497+47	OUTSIDE SHOULDER	6	7	4.7	4.7	
497+71	497+86	INSIDE LANE	15	12	20.0		20.0
498+01	498+31	OUTSIDE SHOULDER	30	7	23.3	23.3	
503+90	503+96	OUTSIDE LANE	6	15	10.0		10.0
508+31	508+46	OUTSIDE LANE	15	15	25.0		25.0
510+55	510+61	OUTSIDE LANE	6	15	10.0		10.0
513+29	513+35	INSIDE LANE	6	12	8.0		8.0
513+65	513+71	OUTSIDE LANE	6	15	10.0		10.0
513+59	513+65	OUTSIDE SHOULDER	6	7	4.7	4.7	
522+48	522+54	OUTSIDE LANE	6	15	10.0		10.0
525+33	525+39	OUTSIDE LANE	6	15	10.0		10.0
564+17	564+23	OUTSIDE SHOULDER	6	7	4.7	4.7	
566+02	566+08	OUTSIDE SHOULDER	6	7	4.7	4.7	
571+37	571+43	OUTSIDE SHOULDER	6	7	4.7	4.7	
SUBTOTALS (BOX 1 OF 2):					1566.3	141.8	1424.5

PCCP PATCHING (I-30 WESTBOUND) (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	WIDTH	REM. & DISP. CONC. PVMT. FOR PATCHING	P.C.C.P PATCHING (8" U.T.)	P.C.C.P PATCHING (12" U.T.)
			FEET		SQ. YD.	SQ. YD.	SQ. YD.
394+94	395+07	INSIDE AND OUTSIDE LANE	13	27	39.0		39.0
396+98	397+04	OUTSIDE LANE	6	15	10.0		10.0
397+90	397+96	INSIDE LANE	6	12	8.0		8.0
398+04	398+19	INSIDE SHOULDER	15	4	6.7	6.7	
398+19	398+25	INSIDE LANE	6	12	8.0		8.0
400+56	400+62	OUTSIDE LANE	6	15	10.0		10.0
405+59	405+71	OUTSIDE SHOULDER	12	7	9.3	9.3	
408+64	408+70	INSIDE LANE	6	12	8.0		8.0
409+39	409+69	INSIDE SHOULDER	30	4	13.3	13.3	
409+39	409+69	INSIDE LANE	30	12	40.0		40.0
409+54	409+60	OUTSIDE SHOULDER	6	7	4.7	4.7	
409+84	409+90	OUTSIDE LANE	6	15	10.0		10.0
412+03	412+09	INSIDE LANE	6	12	8.0		8.0
413+81	413+87	INSIDE LANE	6	12	8.0		8.0
418+80	418+86	OUTSIDE LANE	6	15	10.0		10.0
425+93	425+99	OUTSIDE LANE	6	15	10.0		10.0
435+89	435+95	OUTSIDE LANE	6	15	10.0		10.0
438+44	438+50	INSIDE SHOULDER	6	4	2.7	2.7	
443+35	444+10	OUTSIDE LANE	75	15	125.0		125.0
472+88	472+95	INSIDE SHOULDER	7	4	3.1	3.1	
473+12	473+18	INSIDE SHOULDER	6	4	2.7	2.7	
473+34	473+40	INSIDE SHOULDER	6	4	2.7	2.7	
473+49	473+55	INSIDE SHOULDER	6	4	2.7	2.7	
473+78	473+84	INSIDE SHOULDER	6	4	2.7	2.7	
473+94	474+09	INSIDE SHOULDER	15	4	6.7	6.7	
474+18	474+24	INSIDE SHOULDER	6	4	2.7	2.7	
474+33	474+39	INSIDE SHOULDER	6	4	2.7	2.7	
474+63	474+69	INSIDE SHOULDER	6	4	2.7	2.7	
474+78	474+84	INSIDE SHOULDER	6	4	2.7	2.7	
475+23	475+29	INSIDE SHOULDER	6	4	2.7	2.7	
475+60	475+66	INSIDE SHOULDER	6	4	2.7	2.7	
475+75	475+81	INSIDE SHOULDER	6	4	2.7	2.7	
476+13	476+20	INSIDE SHOULDER	7	4	3.1	3.1	
476+28	476+34	INSIDE SHOULDER	6	4	2.7	2.7	
476+49	476+55	INSIDE SHOULDER	6	4	2.7	2.7	
476+80	476+86	INSIDE SHOULDER	6	4	2.7	2.7	
477+03	477+09	INSIDE SHOULDER	6	4	2.7	2.7	
477+49	477+55	INSIDE SHOULDER	6	4	2.7	2.7	
477+85	478+00	INSIDE SHOULDER	15	4	6.7	6.7	
478+09	478+15	INSIDE SHOULDER	6	4	2.7	2.7	
478+24	478+30	INSIDE SHOULDER	6	4	2.7	2.7	
478+00	478+15	INSIDE SHOULDER	15	4	6.7	6.7	
478+90	479+35	INSIDE SHOULDER	45	4	20.0	20.0	
479+50	479+65	INSIDE SHOULDER	15	4	6.7	6.7	
479+80	479+86	INSIDE SHOULDER	6	4	2.7	2.7	
480+03	480+09	INSIDE SHOULDER	6	4	2.7	2.7	
480+19	480+25	INSIDE SHOULDER	6	4	2.7	2.7	
480+34	480+40	INSIDE SHOULDER	6	4	2.7	2.7	
480+49	480+55	INSIDE SHOULDER	6	4	2.7	2.7	
480+70	480+85	INSIDE SHOULDER	15	4	6.7	6.7	
480+94	481+00	INSIDE SHOULDER	6	4	2.7	2.7	
481+15	481+21	INSIDE SHOULDER	6	4	2.7	2.7	
481+30	481+36	INSIDE SHOULDER	6	4	2.7	2.7	
481+44	481+50	INSIDE SHOULDER	6	4	2.7	2.7	
481+60	481+75	INSIDE SHOULDER	15	4	6.7	6.7	
481+84	481+90	INSIDE SHOULDER	6	4	2.7	2.7	
482+20	482+35	INSIDE SHOULDER	15	4	6.7	6.7	
482+50	482+65	INSIDE SHOULDER	15	4	6.7	6.7	
482+74	482+80	INSIDE SHOULDER	6	4	2.7	2.7	
483+25	483+31	INSIDE SHOULDER	6	4	2.7	2.7	
483+41	483+56	INSIDE SHOULDER	15	4	6.7	6.7	
483+65	483+71	INSIDE SHOULDER	6	4	2.7	2.7	
483+80	483+86	INSIDE SHOULDER	6	4	2.7	2.7	
483+95	484+01	INSIDE SHOULDER	6	4	2.7	2.7	
484+10	484+16	INSIDE SHOULDER	6	4	2.7	2.7	
484+31	484+37	INSIDE SHOULDER	6	4	2.7	2.7	
484+46	484+52	INSIDE SHOULDER	6	4	2.7	2.7	
484+60	484+75	INSIDE SHOULDER	15	4	6.7	6.7	
484+84	484+90	INSIDE SHOULDER	6	4	2.7	2.7	
485+06	485+12	INSIDE SHOULDER	6	4	2.7	2.7	
485+21	485+36	INSIDE SHOULDER	15	4	6.7	6.7	
485+66	485+81	INSIDE SHOULDER	15	4	6.7	6.7	
486+05	486+11	INSIDE SHOULDER	6	4	2.7	2.7	
486+25	486+31	OUTSIDE LANE	6	15	10.0		10.0
486+26	486+31	INSIDE SHOULDER	6	4	2.7	2.7	
486+70	486+85	INSIDE SHOULDER	15	4	6.7	6.7	
486+95	487+01	INSIDE SHOULDER	6	4	2.7	2.7	
487+25	487+31	INSIDE SHOULDER	6	4	2.7	2.7	
487+62	487+77	INSIDE SHOULDER	15	4	6.7	6.7	
487+85	487+91	INSIDE SHOULDER	6	4	2.7	2.7	
488+05	488+11	INSIDE SHOULDER	6	4	2.7	2.7	
488+97	489+03	INSIDE SHOULDER	6	4	2.7	2.7	
489+20	489+26	INSIDE SHOULDER	6	4	2.7	2.7	
489+56	489+62	INSIDE SHOULDER	6	4	2.7	2.7	
489+85	490+00	INSIDE SHOULDER	15	4	6.7	6.7	
490+09	490+15	INSIDE SHOULDER	6	4	2.7	2.7	
490+31	490+37	INSIDE SHOULDER	6	4	2.7	2.7	
490+54	490+60	OUTSIDE LANE	6	15	10.0		10.0
490+62	490+68	INSIDE SHOULDER	6	4	2.7	2.7	
490+76	490+91	INSIDE SHOULDER	15	4	6.7	6.7	
491+30	491+36	INSIDE SHOULDER	6	4	2.7	2.7	
493+71	493+77	OUTSIDE SHOULDER	6	7	4.7	4.7	
494+22	494+28	INSIDE SHOULDER	6	4	2.7	2.7	
495+11	495+17	OUTSIDE LANE	6	15	10.0		10.0
496+16	496+61	INSIDE AND OUTSIDE LANE	45	27	135.0		135.0
497+51	497+57	OUTSIDE LANE	6	15	10.0		10.0
497+66	497+72	INSIDE LANE	6	12	8.0		8.0
498+12	498+27	OUTSIDE LANE	15	15	25.0		25.0
500+67	500+73	OUTSIDE LANE	6	15	10.0		10.0
501+13	501+19	OUTSIDE LANE	6	15	10.0		10.0
501+57	501+63	INSIDE LANE	6	12	8.0		8.0
501+96	502+02	OUTSIDE LANE	6	15	10.0		10.0
503+08	504+72	INSIDE LANE	164	12	218.7		218.7
510+03	510+09	INSIDE AND OUTSIDE LANE	6	27	18.0		18.0
511+07	511+22	INSIDE AND OUTSIDE LANE	15	27	45.0		45.0
512+36	512+42	OUTSIDE LANE	6	15	10.0		10.0
514+06	514+21	INSIDE AND OUTSIDE LANE	15	27	45.0		45.0
514+45	514+51	INSIDE LANE	6	12	8.0		8.0
515+72	515+87	INSIDE AND OUTSIDE LANE	15	27	45.0		45.0
517+64	517+70	OUTSIDE LANE	6	15	10.0		10.0
519+99	520+05	INSIDE SHOULDER	6	4	2.7	2.7	
521+70	521+76	OUTSIDE LANE	6	15	10.0		10.0
526+18	526+33	INSIDE LANE	15	12	20.0		20.0
527+17	527+23	OUTSIDE SHOULDER	6	7	4.7	4.7	
527+39	527+45	OUTSIDE SHOULDER	6	7	4.7	4.7	
528+43	528+65	OUTSIDE SHOULDER	22	7	17.1	17.1	
531+68	531+74	OUTSIDE LANE	6	15	10.0		10.0
538+01	538+07	OUTSIDE SHOULDER	6	7	4.7	4.7	
538+74	538+80	OUTSIDE LANE	6	15	10.0		10.0
548+87	548+93	OUTSIDE LANE	6	15	10.0		10.0
551+20	551+26	INSIDE LANE	6	12	8.0		8.0
557+67	557+73	OUTSIDE LANE	6	15	10.0		10.0
566+30	566+36	OUTSIDE LANE	6	15	10.0		10.0
570+50	570+56	OUTSIDE LANE	6	15	10.0		10.0
SUBTOTALS (BOX 2 OF 2):					1396.8	349.1	1047.7
SUBTOTALS (BOX 1 OF 2)					1566.3	141.8	1424.5
TOTALS:					2963.1	490.9	2472.2

RUMBLE STRIPS IN CONCRETE SHOULDERS

STATION	STATION	LOCATION	* RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS
			LIN.FT.
432+20	432+35	LT. OF RT. MAIN LANES	15
439+84	439+98	LT. OF RT. MAIN LANES	14
441+28	441+34	LT. OF RT. MAIN LANES	6
472+06	472+21	LT. OF RT. MAIN LANES	15
398+04	398+19	RT. OF LT. MAIN LANES	15
409+39	409+69	RT. OF LT. MAIN LANES	30
438+44	438+50	RT. OF LT. MAIN LANES	6
472+88	472+95	RT. OF LT. MAIN LANES	7
473+12	473+18	RT. OF LT. MAIN LANES	6
473+34	473+40	RT. OF LT. MAIN LANES	6
473+49	473+55	RT. OF LT. MAIN LANES	6
473+78	473+84	RT. OF LT. MAIN LANES	6
473+94	474+09	RT. OF LT. MAIN LANES	15
474+18	474+24	RT. OF LT. MAIN LANES	6
474+33	474+39	RT. OF LT. MAIN LANES	6
474+63	474+69	RT. OF LT. MAIN LANES	6
474+78	474+84	RT. OF LT. MAIN LANES	6
475+23	475+29	RT. OF LT. MAIN LANES	6
475+60	475+66	RT. OF LT. MAIN LANES	6
475+75	475+81	RT. OF LT. MAIN LANES	6
476+13	476+20	RT. OF LT. MAIN LANES	7
476+28	476+34	RT. OF LT. MAIN LANES	6
476+49	476+55	RT. OF LT. MAIN LANES	6
476+80	476+86	RT. OF LT. MAIN LANES	6
477+03	477+09	RT. OF LT. MAIN LANES	6
477+49	477+55	RT. OF LT. MAIN LANES	6
477+85	478+00	RT. OF LT. MAIN LANES	15
478+09	478+15	RT. OF LT. MAIN LANES	6
478+24	478+30	RT. OF LT. MAIN LANES	6
478+00	478+15	RT. OF LT. MAIN LANES	15
478+90	479+35	RT. OF LT. MAIN LANES	45
479+50	479+65	RT. OF LT. MAIN LANES	15
479+80	479+86	RT. OF LT. MAIN LANES	6
480+03	480+09	RT. OF LT. MAIN LANES	6
480+19	480+25	RT. OF LT. MAIN LANES	6
480+34	480+40	RT. OF LT. MAIN LANES	6
480+49	480+55	RT. OF LT. MAIN LANES	6
480+70	480+85	RT. OF LT. MAIN LANES	15
480+94	481+00	RT. OF LT. MAIN LANES	6
481+15	481+21	RT. OF LT. MAIN LANES	6
481+30	481+36	RT. OF LT. MAIN LANES	6
481+44	481+50	RT. OF LT. MAIN LANES	6
481+60	481+75	RT. OF LT. MAIN LANES	15
481+84	481+90	RT. OF LT. MAIN LANES	6
482+20	482+35	RT. OF LT. MAIN LANES	15
482+50	482+65	RT. OF LT. MAIN LANES	15
482+74	482+80	RT. OF LT. MAIN LANES	6
483+25	483+31	RT. OF LT. MAIN LANES	6
483+41	483+56	RT. OF LT. MAIN LANES	15
483+65	483+71	RT. OF LT. MAIN LANES	6
483+80	483+86	RT. OF LT. MAIN LANES	6
483+95	484+01	RT. OF LT. MAIN LANES	6
484+10	484+16	RT. OF LT. MAIN LANES	6
484+31	484+37	RT. OF LT. MAIN LANES	6
484+46	484+52	RT. OF LT. MAIN LANES	6
484+60	484+75	RT. OF LT. MAIN LANES	15
484+84	484+90	RT. OF LT. MAIN LANES	6
485+06	485+12	RT. OF LT. MAIN LANES	6
485+21	485+36	RT. OF LT. MAIN LANES	15
485+66	485+81	RT. OF LT. MAIN LANES	15
486+05	486+11	RT. OF LT. MAIN LANES	6
486+26	486+31	RT. OF LT. MAIN LANES	5
486+70	486+85	RT. OF LT. MAIN LANES	15
486+95	487+01	RT. OF LT. MAIN LANES	6
487+25	487+31	RT. OF LT. MAIN LANES	6
487+62	487+77	RT. OF LT. MAIN LANES	15
487+85	487+91	RT. OF LT. MAIN LANES	6
488+05	488+11	RT. OF LT. MAIN LANES	6
488+97	489+03	RT. OF LT. MAIN LANES	6
489+20	489+26	RT. OF LT. MAIN LANES	6
489+56	489+62	RT. OF LT. MAIN LANES	6
489+85	490+00	RT. OF LT. MAIN LANES	15
490+09	490+15	RT. OF LT. MAIN LANES	6
490+31	490+37	RT. OF LT. MAIN LANES	6
490+62	490+68	RT. OF LT. MAIN LANES	6
490+76	490+91	RT. OF LT. MAIN LANES	15
491+30	491+36	RT. OF LT. MAIN LANES	6
494+22	494+28	RT. OF LT. MAIN LANES	6
519+99	520+05	RT. OF LT. MAIN LANES	6
391+73	506+98	RT. OF RT. MAIN LANES	11525
508+46	574+68	RT. OF RT. MAIN LANES	6622
392+71	506+82	LT. OF LT. MAIN LANES	11411
508+30	574+68	LT. OF LT. MAIN LANES	6638
TOTAL:			36913

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 14435
KENNETH D. HAYNES
10-4-16

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FEDERAL DIST.NO.	STATE
				6	ARK.

JOB NO.	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
R8B0302		42	74

(2) QUANTITIES

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	43	74

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
576+31	581+81	LT. MAIN LANES	550	4
631+50	637+00	LT. MAIN LANES	550	4
576+31	581+81	RT. MAIN LANES	550	4
631+50	637+00	RT. MAIN LANES	550	4
TOTALS:			2200	16

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

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POSTS (TYPE 1)
			LIN. FT.	EACH		
504+12.22	507+30.97	LEFT OF RIGHT MAIN LANES	250	1	1	
504+69.28	507+38.03	RIGHT OF RIGHT MAIN LANES	200	1	1	
507+89.97	509+49.97	LEFT OF LEFT MAIN LANES	125	2		
507+97.03	513+65.78	RIGHT OF LEFT MAIN LANES	500	1	1	
508+05.97	511+49.72	LEFT OF RIGHT MAIN LANES	300	1		1
508+13.03	510+08.03	RIGHT OF RIGHT MAIN LANES	175	2		
509+87.08	512+55.83	LEFT OF LEFT MAIN LANES	200	1	1	
510+48.38	512+67.13	RIGHT OF RIGHT MAIN LANES	175	1		1
569+85.25	575+04.00	RIGHT OF RIGHT MAIN LANES	450	1	1	
571+85.25	575+04.00	LEFT OF RIGHT MAIN LANES	250	1	1	
575+94.00	578+62.75	RIGHT OF RIGHT MAIN LANES	225	1		1
575+94.00	578+62.75	LEFT OF LEFT MAIN LANES	200	1	1	
575+94.00	579+12.75	RIGHT OF LEFT MAIN LANES	250	1	1	
TOTALS:			3300	15	8	3

WIRE ROPE SAFETY FENCE

STATION	STATION	LOCATION	WIRE ROPE SAFETY FENCE	*WRSF ANCHOR	WRSF MAINTENANCE MATERIALS	**WRSF POST REPAIR
			LIN. FT.	EACH	LUMP SUM	EACH
412+37.01	507+12.03	RIGHT OF LEFT MAIN LANES	9475	2		
510+99.55	546+45.83	LEFT OF RIGHT MAIN LANES	3546	2		
546+81.81	572+35.38	LEFT OF RIGHT MAIN LANES	2554	2		
576+04.00	591+15.00	LEFT OF RIGHT MAIN LANES	1511	1		
590+60.00	630+60.30	LEFT OF RIGHT MAIN LANES	4000	1		
630+96.30	637+23.93	LEFT OF RIGHT MAIN LANES	628	2		
ENTIRE	PROJECT				1.00	50
TOTALS:			21714	10	1.00	50

*SHOWN FOR INFORMATION ONLY.
**QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL				
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SAND BAG DITCH CHECKS (E-5)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	FILTER SOCK 18"	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	BAG	LIN. FT.	LIN. FT.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	PAVEMENT REHABILITATION	4.98	9.96	4.98	508.0	4.98	528	400	8301		346
ENTIRE	PROJECT	RUBBLIZE AND OVERLAY - STAGE 1						264	175	12737		490
ENTIRE	PROJECT	RUBBLZIE AND OVERLAY - STAGE 2								13140		487
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			1.25	2.50	1.25	127.5	1.25	132	100	2075	750	81
TOTALS:			6.23	12.46	6.23	635.5	6.23	924	675	36253	750	1404

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
SAND BAG DITCH CHECKS.....22 BAGS / 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.

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	* RUMBLE STRIPS IN ASPHALT SHOULDERS
			LIN.FT.
576+31	591+15	LT. OF LT. MAIN LANES	1484
590+60	637+00	LT. OF LT. MAIN LANES	4640
576+31	591+15	RT. OF LT. MAIN LANES	1484
590+60	637+00	RT. OF LT. MAIN LANES	4640
576+31	591+15	LT. OF RT. MAIN LANES	1484
590+60	637+00	LT. OF RT. MAIN LANES	4640
576+31	591+15	RT. OF RT. MAIN LANES	1484
590+60	637+00	RT. OF RT. MAIN LANES	4640
TOTAL:			24496

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

FLUSHING UNDERDRAIN

STA.	STA.	LOCATION	LIN. FT.
392+71	506+82	LEFT MAIN LANES	11411
508+30	574+68	LEFT MAIN LANES	6638
581+81	591+15	LEFT MAIN LANES	934
590+60	631+50	LEFT MAIN LANES	4090
391+73	506+98	RIGHT MAIN LANES	11525
508+46	574+68	RIGHT MAIN LANES	6622
581+81	591+15	RIGHT MAIN LANES	934
590+60	631+50	RIGHT MAIN LANES	4090
TOTAL:			46244

SPECIAL CLEARING

STATION	STATION	LOCATION	SPECIAL CLEARING
			STATION
391+00	575+00	OUTSIDE OF MAIN LANES	184
TOTAL:			184

POLYMER OVERLAY AND BRIDGE DECK REPAIR

STATION	STATION	LOCATION	POLYMER OVERLAY	BRIDGE DECK REPAIR
			SQ. YD.	SQ. FT.
506+82.00	508+30.00	BRIDGE NO. A3797	668.00	300.00
506+98.00	508+46.00	BRIDGE NO. B3797	668.00	300.00
574+67.50	576+30.50	BRIDGE NO. A3971	734.00	360.00
574+67.50	576+30.50	BRIDGE NO. B3971	734.00	360.00
TOTALS:			2804.00	1320.00

NOTE: EXISTING BRIDGE DECKS HAVE NO ASPHALTIC OVERLAY.

NOTE: QUANTITY SHOWN FOR "POLYMER OVERLAY" INCLUDES APPROACH SLABS AND GUTTERS.

NOTE: QUANTITY SHOWN FOR "BRIDGE DECK REPAIR" IS FOR ESTIMATING AND BIDDING PURPOSES ONLY. ACTUAL QUANTITY, IF ANY, WILL BE DETERMINED IN THE FIELD.

10/6/2016

RBB0302.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	44	74

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	BORROW		AGGREGATE BASE COURSE (CLASS 1)		AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								
			FEET	CU. YD. / LIN. FT.	CU. YD.	TON / STATION	TON	TON / STATION	TON	AVG. WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 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	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL PG 76-22 TON
RUBBLIZE AND OVERLAY - MAIN LANES																														
581+80.50	591+15.00	MAIN LANES - LT. MAIN LANES	934.50							108.00	11214.00	0.05	560.70	27.00	2803.50	530.00	742.93	27.00	2803.50	330.00	462.58	27.00	2803.50	220.00	308.39	27.00	2803.50	220.00	308.39	616.78
590+60.00	631+50.00	MAIN LANES - LT. MAIN LANES	4090.00							108.00	49080.00	0.05	2454.00	27.00	12270.00	530.00	3251.55	27.00	12270.00	330.00	2024.55	27.00	12270.00	220.00	1349.70	27.00	12270.00	220.00	1349.70	2699.40
581+80.50	591+15.00	MAIN LANES - RT. MAIN LANES	934.50							108.00	11214.00	0.05	560.70	27.00	2803.50	530.00	742.93	27.00	2803.50	330.00	462.58	27.00	2803.50	220.00	308.39	27.00	2803.50	220.00	308.39	616.78
590+60.00	631+50.00	MAIN LANES - RT. MAIN LANES	4090.00							108.00	49080.00	0.05	2454.00	27.00	12270.00	530.00	3251.55	27.00	12270.00	330.00	2024.55	27.00	12270.00	220.00	1349.70	27.00	12270.00	220.00	1349.70	2699.40
RUBBLIZE AND OVERLAY - OUTSIDE SHOULDERS																														
581+80.50	591+15.00	OUTSIDE SHOULDER - LT. MAIN LANES	934.50	0.07	65.42	39.21	366.42			29.12	3023.63	0.05	151.18	7.38	766.29	440.00	168.58	7.23	750.72	330.00	123.87	7.13	740.33	220.00	81.44	7.00	726.83	220.00	79.95	161.39
590+60.00	631+50.00	OUTSIDE SHOULDER - LT. MAIN LANES	4090.00	0.07	286.30	39.21	1603.69			29.12	13233.42	0.05	661.67	7.38	3353.80	440.00	737.84	7.23	3285.63	330.00	542.13	7.13	3240.19	220.00	356.42	7.00	3181.11	220.00	349.92	706.34
581+80.50	591+15.00	OUTSIDE SHOULDER - RT. MAIN LANES	934.50	0.07	65.42	39.21	366.42			29.12	3023.63	0.05	151.18	7.38	766.29	440.00	168.58	7.23	750.72	330.00	123.87	7.13	740.33	220.00	81.44	7.00	726.83	220.00	79.95	161.39
590+60.00	631+50.00	OUTSIDE SHOULDER - RT. MAIN LANES	4090.00	0.07	286.30	39.21	1603.69			29.12	13233.42	0.05	661.67	7.38	3353.80	440.00	737.84	7.23	3285.63	330.00	542.13	7.13	3240.19	220.00	356.42	7.00	3181.11	220.00	349.92	706.34
RUBBLIZE AND OVERLAY - INSIDE SHOULDERS																														
581+80.50	591+15.00	INSIDE SHOULDER - LT. MAIN LANES	934.50	0.08	74.76	44.56	416.41			25.20	2616.60	0.05	130.83	6.42	666.61	625.00	208.32	6.23	646.88	330.00	106.74	6.13	636.50	220.00	70.02	6.00	623.00	220.00	68.53	138.55
590+60.00	631+50.00	INSIDE SHOULDER - LT. MAIN LANES	4090.00	0.08	327.20	44.56	1822.50			25.20	11452.00	0.05	572.60	6.42	2917.53	625.00	911.73	6.23	2831.19	330.00	467.15	6.13	2785.74	220.00	306.43	6.00	2726.67	220.00	299.93	606.36
581+80.50	591+15.00	INSIDE SHOULDER - RT. MAIN LANES	934.50	0.08	74.76	44.56	416.41			25.20	2616.60	0.05	130.83	6.42	666.61	625.00	208.32	6.23	646.88	330.00	106.74	6.13	636.50	220.00	70.02	6.00	623.00	220.00	68.53	138.55
590+60.00	631+50.00	INSIDE SHOULDER - RT. MAIN LANES	4090.00	0.08	327.20	44.56	1822.50			25.20	11452.00	0.05	572.60	6.42	2917.53	625.00	911.73	6.23	2831.19	330.00	467.15	6.13	2785.74	220.00	306.43	6.00	2726.67	220.00	299.93	606.36
FULL DEPTH RECONSTRUCTION																														
576+30.50	581+80.50	LT. MAIN LANES	550.00	0.15	82.50	149.00	819.50	VAR.	1633.05	162.75	9945.83	0.05	497.29	41.00	2505.56	880.00	1102.45	40.50	2475.00	660.00	816.75	40.25	2459.72	220.00	270.57	40.00	2444.44	220.00	268.89	539.46
631+50.00	637+00.00	LT. MAIN LANES	550.00	0.15	82.50	149.00	819.50	VAR.	1633.05	162.75	9945.83	0.05	497.29	41.00	2505.56	880.00	1102.45	40.50	2475.00	660.00	816.75	40.25	2459.72	220.00	270.57	40.00	2444.44	220.00	268.89	539.46
576+30.50	581+80.50	RT. MAIN LANES	550.00	0.15	82.50	149.00	819.50	VAR.	1633.05	162.75	9945.83	0.05	497.29	41.00	2505.56	880.00	1102.45	40.50	2475.00	660.00	816.75	40.25	2459.72	220.00	270.57	40.00	2444.44	220.00	268.89	539.46
631+50.00	637+00.00	RT. MAIN LANES	550.00	0.15	82.50	149.00	819.50	VAR.	1633.05	162.75	9945.83	0.05	497.29	41.00	2505.56	880.00	1102.45	40.50	2475.00	660.00	816.75	40.25	2459.72	220.00	270.57	40.00	2444.44	220.00	268.89	539.46
ADDITIONAL FOR LEVELING																														
581+80.50	591+15.00	MAIN LANES - LT. MAIN LANES	934.50							40.00	4153.33	0.17	706.07	40.00	4153.33	220.00	456.87													
590+60.00	631+50.00	MAIN LANES - LT. MAIN LANES	4090.00							40.00	18177.78	0.17	3090.22	40.00	18177.78	220.00	1999.56													
581+80.50	591+15.00	MAIN LANES - RT. MAIN LANES	934.50							40.00	4153.33	0.17	706.07	40.00	4153.33	220.00	456.87													
590+60.00	631+50.00	MAIN LANES - RT. MAIN LANES	4090.00							40.00	18177.78	0.17	3090.22	40.00	18177.78	220.00	1999.56													
GUARDRAIL WIDENING																														
503+45.22	507+30.97	LEFT OF RIGHT MAIN LANES	385.75					VAR.	141.75													VAR.	266.26	220.00	29.29					29.29
504+20.28	507+38.03	RIGHT OF RIGHT MAIN LANES	317.75					VAR.	78.27													VAR.	137.24	220.00	15.10					15.10
507+89.97	509+49.97	LEFT OF LEFT MAIN LANES	160.00					12.25	19.60													2.00	35.56	220.00	3.91					3.91
507+97.03	514+18.08	RIGHT OF LEFT MAIN LANES	621.05					VAR.	250.23													VAR.	475.61	220.00	52.32					52.32
508+05.97	512+06.60	LEFT OF RIGHT MAIN LANES	400.63					VAR.	169.04													VAR.	323.06	220.00	35.54					35.54
508+13.03	510+08.03	RIGHT OF RIGHT MAIN LANES	195.00					12.25	23.89													2.00	43.33	220.00	4.77					4.77
509+87.08	513+04.83	LEFT OF LEFT MAIN LANES	317.75					VAR.	80.14													VAR.	141.23	220.00	15.54					15.54
510+48.38	513+16.13	RIGHT OF RIGHT MAIN LANES	267.75					VAR.	64.60													VAR.	112.77	220.00	12.40					12.40
569+36.25	575+04.00	RIGHT OF RIGHT MAIN LANES	567.75					VAR.	144.58													VAR.	255.32	220.00	28.09					28.09
571+18.25	575+04.00	LEFT OF RIGHT MAIN LANES	385.75					VAR.	141.75													VAR.	266.26	220.00	29.29					29.29
575+94.00	579+11.75	RIGHT OF RIGHT MAIN LANES	317.75					VAR.	78.27													VAR.	137.24	220.00	15.10					15.10
575+94.00	579+11.75	LEFT OF LEFT MAIN LANES	317.75					VAR.	78.27													VAR.	137.24	220.00	15.10					15.10
575+94.00	579+79.75	RIGHT OF LEFT MAIN LANES	385.75					VAR.	141.75													VAR.	266.26	220.00	29.29					29.29
ADDITIONAL FOR MEDIAN CROSSOVER																														
630+78.00		I-30 MAIN LANE MEDIAN CROSSOVER	60.00	VARIES	50.00																	VAR.	131.11	220.00	14.42					14.42
TOTALS:					**1887.36**		**11696.04**		**7944.34**		**265684.84**		**18643.70**		**100239.92**		**21364.56**		**55075.84**		**10721.04**		**57519.89**		**6327.24**		**54439.98**		**5988.40**	**12315.64**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.0% MIN. AGGR.....4.0% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

10/6/2016

RBB0302.DGN

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM		QUANTITY			UNIT
			HSIP-30-1(153)12	NHPP-30-1(153)12	TOTAL	
202	REMOVAL AND DISPOSAL OF GUARDRAIL			3970	3970	LIN. FT.
202	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT			9289	9289	SQ. YD.
210	UNCLASSIFIED EXCAVATION			3865	3865	CU. YD.
SP & 210	BORROW			1887	1887	CU. YD.
210	COMPACTED EMBANKMENT			500	500	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 1)			11696	11696	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)			7944	7944	TON
SS & 401	TACK COAT			18644	18644	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")			20510	20510	TON
SP & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2")			855	855	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")			10260	10260	TON
SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")			461	461	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")			11676	11676	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")			640	640	TON
507	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT FOR PATCHING			2963	2963	SQ. YD.
SP & 507	PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (8" UNIFORM THICKNESS)			491	491	SQ. YD.
SP & 507	PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (12" UNIFORM THICKNESS)			2472	2472	SQ. YD.
509	JOINT REHABILITATION (TYPE A)			65151	65151	LIN. FT.
509	JOINT REHABILITATION (TYPE B)			108587	108587	LIN. FT.
SP & 510	GRINDING PORTLAND CEMENT CONCRETE PAVEMENT			108586	108586	SQ. YD.
513	RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT			42429	42429	SQ. YD.
601	MOBILIZATION			1.00	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE			1	1	EACH
SP & 603	MAINTENANCE OF TRAFFIC			1.00	1.00	LUMP SUM
SS & 604	SIGNS			1100	1100	SQ. FT.
SS & 604	TRAFFIC DRUMS			482	482	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER			14660	14660	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER			16960	16960	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS			161122	161122	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS			10844	10844	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS			16760	16760	LIN. FT.
604	ADVANCE WARNING ARROW PANEL			402	402	DAY
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN			116	116	WEEK
SP & 605	CONCRETE DITCH PAVING (TYPE B)		9620		9620	SQ. YD.
611	UNDERDRAIN OUTLET PROTECTORS			16	16	EACH
611	4" PIPE UNDERDRAINS			2200	2200	LIN. FT.
617	GUARDRAIL (TYPE A)			3300	3300	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)			3	3	EACH
617	GUARDRAIL TERMINAL (TYPE 2)			8	8	EACH
617	THRIE BEAM GUARDRAIL TERMINAL			15	15	EACH
620	LIME			12	12	TON
620	SEEDING			6.23	6.23	ACRE
SS & 620	MULCH COVER			6.23	6.23	ACRE
620	WATER		121.2	635.5	756.7	M.GAL.
621	SILT FENCE			36253	36253	LIN. FT.
621	SAND BAG DITCH CHECKS			924	924	BAG
621	DROP INLET SILT FENCE			675	675	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL			1404	1404	CU. YD.
623	SECOND SEEDING APPLICATION			6.23	6.23	ACRE
624	SOLID SODDING		9620		9620	SQ. YD.
SP & 635	ROADWAY CONSTRUCTION CONTROL			1.00	1.00	LUMP SUM
642	RUMBLE STRIPS IN ASPHALT SHOULDERS			24496	24496	LIN. FT.
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS			36913	36913	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4")	(ALTERNATE NO. 1)		49718	49718	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (4")	(ALTERNATE NO. 2)		49718	49718	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (4")	(ALTERNATE NO. 1)		12460	12460	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE (SKIP LINE) WHITE (4")	(ALTERNATE NO. 2)		12460	12460	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	(ALTERNATE NO. 1)		49718	49718	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4")	(ALTERNATE NO. 2)		49718	49718	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4")	(ALTERNATE NO. 1)		150	150	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4")	(ALTERNATE NO. 2)		150	150	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)			623	623	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER			7	7	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)			7	7	EACH
SP	MOTORIST ASSISTANCE PATROL			1.00	1.00	LUMP SUM
SP	REMOVAL OF RUMBLE STRIP			12248	12248	LIN. FT.
SP	FLUSHING UNDERDRAIN			46244	46244	LIN. FT.
SP	WIRE ROPE SAFETY FENCE		21714		21714	LIN. FT.
SP	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS		1.00		1.00	LUMP SUM
SP	WIRE ROPE SAFETY FENCE (POST REPAIR)		50		50	EACH
SP	FILTER SOCK (18")			750	750	LIN. FT.
SP	THERMOPLASTIC RUMBLE BAR			144	144	LIN. FT.
SP	SPECIAL CLEARING			184	184	STATION
	STRUCTURES OVER 20' SPAN					
SP	POLYMER OVERLAY			2804	2804	SQ. YD.
SP	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS			1320	1320	SQ. FT.

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
10/6/2016	REVISED LOCATION OF WIRE ROPE SAFETY FENCE BETWEEN STA. 510+~~59~~.55 - STA. 630+60.30, REVISED MAINTENANCE OF TRAFFIC DETAILS, REVISED ITEM NUMBERS FOR PAY ITEMS "PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (8" UNIFORM THICKNESS) AND "PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (12" UNIFORM THICKNESS)," ADDED "TEMPORARY IMPACT ATTENUATION BARRIER" AND "TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)" QUANTITIES, REVISED "CONCRETE DITCH PAVING (TYPE B)," "SEEDING," "MULCH COVER," "WATER," "SECOND SEEDING APPLICATION," "SOLID SODDING," "WIRE ROPE SAFETY FENCE," "RELOCATING PRECAST CONCRETE BARRIER," "CONSTRUCTION PAVEMENT MARKINGS," AND "REMOVABLE PAVEMENT MARKINGS" QUANTITIES	20-24, 26-27, 29, 31-37, 39-40, 43-45, 50-54

SUMMARY OF QUANTITIES AND REVISIONS

STATE OF ARKANSAS * REGISTERED PROFESSIONAL ENGINEER * No. 11425 * TIMOTHY D. SMITH

10-10-16

2 SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.ROAD DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-5-16				6	ARK.	BB0302	45	74

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.		BB0302	46	74
				(2) PLAN SHEETS				

STA. 397+00 - IN PLACE
DROP INLET IN MEDIAN
18" x 130' R.C. PIPE CULVERT TO RT.
RETAIN

STA. 402+00 - IN PLACE
DROP INLET IN MEDIAN
18" x 102' R.C. PIPE CULVERT TO RT.
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16

HWY. 67
MANDEVILLE RD.
MO. PAC. R.R.
3796 AR
3796 BR

STA. 391+72.87
BEGIN JOB BB0302
BEGIN PAVEMENT REHABILITATION
LOG MILE 11.63

BR. END STA. 392+34.14
STA. 392+70.64
P.C. 394+50.08
N 83° 55' 00" E
12' 12' 8" 30' 30' 8" 12' 12'
STA. 391+72.87
BR. END STA. 391+36.37

390 395 400 405

I-30 CENTERLINE
PI = 404+12.30
Δ = 45°33'00" LT.
D = 2°30'00"
T = 962.22'
L = 1822.00'
PC = 394+50.08
PT = 412+72.08
MATCH EXISTING SUPER

P.I. 404+12.30
N 38° 22' 00" E

405 410 415 420

I-30 CENTERLINE
PI = 404+12.30
Δ = 45°33'00" LT.
D = 2°30'00"
T = 962.22'
L = 1822.00'
PC = 394+50.08
PT = 412+72.08
MATCH EXISTING SUPER

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STA. 412+37.01
BEGIN WRSF
P.T. 412+72.08
N 38° 22' 00" E
12' 12' 10" 30' 30' 12' 12' 4"

STA. 406+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 86' R.C. PIPE CULVERT TO RT.
RETAIN

STA. 409+00 - IN PLACE
DROP INLET IN MEDIAN
DBL. 5' x 3' x 176' R.C. BOX CULVERT
RETAIN

10/4/2016
RBB0302.DGN

PLAN SHEETS

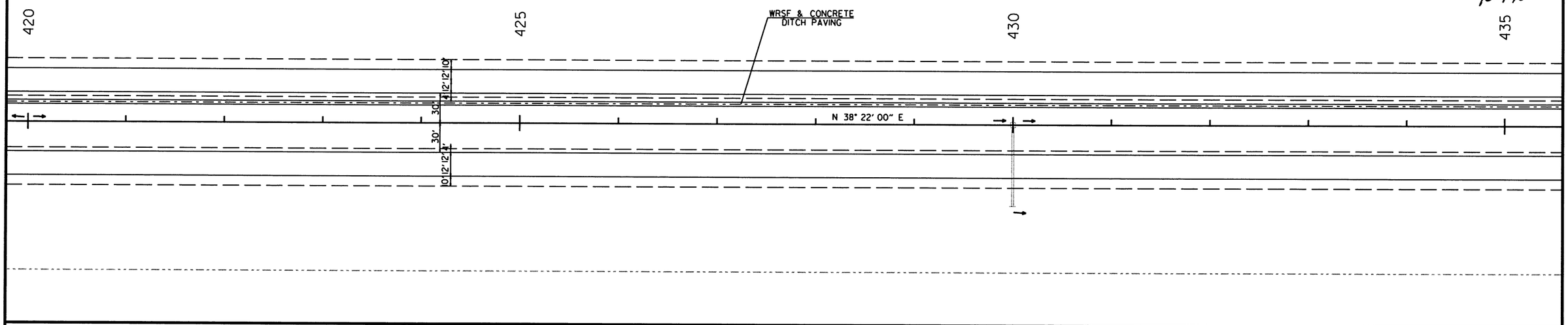
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0302	47	74

(2) PLAN SHEETS

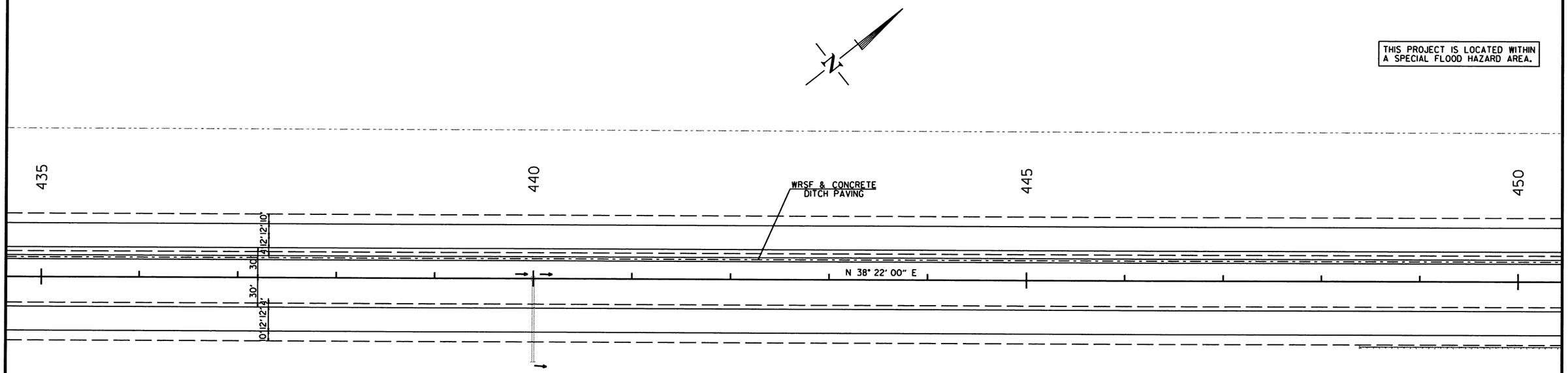
STA. 430+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 80' R.C. PIPE CULVERT TO RT.
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.



STA. 440+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 82' R.C. PIPE CULVERT TO RT.
RETIAN

10/4/2016

RBB0302.DGN

PLAN SHEETS

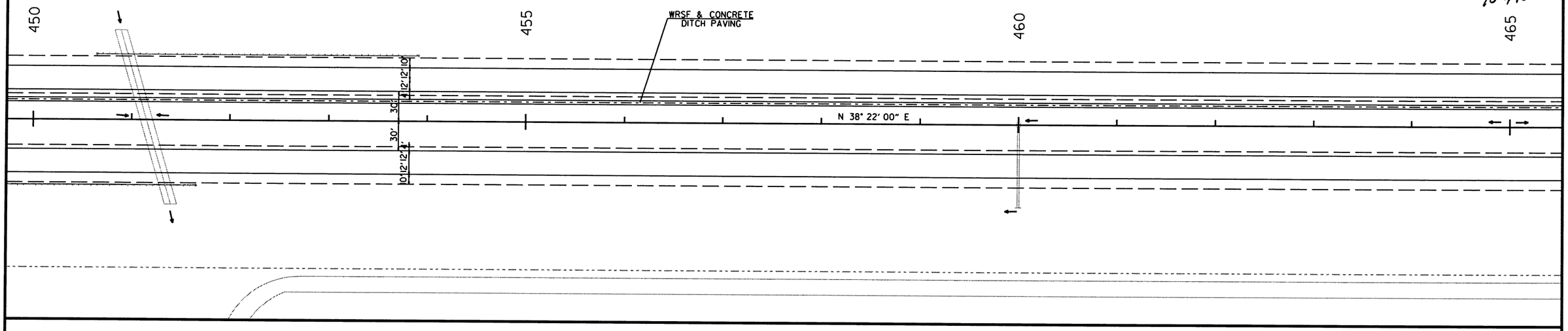
STA. 451+15 - IN PLACE
DROP INLET IN MEDIAN
DBL. 6' x 3' x 180' R.C. BOX CULVERT
15°RT. FWD. SKEW
RETAIN

STA. 460+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 82' R.C. PIPE CULVERT TO RT.
RETAIN

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.		BB0302	48	74
				(2) PLAN SHEETS				

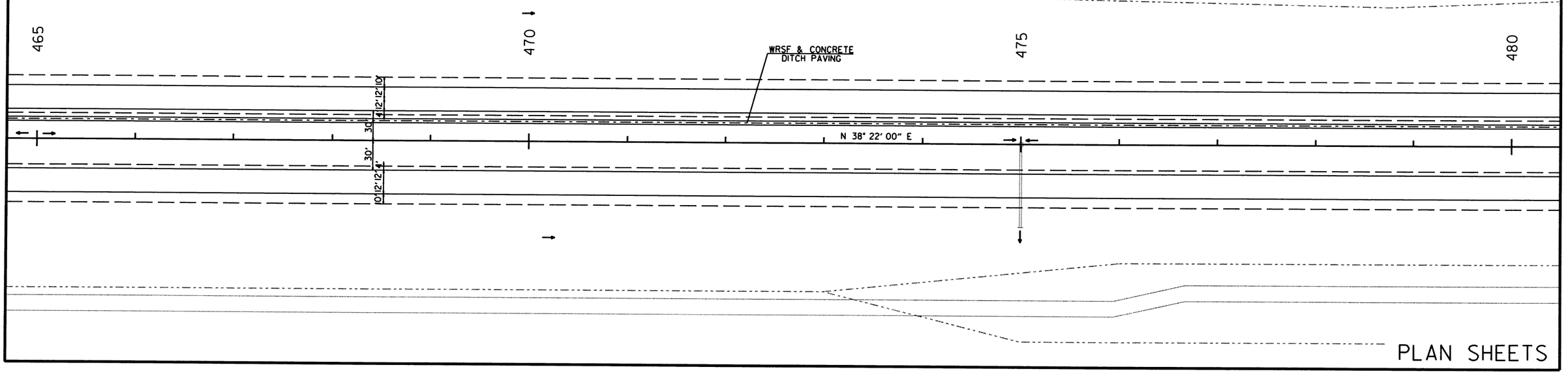
THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-4-16



STA. 475+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 82' R.C. PIPE CULVERT TO RT.
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.



10/4/2016

RBB0302.DGN

PLAN SHEETS

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.		BB0302	49	74

(2) PLAN SHEETS

STA. 489+00 - IN PLACE
DROP INLET IN MEDIAN
DBL. 36" x 79' R.C. PIPE CULVERT TO LT.
DBL. 36" x 82' R.C. PIPE CULVERT TO RT.
AT 15° RT. FWD. SKEW
RETAIN

STA. 489+30 - IN PLACE FR. RD
DBL. 36" x 32' R.C. PIPE CULVERT
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
p-4-16

480 485 490 495

WRSF & CONCRETE DITCH PAVING

N 38° 22' 00" E

30' 12'-10" 12'-10"
30' 12'-2" 12'-2"

STA. 507+18.50 BR. END
75'-0" R.C. SLAB SPAN
BR. NO. A3797
40'-0" CLEAR RDWY.
STA. 507+93.50 BR. END
POLYMER OVERLAY

STA. 507+34.50 BR. END
75'-0" R.C. SLAB SPAN
BR. NO. B3797
40'-0" CLEAR RDWY.
STA. 508+09.50 BR. END
POLYMER OVERLAY

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

495 500 505 510

BR. END. STA. 507+18.50
STA. 507+12.03 END WRSF
STA. 506+82.00

BR. END. STA. 507+93.50
STA. 508+30.00

BR. NO. A3797

N 38° 22' 00" E

30' 12'-10" 12'-10"
30' 12'-4" 12'-4"

BR. NO. B3797

STA. 506+98.00
BR. END. STA. 507+34.50

STA. 508+46.00
BR. END. STA. 508+09.50

GILLESPIE DITCH

HWY. 412

STA. 501+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 78' R.C. PIPE CULVERT TO RT.
RETAIN

10/4/2016

RBB0302.DGN

PLAN SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	50	74

(2) PLAN SHEETS

STA. 511+60 - IN PLACE
DROP INLET IN MEDIAN
30" x 204' R.C. PIPE CULVERT
AT 30° RT. FWD. SKEW
RETAIN

I-30 CENTERLINE
PI = 517+34.00
Δ = 11°16'00" LT.
D = 1°00'00"
T = 565.16'
L = 1126.67'
PC = 511+68.84
PT = 522+95.51
MATCH EXIST. SUPER

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

510 515 520 525

P.C. 511+68.84

N 38° 22' 00" E

STA. 510+99.55
BEGIN WRSF

HWY. 212

15

P.I. 517+34.00

P.T. 522+95.51

N 27° 06' 00" E

4 12' 12' 10"
30'
4 12' 12' 10"

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

525 530 535 540

WRSF & CONCRETE DITCH PAVING

N 27° 06' 00" E

4 12' 12' 10"
30'
4 12' 12' 10"

STA. 531+00 - IN PLACE
DROP INLET IN MEDIAN
DBL. 4' x 3' x 160' R.C. BOX CULVERT
RETAIN

10/6/2016

RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	51	74

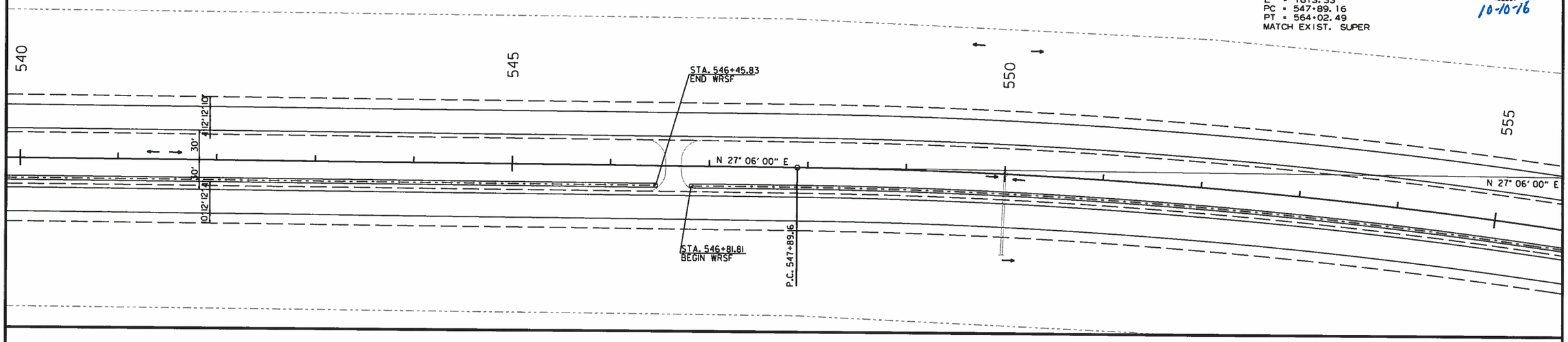
(2) PLAN SHEETS

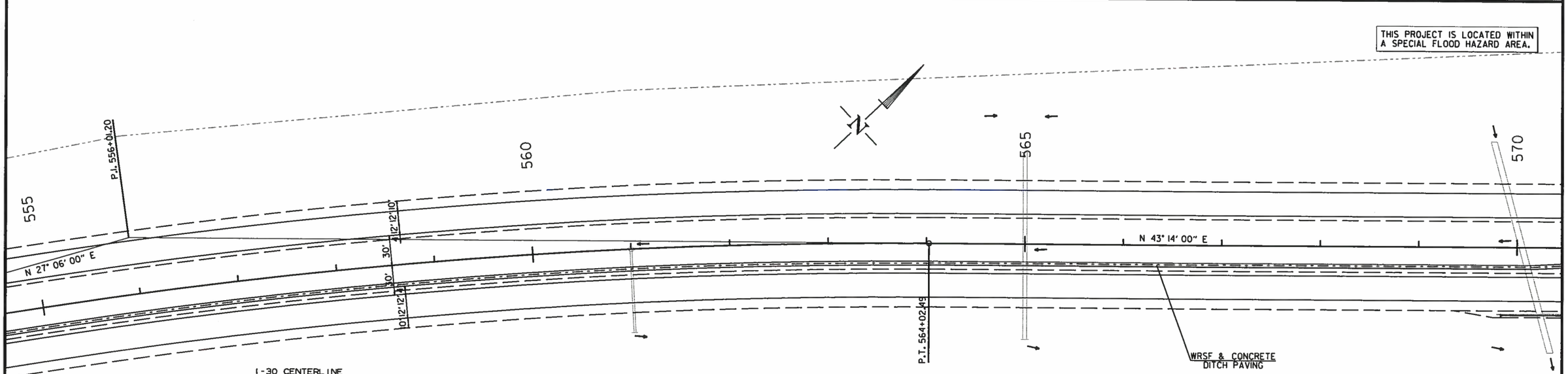
STA. 550+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 80' R.C. PIPE CULVERT TO RT.
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

I-30 CENTERLINE
PI = 556+01.20
Δ = 16°08' 00" RT.
D = 1°00' 00"
T = 812.04'
L = 1613.33'
PC = 547+89.16
PT = 564+02.49
MATCH EXIST. SUPER





STA. 561+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 82' R.C. PIPE CULVERT TO RT.
RETAIN

STA. 565+00 - IN PLACE
DROP INLET IN MEDIAN
48" x 188' R.C. PIPE CULVERT
RETAIN

STA. 570+05 - IN PLACE
6' x 6' x 218' R.C. BOX CULVERT
AT 15° RT. FWD. SKEW
RETAIN

PLAN SHEETS

10/6/2016
RBB0302.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	52	74

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

STA. 575+04.00 BR. END
90'-0" R.C. SLAB SPAN
BR. NO. A3971
40'-0" CLEAR RDWY.
STA. 575+94.00 BR. END
POLYMER OVERLAY

STA. 575+04.00 BR. END
90'-0" R.C. SLAB SPAN
BR. NO. B3971
40'-0" CLEAR RDWY.
STA. 575+94.00 BR. END
POLYMER OVERLAY

BR. END. STA. 575+04.00

STA. 574+67.50
END PAVEMENT
REHABILITATION

STA. 574+67.50

570

575

BR. NO. A3971

BR. NO. B3971

STA. 572+35.38
END WRSF

STA. 574+67.50

BR. END. STA. 575+04.00

STA. 574+00 - IN PLACE
54" x 236' R.C. PIPE CULVERT
RETAIN

+30.50

550' FULL DEPTH CONSTRUCTION TRANSITION TO OVERLAY

+80.50

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

BR. END. STA. 575+94.00

STA. 576+30.50

580

STA. 581+80.50
END FULL DEPTH CONSTRUCTION
BEGIN RUBBLIZE AND OVERLAY

585

N 43° 14' 00" E

4'-12'-12'-10'

30'

30'

10'-12'-12'-4'

STA. 576+30.50

STA. 576+04.00
BEGIN WRSF

BR. END. STA. 575+94.00

STA. 581+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 108' R.C. PIPE CULVERT TO RT.
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

585

590

595

600

4'-12'-12'-10'

30'

30'

10'-12'-12'-4'

N 43° 14' 00" E

CON. STA. 591+15.00
CON. STA. 590+60.00 AHD

WRSF & CONCRETE
DITCH PAVING

STA. 586+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 88' R.C. PIPE CULVERT TO RT.
RETAIN

STA. 590+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 180' R.C. PIPE
RETAIN

STA. 590+00 - IN PLACE FR. RD.
24" x 50' R.C. PIPE
RETAIN

STA. 597+00 - IN PLACE
DROP INLET IN MEDIAN
48" x 160' R.C. PIPE CULVERT
RETAIN

STA. 597+00 - IN PLACE FR. RD.
48" x 36' R.C. PIPE CULVERT
RETAIN

10/6/2016

RBB0302.DGN

PLAN SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-6-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0302	53	74

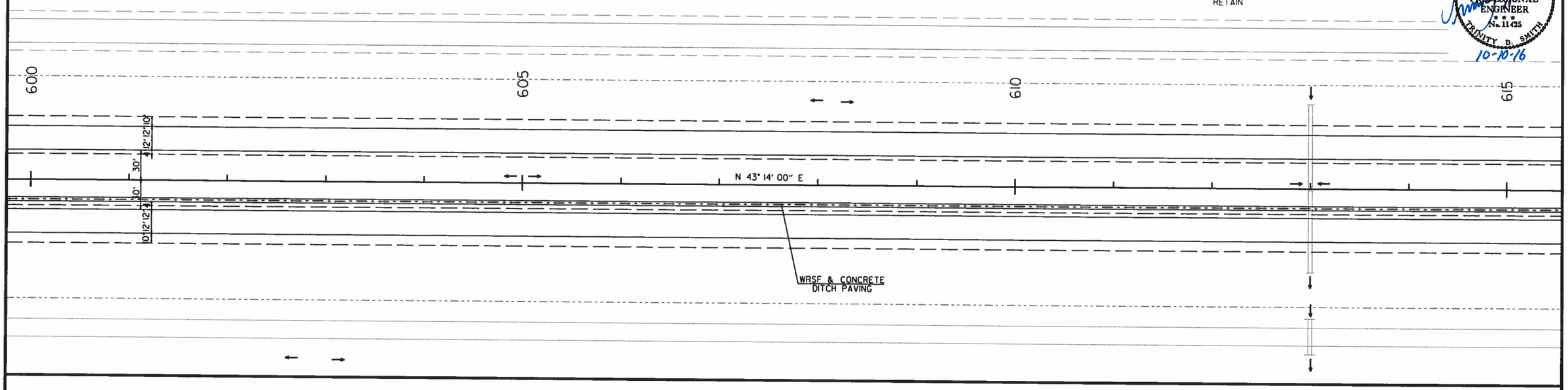
(2) PLAN SHEETS

STA. 613+00 - IN PLACE
DROP INLET IN MEDIAN
48" x 170' R.C. PIPE CULVERT
RETAIN

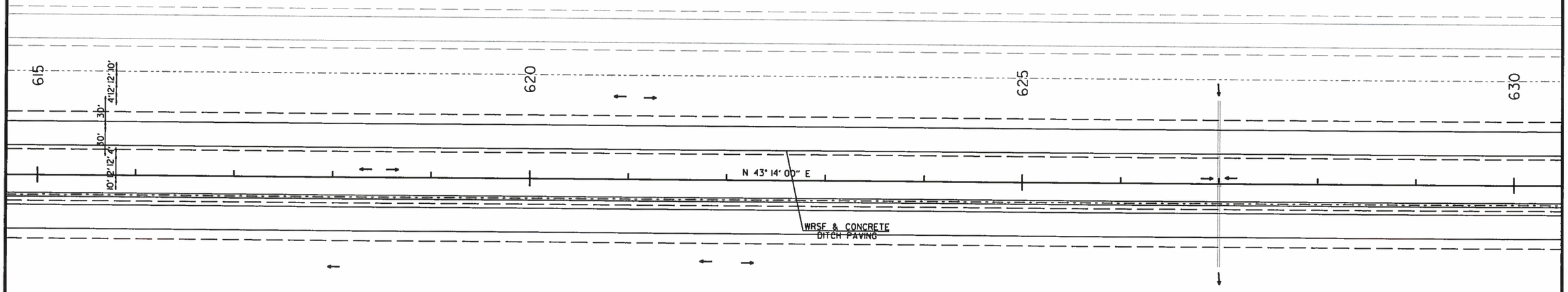
STA. 613+00 - IN PLACE FR. RD.
48" x 36' R.C. PIPE CULVERT
RETAIN

THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



THIS PROJECT IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.



STA. 627+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 168' R.C. PIPE CULVERT
RETAIN

10/6/2016

RBB0302.DGN

PLAN SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-6-16				6	ARK.			
				JOB NO.		BB0302	54	74
				(2) PLAN SHEETS				

STA. 637+00 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(4' X 3' X H = 3'-0")
WITH 24" X 198' R.C. PIPE TO
EXISTING DROP INLET AT STA. 639+00
RETAIN

STA. 639+00 - IN PLACE
DROP INLET IN MEDIAN
24" x 182' R.C. PIPE CULVERT
W/ F.E.S. LT.
RETAIN

THIS PROJECT IS LOCATED WITHIN
A SPECIAL FLOOD HAZARD AREA.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16

630 635 640 645

STA. 630+60.30
END WRSF

STA. 630+96.30
BEGIN

12' 12' 10'
30'
30'
10' 12' 12'

STA. 637+00.00
END FULL DEPTH RECONSTRUCTION
BEGIN JOB BB0303
LOG MILE 16.28

N 43° 14' 00" E

STA. 637+23.93
END WRSF
END JOB BB0302
LOG MILE 16.28

+50.00 550' FULL DEPTH RECONSTRUCTION TRANSITION TO EXISTING PAVEMENT +00.00

STA. 631+50.00
END RUBBLIZE AND OVERLAY
BEGIN FULL DEPTH RECONSTRUCTION

P.C. 639+67.03

STA. 640+55 - IN PLACE
TYPE ST DROP INLET
16.7' RT. OF C.L. MEDIAN
(5' X 4' X H = 3'-6")
WITH 24" X 140' R.C. PIPE
TO DROP INLET AT 642+00
RETAIN

EXIST. LT. MAIN LANES
EXIST. CENTERLINE
JOB BB0303 CENTERLINE
P.C. 642+78.15
P.C. 643+21.13
P.C. 643+64.10
EXIST. RT. MAIN LANES

STA. 642+00 - IN PLACE
TYPE ST DROP INLET
14.6' RT. OF C.L. MEDIAN
(5' X 4' X H = 4'-6")
WITH 24" X 62' R.C. PIPE
OUTLET ON RT.
RETAIN

STA. 644+50 - IN PLACE
TYPE ST DROP INLET
11' RT. OF C.L. MEDIAN
(5' X 4' X H = 5'-0")
WITH 24" X 70' R.C. PIPE OUTLET ON RT.
RETAIN

I-30 L.M.L.
PI = 648+68.72
Δ = 28°54' 00" RT.
D = 2°30' 00"
T = 590.57'
L = 1156.00'
PC = 642+78.15
PT = 654+34.15

I-30 CENTERLINE
PI = 649+11.70
Δ = 28°54' 00" RT.
D = 2°30' 00"
T = 590.57'
L = 1156.00'
PC = 643+21.13
PT = 654+77.13

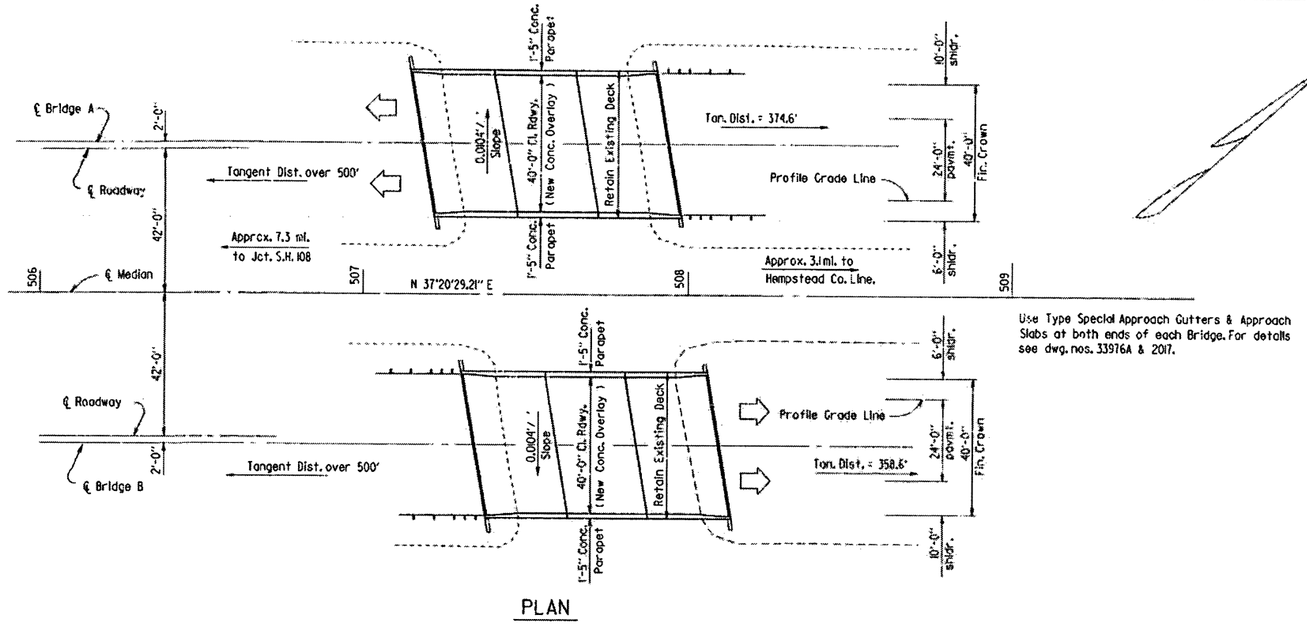
I-30 R.M.L.
PI = 649+54.68
Δ = 28°54' 00" RT.
D = 2°30' 00"
T = 590.57'
L = 1156.00'
PC = 643+64.10
PT = 655+20.10

RBB0302.DGN 10/6/2016

For R/W Data-See Rdwy. Plans

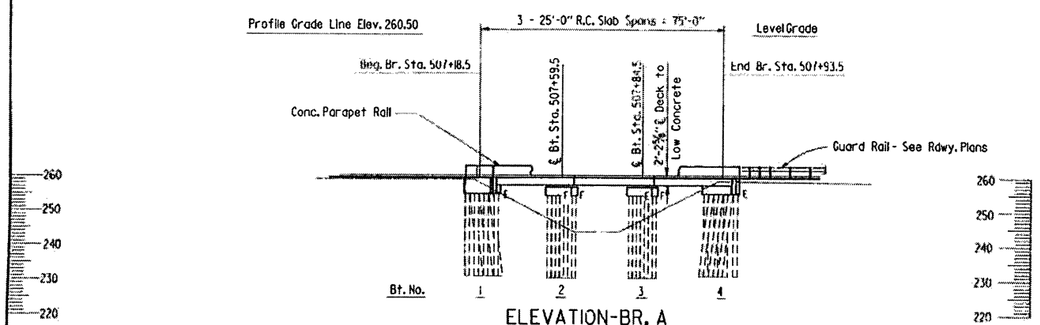
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		95	74
				JOB NO.		030050	95	98
				1	3797AR & BR	LAYOUT		33976

JOB NO. BB0302

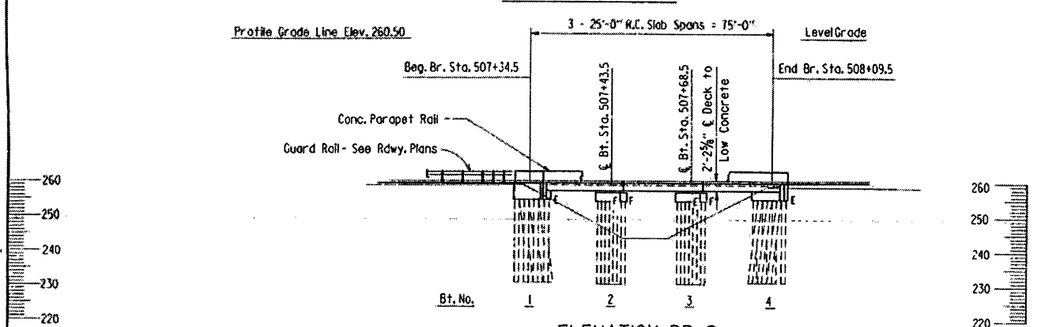


PLAN

Use Type Special Approach Gutters & Approach Slabs at both ends of each Bridge. For details see dwg. nos. 33976A & 2017.



ELEVATION-BR. A



ELEVATION-BR. B

Note: Top of New Bridge Deck is 8" above Existing Bridge Deck.

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	* NORMAL WATER SURFACE ELEVATION	WATER SURFACE ELEVATION W/BACKWATER
	YEARS	CFS	FEET	FEET
DESIGN FLOOD	50	1630	257.6	258.2
BASE	100	1960	257.9	258.5
EXTREME	500	2800	258.6	259.3

*Unconstricted water surface without structures and roadway approaches.
Drainage Area = 18.6 sq. mi.
Historical H.W. Elev. 255.6
Low member of Bridge at Elev. 258.14

GENERAL NOTES

BENCH MARK: TBM-105, chisled square on northwest wingwall 20' rt. of Sta. 489+02, Elev. 256.32.

The proposed work consists of removal of existing curbs and railing, removing ½" of existing concrete deck and constructing new 8½" Thick Reinforced Concrete Deck Overlay with New Concrete Parapet Railing as detailed in accordance with these plans and specifications.

Elevations and dimensions shown are based on existing plans and are for design and estimation purposes only. Final elevations and dimensions are to be determined in the field. The work of adjusting the new work to the existing structure shall be considered subsidiary to the item "Modification of Existing Bridge Structure". The contractor shall be responsible for making check measurements of existing bridge and making necessary adjustments to the new work.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1993 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1992 with current interim specifications.

LIVE LOADING: HS20 and Military Loading of two 24,000 lb. axles at 4' ctrs.
METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Reinforcing Steel (A615 or A617, GR. 60)	fy = 60,000 psi

MAINTENANCE OF TRAFFIC: See Rdwy. Plans.

DETAIL DRAWINGS:	DRAWING NO.
Superstructure	33977 & 33978

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in subsection 802.20 for Class 5 Tined Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Boiled linseed oil treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

FOR INFORMATION ONLY

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 1779 VISUAL INSPECTION

BRIDGE ENGINEER

LAYOUT OF BRIDGES OVER GILLESPIE'S DITCH
HWY. 67 - RED RIVER (REHAB.)
MILLER COUNTY
INT. ROUTE 30 SEC. 11

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: WHAL DATE: 7-6-92
CHECKED BY: MLV DATE: 3/25/93 SCALE: 1" = 20'
DESIGNED BY: MLV DATE: 6/92

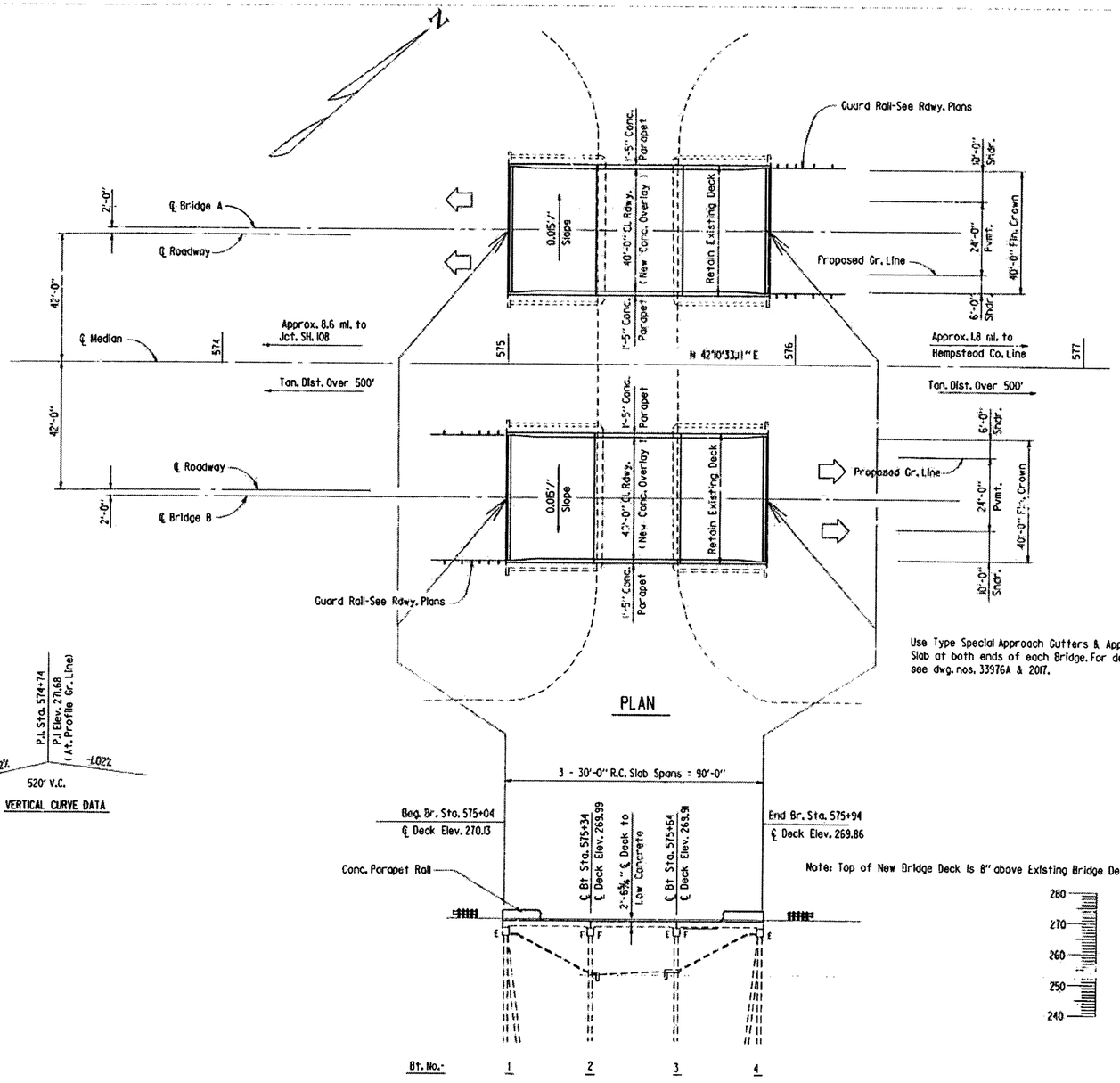
BRIDGE NO. 3797AR & BR DRAWING NO. 33976

I, 550, 3000, 30050, RWME548, B30050X2.L01

For R/W Data-See Rdwy. Plans

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		30	74
				JOB NO.		030060	89	95
				(1) 3971AR & BR		LAYOUT	33979	

JOB NO. BB0302



Use Type Special Approach Gutters & Approach Slab at both ends of each Bridge. For details see dwg. nos. 33976A & 2017.

GENERAL NOTES

BENCH MARK: TBM-101, chisled square in wingwall 69' lt. of Sta. 575+94, Elev. 270.09.

The proposed work consists of removal of existing curbs and railing, removing ½" of existing concrete deck and constructing new 8½" Thick Reinforced Concrete Deck Overlay with New Concrete Parapet Railing as detailed in accordance with these plans and specifications.

Elevations and dimensions shown are based on existing plans and are for design and estimation purposes only. Final elevations and dimensions are to be determined in the field. The work of adjusting the new work to the existing structure shall be considered subsidiary to the item "Modification of Existing Bridge Structure". The contractor shall be responsible for making check measurements of existing bridge and making necessary adjustments to the new work.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1993 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1992 with current interim specifications.

LIVE LOADING: HS20 and Military Loading of two 24,000 lb. axles at 4' ctrs.
METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Reinforcing Steel (A615 or A617, GR. 60)	fy = 60,000 psi

MAINTENANCE OF TRAFFIC: See Rdwy. Plans.

DETAIL DRAWINGS:	DRAWING NO.
Superstructure	33977 & 33980

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in subsection 802.20 for Class S Tined Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Boiled Linseed Oil treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

FOR INFORMATION ONLY

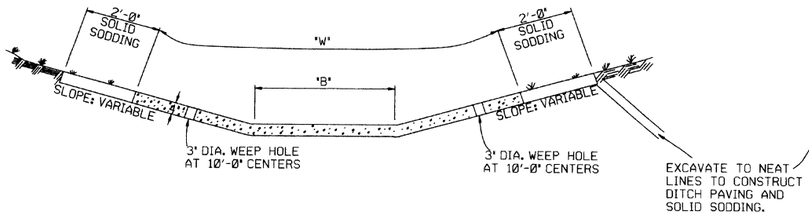
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11779 FINAL INSPECTION
BRIDGE ENGINEER

LAYOUT OF OVERPASSES
COUNTY ROAD 111
HWY. 67 - RED RIVER (REHAB.)
MILLER COUNTY
INT. ROUTE 30 SEC. 11
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: WMAJ. DATE: 7-9-92
CHECKED BY: AHV DATE: 3/25/93 SCALE: 1" = 20'
DESIGNED BY: AHV DATE: 6/92
BRIDGE NO. 3971 AR & BR DRAWING NO. 33979

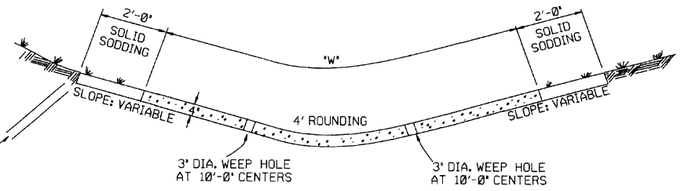
1, 550, 3000, 30050, RWME548, B30050X3.L01

REFER TO TABULATION OF QUANTITIES FOR 'W' & 'B' DIMENSIONS



TYPE A

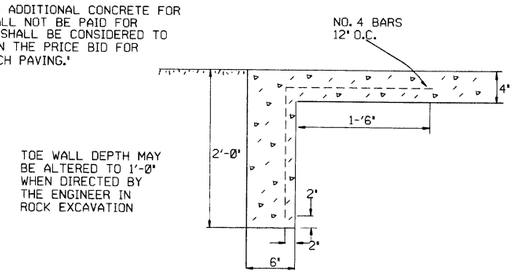
REFER TO TABULATION OF QUANTITIES FOR 'W' DIMENSIONS



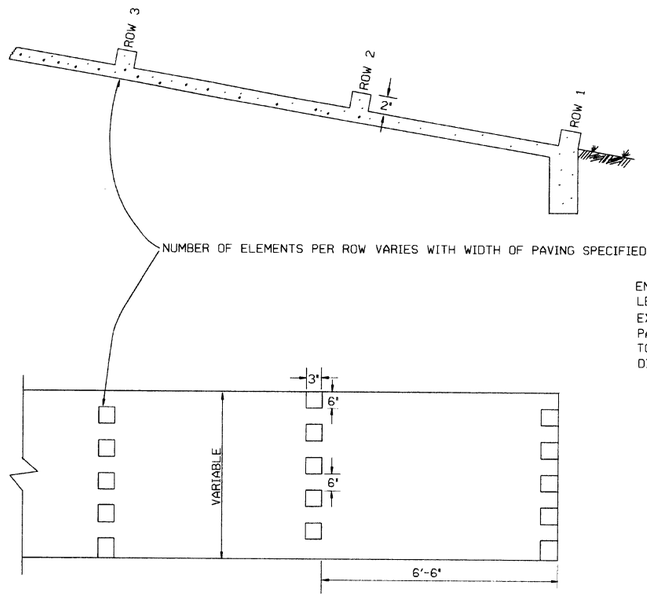
TYPE B

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



ENERGY DISSIPATORS
(NO SCALE)

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 UNCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.

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.

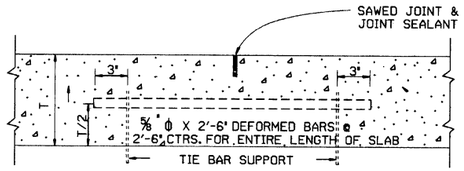
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILM'D
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

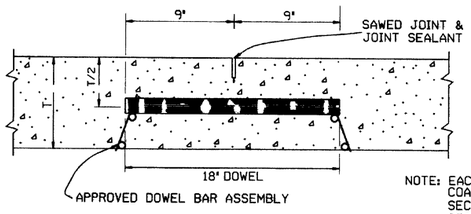
STANDARD DRAWING CDP-1



LONGITUDINAL JOINT

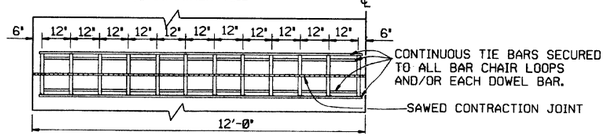
NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.

TIE BARS SHALL BE 15' FROM TRANSVERSE JOINTS.



NOTE: EACH DOWEL TO BE COATED ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS.

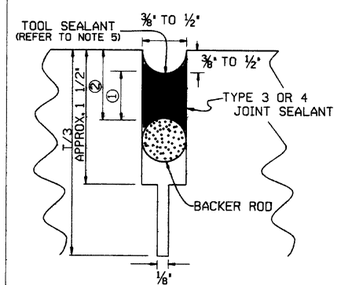
ROUND STEEL BAR DOWEL
1¼" DIA. WHEN T<10"
1½" DIA. WHEN T≥10"



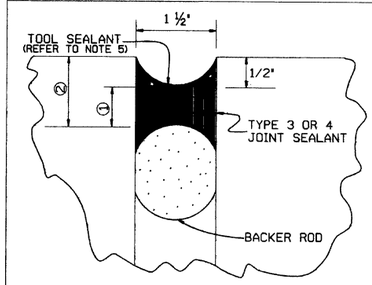
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



DETAIL OF SAWED CONTRACTION JOINT



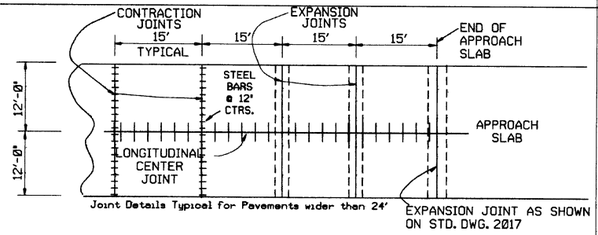
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

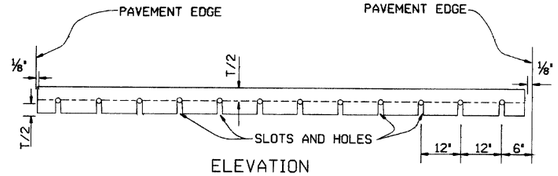
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½
½	½	⅝	½
⅝	⅜	¾	⅝
¾	⅜	⅞	⅝
1 ½	¾	2	1 ¼

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	¾	¾
⅜	¾	⅞	¾
		1½	1

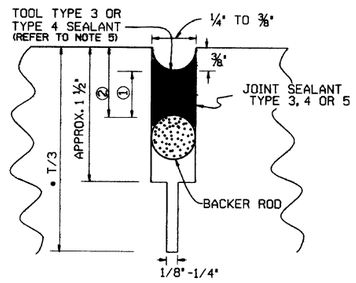


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



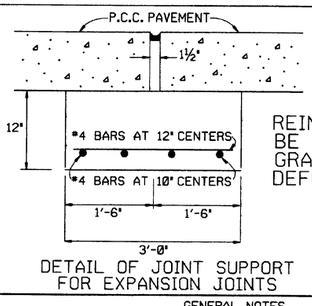
ELEVATION

NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.



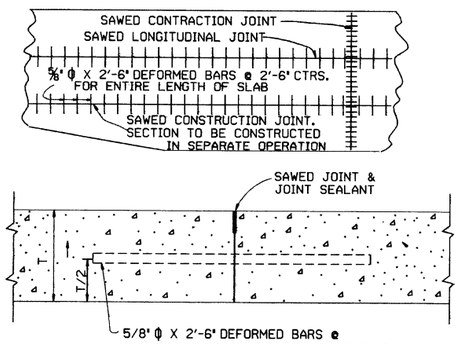
*NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED
LONGITUDINAL JOINT
AND LONGITUDINAL CONSTRUCTION JOINT



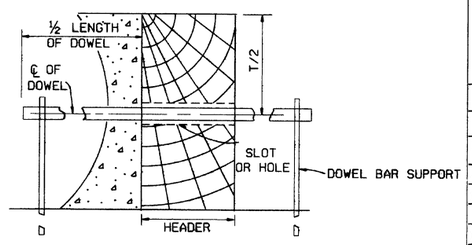
REINFORCING SHALL BE GRADE 40 OR GRADE 60 DEFORMED BARS.

DETAIL OF JOINT SUPPORT
FOR EXPANSION JOINTS



NOTE: TIE BARS SHALL BE 15' FROM TRANSVERSE JOINTS.

LONGITUDINAL CONSTRUCTION JOINT



SECTION

TRANSVERSE
CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11- 3-94	ADDED NOTE RE: REINF. BARS	
4- 1-93	REVISED DOWEL BARS & GEN. NOTES	4- 1-93
10- 1-92	REVISED DOWEL SPACING	10- 1-92
8- 15-91	ADDED SPAC FOR CONTR JTS & DEL KEYWAY	
05-24-90	REVISED TIE BAR, DOWEL & JOINT SIZE	
01-25-90	ADDED EXPANSION JOINT	01-25-90
11-30-89	CHANGED T/4+1 TO T/3+1	11-30-89
03-23-89	ALTERED SAWED JOINT & ADDED NOTE	512-03-23-89
07-15-88	REVISED AND REDRAWN	632-07-15-88

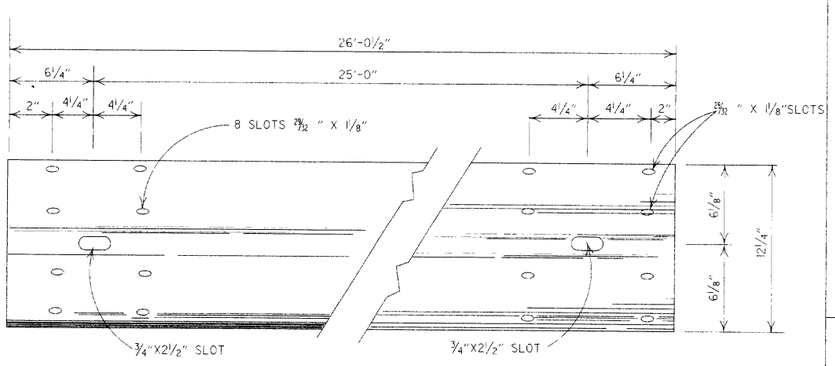
GENERAL NOTES

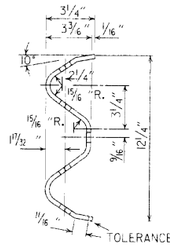
1. "T" DENOTES THICKNESS OF SLAB.
2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 2" GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
3. THE EXPANSION 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 SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.

ARKANSAS STATE HIGHWAY COMMISSION

TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)

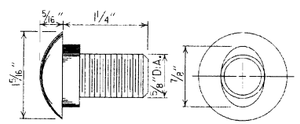
STANDARD DRAWING CPTJ - 6A



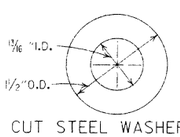


DETAILS OF W-BEAM GUARD RAIL

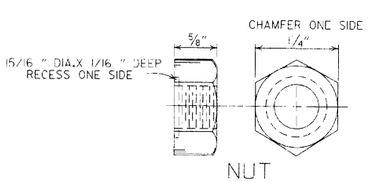
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



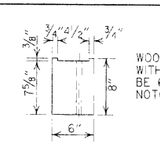
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



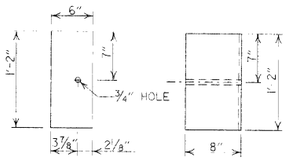
CUT STEEL WASHER



NUT



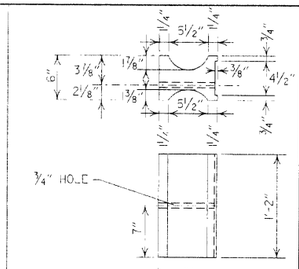
TOP



FRONT SIDE

WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"x1'-2" WITH NO NOTCH REQUIRED.

WOOD BLOCKOUT (W-BEAM)

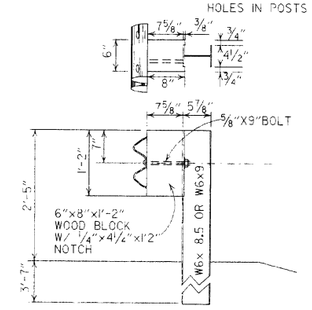


NOTES:

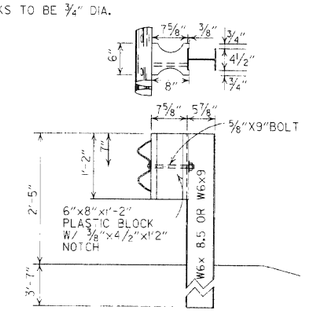
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT (W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE ¾" DIA.

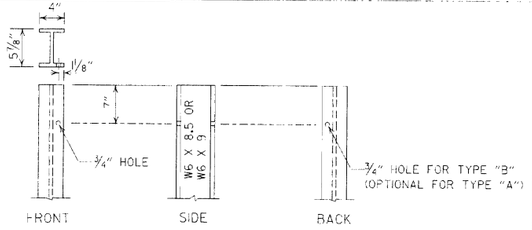


WOOD BLOCKOUT CONNECTIONS

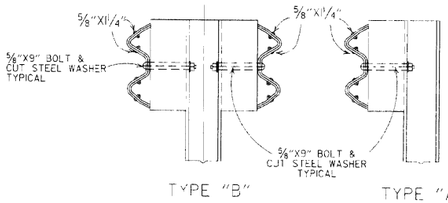


PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



STEEL POST



TYPE "B" TYPE "A"

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE ¾" DIA.

POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - ¼".

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD 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 ¾" 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 9.7# (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

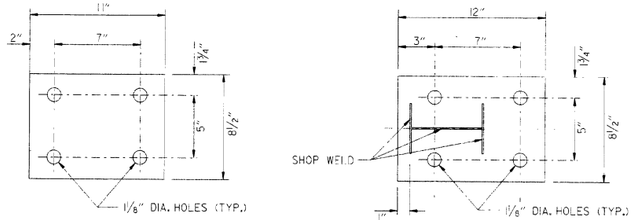
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

DATE	REVISION	DATE FILM
7-14-0	RAISED HEIGHT OF GUARD RAIL 1"	
10-5-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
1-2-00	ADDED PLASTIC BLOCKOUT	
8-2-98	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	
4-3-97	REMOVED "LAP IN DIRECTON OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
6-2-94	ADDED A.T. STEEL POST SIZE	
8-5-93	REVISED STEEL POST SIZE	8-5-93
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED WASHER NOTE	8-15-91
8-2-90	REV. GEN. NOTE & DEPHT OF ANC. POST IN ROCK	8-2-90
7-15-88	REVISED SECTION 3 & GENERAL NOTES	
3-4-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-9-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

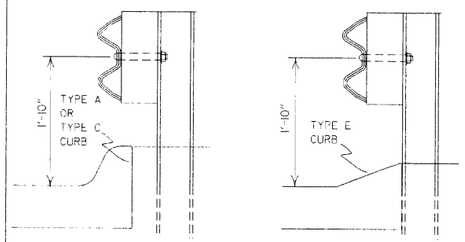
STANDARD DRAWING GR-8



WASHER PLATE

BASE PLATE

Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.



FOR DESIGN SPEEDS OF 50 MPH OR LESS

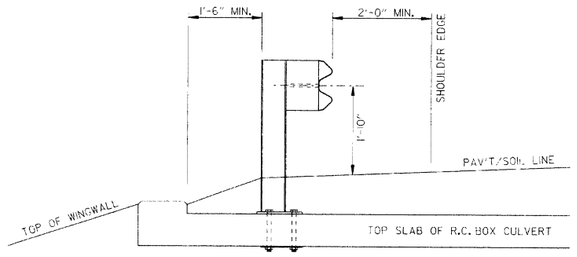
ALIGN FACE OF GUARD RAIL WITH FACE OF CURB.

FOR DESIGN SPEEDS OF 55 MPH OR MORE

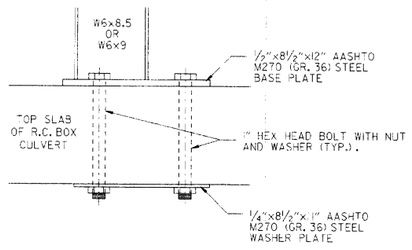
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

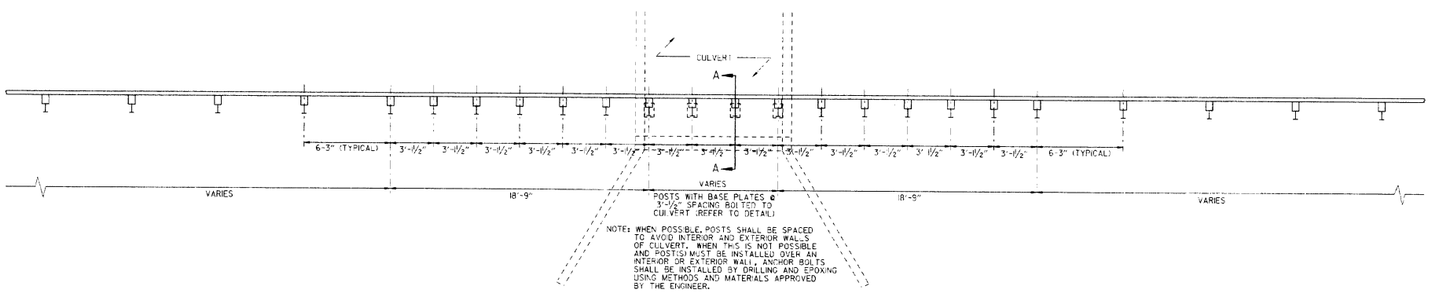
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



SECTION A-A



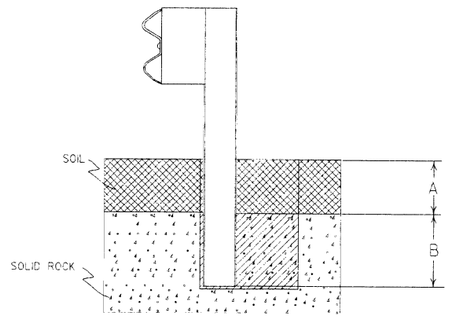
DETAIL OF CONNECTION



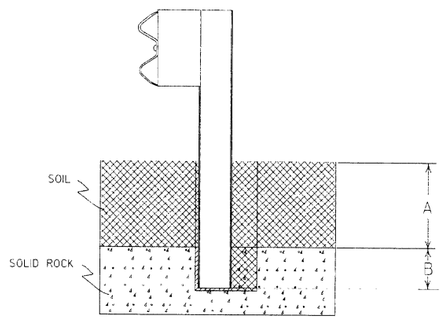
PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

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. DWG. GR-8.

Case 1

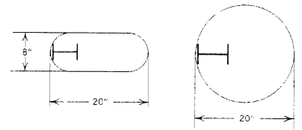


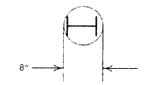
Case 2



Plan View Steel Posts

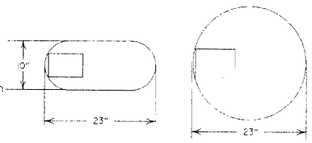
Either hole configuration acceptable

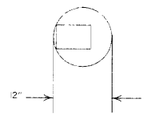




Plan View Wood Posts

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(a) - 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)

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
4-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHND 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	
3-30-00	REMOVED CONCRETE INSERT ANCHOR	
8-12-98	CHANGED STEEL SPACER BLOCK TO WOOD, BLOCKOUT, ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULVT., DELETED DET. OF STEEL LINE POST CONN.& ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK	
4-3-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
6-2-94	REVISED ALTERNATE POST SIZE	
8-5-93	REVISED STEEL POST SIZE	
10-1-92	REDRAWN & REVISED	10-1-92
8-7-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
7-15-88	CONFORMED TO 1988 SPECS	
3-4-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	712-10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-0-30-87
10-9-87	REDRAWN & REVISED	803-10-9-87

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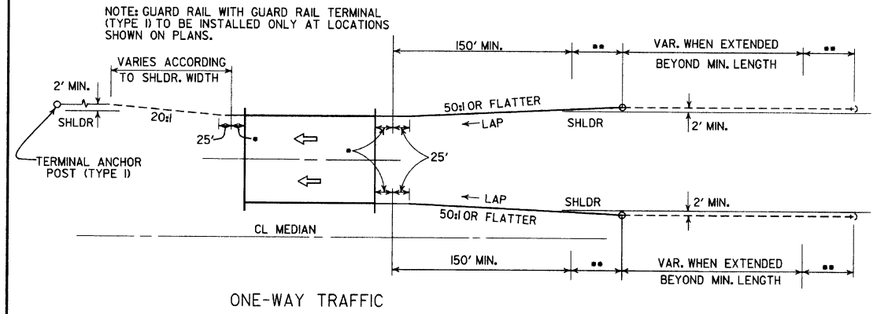
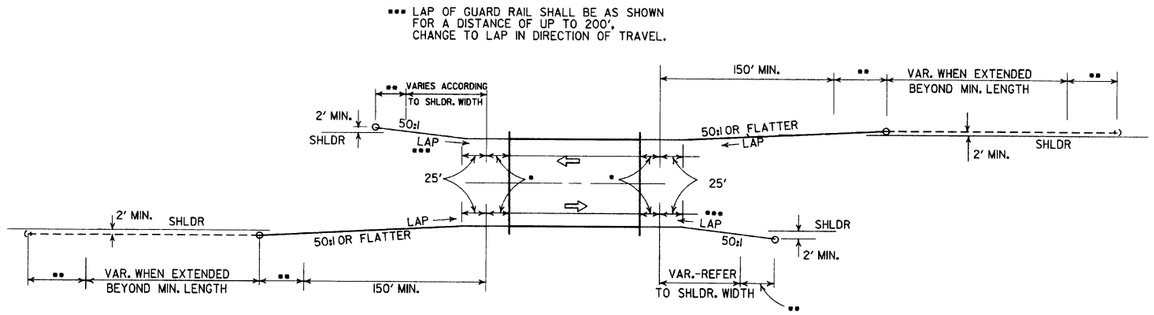
GUARD RAIL DETAILS

STANDARD DRAWING GR-8A

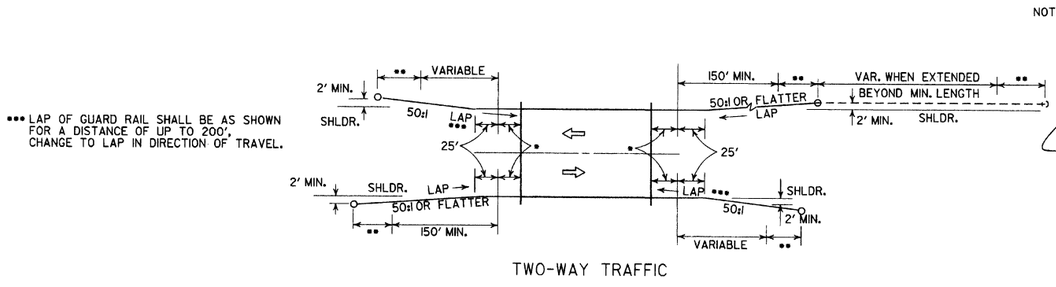


ONE-WAY TRAFFIC

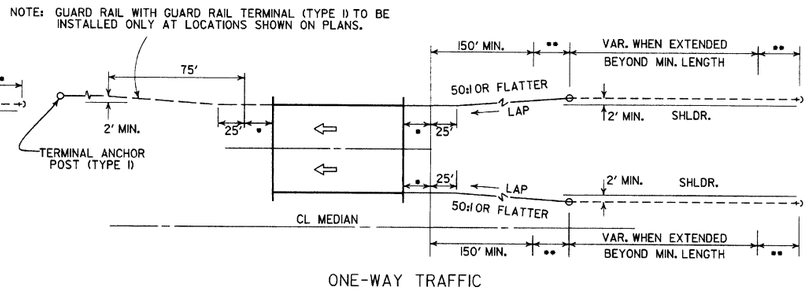


TWO-WAY TRAFFIC

METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)



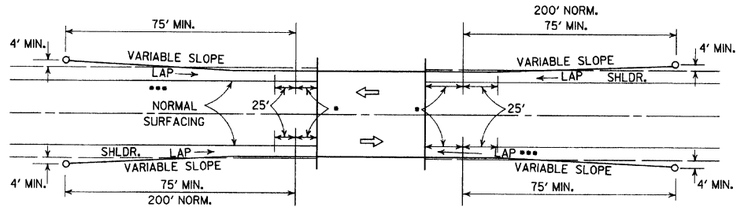
TWO-WAY TRAFFIC



ONE-WAY TRAFFIC

METHOD OF INSTALLATION OF GUARD RAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



LEGEND

- • THRIE BEAM GUARD RAIL TERMINAL
- •• GUARD RAIL TERMINAL (TYPE 2)

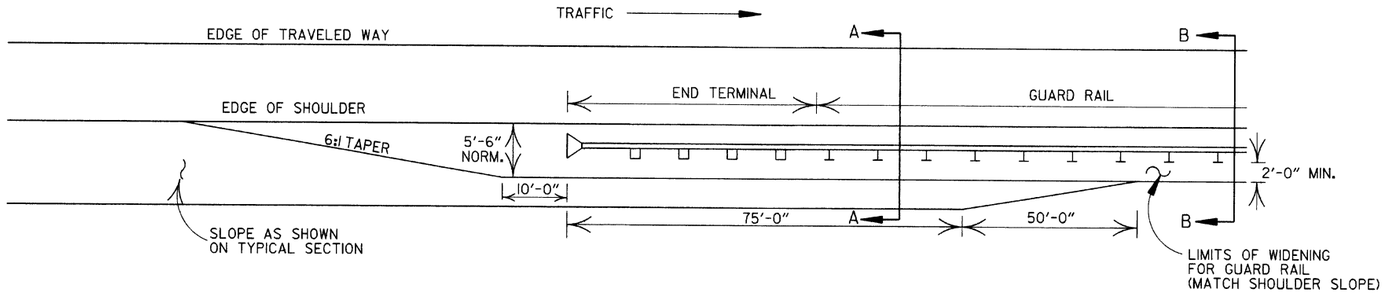
METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE I) (FULL SHOULDER WIDTH OR LESS BRIDGES)

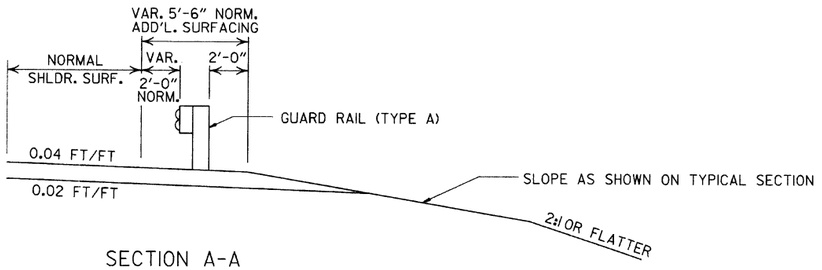
DATE	REVISION	DATE FILM
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

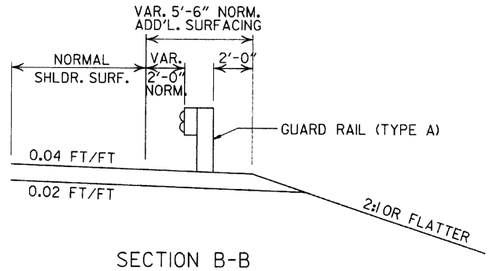
GUARD RAIL DETAILS

STANDARD DRAWING GR-9





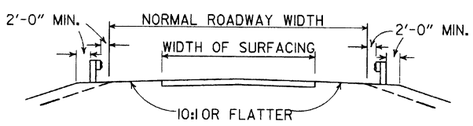
SECTION A-A



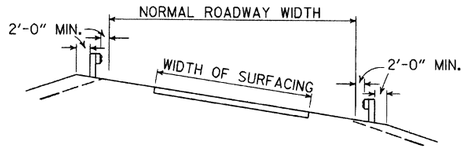
SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

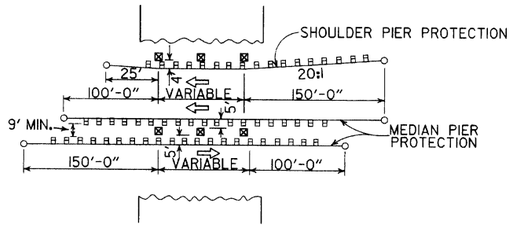


SECTION ON TANGENT



SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY



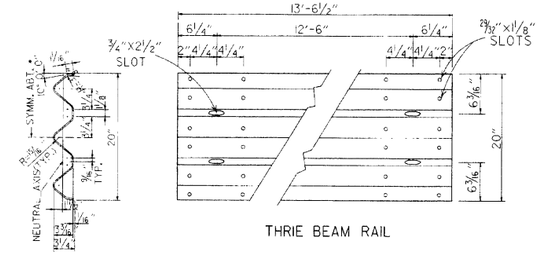
METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

DATE	REVISION	DATE FILM
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

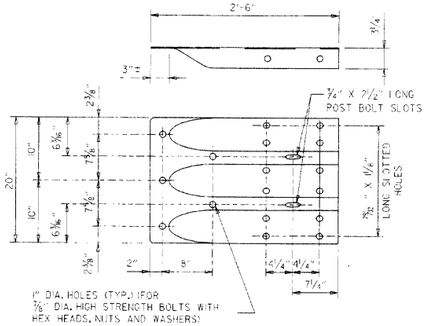
GUARD RAIL DETAILS

STANDARD DRAWING GR-9A

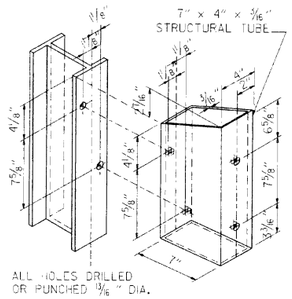


THRIE BEAM RAIL

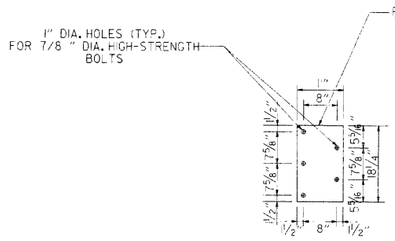
SECTION THRU THRIE BEAM RAIL



SPECIAL END SHOE

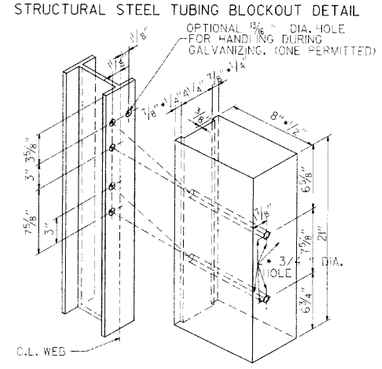


STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



CONNECTOR PLATE

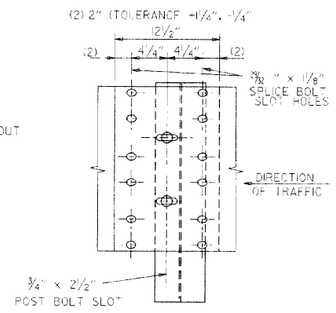
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



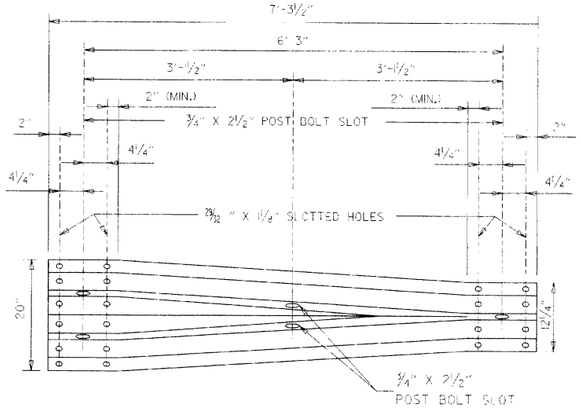
ALL HOLES 13/16 " DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

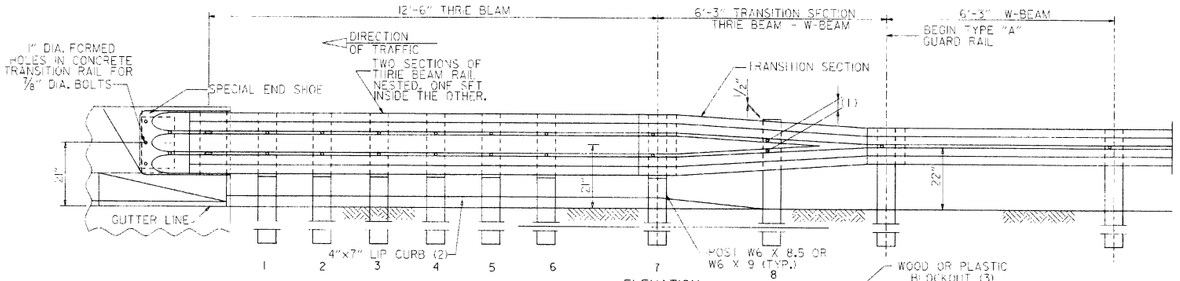
NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.

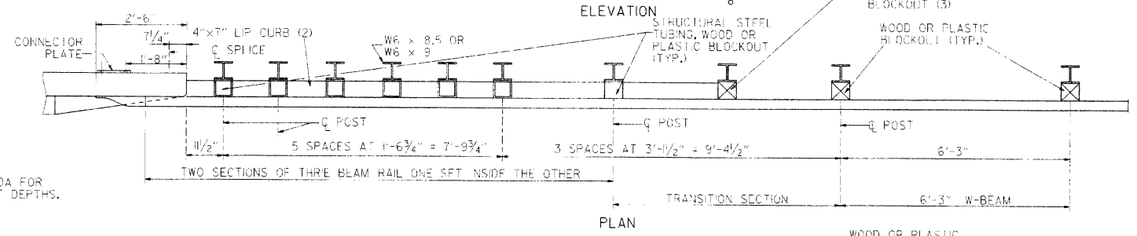


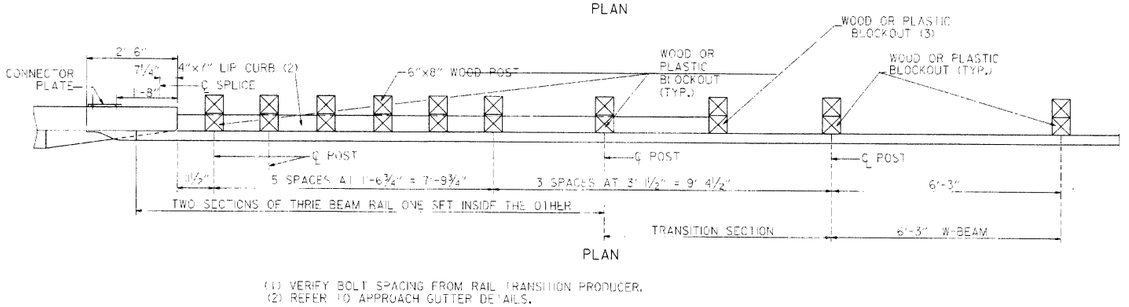
THRIE BEAM RAIL SPLICE AT POST



TRANSITION SECTION







NOTE:
SEE STANDARD DRAWING GR-10A FOR GUARD RAIL POST EMBEDMENT DEPTHS.

(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 II.

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 ¾" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7# (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

REFER TO STD. DRWG. GR-10A FOR POST DETAILS.

USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

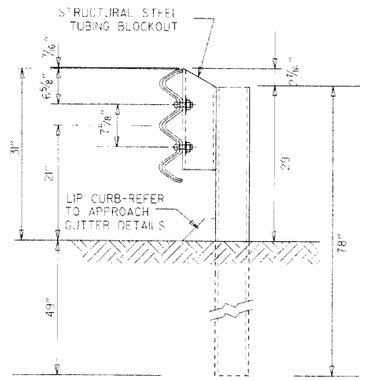
THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	

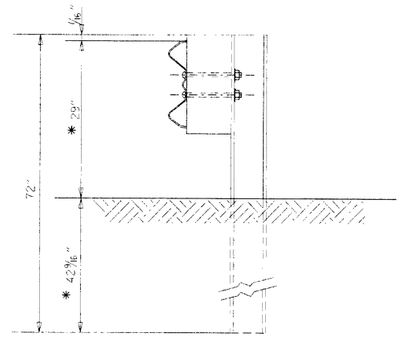
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10

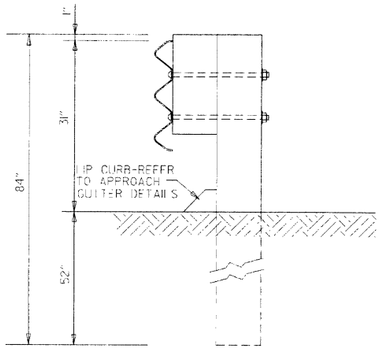


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

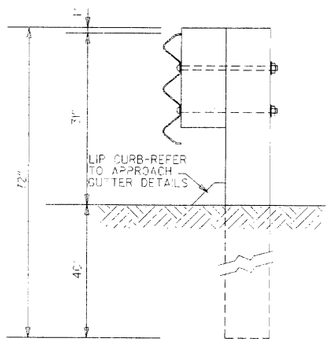


W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

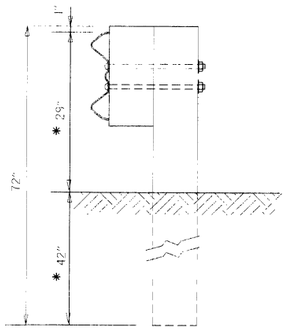
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



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.

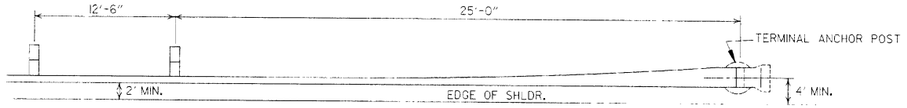
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	DATE FILM
7-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	

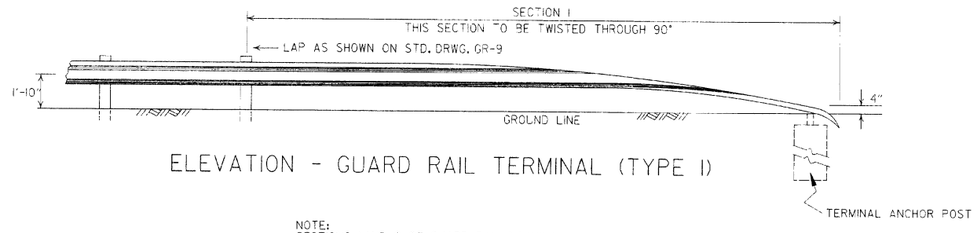
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10A

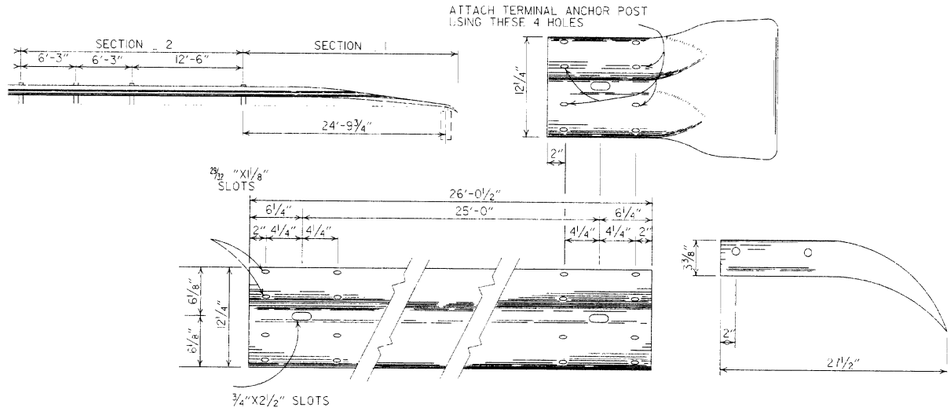


PLAN - GUARD RAIL TERMINAL (TYPE I)



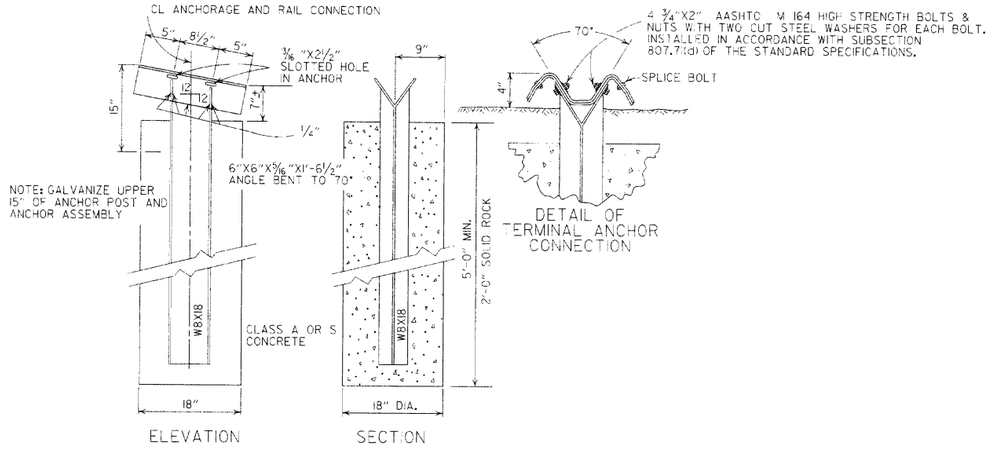
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

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



NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND B WF 17 POST IF CONTRACTOR SO DESIRES.

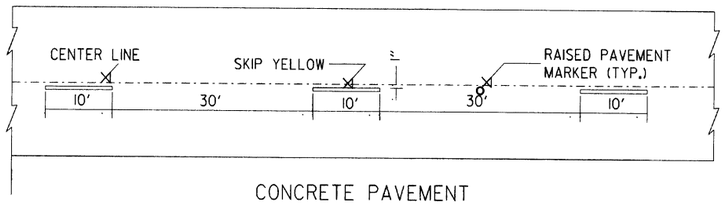
DETAIL OF TERMINAL ANCHOR POST (TYPE I)

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
6-26-97	REVISED LAP NOTE	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-3-94	DIMENSION TERMINAL DETAIL	
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92
10-1-92	DRAWN & ISSUED	10-1-92

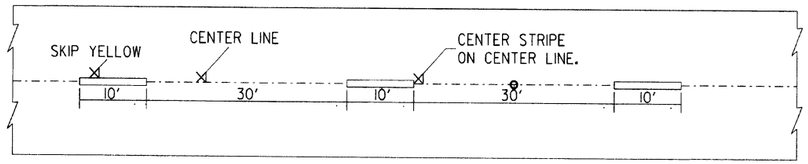
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GRT-1

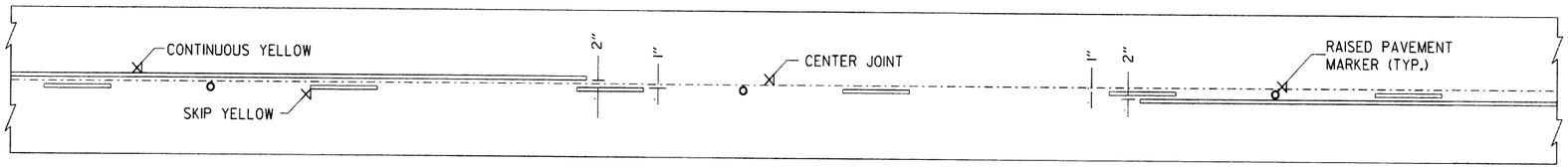


CONCRETE PAVEMENT

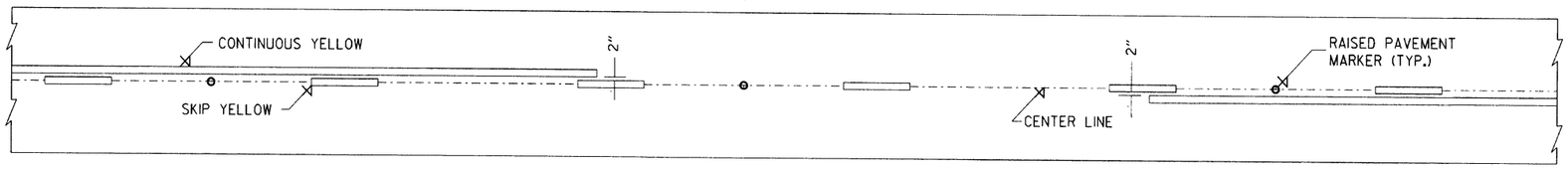


ASPHALT PAVEMENT

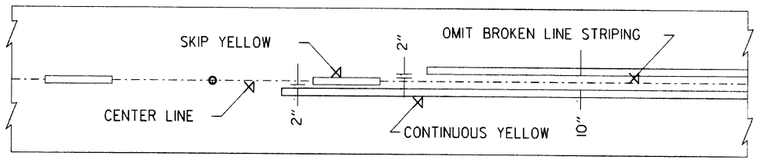
BROKEN LINE STRIPING



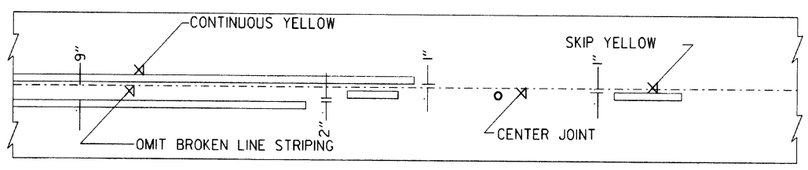
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

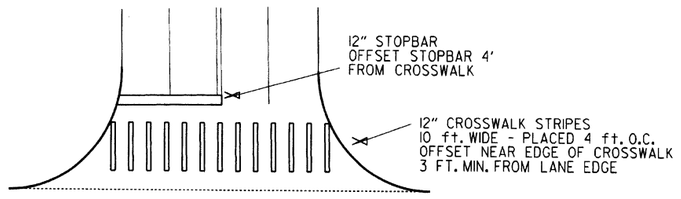


ASPHALT PAVEMENT



CONCRETE PAVEMENT

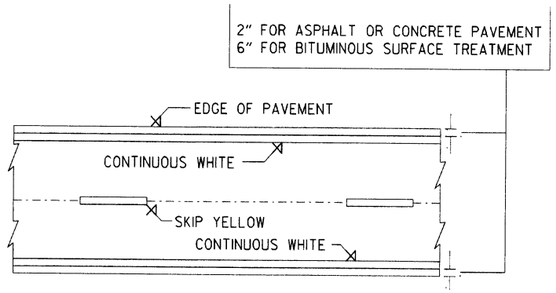
STRIPING AT ADJACENT NO PASSING LANES



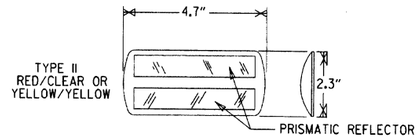
CROSSWALK AND STOPBAR DETAILS

NOTES:

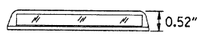
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



PAVEMENT EDGE LINE MARKING



NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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.

DATE	REVISION	FILMED
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 PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. 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

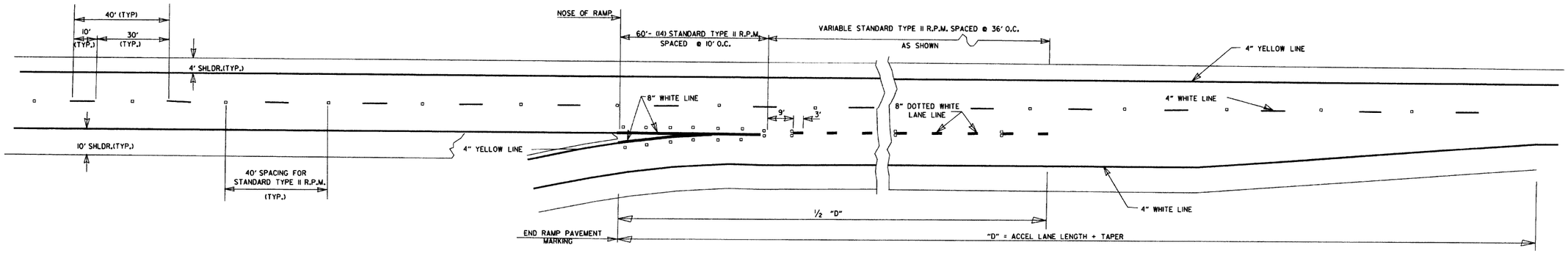
STANDARD DRAWING PM-1

PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

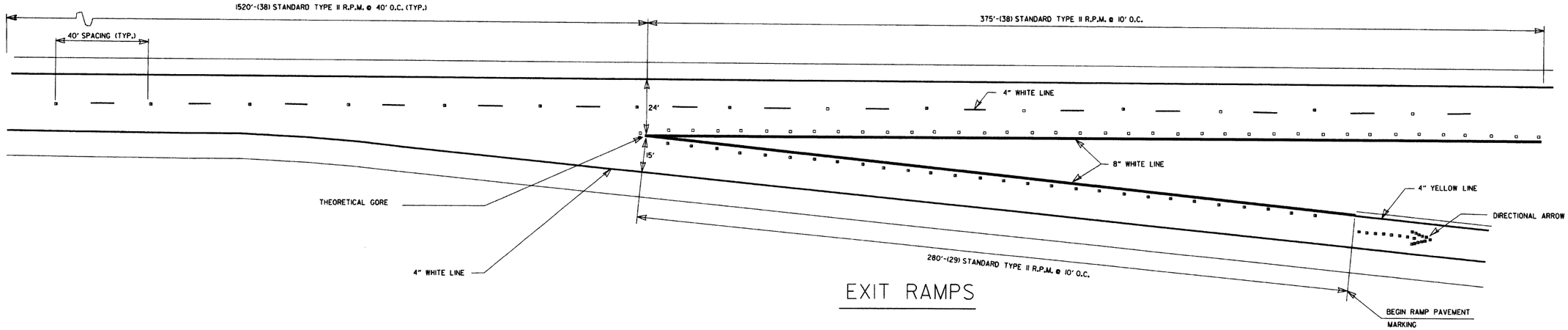
ENTRANCE RAMP

8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

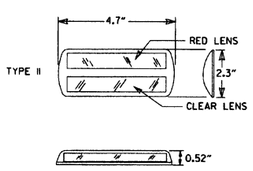
EXIT RAMP
4" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

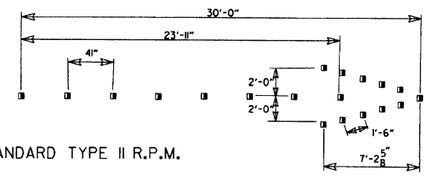


EXIT RAMPS



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.

DATE	REVISION	FILMED
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

ARKANSAS STATE HIGHWAY COMMISSION

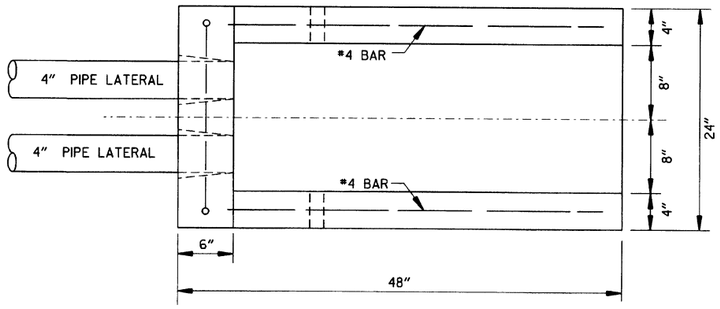
PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

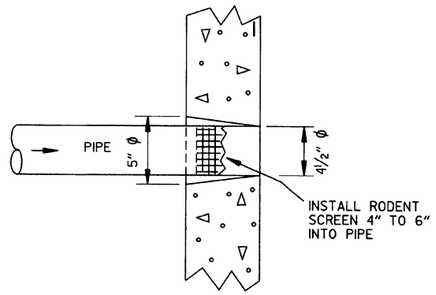
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

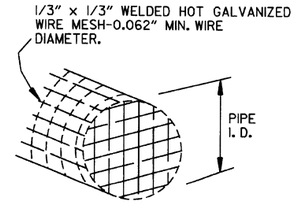
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



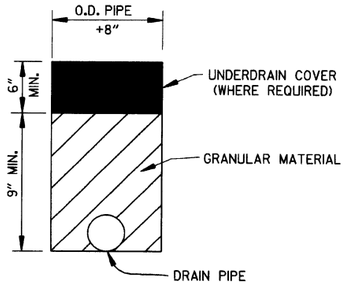
PLAN VIEW

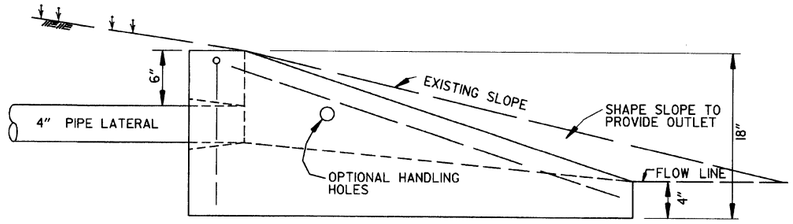


DETAIL OF HOLE FOR 4" PIPE

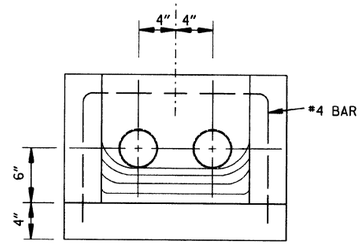


DETAIL OF RODENT SCREEN

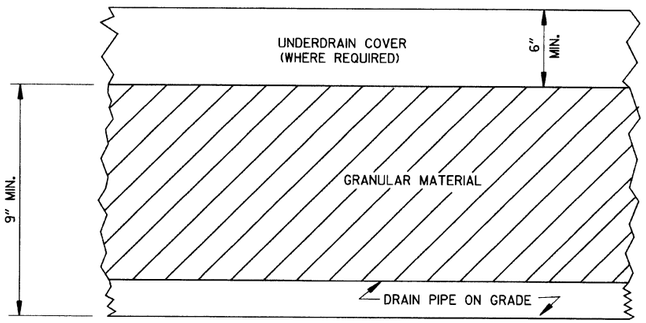




SIDE VIEW

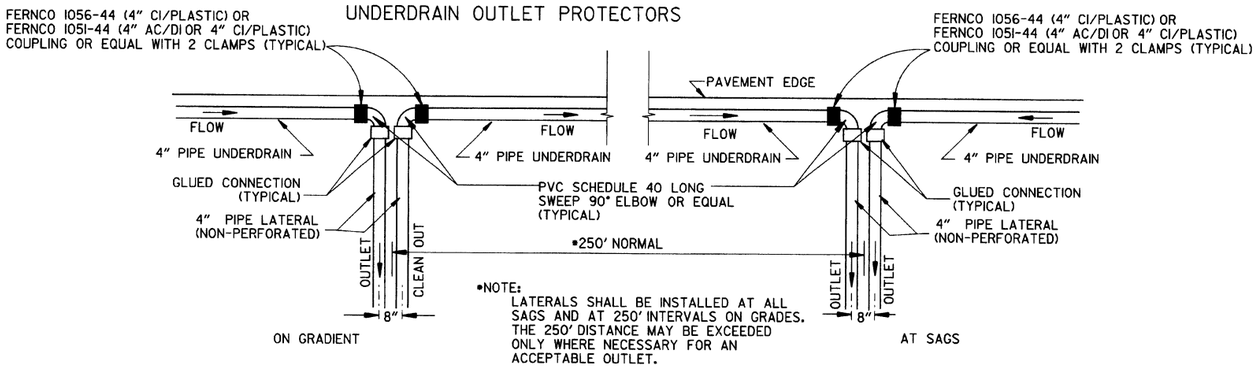


FRONT VIEW



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



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.

DATE	REVISION	DATE FILMED
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; 5½" 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 POLYEOTHYLENE 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

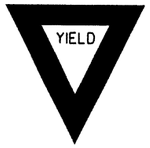
STANDARD DRAWING PU-1

7-20-95 INSTD.PUI

R1-1

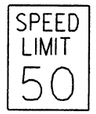
STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

W3-5

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

R4-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

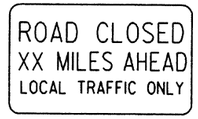
R5-1

STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2

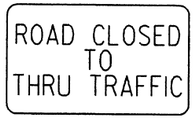
48"X30"

R11-3A



60"X30"

R11-4



60"X30"

RSP-1

48"X30"

W1-1

STD. 36"X36"
FWY. 48"X48"

W1-2

STD. 36"X36"
FWY. 48"X48"

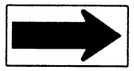
W1-3

STD. 48"X48"

W1-4

STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8

STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

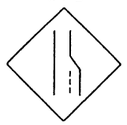
W3-1

STD. 36"X36"
SPECIAL 48"X48"

W3-2

STD. 36"X36"
SPECIAL 48"X48"

W4-2



STD. 36"X36"
FWY. 48"X48"

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

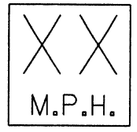
W8-7

EXPWY. 36"X36"
FWY. 48"X48"

W9-2

STD. 36"X36"
FWY. 48"X48"

W13-1



STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

STD. 36"X36"
FWY. 48"X48"

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

W1-4b

STD. 48"X48"

R56-1

STD. 18"X18"

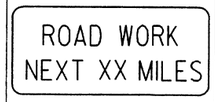
W8-11

STD. 36"X36"
FWY. 48"X48"

W8-9

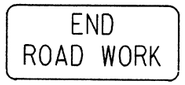
STD. 36"X36"
FWY. 48"X48"

G20-1



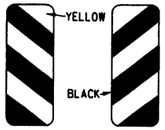
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

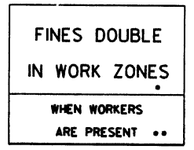
M4-9

STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

R55-1



36"X60"
• USE 6" C LETTERS
•• USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	½ MILE
1000 FT	¾ 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, DEFACED, 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 SQ. 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.

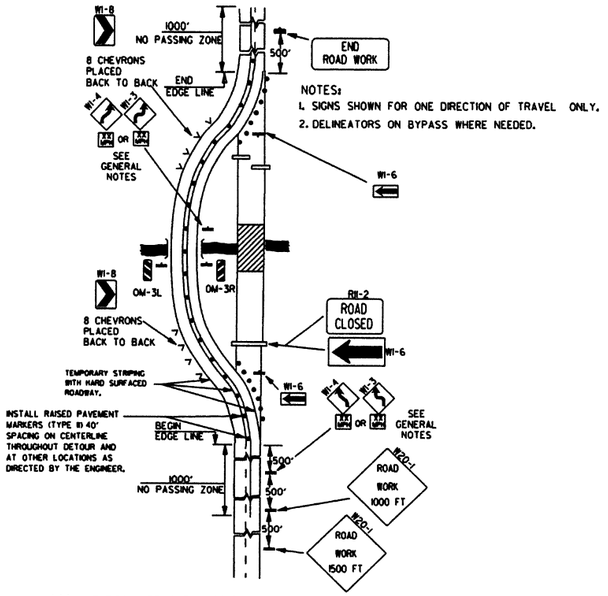
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

DATE	REVISION	FILMED
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
8-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
8-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
8-18-98	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	

ARKANSAS STATE HIGHWAY COMMISSION

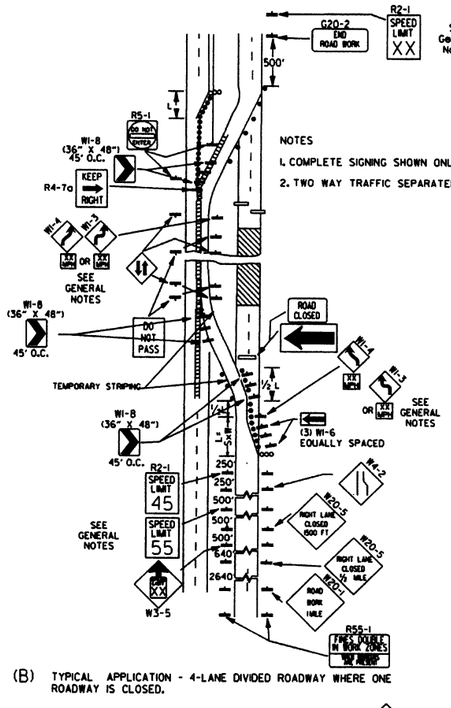
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



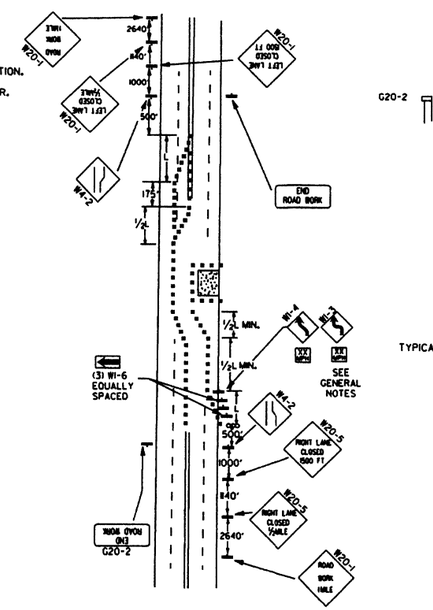
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.

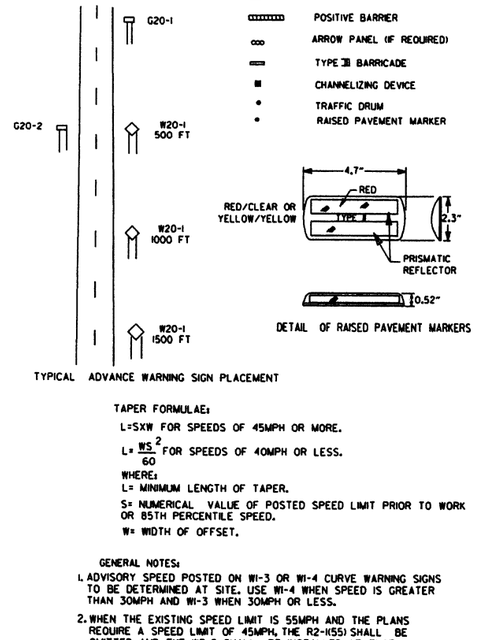


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(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.



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

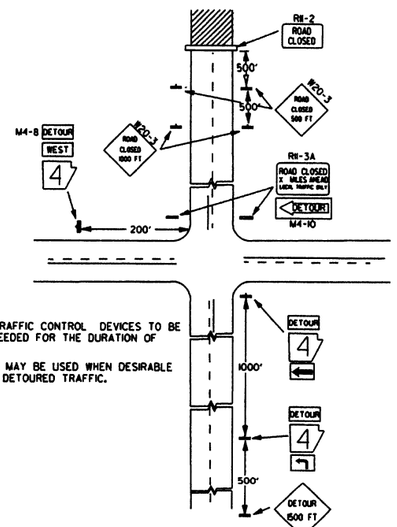
L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ 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.

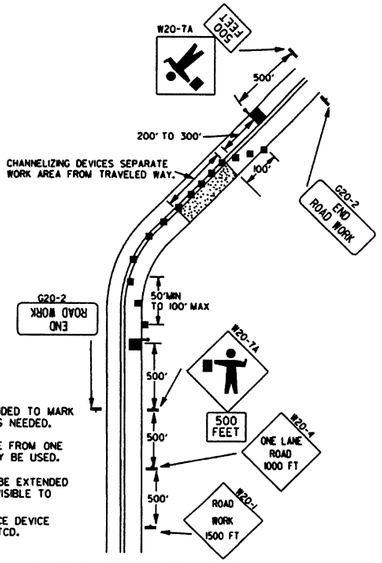
GENERAL NOTES:

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(55) 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 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(XX) 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 R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH 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.
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.



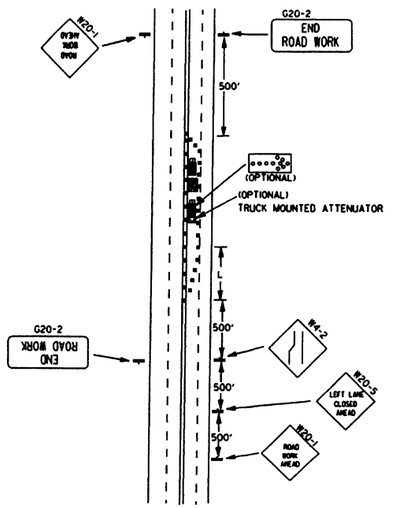
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



NOTES:
1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



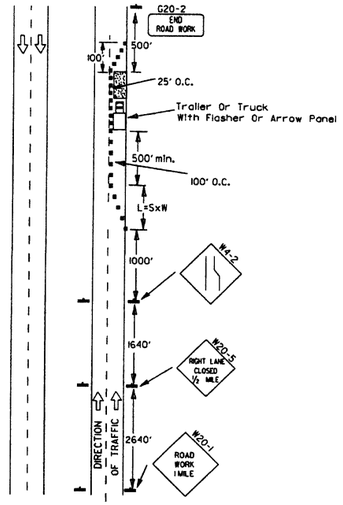
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	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	

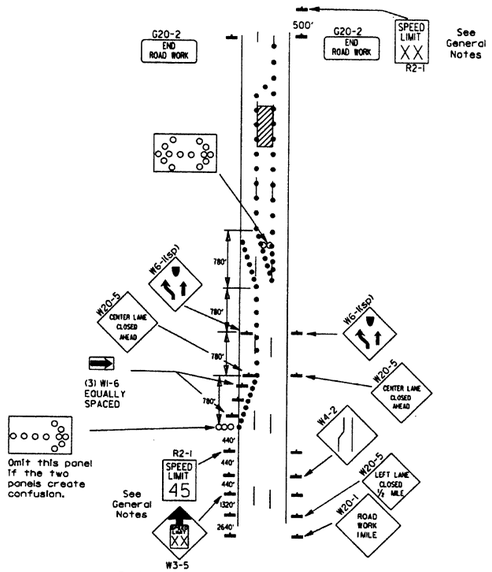
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

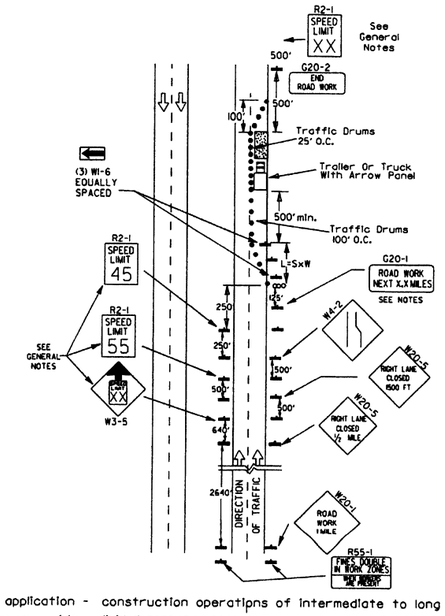
STANDARD DRAWING TC-2



(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.

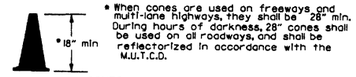
KEY:

- ○○○ Arrow Panel (If Required)
- ■ Channelizing Device
- ● Traffic drum

GENERAL NOTES:

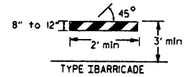
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1 45mph 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.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph 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.
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. 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.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
10. 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.

Channelizing devices



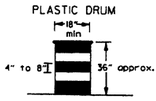
CONES

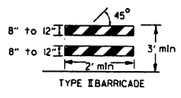
* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.



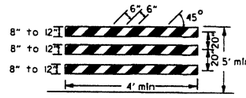
TYPE I BARRICADE

PLASTIC DRUM



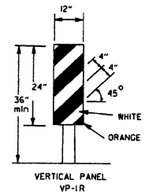


TYPE II BARRICADE



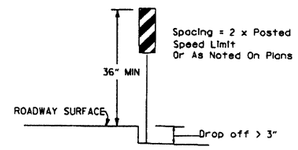
TYPE III BARRICADE

NOTE:
For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.



VERTICAL PANEL
VP-1R

VERTICAL PANEL PLACEMENT



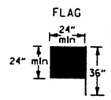
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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.

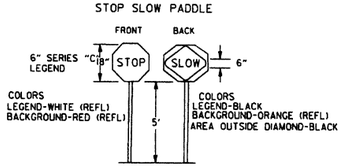
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

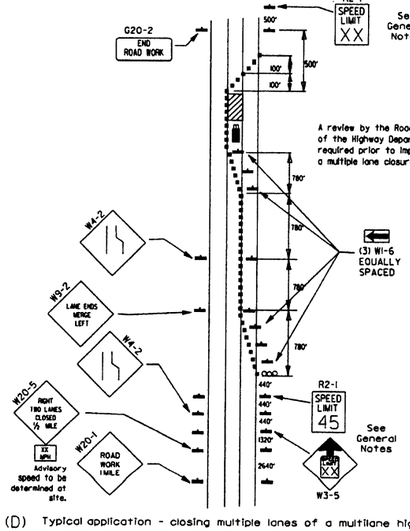
FLAG



Flag shall be of good grade red material

STOP SLOW PADDLE





A review by the Roadway Design Division of the Highway Department will be required prior to implementing a multiple lane closure.

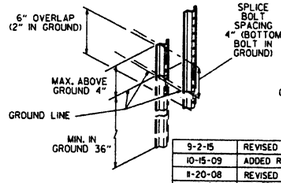
(D) Typical application - closing multiple lanes of a multilane highway.

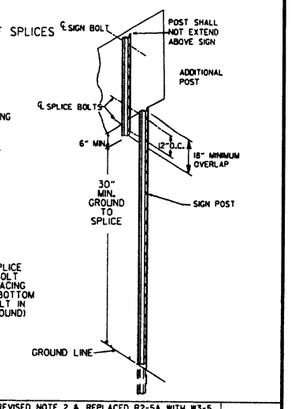
DETAIL OF SPLICES

NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21)

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 WASH	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	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	

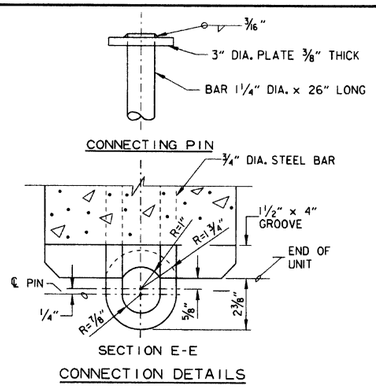
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-3

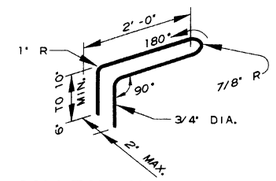
REINFORCING BAR TABLE PER BARRIER UNIT

MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2. TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", 90°, 3 3/8" R, LIFTING HOLE
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 1" MIN. CLEAR TO BAR, 7", 1'-6", 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9", 2 3/16" R, 12°, 9 1/2", 2'-1 3/8", 4 3/8"

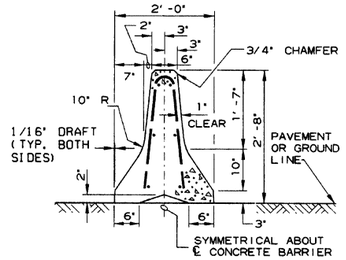


SECTION E-E

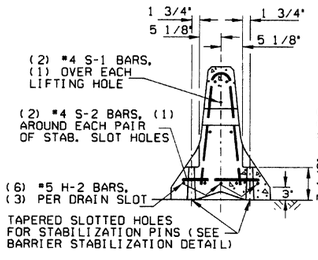
CONNECTION DETAILS



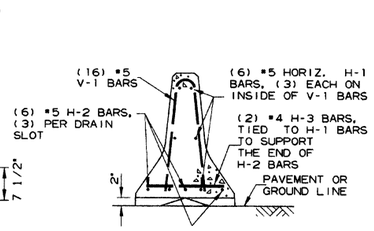
CONNECTION LOOP



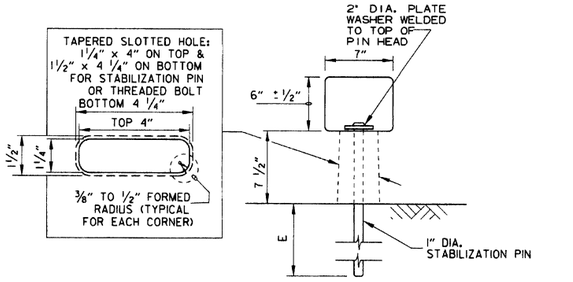
SECTION A-A



SECTION B-B



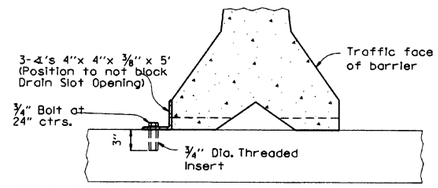
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

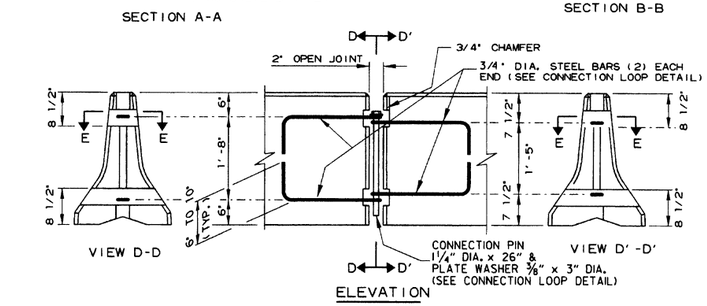
(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

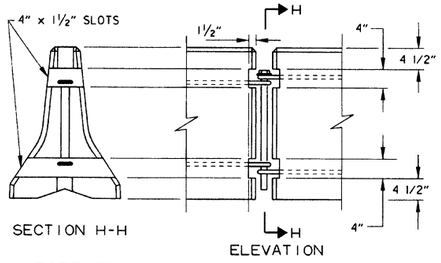
BRIDGE DECKS



VIEW D-D

VIEW D'-D'

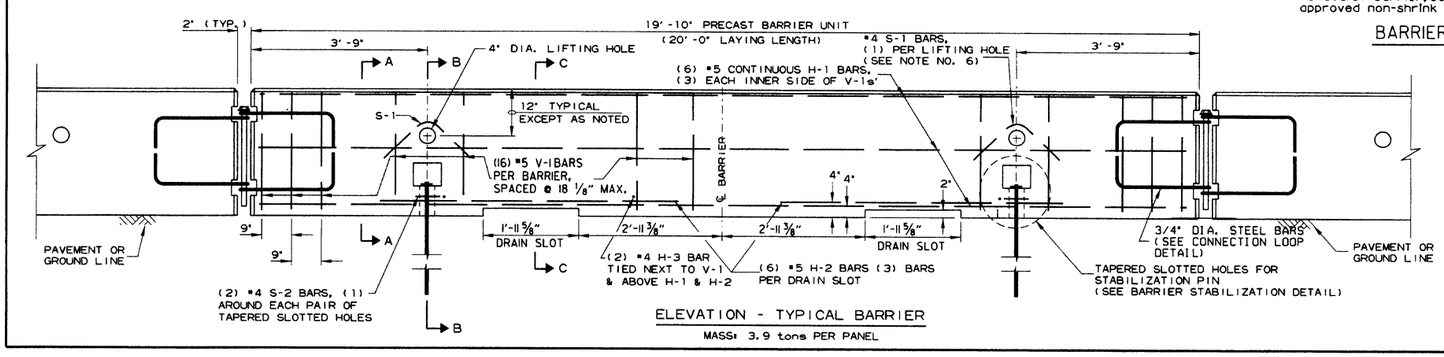
ELEVATION



SECTION H-H

ELEVATION

BARRIER REMOVAL SLOT DETAILS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

General Notes

1. 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.
2. 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 wall is 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 on 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.
3. 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.
4. 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.
5. Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.
6. A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

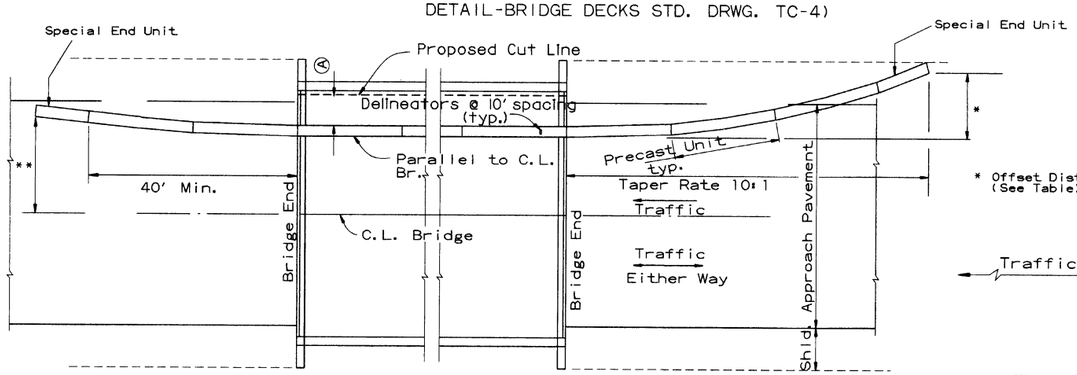
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

Ⓐ 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)

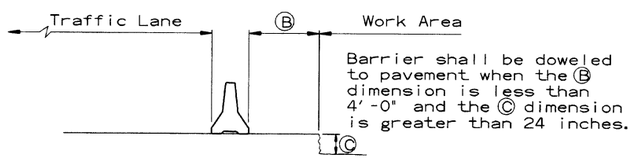


BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

* Offset Distance (See Table)

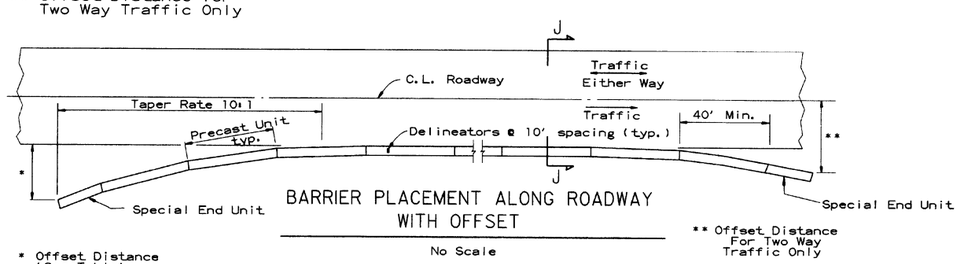
** Offset Distance for Two Way Traffic Only



Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

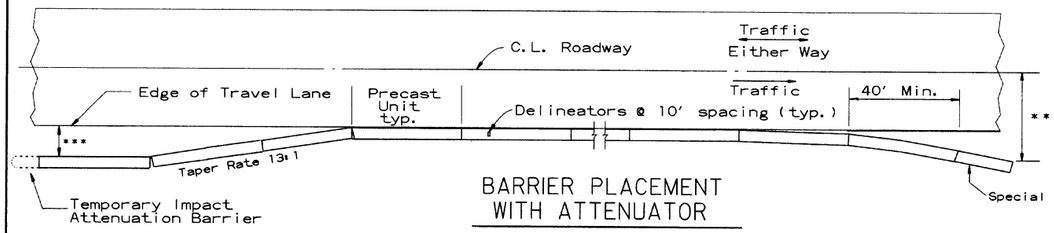
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance 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.

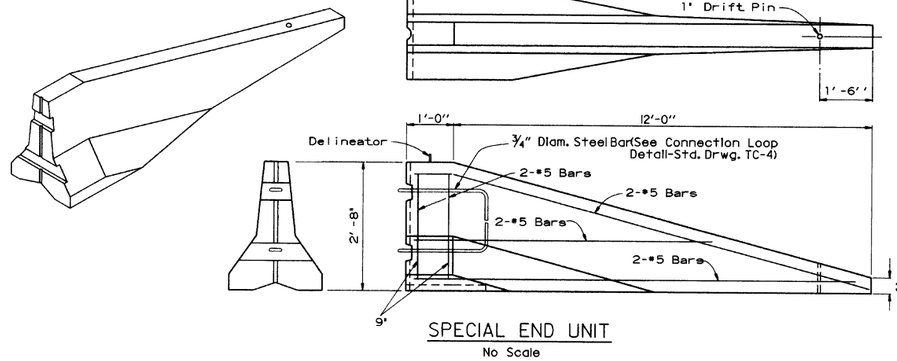


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

*** Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

** Offset Distance For Two Way Traffic Only



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."

DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

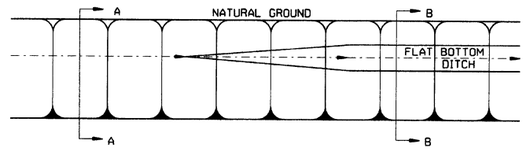
ARKANSAS STATE HIGHWAY COMMISSION

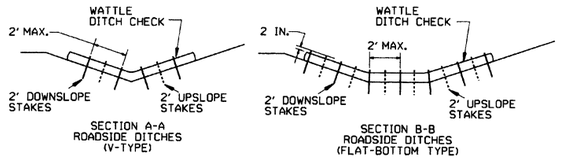
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5

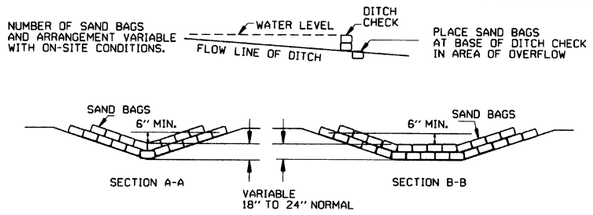
GENERAL NOTES

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

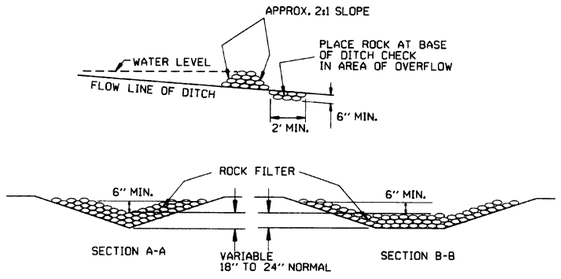




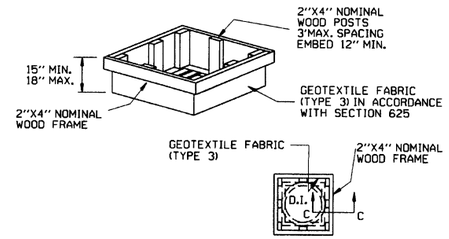
WATTLE DITCH CHECK (E-1)



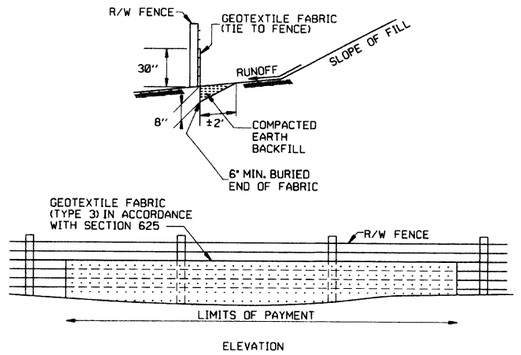
SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



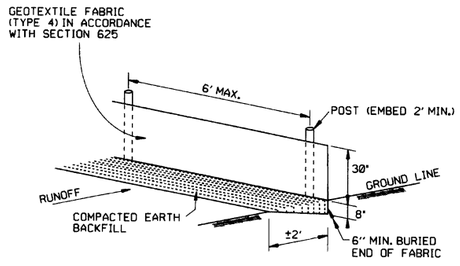
DROP INLET SILT FENCE (E-7)



SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

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.



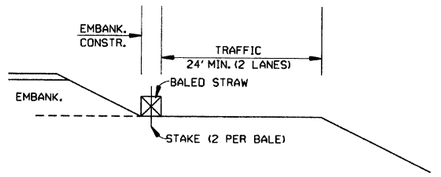
SILT FENCE (E-11)

GENERAL NOTES

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.

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 30 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)

DATE	REVISION	FILMED
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
6-2-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
4-1-93	REDRAWN	
10-1-92	REDRAWN	
8-2-76	ISSUED R.D.M.	298-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1