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.		040489	1	113

(2) HWY. 112 SPUR - NORTH (FAYETTEVILLE) (S)

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 112 SPUR - NORTH (FAYETTEVILLE) (S)

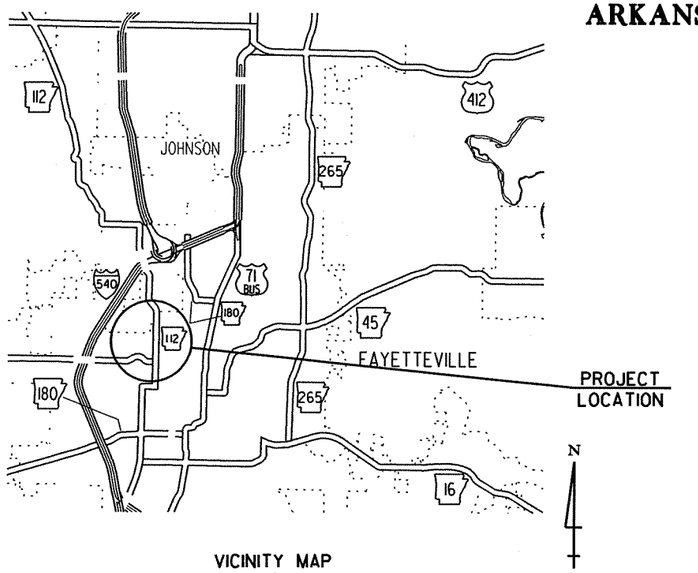
JOB 040489

F.A.P. STP-9142(22)

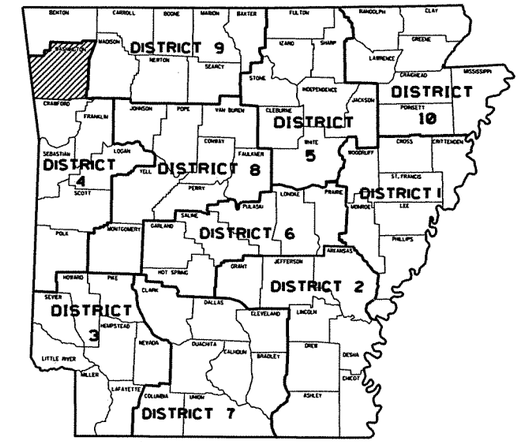
ROUTE 112 SECTION 1

WASHINGTON COUNTY

NOT TO SCALE



VICINITY MAP



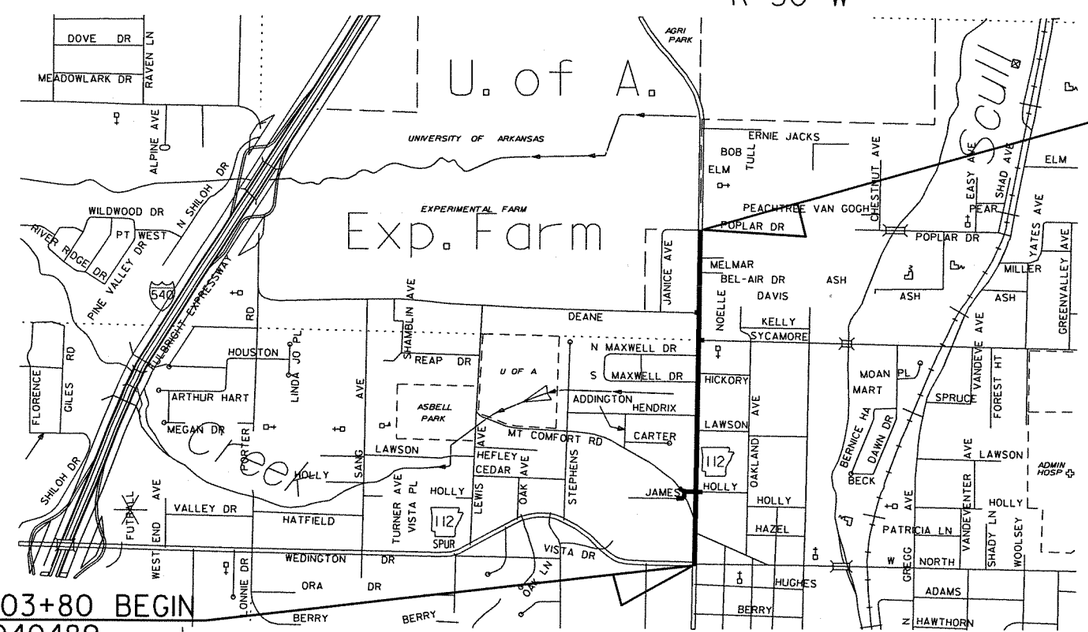
ARKANSAS HIGHWAY DIST. 4

• DESIGN TRAFFIC DATA •

DESIGN YEAR		2032
2012	ADT	16,000
2032	ADT	22,500
2032	DHV	2,475
DIRECTIONAL DISTRIBUTION		60%
TRUCKS		5%
DESIGN SPEED		40 MPH

R 30 W

T 16 N



STA. 141+00 - END
JOB 040489
LOG MILE 3.92

STA. 103+80 BEGIN
JOB 040489
LOG MILE 3.21

PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	N 36°04'42"	N 36°05'34"	N 36°05'18"
LONG.	W 94°10'31"	W 94°10'30"	W 94°10'30"

LENGTH COMPUTER ALONG HWY. 112 CENTERLINE

GROSS LENGTH OF PROJECT	3720.00	FEET OR	0.705 MILES
NET LENGTH OF ROADWAY	3720.00	FEET OR	0.705 MILES
NET LENGTH OF BRIDGES	0.00	FEET OR	0.000 MILES
NET LENGTH OF PROJECT	3720.00	FEET OR	0.705 MILES

P.E. JOB 040489
NON PART.

APPROVED

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 3917 FRANK VOZEL

8/29/12

DEPUTY DIRECTOR
AND CHIEF ENGINEER

040489

JOB

8/17/2012

R040489.DGN

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

INDEX OF SHEETS

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

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.

2. ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.

3. 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.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.

5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.

6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.

8. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.

9. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

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

8-27-12

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 - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-2	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1	BIDDING REQUIREMENTS AND CONDITIONS
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
105-3	CONTROL OF WORK
107-1	WORKER VISIBILITY
108-1	LIQUIDATED DAMAGES
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
303-1	AGGREGATE BASE COURSE
404-1	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
404-2	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
409-1	MINERAL AGGREGATES
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
411-1	ASPHALT CONCRETE COLD PLANT MIX
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
606-2	PIPE CULVERTS
711-1	CONCRETE PULL BOX
714-1	DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL MAST ARMS AND POLES
715-1	DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL PEDESTAL POLES
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2	THERMOPLASTIC PAVEMENT MARKING MATERIAL
JOB 040489	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 040489	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 040489	CABINET DRAWER ASSEMBLY
JOB 040489	EDGE CARD VIDEO PROCESSOR
JOB 040489	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 040489	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 040489	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 040489	INTERNET BIDDING
JOB 040489	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 040489	LED TRAFFIC SIGNAL HEAD
JOB 040489	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 040489	MAINTENANCE OF TRAFFIC
JOB 040489	PARTNERING REQUIREMENTS
JOB 040489	SERVICE POINT ASSEMBLY
JOB 040489	SITE USE (A + C METHOD)
JOB 040489	SOIL STABILIZATION
JOB 040489	STORM WATER POLLUTION PREVENTION PLAN
JOB 040489	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 040489	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 040489	SYSTEM LOCAL CONTROLLER
JOB 040489	UTILITY ADJUSTMENTS
JOB 040489	VALUE ENGINEERING
JOB 040489	VIDEO DETECTOR (COLOR)
JOB 040489	WARM MIX ASPHALT

INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES

8/17/2012

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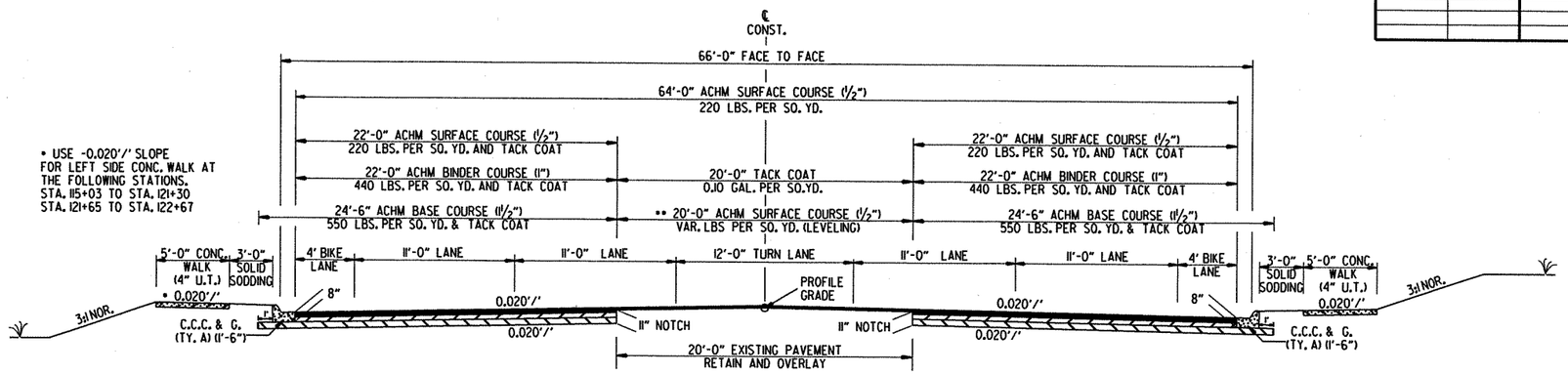
(2) TYPICAL SECTIONS OF IMPROVEMENT

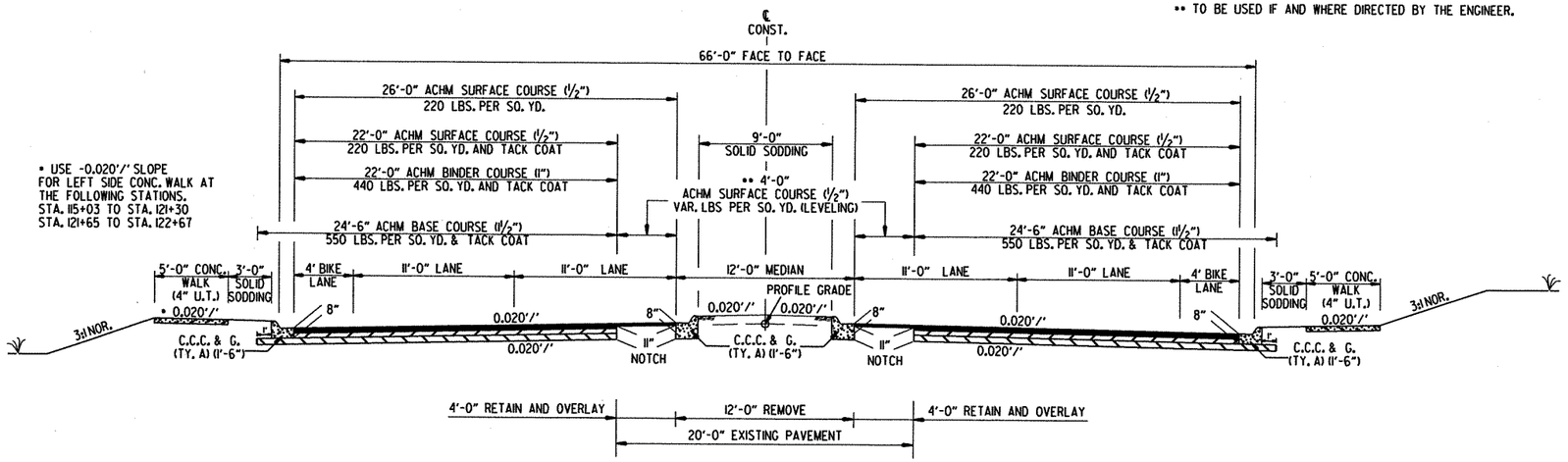
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12



TYPICAL SECTION OF IMPROVEMENT - NOTCH & WIDENING

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



TYPICAL SECTION OF IMPROVEMENT - NOTCH & WIDENING

NOTES:

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.

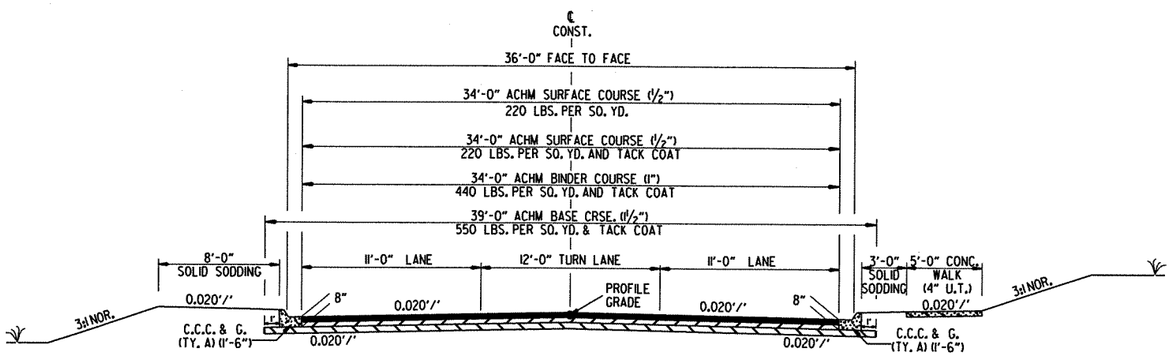
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE FINAL 2 INCHES OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

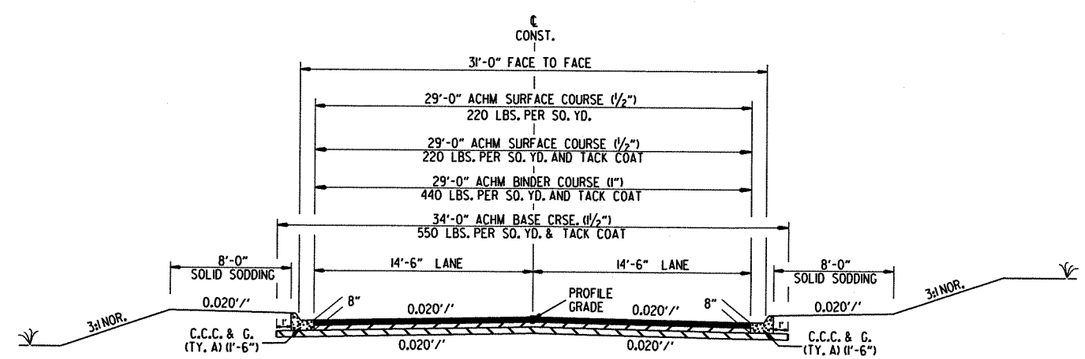
PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN THE CONCRETE WALKS AT 45' INTERVALS.

ANY WIDENING AREAS LESS THAN 8' IN WIDTH WILL BE DONE WITH P.C. CONCRETE BASE (11") INSTEAD OF ACHM SURFACE, BINDER AND BASE.



TYPICAL SECTION OF IMPROVEMENT - FULL DEPTH
MT. COMFORT RD.



TYPICAL SECTION OF IMPROVEMENT - FULL DEPTH
JAMES ST.

TYPICAL SECTIONS OF IMPROVEMENT

8/17/2012

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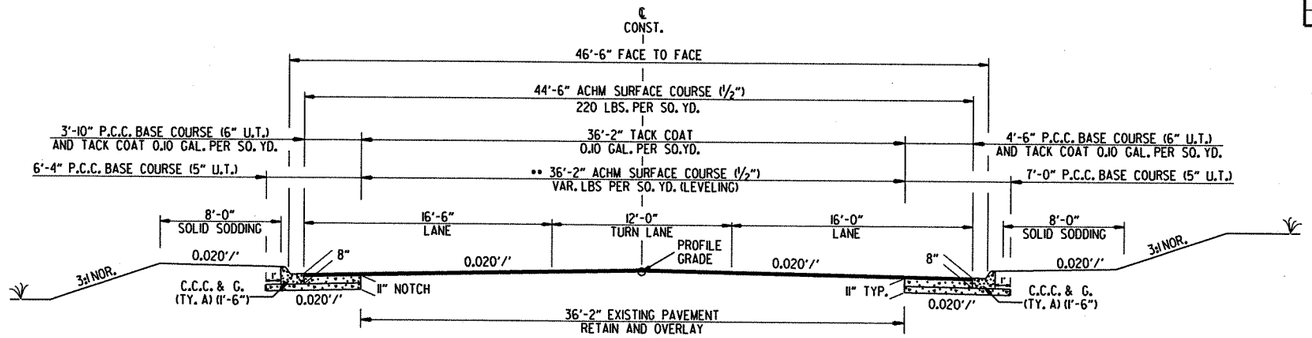
(2) TYPICAL SECTIONS OF IMPROVEMENT

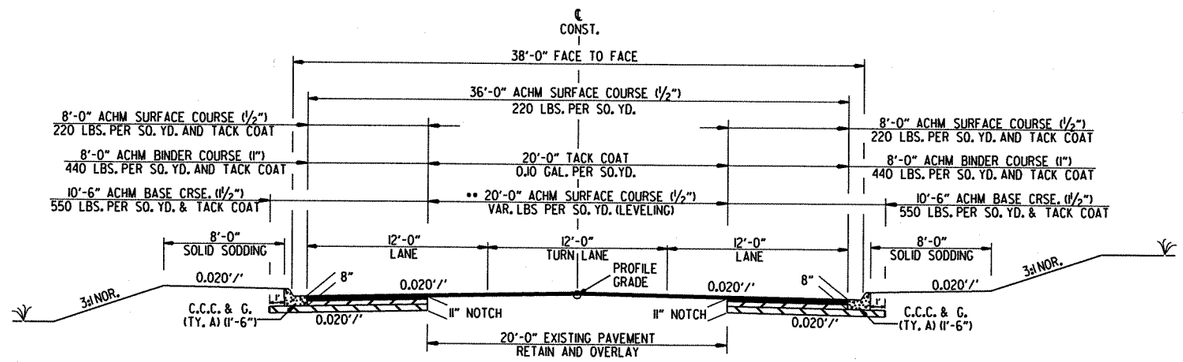
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12



TYPICAL SECTION OF IMPROVEMENT - NOTCH & WIDENING
DEANE ST.

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



TYPICAL SECTION OF IMPROVEMENT - NOTCH & WIDENING
SYCAMORE ST.

NOTES:

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.

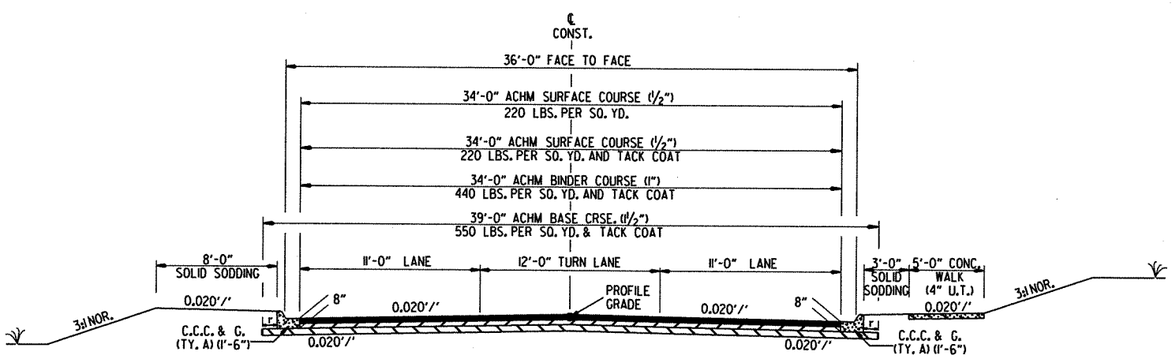
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE FINAL 2 INCHES OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

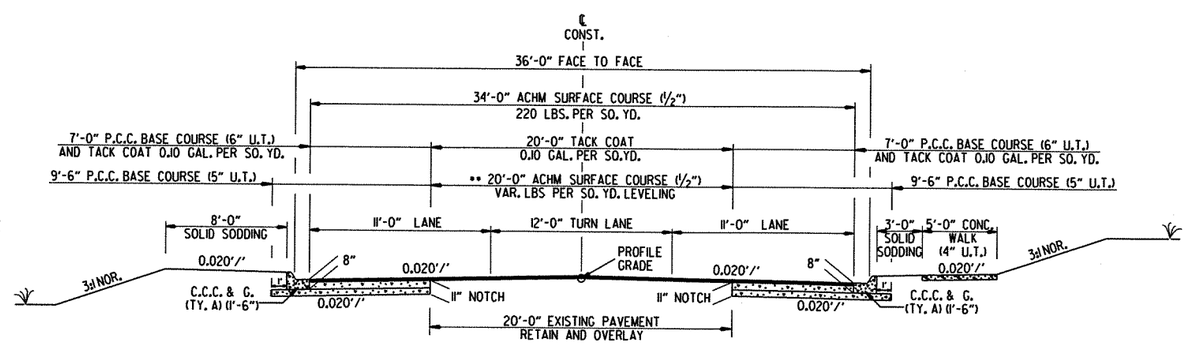
PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN THE CONCRETE WALKS AT 45' INTERVALS.

ANY WIDENING AREAS LESS THAN 8' IN WIDTH WILL BE DONE WITH P.C. CONCRETE BASE (11") INSTEAD OF ACHM SURFACE, BINDER AND BASE.



TYPICAL SECTION OF IMPROVEMENT - FULL DEPTH
HOLLY ST.



TYPICAL SECTION OF IMPROVEMENT - NOTCH & WIDENING
HOLLY ST.

TYPICAL SECTIONS OF IMPROVEMENT

8/17/2012

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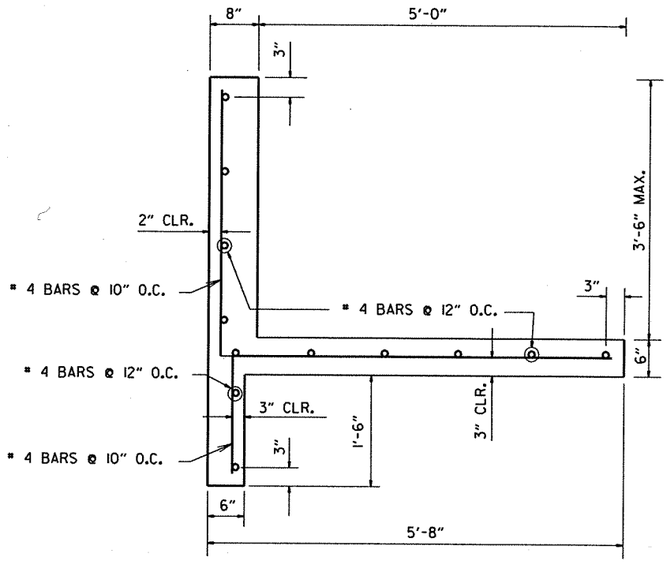
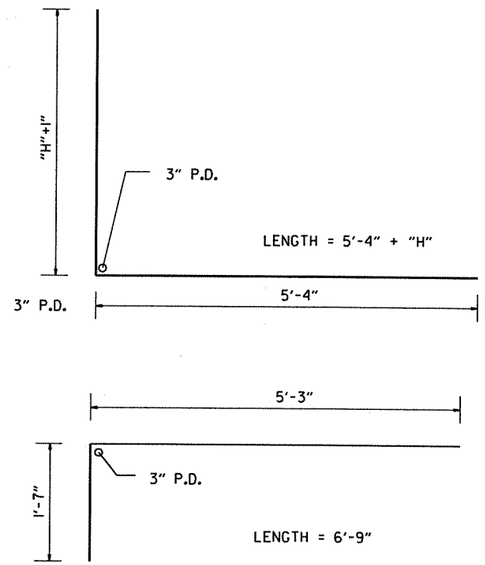
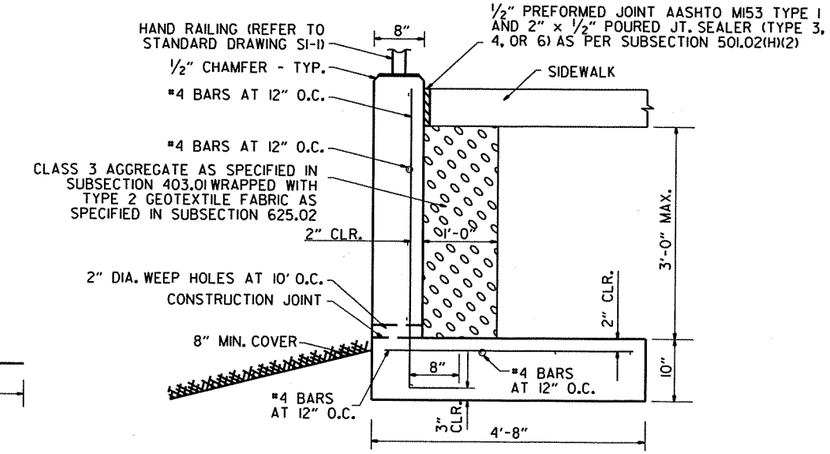
(2) SPECIAL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
8-27-12



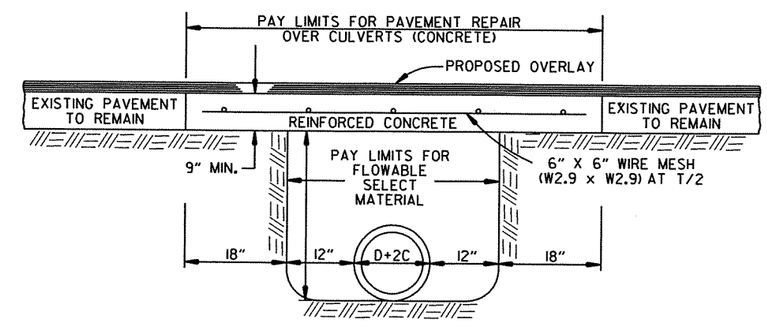


CONCRETE WALK (TYPE SPECIAL) DETAILS
MAX HEIGHT 3'-6"

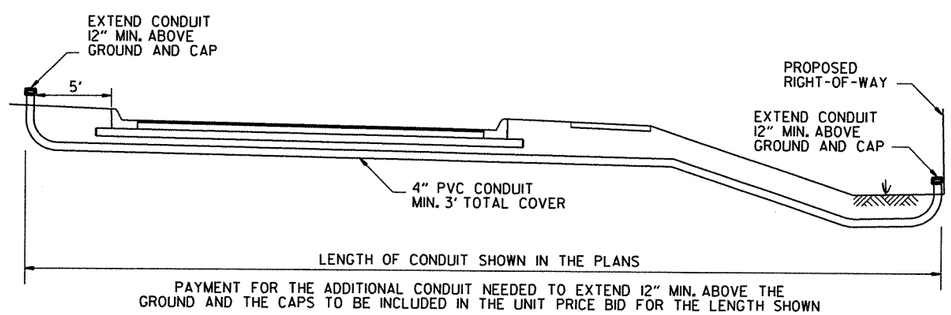


CONCRETE WALKS (TYPE SPECIAL)

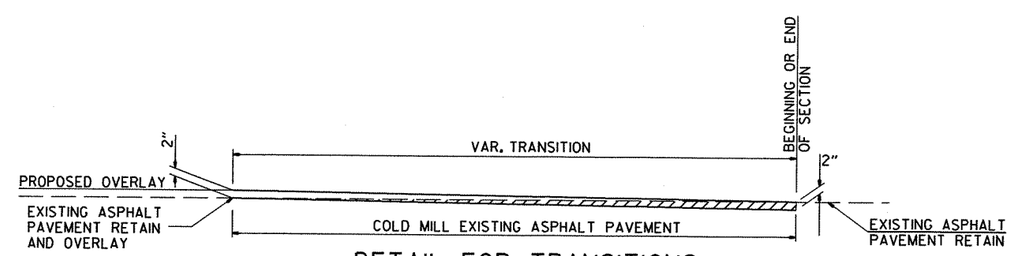
NOTES:
JOINTS IN THE WALL SHALL MATCH THE TYPE AND SPACING OF THE JOINTS IN THE WALK.
ALL CONCRETE SHALL BE CLASS S (f'c=3,500 psi) AND SHALL BE POURED IN THE DRY.
REINFORCING STEEL SHALL BE AASHTO M31 OR M53, GRADE 60 (fy=60,000 psi).
PAYMENT FOR THE WEEP HOLES, CLASS 3 AGGREGATE, TYPE 2 GEOTEXTILE FABRIC, PREFORMED JOINT FILLER, POURED JOINT SEALER, REINFORCING STEEL, AND CONCRETE SHALL BE INCLUDED IN THE UNIT BID PRICE PER SQ. YD. FOR CONCRETE WALKS (TYPE SPECIAL).



PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



DETAILS OF CONDUIT PLACEMENT FOR
CITY'S FUTURE UTILITY ACCESS TO MEDIAN



DETAIL FOR TRANSITIONS
SEE PLANS FOR TRANSITION LENGTHS

SPECIAL DETAILS

8/17/2012

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(2) SPECIAL DETAILS

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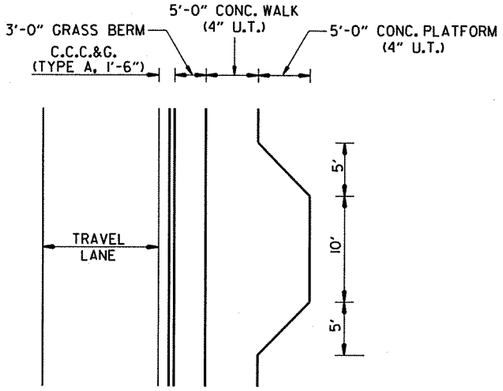
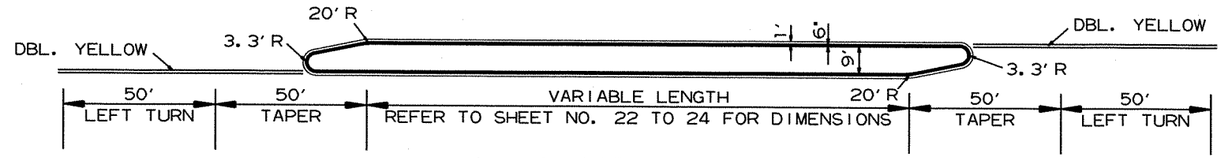
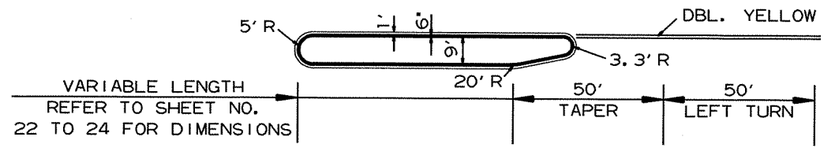


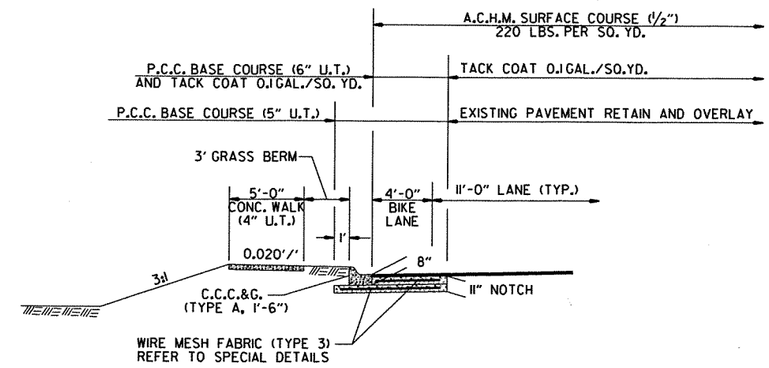
CONCRETE PLATFORM LANDING FOR WHEELCHAIR AT BUS STOP



HWY. 112 (GARLAND AVENUE) INTERMITTENT TAPERED MEDIANS

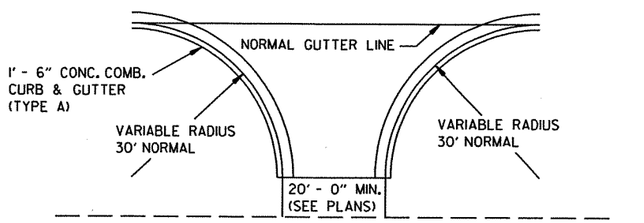


HWY. 112 (GARLAND AVENUE) INTERMITTENT TAPERED MEDIANS



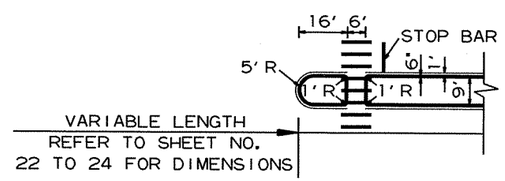
P.C.C. BASE WIDENING DETAIL

P.C.C. BASE WIDENING TO BE USED AS SHOWN ON THE PLANS.

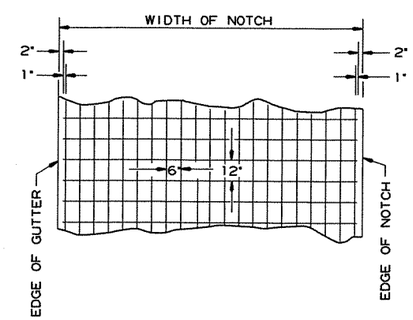


DETAIL OF TURNOUTS ASPHALT STREETS CURB & GUTTER SECTION

NOTE:
PAVEMENT STRUCTURE TO BE SAME AS MAIN LANES



HWY. 112 (GARLAND AVENUE) MEDIAN CROSSING

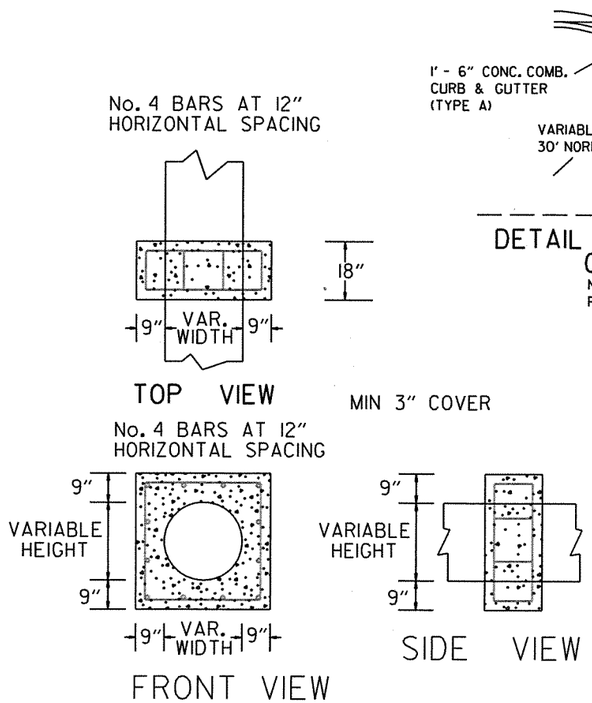


DETAIL OF REINFORCING STEEL FOR PAVEMENT (WIRE MESH TYPE 3)

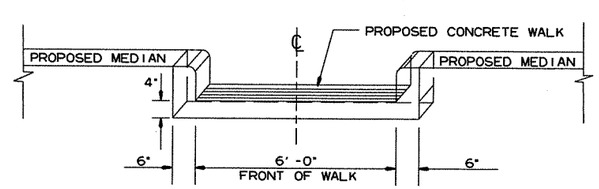
6"X 12" MESH FABRIC (TYPE 3) (W5.5 x W2.9) = 4.26 LBS./SQ.YD.

NOTES:

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



PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL



CONCRETE WALK THRU MEDIAN

FACE SHALL MEET REQUIREMENTS OF TYPE A CURB

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

8/17/2012

R040489.DGN

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.		040489	7	113

(2) TEMPORARY EROSION CONTROL DETAILS

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

8-27-12

(E-6) ROCK DITCH CHECKS
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE

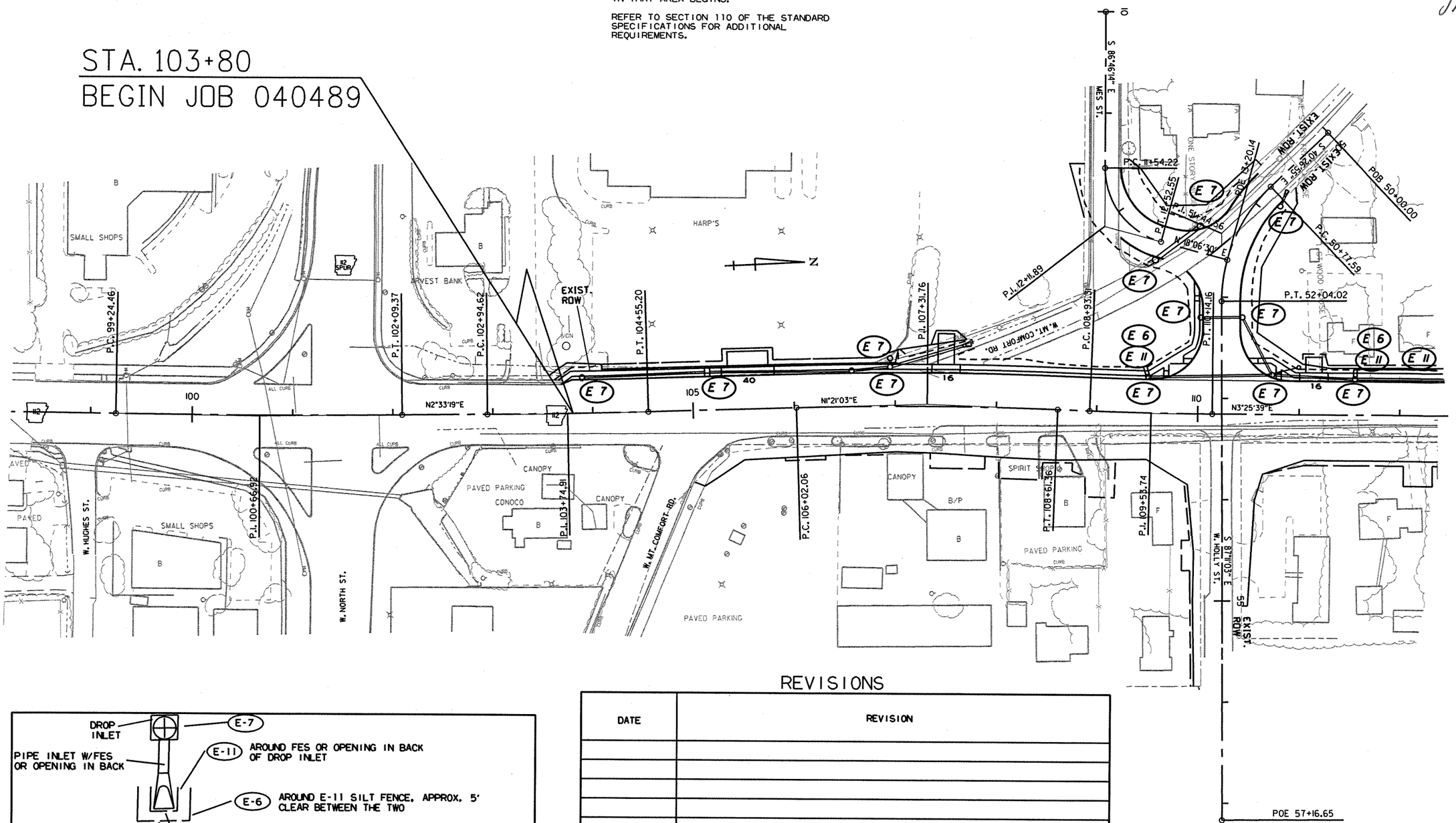
LEGEND

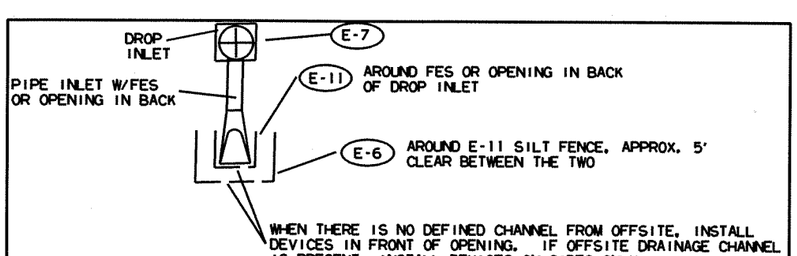
EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED, AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

STA. 103+80
BEGIN JOB 040489





TYPICAL DEVICE PLACEMENT AT DROP INLETS

REVISIONS

DATE	REVISION

STAGE I
TEMPORARY EROSION CONTROL DETAILS

8/17/2012

R040489.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.		040489	8	113

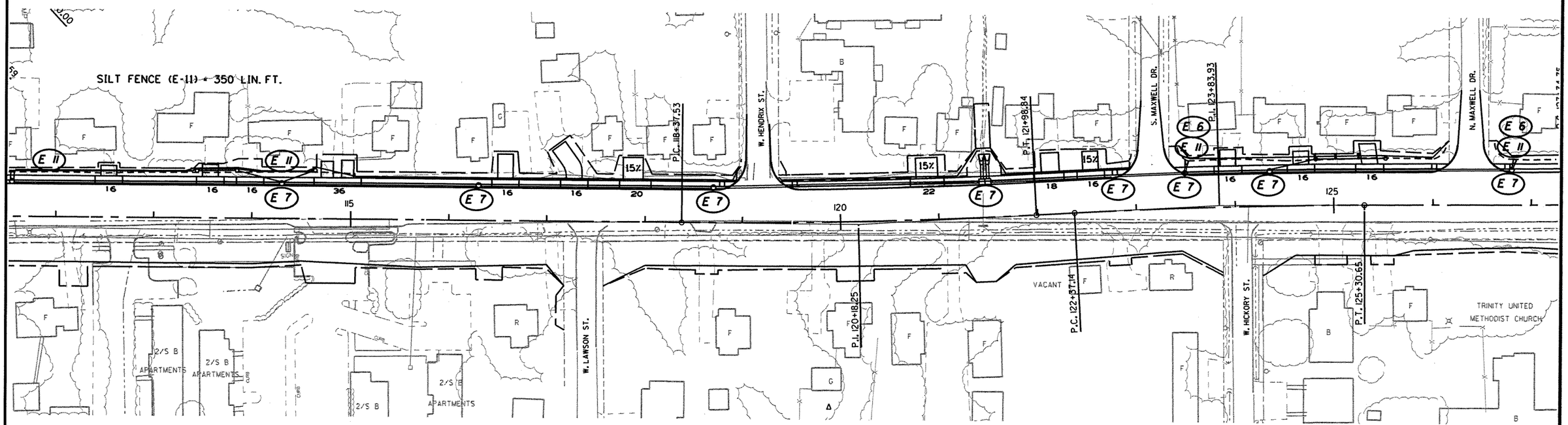
(2) TEMPORARY EROSION CONTROL DETAILS

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

8-27-12

(E-6) ROCK DITCH CHECKS
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE

LEGEND



REVISIONS

DATE	REVISION

STAGE I
TEMPORARY EROSION CONTROL DETAILS

8/17/2012

R040489.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.		040489	9	113

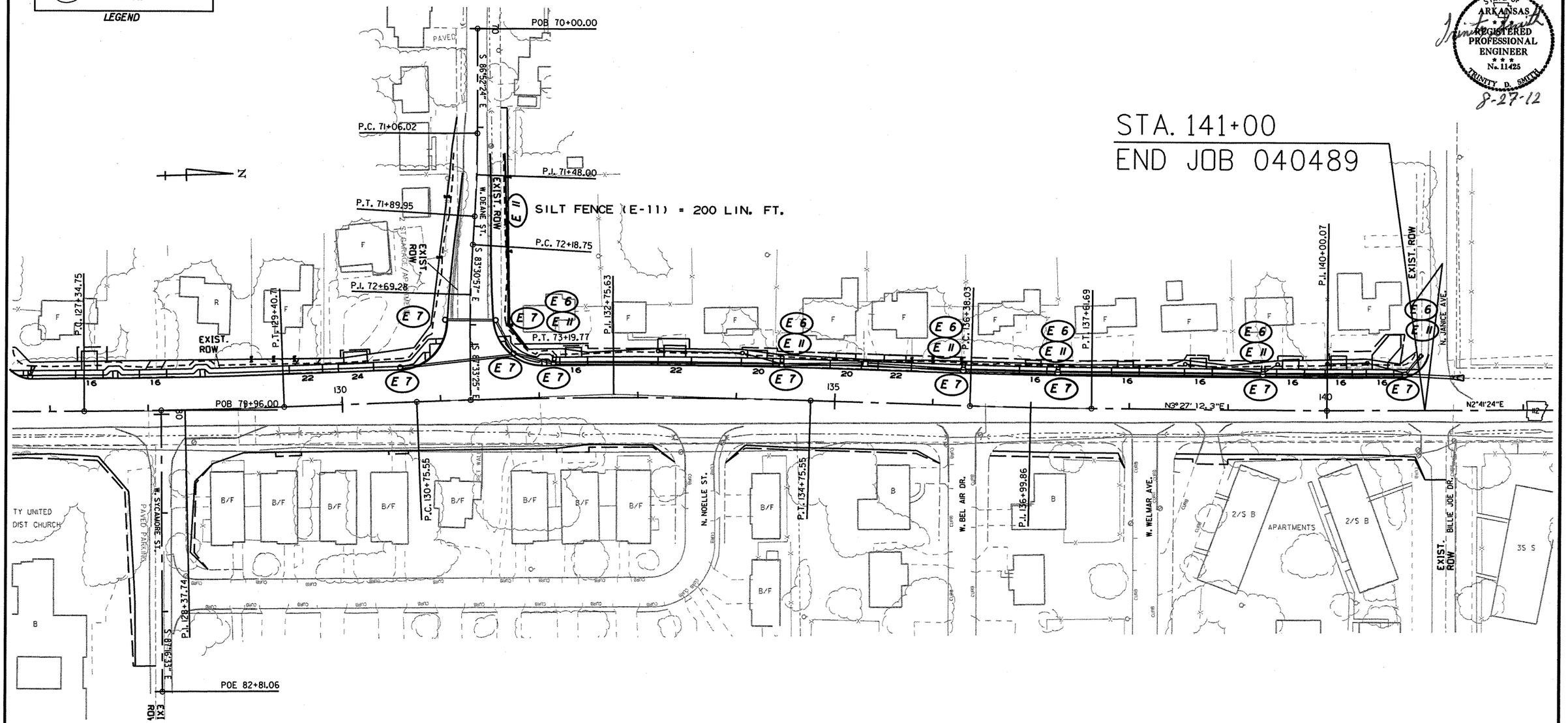
(2) TEMPORARY EROSION CONTROL DETAILS

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

Trinity Smith 8-27-12

(E-6) ROCK DITCH CHECKS
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE

LEGEND



REVISIONS

DATE	REVISION

8/17/2012

R040489.DGN

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.		040489	10	113

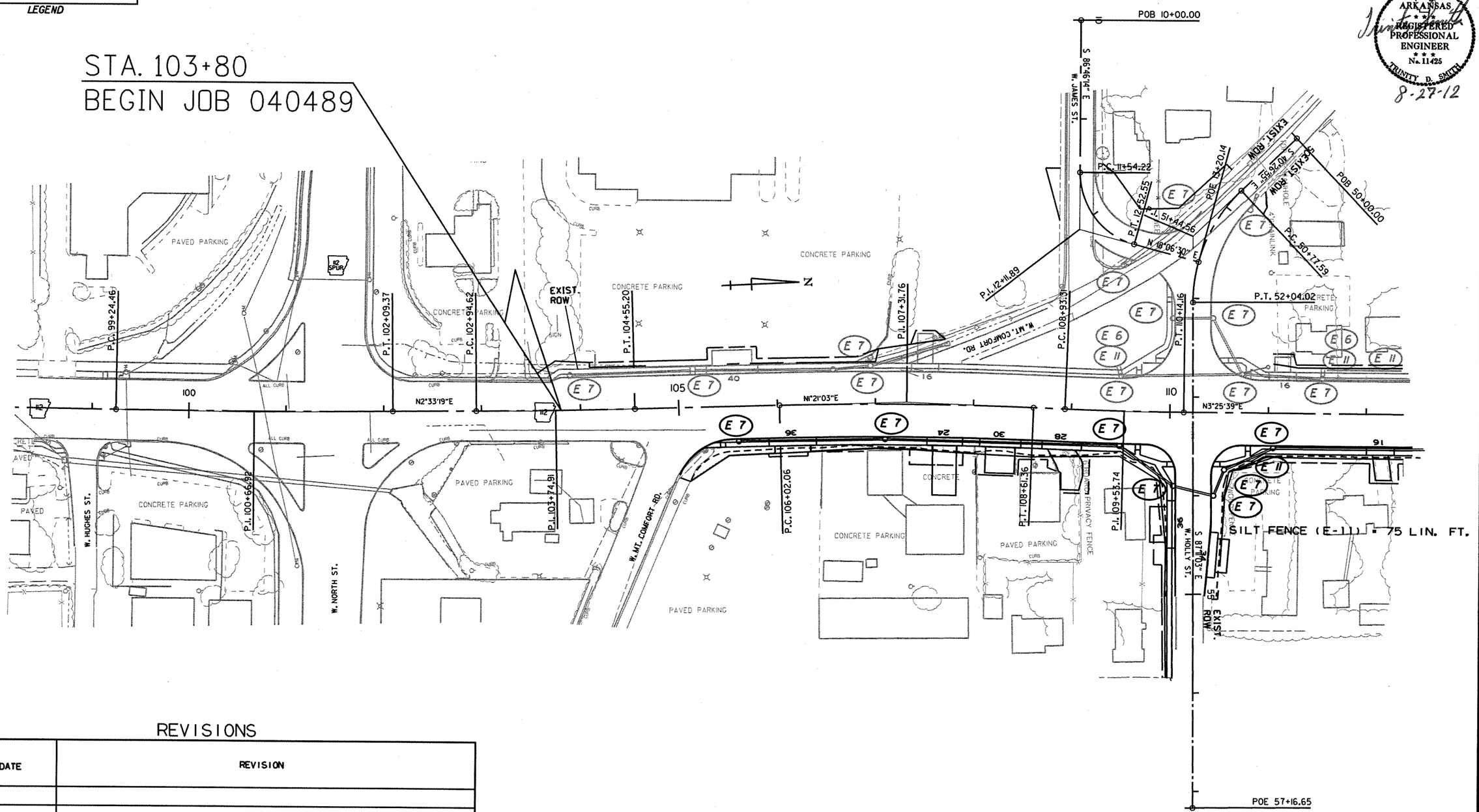
(2) TEMPORARY EROSION CONTROL DETAILS

(E-6) ROCK DITCH CHECKS
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE

LEGEND

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

8-27-12



REVISIONS

DATE	REVISION

8/17/2012

R040489.DGN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

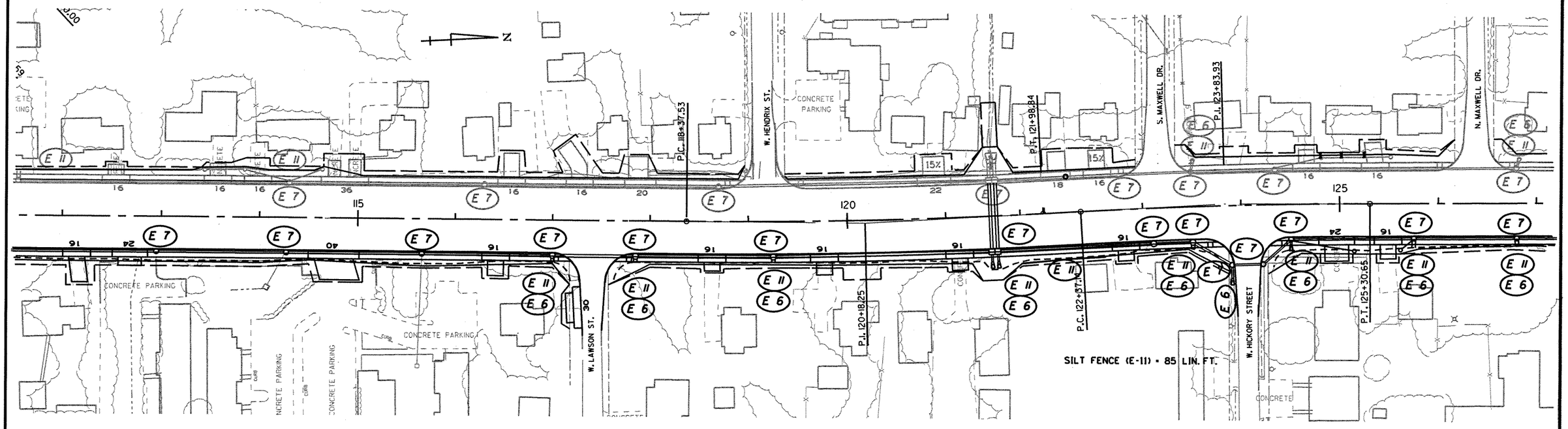
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	11	113

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-12

(E-6) ROCK DITCH CHECKS
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE

LEGEND



REVISIONS

DATE	REVISION

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

8/17/2012

R040489.DGN

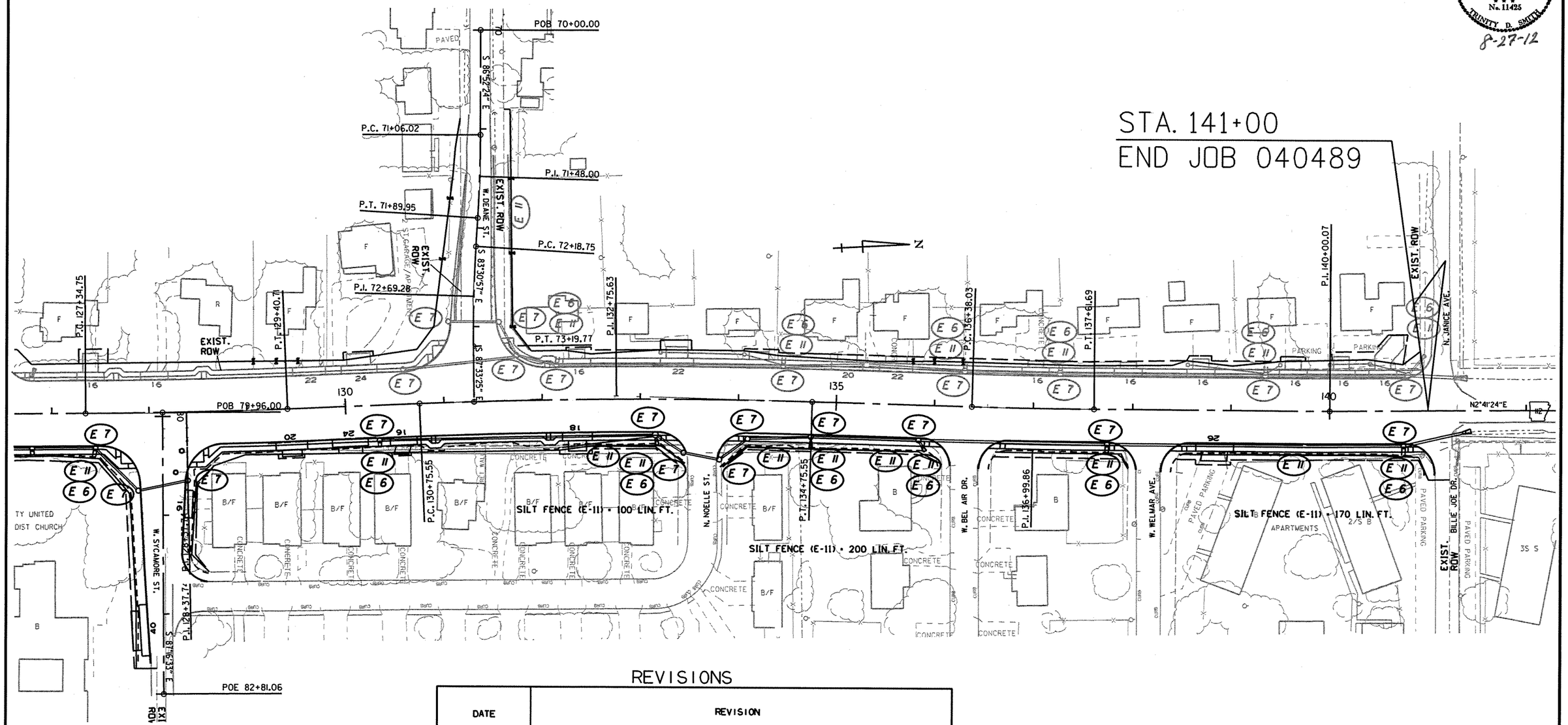
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	12	113

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-12

(E-6) ROCK DITCH CHECKS
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE

LEGEND



REVISIONS

DATE	REVISION

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

8/17/2012

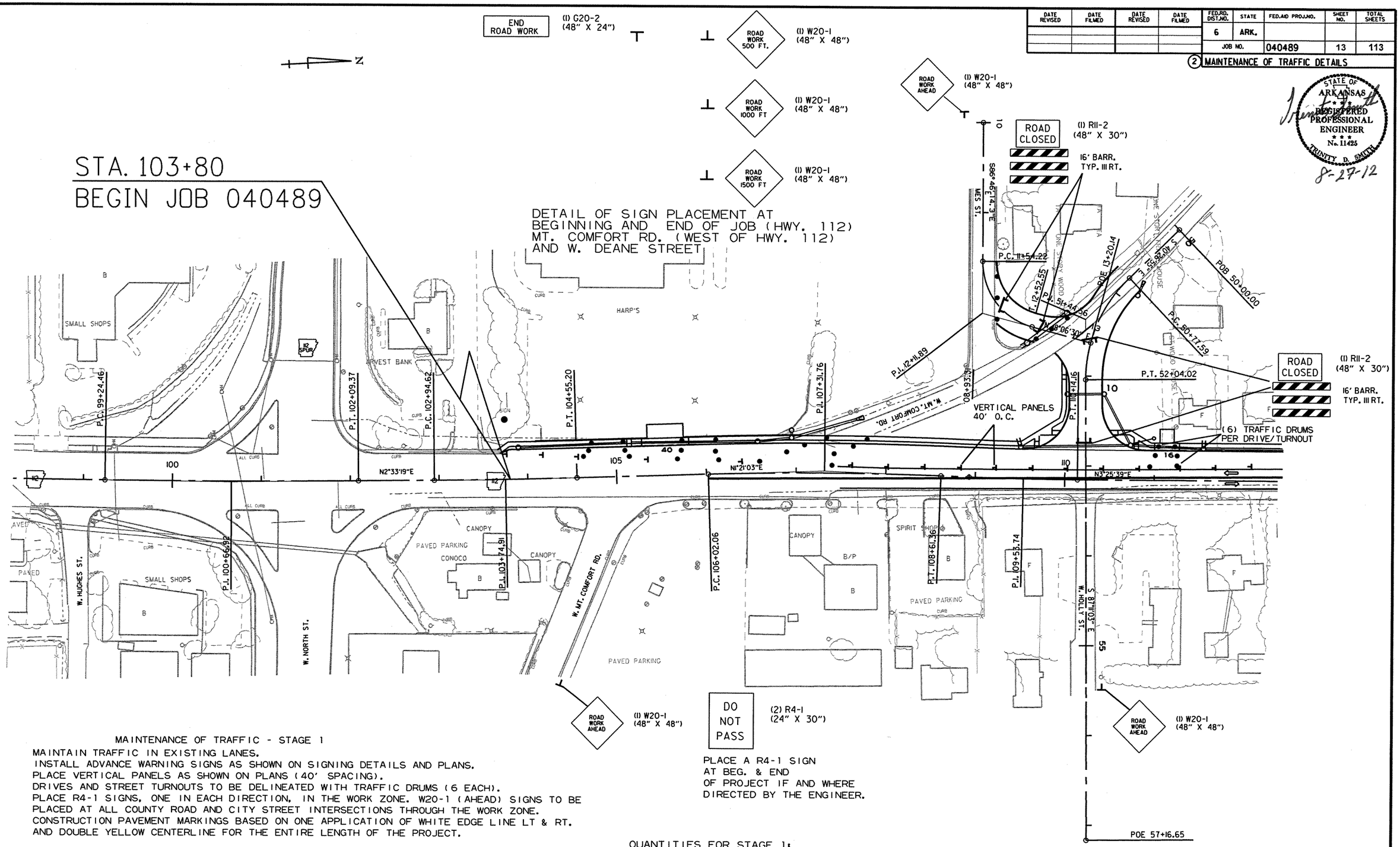
R040489.DGN

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.		040489	13	113

(2) MAINTENANCE OF TRAFFIC DETAILS

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

8-27-12



MAINTENANCE OF TRAFFIC - STAGE 1

MAINTAIN TRAFFIC IN EXISTING LANES.
INSTALL ADVANCE WARNING SIGNS AS SHOWN ON SIGNING DETAILS AND PLANS.
PLACE VERTICAL PANELS AS SHOWN ON PLANS (40' SPACING).
DRIVES AND STREET TURNOUTS TO BE DELINEATED WITH TRAFFIC DRUMS (6 EACH).
PLACE R4-1 SIGNS, ONE IN EACH DIRECTION, IN THE WORK ZONE. W20-1 (AHEAD) SIGNS TO BE PLACED AT ALL COUNTY ROAD AND CITY STREET INTERSECTIONS THROUGH THE WORK ZONE.
CONSTRUCTION PAVEMENT MARKINGS BASED ON ONE APPLICATION OF WHITE EDGE LINE LT & RT. AND DOUBLE YELLOW CENTERLINE FOR THE ENTIRE LENGTH OF THE PROJECT.

CONSTRUCT LEFT SIDE HWY. 112 (GARLAND AVE.) AS SHOWN ON PLANS.
CONSTRUCT MT. COMFORT RD. STA. 51+33 - STA. 52+83 AS SHOWN ON PLANS.
CONSTRUCT JAMES ST. STA. 12+00 - STA. 12+75 AS SHOWN ON PLANS.
CONSTRUCT DEANE ST. AS SHOWN ON PLANS

PLACE A R4-1 SIGN AT BEG. & END OF PROJECT IF AND WHERE DIRECTED BY THE ENGINEER.

QUANTITIES FOR STAGE 1:

SIGNS = 546 SQ. FT.
BARRICADES = 96 LIN. FT.
TRAFFIC DRUMS = 226 EACH
VERTICAL PANELS = 56 EACH
CONSTRUCTION PAVEMENT MARKINGS = 14880 LIN. FT.

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

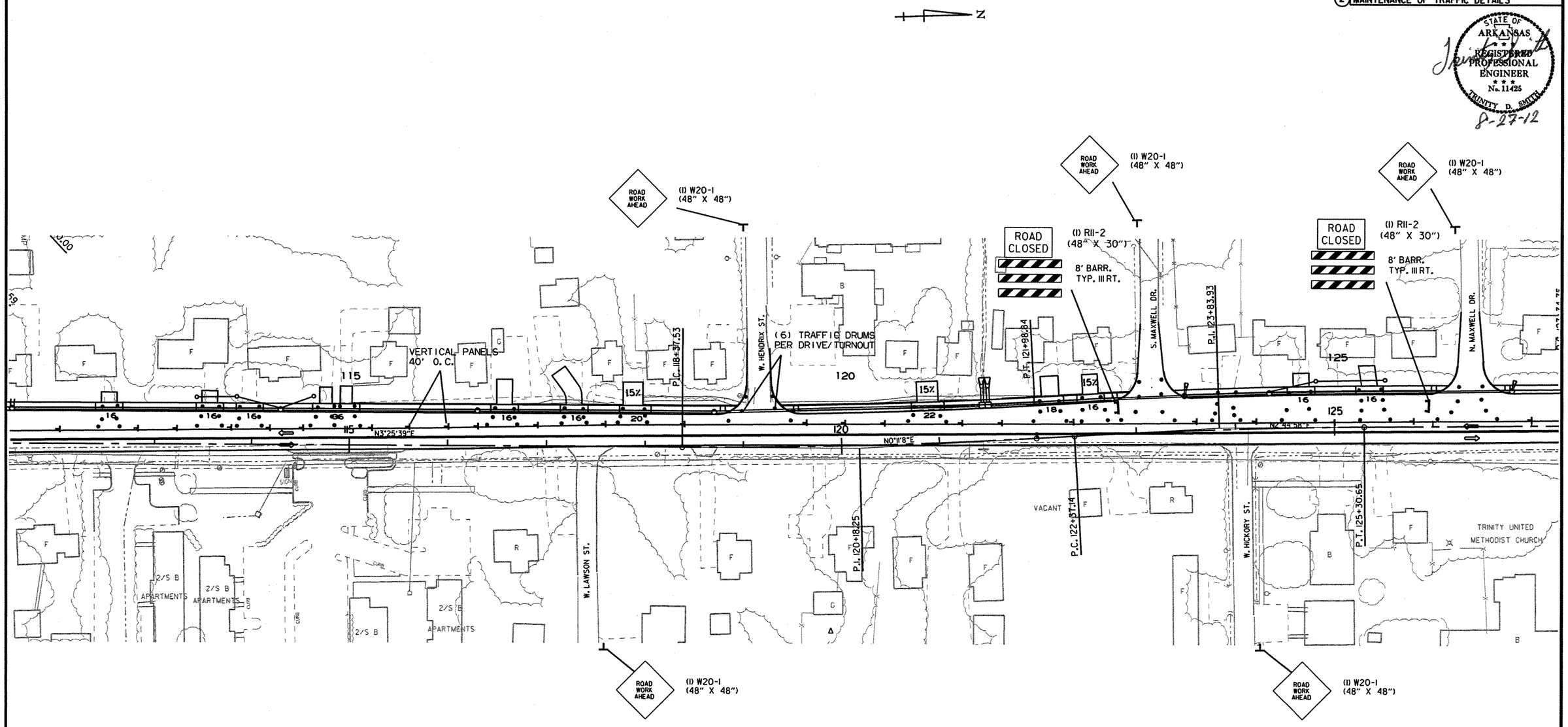
8/17/2012

R040489.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.		040489	14	113

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-12



STAGE I
MAINTENANCE OF TRAFFIC DETAILS

8/17/2012

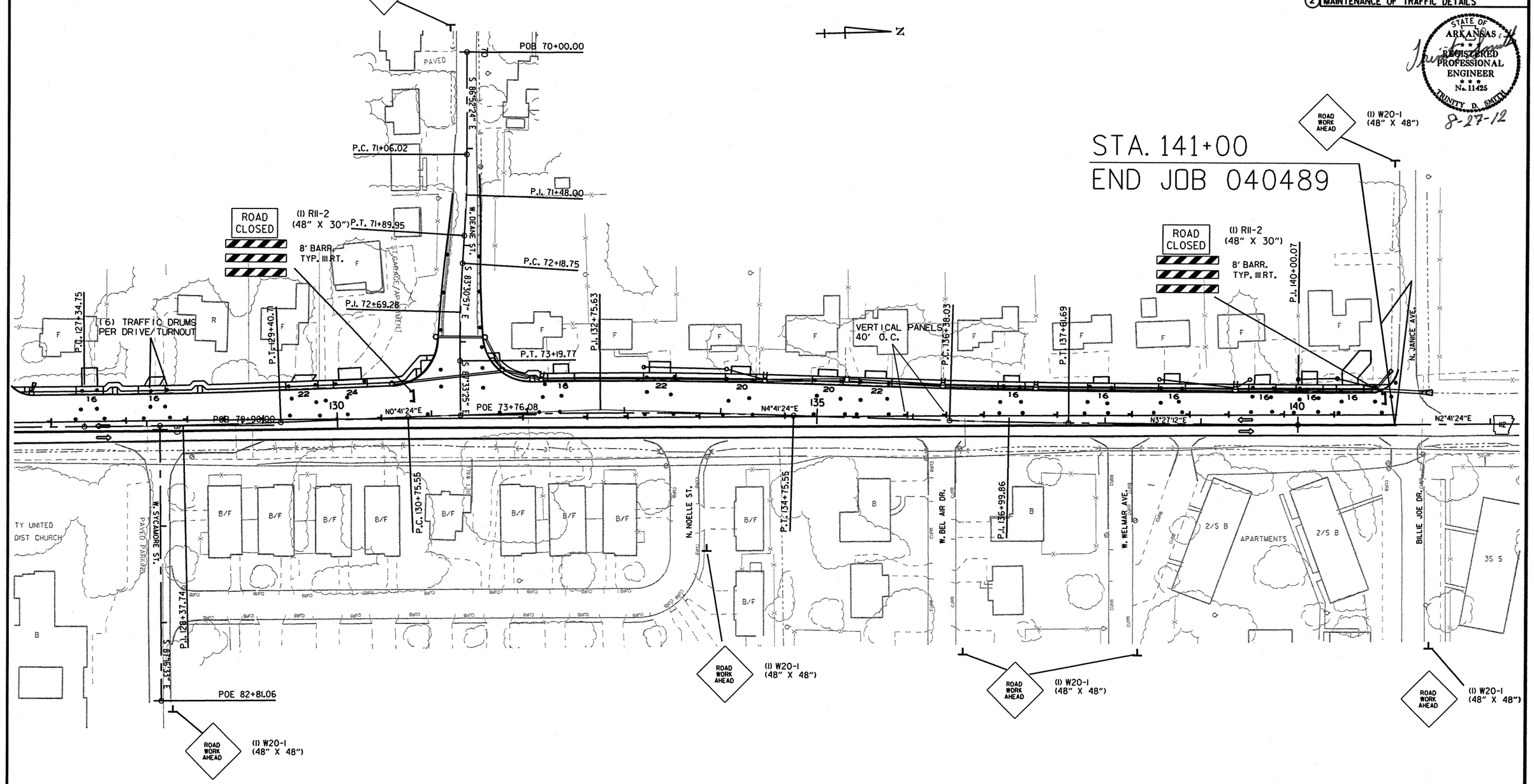
R040489.DGN

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.		040489	15	113

(2) MAINTENANCE OF TRAFFIC DETAILS

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

8-27-12



STAGE I
MAINTENANCE OF TRAFFIC DETAILS

8/17/2012

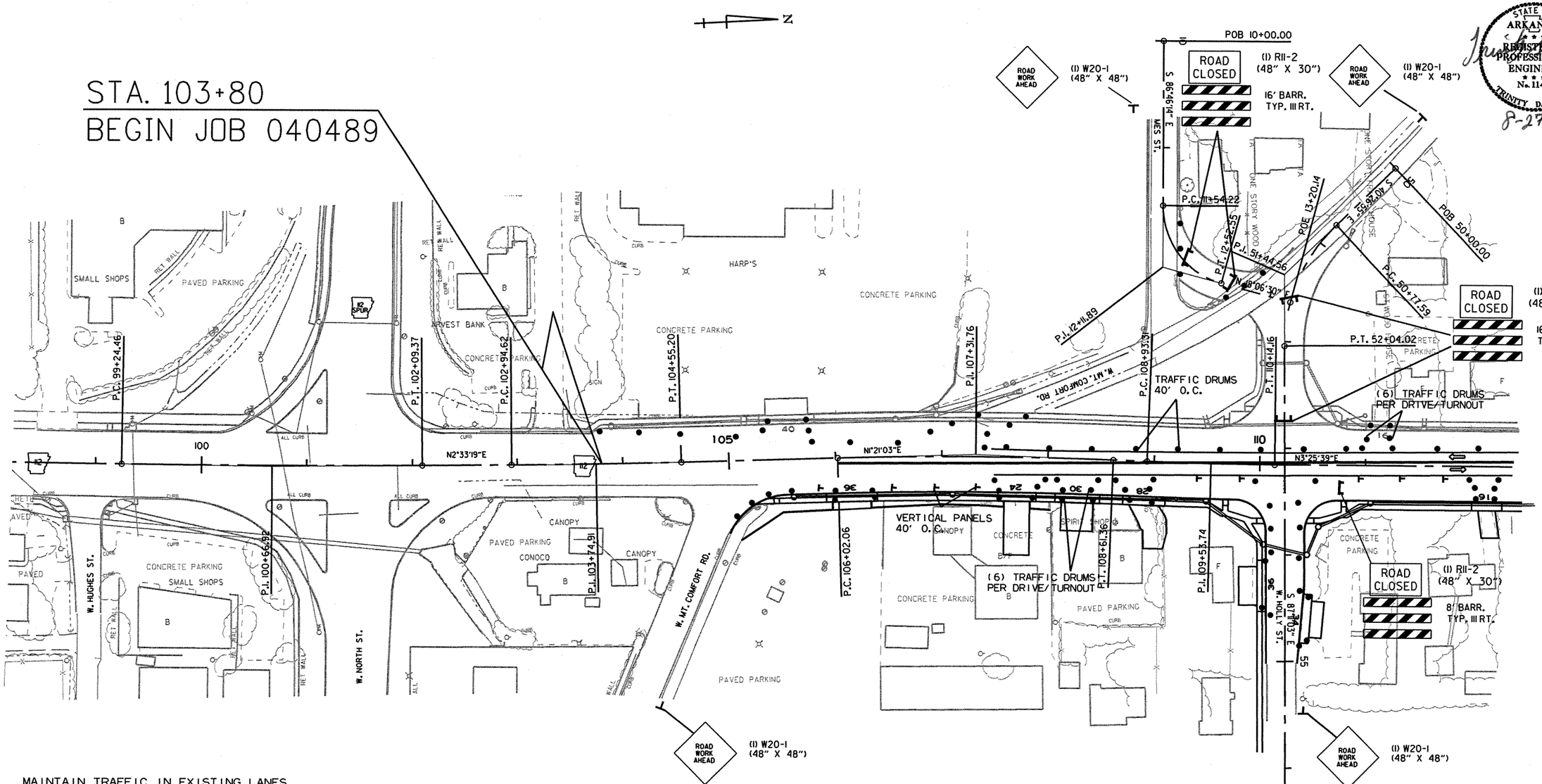
R040489.DGN

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.		040489	16	113

(2) MAINTENANCE OF TRAFFIC DETAILS

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

8-27-12



MAINTAIN TRAFFIC IN EXISTING LANES.
MAINTAIN ADVANCE WARNING SIGNS AS SHOWN ON SIGNING DETAILS
MAINTAIN W20-1(AHEAD) SIGNS AS SHOWN IN STAGE 1.
PLACE VERTICAL PANELS AS SHOWN ON PLANS (40' SPACING).
PLACE TRAFFIC DRUMS ON LT. SIDE OF HWY. 112 CONSTRUCTED IN STAGE 1 AS SHOWN ON PLANS (40 SPACING).
DRIVES AND STREET TURNOUTS TO BE DELINEATED WITH TRAFFIC DRUMS (6 EACH).
PLACE R4-1 SIGNS, ONE IN EACH DIRECTION, IN THE WORK ZONE. W20-1 (AHEAD) SIGNS TO BE PLACED ON ALL COUNTY ROAD AND CITY STREET INTERSECTIONS THROUGH THE WORK ZONE.
CONSTRUCTION PAVEMENT MARKINGS BASED ON ONE APPLICATION OF WHITE EDGE LINE LT & RT. AND DOUBLE YELLOW CENTERLINE FOR THE ENTIRE LENGTH OF THE PROJECT.

CONSTRUCT RT. SIDE HWY. 112 (GARLAND AVE.) AS SHOWN ON PLANS.
CONSTRUCT HOLLY STREET AS SHOWN ON PLANS.
CONSTRUCT SYCAMORE STREET AS SHOWN ON PLANS.

QUANTITIES FOR STAGE 2:

SIGNS = 616 SQ. FT.
BARRICADES = 152 LIN. FT.
TRAFFIC DRUMS = 448 EACH
VERTICAL PANELS = 56 EACH
CONSTRUCTION PAVEMENT MARKINGS = 14880 LIN. FT.

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

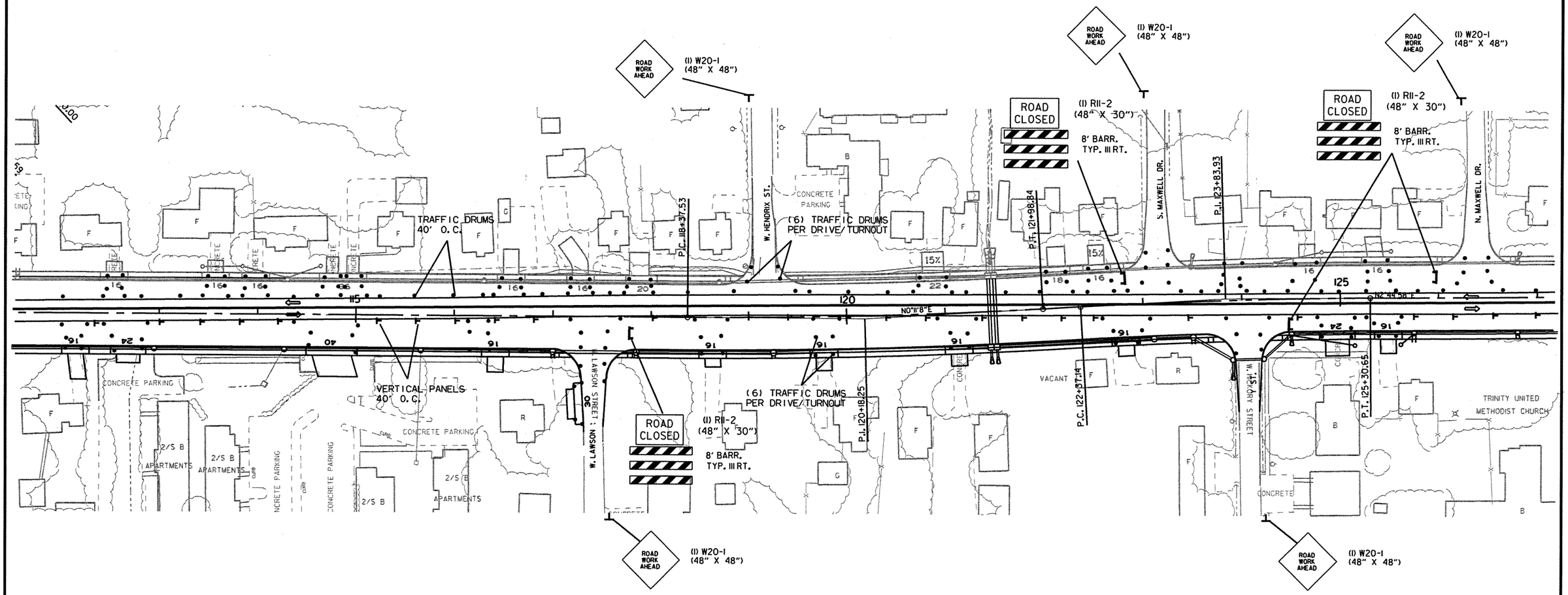
8/17/2012

R040489.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.		040489	17	113

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-12



STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

8/17/2012

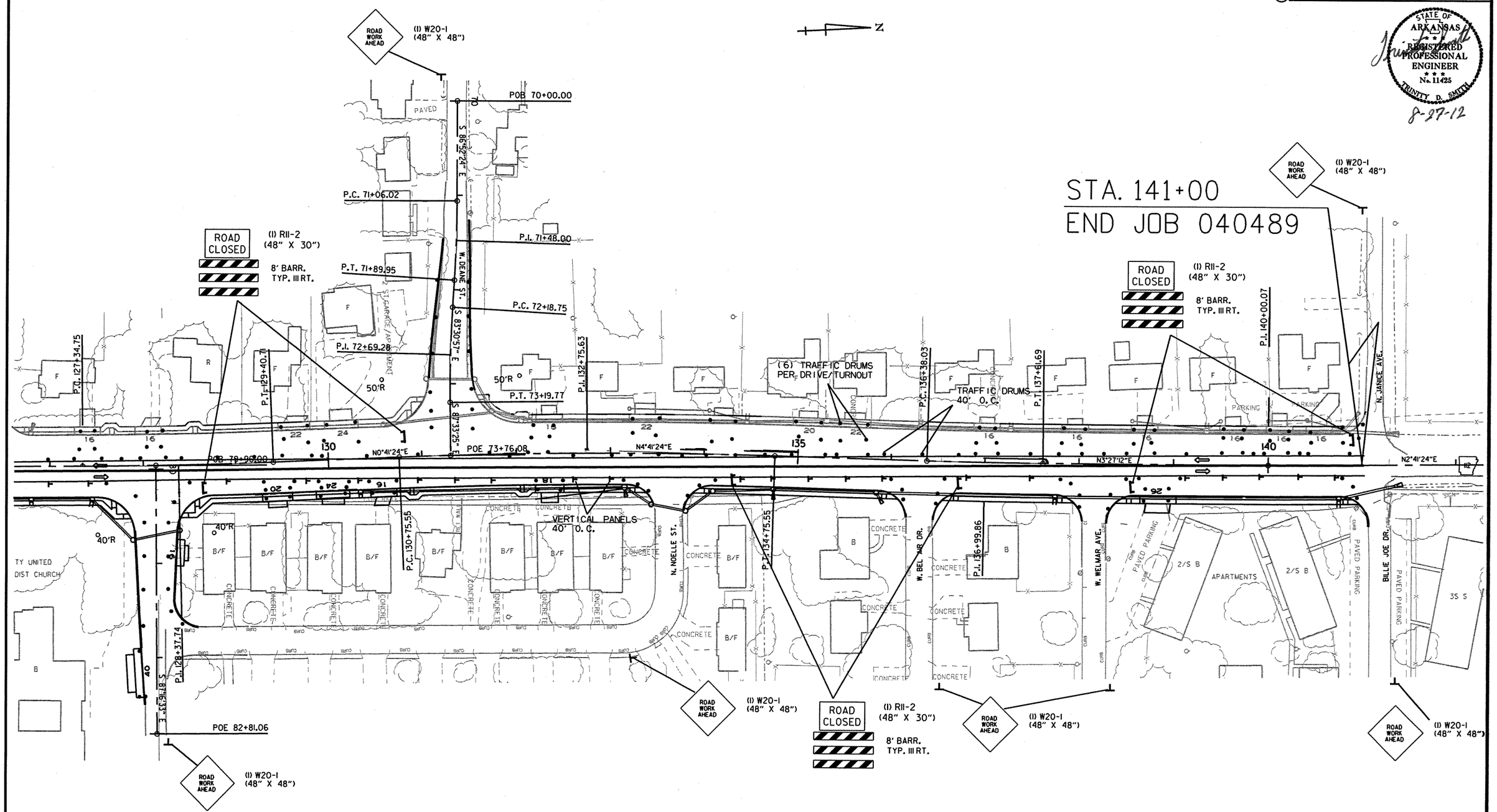
R040489.DGN

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.		040489	18	113

(2) MAINTENANCE OF TRAFFIC DETAILS

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

8-27-12



STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

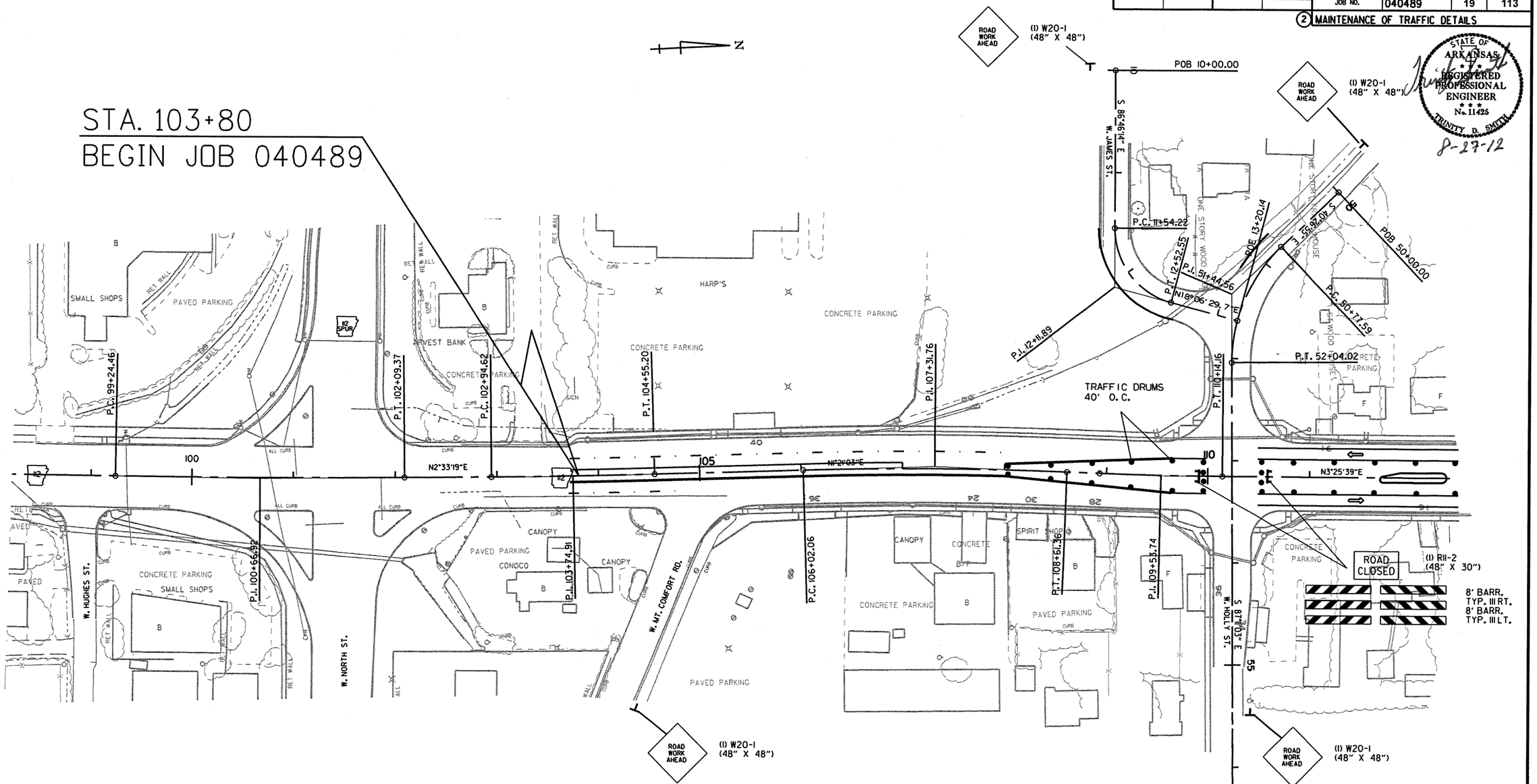
8/17/2012

R040489.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.		040489	19	113

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 8-27-12



MAINTENANCE OF TRAFFIC - STAGE 3

MAINTAIN ADVANCE WARNING SIGNS AS SHOWN ON SIGNING DETAILS.
MAINTAIN W20-1(AHEAD) SIGNS AS SHOWN IN STAGE 1.
PLACE TRAFFIC ON NEW OUTSIDE LANE IN EACH DIRECTION.
PLACE TRAFFIC ON NEW MT. COMFORT RD. & JAMES ST. CONNECTIONS.
PLACE TRAFFIC DRUMS AS SHOWN ON PLANS (40' SPACING).
PLACE R4-1 SIGNS, ONE IN EACH DIRECTION, IN THE WORK ZONE.
PLACE CONSTRUCTION PAVEMENT MARKINGS AS SHOWN ON PLANS.

CONSTRUCT MEDIAN CURBS ON HWY. 112 (GARLAND AVE.) AS SHOWN ON PLANS.
CONSTRUCT REMAINDER OF MT. COMFORT RD. AND JAMES ST. AS SHOWN ON PLANS.
OBLITERATE EXISTING MT. COMFORT RD. AND JAMES ST. AS SHOWN ON PLANS.
PLACE FINAL 2" OF SURFACE COURSE WHEN ALL OTHER WORK IS COMPLETE AND STRIPE AS SHOWN ON FINAL STRIPING DETAILS.

QUANTITIES FOR STAGE 3:

SIGNS = 576 SQ. FT.
BARRICADES = 160 LIN. FT.
TRAFFIC DRUMS = 162 EACH
CONSTRUCTION PAVEMENT MARKINGS = 8540 LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS = 14880 LIN. FT.

STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

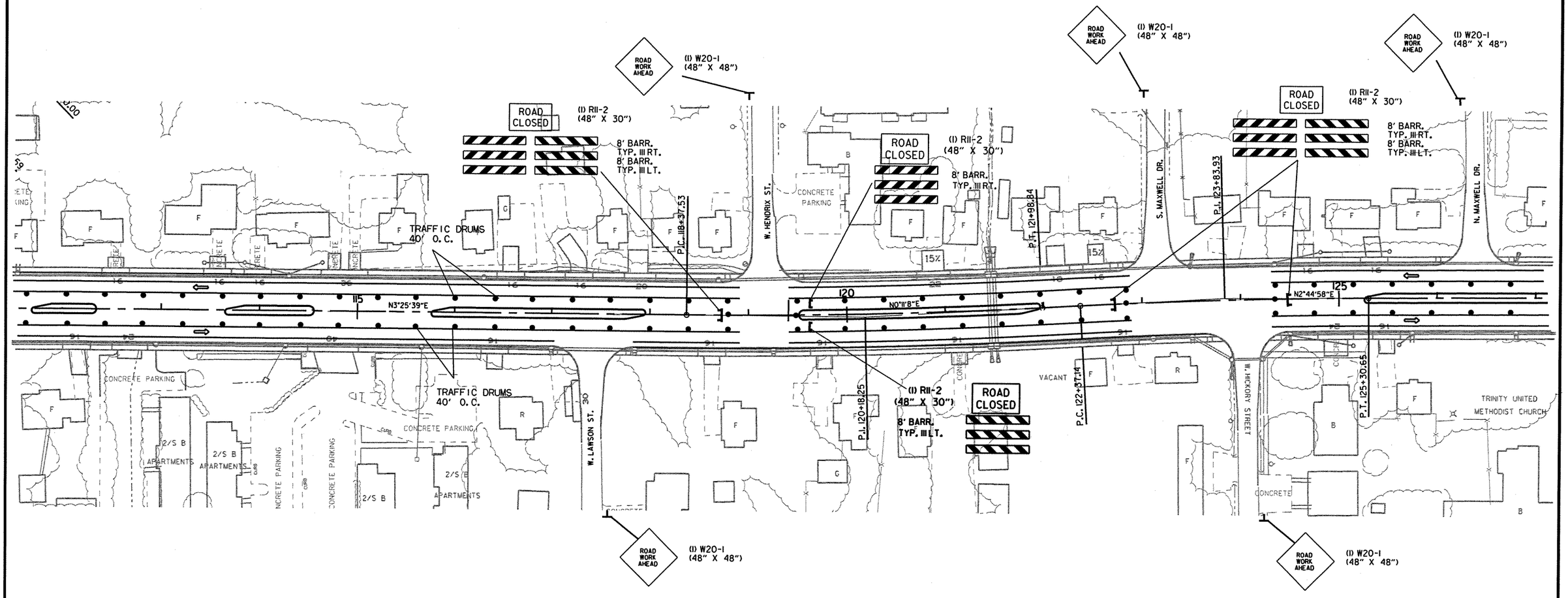
8/17/2012

R040489.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.		040489	20	113

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-12



STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

8/17/2012

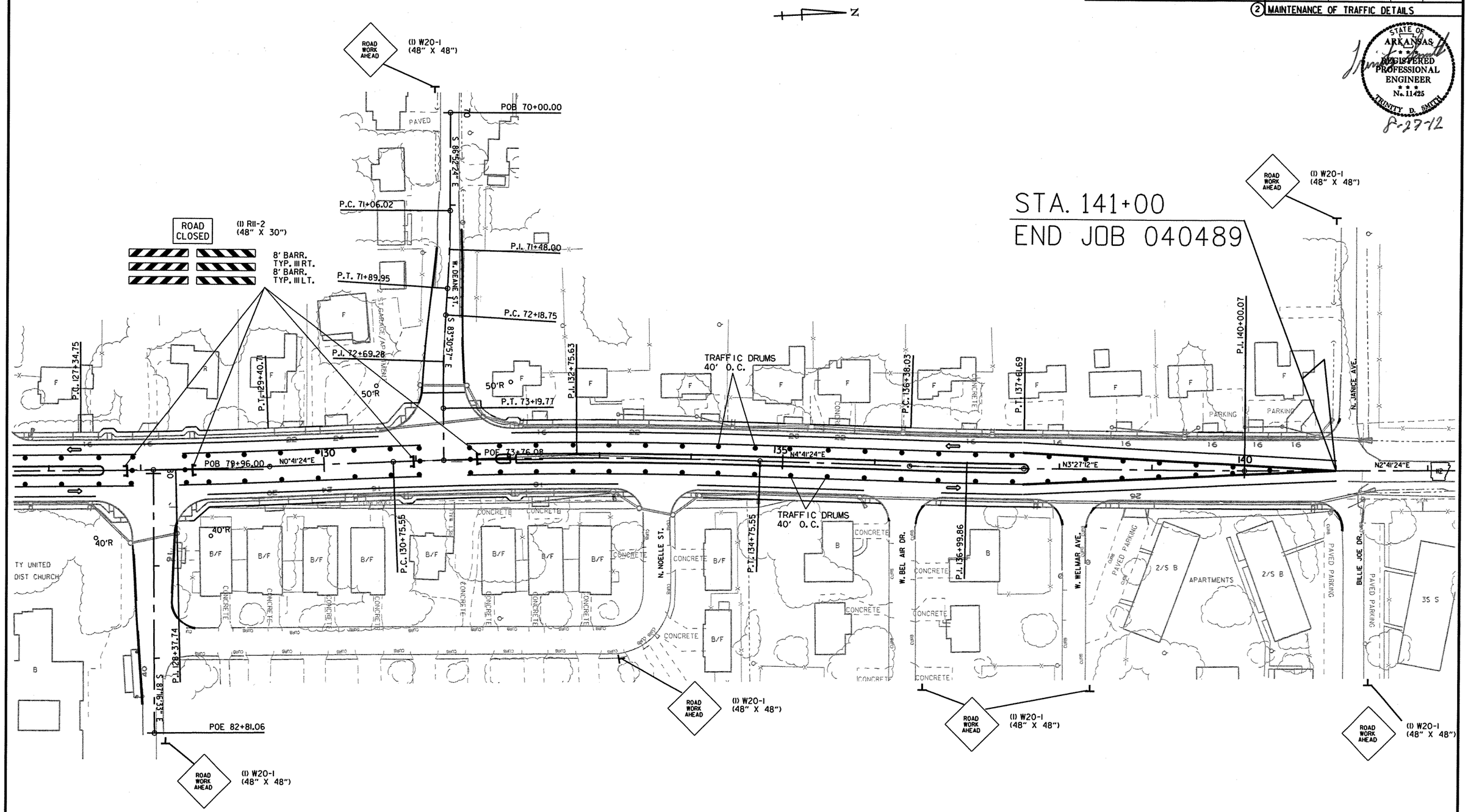
R040489.DGN

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.		040489	21	113

(2) MAINTENANCE OF TRAFFIC DETAILS

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

8-27-12



STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

8/17/2012

R040489.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.		040489	22	113

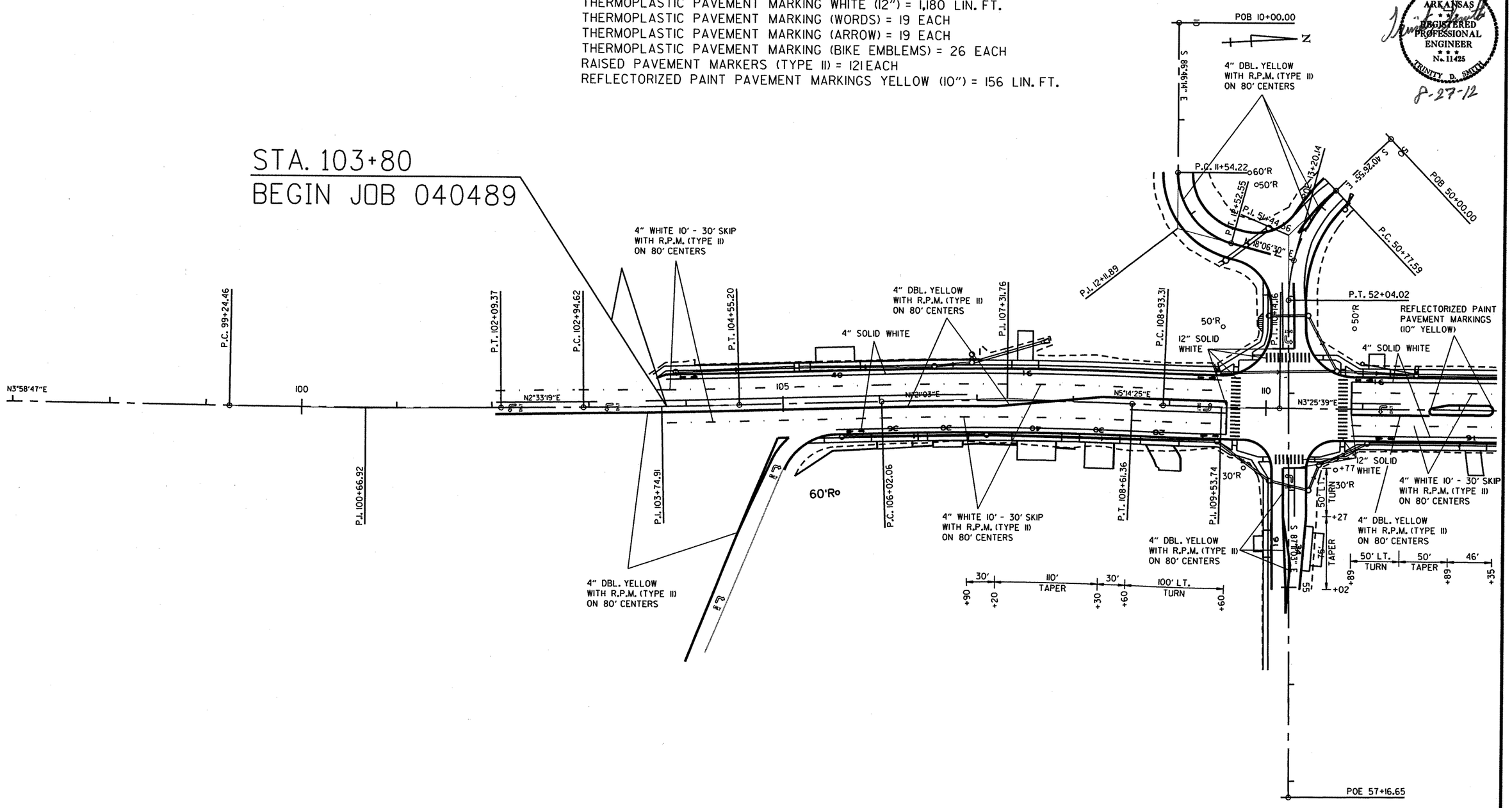
(2) PERMANENT PAVEMENT MARKING DETAILS

PERMANENT PAVEMENT MARKING DETAILS QUANTITIES

THERMOPLASTIC PAVEMENT MARKING WHITE (4") = 8,971 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (4") = 6,731 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (12") = 1,180 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING (WORDS) = 19 EACH
THERMOPLASTIC PAVEMENT MARKING (ARROW) = 19 EACH
THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS) = 26 EACH
RAISED PAVEMENT MARKERS (TYPE II) = 121 EACH
REFLECTORIZED PAINT PAVEMENT MARKINGS YELLOW (10") = 156 LIN. FT.

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

8-27-12



PERMANENT PAVEMENT MARKING DETAILS

8/17/2012

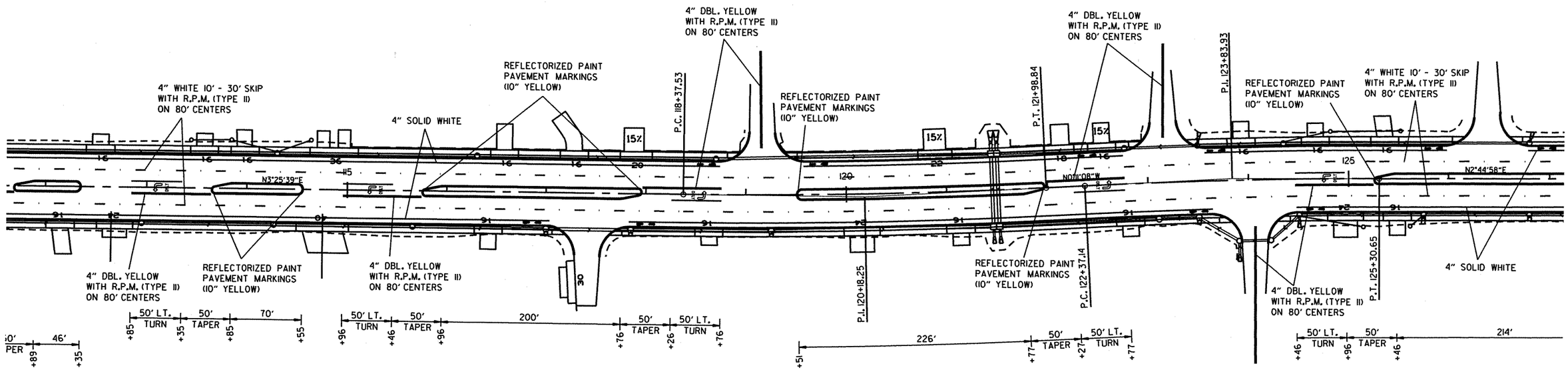
R040489.DGN

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.		040489	23	113

(2) PERMANENT PAVEMENT MARKING DETAILS

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

8-27-12



PERMANENT PAVEMENT MARKING DETAILS

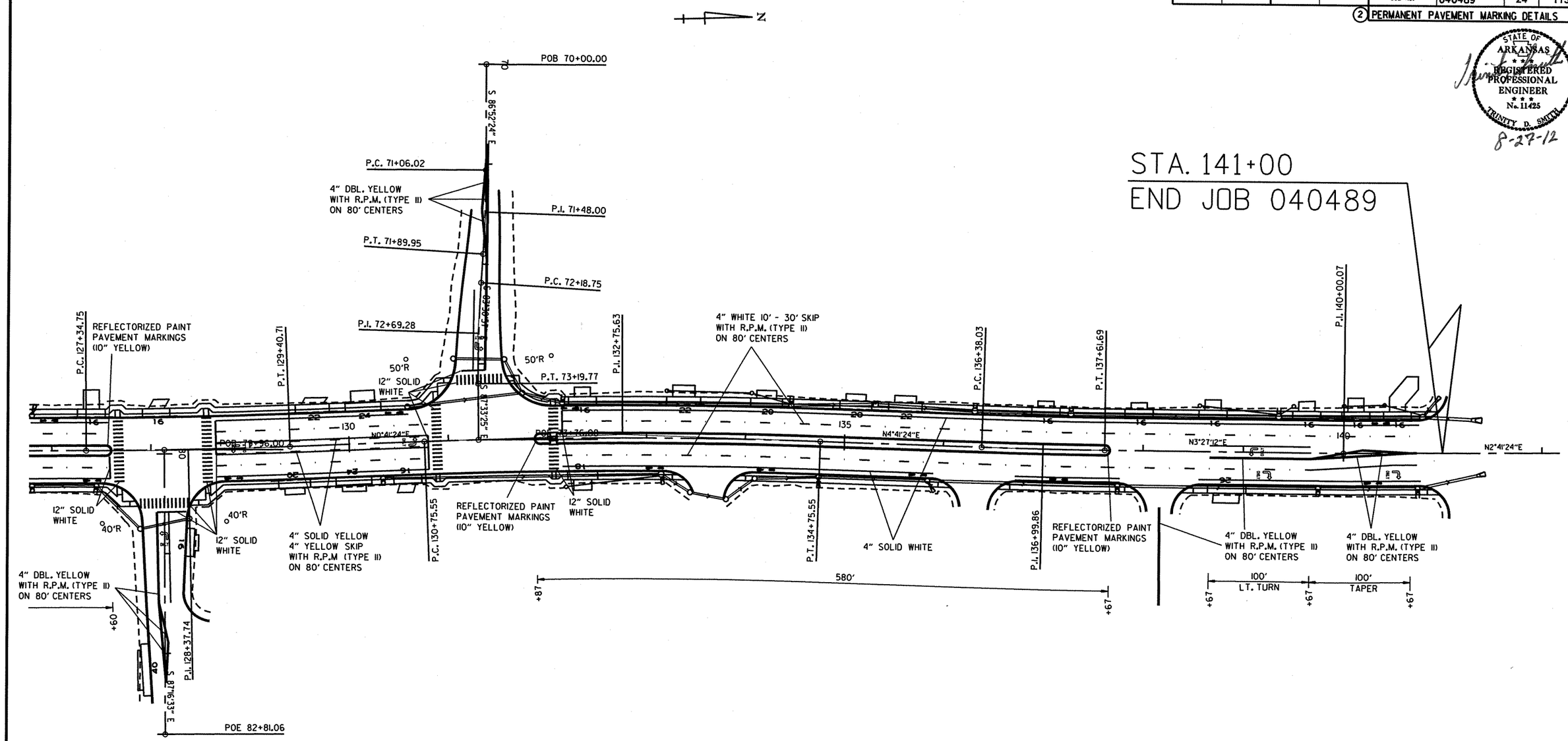
8/17/2012

R040489.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.		040489	24	113

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-12



PERMANENT PAVEMENT MARKING DETAILS

8/17/2012

R040489.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.		040489	25	113

(2) QUANTITIES

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

8-27-12

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS		PERMANENT PAVEMENT MARKINGS								
					CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKINGS						REFLECTORIZED PAINT PAVEMENT MARKINGS
							TYPE II (WH/RED)	TYPE II (YEL/YEL)	4" WHITE	4" YELLOW	12" WHITE	WORDS	ARROWS	BIKE EMBLEMS	10" YELLOW
	LIN. FT. - EACH				LIN. FT.		EACH		LIN. FT.			EACH			LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	14880	14880	8540		38300										
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS			14880			14880									
RAISED PAVEMENT MARKERS TYPE II (WH/RED)				60			60								
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)				61				61							
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")				9021					9021						
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")				7231						7231					
THERMOPLASTIC PAVEMENT MARKINGS WHITE (12")				1180							1180				
THERMOPLASTIC PAVEMENT MARKING (WORDS)				20								20			
THERMOPLASTIC PAVEMENT MARKING (ARROWS)				20									20		
THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)				26										26	
REFLECTORIZED PAINT PAVEMENT MARKINGS YELLOW (10")				156											156
TOTALS:					**38300**	**14880**	**60**	**61**	**9021**	**7231**	**1180**	**20**	**20**	**26**	**156**

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)	
											RIGHT	LEFT
			LIN. FT. - EACH				NO.	SQ. FT.	EACH		LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	4	64.0				
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	4	64.0				
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	4	64.0				
W20-1	ROAD WORK AHEAD	48"x48"	15	15	15	15	15	240.0				
G20-2	END ROAD WORK	48"x24"	3	3	3	3	3	24.0				
R11-2	ROAD CLOSED	48"x30"	8	15	11	15	15	150.0				
R4-1	DO NOT PASS	24"x30"	2	2	2	2	2	10.0				
	VERTICAL PANELS		56	56		56			56			
	TRAFFIC DRUMS		226	448	162	448				448		
	TYPE III BARRICADE-RT. (8')		4	11	10	11					88	
	TYPE III BARRICADE-LT. (8')				10	10						80
	TYPE III BARRICADE-RT. (16')		4	4		4					64	
TOTALS:								**616.0**	**56**	**448**	**152**	**80**

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

8/17/2012

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QUANTITIES

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.		040489	26	113

(2) QUANTITIES

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

8-27-12

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	CONCRETE PAVEMENT	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WALKS	SIGN FOUNDATIONS	BUILDINGS	SIGNS	POST	LUMINAIRE POLES	BENCH	RETAINING WALLS
			LIN.FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.
103+70	107+00	CURB AND GUTTER ON LT.		674											
104+15	104+68	CONCRETE PAVEMENT ON LT.			24										
104+92		CONCRETE DRIVE ON LT.					81								
105+00	105+33	CURB AND GUTTER & SIGN ON RT.		100							1				
105+12	105+65	CONCRETE PAVEMENT ON LT.			44										
105+72	105+98	CONCRETE ISLAND ON RT.				24									
105+90		CONCRETE DRIVE ON LT.					128								
106+36	106+95	CURB AND GUTTER ON RT.		128											
106+55		SIGN FOUNDATION							1						
107+33	107+50	CONCRETE ISLAND ON RT.				17									
107+58	110+60	CONCRETE PAVEMENT ON LT.			2415										
107+70		CONCRETE DRIVE ON TRT.					198								
107+91	108+14	CURB AND CONCRETE ISLAND ON RT.	78			11									
108+42	108+85	CURB ON RT.	84												
108+90	109+00	CURB ON RT.	38												
109+00		BUILDING ON LT.								1					
109+66		BUILDING ON LT.								1					
110+18	119+03	CONCRETE WALK ON LT.						393							
110+61		SIGN ON LT.									1				
110+71		BUILDING ON LT.								1					
110+85		SIGN ON RT.									1				
112+38	112+96	CONCRETE DRIVE & PAVEMENT ON RT.			45		110								
112+43	113+20	CONCRETE WALK ON RT.						23							
112+53		CONCRETE DRIVE ON LT.					46								
113+10		SIGN ON RT.									1				
113+37	116+27	CONCRETE WALK ON RT.						155							
113+57		CONCRETE DRIVE ON LT.					55								
113+97		CONCRETE DRIVE ON LT.					74								
114+37		SIGN ON RT.							1		1				
114+43	115+49	CURB, CONC. DRIVE & PAVEMENT ON RT.	167		213		120								
114+75		CONCRETE DRIVE ON LT.					56								
114+97		CONCRETE DRIVE ON LT.					58								
119+31	123+05	CONCRETE WALK ON LT.						166							
121+13		CONCRETE DRIVE ON RT.					86								
123+23	126+26	CONCRETE WALK ON RT.						134							
124+16	125+27	CONCRETE WALK ON RT.						79							
124+85		4' STEEL POST ON LT.										1			
124+97		CONCRETE DRIVE ON RT.					102								
125+20		4' STEEL POST ON LT.										1			
126+48	128+07	CONCRETE WALK ON LT.						71							
128+36	128+90	CURB ON RT.	54												
128+55		BENCH ON RT.												1	
129+44		CONCRETE DRIVE ON RT.					51								
130+03		CONCRETE DRIVE ON RT.					60								
130+58		CONCRETE DRIVE ON RT.					60								
131+40		RETAINING WALL ON RT.													6
131+77		CONCRETE DRIVE ON RT.					48								
132+32		CONCRETE DRIVE ON RT.					61								
133+40		CURB ON RT.	40												
133+87		CURB ON RT.	49												
135+60		CONCRETE DRIVE ON LT.					126								
136+17		CURB ON RT.	49												
136+45		CURB ON RT.	54												
138+03		CURB ON RT.	56												
138+28		CURB ON RT.	62												
138+60		GAS LAMPOST											1		
138+83		CURB ON RT.	94												
140+96		CURB & SIGN ON RT.	55								1				
54+62		CONCRETE DRIVE ON LT.					100								
11+54	12+25	CURB AND GUTTER ON RT.		132											
11+54	12+52	CURB AND GUTTER ON LT. & RT.		120											
71+47	73+56	CURB AND GUTTER ON RT.		211											
80+54	81+37	CURB ON RT.	105												
81+41	81+67	CURB ON LT.	52												
TOTALS:			**1037**	**1365**	**2741**	**52**	**1620**	**1021**	**2**	**3**	**6**	**2**	**1**	**1**	**6**

QUANTITIES

8/17/2012

R040489.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.		040489	27	113

(2) QUANTITIES

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

8-27-12

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS (BOX 1 OF 2)

STATION	DESCRIPTION	PIPE CULVERTS EACH	JUNCTION BOXES EACH	DROP INLETS EACH
103+90	GARLAND AVENUE - LT.			1
104+63	GARLAND AVENUE - LT.	1		
105+35	GARLAND AVENUE - LT.			1
105+98	GARLAND AVENUE - LT.	1		
106+60	GARLAND AVENUE - LT.			2
106+60	GARLAND AVENUE - LT.	1		
106+95	GARLAND AVENUE - LT.	1		
107+50	GARLAND AVENUE - LT.	1		
109+22	GARLAND AVENUE - LT.	1		
109+72	GARLAND AVENUE - LT.	1		
110+03	GARLAND AVENUE - LT.	1		
110+23	GARLAND AVENUE - RT.	1		
111+14	GARLAND AVENUE - LT.	1		
112+15	GARLAND AVENUE - RT.	1		
112+60	GARLAND AVENUE - LT.	1		
112+65	GARLAND AVENUE - RT.	1		
113+57	GARLAND AVENUE - LT.	1		
113+98	GARLAND AVENUE - LT.	1		
114+75	GARLAND AVENUE - RT.	1		
114+76	GARLAND AVENUE - LT.	1		
114+98	GARLAND AVENUE - LT.	1		
116+24	GARLAND AVENUE - RT.	1		
116+57	GARLAND AVENUE - LT.	1		
117+04	GARLAND AVENUE - RT.	1		
117+28	GARLAND AVENUE - LT.	1		
117+42	GARLAND AVENUE - RT.	1		
117+88	GARLAND AVENUE - LT.	1		
118+63	GARLAND AVENUE - RT.	1		
119+20	GARLAND AVENUE - LT.	1		
119+76	GARLAND AVENUE - RT.	1		
120+89	GARLAND AVENUE - LT.	1		
121+13	GARLAND AVENUE - RT.	1		
121+45	GARLAND AVENUE - C.L.	1		
122+15	GARLAND AVENUE - LT.	1		
122+70	GARLAND AVENUE - LT.	1		
122+81	GARLAND AVENUE - RT.	1		
123+14	GARLAND AVENUE - LT.	1		
123+93	GARLAND AVENUE - LT.	1		
124+02	GARLAND AVENUE - RT.	1		
124+05	GARLAND AVENUE - RT.	1		
124+67	GARLAND AVENUE - LT.	1		
124+97	GARLAND AVENUE - RT.	1		
125+36	GARLAND AVENUE - LT.	1		
125+49	GARLAND AVENUE - RT.	1		
126+37	GARLAND AVENUE - LT.	1		
127+40	GARLAND AVENUE - LT.	1		
129+44	GARLAND AVENUE - RT.	1		
129+64	GARLAND AVENUE - LT.	1		
129+97	GARLAND AVENUE - LT.	1		
130+04	GARLAND AVENUE - RT.	1		
130+58	GARLAND AVENUE - RT.	1		
131+32	GARLAND AVENUE - LT.	1		
131+77	GARLAND AVENUE - RT.	1		
132+36	GARLAND AVENUE - LT.	1		
132+36	GARLAND AVENUE - RT.	1		
SUBTOTALS (BOX 1 OF 2):		**52**		**4**

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

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS (BOX 2 OF 2)

STATION	DESCRIPTION	PIPE CULVERTS EACH	JUNCTION BOXES EACH	DROP INLETS EACH
133+38	GARLAND AVENUE - LT.	1		
133+39	GARLAND AVENUE - RT.			1
133+63	GARLAND AVENUE - RT.	1		
133+88	GARLAND AVENUE - RT.			1
134+20	GARLAND AVENUE - LT.	1		
135+15	GARLAND AVENUE - LT.	1		
135+60	GARLAND AVENUE - LT.	1		
136+36	GARLAND AVENUE - RT.	1		
137+02	GARLAND AVENUE - LT.	1		
137+96	GARLAND AVENUE - LT.	1		
138+16	GARLAND AVENUE - RT.	1		
138+70	GARLAND AVENUE - LT.	1		
138+84	GARLAND AVENUE - RT.	1		
139+63	GARLAND AVENUE - LT.	1		
140+12	GARLAND AVENUE - LT.	1		
140+71	GARLAND AVENUE - LT.	1		
141+06	GARLAND AVENUE - RT.	1		
141+13	GARLAND AVENUE - LT.	1		
12+61	JAMES STREET - LT.	1		
12+75	JAMES STREET - LT.		1	
SUBTOTALS (BOX 2 OF 2):		**17**	**1**	**2**
TOTALS:		**69**	**1**	**6**

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

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE LIN. FT.
109+09		GARLAND AVENUE - RT.	16
128+63	128+74	GARLAND AVENUE - RT.	20
129+08		GARLAND AVENUE - LT.	22
129+83		GARLAND AVENUE - LT.	20
135+77	136+28	GARLAND AVENUE - LT.	94
140+02		GARLAND AVENUE - LT.	12
12+66	12+70	JAMES STREET - LT.	11
71+48	72+25	DEANE STREET - LT	78
71+71	72+33	DEANE STREET - RT	67
53+89	54+05	HOLLY STREET - LT.	20
TOTAL:			**360**

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING STATION	GRUBBING STATION
103+00	141+00	GARLAND AVENUE	38	38
12+00	13+00	JAMES STREET	1	1
50+00	52+00	MT. COMFORT ROAD	2	2
70+00	73+00	DEANE STREET	3	3
80+00	83+00	SYCAMORE STREET	3	3
53+00	55+00	HOLLY STREET	2	2
TOTALS:			**49**	**49**

MAILBOXES

LOCATION	MAILBOXES EACH	MAILBOX SUPPORTS (SINGLE) EACH	MAILBOX SUPPORTS (DOUBLE) EACH
ENTIRE PROJECT	21	19	1
TOTALS:	**21**	**19**	**1**

SOIL LOG

STATION	LATITUDE DEG	LATITUDE MIN	LATITUDE SEC	LONGITUDE DEG	LONGITUDE MIN	LONGITUDE SEC	LOCATION	DEPTH FEET	AASHTO CLASSIFICATION	LIQUID	PLASTICITY INDEX	COLOR
106+00	36	4	43.80	94	10	30.90	GARLAND AVENUE - 5' RT.	0-2Z	A-4 (1)	22	8	BROWN
106+00	36	4	43.80	94	10	30.80	GARLAND AVENUE - 24' RT.	0-5	A-4 (1)	20	7	BROWN
114+00	36	4	51.80	94	10	30.90	GARLAND AVENUE - 5' LT.	0-5	A-4 (3)	24	9	BROWN
114+00	36	4	51.70	94	10	31.00	GARLAND AVENUE - 20' LT.	0-5	A-6 (8)	30	16	GR/BR
122+00	36	4	59.70	94	10	30.50	GARLAND AVENUE - 5' RT.	0-5	A-6 (7)	27	11	GRAY
122+00	36	4	59.70	94	10	30.30	GARLAND AVENUE - 21' RT.	0-5	A-6 (10)	31	15	BROWN
130+00	36	5	7.60	94	10	30.40	GARLAND AVENUE - 5' LT.	0-5	A-4 (3)	24	9	RD/BR
130+00	36	5	7.60	94	10	30.50	GARLAND AVENUE - 17' LT.	0-5	A-7-6 (23)	52	26	RD/BR
138+00	36	5	15.30	94	10	30.10	GARLAND AVENUE - 5' RT.	0-5	A-7-6 (24)	43	26	BROWN
138+00	36	5	15.30	94	10	29.90	GARLAND AVENUE - 25' RT.	0-5	A-6 (18)	36	22	BROWN

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

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.		040489	28	113

(2) QUANTITIES

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

8-27-12

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND			925	5
WHERE DIRECTED BY THE ENGINEER				
TOTALS:			925	5

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	20
DIRECTED BY THE ENGINEER	
TOTAL:	20

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

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
121+45	GARLAND AVENUE - RT. ON DROP INLET	1
TOTAL:		1

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

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3
		SQ. YD.
105+41	GARLAND AVENUE - RT.	6.9
109+68	GARLAND AVENUE - LT.	3.8
109+69	GARLAND AVENUE - RT.	3.4
109+85	GARLAND AVENUE - LT.	4.5
109+98	GARLAND AVENUE - LT.	6.3
109+98	GARLAND AVENUE - RT.	3.9
110+51	GARLAND AVENUE - RT.	3.9
110+59	GARLAND AVENUE - LT.	4.4
110+80	GARLAND AVENUE - LT.	3.7
110+80	GARLAND AVENUE - RT.	3.3
117+06	GARLAND AVENUE - RT.	5.9
117+76	GARLAND AVENUE - RT.	5.4
118+82	GARLAND AVENUE - LT.	5.5
119+51	GARLAND AVENUE - LT.	5.4
122+82	GARLAND AVENUE - LT.	5.4
123+51	GARLAND AVENUE - LT.	5.4
123+70	GARLAND AVENUE - RT.	5.4
124+40	GARLAND AVENUE - RT.	5.4
126+04	GARLAND AVENUE - LT.	5.4
126+73	GARLAND AVENUE - LT.	5.4
127+68	GARLAND AVENUE - LT.	4.2
127+68	GARLAND AVENUE - RT.	4.0
127+78	GARLAND AVENUE - RT.	4.1
128+47	GARLAND AVENUE - RT.	4.1
128+57	GARLAND AVENUE - LT.	4.2
128+57	GARLAND AVENUE - RT.	4.1
130+88	GARLAND AVENUE - LT.	4.3
130+88	GARLAND AVENUE - RT.	3.4
130+97	GARLAND AVENUE - LT.	4.1
131+67	GARLAND AVENUE - LT.	4.0
132+06	GARLAND AVENUE - LT.	3.6
132+06	GARLAND AVENUE - RT.	3.3
133+26	GARLAND AVENUE - RT.	5.4
134+01	GARLAND AVENUE - RT.	5.4
135+96	GARLAND AVENUE - RT.	5.4
136+67	GARLAND AVENUE - RT.	5.4
137+82	GARLAND AVENUE - RT.	5.4
138+51	GARLAND AVENUE - RT.	5.4
140+83	GARLAND AVENUE - LT.	5.4
140+85	GARLAND AVENUE - RT.	5.4
TOTAL:		189.3

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
103+70	110+04	GARLAND AVENUE - LT.	625
105+00	110+06	GARLAND AVENUE - RT.	515
105+10	105+96	GARLAND AVENUE - RT.	101
106+33	106+55	GARLAND AVENUE - RT.	33
106+85	107+42	GARLAND AVENUE - RT.	65
107+83	108+04	GARLAND AVENUE - RT.	27
110+41	119+04	GARLAND AVENUE - LT.	884
110+42	117+28	GARLAND AVENUE - RT.	689
111+67	112+36	GARLAND AVENUE - C.L.	142
113+63	114+57	GARLAND AVENUE - C.L.	192
115+74	117+97	GARLAND AVENUE - C.L.	450
117+54	123+93	GARLAND AVENUE - RT.	640
119+29	123+04	GARLAND AVENUE - LT.	389
119+50	121+98	GARLAND AVENUE - C.L.	502
123+30	126+26	GARLAND AVENUE - LT.	319
124+18	127+90	GARLAND AVENUE - RT.	393
125+25	127+61	GARLAND AVENUE - C.L.	478
126+51	131+10	GARLAND AVENUE - LT.	494
128+35	133+47	GARLAND AVENUE - RT.	525
131+55	141+05	GARLAND AVENUE - LT.	950
131+86	137+68	GARLAND AVENUE - C.L.	1172
133+78	136+18	GARLAND AVENUE - RT.	257
136+46	138+04	GARLAND AVENUE - RT.	187
138+29	141+07	GARLAND AVENUE - RT.	299
11+54	13+10	JAMES STREET - LT.	148
11+54	13+10	JAMES STREET - RT.	144
50+77	51+17	MT. COMFORT ROAD - RT.	40
50+77	52+32	MT. COMFORT ROAD - LT.	147
52+11	52+32	MT. COMFORT ROAD - RT.	17
80+65	81+68	SYCAMORE STREET - LT.	112
80+69	82+50	SYCAMORE STREET - RT.	177
71+26	72+96	DEANE STREET - LT.	166
71+46	72+96	DEANE STREET - RT.	142
53+78	55+02	HOLLY STREET - RT.	120
53+79	55+02	HOLLY STREET - LT.	119
TOTAL:			11660

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		TON
ENTIRE	PROJECT	GARLAND AVENUE	4600	5304	
ENTIRE	PROJECT	JAMES STREET	110	200	
ENTIRE	PROJECT	MT. COMFORT ROAD	319	68	
ENTIRE	PROJECT	SYCAMORE STREET	177	86	
ENTIRE	PROJECT	DEANE STREET	233	176	
ENTIRE	PROJECT	APPROACHES	310	580	
ENTIRE	PROJECT	TEMPORARY APPROACHES	105	105	
ENTIRE	PROJECT	OBLITERATION OF MEDIAN PAVEMENT	700	800	
ENTIRE	PROJECT	OBLITERATION OF MT. COMFORT RD.	350		
ENTIRE	PROJECT	HOLLY STREET	284	53	
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	500	500	50
TOTALS:			7688	7872	50

* QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.
NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	20	40
DIRECTED BY THE ENGINEER		
TOTALS:	20	40

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

COLD MILLING

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
102+80	103+80	MAIN LANES	60	666.67
141+00	142+00	MAIN LANES	22	244.44
TOTAL:				911.11

NOTE: AVERAGE MILLING DEPTH 1".

8/17/2012

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QUANTITIES

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.		040489	29	113

(2) QUANTITIES

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

8-27-12

FENCING

STATION	STATION	LOCATION	* 4' CHAIN LINK FENCE
			LIN. FT.
124+77	125+25	GARLAND AVENUE - LT.	48
129+08	129+52	GARLAND AVENUE - LT.	45
135+77	136+28	GARLAND AVENUE - LT.	51
71+48	72+33	W. DEANE ST. RT.	85
71+49	73+00	W. DEANE ST. LT.	150
TOTAL:			379

* DENOTES ALTERNATE BID ITEM.

NON-METALLIC CONDUIT (3")

STATION	STATION	LOCATION	LIN. FT.
112+33	113+66	GARLAND AVENUE - C.L.	133
114+53		GARLAND AVENUE - LT.	39
114+54	115+78	GARLAND AVENUE - C.L.	124
120+70		GARLAND AVENUE - RT.	38
126+45		GARLAND AVENUE - RT.	38
135+23		GARLAND AVENUE - RT.	38
TOTAL:			410

NOTE: REFER TO SPECIAL DETAIL FOR MORE INFORMATION.

SELECTED PIPE BEDDING

LOCATION	CU. YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	300
TOTAL:	300

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

CONCRETE WALKS (TYPE SPECIAL) AND HAND RAILING

STATION	STATION	LOCATION	CONCRETE WALK (TYPE SPECIAL)	HAND RAILING
			SQ. YD.	LIN. FT.
104+09	105+35	GARLAND AVENUE - LT.	70	126
105+75	107+03	GARLAND AVENUE - LT.	71	128
115+03	116+49	GARLAND AVENUE - LT.	81	146
116+65	117+19	GARLAND AVENUE - LT.	30	54
117+36	117+78	GARLAND AVENUE - LT.	23	42
117+98	118+94	GARLAND AVENUE - LT.	53	96
119+33	120+78	GARLAND AVENUE - LT.	83	149
121+00	121+30	GARLAND AVENUE - LT.	17	30
121+65	122+05	GARLAND AVENUE - LT.	22	40
122+24	122+47	GARLAND AVENUE - LT.	13	23
122+64	122+94	GARLAND AVENUE - LT.	17	30
TOTALS:			480	864

FLOWABLE SELECT MATERIAL

STATION	LOCATION	CU. YD.
121+48	MAIN LANES	33.4
53+90	HOLLY STREET	16.8
80+70	SYCAMORE STREET	8.8
72+95	DEANE STREET	14.4
73+34	DEANE STREET	14.4
TOTAL:		87.8

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

STATION	LOCATION	WIDTH	LENGTH	CU. YD.
		FEET		
121+48	MAIN LANES	15.7	22	12.8
53+90	HOLLY STREET	7.9	22	6.4
80+70	SYCAMORE STREET	7.9	22	6.4
72+95	DEANE STREET	7.9	36	10.5
73+34	DEANE STREET	7.9	36	10.5
TOTAL:				46.6

AVG. DEPTH = 1'-0"

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS
			LIN. FT.	SQ. YD.
103+66	104+09	GARLAND AVENUE - LT.	43	24
105+41	110+06	GARLAND AVENUE - RT.	286	159
107+03	110+04	GARLAND AVENUE - LT.	273	152
110+51	117+06	GARLAND AVENUE - RT.	516	287
110+59	115+03	GARLAND AVENUE - LT.	284	158
117+76	123+70	GARLAND AVENUE - RT.	482	268
121+30	121+65	GARLAND AVENUE - LT.	35	19
123+51	126+04	GARLAND AVENUE - LT.	169	94
124+40	127+78	GARLAND AVENUE - RT.	280	156
126+73	130+86	GARLAND AVENUE - LT.	287	159
128+47	133+26	GARLAND AVENUE - RT.	365	203
131+72	140+83	GARLAND AVENUE - LT.	583	324
132+03	132+09	GARLAND AVENUE - C.L.	12	8
134+00	135+96	GARLAND AVENUE - RT.	196	109
136+67	137+83	GARLAND AVENUE - RT.	116	64
138+50	140+85	GARLAND AVENUE - RT.	197	109
51+98	52+60	MT. COMFORT ROAD	65	44
53+70	55+86	HOLLY STREET	170	94
TOTAL:				2431

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL		TEMPORARY EROSION CONTROL						
			** SOLID SODDING	WATER	TEMPORARY SEEDING	MULCH COVER	WATER	ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	* SEDIMENT REMOVAL & DISPOSAL
								(E-6)	(E-7)	(E-11)	
			SQ. YD.	M. GAL.	ACRE	ACRE	M. GAL.	CU. YD.	LIN. FT.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	MAIN LANES	5300	66.8	7.91	7.91	161.4				10
ENTIRE	PROJECT	STAGE 1						50	750	800	73
ENTIRE	PROJECT	STAGE 2						80	800	1005	83
TOTALS:			5300	66.8	7.91	7.91	161.4	130	1550	1805	166

BASIS OF ESTIMATE:
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING.
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
ROCK DITCH CHECKS.....3 CU.YD./LOCATION
* QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.
** SOLID SODDING IS TO BE USED IN THE 3' WIDTH BETWEEN THE SIDEWALK AND CURB AND FOR PERMANENT EROSION CONTROL.
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

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.		040489	30	113

(2) QUANTITIES

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

8-27-12

DRIVEWAYS & TURNOUTS (BOX 1 OF 2)

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG64-22)		AGGREGATE BASE COURSE (CLASS 7)
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON
105+55	LT.	GARLAND AVENUE	40	105+21	105+89	115.10			
106+15	RT.	GARLAND AVENUE	36	105+83	106+47	42.70	26.8	2.9	10.9
106+70	RT.	GARLAND AVENUE	30	106+41	106+99	37.30	22.0	2.4	9.0
107+50	LT.	GARLAND AVENUE	16	107+28	107+72	24.90	54.2	6.0	22.1
107+63	RT.	GARLAND AVENUE	40	107+29	107+97	133.30			
108+29	RT.	GARLAND AVENUE	30	108+00	108+58	37.30	88.0	9.7	35.9
108+91	RT.	GARLAND AVENUE	28	108+63	109+19	35.60	87.1	9.6	35.6
111+14	LT.	GARLAND AVENUE	16	110+92	111+36	52.30			
112+15	RT.	GARLAND AVENUE	16	111+93	112+37	24.90	45.8	5.0	18.7
112+54	LT.	GARLAND AVENUE	16	112+32	112+76	43.80			
112+65	RT.	GARLAND AVENUE	24	112+39	112+91	54.90			
113+57	LT.	GARLAND AVENUE	16	113+35	113+79	47.00			
113+98	LT.	GARLAND AVENUE	16	113+76	114+20	54.20			
114+75	RT.	GARLAND AVENUE	40	114+41	115+09	146.20			
114+76	LT.	GARLAND AVENUE	12	114+56	114+96	43.70			
114+97	LT.	GARLAND AVENUE	12	114+77	115+17	44.90			
116+42	RT.	GARLAND AVENUE	16	116+20	116+64	24.90	27.6	3.0	11.3
116+57	LT.	GARLAND AVENUE	16	116+35	116+79	24.90	45.6	5.0	18.6
117+28	LT.	GARLAND AVENUE	16	117+06	117+50	24.90	70.6	7.8	28.8
117+30	RT.	GARLAND AVENUE	30	117+01	117+59	37.30	25.0	2.8	10.2
117+88	LT.	GARLAND AVENUE	20	117+64	118+12	28.40	52.4	5.8	21.4
118+63	RT.	GARLAND AVENUE	16	118+41	118+85	24.90	15.6	1.7	6.4
120+15	RT.	GARLAND AVENUE	24	119+89	120+41	32.00	42.7	4.7	17.4
120+89	LT.	GARLAND AVENUE	22	120+64	121+14	30.20	51.3	5.6	20.9
121+13	RT.	GARLAND AVENUE	16	120+91	121+35	46.40			
122+15	LT.	GARLAND AVENUE	18	121+92	122+38	26.70	41.2	4.5	16.8
122+56	LT.	GARLAND AVENUE	16	122+34	122+78	24.90	35.7	3.9	14.6
122+81	RT.	GARLAND AVENUE	16	122+59	123+03	24.90	18.8	2.1	7.7
123+93	LT.	GARLAND AVENUE	16	123+71	124+15	24.90	29.5	3.2	12.0
124+67	LT.	GARLAND AVENUE	16	124+45	124+89	24.90	24.1	2.7	9.8
124+97	RT.	GARLAND AVENUE	24	124+71	125+23	76.30			
125+36	LT.	GARLAND AVENUE	16	125+14	125+58	24.90	37.3	4.1	15.2
125+49	RT.	GARLAND AVENUE	16	125+27	125+71	24.90	25.9	2.8	10.6
127+40	LT.	GARLAND AVENUE	16	127+18	127+62	24.90	34.1	3.8	13.9
128+06	LT.	GARLAND AVENUE	16	127+84	128+28	24.90	19.0	2.1	7.8
129+44	RT.	GARLAND AVENUE	20	129+20	129+68	42.40			
129+64	LT.	GARLAND AVENUE	22	129+39	129+89	30.20	18.5	2.0	7.6
130+04	RT.	GARLAND AVENUE	24	129+78	130+30	50.90			
130+15	LT.	GARLAND AVENUE	24	129+89	130+41	32.00	32.0	3.5	13.1
130+58	RT.	GARLAND AVENUE	16	130+36	130+80	42.20			
132+36	LT.	GARLAND AVENUE	16	132+14	132+58	24.90	17.1	1.9	7.0
SUBTOTALS (BOX 1 OF 2):						**1736.80**	987.9	**108.6**	**403.3**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

** FOR INFORMATION ONLY

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

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.		040489	31	113

(2) QUANTITIES

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

8-27-12

DRIVEWAYS & TURNOUTS (BOX 2 OF 2)

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG64-22)		AGGREGATE BASE COURSE (CLASS 7)
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON
132+36	RT.	GARLAND AVENUE	18	132+13	132+59	47.70			
133+38	LT.	GARLAND AVENUE	22	133+13	133+63	30.20	28.4	3.1	11.6
134+20	LT.	GARLAND AVENUE	20	133+96	134+44	28.40	17.6	1.9	7.2
135+10	LT.	GARLAND AVENUE	20	134+86	135+34	28.40	17.8	2.0	7.3
135+60	LT.	GARLAND AVENUE	22	135+35	135+85	51.50			
137+02	LT.	GARLAND AVENUE	16	136+80	137+24	24.90	17.3	1.9	7.1
137+96	LT.	GARLAND AVENUE	16	137+74	138+18	24.90	16.0	1.8	6.5
138+70	LT.	GARLAND AVENUE	16	138+48	138+92	24.90	18.5	2.0	7.6
138+84	RT.	GARLAND AVENUE	26	138+57	139+11	33.80	28.3	3.1	11.6
139+63	LT.	GARLAND AVENUE	16	139+41	139+85	24.90	20.6	2.3	8.4
140+12	LT.	GARLAND AVENUE	16	139+90	140+34	24.90	32.9	3.6	13.4
140+54	LT.	GARLAND AVENUE	16	140+32	140+76	24.90	71.1	7.8	29.0
80+89	LT.	SYCAMORE STREET	16	80+67	81+11	24.90	7.6	0.8	3.1
82+17	RT.	SYCAMORE STREET	40	81+83	82+51	46.20	38.7	4.3	15.8
54+29	RT.	HOLLY STREET	36	53+97	54+61	42.70	69.2	7.6	28.3
54+60	LT.	HOLLY STREET	34	54+29	54+91	84.70			
* ENTIRE PROJECT - TEMPORARY DRIVES									600.0
SUBTOTALS (BOX 2 OF 2):						**567.90**	384.0	**42.2**	**756.9**
TOTALS:						**2304.70**	1371.9	**150.8**	**1160.2**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

* QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
** FOR INFORMATION ONLY

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

CONCRETE BASE

STATION	STATION	LOCATION	LENGTH	TACK COAT 0.1 GAL. PER SQ. YD.			PORTLAND CEMENT CONCRETE BASE			
				AVG. WID.	SQ. YD.	GAL.	AVG. WID.	5" U.T.	AVG. WID.	6" U.T.
			FEET	FEET			FEET	SQ. YD.	FEET	SQ. YD.
103+70	104+54	GARLAND AVENUE - LT.	84.0	VAR.	45.6	4.6	VAR.	68.9	VAR.	45.6
105+30	107+37	GARLAND AVENUE - RT.	207.0	VAR.	70.6	7.1	VAR.	127.6	VAR.	70.6
130+99	134+43	GARLAND AVENUE - RT.	344.0	VAR.	235.2	23.5	VAR.	330.8	VAR.	235.2
71+26	72+96	DEANE STREET	170.0	VAR.	80.8	8.1	VAR.	175.4	VAR.	80.8
81+14	82+50	SYCAMORE STREET	136.0	VAR.	48.3	4.8	VAR.	86.1	VAR.	48.3
54+40	55+02	HOLLY STREET	62.0	VAR.	53.9	5.4	VAR.	88.3	VAR.	53.9
TOTALS:					534.4	**53.5**		**877.1**		**534.4**

SOLID SODDING

STATION	STATION	LOCATION	SOLID SODDING	WATER
			SQ. YD.	GAL.
111+68	112+36	GARLAND AVENUE - C.L.	59	0.7
113+65	114+56	GARLAND AVENUE - C.L.	84	1.1
115+75	117+96	GARLAND AVENUE - C.L.	209	2.6
119+50	121+97	GARLAND AVENUE - C.L.	241	3.0
125+26	127+60	GARLAND AVENUE - C.L.	232	2.9
131+87	137+67	GARLAND AVENUE - C.L.	577	7.3
TOTALS:			**1402**	**17.6**

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
SOLID SODDING IS TO BE USED IN MEDIAN.

8/17/2012

R040489.DGN

QUANTITIES

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.		040489	32	113

(2) QUANTITIES

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

8-27-12

STRUCTURES (BOX 1 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	(CLASS III) 24"	(CLASS III) 30"	(CLASS III) 42"	(CLASS V) 18"	(CLASS V) 24"	(CLASS V) 30"	(CLASS V) 42"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	DROP INLETS TYPE C	TYPE MO	EXT. 4'	EXT. 8'	JUNCTION BOX (TYPE E)	MODIFYING DROP INLETS (TYPE ST)	YARD DRAIN	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.												EACH							EACH			SQ. YD.	M. GAL	
103+90	CONST. D.I. LT. W/ EXT., PIPE INLET & PIPE OUTLET										121							1		1						FPC-9E, FPC-9M, PCC-1, PCM-1
103+90	MODIFYING DROP INLET TO JUNCTION BOX ON LT. W/ PIPE OUTLET	2																				1				FPC-9S, PCC-1
105+15	CONST. D.I. LT. W/ EXT., OIB, PIPE INLET & PIPE OUTLET										139						1			1						FPC-9E, PCC-1, PCM-1
105+60	CONST. D.I. RT. W/ EXT. & PIPE OUTLET										145							1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
106+57	CONST. D.I. LT. W/ EXT., PIPE INLET & PIPE OUTLET										36							1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
106+95	CONST. D.I. LT. W/ EXT. & PIPE OUTLET										5							1		1						FPC-9E, FPC-9M, PCC-1, PCM-1
106+95	CONST. JUNCTION BOX LT. W/ PIPE INLET & PIPE OUTLET W/ FES		74												1						1			8	0.10	FES-1, FES-2, FPC-9, PCC-1
107+10	CONST. D.I. RT. W/ EXT., PIPE INLET & PIPE OUTLET										235							1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
109+50	CONST. D.I. LT. W/ EXT., OIB, PIPE INLET & PIPE OUTLET					118												1	1							FPC-9E, FPC-9M, PCC-1
109+50	CONST. D.I. RT. W/ EXT., PIPE INLET & PIPE OUTLET	235																1	1							FPC-9E, FPC-9M, PCC-1
110+55	CONST. JUNCTION BOX RT. W/ PIPE INLET & PIPE OUTLET										51										1					FPC-9, PCC-1, PCM-1
110+73	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET										78							1								FPC-9E, FPC-9M, PCC-1, PCM-1
111+00	CONST. YARD DRAIN LT.									54													1			FPC-9, PCM-1
111+05	CONST. D.I. RT. W/ EXT., PIPE INLET & PIPE OUTLET										186							1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
111+55	CONST. D.I. LT. W/ OIB, PIPE INLET & PIPE OUTLET										271							1								FPC-9E, FPC-9M, PCC-1, PCM-1
112+95	CONST. D.I. RT. W/ EXT., PIPE INLET & PIPE OUTLET										128							1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
113+43	CONST. YARD DRAIN LT.									38													1			FPC-9, PCM-1
113+84	CONST. YARD DRAIN LT.									44													1			FPC-9, PCM-1
114+27	CONST. D.I. RT. W/ PIPE INLET & PIPE OUTLET											135						1								FPC-9E, FPC-9M, PCC-1, PCM-1
114+30	CONST. D.I. LT. W/ EXT., PIPE INLET & PIPE OUTLET										196							1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
115+66	CONST. D.I. RT. W/ EXT., PIPE INLET & PIPE OUTLET											130						1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
116+30	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET										236							1								FPC-9E, FPC-9M, PCC-1, PCM-1
117+00	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET			80														1								FPC-9E, FPC-9M, PCC-1
117+85	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET												136					1								FPC-9E, FPC-9M, PCC-1, PCM-1
118+70	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET						269											1								FPC-9E, FPC-9M, PCC-1
119+25	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET												216					1								FPC-9E, FPC-9M, PCC-1, PCM-1
121+45	CONST. D.I. LT. W/ EXT., PIPE INLET & PIPE OUTLET W/ FES			16												1	1		1					13	0.16	FES-1, FES-2, FPC-9E, PCC-1
121+45	CONST. D.I. RT. W/ EXT., PIPE INLET W/ FES & PIPE OUTLET	7						67							1		1		1					5	0.06	FES-1, FES-2, FPC-9E, PCC-1
121+51	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET W/ FES			16												1	1							13	0.16	FES-1, FES-2, FPC-9E, PCC-1
121+51	CONST. D.I. RT. W/ PIPE INLET W/ FES & PIPE OUTLET	7						67							1		1							5	0.06	FES-1, FES-2, FPC-9E, PCC-1
122+78	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET											122						1								FPC-9E, FPC-9M, PCC-1, PCM-1
123+10	CONST. D.I. RT. W/ PIPE INLET & PIPE OUTLET												154					1								FPC-9E, FPC-9M, PCC-1, PCM-1
123+50	CONST. D.I. LT. W/ PIPE INLET W/ FES & PIPE OUTLET	4				68									1			1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
123+50	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET												35					1								FPC-9E, FPC-9M, PCC-1, PCM-1
123+90	CONST. D.I. RT. W/ PIPE INLET W/ FES & PIPE OUTLET	12										42			1			1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
124+21	CONST. D.I. RT. W/ PIPE INLET & PIPE OUTLET					27												1								FPC-9E, FPC-9M, PCC-1
124+35	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET										82							1								FPC-9E, FPC-9M, PCC-1, PCM-1
124+50	CONST. D.I. RT. W/ PIPE INLET W/ FES & PIPE OUTLET	3									34				1			1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
124+82	CONST. YARD DRAIN LT.									46													1			FPC-9, PCM-1
125+15	CONST. YARD DRAIN RT.									62													1			FPC-9, PCM-1
125+52	CONST. YARD DRAIN LT.									68													1			FPC-9, PCM-1
125+62	CONST. YARD DRAIN RT.									15													1			FPC-9, PCM-1
125+75	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET										120							1								FPC-9E, FPC-9M, PCC-1, PCM-1
126+80	CONST. D.I. LT. W/ PIPE INLET W/ FES & PIPE OUTLET	3				242									1			1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
126+80	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET										101							1								FPC-9E, FPC-9M, PCC-1, PCM-1
127+45	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET										61							1								FPC-9E, FPC-9M, PCC-1, PCM-1
SUBTOTALS (BOX 1 OF 2):		**273**	**74**	**112**		**455**	**269**	**134**		**327**	**2225**	**429**	**541**	**6**	**1**	**2**	**5**	**31**	**11**	**3**	**2**	**1**	**7**	**64**	**0.78**	

BASIS OF ESTIMATE:

WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

8/17/2012

R040489.DGN

QUANTITIES

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.		040489	33	113

(2) QUANTITIES

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

8-27-12

STRUCTURES (BOX 2 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	(CLASS III) 24"	(CLASS III) 30"	(CLASS III) 42"	(CLASS V) 18"	(CLASS V) 24"	(CLASS V) 30"	(CLASS V) 42"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	DROP INLETS TYPE C	TYPE MO	EXT. 4'	EXT. 8'	JUNCTION BOX (TYPE E)	MODIFYING DROP INLETS (TYPE ST)	YARD DRAIN	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.												EACH							EACH			SQ. YD.	M. GAL	
130+33	CONST. D.I. RT. W/ OIB & PIPE OUTLET										276							1								FPC-9E, FPC-9M, PCC-1, PCM-1
130+60	CONST. D.I. LT. W/ EXT. & PIPE OUTLET					113												1								FPC-9E, FPC-9M, PCC-1
131+75	CONST. JUNCTION BOX LT. W/ PIPE INLET & PIPE OUTLET										38										1					FPC-9, PCC-1, PCM-1
132+15	CONST. D.I. LT. W/ EXT., OIB, PIPE INLET & PIPE OUTLET										227							1	1							FPC-9E, FPC-9M, PCC-1, PCM-1
132+18	CONST. YARD DRAIN RT.									94													1			FPC-9, PCM-1
133+15	CONST. D.I. LT. W/ EXT., PIPE INLET W/ FES & PIPE OUTLET	2									29			1				1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
133+20	CONST. YARD DRAIN LT.									85													1			FPC-9, PCM-1
133+44	CONST. D.I. RT. W/ PIPE INLET & PIPE OUTLET					33												1								FPC-9E, FPC-9M, PCC-1
133+81	CONST. D.I. RT. W/ PIPE INLET & PIPE OUTLET										32							1								FPC-9E, FPC-9M, PCC-1, PCM-1
134+05	CONST. YARD DRAIN LT.									39													1			FPC-9, PCM-1
134+10	CONST. JUNCTION BOX RT. W/ PIPE INLET & PIPE OUTLET										61										1					FPC-9, PCC-1, PCM-1
134+45	CONST. D.I. LT. W/ OIB, PIPE INLET & PIPE OUTLET											81						1								FPC-9E, FPC-9M, PCC-1, PCM-1
134+75	CONST. D.I. RT. W/ PIPE INLET W/ FES & PIPE OUTLET	3									106			1				1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
135+30	CONST. JUNCTION BOX LT. W/ OIB, PIPE INLET & PIPE OUTLET											96									1					FPC-9, PCC-1, PCM-1
135+85	CONST. D.I. RT. W/ PIPE INLET W/ FES & PIPE OUTLET	5					187							1				1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
136+30	CONST. D.I. LT. W/ OIB, PIPE INLET & PIPE OUTLET												91					1								FPC-9E, FPC-9M, PCC-1, PCM-1
137+27	CONST. D.I. LT. W/ OIB, PIPE INLET & PIPE OUTLET												203					1								FPC-9E, FPC-9M, PCC-1, PCM-1
137+75	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET						196											1								FPC-9E, FPC-9M, PCC-1
138+56	CONST. YARD DRAIN LT.									76													1			FPC-9, PCM-1
139+35	CONST. D.I. LT. W/ OIB, PIPE INLET & PIPE OUTLET												140					1								FPC-9E, FPC-9M, PCC-1, PCM-1
139+50	CONST. YARD DRAIN LT.									15													1			FPC-9, PCM-1
139+75	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET											96						1								FPC-9E, FPC-9M, PCC-1, PCM-1
140+00	CONST. YARD DRAIN LT.									40													1			FPC-9, PCM-1
140+41	CONST. YARD DRAIN LT.									39													1			FPC-9, PCM-1
140+75	CONST. D.I. RT. W/ OIB, PIPE INLET & PIPE OUTLET W/ FES						59								1			1						8	0.10	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
140+80	CONST. D.I. LT. W/ PIPE INLET W/ FES & PIPE OUTLET W/ FES	18						47						1		1		1						18	0.23	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
12+52	CONST. D.I. RT. W/ EXT., PIPE INLET & PIPE OUTLET				6				51									1		1						FPC-9E, FPC-9M, PCC-1
12+86	CONST. D.I. LT. W/ EXT., PIPE INLET & EXIST. PIPE OUTLET																	1	1							FPC-9E, FPC-9M
50+85	CONST. D.I. LT. W/ PIPE OUTLET W/ FES	14												1				1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
52+20	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET										60							1								FPC-9E, FPC-9M, PCC-1, PCM-1
52+20	CONST. D.I. RT. W/ PIPE OUTLET					37												1								FPC-9E, FPC-9M, PCC-1
53+90	CONST. D.I. RT. W/ PIPE INLET & PIPE OUTLET	38																1								FPC-9E, FPC-9M, PCC-1, PCM-1
54+00	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET										24							1								FPC-9E, FPC-9M, PCC-1, PCM-1
72+95	CONST. D.I. LT. W/ PIPE INLET & PIPE OUTLET										34							1								FPC-9E, FPC-9M, PCC-1, PCM-1
72+95	CONST. D.I. RT. W/ EXT. & PIPE OUTLET					47												1	1							FPC-9E, FPC-9M, PCC-1
80+65	CONST. D.I. LT. W/ PIPE OUTLET					47												1								FPC-9E, FPC-9M, PCC-1
80+75	CONST. D.I. RT. W/ PIPE INLET & PIPE OUTLET										57							1								FPC-9E, FPC-9M, PCC-1, PCM-1
* ENTIRE PROJECT - IF & WHERE DIRECTED BY THE ENGINEER										300													5			FPC-9, PCM-1
SUBTOTALS (BOX 2 OF 2):		**80**			**6**	**277**	**442**	**47**	**51**	**688**	**944**	**273**	**434**	**5**	**1**	**1**		**27**	**3**	**1**	**3**		**12**	**46**	**0.57**	
TOTALS:		**353**	**74**	**112**	**6**	**732**	**711**	**181**	**51**	**1015**	**3169**	**702**	**975**	**11**	**2**	**3**	**5**	**58**	**14**	**4**	**5**	**1**	**19**	**110**	**1.35**	

BASIS OF ESTIMATE:

WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

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

FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

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

8/17/2012

R040489.DGN

QUANTITIES

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.		040489	34	113

(2) QUANTITIES

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

8-27-12

BASE AND SURFACING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TOTAL WID.	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID.	SQ. YD.	POUND / SQ. YD.	PG 64-22	AVG. WID.	SQ. YD.	POUND / SQ. YD.	PG 64-22	AVG. WID.	SQ. YD.	POUND / SQ. YD.	PG 70-22
			FEET	FEET				FEET			TON	FEET			TON	FEET			TON
MAIN LANES																			
103+70	141+00	GARLAND AVENUE	3730.00													64.00	24632.4	220	2709.6
104+54	106+12	GARLAND AVENUE - LT.	158.00	43.60	765.4	0.03	23.0	16.20	284.4	550	78.2	13.70	240.5	440	52.9	13.70	240.5	220	26.5
106+12	106+59	GARLAND AVENUE - LT.	47.00	55.30	288.8	0.03	8.7	20.10	105.0	550	28.9	17.60	91.9	440	20.2	17.60	91.9	220	10.1
106+59	107+07	GARLAND AVENUE - LT.	48.00	26.50	141.3	0.03	4.2	10.50	56.0	550	15.4	8.00	42.7	440	9.4	8.00	42.7	220	4.7
107+40	107+71	GARLAND AVENUE - LT.	31.00	57.70	198.7	0.03	6.0	20.90	72.0	550	19.8	18.40	63.4	440	13.9	18.40	63.4	220	7.0
107+71	109+53	GARLAND AVENUE - LT.	182.00	71.50	1445.9	0.03	43.4	25.50	515.7	550	141.8	23.00	465.1	440	102.3	23.00	465.1	220	51.2
109+53	110+91	GARLAND AVENUE - LT.	138.00	62.50	958.3	0.03	28.7	22.50	345.0	550	94.9	20.00	306.7	440	67.5	20.00	306.7	220	33.7
110+91	113+70	GARLAND AVENUE - LT.	279.00	53.20	1649.2	0.03	49.5	19.40	601.4	550	165.4	16.90	523.9	440	115.3	16.90	523.9	220	57.6
113+70	116+16	GARLAND AVENUE - LT.	246.00	44.80	1224.5	0.03	36.7	16.60	453.7	550	124.8	14.10	385.4	440	84.8	14.10	385.4	220	42.4
116+16	118+74	GARLAND AVENUE - LT.	258.00	34.60	991.9	0.03	29.8	13.20	378.4	550	104.1	10.70	306.7	440	67.5	10.70	306.7	220	33.7
118+74	119+57	GARLAND AVENUE - LT.	83.00	27.40	252.7	0.03	7.6	10.80	99.6	550	27.4	8.30	76.5	440	16.8	8.30	76.5	220	8.4
119+57	122+76	GARLAND AVENUE - LT.	319.00	46.00	1630.4	0.03	48.9	17.00	602.6	550	165.7	14.50	513.9	440	113.1	14.50	513.9	220	56.5
122+76	123+57	GARLAND AVENUE - LT.	81.00	68.80	619.2	0.03	18.6	24.60	221.4	550	60.9	22.10	198.9	440	43.8	22.10	198.9	220	21.9
123+57	125+98	GARLAND AVENUE - LT.	241.00	77.80	2083.3	0.03	62.5	27.60	739.1	550	203.3	25.10	672.1	440	147.9	25.10	672.1	220	73.9
125+98	126+79	GARLAND AVENUE - LT.	81.00	82.60	743.4	0.03	22.3	29.20	262.8	550	72.3	26.70	240.3	440	52.9	26.70	240.3	220	26.4
126+79	130+60	GARLAND AVENUE - LT.	381.00	90.40	3826.9	0.03	114.8	31.80	1346.2	550	370.2	29.30	1240.4	440	272.9	29.30	1240.4	220	136.4
130+60	132+05	GARLAND AVENUE - LT.	145.00	103.90	1673.9	0.03	50.2	36.30	584.8	550	160.8	33.80	544.6	440	119.8	33.80	544.6	220	59.9
132+05	140+77	GARLAND AVENUE - LT.	872.00	88.60	8584.4	0.03	257.5	31.20	3022.9	550	831.3	28.70	2780.7	440	611.8	28.70	2780.7	220	305.9
140+77	141+04	GARLAND AVENUE - LT.	27.00	VAR.	167.1	0.03	5.0	VAR.	63.1	550	17.4	VAR.	52.0	440	11.4	VAR.	52.0	220	5.7
107+37	107+46	GARLAND AVENUE - RT.	9.00	26.20	26.2	0.03	0.8	10.40	10.4	550	2.9	7.90	7.9	440	1.7	7.90	7.9	220	0.9
107+46	109+77	GARLAND AVENUE - RT.	231.00	52.00	1334.7	0.03	40.0	19.00	487.7	550	134.1	16.50	423.5	440	93.2	16.50	423.5	220	46.6
109+77	110+72	GARLAND AVENUE - RT.	95.00	63.40	669.2	0.03	20.1	22.80	240.7	550	66.2	20.30	214.3	440	47.1	20.30	214.3	220	23.6
110+72	117+04	GARLAND AVENUE - RT.	632.00	79.60	5589.7	0.03	167.7	28.20	1980.3	550	544.6	25.70	1804.7	440	397.0	25.70	1804.7	220	198.5
117+04	117+83	GARLAND AVENUE - RT.	79.00	97.00	851.4	0.03	25.5	34.00	298.4	550	82.1	31.50	276.5	440	60.8	31.50	276.5	220	30.4
117+83	120+76	GARLAND AVENUE - RT.	293.00	96.40	3138.4	0.03	94.2	33.80	1100.4	550	302.6	31.30	1019.0	440	224.2	31.30	1019.0	220	112.1
120+76	123+65	GARLAND AVENUE - RT.	289.00	73.90	2373.0	0.03	71.2	26.30	844.5	550	232.2	23.80	764.2	440	168.1	23.80	764.2	220	84.1
123+65	124+47	GARLAND AVENUE - RT.	82.00	76.30	695.2	0.03	20.9	27.10	246.9	550	67.9	24.60	224.1	440	49.3	24.60	224.1	220	24.7
124+47	127+51	GARLAND AVENUE - RT.	304.00	74.20	2506.3	0.03	75.2	26.40	891.7	550	245.2	23.90	807.3	440	177.6	23.90	807.3	220	88.8
127+51	128+72	GARLAND AVENUE - RT.	121.00	49.00	658.8	0.03	19.8	18.00	242.0	550	66.6	15.50	208.4	440	45.8	15.50	208.4	220	22.9
128+72	130+99	GARLAND AVENUE - RT.	227.00	38.20	963.5	0.03	28.9	14.40	363.2	550	99.9	11.90	300.1	440	66.0	11.90	300.1	220	33.0
134+43	135+91	GARLAND AVENUE - RT.	148.00	34.00	559.1	0.03	16.8	13.00	213.8	550	58.8	10.50	172.7	440	38.0	10.50	172.7	220	19.0
135+91	136+72	GARLAND AVENUE - RT.	81.00	46.60	419.4	0.03	12.6	17.20	154.8	550	42.6	14.70	132.3	440	29.1	14.70	132.3	220	14.6
136+72	137+77	GARLAND AVENUE - RT.	105.00	53.80	627.7	0.03	18.8	19.60	228.7	550	62.9	17.10	199.5	440	43.9	17.10	199.5	220	21.9
137+77	138+56	GARLAND AVENUE - RT.	79.00	58.00	509.1	0.03	15.3	21.00	184.3	550	50.7	18.50	162.4	440	35.7	18.50	162.4	220	17.9
138+56	140+78	GARLAND AVENUE - RT.	222.00	62.50	1541.7	0.03	46.3	22.50	555.0	550	152.6	20.00	493.3	440	108.5	20.00	493.3	220	54.3
140+78	141+04	GARLAND AVENUE - RT.	26.00	VAR.	263.1	0.03	7.9	VAR.	95.1	550	26.2	VAR.	84.0	440	18.5	VAR.	84.0	220	9.2
SUBTOTALS (BOX 1 OF 2):					49971.8		**1499.4**		17892.0		**4920.7**		16039.9		**3528.7**		40672.3		**4474.0**

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.0% MIN. AGGR.....5.0% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.5% MIN. AGGR.....4.5% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22

8/17/2012

R040489.DGN

QUANTITIES

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.		040489	35	113

(2) QUANTITIES

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

8-27-12

BASE AND SURFACING (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TOTAL WID.	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID.	SQ. YD.	POUND / SQ. YD.	PG 64-22	AVG. WID.	SQ. YD.	POUND / SQ. YD.	PG 64-22	AVG. WID.	SQ. YD.	POUND / SQ. YD.	PG 70-22
			FEET	FEET				FEET			TON	FEET			TON	FEET			TON
CITY STREETS																			
11+54	13+03	JAMES STREET	149.00	VAR.	947.0	0.03	28.4	VAR.	356.6	550	98.1	VAR.	295.2	440	64.9	VAR.	590.4	220	64.9
50+78	52+83	MT. COMFORT RD.	205.00	VAR.	2329.7	0.03	69.9	VAR.	845.3	550	232.5	VAR.	742.2	440	163.3	VAR.	1484.4	220	163.3
71+26	72+96	DEANE STREET	170.00													VAR.	645.3	220	71.0
72+96	73+44	DEANE STREET	48.00	VAR.	1128.2	0.03	33.8	VAR.	404.6	550	111.3	VAR.	361.8	440	79.6	VAR.	723.6	220	79.6
80+27	80+67	SYCAMORE STREET	40.00	VAR.	842.1	0.03	25.3	VAR.	303.3	550	83.4	VAR.	269.4	440	59.3	VAR.	538.8	220	59.3
80+67	81+14	SYCAMORE STREET - RT.	47.00	VAR.	164.3	0.03	4.9	VAR.	63.5	550	17.5	VAR.	50.4	440	11.1	VAR.	100.8	220	11.1
80+67	81+69	SYCAMORE STREET - LT.	102.00	VAR.	425.8	0.03	12.8	VAR.	164.0	550	45.1	VAR.	130.9	440	28.8	VAR.	261.8	220	28.8
80+67	82+50	SYCAMORE STREET	183.00													VAR.	447.8	220	49.3
117+04	117+83	W. LAWSON STREET	79.00	VAR.	442.3	0.03	13.3	VAR.	164.1	550	45.1	VAR.	139.1	440	30.6	VAR.	249.2	220	27.4
118+74	119+57	W. HENDRIX STREET	83.00	VAR.	408.9	0.03	12.3	VAR.	153.5	550	42.2	VAR.	127.7	440	28.1	VAR.	236.0	220	26.0
122+76	123+57	S. MAXWELL DRIVE	81.00	VAR.	464.5	0.03	13.9	VAR.	171.3	550	47.1	VAR.	146.6	440	32.3	VAR.	246.5	220	27.1
123+64	124+47	W. HICKORY STREET	83.00	VAR.	461.7	0.03	13.9	VAR.	171.1	550	47.1	VAR.	145.3	440	32.0	VAR.	257.7	220	28.3
125+98	126+79	N. MAXWELL DRIVE	81.00	VAR.	448.2	0.03	13.4	VAR.	166.8	550	45.9	VAR.	140.7	440	31.0	VAR.	246.7	220	27.1
133+20	134+07	N. NOELLE STREET	87.00	VAR.	389.1	0.03	11.7	VAR.	144.7	550	39.8	VAR.	122.2	440	26.9	VAR.	122.2	220	13.4
135+90	136+72	W. BEL AIR DRIVE	82.00	VAR.	419.8	0.03	12.6	VAR.	156.2	550	43.0	VAR.	131.8	440	29.0	VAR.	131.8	220	14.5
137+77	138+56	W. WELMAR AVENUE	79.00	VAR.	391.9	0.03	11.8	VAR.	147.3	550	40.5	VAR.	122.3	440	26.9	VAR.	122.3	220	13.5
ADDITIONAL FOR LEVELING																			
103+70	141+00	GARLAND AVENUE	3730.00	VAR.	9626.7	0.10	962.7												2100.0
11+54	13+03	JAMES STREET	149.00	VAR.	258.2	0.10	25.8												30.0
50+78	52+83	MT. COMFORT RT.	205.00	VAR.	159.1	0.10	15.9												20.0
71+26	72+96	DEANE STREET	170.00	VAR.	564.6	0.10	56.5												55.0
80+67	82+50	SYCAMORE STREET	183.00	VAR.	447.8	0.10	44.8												40.0
117+04	117+83	W. LAWSON STREET	79.00	VAR.	110.1	0.10	11.0												
118+74	119+57	W. HENDRIX STREET	83.00	VAR.	108.3	0.10	10.8									VAR.	108.3	VAR.	35.7
122+76	123+57	S. MAXWELL DRIVE	81.00	VAR.	99.9	0.10	10.0									VAR.	99.9	VAR.	16.5
123+64	124+47	W. HICKORY STREET	83.00	VAR.	112.4	0.10	11.2												
125+98	126+79	N. MAXWELL DRIVE	81.00	VAR.	106.0	0.10	10.6									VAR.	106.0	VAR.	20.4
53+47	54+40	HOLLY STREET	93.00	VAR.	1248.1	0.03	37.4	VAR.	457.3	550	125.8	VAR.	395.4	440	87.0	VAR.	790.8	220	87.0
54+40	55+02	HOLLY STREET	62.00														207.8	220	22.9
54+40	55+02	HOLLY STREET	62.00	VAR.	153.9	0.10	15.4												30.0
SUBTOTALS (BOX 2 OF 2):					22258.6		**1490.1**		3869.6		**1064.4**		3321.0		**730.8**		7718.1		**3162.1**
TOTALS:					72230.4		**2989.5**		21761.6		**5985.1**		19360.9		**4259.5**		48390.4		**7636.1**

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.0% MIN. AGGR.....5.0% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.5% MIN. AGGR.....4.5% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22

8/17/2012

R040489.DGN

QUANTITIES

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.		040489	36	113

(2) SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	49	STATION
201	GRUBBING	49	STATION
202	REMOVAL AND DISPOSAL OF CURB	1037	LIN. FT.
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER	1365	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE	360	LIN. FT.
202	REMOVAL AND DISPOSAL OF POSTS	2	EACH
202	REMOVAL AND DISPOSAL OF RETAINING WALLS	6	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT	2741	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	52	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	1620	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS	1021	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	2	EACH
202	REMOVAL AND DISPOSAL OF JUNCTION BOXES	1	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS	6	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	69	EACH
202	REMOVAL AND DISPOSAL OF BENCH	1	EACH
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLES	1	EACH
202	REMOVAL AND DISPOSAL OF BUILDINGS	3	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	6	EACH
206	FLOWABLE SELECT MATERIAL	88	CU. YD.
210	UNCLASSIFIED EXCAVATION	7688	CU. YD.
210	COMPACTED EMBANKMENT	7872	CU. YD.
SP & 210	SOIL STABILIZATION	50	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	1160	TON
309	PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)	877	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (6" UNIFORM THICKNESS)	534	SQ. YD.
401	TACK COAT	3083	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	5716	TON
SP, SS, & 405	ASPHALT BINDER (PG 64-22) IN ACHM BASE COURSE (1 1/2")	269	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	4047	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	213	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	7343	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	9	TON
SP, SS, & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")	435	TON
412	COLD MILLING ASPHALT PAVEMENT	911	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	20	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	20	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY	2304.70	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SP, SS, & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	616	SQ. FT.
SS & 604	BARRICADES	232	LIN. FT.
SS & 604	TRAFFIC DRUMS	448	EACH
SS & 604	CONSTRUCTION PAVEMENT MARKINGS	38300	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	14880	LIN. FT.
SS & 604	VERTICAL PANELS	56	EACH
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	353	LIN. FT.
* SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	3169	LIN. FT.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	3169	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	732	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	74	LIN. FT.
* SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	702	LIN. FT.
* 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	702	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	711	LIN. FT.
SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	112	LIN. FT.
* SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	975	LIN. FT.
* 606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	975	LIN. FT.
SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	181	LIN. FT.
SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	6	LIN. FT.
SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	51	LIN. FT.
SS & 606	12" SIDE DRAIN	1015	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	11	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	3	EACH
606	SELECTED PIPE BEDDING	300	CU. YD.
609	DROP INLETS (TYPE C)	5	EACH
609	DROP INLETS (TYPE MO)	58	EACH
609	JUNCTION BOXES (TYPE E)	5	EACH
609	DROP INLET EXTENSIONS (4')	14	EACH
609	DROP INLET EXTENSIONS (8')	4	EACH
609	YARD DRAINS	19	EACH
611	UNDERDRAIN OUTLET PROTECTORS	5	EACH
611	4" PIPE UNDERDRAINS	925	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)	46.6	CU. YD.
* 619	4' STEEL CHAIN LINK FENCE (ALTERNATE NO. 1)	379	LIN. FT.
* 619	4' ALUMINUM CHAIN LINK FENCE (ALTERNATE NO. 2)	379	LIN. FT.
620	MULCH COVER	7.91	ACRE
SS & 620	WATER	247.2	M.GAL.

* ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
621	TEMPORARY SEEDING	7.91	ACRE
621	SILT FENCE	1805	LIN. FT.
621	DROP INLET SILT FENCE	1550	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	166	CU. YD.
621	ROCK DITCH CHECKS	130	CU. YD.
624	SOLID SODDING	6812	SQ. YD.
633	CONCRETE WALKS	2431	SQ. YD.
633	CONCRETE WALKS (TYPE SPECIAL)	480	SQ. YD.
633	HAND RAILING	864	LIN. FT.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	11660	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	21	EACH
637	MAILBOX SUPPORTS (SINGLE)	19	EACH
637	MAILBOX SUPPORTS (DOUBLE)	1	EACH
640	MODIFYING DROP INLETS	1	EACH
641	WHEELCHAIR RAMPS (TYPE 3)	189	SQ. YD.
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	2	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	21	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	5	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	20	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	7895	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	482	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	1939	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	40	LIN. FT.
710	NON-METALLIC CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (3")	2326	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	25	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	3	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	10	EACH
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	156	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	9021	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	1180	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	7231	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	20	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	20	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)	26	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	121	EACH
733	VIDEO CABLE	2936	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)	13	EACH
733	VIDEO MONITOR (CLR)	2	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	9	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	4	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	2	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	2071	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	455	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	40	LIN. FT.
SP	LUMINAIRE ASSEMBLY	10	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	2352	LIN. FT.
SP	18" STREET NAME SIGN	12	EACH
SP	LOCAL RADIO WITH ANTENNA	2	EACH
SP	ANTENNA CABLE (TYPE 6)	140	LIN. FT.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	2	EACH

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

8-27-12

REVISIONS

DATE	REVISION	SHEET NUMBER

8/17/2012

R040489.DGN

SUMMARY OF QUANTITIES AND REVISIONS

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.		040489	37	113

(2) SURVEY CONTROL DETAILS

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

8-27-12

COORDINATES

ARKANSAS STATE PLANE, NORTH /SOUTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
U.S. FOOT UNITS

POINT	EASTING	NORTHING	ELEVATION	FE	DESCRIPTION
1	669544.2512	641675.2828	1371.26	CTL	RBR & CAP LEFT SOULDER, HIGHWAY 112
2	669650.7256	642122.9734	1340.92	CTL	RBR & CAP INTERSECTION OF HIGHWAY 112/112 SOUTH
3	669606.073	642638.7931	1313.92	CTL	RBR & CAP LEFT SHOULDER
4	669680.2017	643323.9028	1294.02	CTL	RBR & CAP RIGHT SHOULDER
5	669675.5694	643964.1047	1287.58	CTL	RBR & CAP LEFT SHOULDER
6	669751.7359	644792.4019	1294.64	CTL	RBR & CAP RIGHT SHOULDER
7	669796.5838	645788.4928	1278.83	CTL	RBR & CAP RIGHT SHOULDER
8	669834.0655	647538.5522	1277.60	CTL	RBR & CAP RIGHT SHOULDER
9	669118.6589	648580.8368	1288.97	CTL	RBR & CAP RIGHT SHOULDER
10	669106.5583	649473.8396	1295.18	CTL	RBR & CAP LEFT SHOULDER
11	669192.0741	650289.7151	1291.32	CTL	RBR & CAP
12	669131.8519	651206.5844	1253.73	CTL	RBR & CAP
13	668593.3986	651994.9816	1255.03	CTL	RBR & CAP
100	669776.1635	646577.9553	1276.03	GPS	AHTD GPS 720033
101	669973.02	649060.6371	1294.43	GPS	ARGONOMY
102	671555.8815	653467.9567	1248.21	GPS	AHTD GPS 720018 RESET
900	671713.8495	642257.6729	1319.57	BM	USCGS C 27 1932 SOUTH END HEADWALL BOX UNDER RAILROAD
901	669687.2579	642091.8486	1339.27	BM	AHTD DISK SET IN CONRETE HEAWALL
902	669734.877	643289.9572	1297.55	BM	CHISELED SQUARE CORNER CONCRETE BOX
903	669711.8268	644030.8997	1287.98	BM	CHISELED SQUARE CENTER HEAWALL RIGHT SIDE
904	669774.4494	645220.9974	1281.66	BM	CHISELED SQUARE CORNER CONCRETE NOELLE AVE
905	669820.4313	646335.3563	1277.08	BM	CHISELED SQUARE CENTER HEAWALL RIGHT SIDE
906	669829.3412	647339.6038	1275.94	BM	CHISELED SQUARE SOUTH END HEAWALL
907	669163.6017	648594.7278	1286.91	BM	CHISELED SQUARE SOUTH END RCP 112/KNAPP ST
908	669116.4058	649773.7632	1296.76	BM	CUT X IN BOLT IN FIRE HYDRANT
909	669112.3108	650462.3176	1287.73	BM	CHISELED SQUARE NE CORNER CONCRETE SLAB
910	669168.7794	651319.0956	1256.42	BM	CHISELED SQUARE BASE PA, HIGHWAY 112 / DRAKE ST
911	668876.2699	651691.6645	1250.11	BM	CHISELED SQUARE TOP HEAWALL RIGHT OF CENTERLINE
912	668584.2368	652184.9003	1253.09	BM	AHTD CAP HIGHWAY 71 UNDERPASS BRIDGE" HS20 5692
913	671554.3512	653475.3701	1248.58	BM	AHTD DISK SOUTH EAST BRIDGE CORNER
914	673331.4662	654209.3196	1212.09	BM	NGS K 310 1989 IN BRIDGE PAIR
915	673319.7581	656296.0106	1198.65	BM	A27 1932 BRASS CAP LEFT OF CENTERLINE GREGG & VAN ASCHE
916	669542.513	641667.8931	1372.07	BM	AHTD CAP, SET IN CONCRETE
1501	642093.2465	669493.1936	1349.75	CTL	CAP/REBAR LT HWY.112 44' SW OF WV, 39' W OF LP
1502	642238.9515	669526.1080	1338.80	CTL	CAP/REBAR LT HWY.112 9.5' NW OF SW COR. TB
1503	642642.8240	669391.6524	1323.04	CTL	CAP/REBAR LT HWY.112 76' N. OF LP 66' NW OF LP
1504	644344.6854	669756.7757	1286.11	CTL	CAP/REBAR RT HWY.112 23' NW OF 36" OAK 25' S. OF DW
1505	644476.8190	669772.9776	1288.80	CTL	CAP/REBAR RT HWY.112 27' W. OF NW HOUSE COR. 26' SE OF PP
1506	644597.8164	669761.6668	1292.83	CTL	CAP/REBAR RT HWY.112 26' W. OF 24" OAK 46' SW OF 24" OAK

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
"(standard markings common to all caps)", or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.9999168402 HAS BEEN USED TO COMPUTE THE ABOVE COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME S040489.CTL
HORIZONTAL DATUM: NAD NAD 83 (1997)
VERTICAL DATUM: NAVD 88

BASIS OF BEARINGS:
GRID BASED ON GPS CONTROL AT POINT NUMBER 8,
ARKANSAS STATE PLANE GRID COORDINATES NORTH ZONE - 0301
NORTHING 647484.7030, EASTING 669778.3622.
CONVERGENCE ANGLE 1°15' 56.16915" LEFT
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL
IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL

MID JOB LAT. 36°05' 33.70"
LON. 94°10' 29.82"

CONST. C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	96+71.74	641562.7251	669570.5720
8001	P.C. STA.	99+24.46	641814.8369	669588.1117
8003	P.T. STA.	102+09.37	642099.2754	669604.3502
8004	P.C. STA.	102+94.62	642184.4410	669608.1508
8006	P.T. STA.	104+55.20	642344.9259	669613.6233
8007	P.C. STA.	106+02.06	642491.7422	669617.0853
8009	P.T. STA.	108+61.36	642750.5605	669631.9885
8010	P.C. STA.	108+93.31	642782.3801	669634.9069
8012	P.T. STA.	110+14.16	642902.8811	669644.0391
8013	P.C. STA.	118+37.53	643724.7756	669693.2645
8015	P.T. STA.	121+98.84	644085.8870	669703.4832
8016	P.C. STA.	122+37.14	644124.1794	669703.3591
8018	P.T. STA.	125+30.65	644417.5910	669709.9250
8019	P.C. STA.	127+34.75	644621.4578	669719.7157
8021	P.T. STA.	129+40.71	644827.3091	669725.8962
8022	P.C. STA.	130+75.55	644962.1392	669727.5199
8024	P.T. STA.	134+75.55	645361.6173	669746.2887
8025	P.C. STA.	136+38.03	645523.5570	669759.5740
8027	P.T. STA.	137+61.69	645646.8984	669768.3539
8028	P.I. STA.	140+00.07	645884.8416	669782.7129
8029	POE	143+00.07	646184.5111	669796.7924

MT. COMFORT ROAD C.L. / HOLLY STREET C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8100	POB	50+00.00	643031.0237	669372.6382
8101	P.C. STA.	50+77.59	642971.9821	669422.9730
8103	P.T. STA.	52+04.02	642917.7279	669533.3117
8104	POE	57+16.65	642892.5442	670045.3278

JAMES STREET C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8200	POB	10+00.00	642818.0968	669242.2613
8201	P.C. STA.	11+54.22	642809.4092	669396.2332
8203	P.T. STA.	12+52.55	642860.9792	669471.7435
8204	POE	13+20.14	642925.2177	669492.7502

SYCAMORE STREET C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8300	POB	79+96.00	644700.3007	669722.9581
8301	POE	82+81.06	644686.7522	670007.6939

DEANE STREET C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8400	POB	70+00.00	645043.4510	669353.3981
8401	P.C. STA.	71+06.02	645037.6682	669459.2587
8403	P.T. STA.	71+89.95	645030.6381	669542.8833
8404	P.C. STA.	72+18.75	645027.3859	669571.4985
8406	P.T. STA.	73+19.77	645019.5254	669672.1946
8407	POE	73+76.08	645017.1254	669728.4460

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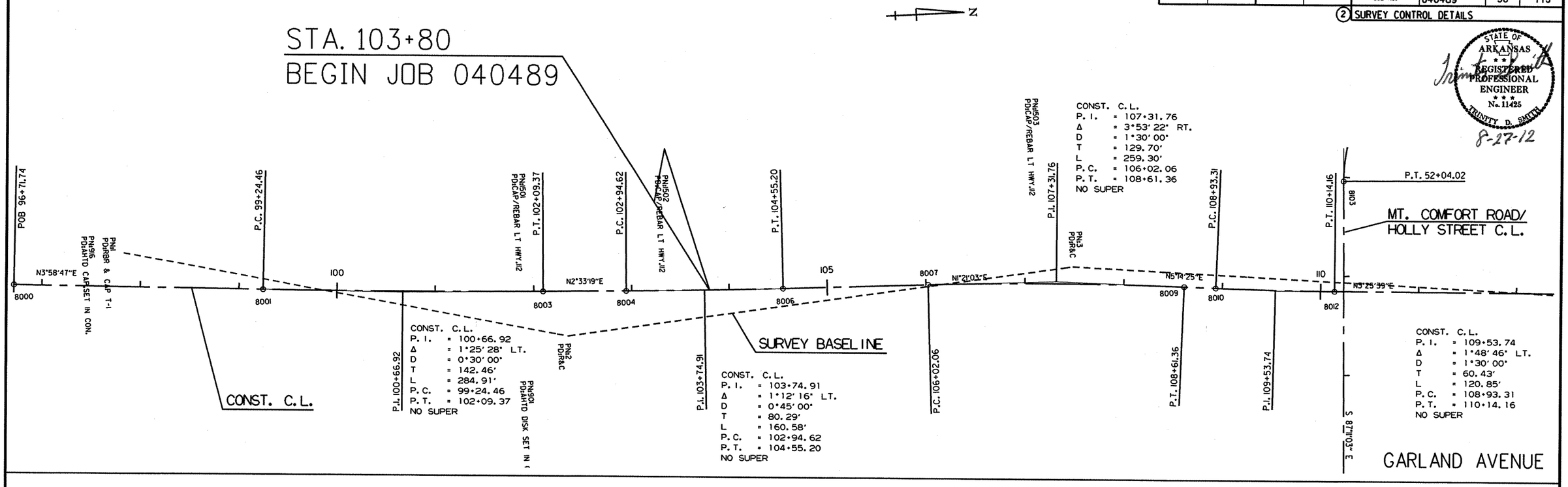
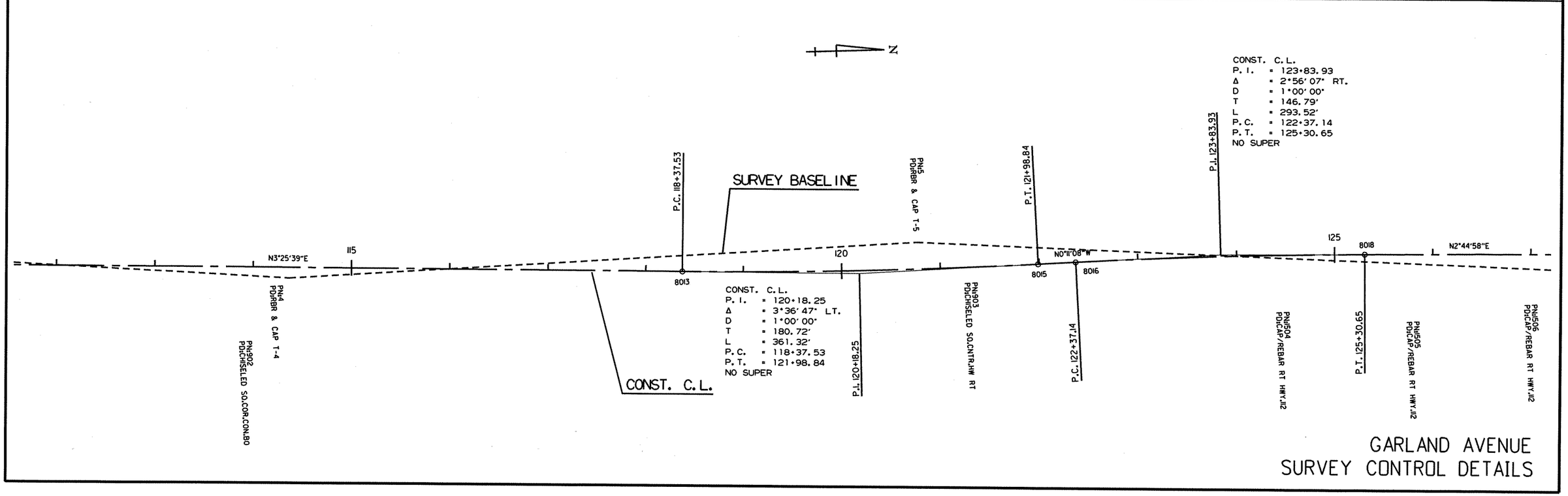
				6	ARK.			
				JOB NO.		040489	38	113

(2) SURVEY CONTROL DETAILS

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

8-27-12





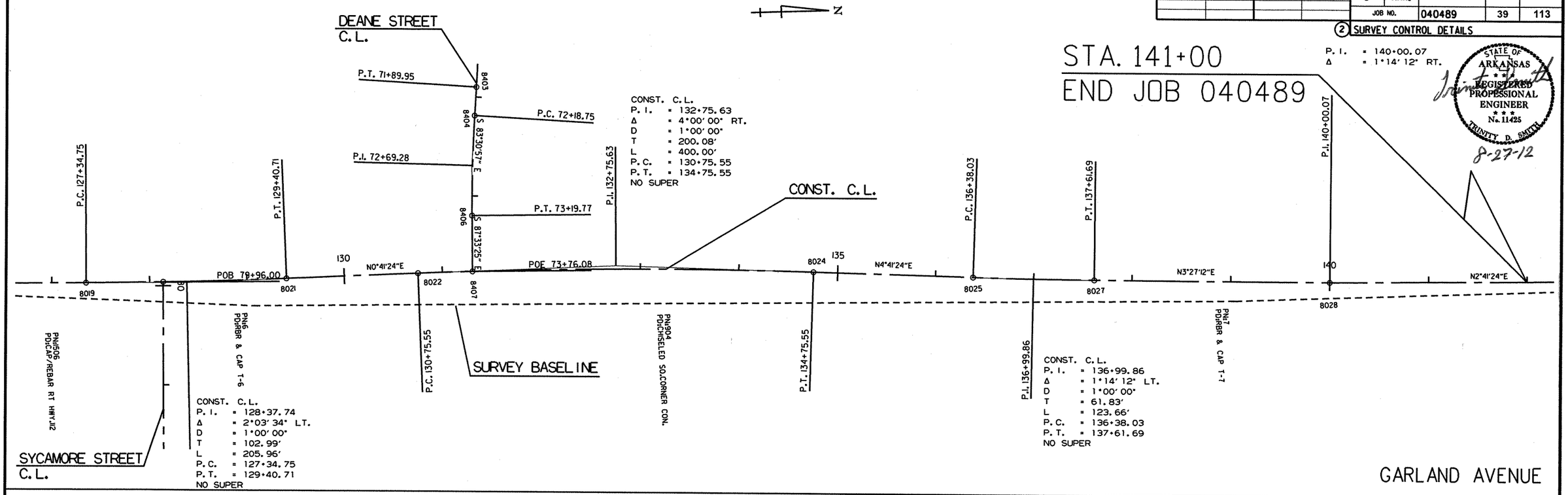
8/17/2012

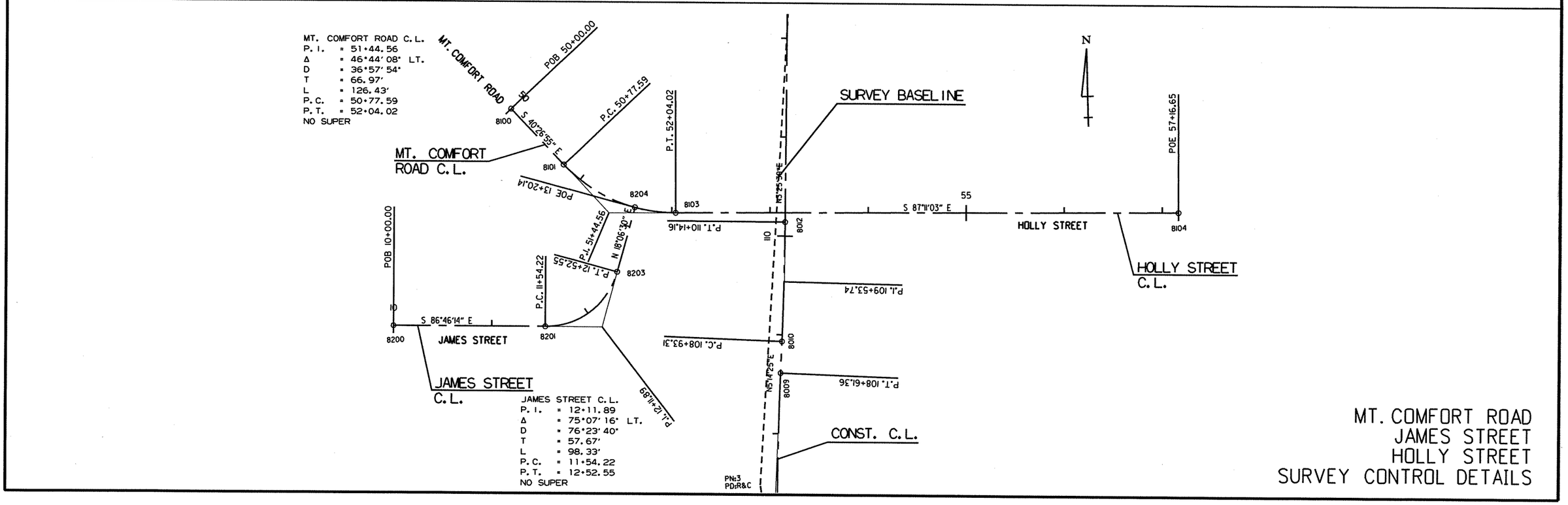
R040489.DGN

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.		040489	39	113

(2) SURVEY CONTROL DETAILS





MT. COMFORT ROAD
JAMES STREET
HOLLY STREET
SURVEY CONTROL DETAILS

8/17/2012

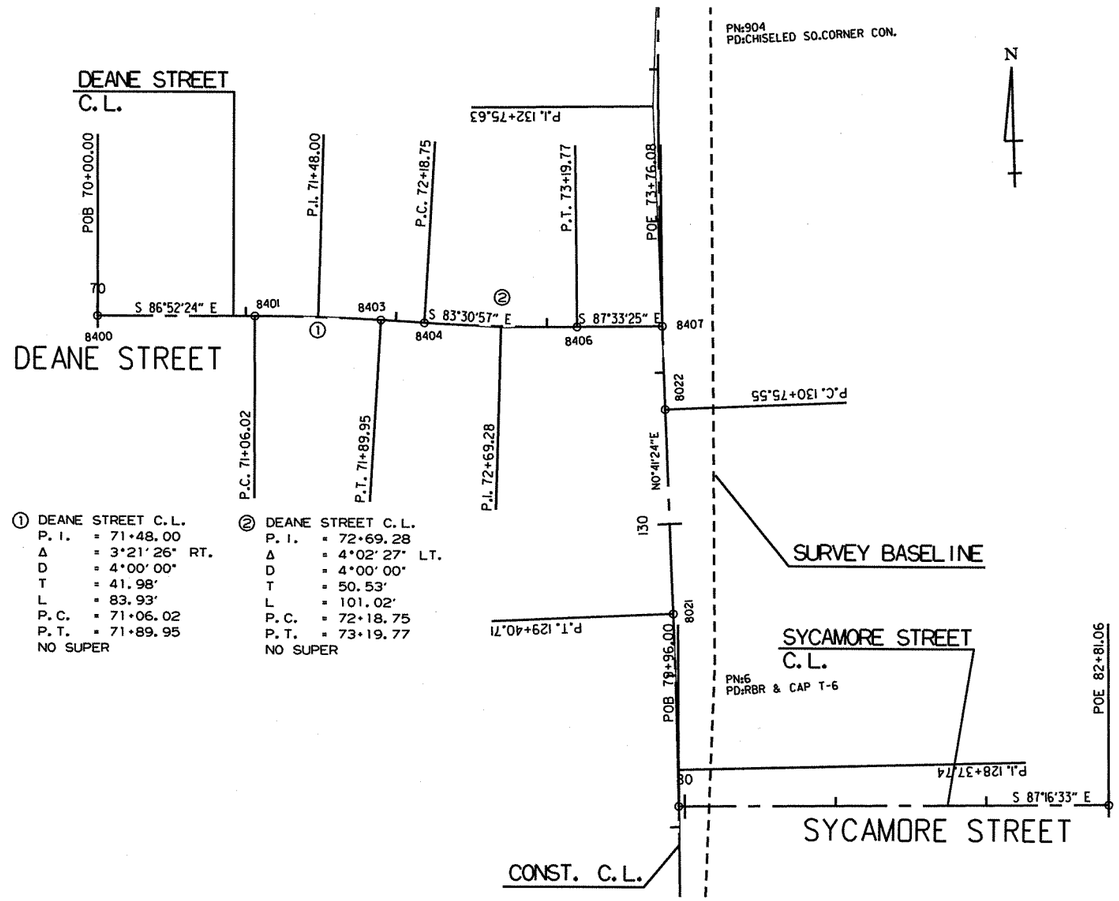
R040489.DGN

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.		040489	40	113

② SURVEY CONTROL DETAILS

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

8-27-12



① DEANE STREET C.L.
P.I. = 71+48.00
Δ = 3°21'26" RT.
D = 4°00'00"
T = 41.98'
L = 83.93'
P.C. = 71+06.02
P.T. = 71+89.95
NO SUPER

② DEANE STREET C.L.
P.I. = 72+69.28
Δ = 4°02'27" LT.
D = 4°00'00"
T = 50.53'
L = 101.02'
P.C. = 72+18.75
P.T. = 73+19.77
NO SUPER

DEANE STREET
SYCAMORE STREET
SURVEY CONTROL DETAILS

8/17/2012

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040489	41	113

(2) PLAN AND PROFILE SHEETS

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

8-27-12

N

STA. 103+90 CONSTRUCT
DROP INLET ON LT. H= 4' 10"
WITH 8' EXTENSION AND
18" x 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET ON LT.
AND 18" x 121' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

CONCRETE WALKS (TYPE SPECIAL)

STA.	STA.	SIDE	SQ. YD.
104+09	105+35	LT.	70
105+75	107+03	LT.	71

STA. 105+15 CONSTRUCT
DROP INLET ON LT. H= 6' 5"
WITH 8' EXTENSION AND
OPENING IN BACK AND 18" x 139'
PIPE CULVERT TO DROP INLET ON LT.
TYPE C DROP INLET = 4' x 8'

STA. 106+57 CONSTRUCT
DROP INLET ON LT. H= 4' 4"
WITH 4' EXTENSION AND 18" x 36'
PIPE CULVERT TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

OBLITERATION OF MT. COMFORT RD. WILL BE PAID FOR AS UNCLASSIFIED EXCAVATION.

STA. 106+95 CONSTRUCT
DROP INLET ON LT. H= 7' 4"
WITH 8' EXTENSION AND 18" x 5'
PIPE CULVERT TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 106+95 CONSTRUCT
JUNCTION BOX ON LT. H= 3' 11"
24" x 74' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES
TYPE E JUNCTION BOX = 4' x 4'

STA. 107+50 IN PLACE
24" x 16' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

STA. 109+50 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH 4' EXTENSION AND
OPENING IN BACK AND 18" x 118'
R.C. PIPE CULVERT (CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 110+73 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
18" x 78' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 110+03 IN PLACE
18" x 120' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 111+00 INSTALL
YARD DRAIN ON LT.
12" X 54' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 103+90 IN PLACE
DROP INLET ON LT.
RETAIN AND MODIFY TO
JUNCTION BOX (TYPE ST)

STA. 104+63 IN PLACE
18" x 142' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 105+35 IN PLACE
DROP INLET ON LT. WITH
18" x 121' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 106+60 IN PLACE
DROP INLET ON LT. WITH
18" x 24" x 5' ARCH C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 106+60 IN PLACE
DROP INLET ON LT. WITH
24" x 67' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 109+22 IN PLACE
18" x 39' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 109+72 IN PLACE
18" x 102' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

P. I. = 107+31.76
Δ = 3°53' 22" RT.
D = 1°30' 00"
T = 129.70'
L = 259.30'
P. C. = 106+02.06
P. T. = 108+61.36
NO SUPER

STA. 109+68 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.8 SQ. YDS.

STA. 109+85 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.5 SQ. YDS.

STA. 109+98 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 6.3 SQ. YDS.

STA. 110+59 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.4 SQ. YDS.

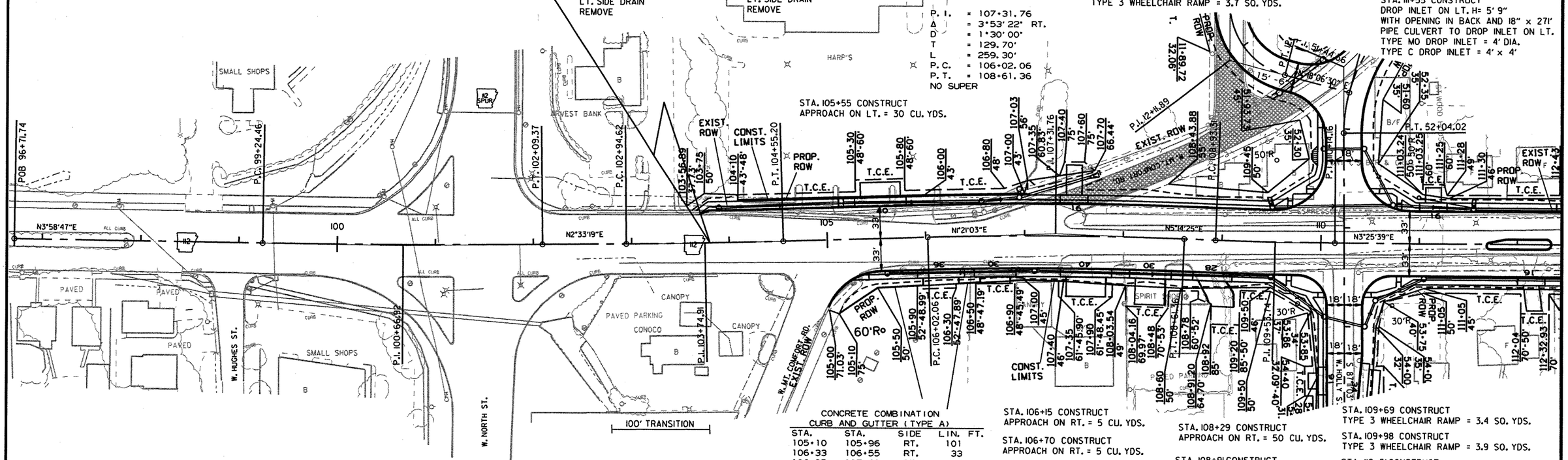
STA. 110+80 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.7 SQ. YDS.

STA. 111+14 IN PLACE
18" x 20' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 111+55 CONSTRUCT
DROP INLET ON LT. H= 5' 9"
WITH OPENING IN BACK AND 18" x 271'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 105+55 CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

STA. 103+80
BEGIN JOB 040489



CONCRETE COMBINATION CURB AND GUTTER (TYPE A)

STA.	STA.	SIDE	LIN. FT.
105+10	105+96	RT.	101
106+33	106+55	RT.	33
106+85	107+42	RT.	65
107+83	108+04	RT.	27

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
109+09		RT.	15

STA. 106+15 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 106+70 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 107+63 CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 108+29 CONSTRUCT
APPROACH ON RT. = 50 CU. YDS.

STA. 108+91 CONSTRUCT
APPROACH ON RT. = 40 CU. YDS.

STA. 110+23 IN PLACE
18" x 32' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 109+69 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.4 SQ. YDS.

STA. 109+98 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.9 SQ. YDS.

STA. 110+51 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.9 SQ. YDS.

STA. 110+80 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.3 SQ. YDS.

STA. 110+55 CONSTRUCT
JUNCTION BOX ON RT. H= 6' 6"
18" x 51' PIPE CULVERT
TO DROP INLET ON RT.
TYPE E JUNCTION BOX = 4' x 4'

STA. 111+05 CONSTRUCT
DROP INLET ON RT. H= 6' 7"
WITH 4' EXTENSION AND 18" x 186'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 105+41 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 6.9 SQ. YDS.

STA. 107+10 CONSTRUCT
DROP INLET ON RT. H= 5' 8"
WITH 4' EXTENSION AND 18" x 235'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

P. I. = 100+66.92
Δ = 1°25' 28" LT.
D = 0°30' 00"
T = 142.46'
L = 284.91'
P. C. = 99+24.46
P. T. = 102+09.37
NO SUPER

P. I. = 103+74.91
Δ = 1°12' 16" LT.
D = 0°45' 00"
T = 80.29'
L = 160.58'
P. C. = 102+94.62
P. T. = 104+55.20
NO SUPER

STA. 105+60 CONSTRUCT
DROP INLET ON RT. H= 5' 4"
WITH 4' EXTENSION AND 18" x 145'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 109+50 CONSTRUCT
DROP INLET ON RT. H= 4' 3"
WITH 4' EXTENSION AND 18" x 235'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

P. I. = 109+53.74
Δ = 1°48' 46" LT.
D = 1°30' 00"
T = 60.43'
L = 120.85'
P. C. = 108+93.31
P. T. = 110+14.16
NO SUPER

GARLAND AVENUE

8/17/2012

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				6	ARK.			
				JOB NO.		040489	42	113

(2) PLAN AND PROFILE SHEETS

NOTE:
FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

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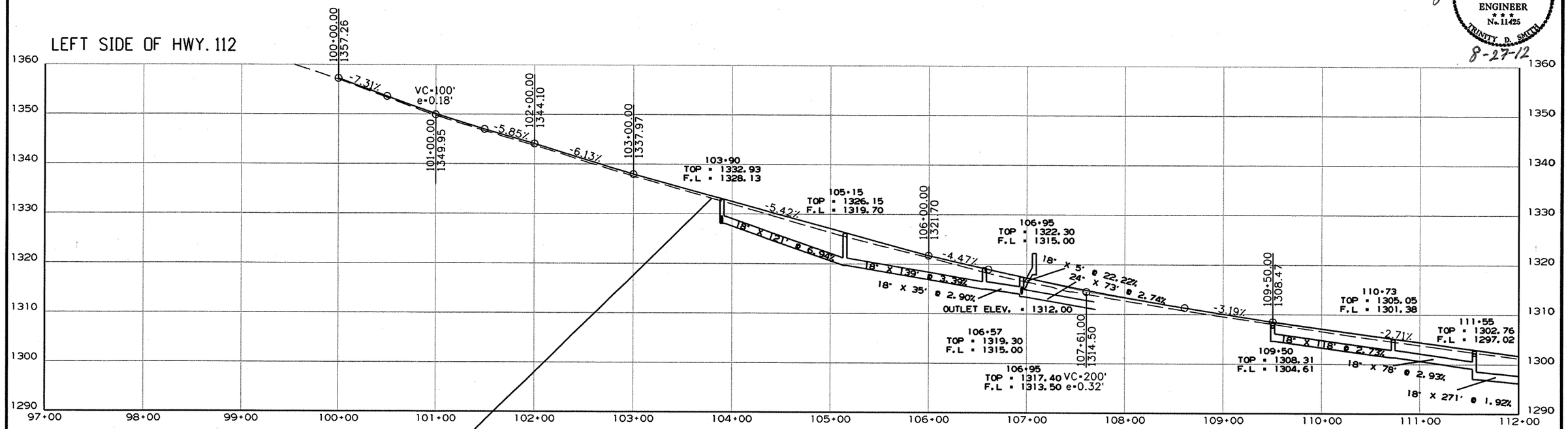
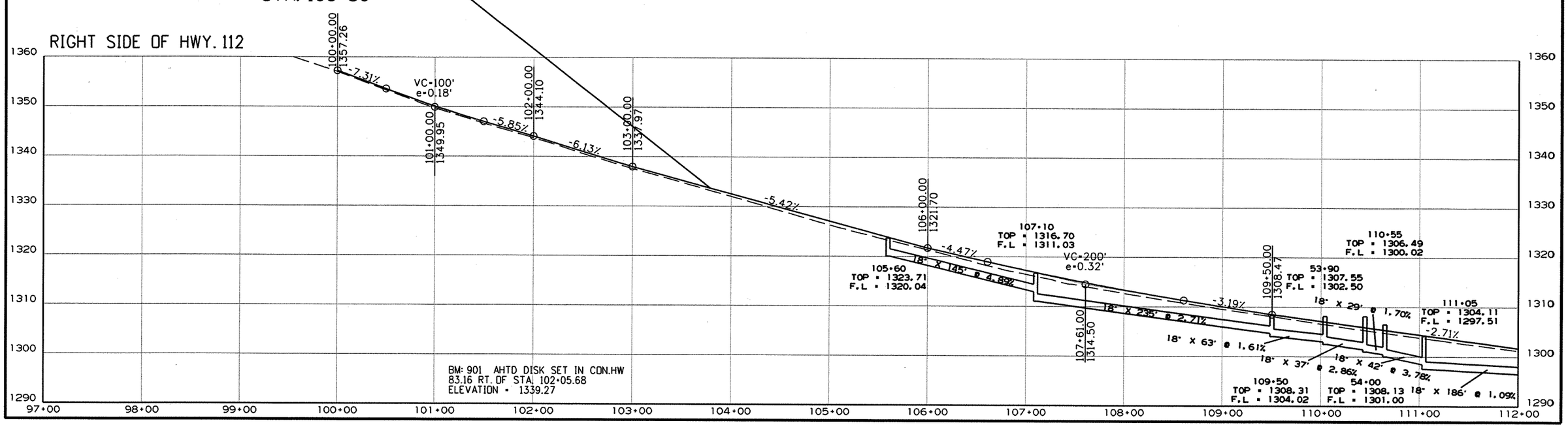


BEGIN JOB 040489
STA. 103+80



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				6	ARK.			
				JOB NO.		040489	43	113

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 8-27-12

CONCRETE WALKS (TYPE SPECIAL)

STA.	STA.	SIDE	SQ. YD.
115+03	116+49	LT.	81
116+65	117+19	LT.	30
116+75	117+19	LT.	
117+36	117+78	LT.	23
117+98	118+94	LT.	53

HAND RAILING

LIN. FT.
44
42
96

STA. 112+54 IN PLACE
18" x 26' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 113+43 INSTALL
YARD DRAIN ON LT.
12" X 38' PIPE CULVERT
LT. SIDE DRAIN
TO YARD DRAIN ON LT.

STA. 113+57 IN PLACE
18" x 19' STEEL PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 113+84 INSTALL
YARD DRAIN ON LT.
12" X 44' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 113+98 IN PLACE
18" x 20' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 20 CU. YDS.

STA. 114+63 INSTALL
YARD DRAIN ON LT.
12" X 33' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 114+30 CONSTRUCT
DROP INLET ON LT. H= 5' 6"
WITH 4' EXTENSION AND 18" x 196'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 114+76 IN PLACE
18" x 16' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 114+97 IN PLACE
18" x 19' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 116+57 IN PLACE
18" x 20' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 35 CU. YDS.

STA. 117+28 IN PLACE
24" x 20' PLASTIC PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 75 CU. YDS.

STA. 117+88 IN PLACE
24" x 30' PLASTIC PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 45 CU. YDS.

STA. 116+30 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
18" x 236' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 118+70 CONSTRUCT
DROP INLET ON LT. H= 4' 0"
24" x 269' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 121+45 CONSTRUCT
DROP INLET ON LT. H= 5' 5"
WITH 4' EXTENSION AND 30" x 16'
R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES
TYPE C DROP INLET = 5' x 5'

STA. 118+82 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.5 SQ. YDS.

STA. 119+51 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 119+20 IN PLACE
24" x 48' PLASTIC PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 120+89 IN PLACE
24" x 30' PLASTIC PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 50 CU. YDS.

STA. 121+45 IN PLACE
24" x 33' R.C. PIPE CULVERT
C.L. CROSS DRAIN
REMOVE

STA. 122+15 IN PLACE
24" x 21' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

STA. 122+56 CONSTRUCT
APPROACH ON LT. = 35 CU. YDS.

CONCRETE WALKS (TYPE SPECIAL)

STA.	STA.	SIDE	SQ. YD.
119+33	120+78	LT.	83
119+36	120+25	LT.	
121+00	121+30	LT.	17
121+65	122+05	LT.	22
122+24	122+47	LT.	13
122+64	122+94	LT.	17

HAND RAILING

LIN. FT.
89

STA. 121+51 CONSTRUCT
DROP INLET ON LT. H= 5' 4"
30" x 16' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES
TYPE C DROP INLET = 5' x 5'

WIRE FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.
124+77	125+25	LT.	4' CHAIN LINK	48

STA. 122+78 CONSTRUCT
DROP INLET ON LT. H= 4' 3"
24" x 122' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 123+50 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
18" x 4' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND
18" x 68' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 122+70 IN PLACE
24" x 12' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 123+14 IN PLACE
24" x 25' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 123+93 IN PLACE
24" x 16' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 124+67 IN PLACE
24" x 24' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 124+82 INSTALL
YARD DRAIN ON LT.
12" X 46' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 122+82 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 123+51 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 126+04 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 126+73 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 124+35 CONSTRUCT
DROP INLET ON LT. H= 3' 5"
18" x 82' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

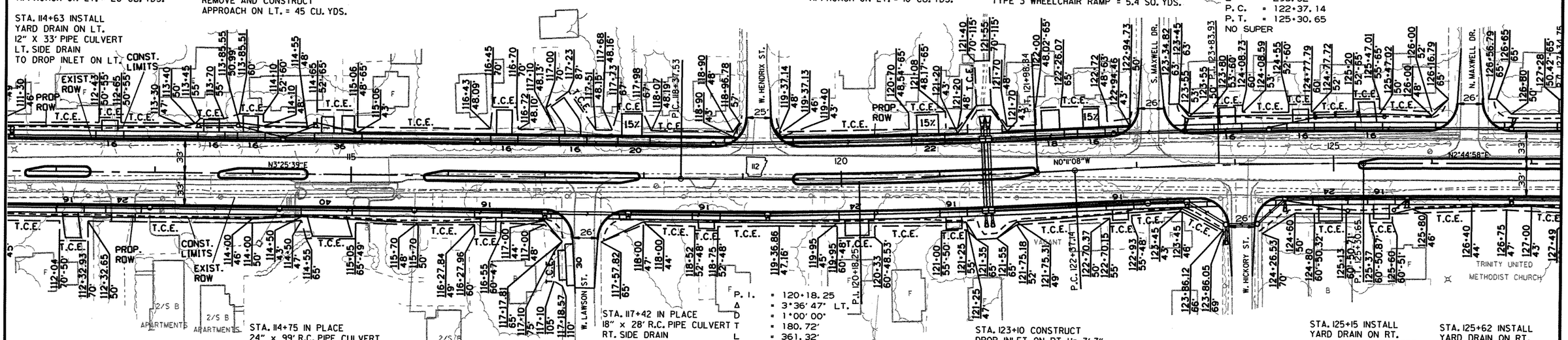
STA. 125+36 IN PLACE
24" x 28' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 25 CU. YDS.

STA. 125+52 INSTALL
YARD DRAIN ON LT.
12" X 68' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 126+80 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
18" x 3' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND
18" x 242' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 126+37 IN PLACE
24" x 34' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

P. I. = 123+83.93
Δ = 2°56' 07" RT.
D = 1°00' 00"
T = 146.79'
L = 293.52'
P. C. = 122+37.14
P. T. = 125+30.65
NO SUPER



STA. 112+15 IN PLACE
24" x 36' PLASTIC PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 112+65 IN PLACE
18" x 40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT.

STA. 112+95 CONSTRUCT
DROP INLET ON RT. H= 4' 11"
WITH 4' EXTENSION AND 18" x 128'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 114+27 CONSTRUCT
DROP INLET ON RT. H= 4' 6"
24" x 135' PIPE CULVERT
TO DROP INLET ON RT.
CONNECT TO EXIST. 18" C.M. PIPE CULVERT
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 114+75 IN PLACE
24" x 99' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 30 CU. YDS.

STA. 116+24 IN PLACE
18" x 15' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 116+42 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 115+66 CONSTRUCT
DROP INLET ON RT. H= 3' 10"
WITH 4' EXTENSION AND 24" x 130'
PIPE CULVERT TO DROP INLET ON RT.
CONNECT TO EXIST. 18" C.M. PIPE CULVERT
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 117+00 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 30" x 80'
R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 117+04 IN PLACE
18" x 15' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 117+06 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.9 SQ. YDS.

STA. 117+76 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 117+30 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 117+85 CONSTRUCT
DROP INLET ON RT. H= 4' 0"
WITH OPENING IN BACK AND 30" x 136'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 119+25 CONSTRUCT
DROP INLET ON RT. H= 5' 2"
WITH OPENING IN BACK AND 30" x 216'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 117+42 IN PLACE
18" x 28' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

P. I. = 120+18.25
Δ = 3°36' 47" LT.
D = 1°00' 00"
T = 180.72'
L = 361.32'
P. C. = 118+37.53
P. T. = 121+98.84
NO SUPER

STA. 118+63 IN PLACE
24" x 30' PLASTIC PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 119+76 IN PLACE
24" x 36' PLASTIC PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 120+15 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 121+13 IN PLACE
24" x 24' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 124+02 IN PLACE
18" x 8' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 122+81 IN PLACE
24" x 36' PLASTIC PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 121+45 CONSTRUCT
DROP INLET ON RT. H= 5' 0"
WITH 4' EXTENSION AND 18" x 7'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
WITH FES AND 30" x 67'
R.C. PIPE CULVERT (CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE C DROP INLET = 5' x 5'

STA. 121+51 CONSTRUCT
DROP INLET ON RT. H= 5' 0"
18" x 7' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND 30" x 67'
R.C. PIPE CULVERT (CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE C DROP INLET = 5' x 5'

STA. 123+10 CONSTRUCT
DROP INLET ON RT. H= 3' 7"
30" x 154' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 123+70 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 124+40 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 124+05 IN PLACE
24" x 25' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 124+97 IN PLACE
18" x 40' PLASTIC PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 20 CU. YDS.

STA. 125+49 IN PLACE
18" x 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 125+15 INSTALL
YARD DRAIN ON RT.
12" X 62' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 125+62 INSTALL
YARD DRAIN ON RT.
12" X 15' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 123+50 CONSTRUCT
DROP INLET ON RT. H= 3' 1"
WITH OPENING IN BACK AND 30" x 35'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 123+90 CONSTRUCT
DROP INLET ON RT. H= 2' 9"
18" x 12' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND 24" x 42'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 124+21 CONSTRUCT
DROP INLET ON RT. H= 2' 7"
18" x 27' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 124+50 CONSTRUCT
DROP INLET ON RT. H= 2' 6"
18" x 3' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND 18" x 34'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 125+75 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 18" x 120'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 126+80 CONSTRUCT
DROP INLET ON RT. H= 3' 7"
WITH OPENING IN BACK AND 18" x 101'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

GARLAND AVENUE

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NOTE:
FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

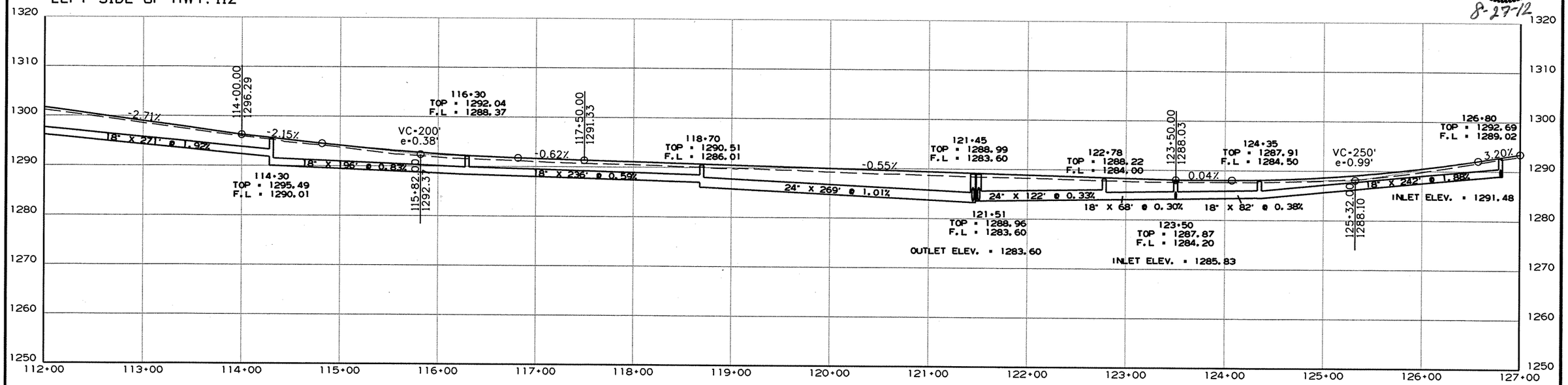
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	44	113

(2) PLAN AND PROFILE SHEETS

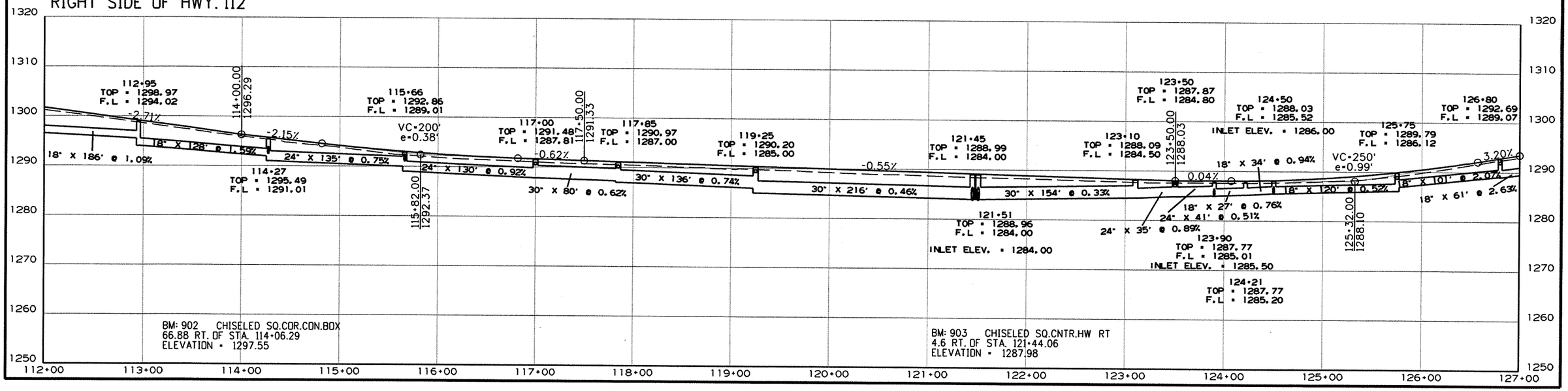
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

Trinity D. Smith 8-27-12

LEFT SIDE OF HWY. 112



RIGHT SIDE OF HWY. 112



8/17/2012

R040489.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.		040489	45	113

(2) PLAN AND PROFILE SHEETS

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

8-27-12

WIRE FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.
129+08	129+52	LT.	4' CHAIN LINK	45
135+77	136+28	LT.	4' CHAIN LINK	51

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
135+77	136+28	LT.	94
140+02		LT.	12

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
129+08		LT.	22
129+83		LT.	20

STA. 127+68 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.2 SQ. YDS.

STA. 128+57 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.2 SQ. YDS.

STA. 127+40 IN PLACE
24" x 19' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 128+06 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 129+64 IN PLACE
18" x 28' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 129+97 IN PLACE
24" x 24' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 130+15 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 130+60 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH 4' EXTENSION AND 18" x 113'
R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 131+75 CONSTRUCT
JUNCTION BOX ON LT. H= 3' 8"
18" x 38' PIPE CULVERT
TO DROP INLET ON LT.
TYPE E JUNCTION BOX = 4' x 4'

STA. 130+88 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.3 SQ. YDS.

STA. 130+97 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.1 SQ. YDS.

STA. 131+67 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.0 SQ. YDS.

STA. 132+06 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.6 SQ. YDS.

STA. 131+32 IN PLACE
18" x 64' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 132+36 IN PLACE
18" x 15' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 133+20 INSTALL
YARD DRAIN ON LT.
12" X 85' PIPE CULVERT
LT. SIDE DRAIN
TO YARD DRAIN ON LT.

STA. 133+38 IN PLACE
18" x 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 134+05 INSTALL
YARD DRAIN ON LT.
12" X 39' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 134+20 IN PLACE
24" x 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 135+10 IN PLACE
24" x 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT.

STA. 132+15 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH 4' EXTENSION AND
OPENING IN BACK AND 18" x 227'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 134+45 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH OPENING IN BACK AND 24" x 81'
PIPE CULVERT TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 135+30 CONSTRUCT
JUNCTION BOX ON LT. H= 3' 8"
WITH OPENING IN BACK AND 24" x 96'
PIPE CULVERT TO DROP INLET ON LT.
TYPE E JUNCTION BOX = 4' x 4'

STA. 135+60 IN PLACE
24" x 26' PLASTIC PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 137+02 IN PLACE
24" x 16' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT.

STA. 136+30 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH OPENING IN BACK AND 30" x 91'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 137+27 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH OPENING IN BACK AND 30" x 203'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 137+96 IN PLACE
24" x 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT.

STA. 138+56 INSTALL
YARD DRAIN ON LT.
12" X 76' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 138+70 IN PLACE
24" x 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 139+50 INSTALL
YARD DRAIN ON LT.
12" X 15' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 139+35 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH OPENING IN BACK AND 30" x 140'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 139+63 IN PLACE
24" x 19' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 140+00 INSTALL
YARD DRAIN ON LT.
12" X 40' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 140+12 IN PLACE
24" x 25' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 140+80 CONSTRUCT
DROP INLET ON LT. H= 3' 11"
18" x 18' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND
30" x 47' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
WITH FES
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 140+71 IN PLACE
24" x 17' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 141+13 IN PLACE
24" x 33' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 140+41 INSTALL
YARD DRAIN ON LT.
12" X 39' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

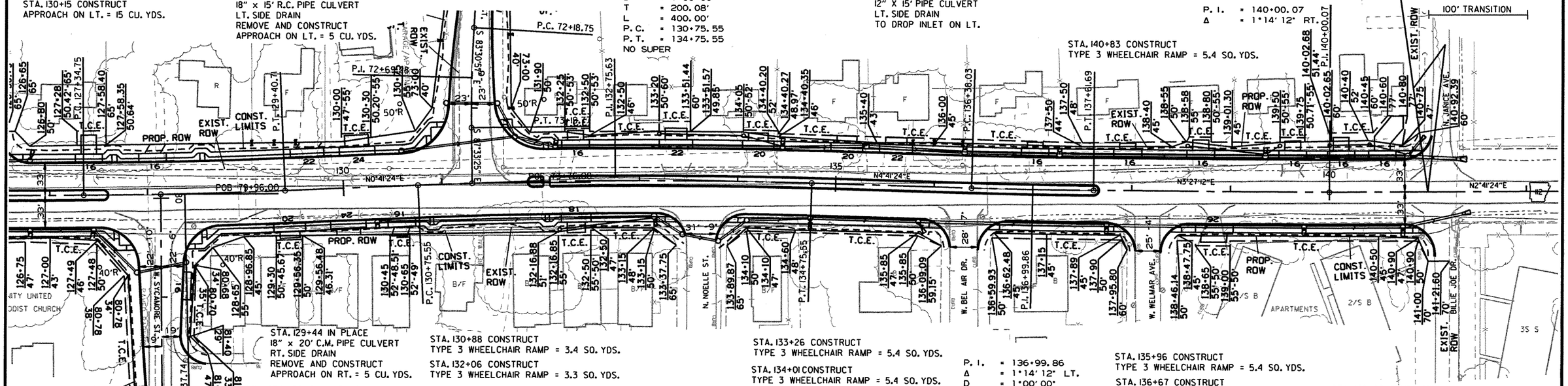
STA. 140+54 CONSTRUCT
APPROACH ON LT. = 25 CU. YDS.

STA. 141+00
END JOB 040489

P. I. = 132+75.63
Δ = 4°00' 00" RT.
D = 1°00' 00"
T = 200.08'
L = 400.00'
P. C. = 130+75.55
P. T. = 134+75.55
NO SUPER

P. I. = 140+00.07
Δ = 1°14' 12" RT.

STA. 140+83 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.



STA. 127+68 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.0 SQ. YDS.

STA. 127+78 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.1 SQ. YDS.

STA. 128+47 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.1 SQ. YDS.

STA. 128+57 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 4.1 SQ. YDS.

P. I. = 128+37.74
Δ = 2°03' 34" LT.
D = 1°00' 00"
T = 102.99'
L = 205.96'
P. C. = 127+34.75
P. T. = 129+40.71
NO SUPER

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
128+63	128+74	RT.	15

STA. 129+44 IN PLACE
18" x 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 130+04 IN PLACE
18" x 20' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT.

STA. 130+58 IN PLACE
18" x 20' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT.

STA. 127+45 CONSTRUCT
DROP INLET ON RT. H= 3' 11"
WITH OPENING IN BACK AND 18" x 61'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 130+33 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 18" x 276'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 130+88 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.4 SQ. YDS.

STA. 132+06 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 3.3 SQ. YDS.

STA. 131+77 IN PLACE
18" x 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 132+18 INSTALL
YARD DRAIN ON RT.
12" X 94' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 132+36 IN PLACE
18" x 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 133+88 IN PLACE
DROP INLET ON RT.
REMOVE

STA. 133+39 IN PLACE
DROP INLET ON RT. WITH
30" x 46' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 133+15 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH 4' EXTENSION AND 18" x 2'
R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND
18" x 29' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 133+44 CONSTRUCT
DROP INLET ON RT. H= 3' 3"
18" x 33' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 133+26 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 134+01 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 133+81 CONSTRUCT
DROP INLET ON RT. H= 3' 2"
18" x 32' PIPE CULVERT
TO JUNCTION BOX ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 134+10 CONSTRUCT
JUNCTION BOX ON RT. H= 3' 10"
18" x 61' PIPE CULVERT
TO DROP INLET ON RT.
TYPE E JUNCTION BOX = 4' x 4'

STA. 134+75 CONSTRUCT
DROP INLET ON RT. H= 3' 7"
18" x 3' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND
18" x 106' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

P. I. = 136+99.86
Δ = 1°14' 12" LT.
D = 1°00' 00"
T = 61.83'
L = 123.66'
P. C. = 136+38.03
P. T. = 137+61.69
NO SUPER

STA. 135+85 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
18" x 5' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND
24" x 187' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 137+75 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 24" x 196'
R.C. PIPE CULVERT (CLASS V) (TYPE 3 BEDDING)
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 135+96 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 136+67 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 137+82 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 138+51 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 136+36 IN PLACE
24" x 40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 138+16 IN PLACE
18" x 40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 138+84 IN PLACE
24" x 40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 140+85 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 141+06 IN PLACE
24" x 38' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 139+75 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 24" x 96'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 140+75 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 24" x 59'
R.C. PIPE CULVERT (CLASS V) (TYPE 3 BEDDING)
WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	46	113

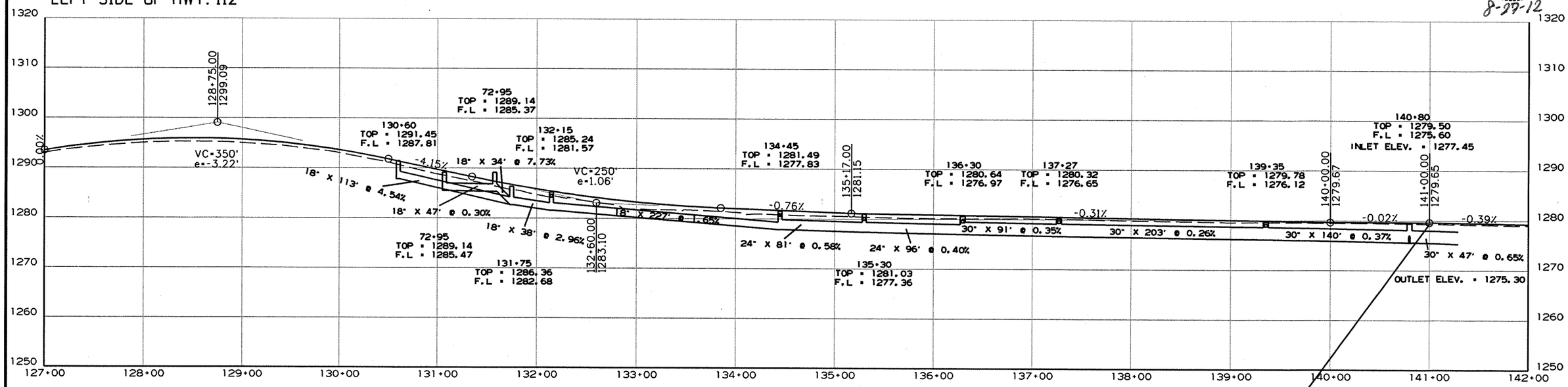
(2) PLAN AND PROFILE SHEETS

NOTE:
FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

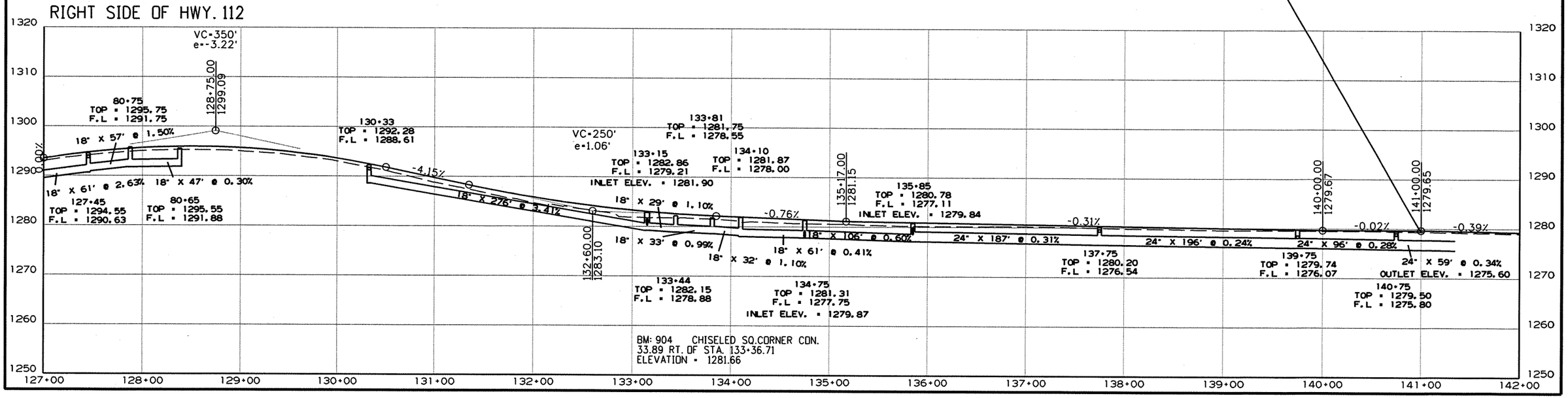
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

Trinity Smith 8-27-12

LEFT SIDE OF HWY. 112



RIGHT SIDE OF HWY. 112



8/17/2012

R040489.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.		040489	47	113

(2) PLAN AND PROFILE SHEETS

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

8-27-12

CONSTRUCT WHEELCHAIR PLATFORM AT BUS STOP.
REFER TO SPECIAL DETAILS.

STA. 50+85 CONSTRUCT
DROP INLET ON LT. H= 2' 6"
18" x 14' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 52+20 CONSTRUCT
DROP INLET ON LT. H= 3' 9"
18" x 60' PIPE CULVERT
TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

P. I. = 51+44.56
Δ = 46°44' 08" LT.
D = 36°57' 54"
T = 66.97'
L = 126.43'
P. C. = 50+77.59
P. T. = 52+04.02
NO SUPER

STA. 54+00 CONSTRUCT
DROP INLET ON LT. H= 7' 2"
18" x 24' PIPE CULVERT
TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 54+60 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 12+61 IN PLACE
40" x 40' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 12+75 IN PLACE
JUNCTION BOX ON LT
REMOVE

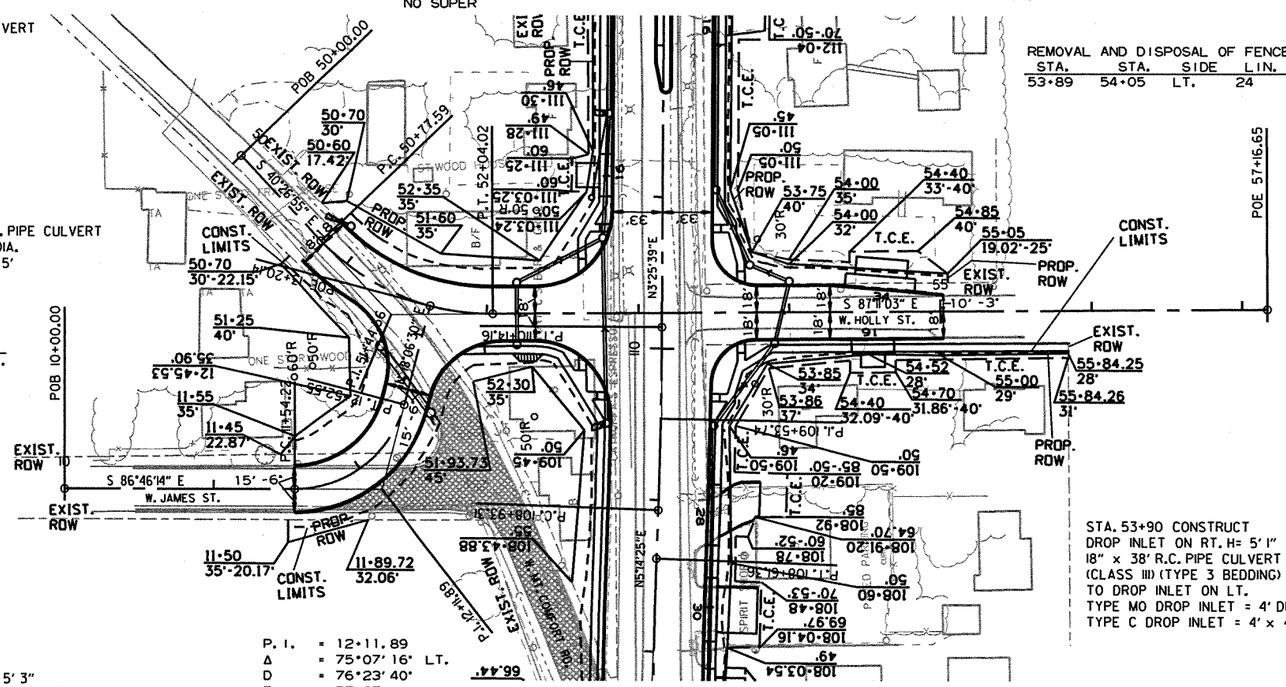
STA. 12+86 CONSTRUCT
DROP INLET ON LT. H= 5' 9"
WITH 4' EXTENSION
CONNECT TO EXIST. 40" R.C. PIPE CULVERT
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
12+66	12+70	LT.	11

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
53+89	54+05	LT.	24



STA. 53+90 CONSTRUCT
DROP INLET ON RT. H= 5' 1"
18" x 38' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 54+55 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 12+52 CONSTRUCT
DROP INLET ON RT. H= 5' 3"
WITH 8' EXTENSION AND 42" x 6'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET ON RT.
AND 42" x 51' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

P. I. = 12+11.89
Δ = 75°07' 16" LT.
D = 76°23' 40"
T = 57.67'
L = 98.33'
P. C. = 11+54.22
P. T. = 12+52.55
NO SUPER

STA. 52+20 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
18" x 37' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

OBLITERATION OF MT. COMFORT RD. WILL BE PAID FOR AS UNCLASSIFIED EXCAVATION.

8/17/2012

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JAMES ST. / HOLLY ST.

NOTE:
FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

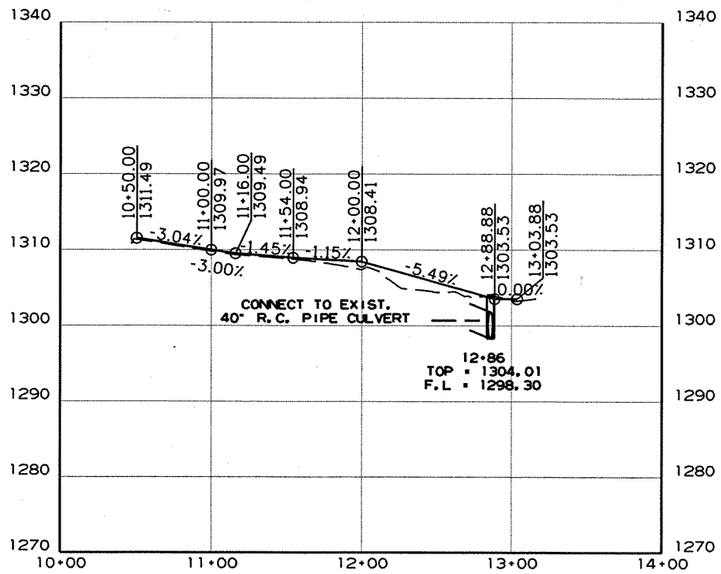
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	48	113

(2) PLAN AND PROFILE SHEETS

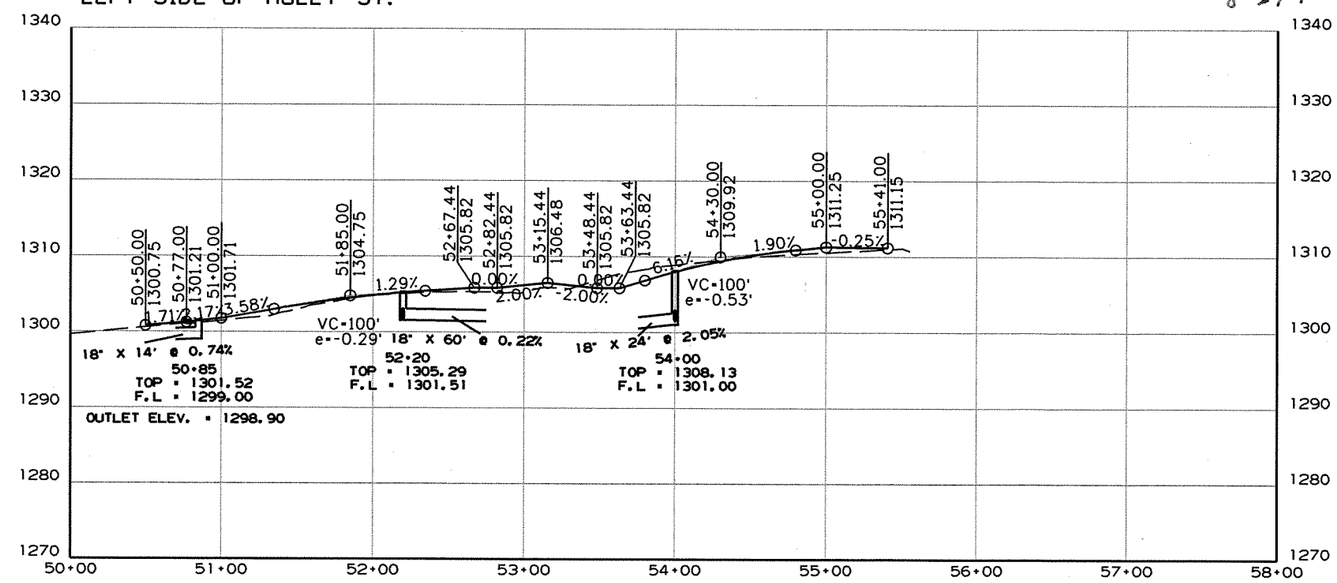
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12

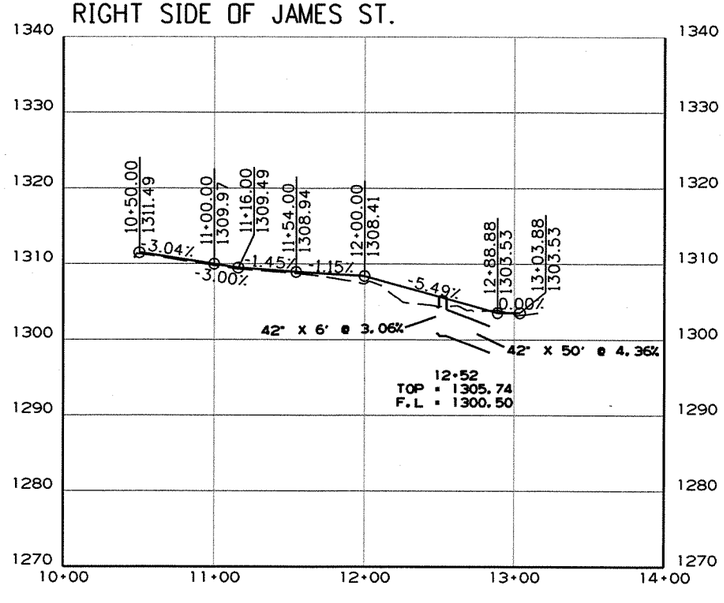
LEFT SIDE OF JAMES ST.



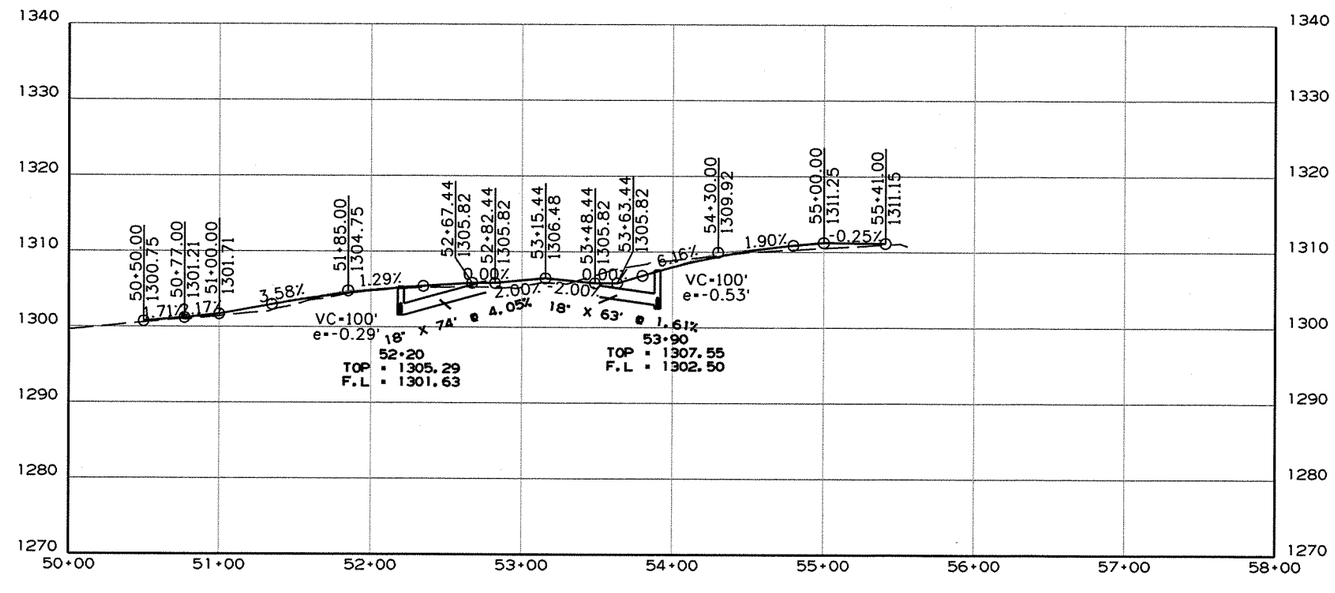
LEFT SIDE OF HOLLY ST.



RIGHT SIDE OF JAMES ST.



RIGHT SIDE OF HOLLY ST.



8/17/2012

R040489.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.		040489	49	113

(2) PLAN AND PROFILE SHEETS

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

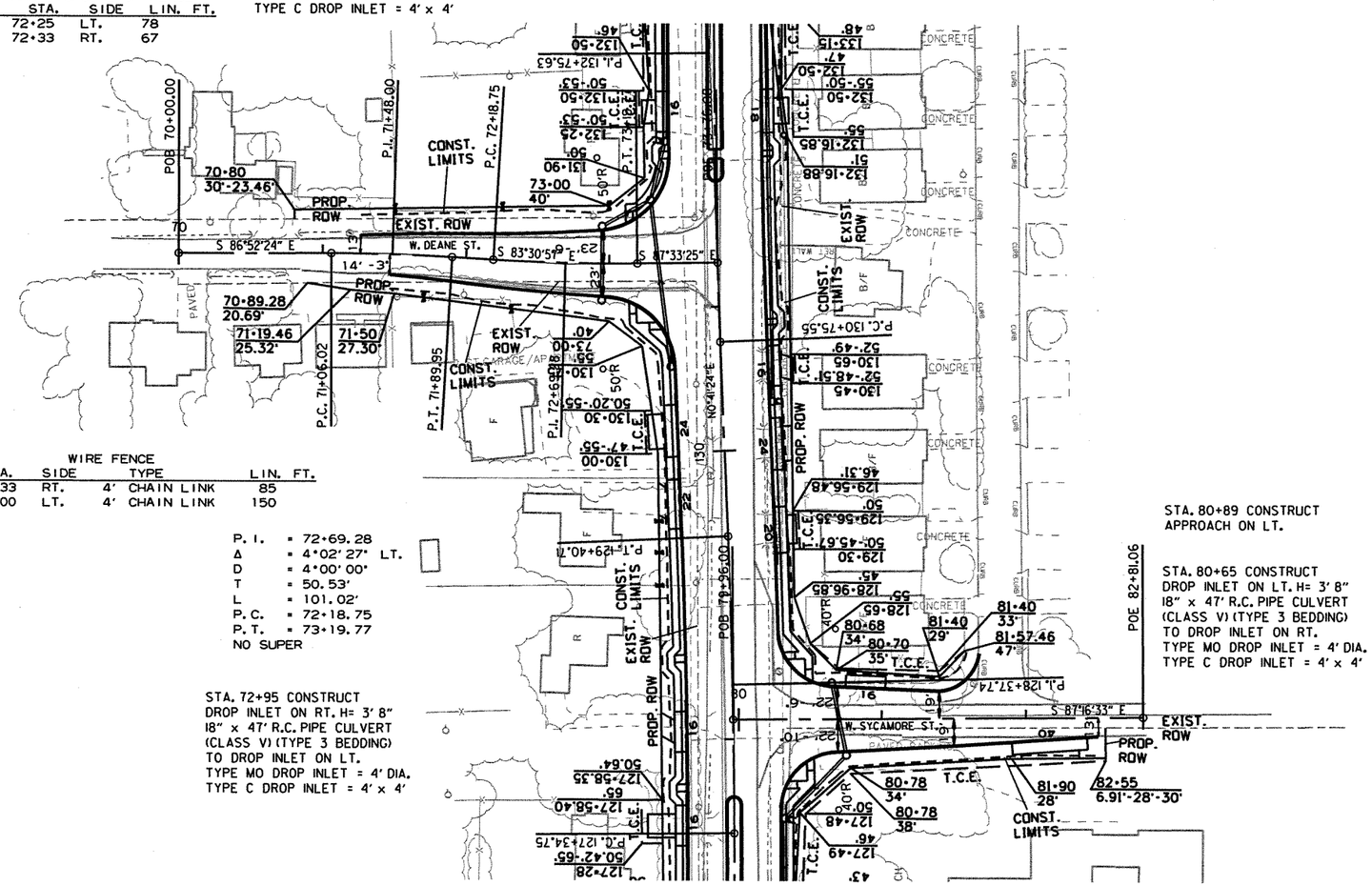
8-27-12

P.I. = 71+48.00
Δ = 3°21'26" RT.
D = 4°00'00"
T = 41.98'
L = 83.93'
P.C. = 71+06.02
P.T. = 71+89.95
NO SUPER

STA. 72+95 CONSTRUCT
DROP INLET ON LT. H= 3' 9"
18" x 34' PIPE CULVERT
TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
71+48	72+25	LT.	78
71+71	72+33	RT.	67



WIRE FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.
71+48	72+33	RT.	4' CHAIN LINK	85
71+49	73+00	LT.	4' CHAIN LINK	150

P.I. = 72+69.28
Δ = 4°02'27" LT.
D = 4°00'00"
T = 50.53'
L = 101.02'
P.C. = 72+18.75
P.T. = 73+19.77
NO SUPER

STA. 72+95 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
18" x 47' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 80+89 CONSTRUCT
APPROACH ON LT.

STA. 80+65 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
18" x 47' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 80+75 CONSTRUCT
DROP INLET ON RT. H= 4' 0"
18" x 57' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 82+17 CONSTRUCT
APPROACH ON RT.

8/17/2012

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DEANE ST. / SYCAMORE ST.

NOTE:
FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

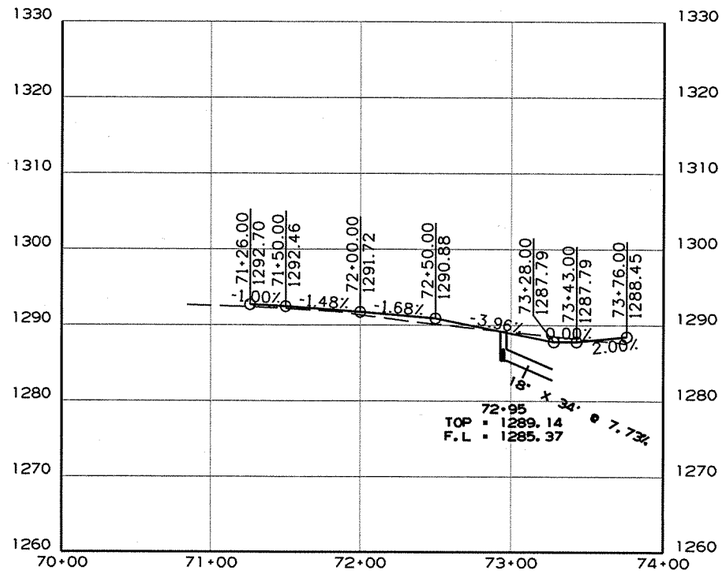
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	50	113

(2) PLAN AND PROFILE SHEETS

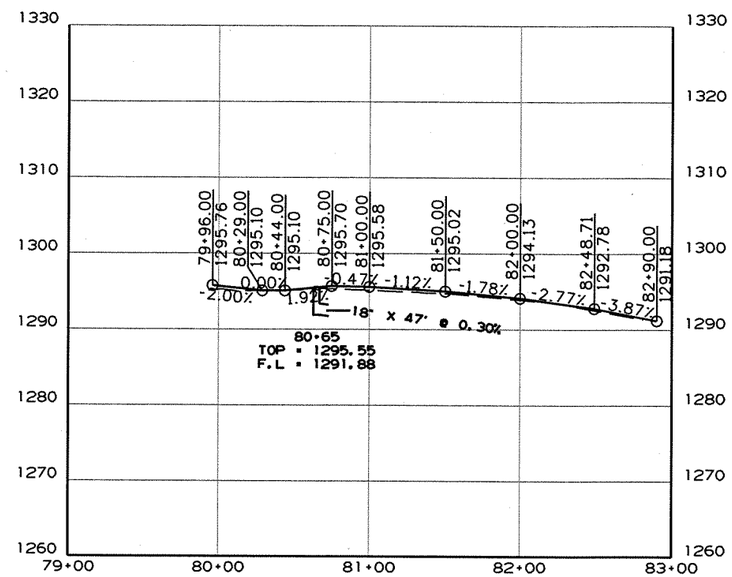
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12

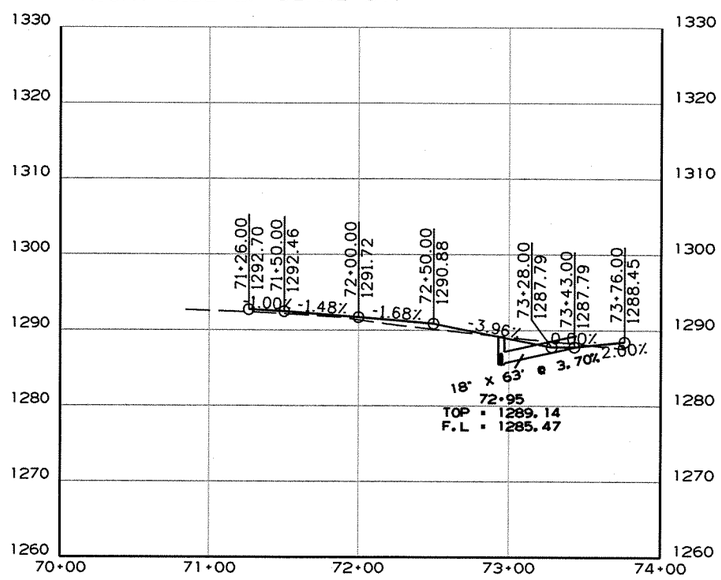
LEFT SIDE OF DEANE ST.



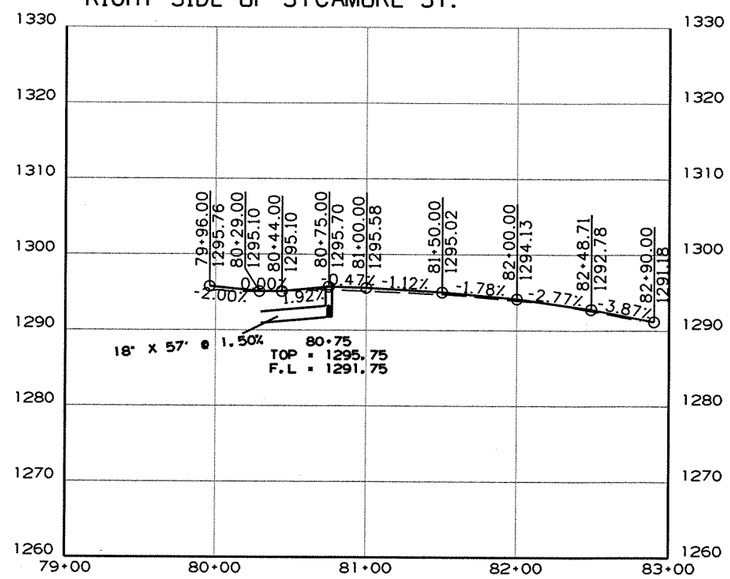
LEFT SIDE OF SYCAMORE ST.



RIGHT SIDE OF DEANE ST.



RIGHT SIDE OF SYCAMORE ST.



8/17/2012

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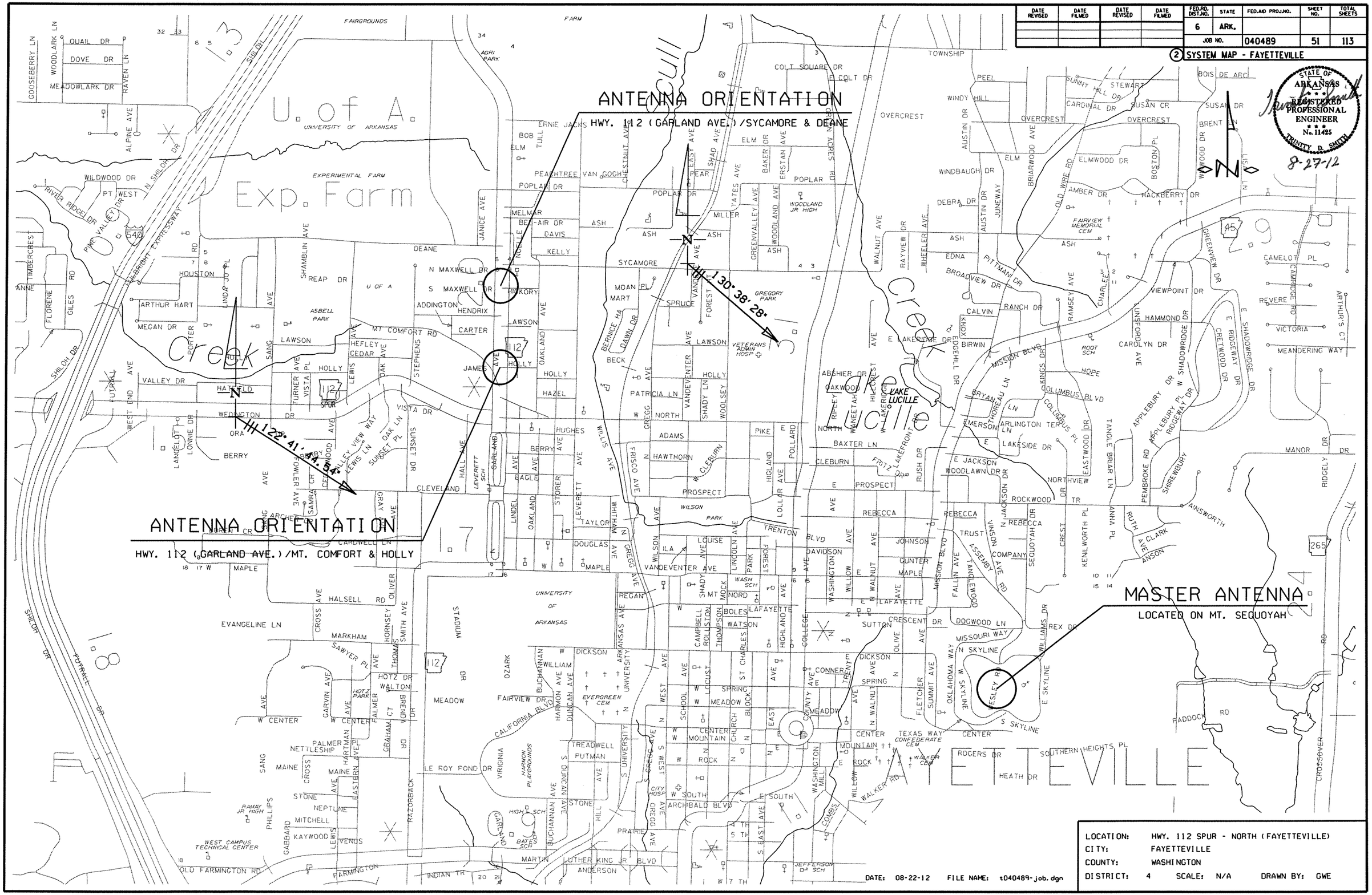
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	51	113

2 SYSTEM MAP - FAYETTEVILLE

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

8-27-12



LOCATION:	HWY. 112 SPUR - NORTH (FAYETTEVILLE)
CITY:	FAYETTEVILLE
COUNTY:	WASHINGTON
DISTRICT: 4	SCALE: N/A
DRAWN BY:	GWE

DATE: 08-22-12 FILE NAME: t040489-job.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.		040489	52	113

(2) SIGNALIZATION PLAN SHEET

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

8-27-12

TRAFFIC SIGNAL NOTES:

1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2002) NATIONAL ELECTRICAL CODE, NFPA 101 (2000) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (EGC) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND EGC TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 AWG UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET SHALL HAVE 16 LOAD BAYS AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARDS AND DETAILS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PAVEMENT MARKING PLAN SHEETS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON SPECIAL DETAILS). PAYMENT WILL BE INCLUDED IN SECTION 714, AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
12. ALL BOXES SHALL BE (TYPE 2) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE 3" DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY.
17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, 38 FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF 21' SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL 6 FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS 6 FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
19. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714-TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION.
21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO ISMA STANDARDS.
22. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
23. TRAFFIC SIGNAL CONTRACTOR MUST NOTIFY RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

JOB 040489 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	HWY. 112/ MT.COMFORT & HOLLY	HWY. 112/ SYCAMORE & DEANE	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	1	2	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	9	12	21	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	3	2	5	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	12	20	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2306	5589	7895	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	236	246	482	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	603	1336	1939	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	20	40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	20	40	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	20	40	LIN. FT.
710	NON-METALLIC CONDUIT (3")	600	1316	1916	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	8	17	25	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	1	2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	1	2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')		1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	2	1	3	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')		1	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	6	10	EACH
733	VIDEO CABLE	1252	1684	2936	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	• 7	6	13	EACH
733	VIDEO MONITOR (CLR)	1	1	2	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	• 5	4	9	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	2	4	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	1	2	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	591	1480	2071	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	180	275	455	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	20	40	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	6	10	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	770	1582	2352	LIN. FT.
SP	18" STREET NAME SIGN	6	6	12	EACH
SP	LOCAL RADIO WITH ANTENNA	1	1	2	EACH
SP	ANTENNA CABLE (TYPE 6)	70	70	140	LIN. FT.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	1	2	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE PROCESSOR SHALL BE SUPPLIED.

DATE: 08-22-12 FILE NAME: t040489-job.dgn

LOCATION: HWY. 112 SPUR - NORTH (FAYETTEVILLE)
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

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.		040489	53	113

(2) SIGNALIZATION PLAN SHEET

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

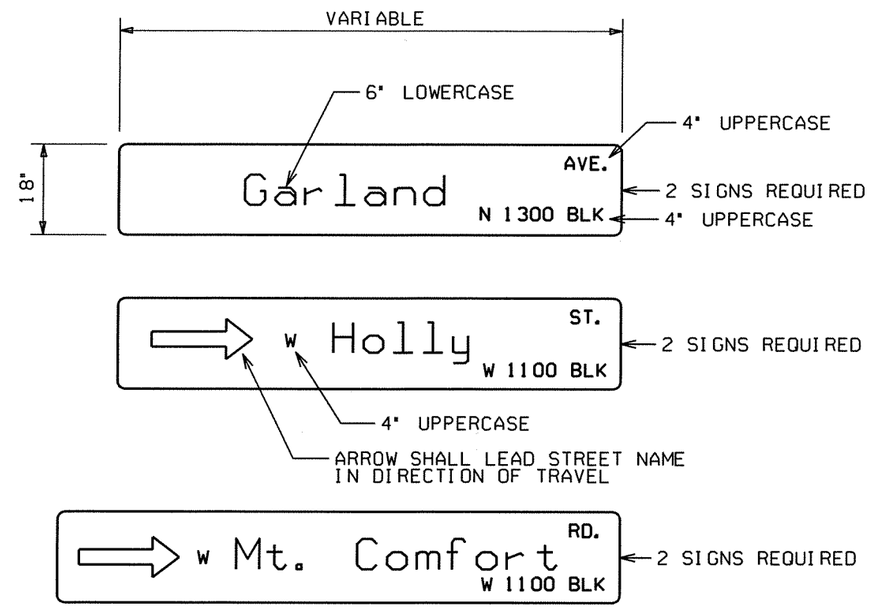
8-27-12

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	9	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	3	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2306	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	236	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	603	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	600	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	8	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	2	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	EACH
733	VIDEO CABLE	1252	LIN. FT.
• SP&733	VIDEO DETECTOR (CLR)	7	EACH
733	VIDEO MONITOR (CLR)	1	EACH
• SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	770	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	591	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	180	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	LOCAL RADIO WITH ANTENNA	1	EACH
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	18" STREET NAME SIGN	6	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

• QUANTITIES INCLUDE ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR.

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

DATE: 08-22-12 FILE NAME: t040489-01.dgn

LOCATION: HWY. 112 (GARLAND AVE.)/MT. COMFORT & HOLLY
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

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.		040489	54	113

(2) SIGNALIZATION PLAN SHEET

POLE DIMENSIONS
HWY. 112/MT. COMFORT RD. & HOLLY ST.

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	42'	180°	35'	10'	180°
B	N/A	N/A	15'	N/A	N/A
C	36'	270°	35'	10'	270°
D	N/A	N/A	15'	N/A	N/A
E	42'	180°	35'	10'	180°
F	N/A	N/A	15'	N/A	N/A
G	34'	270°	35'	10'	270°
H	N/A	N/A	15'	N/A	N/A

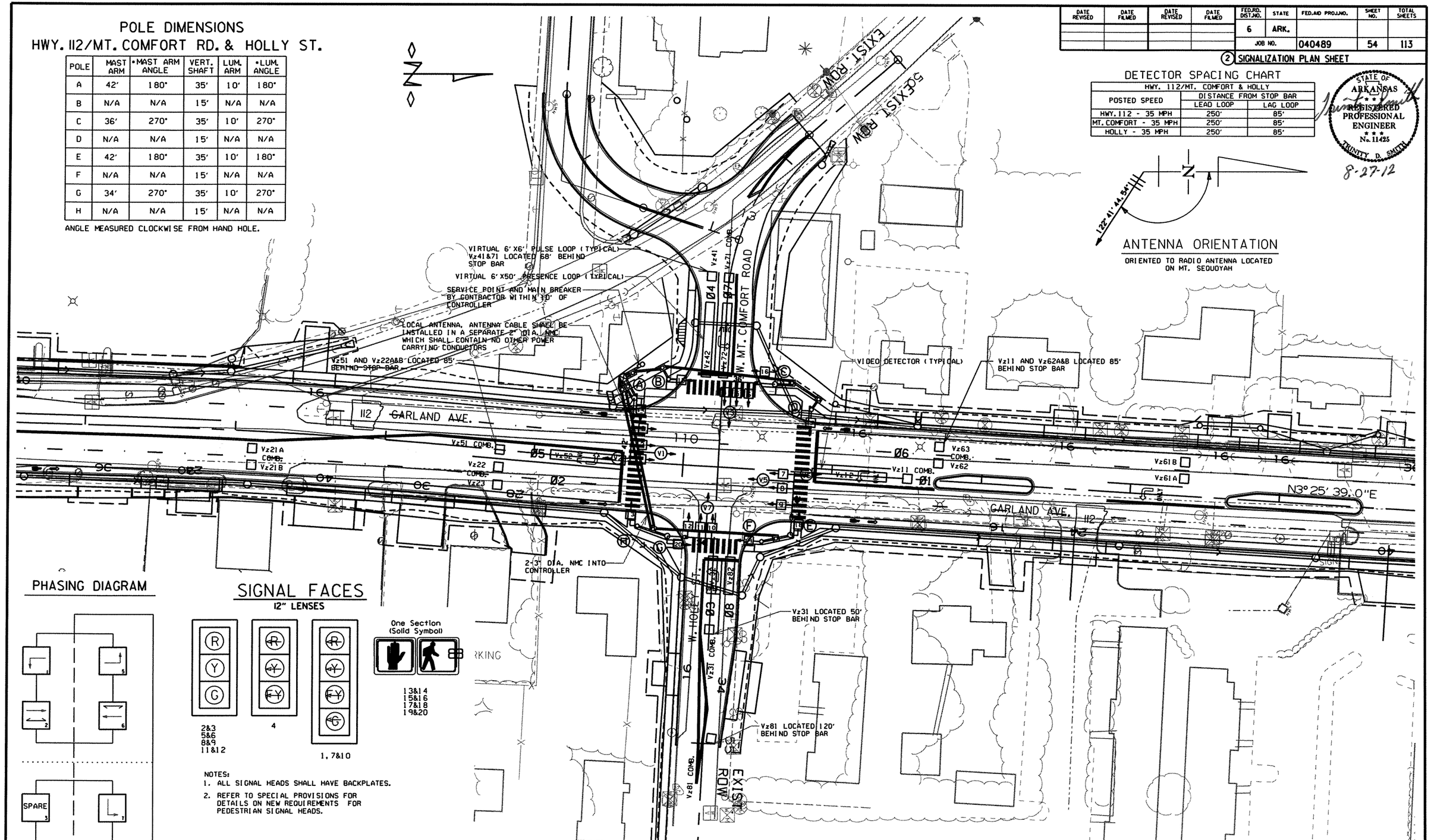
ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

DETECTOR SPACING CHART

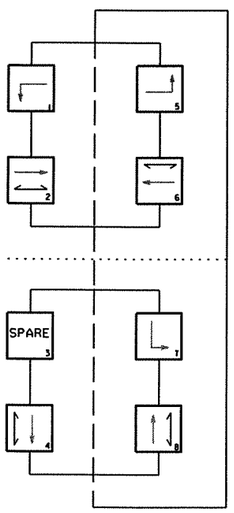
HWY. 112/MT. COMFORT & HOLLY		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
HWY. 112 - 35 MPH	250'	85'
MT. COMFORT - 35 MPH	250'	85'
HOLLY - 35 MPH	250'	85'

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

8-27-12



PHASING DIAGRAM



SIGNAL FACES
12" LENSES

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.

DATE: 08-22-12 FILE NAME: t040489-01.dgn

LOCATION: HWY. 112 (GARLAND AVE.)/MT. COMFORT & HOLLY
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

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.		040489	55	113

(2) SIGNALIZATION PLAN SHEET

DESIGN PARAMETERS

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

LOCATION OF STOP LINES
SHOWN ON PAVEMENT MARKING PLAN.
SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE
1.5 FEET FROM HWY. 112

POLE LOCATIONS
HWY. 112/MT. COMFORT & HOLLY

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 112 - STA. 109+64.11	42' LT.	669593.16, 642967.00
B	HWY. 112 - STA. 109+86.35	56' LT.	669616.34, 642979.51
C	HWY. 112 - STA. 110+58.04	57' LT.	669589.40, 642950.12
D	HWY. 112 - STA. 110+83.36	42' LT.	669711.90, 642959.32
E	HWY. 112 - STA. 110+74.97	42' RT.	669698.25, 642875.97
F	HWY. 112 - STA. 110+55.94	48' RT.	669679.02, 64871.58
G	HWY. 112 - STA. 109+92.84	48' RT.	669616.05, 642875.17
H	HWY. 112 - STA. 109+72.38	42' RT.	669595.74, 642881.90

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
8-27-12

VIRTUAL 6'X6' PULSE LOOP (TYPICAL) Vz41&71 LOCATED 68' BEHIND STOP BAR

VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER

LOCAL ANTENNA, ANTENNA CABLE SHALL BE INSTALLED IN A SEPARATE 2" DIA. NMC WHICH SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS

Vz51 AND Vz22A&B LOCATED 85' BEHIND STOP BAR

VIDEO DETECTOR (TYPICAL)

Vz11 AND Vz62A&B LOCATED 85' BEHIND STOP BAR

2-3" DIA. NMC INTO CONTROLLER

Vz31 LOCATED 50' BEHIND STOP BAR

Vz81 LOCATED 120' BEHIND STOP BAR

W. MT. COMFORT ROAD

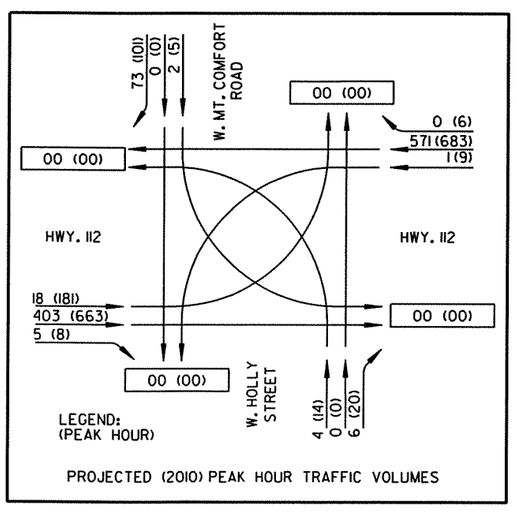
GARLAND AVE.

W. HOLLY ST.

Vz21A COMB.
Vz21B
Vz51 COMB.
Vz22 COMB.
Vz23
Vz52
Vz41
Vz71 COMB.
Vz42
Vz72
Vz63 COMB.
Vz62
Vz11 COMB.
Vz12
Vz61B
Vz61A
Vz31 COMB.
Vz32
Vz82

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø7 Ø8

TRAFFIC FLOW DIAGRAM



PROJECTED (2010) PEAK HOUR TRAFFIC VOLUMES

SCALE IN FEET
0 20 40 80

DATE: 08-22-12 FILE NAME: t040489-01.dgn

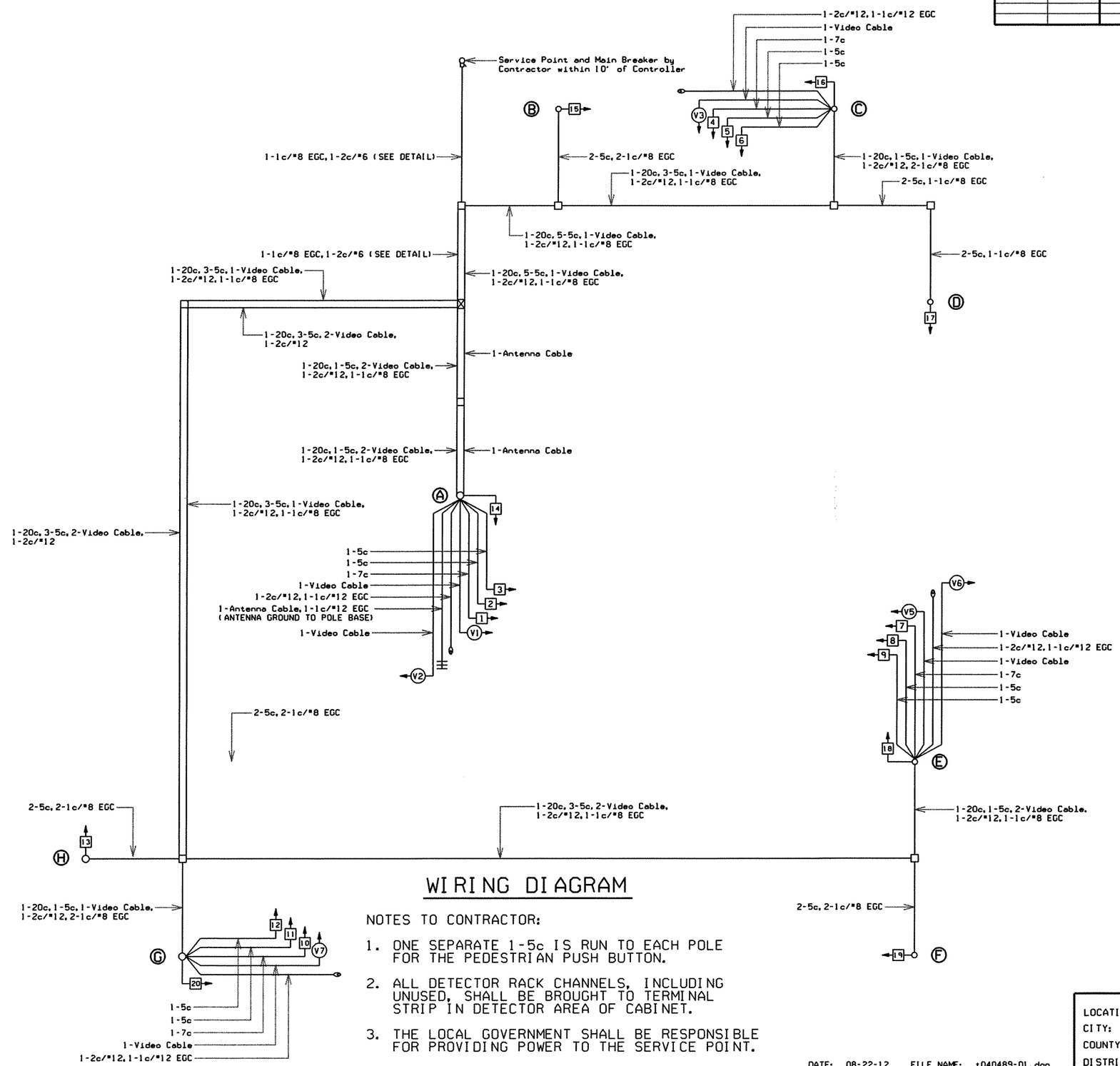
LOCATION: HWY. 112 (GARLAND AVE.)/MT. COMFORT & HOLLY
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=40' DRAWN BY: GWE

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.		040489	56	113

(2) SIGNALIZATION PLAN SHEET

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

8-27-12



WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

DATE: 08-22-12 FILE NAME: t040489-01.dgn

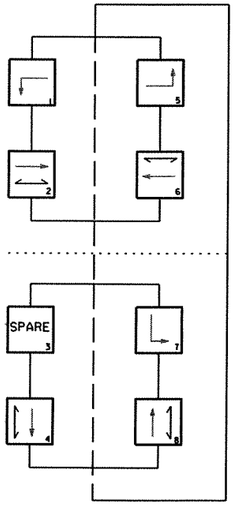
LOCATION: HWY.112 (GARLAND AVE.)/MT. COMFORT & HOLLY
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

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.		040489	57	113

(2) SIGNALIZATION PLAN SHEET

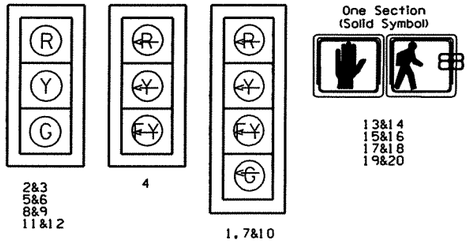
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-12

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.

DETECTOR SYSTEM DESCRIPTION: JOB 040489

FAYETTEVILLE - HWY. 112/MT. COMFORT & HOLLY DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP. #	PHS	SYSTEM DET. #			
Vz11	SB LEFT TURN FAR	COMB.			1	V9	1	9		CAMERA V1	23'
Vz12	SB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23'
Vz21A&B	NB ADVANCE	LOCAL			9	V2	2			CAMERA V2	74'
Vz22	NB INSIDE NEAR	COMB.			10	V10	2	10		CAMERA V5	23'
Vz23	NB OUTSIDE NEAR	COMB.			11	V12	2	12		CAMERA V5	23'
Vz31	WB LEFT TURN FAR	COMB.			17	V11	3	11		CAMERA V3	23'
Vz32	WB LEFT TURN	LOCAL			18	V3	3			CAMERA V3	23'
Vz41	EB ADVANCE	LOCAL			21	V4	4			CAMERA V7	23'
Vz42	EB NEAR	LOCAL			22	V4	4			CAMERA V7	23'
Vz51	NB LEFT TURN FAR	COMB.			13	V13	5	13		CAMERA V5	23'
Vz52	NB LEFT TURN	LOCAL			14	V5	5			CAMERA V5	23'
Vz61A&B	SB ADVANCE	LOCAL			5	V6	6			CAMERA V6	74'
Vz62	SB INSIDE NEAR	COMB.			6	V14	6	14		CAMERA V1	23'
Vz63	SB OUTSIDE NEAR	COMB.			7	V16	6	16		CAMERA V1	23'
Vz71	EB LEFT TURN FAR	COMB.			23	V15	7	15		CAMERA V7	23'
Vz72	EB LEFT TURN	LOCAL			24	V7	7			CAMERA V7	23'
Vz81	WB ADVANCE	LOCAL			19	V8	8			CAMERA V3	23'
Vz82	WB NEAR	LOCAL			20	V8	8			CAMERA V3	23'
PB2A&B	W. HOLLY ST. E. LEG	PED.				P2	2				
PB4A&B	HWY. 112 S. LEG	PED.				P4	4				
PB6A&B	MT. COMFORT RD. W. LEG	PED.				P6	6				
PB8A&B	HWY. 112 N. LEG	PED.				P8	8				
					SPARE 3, 4, 8, 12, 15, 16						

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

INTERVAL CHART

SIGNAL FACES	HWY. 112 (GARLAND AVE.)/MT. COMFORT & HOLLY												FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+7	CLR.	4+8	CLR.	
1	~~G~~	•	~~G~~	•	FY	•••	FY	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R
4	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	FY	•••	FY	•••	~~R~~
5&6	R	R	R	R	R	R	R	R	R	R	G	••	R
7	~~G~~	•	FY	•••	~~G~~	•	FY	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
8&9	R	R	R	R	G	••	G	••	R	R	R	R	R
10	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	FY	•••	~~R~~
11&12	R	R	R	R	R	R	R	R	G	••	G	••	R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	BLK
19&20	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLK

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

DATE: 08-22-12 FILE NAME: t040489-01.dgn

LOCATION: HWY. 112 (GARLAND AVE.)/MT. COMFORT & HOLLY
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

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.		040489	58	113

(2) SIGNALIZATION PLAN SHEET

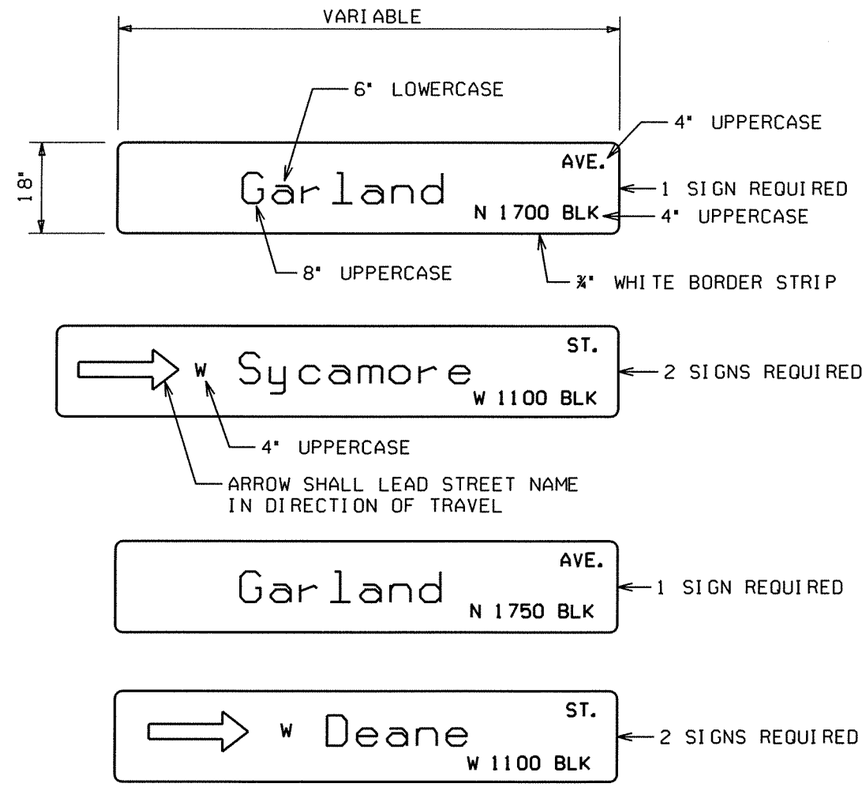
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	12	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	12	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	5589	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	246	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	1336	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	1316	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	17	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	6	EACH
733	VIDEO CABLE	1684	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	6	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1582	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	1480	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	275	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	LOCAL RADIO WITH ANTENNA	1	EACH
SP	LUMINAIRE ASSEMBLY	6	EACH
SP	18" STREET NAME SIGN	6	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

DATE: 08-22-12 FILE NAME: t040489-02.dgn

LOCATION: HWY. 112 (GARLAND AVE.)/SYCAMORE & DEANE
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

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.		040489	59	113

(2) SIGNALIZATION PLAN SHEET

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

8-27-12

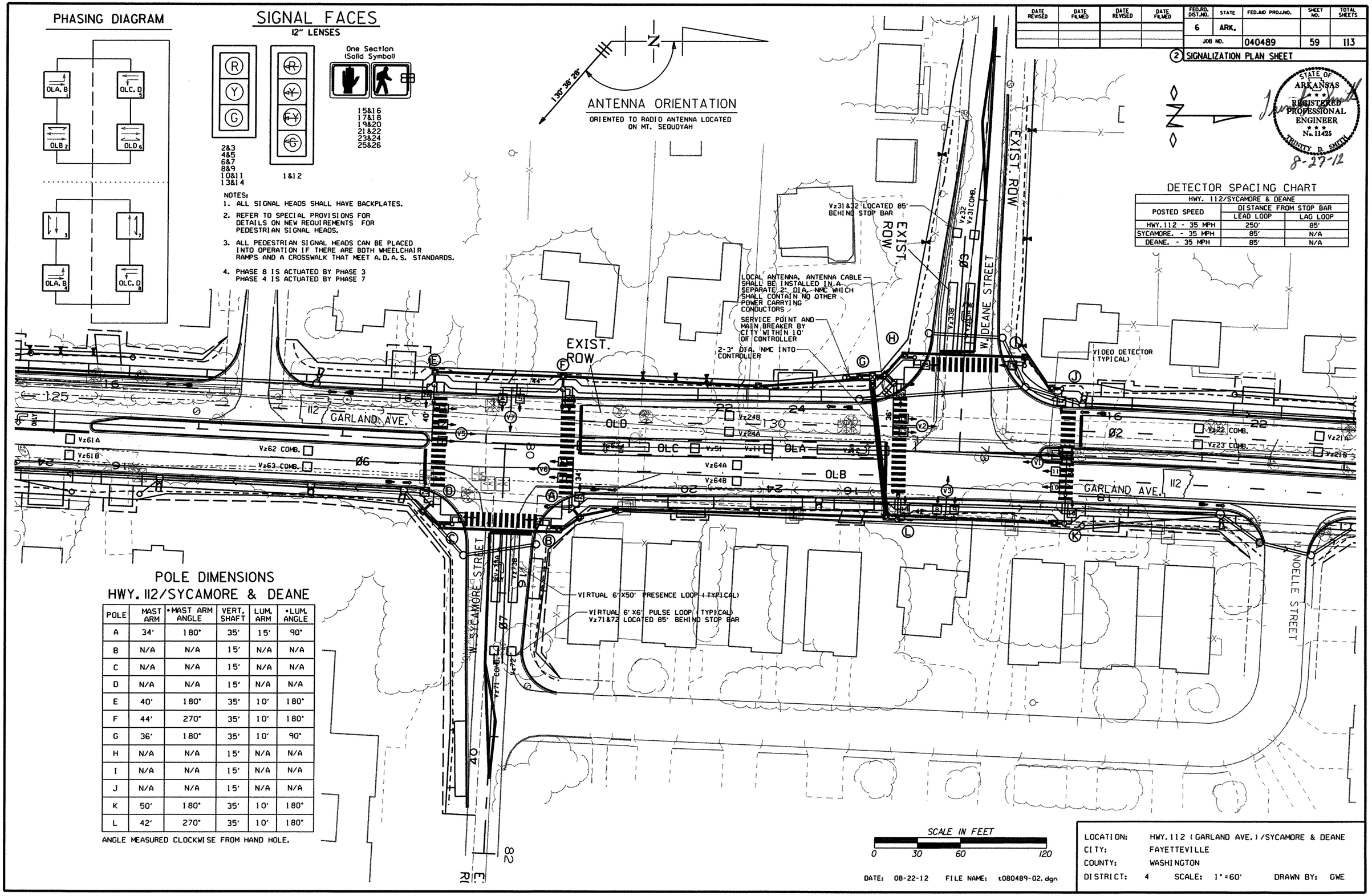
PHASING DIAGRAM

SIGNAL FACES

12" LENSES

NOTES:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.
4. PHASE 8 IS ACTUATED BY PHASE 3
   PHASE 4 IS ACTUATED BY PHASE 7



DETECTOR SPACING CHART

HWY. 112/SYCAMORE & DEANE		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
HWY.112 - 35 MPH	250'	85'
SYCAMORE. - 35 MPH	85'	N/A
DEANE. - 35 MPH	85'	N/A

POLE DIMENSIONS

HWY. 112/SYCAMORE & DEANE

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	34'	180°	35'	15'	90°
B	N/A	N/A	15'	N/A	N/A
C	N/A	N/A	15'	N/A	N/A
D	N/A	N/A	15'	N/A	N/A
E	40'	180°	35'	10'	180°
F	44'	270°	35'	10'	180°
G	36'	180°	35'	10'	90°
H	N/A	N/A	15'	N/A	N/A
I	N/A	N/A	15'	N/A	N/A
J	N/A	N/A	15'	N/A	N/A
K	50'	180°	35'	10'	180°
L	42'	270°	35'	10'	180°

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

DATE: 08-22-12 FILE NAME: t080489-02.dgn

LOCATION: HWY.112 (GARLAND AVE.)/SYCAMORE & DEANE
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

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.		040489	60	113

(2) SIGNALIZATION PLAN SHEET

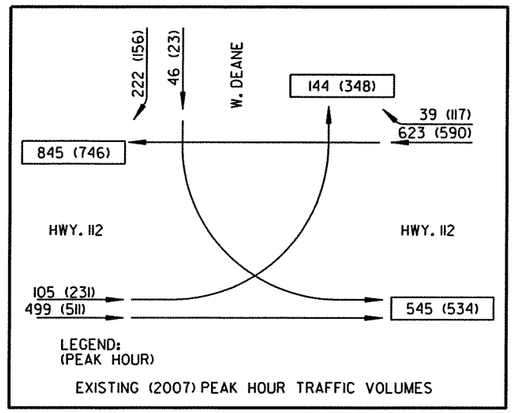
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12

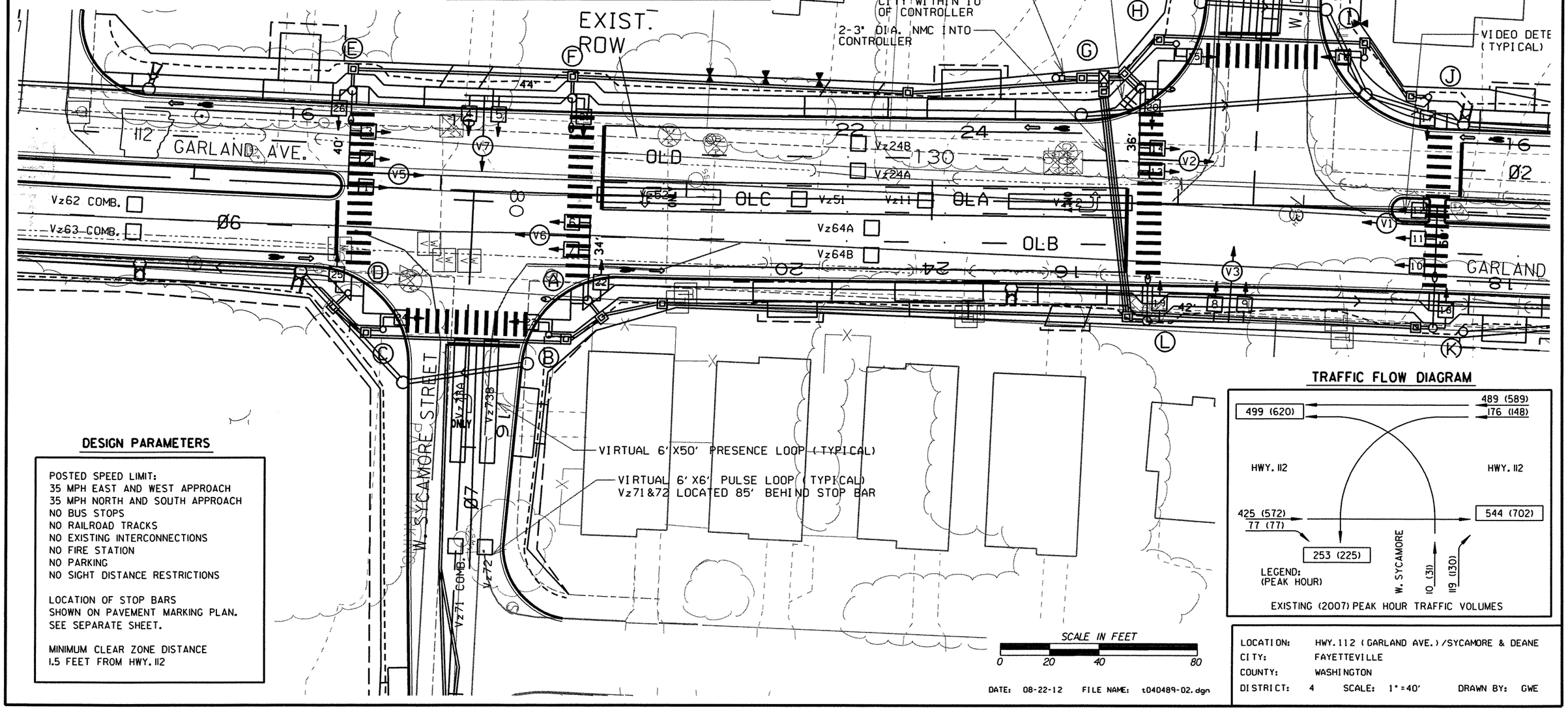
HWY. 112/SYCAMORE & DEANE POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 112 - STA. 128+61.41	43' RT.	669682.51, 644905.69
B	HWY. 112 - STA. 128+45.73	58' RT.	669666.82, 644891.89
C	HWY. 112 - STA. 127+78.24	58' RT.	669599.26, 644894.08
D	HWY. 112 - STA. 127+64.06	43' RT.	669584.94, 644908.93
E	HWY. 112 - STA. 127+62.10	39' LT.	669586.41, 644990.97
F	HWY. 112 - STA. 128+52.27	39' LT.	669675.93, 644987.83
G	HWY. 112 - STA. 130+83.80	46' LT.	669906.85, 644991.98
H	HWY. 112 - STA. 130+97.74	65' LT.	669921.26, 645010.38
I	HWY. 112 - STA. 131+73.89	61' LT.	669668.47, 645062.24
J	HWY. 112 - STA. 132+00.00	46' LT.	669684.39, 645088.44
K	HWY. 112 - STA. 132+05.46	48' RT.	669778.02, 645090.65
L	HWY. 112 - STA. 130+88.06	48' RT.	669775.30, 644974.17

TRAFFIC FLOW DIAGRAM



EXISTING (2007) PEAK HOUR TRAFFIC VOLUMES



DESIGN PARAMETERS

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

LOCATION OF STOP BARS SHOWN ON PAVEMENT MARKING PLAN. SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE 1.5 FEET FROM HWY. 112

TRAFFIC FLOW DIAGRAM

EXISTING (2007) PEAK HOUR TRAFFIC VOLUMES

DATE: 08-22-12 FILE NAME: t040489-02.dgn

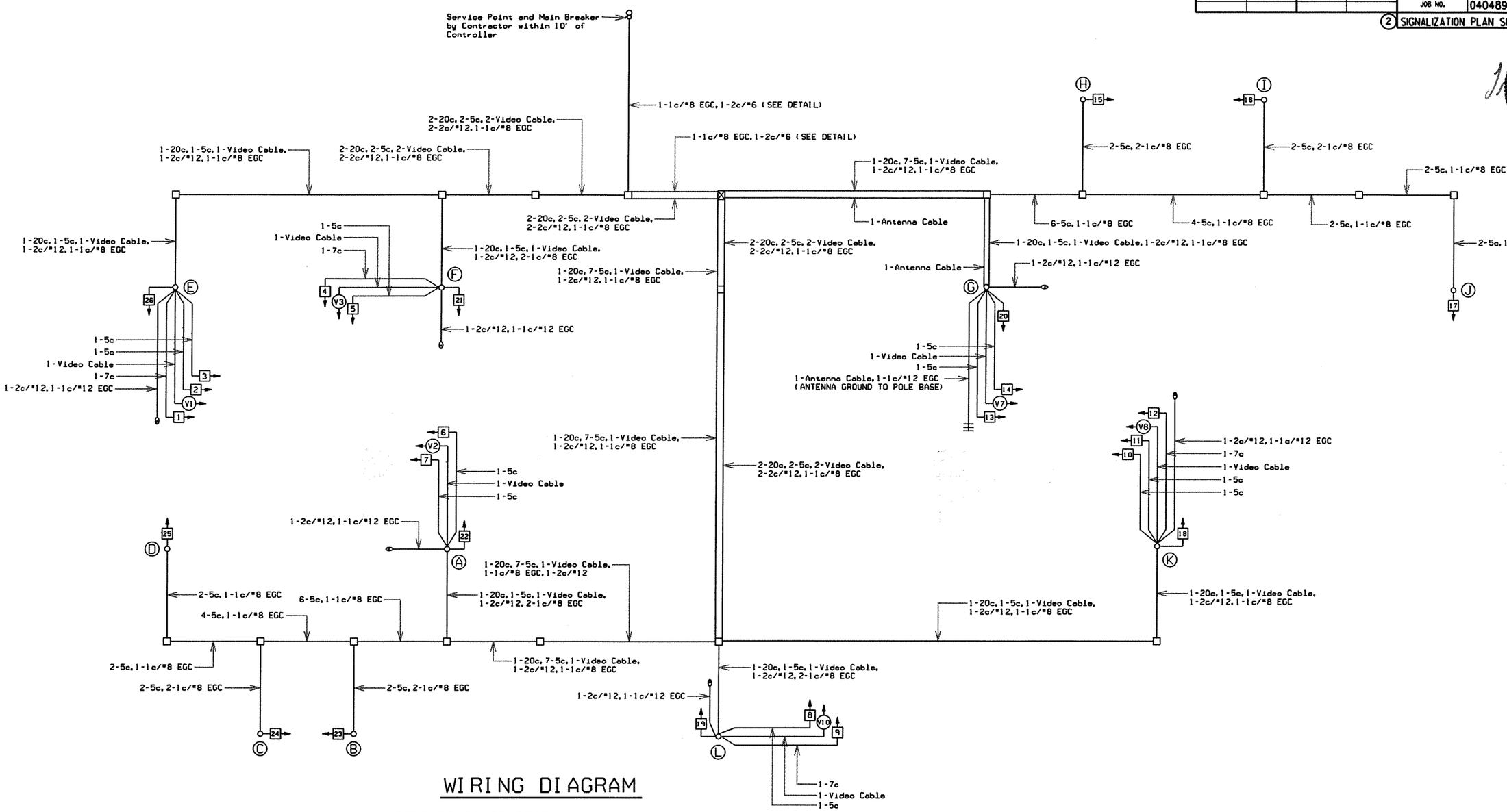
LOCATION: HWY. 112 (GARLAND AVE.)/SYCAMORE & DEANE
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1" = 40' DRAWN BY: GWE

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.		040489	61	113

2 SIGNALIZATION PLAN SHEET

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

8-27-12



WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

DATE: 08-22-12 FILE NAME: t040489-02.dgn

LOCATION: HWY. 112 (GARLAND AVE.)/SYCAMORE & DEANE
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

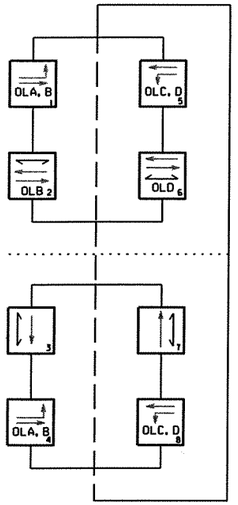
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	62	113

(2) SIGNALIZATION PLAN SHEET

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

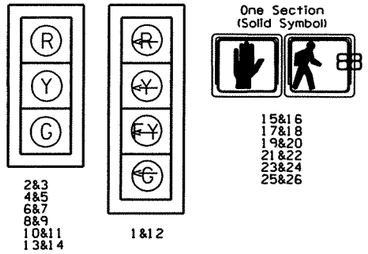
8-27-12

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



NOTES:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

DETECTOR SYSTEM DESCRIPTION: JOB 040489											
FAYETTEVILLE - HWY. 112/SYCAMORE & DEANE DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	NB NEAR	COMB.			1	V9	1	9		CAMERA V1	74'
Vz12	NB LT. PRESENCE	LOCAL			2	V1	1			CAMERA V1	74'
Vz21A&B	SB ADVANCE	LOCAL			5	V2	2			CAMERA V2	74'
Vz22	SB NEAR	COMB.			6	V10	2	10		CAMERA V2	74'
Vz23	SB NEAR	COMB.			7	V12	2	12		CAMERA V2	74'
Vz24A&B	SB ADVANCE	LOCAL			9		OLD			CAMERA V5	23'
Vz31	EB LT. ADVANCE	COMB.			13	D3	3	3		CAMERA V3	23'
Vz32	EB ADVANCE	LOCAL			14	V3	3			CAMERA V3	23'
Vz33A&B	EB PRESENCE	LOCAL			15	V3	3			CAMERA V3	23'
Vz51	SB NEAR	LOCAL			10	V13	5	V13		CAMERA V5	23'
Vz52	EB LEFT TURN	COMB.			11	V5	5			CAMERA V5	23'
Vz61A&B	NB ADVANCE	LOCAL			17	V6	6			CAMERA V6	74'
Vz62	NB NEAR	COMB.			18	V14	6	14		CAMERA V6	74'
Vz63	NB NEAR	COMB.			19	V16	6	16		CAMERA V6	74'
Vz64A&B	NB ADVANCE	LOCAL			3		OLB			CAMERA V1	74'
Vz71	WB LT. ADVANCE	COMB.			21	V15	7	15		CAMERA V7	23'
Vz72	WB ADVANCE	LOCAL			22	V7	7			CAMERA V7	23'
Vz73A&B	WB LT. PRESENCE	LOCAL			23	V7	7			CAMERA V7	23'
PB2A&B	SYCAMORE E. LEG	PED.				P2	2				
PB4A&B	HWY. 112 N&S. LEG	PED.				P4	4				
PB6A&B	DEANE W. LEG	PED.				P6	6				
PB8A&B	HWY. 112 N&S. LEG	PED.				P8	8				
					SPARE 4, 8, 12, 16, 20 & 24						

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

INTERVAL CHART

SIGNAL FACES	HWY. 112 (GARLAND AVE.)/SYCAMORE & DEANE																FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	
1	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~G~~	•	~~R~~	~~R~~	~~G~~	•	~~R~~
2&3	G	••	G	••	G	••	G	••	R	R	G	••	R	R	G	••	R
4&5	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R	R	R
6&7	G	••	G	••	G	••	G	••	R	R	R	R	G	••	G	••	R
8&9	R	R	R	R	R	R	R	R	G	••	G	••	R	R	R	R	R
10&11	G	••	G	••	G	••	G	••	R	R	R	R	G	••	G	••	R
12	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~G~~	•	~~R~~
13&14	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
15&16	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	BLK
19&20	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	BLK
21&22	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	BLK
23&24	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
25&26	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	BLK

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

DATE: 08-22-12 FILE NAME: t040489-02.dgn

LOCATION: HWY. 112 (GARLAND AVE.)/SYCAMORE & DEANE
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

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.		040489	63	113

(2) SIGNALIZATION DETAILS

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

8-27-12

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

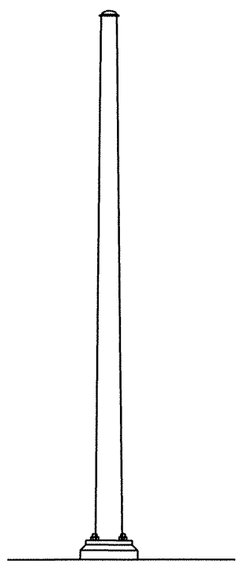
USE FATIGUE CATEGORY II.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH

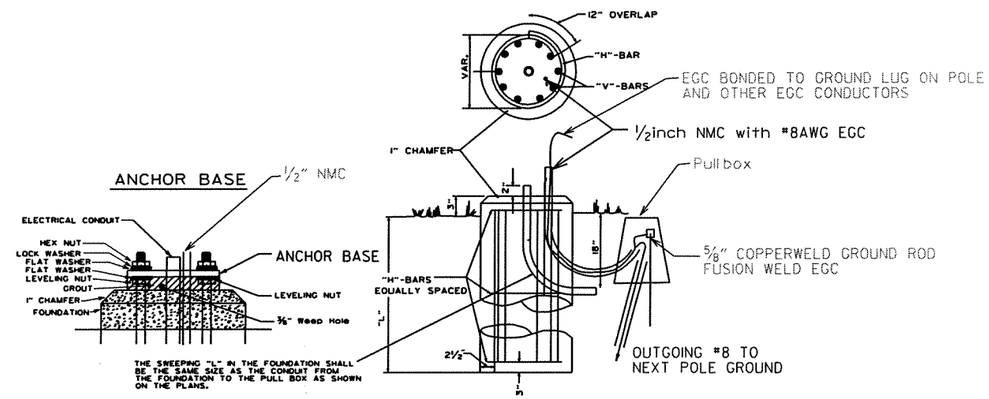
STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN ½" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX PAID FOR SEPARATELY AS SHOWN ON THE PLANS.



ANTENNA POLE

NOTE: COMMUNICATION CABLE SHIELD SHALL BE TIED TO GROUND AT ONLY ONE POINT (MASTER CABINET). THE SHIELD SHALL BE MAINTAINED CONTINUOUS (THROUGH ALL SPLICES). PLEASE REFER TO TESTING PROCEDURES IN SPECIAL PROVISIONS.



TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING.

POLE HEIGHT	FOUNDATION DIAMETER	DEPTH "L"	VERTICAL	HORIZONTAL	TIE SPACING
20.0'	30"	5'-6"	12-#7	#4	5 sp @ 12"
25.0'	30"	6'-0"	12-#7	#4	6 sp @ 11"
30.0'	30"	6'-6"	12-#7	#4	6 sp @ 12"
35.0'	30"	7'-0"	12-#7	#4	7 sp @ 11"
40.0'	30"	7'-6"	12-#7	#4	7 sp @ 12"
45.0'	36"	8'-6"	13-#8	#4	8 sp @ 12"
50.0'	36"	9'-6"	13-#8	#4	9 sp @ 12"
55.0'	36"	10'-0"	13-#8	#4	10 sp @ 11"
60.0'	36"	10'-6"	13-#8	#4	10 sp @ 12"
65.0'	36"	11'-0"	13-#8	#4	12 sp @ 10½"
70.0'	36"	11'-6"	13-#8	#4	11 sp @ 12"
75.0'	42"	13'-0"	18-#8	#4	14 sp @ 10½"
80.0'	42"	13'-6"	18-#8	#4	13 sp @ 12"
85.0'	42"	14'-6"	18-#8	#4	14 sp @ 12"
90.0'	42"	15'-0"	18-#8	#4	18 sp @ 9½"

ALL CONCRETE SHALL BE CLASS "S" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH F'c=3500 PSI. CONCRETE SHALL BE POURED IN THE DRY AND ALL EXPOSED CORNERS CHAMFERED ¾" UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 OR M53, GRADE 40 (YIELD STRENGTH=40,000 PSI).

PROVIDE 3" CLEAR TIES. DETAIL 3" TO FIRST TIE AT TOP OF SHAFT.

DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
9-6-00	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL (Antenna Pole)

11/8/2011

ZBORDER.CEL

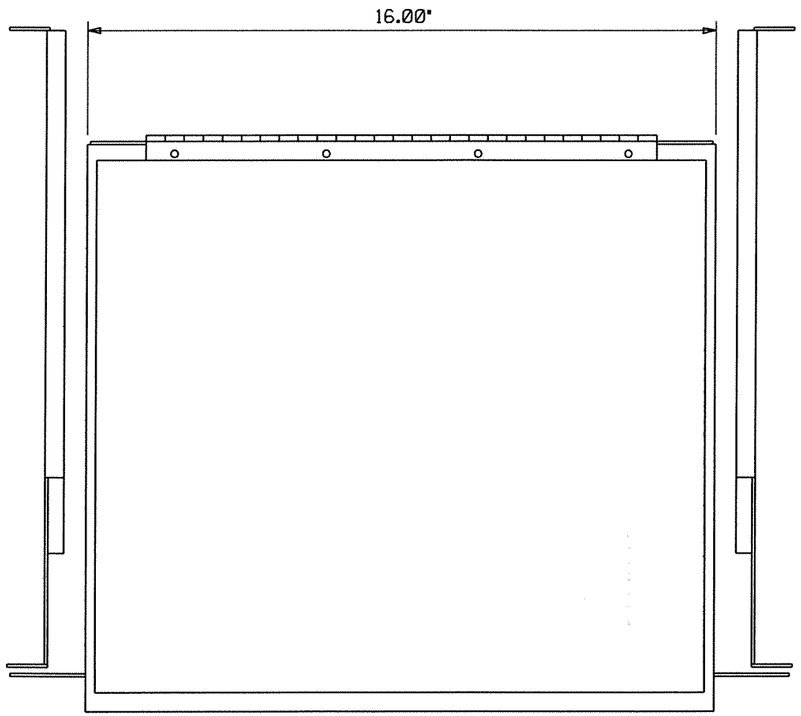
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	64	113

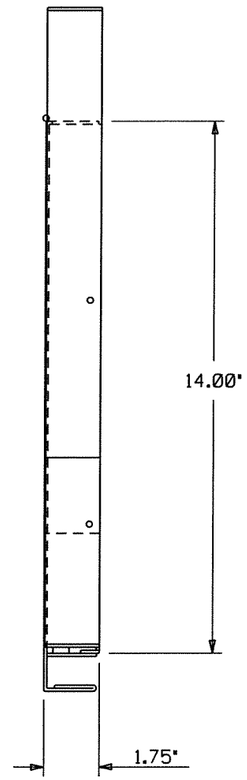
(2) SIGNALIZATION DETAILS

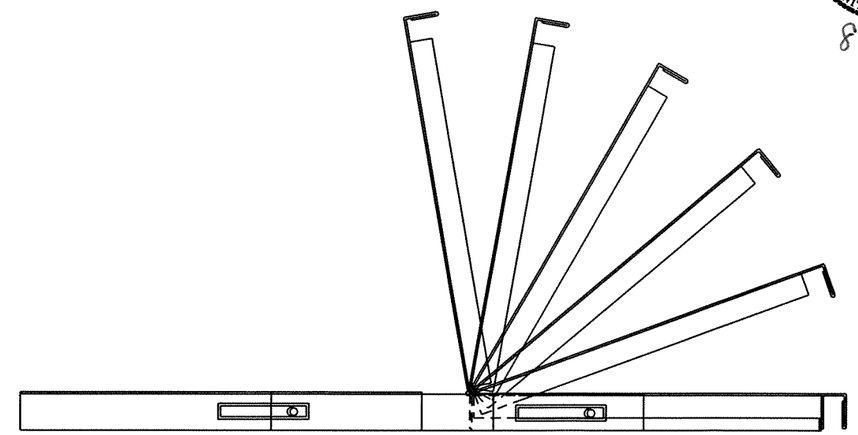
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12

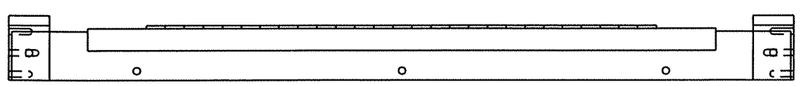
DRAWER PLAN VIEW



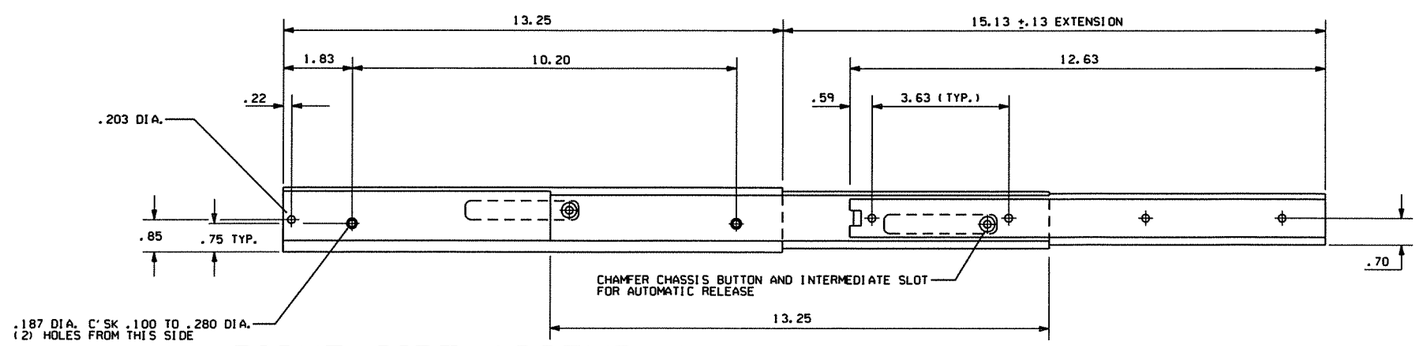




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

DATE	REVISION	DATE FILM
6-15-05	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Controller Cabinet Utility Drawer)

11/8/2011

ZBORDER.CEL

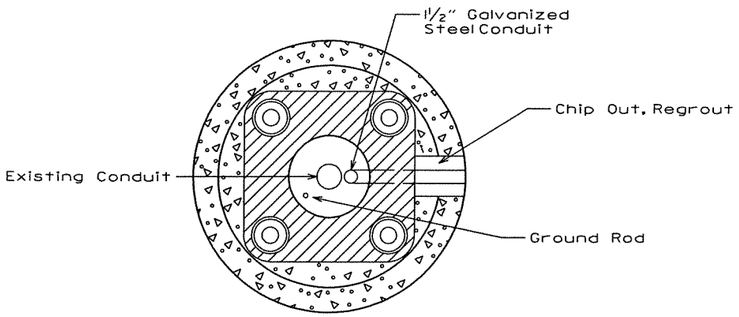
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	65	113

(2) SIGNALIZATION DETAILS

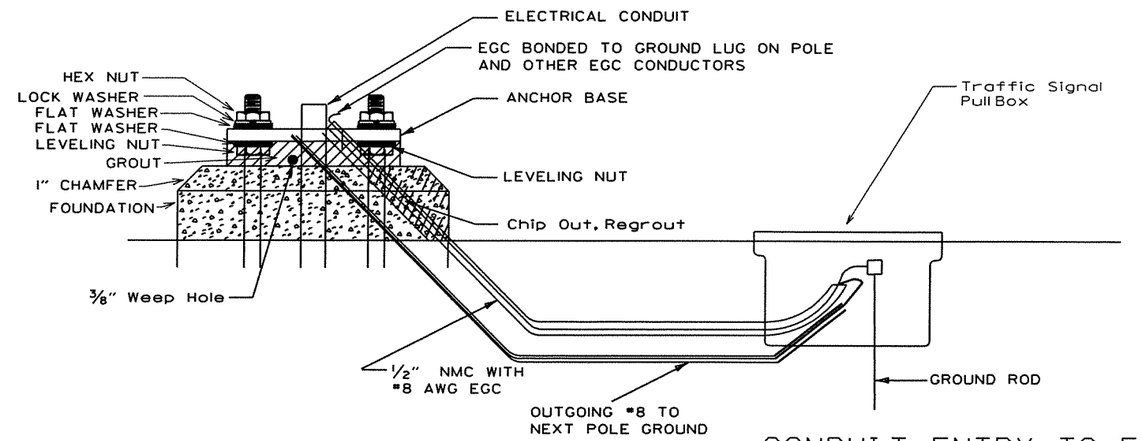
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

8-27-12

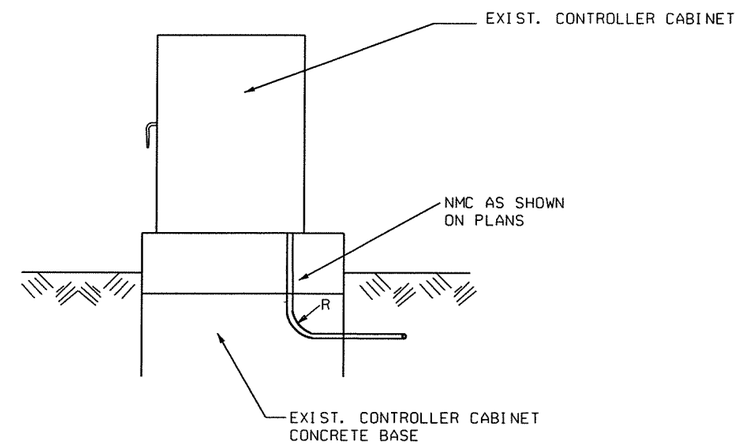
CONDUIT ENTRY TO EXISTING POLE BASE



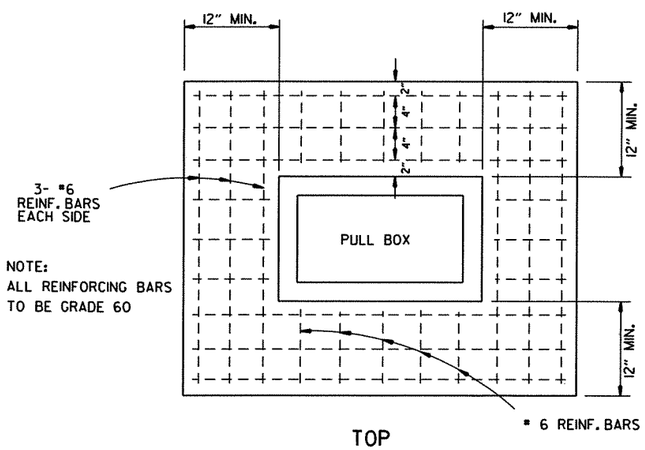
ANCHOR BASE



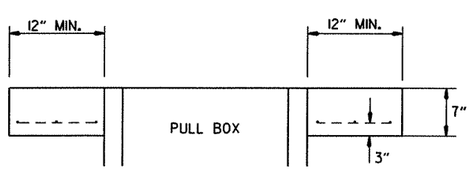
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

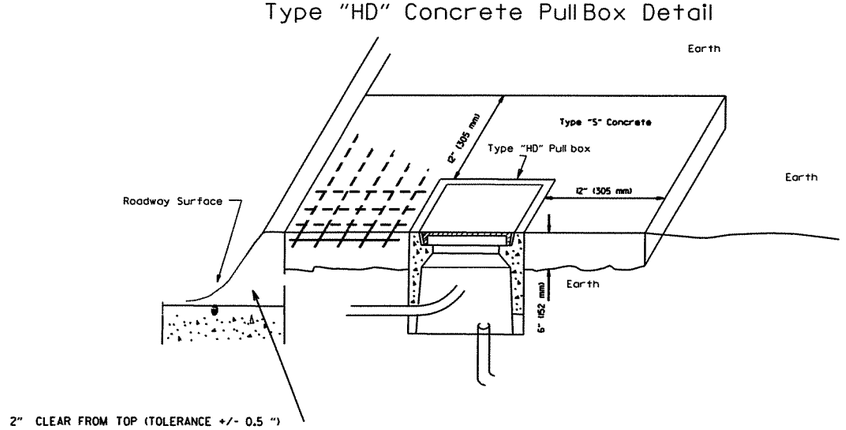


TOP



ELEVATION

Type "HD" Concrete Pull Box Detail



Note: All Type 1 and Type 2 HD pullboxes are installed with an apron of concrete 12" (305 mm) wide and 6" (152 mm) in depth. All payment shall be included in the price of the Type HD pullbox. Pullbox shall be installed flush to surrounding grade unless otherwise instructed by the engineer. The concrete shall be Class "S." Three #6 reinforcing bars in the apron on all sides of the pullbox is required in concrete.

DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	ADDED & REVISED CONDUIT ENTRY	
6-23-04	REVISED CLEARANCE AT CURB ENTRY	
1-4-02	ADDED REINFORCING TO BOX APRON	
7-2-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Heavy Duty Pull Box)

11/8/2011

ZBORDER.CEL

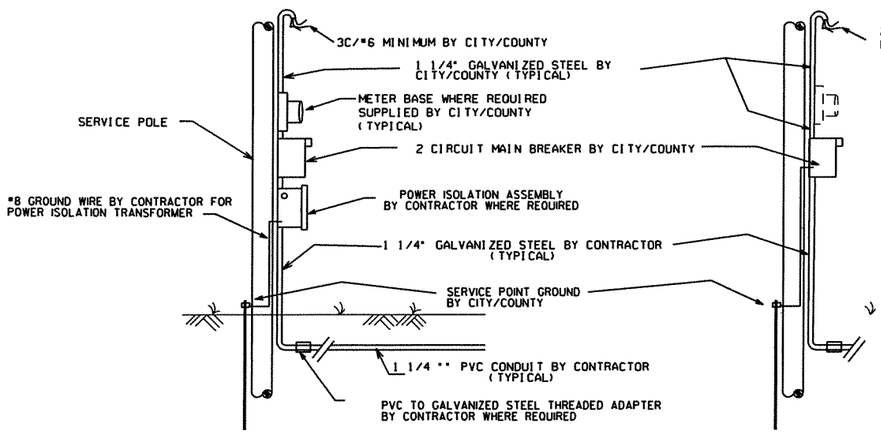
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	66	113

(2) SIGNALIZATION DETAILS

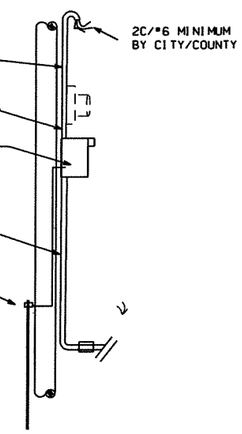
MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

Ground Rod-A 10' x ⅝" ground rod shall be installed in the pull box for each pole and the controller. Payment for the ground rod and ½" NMC shall be included in Item 701. The pull box and conductor box shall be paid for separately.

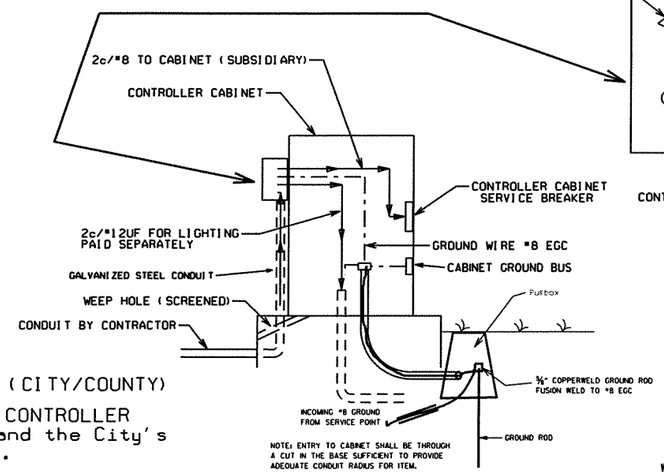
WITH POWER ISOLATION ASSEMBLY

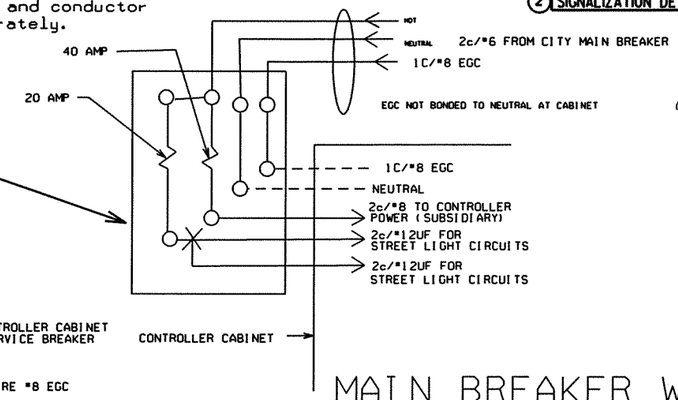


WITHOUT POWER ISOLATION ASSEMBLY



SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)





MAIN BREAKER WIRING (TYPICAL)

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

8-27-12

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

Electrical service typically falls into two categories: MAIN BREAKER NEAR CONTROLLER CABINET; and MAIN BREAKER NOT NEAR CONTROLLER CABINET. The Contractor's and the City's or County's responsibility varies accordingly as indicated on these details.

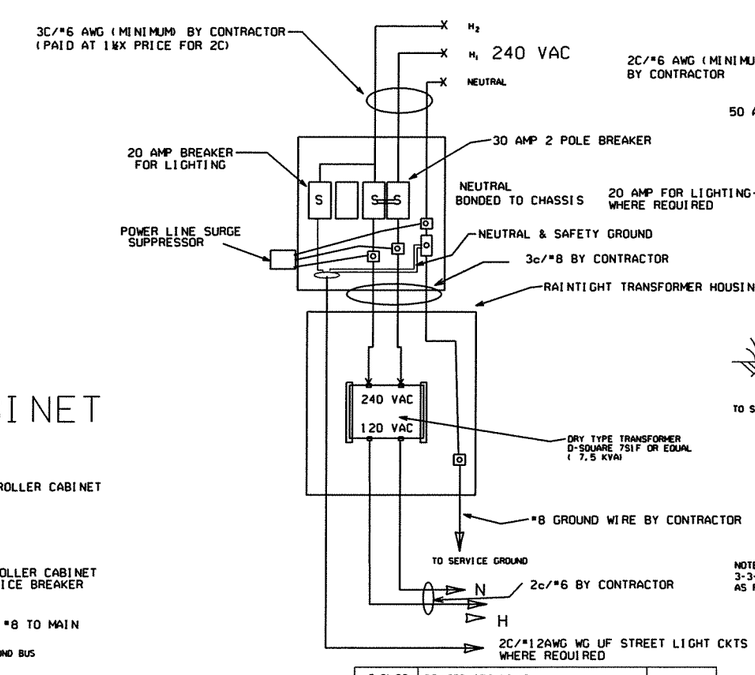
1. ALL SITUATIONS: Electrical service shall be provided by the City/County to a service pole with external raintight breaker (MAIN BREAKER) at a mutually acceptable point within the right-of-way. Service point includes galvanized steel conduit to a point 18" below ground line, two circuit main breaker, power isolation assembly where required, meter loop if required by local utility, electrical conductors and weatherhead. Where street lighting is included as part of signal installation, street lighting circuit (2c/#12 awg UF rated, typical) shall be kept separate from the circuit serving traffic signal. Service wire and wiring from the controller to main breaker is provided by the Contractor as a part of this contract. Wire and wiring from main breaker, and connection to the utility is the responsibility of the City/County.

2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: The Main Breaker assembly, galvanized steel conduit, weatherhead and wire above Main Breaker and connection to the utility shall be provided by City/County. Contractor shall provide as part of contract Secondary Breaker, conduit, wire and wiring to the Main Breaker.

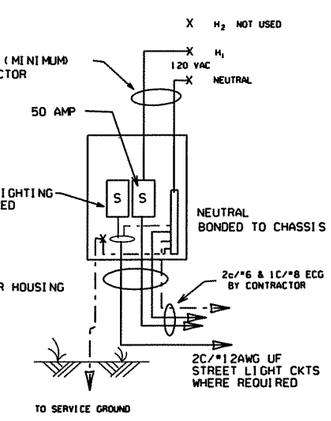
3. MAIN BREAKER NEAR CONTROLLER CABINET: All components of the service point with the exception of the wire and wiring above the Main Breaker is furnished and installed by the Contractor. Wiring from Main Breaker including connection to the utility, is the responsibility of the City/County. If meter loop is required, meter base and hardware is provided by the City/County and installed by the contractor.

Service Ground is typically tied to neutral at the Main Breaker. As such, controller ground IS NOT tied to Neutral at secondary Breaker or in controller cabinet.

WITH POWER ISOLATION ASSEMBLY 4 CIRCUIT MAIN BREAKER

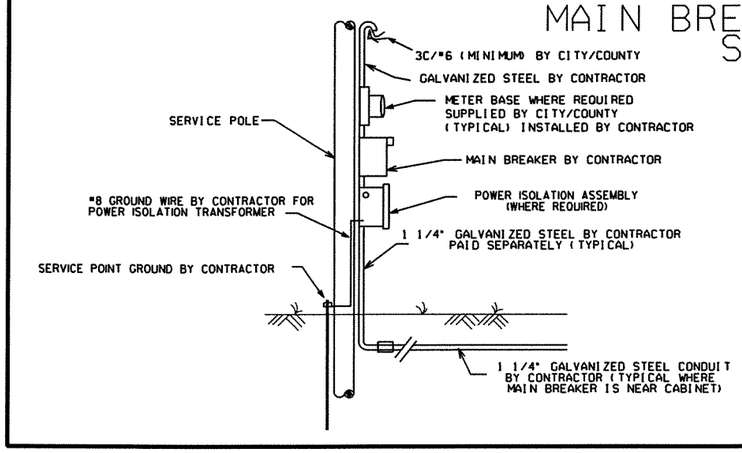


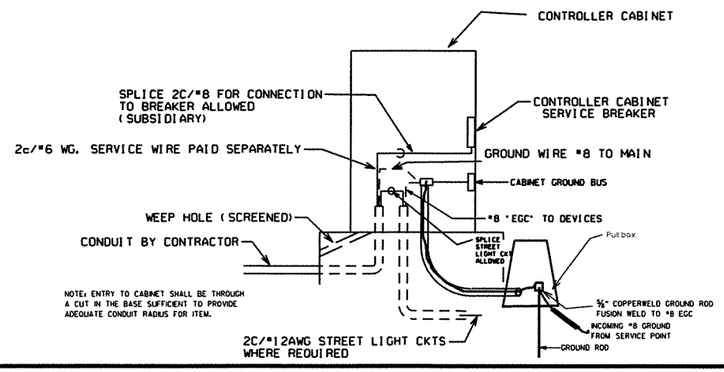
WITHOUT POWER ISOLATION ASSEMBLY 2 CIRCUIT MAIN BREAKER



NOTE: ELECTRICAL GROUND CONDUCTOR (ECG) ADDED 3-3-2003, CONSISTING OF A 1C/#8AWG CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED





DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
3-3-03	ADDED ECC NOTE	
9-26-01	REVISED	
12-27-99	REVISED	
7-28-99	REVISED	
2-5-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL (Service Point)

11/8/2011

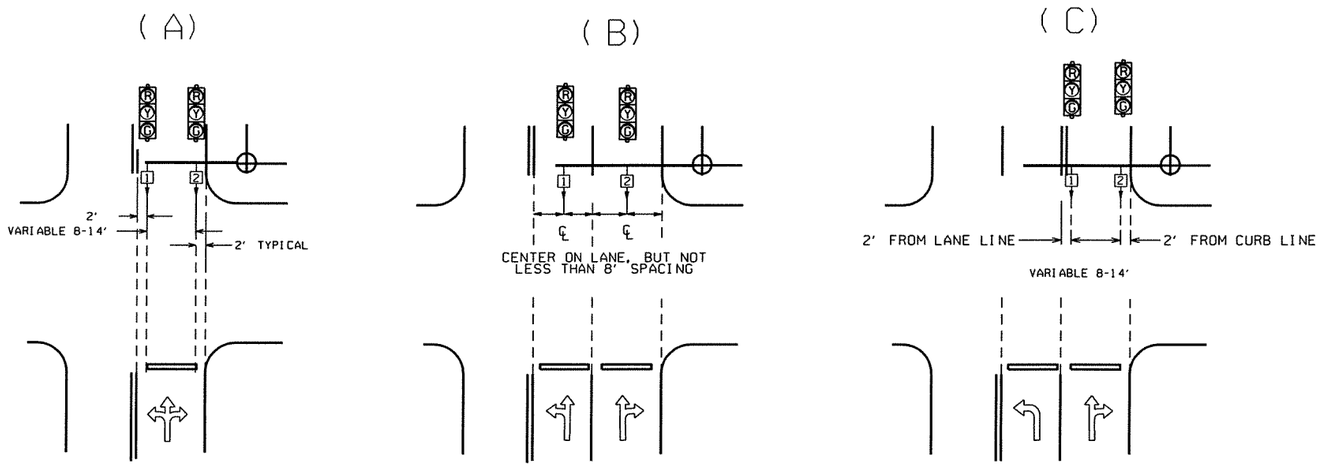
ZBORDER.CEL

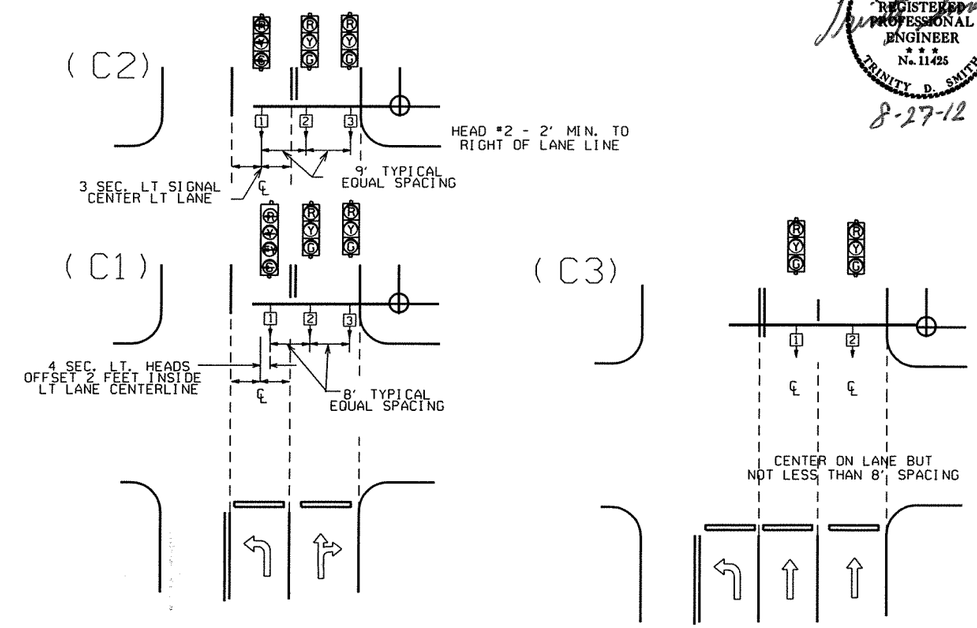
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	67	113

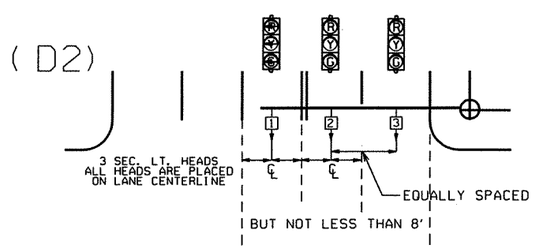
(2) SIGNALIZATION DETAILS

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

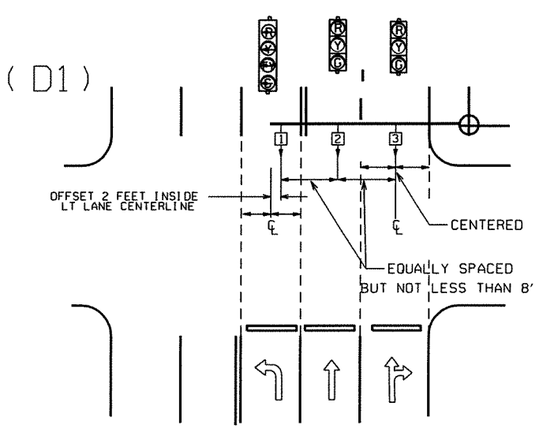
8-27-12

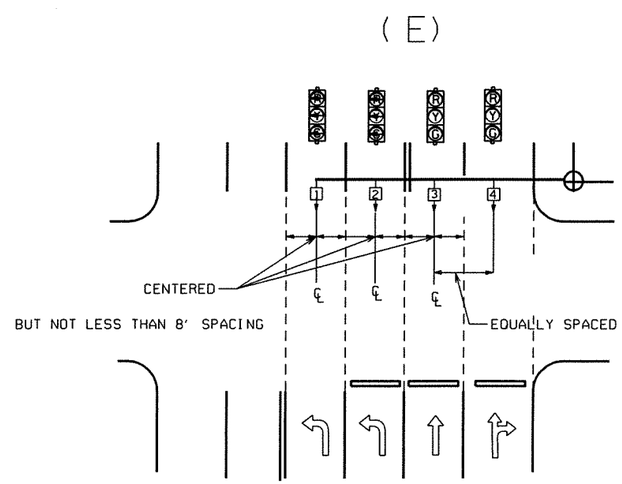






NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS





℄ = CENTER OF LANE FROM APPROACH SIDE

GENERAL NOTES:

1. FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

2. THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

3. WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.

4. SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.

5. ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.

6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-1 OF 2009 MUTCD.

DATE	REVISION	DATE FILM
3-11-10	2009 MUTCD	
12-9-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Signal Head Placement)

11/8/2011

ZBORDER.CEL

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.		040489	68	113

(2) SIGNALIZATION DETAILS

NOTES, PED AND TRAFFIC SIGNAL HEAD SIGNS:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGN FACES SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209. ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF 4 FT. BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY II FOR STRUCTURES ON ROUTES WITH A SPEED LIMIT LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH ARMS LESS THAN 60' AND ROUTES WITH SPEED LIMITS OF 45 MPH AND LESS WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE SPEED LIMIT IS 45 MPH AND LESS AND ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, 12 INCH, AND HAVE 5 IN. BACK PLATES:

HEADS AT END OF ARM - ONE 4 SEC., 85 LB., 16.0 SQ. FT. ONE SIGN MOUNTED 3 FT. FROM SIGNAL * 2' X 0" X 2' * 6"; 20 LB. REMAINING HEADS SPACED A 8 FT. * 3 SEC., 56 LB., TWO 5 SEC):
14.4 SQ. FT. DESIGN TO ACCOMMODATE (INCLUDING
2 HEADS FOR ARMS 10 TO 16 FT.
2 HEADS FOR ARMS 10 TO 16 FT.; INCLUDING LB.
3 HEADS FOR 18 TO 24 FT. ARMS;
4 HEADS FOR OVER 26 FT. ARMS.

STREET NAME SIGN -- 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) * VARIABLE ARM LENGTH (MAX.), 3.3 SQ. FT., 75 LB. PED SIGNALS -- TWO 2 SEC. 12 INCH MOUNTED 8 FT. FROM BASE OF POLE.
POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

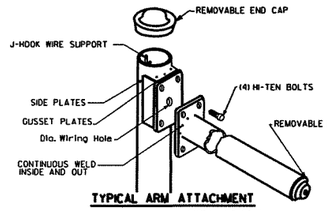
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE -- HAND HOLES SHALL BE 4 X 6 INCHES FOR STANDARD, AND 3 X 5 INCHES FOR PED POLES, MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21 FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDE A HAND HOLD WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

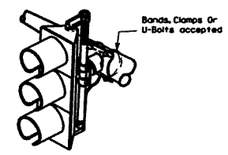
6. POLE/MAST ARM TAPER AND SLOPE - AVERAGE TAPER OF SIGNAL ARMS AND POLE SHALL BE 0.125 TO 0.15 INCHES PER FT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE ARM SHALL MAINTAIN A POSITIVE AFTER IT IS PLACED UNDER LOAD.

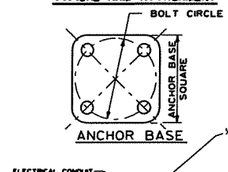
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



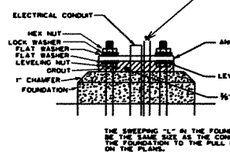
TYPICAL ARM ATTACHMENT

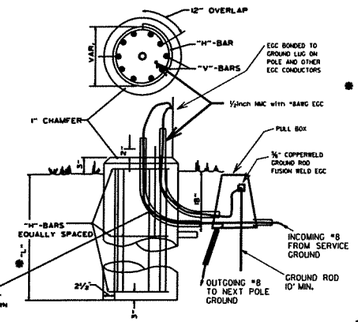


NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



ANCHOR BASE



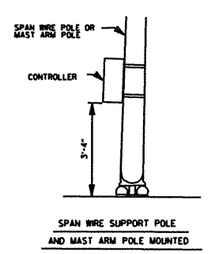


THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/*8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

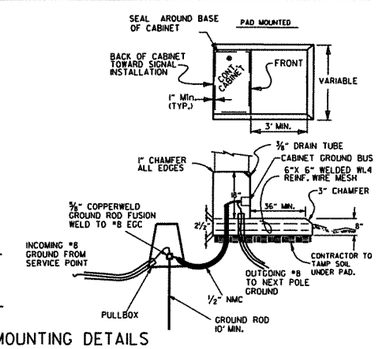
TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FDN. DIAMETER	DEPTH "L" ●	STEEL VERT.	STEEL HORZ.	STEEL O/C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' to 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
over 12' to 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
over 20' to 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
over 35' to 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
over 50' to 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
Twins to 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
Twins over 20' to 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
Twins over 44' to 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
Twins over 50' to 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED



CONTROLLER CABINET MOUNTING DETAILS

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX. NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS "S" OR GREATER.

11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PED PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM PEDESTRIAN SIGNAL HEAD.

SIGNAL OPERATION NOTES:

FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

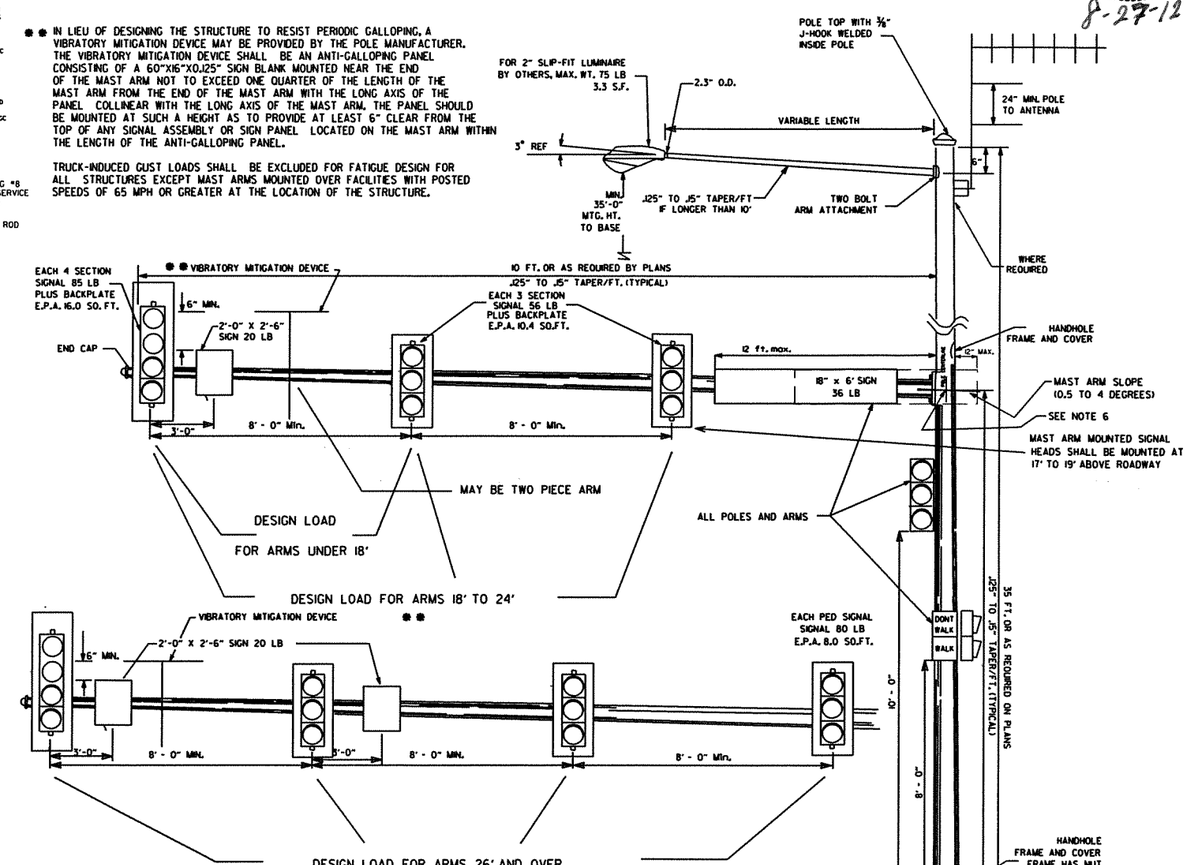
SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.

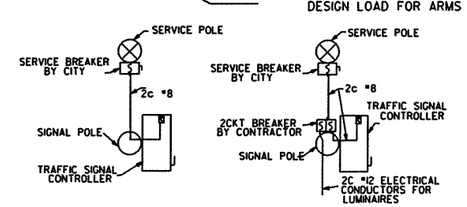
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
8-27-12

● WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 OF THE STANDARD SPECIFICATIONS.

●● IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60"X16"X0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH A HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OR SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

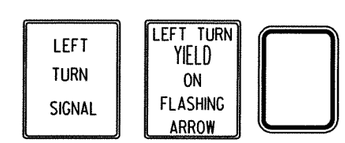
TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.



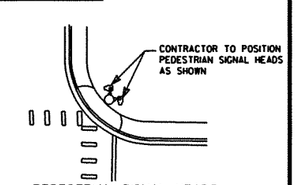


NO LUMINAIRE — WITH LUMINAIRE

SERVICE DISCONNECT



R10-10 — SPECIAL — R10-3e



PEDESTRIAN SIGNAL HEADS

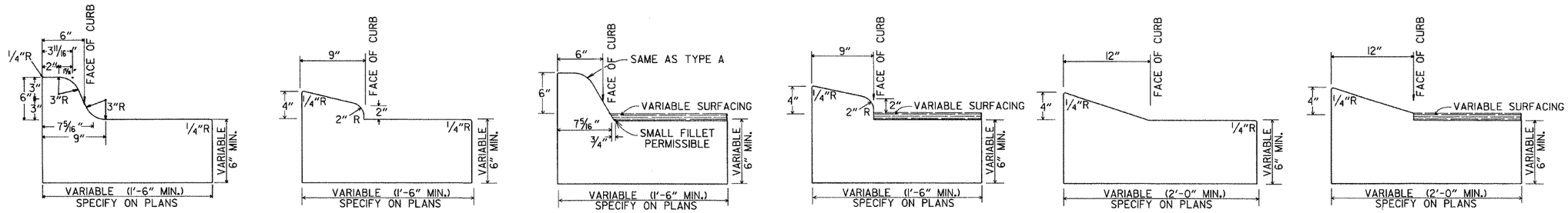
DATE	REVISION	DATE FILM
7-21-11	REVISED VMD, SIGNAL HEADS	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
6-23-04	REVISED	
5-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
6-11-01	REV. NOTES & POLE MAST ARM SLOPE	
4-11-01	REVISED POLE TAPERS	
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAILS
(Steel Pole With Mast Arm)

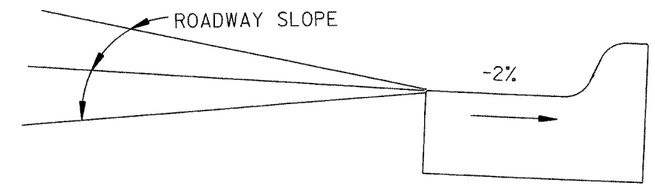
11/8/2011

ZBORDER.CEL



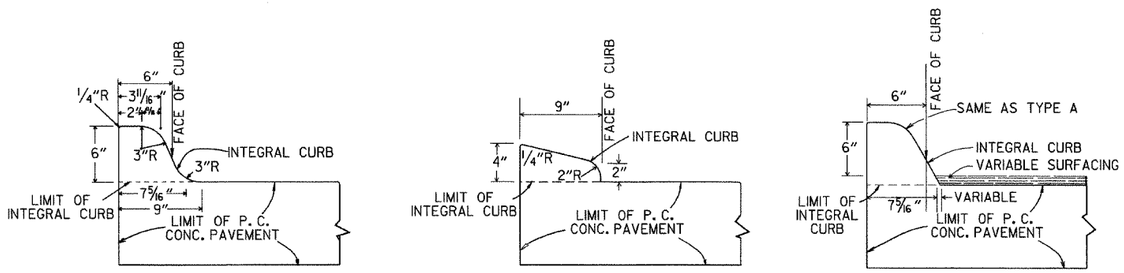
TYPE A | TYPE B-1 | TYPE C | TYPE B-2 | TYPE E-1 | TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER



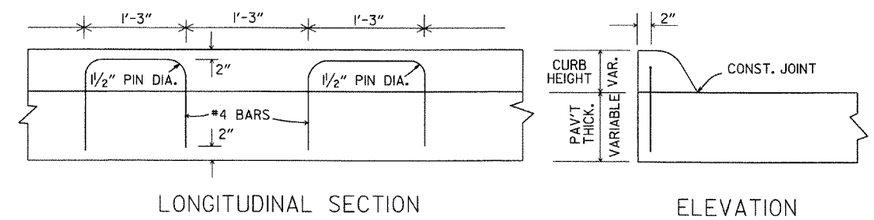
DETAIL OF GUTTER SLOPE

GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



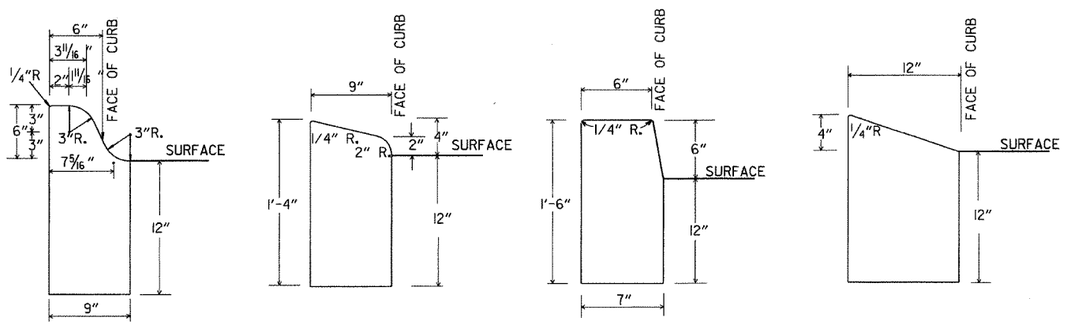
TYPE A | TYPE B | TYPE C

INTEGRAL CURB



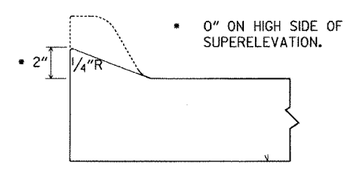
LONGITUDINAL SECTION | ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



TYPE A | TYPE B | TYPE D | TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

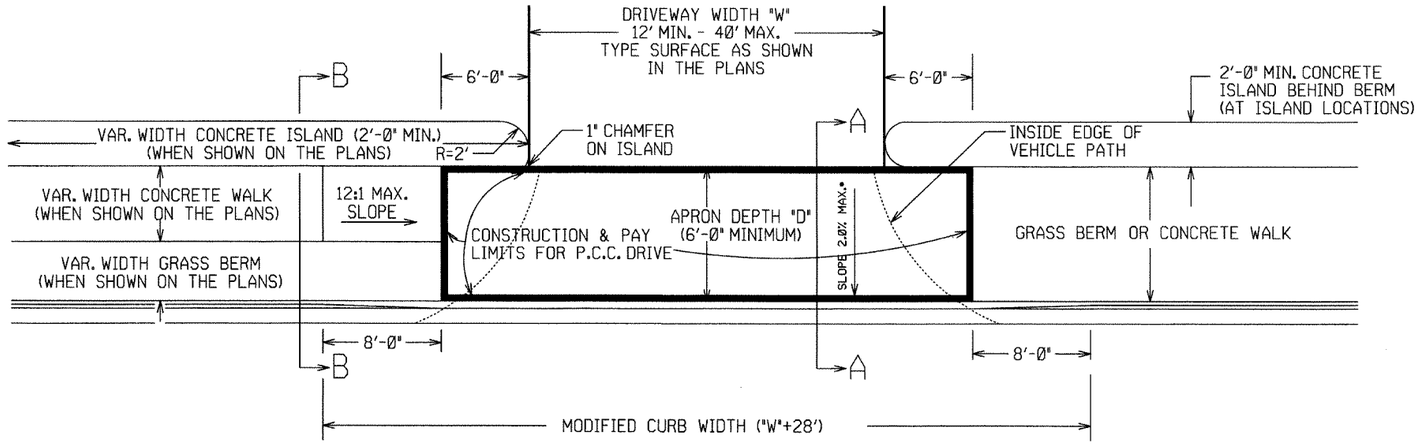
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIBLE DEPTH TYPE A & B 1	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

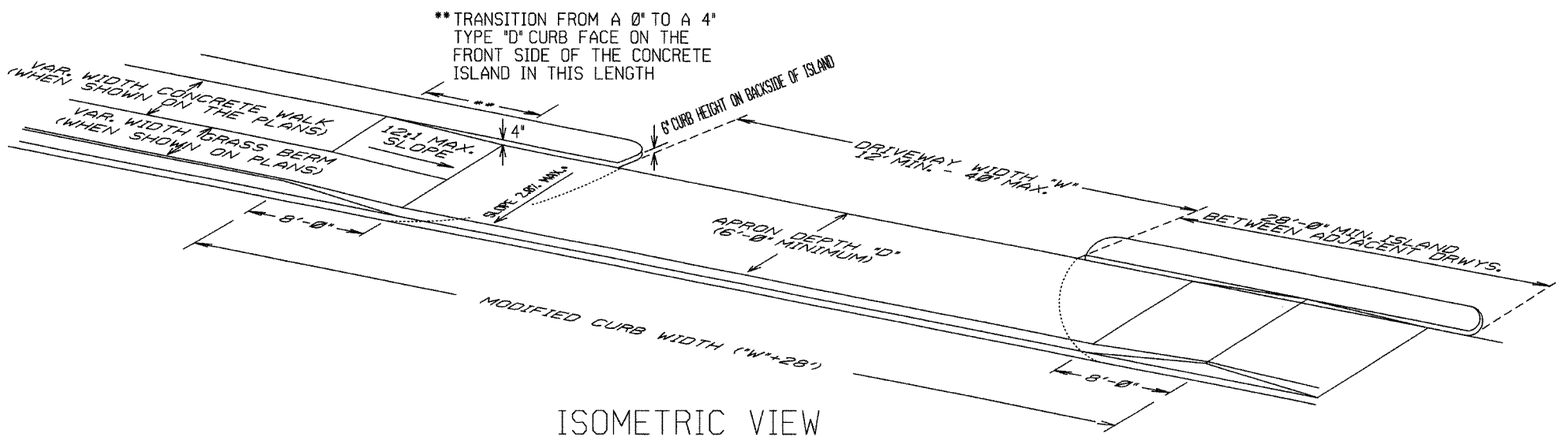
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

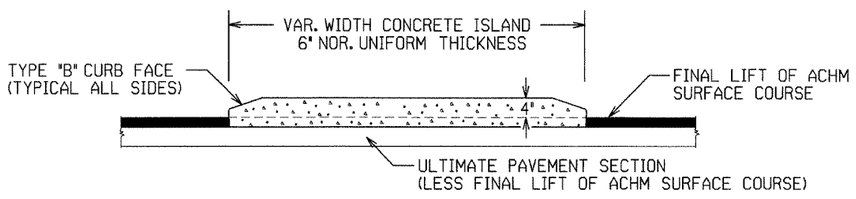
STANDARD DRAWING CG-1

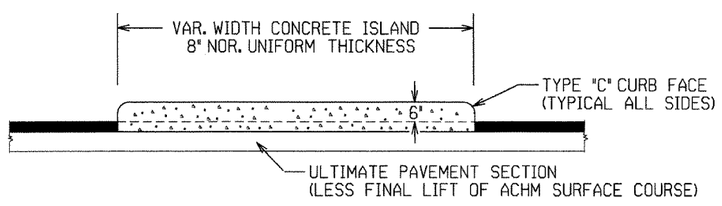


PLAN VIEW



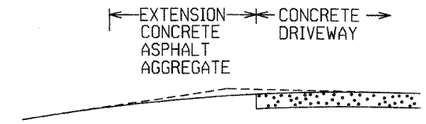
ISOMETRIC VIEW





CURBED ISLANDS FOR CHANNELIZATION

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

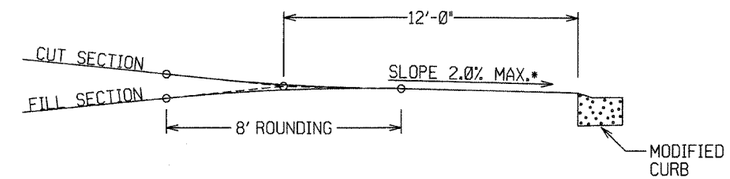
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

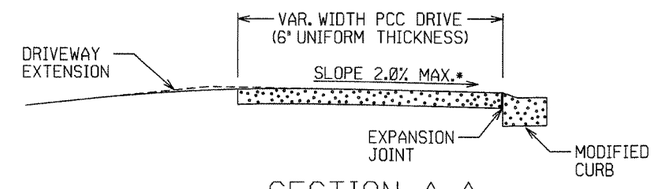
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

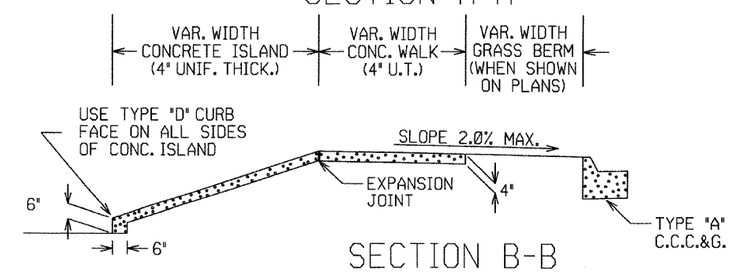


DRIVEWAY VERTICAL ALIGNMENT DETAILS

* NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A



SECTION B-B

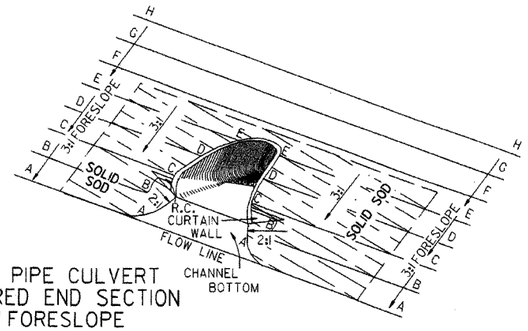
CURBED ISLAND BEHIND WALK

DATE REV	DATE FILMED	DESCRIPTION
11-29-07		ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02		ADDED ISLAND DETAILS & NOTES
3-30-00		REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98		REVISED NOTES
11-18-98		REDRAWN AND REISSUED

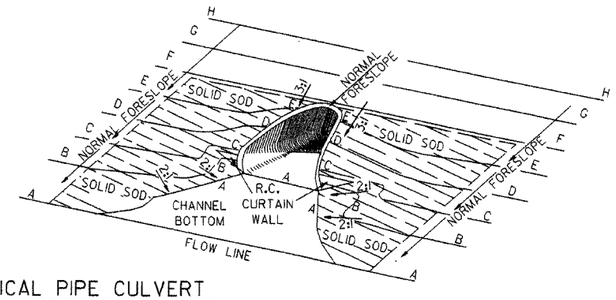
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

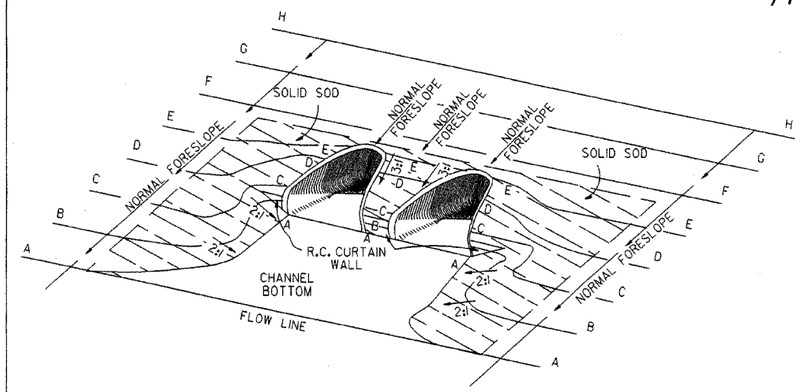
STANDARD DRAWING DR-1



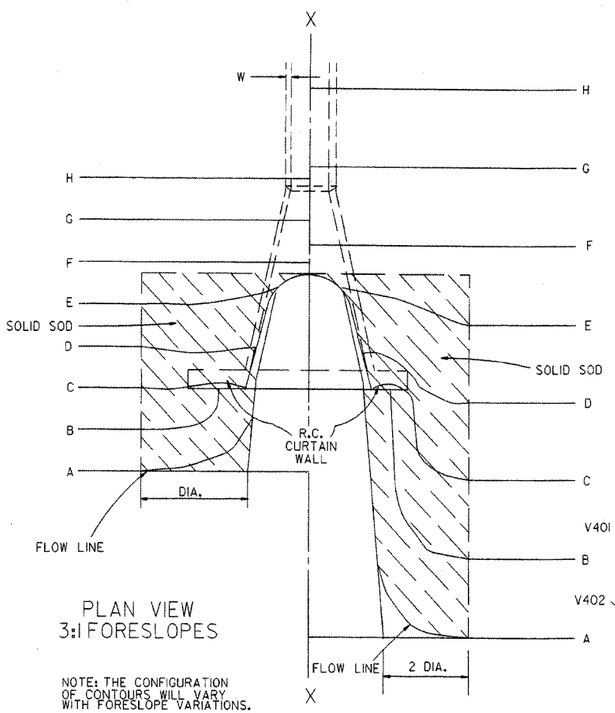
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT
WITH FLARED END SECTIONS
& FLATTENED ADJACENT SLOPES



PLAN VIEW
3:1 FORESLOPES

NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

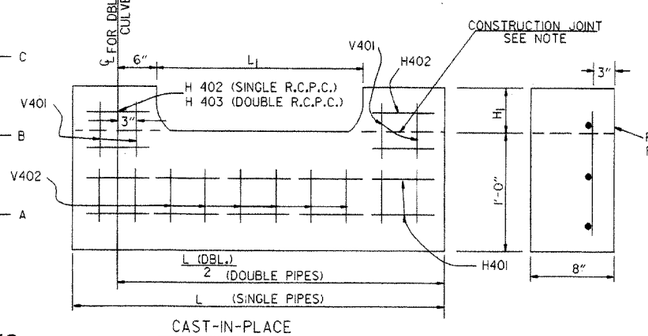
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9 1/2"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.

REINFORCING STEEL SCHEDULE

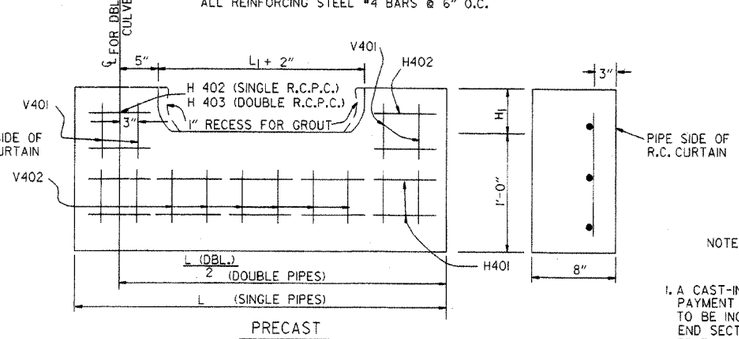
PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11 1/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11 1/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	12	8"	18
30"	10'-8"	2	2'-4 1/2"	4	1'-11 1/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11 1/2"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.



CAST-IN-PLACE

NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



PRECAST

NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

R.C. CURTAIN WALL DETAILS

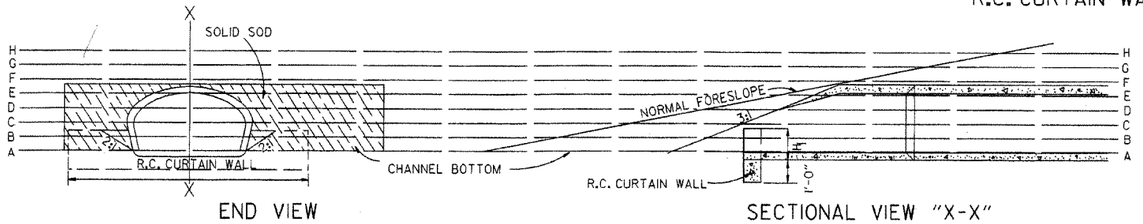
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	SINGLE R.C.P.C. 4:1	SINGLE R.C.P.C. 6:1	DOUBLE R.C.P.C. 3:1	DOUBLE R.C.P.C. 4:1	DOUBLE R.C.P.C. 6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

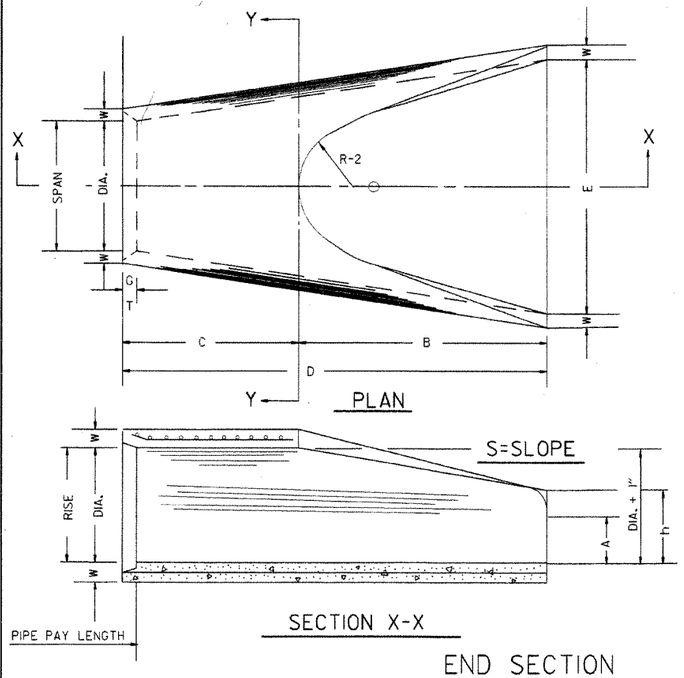
SECTIONAL VIEW "X-X"

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	10-18-96
10-12-95	CORRECTED SPELLING	
11-3-94	ADDED GENERAL NOTE NO. 4	
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
5-15-80	ADDED PRECAST WALL & GENERAL NOTES	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

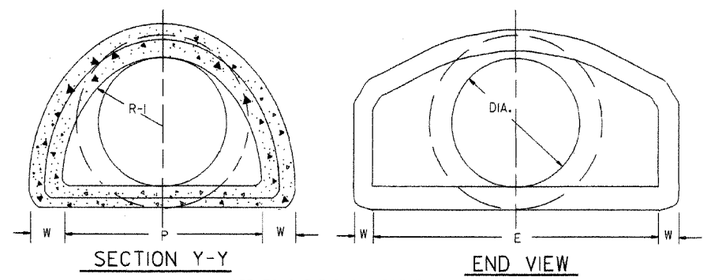
STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33 3/16"	16 13/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3:1	37"	47 11/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 11/16"	38 5/16"	24"	5"	13250	4'-6"

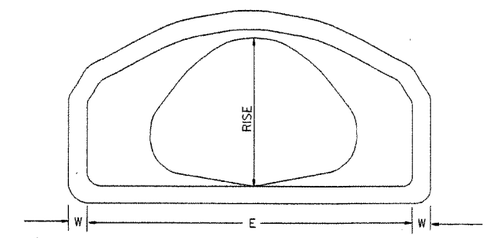


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

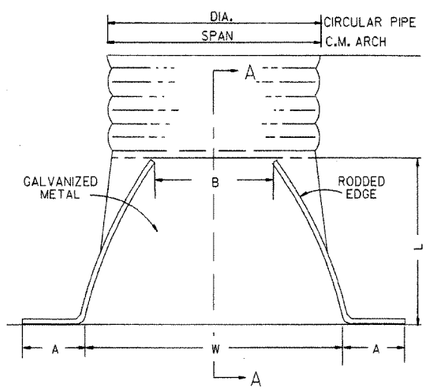
ARCH PIPE

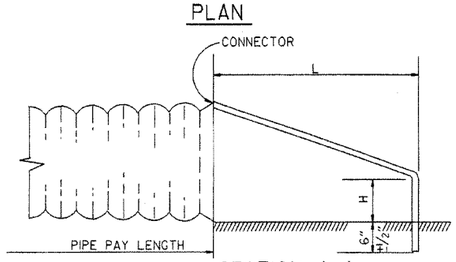
EQUIV. DIA.	* SPAN AASHTO M 206	* SPAN AHD NOMINAL	* RISE AASHTO M 206	* RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 13/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 13/16"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 5/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 13/16"	24"	5"	2¼:1

* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.

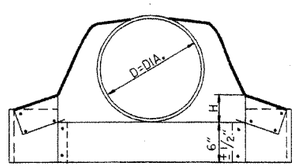


END VIEW
CONCRETE ARCH PIPE

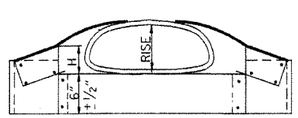




NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.



CIRCULAR PIPE



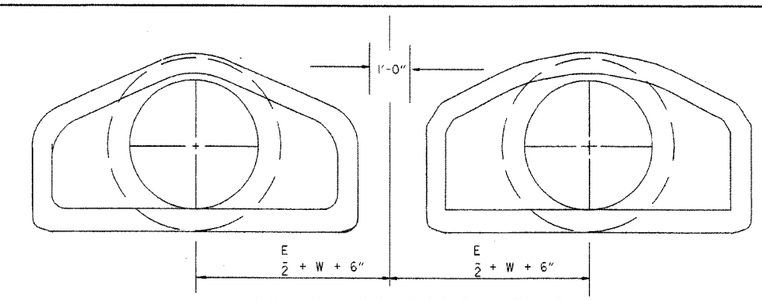
C.M. ARCH PIPE

CIRCULAR PIPE

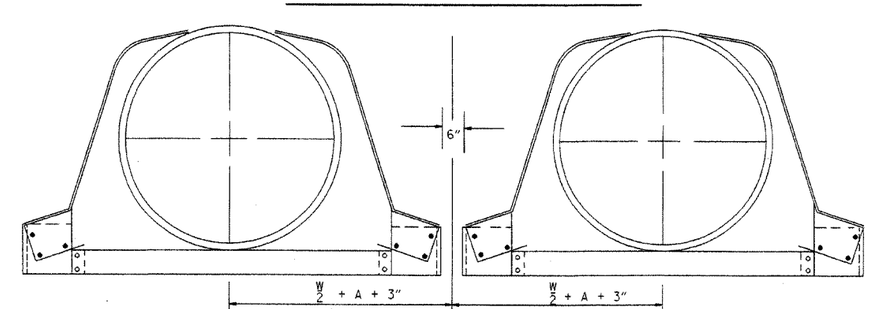
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1¾:1
66	12	18	36	12	87	120	1½:1
72	12	18	39	12	87	126	1 1/3:1

C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12
48"	57	38	18	26	12	63	90	2½:1	12
54"	64	43	18	30	12	70	102	2¼:1	12
60"	71	47	18	33	12	77	114	2¼:1	12



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

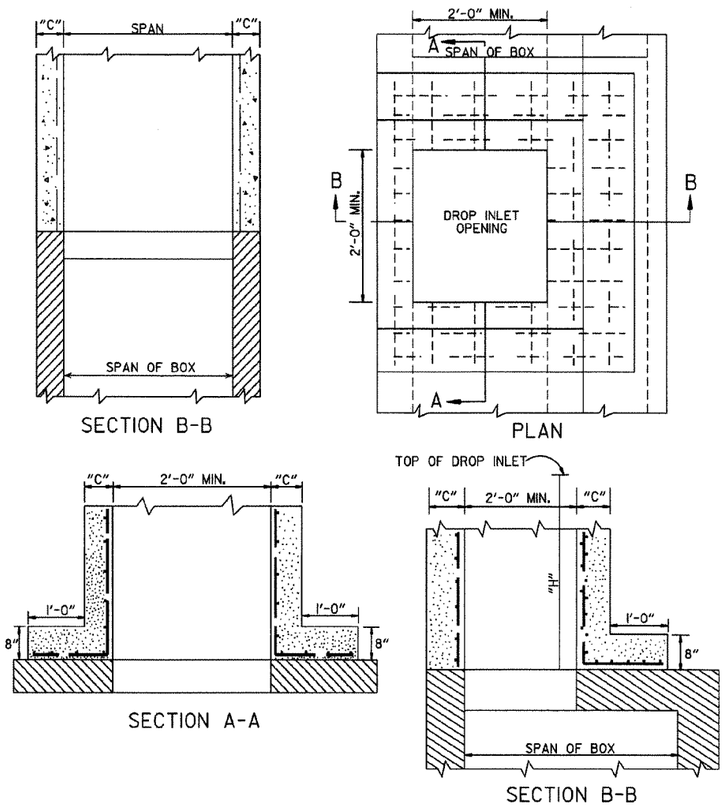
DATE	REVISION	EILMED
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73
10-2-72	REVISED AND REDRAWN	760-10-2-72

ARKANSAS STATE HIGHWAY COMMISION

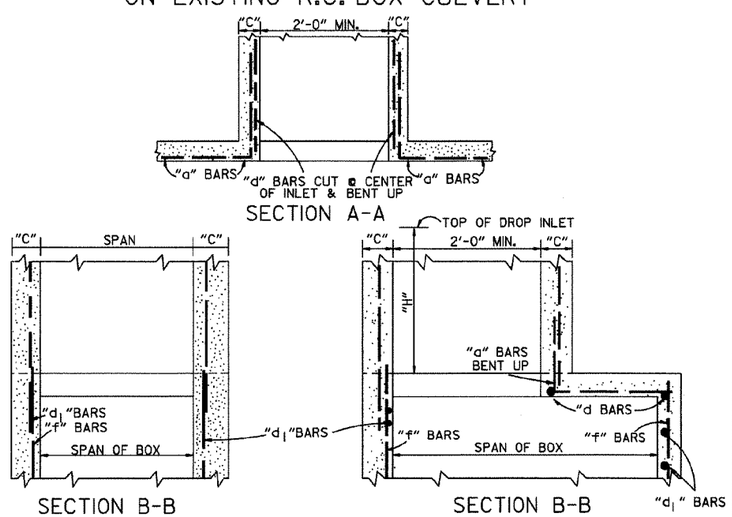
FLARED END SECTION

STANDARD DRAWING FES-2

stdfes2.dgn

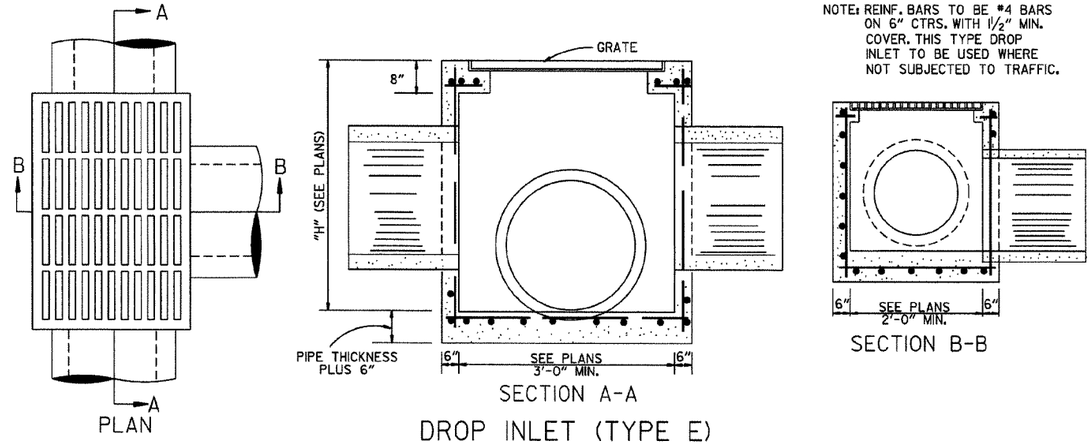


METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT

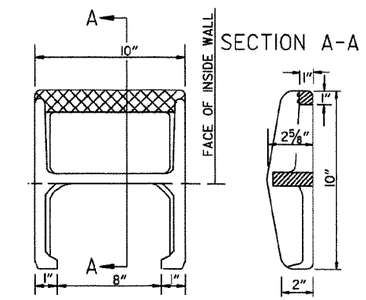


METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

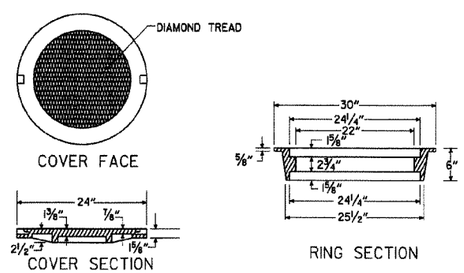


DROP INLET (TYPE E)



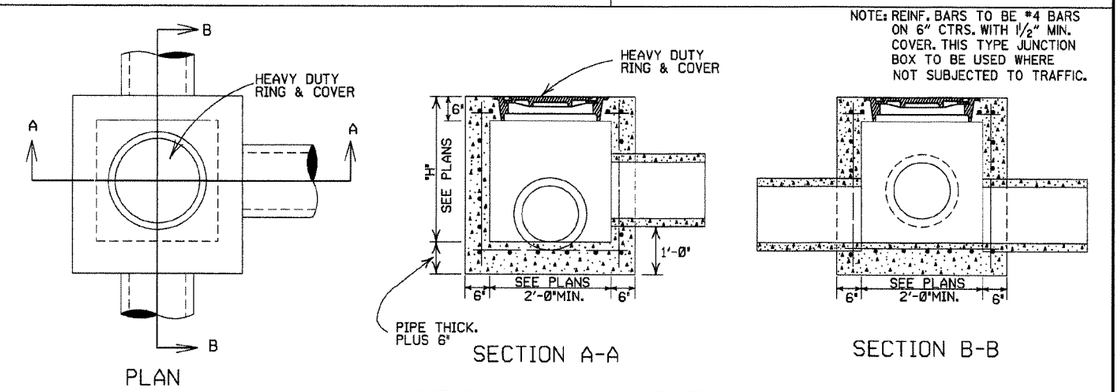
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

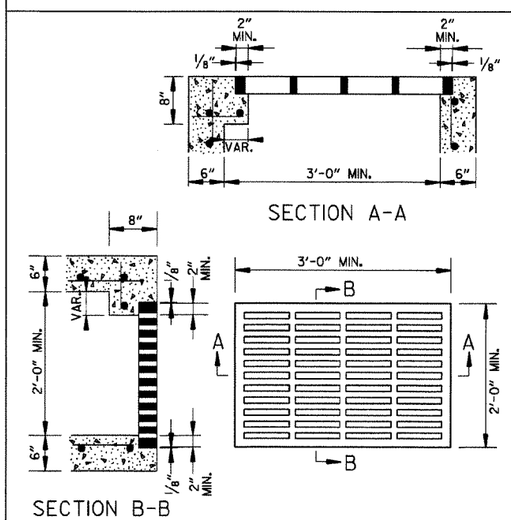


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

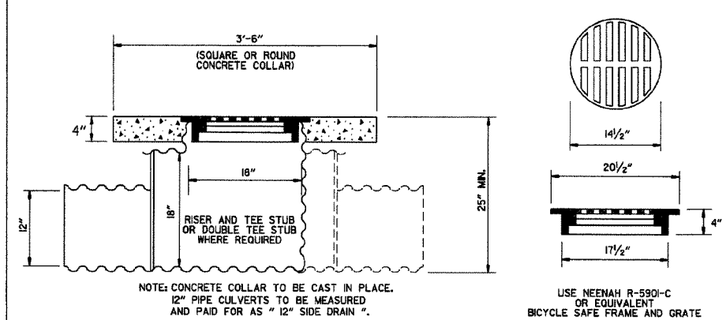


JUNCTION BOX (TYPE E)



APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET



DETAIL OF YARD DRAIN

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

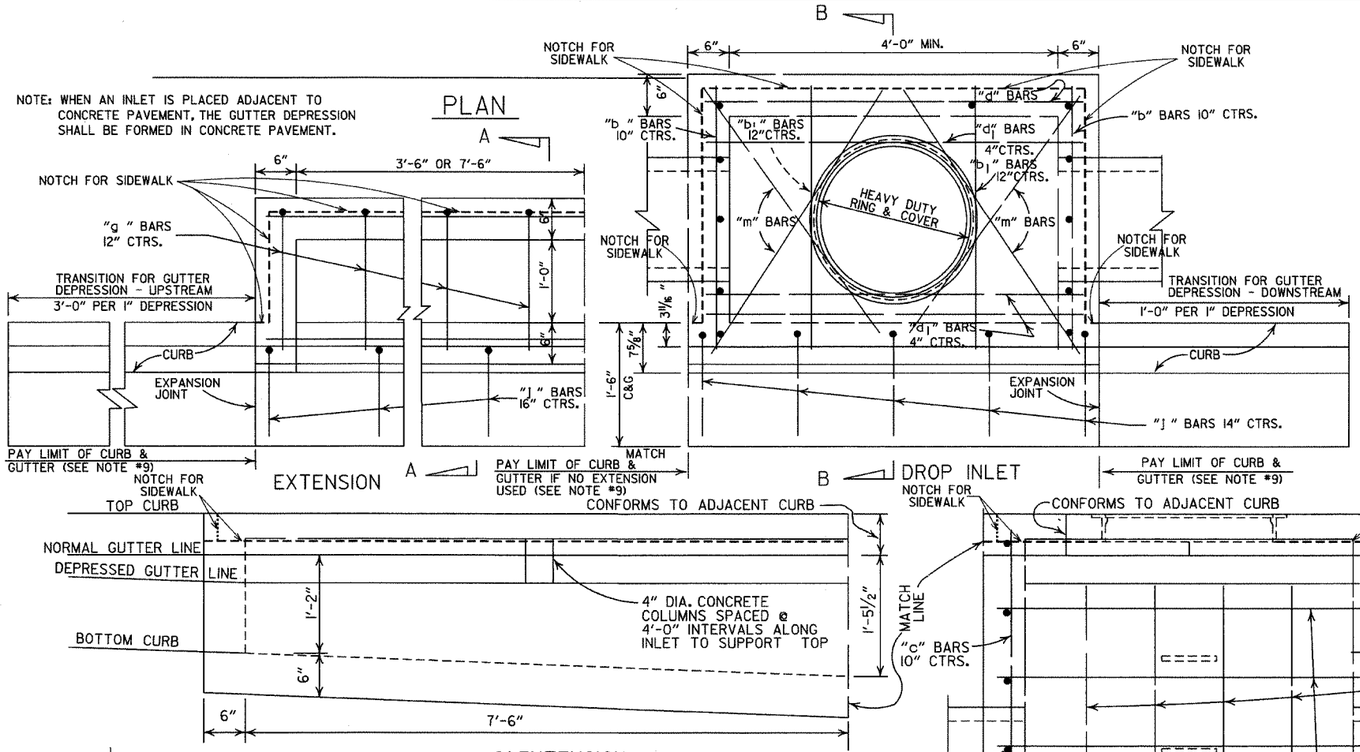
DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9

NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.



4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC.	HEIGHT 5'-0" REINF. STEEL	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL
		CU. YDS.	POUNDS	CU. YDS.	POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

DROP INLET EXTENSION

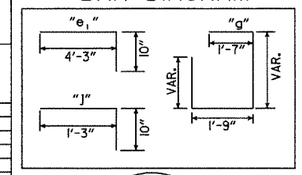
4'-0" CLASS A CONC.	4'-0" REINF. STEEL	8'-0" CLASS A CONC.	8'-0" REINF. STEEL
CU. YDS.	POUNDS	CU. YDS.	POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

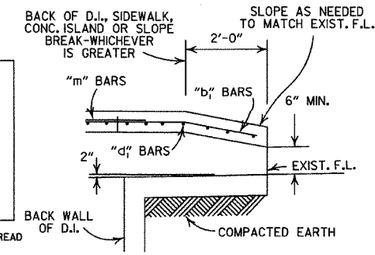
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

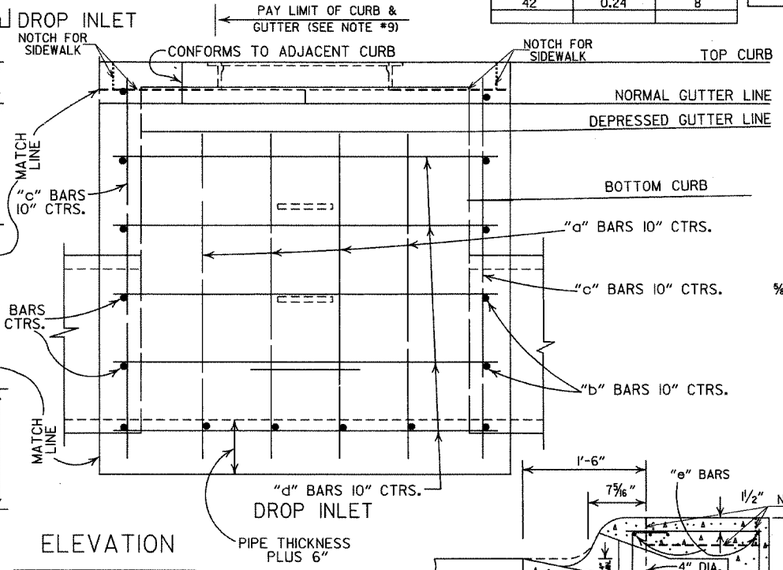
BAR DIAGRAM

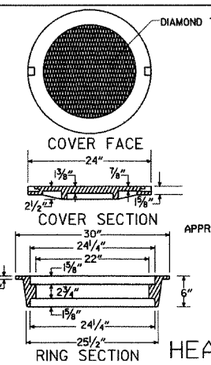




BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



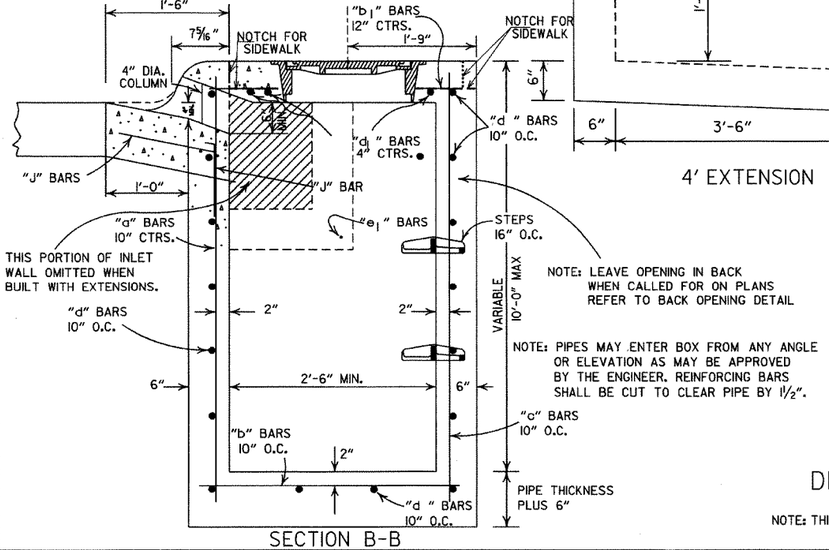


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

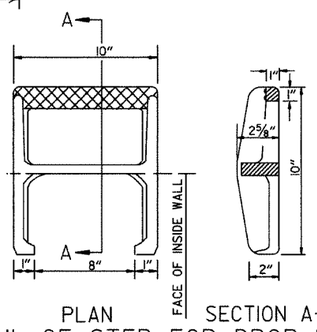
GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.



NOTE: LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

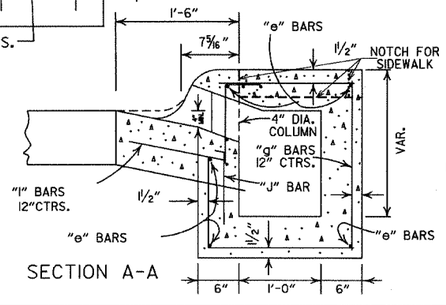
NOTE: PIPES MAY ENTER BOX FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 1½".



DETAIL OF STEP FOR DROP INLET

APPROX. WEIGHT = 11 LBS. (CAST IRON)

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



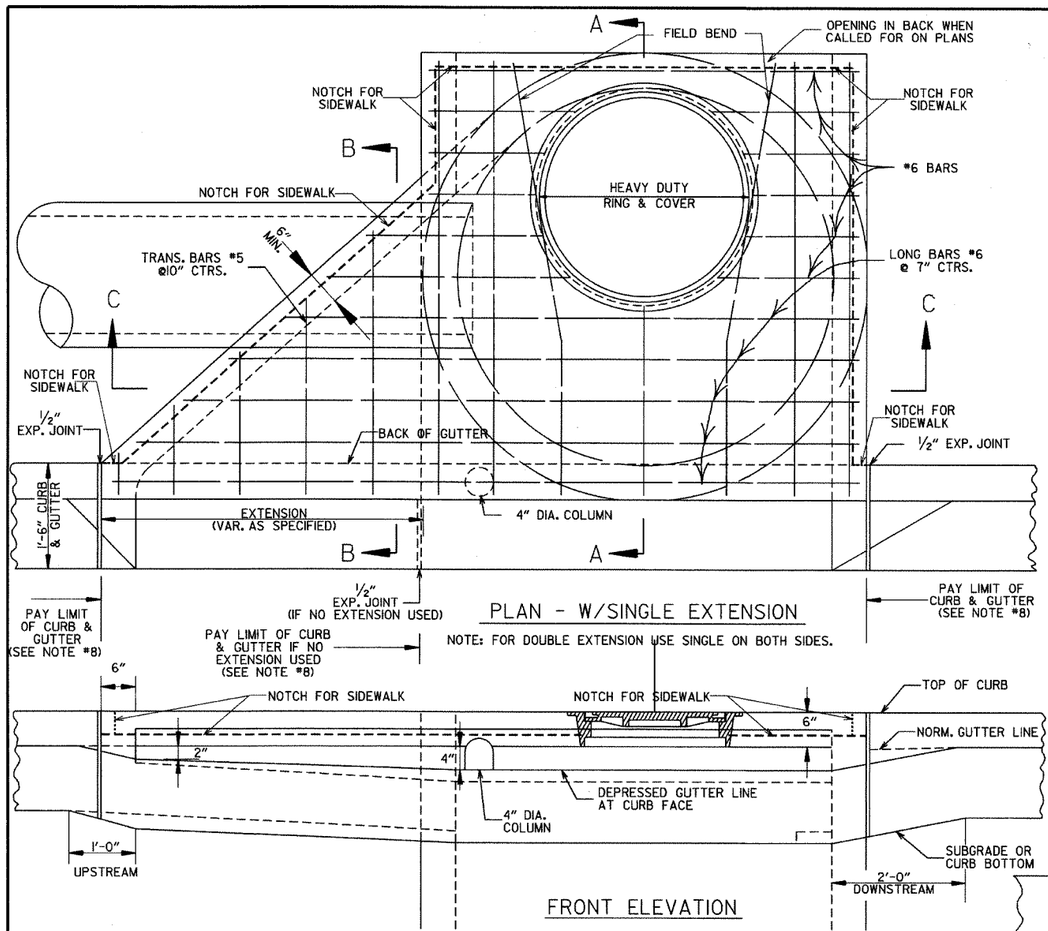
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

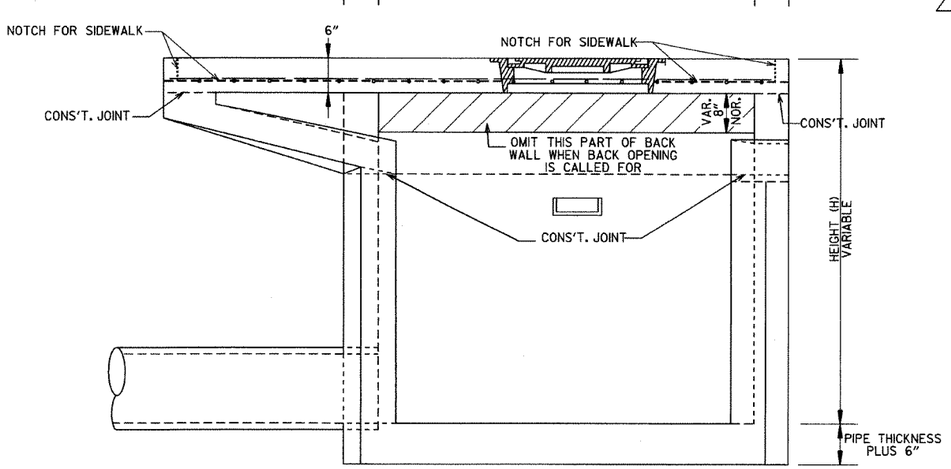
STANDARD DRAWING FPC-9E



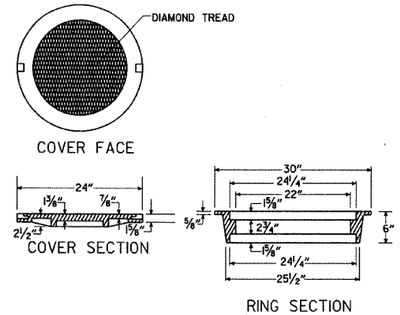
PLAN - W/SINGLE EXTENSION

NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.

FRONT ELEVATION



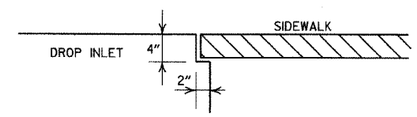
SECTION C-C



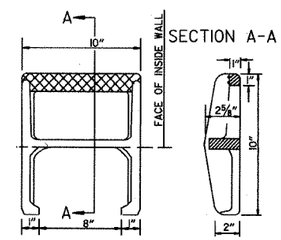
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



DETAIL OF NOTCH FOR SIDEWALKS

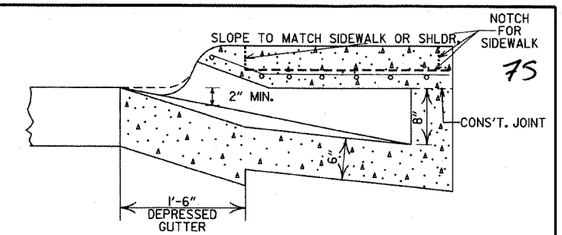


APPROX. WEIGHT = 11 LBS. (CAST IRON)

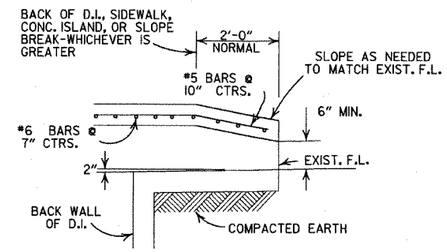
PLAN

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

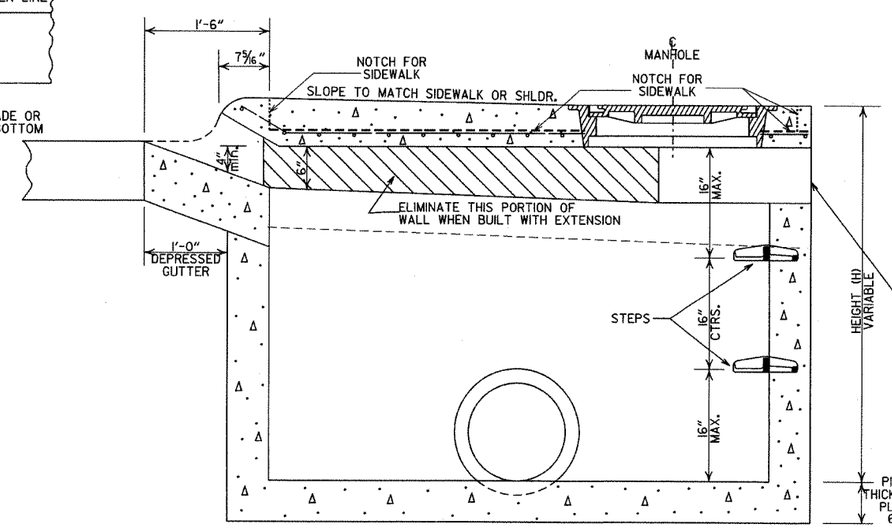


SECTION B-B



BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE MO).



SECTION A-A

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1 1/2" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 4"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

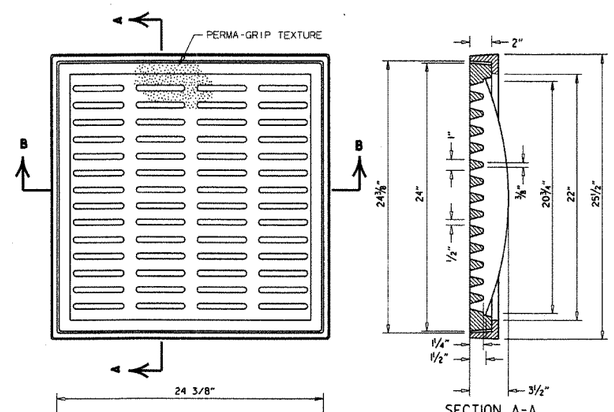
		MINIMUM WALL THICKNESS	
DIA. OF D.I.	DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11 ADJ. OPENING DIMENSION	
10-24-95	CORRECTED *6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN DETAIL & NOTE	4-1-93
8-15-91	REVISED NOTES 11&2 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO.12	11-30-89
4-23-89	ADDED NOTE & MINIMUM WALL THICKNESS	5DL-4-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	649-7-15-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

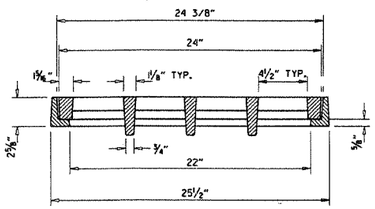
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



SECTION A-A

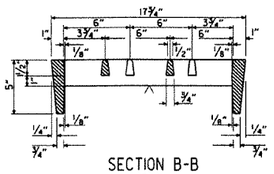


SECTION B-B

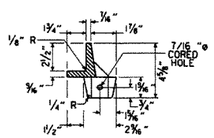
GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE 1/2" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B. & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

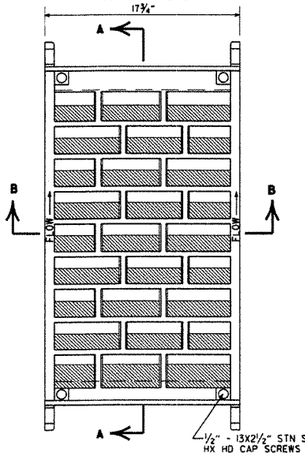
DETAILS OF PEDESTRIAN GRATE AND FRAME

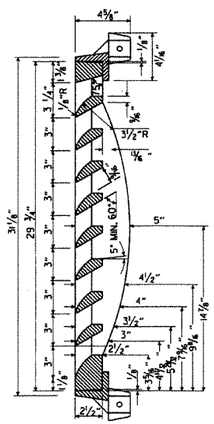


SECTION B-B



SECTION THRU FRAME



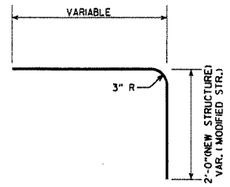


SECTION A-A

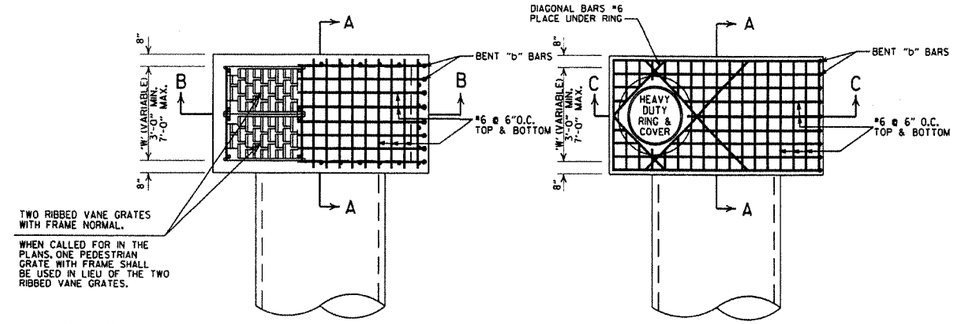
DETAILS OF RIBBED VANE GRATE AND FRAME

GENERAL NOTES (RIBBED VANE GRATE & FRAME)

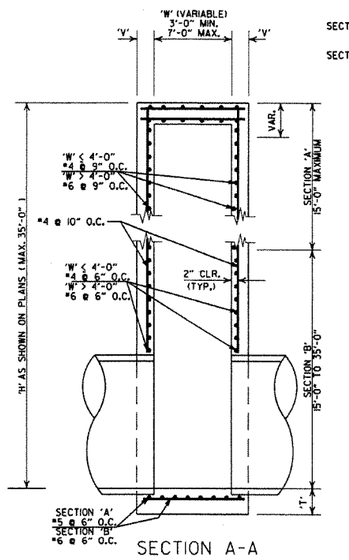
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.



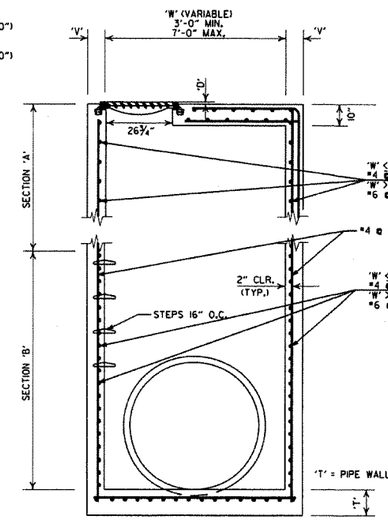
DETAIL OF BENT "b" BAR



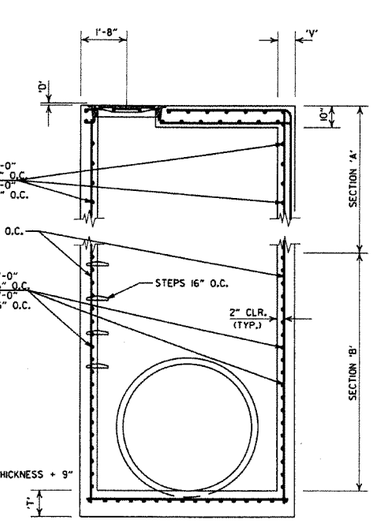
SECTION 'A' 'V' = 8"
SECTION 'B' (W≤4'-0") 'V' = 8"
SECTION 'B' (W>4'-0") 'V' = 10"



SECTION A-A



SECTION B-B

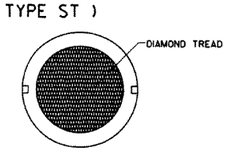


SECTION C-C

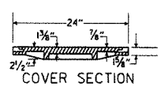
DETAILS OF JUNCTION BOX (TYPE ST)

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

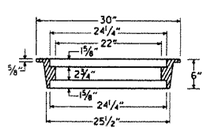
1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A 3/4" CHAMFER.



COVER FACE



COVER SECTION



RING SECTION

GENERAL NOTES (HEAVY DUTY RING & COVER):

1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B. & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

HEAVY DUTY RING & COVER

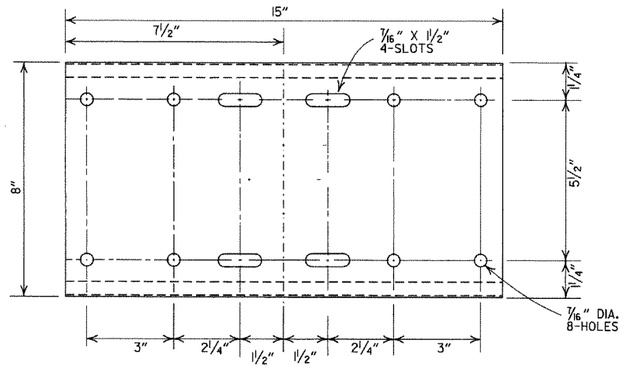
APPROXIMATE TOTAL WEIGHT = 333 LBS.

DATE REVISED	DATE FILMED	DESCRIPTION
7-26-12		REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED

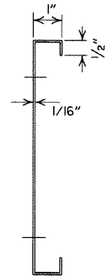
ARKANSAS STATE HIGHWAY COMMISSION

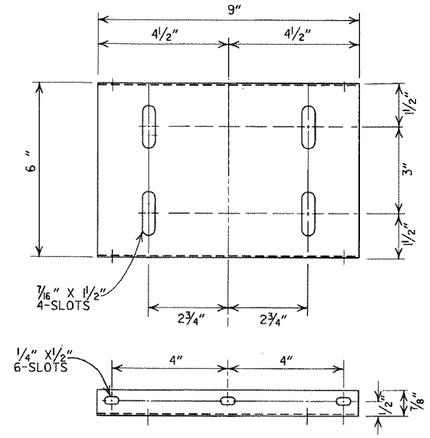
DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)

STANDARD DRAWING FPC-9S

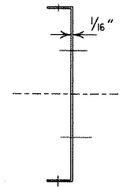


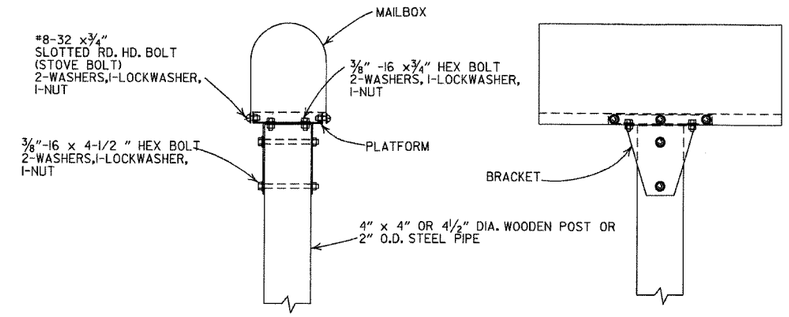
SHELF



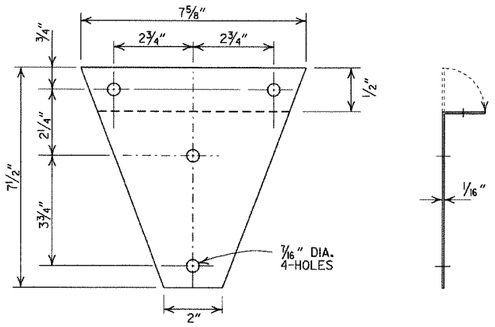


PLATFORM





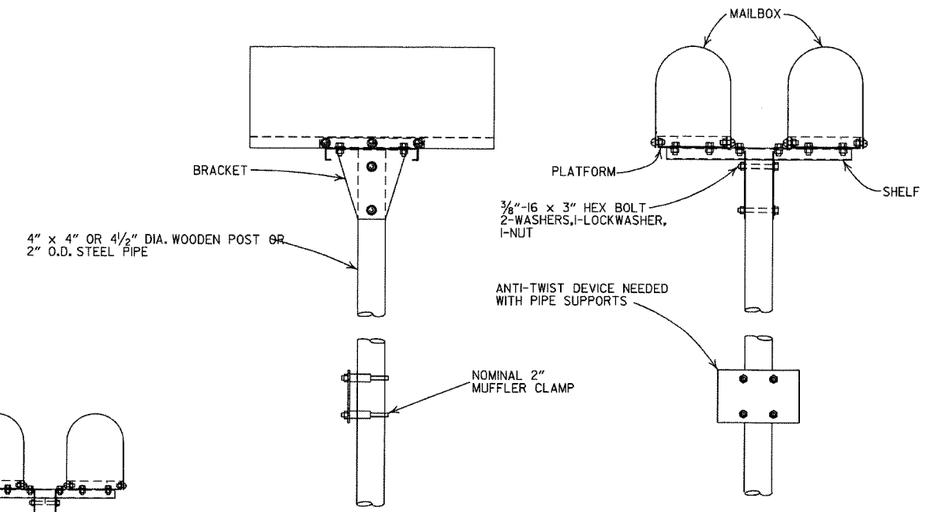
SINGLE INSTALLATION



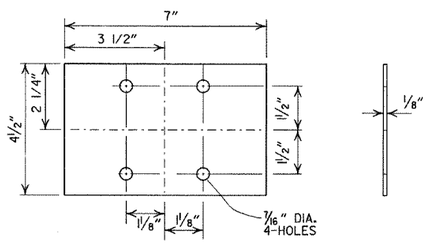
BRACKET

GENERAL NOTES

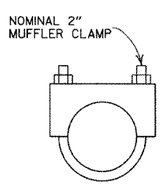
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X¾" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



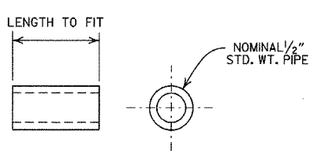
DOUBLE INSTALLATION



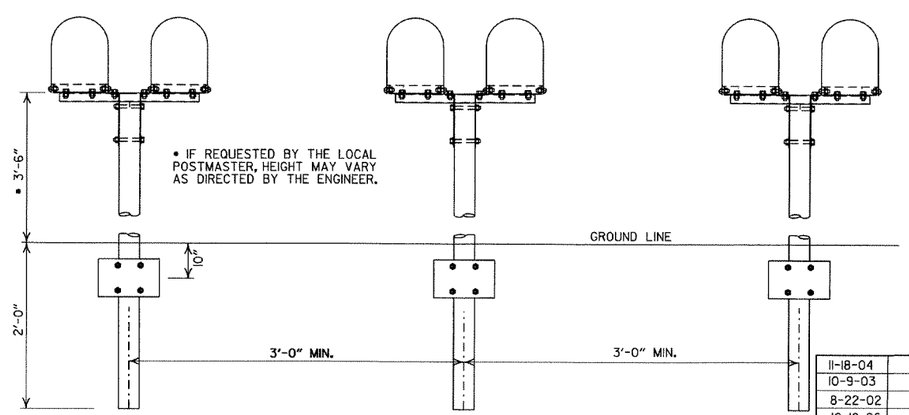
ANTI-TWIST PLATE



CLAMP



SPACER



SPACING FOR MULTIPLE POST INSTALLATION

DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	120-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31 5/16	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

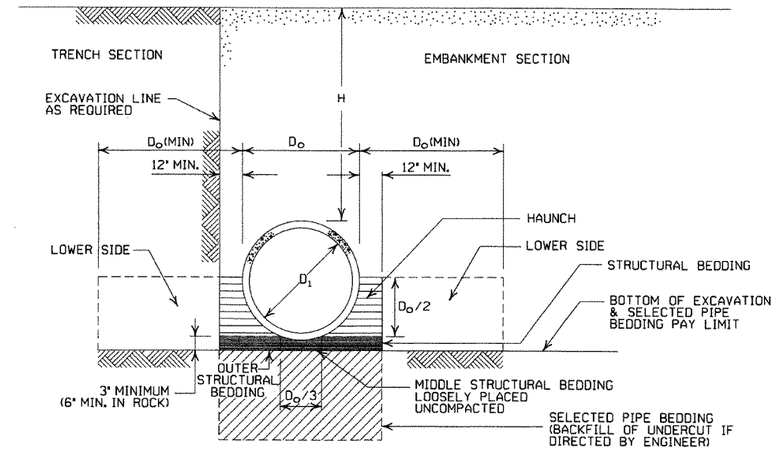
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

DATE	REVISION	DATE FILMED
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
		2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL: MIN. THICKNESS REQUIRED INCHES	STEEL: ① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	STEEL: MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	ALUMINUM: MIN. THICKNESS REQUIRED INCHES	ALUMINUM: ① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	ALUMINUM: MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM		
15	17x13	3	0.064	2	15	0.060	2	15
18	21x15	3	0.064	2	15	0.060	2	15
21	24x18	3	0.064	2.25	15	0.060	2.25	15
24	28x20	3	0.064	2.5	15	0.075	2.5	15
30	35x24	3	0.079	3	12	0.075	3	12
36	42x29	3½	0.079	3	12	0.105	3	12
42	49x33	4	0.079	3	12	0.105	3	12
48	57x38	5	0.109	3	13	0.135	3	13
54	64x43	6	0.109	3	14	0.135	3	14
60	71x47	7	0.138	3	15	0.164	3	15
66	77x52	8	0.168	3	15			
72	83x57	9	0.168	3	15			

			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				
				INSTALLATION TYPE 2	INSTALLATION TYPE 1	INSTALLATION TYPE 2	INSTALLATION TYPE 1
36	40x31	5	0.079	3	2	12	15
42	46x36	6	0.079	3	2	13	15
48	53x41	7	0.079	3	2	13	15
54	60x46	8	0.079	3	2	13	15
60	66x51	9	0.079	3	2	13	15
66	73x55	12	0.079	3	2	15	15
72	81x59	14	0.079	3	2	15	15
78	87x63	14	0.079	3	2	15	15
84	95x67	16	0.109	3	2	15	15
90	103x71	16	0.109	3	2	15	15
96	112x75	18	0.109	3	2	15	15
102	117x79	18	0.109	3	2	15	15
108	128x83	18	0.138	3	2	15	15

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

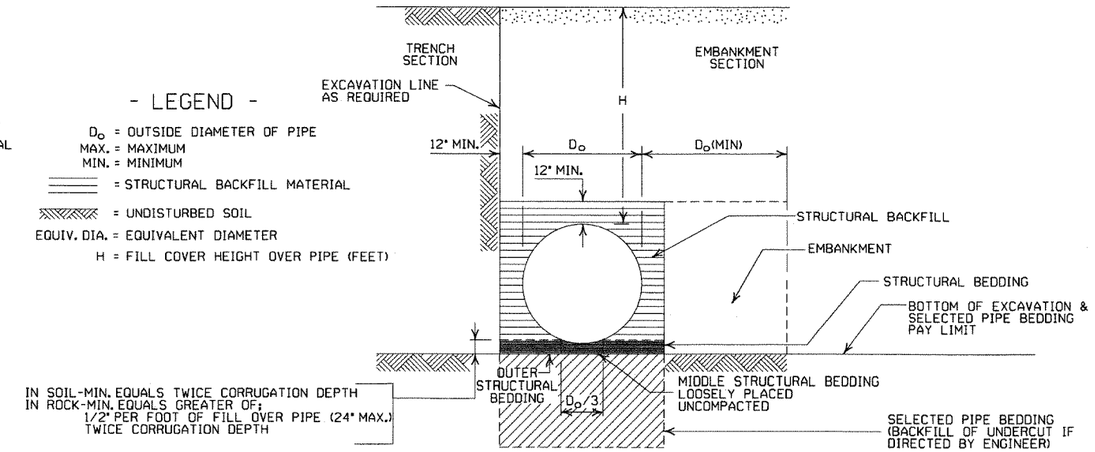
③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

- LEGEND -

D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL
EQUIV. DIA. = EQUIVALENT DIAMETER
H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALALTION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2⅔" X ½" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" X 1" OR 5" X 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3" x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

DATE	REVISION	DATE FILMED
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

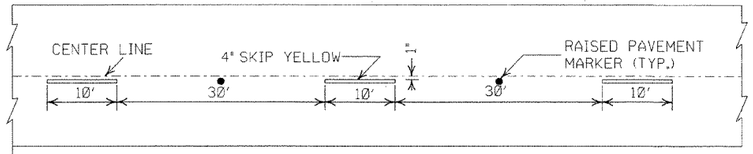
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

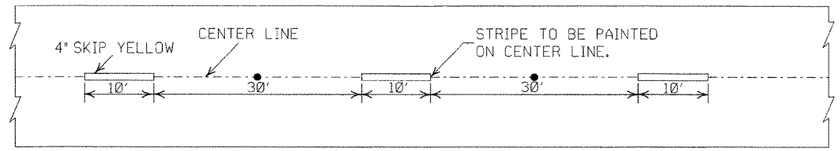
STANDARD DRAWING PCM-1

NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

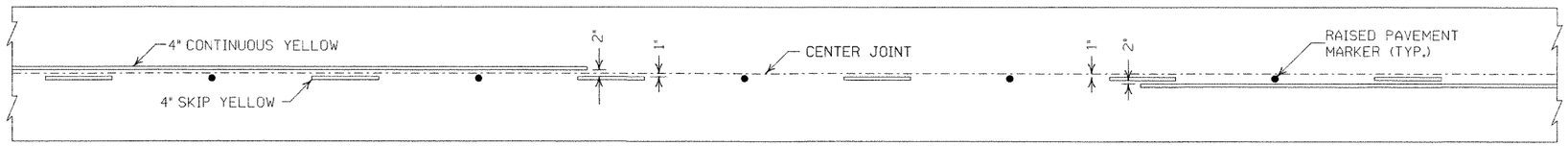


CONCRETE PAVEMENT

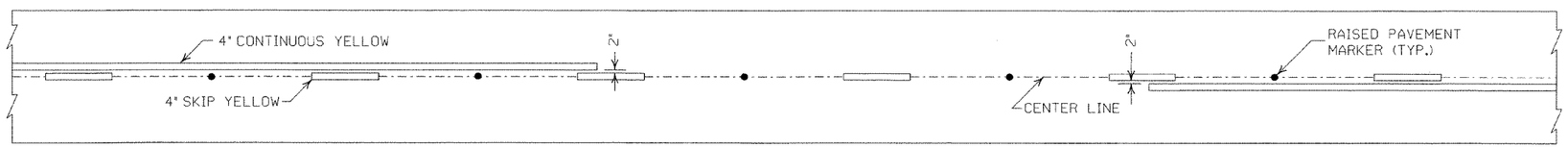


ASPHALT PAVEMENT

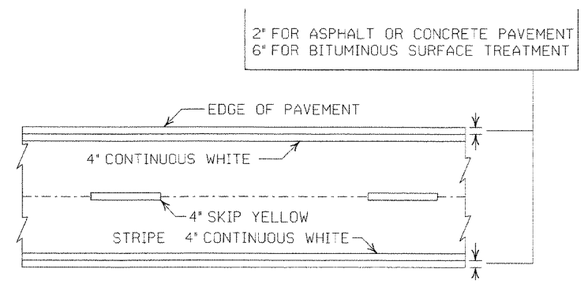
BROKEN LINE STRIPING



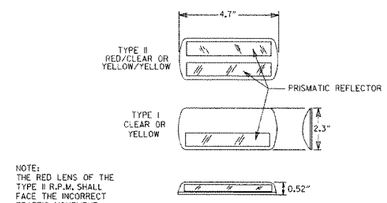
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

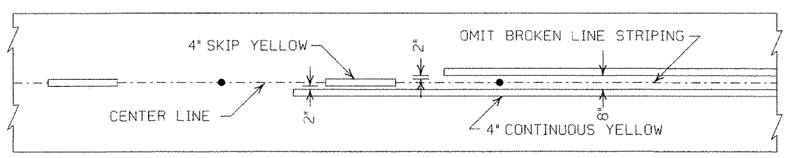


PAVEMENT EDGE LINE MARKING

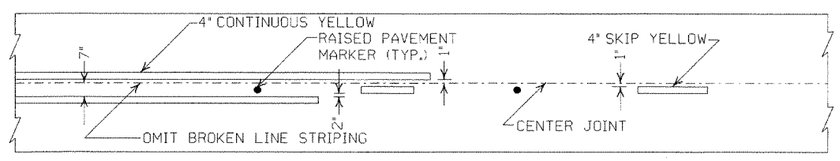


NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS



ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

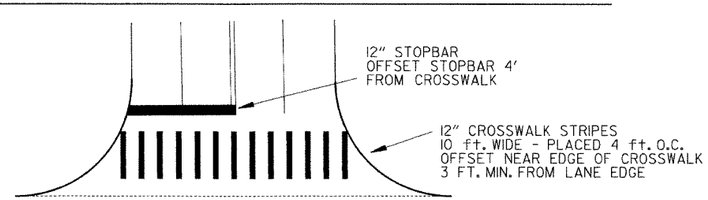
GENERAL NOTES:

THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED 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.



CROSSWALK AND STOPBAR DETAILS

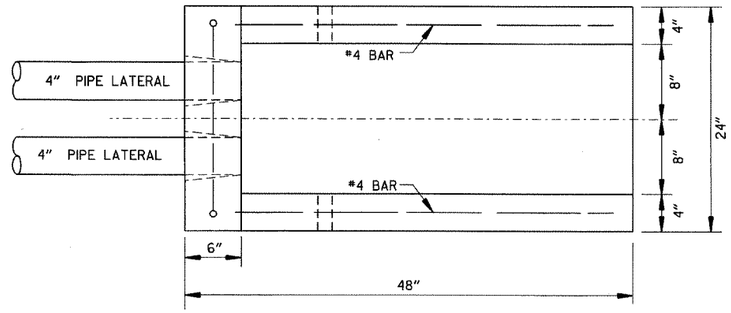
DATE	REVISION	FILMED
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

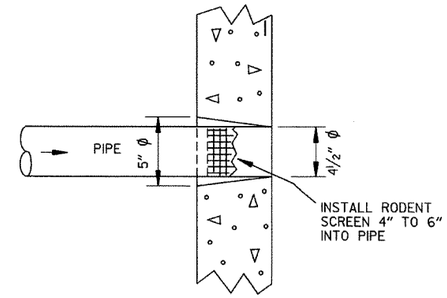
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

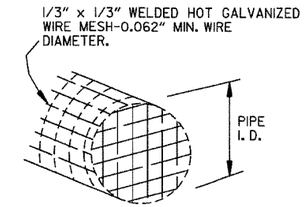
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



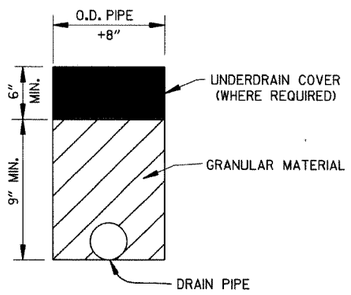
PLAN VIEW

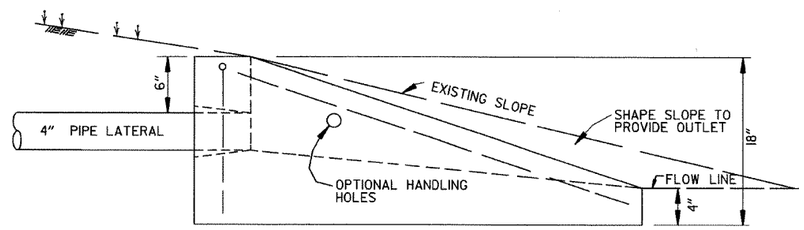


DETAIL OF HOLE FOR 4" PIPE

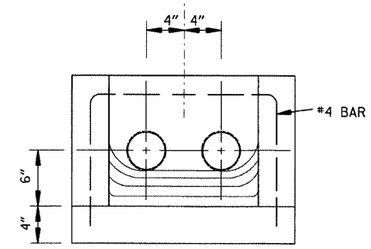


DETAIL OF RODENT SCREEN

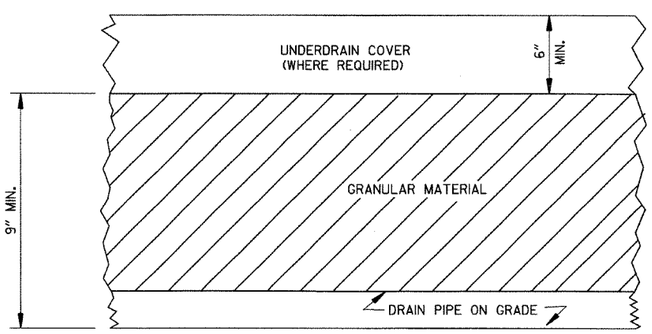




SIDE VIEW

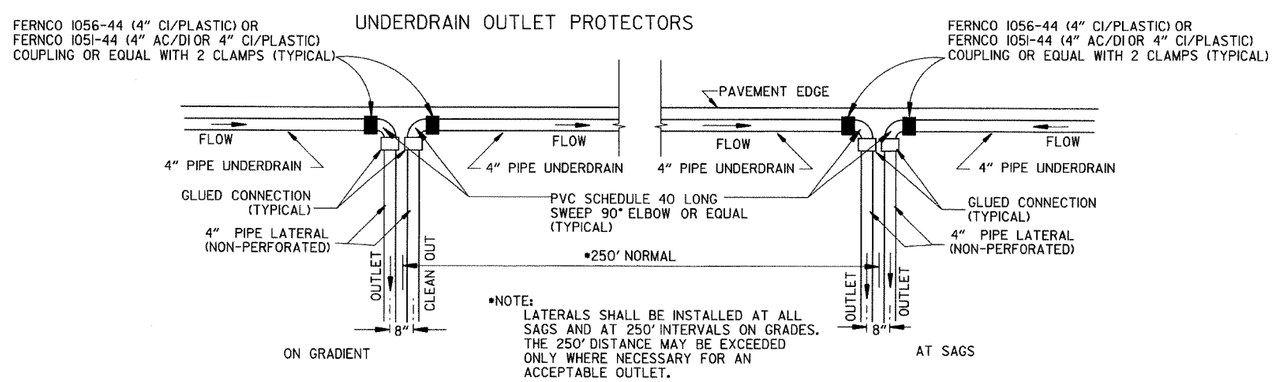


FRONT VIEW



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



•NOTE:
LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

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.

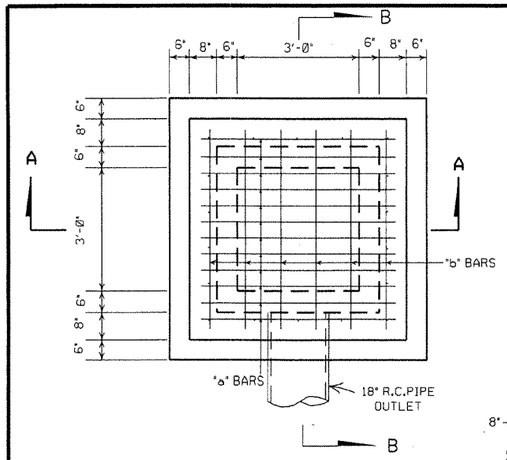
DATE	REVISION	DATE FILMED
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5 1/2" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11- 3-94	REVISED FOR DUAL LATERALS	11- 3-94
10- 1-92	SUBSTITUTED GEOTEXTILE	10- 1-92
8-15-91	ADDED POLYEDTHYLENE 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

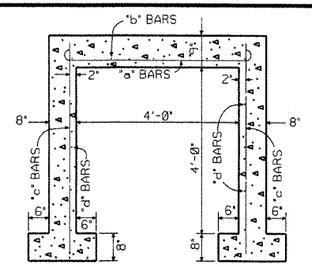
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

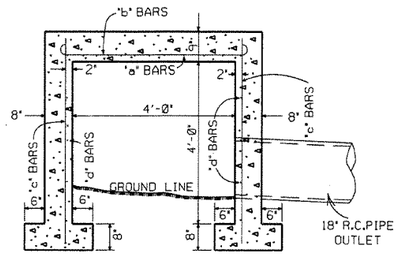
STANDARD DRAWING PU-1

7-20-95 INSTD.PUI





SEC A-A

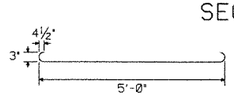


SEC B-B

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"a"	11	6'-0"	5"
"b"	6	6'-0"	10"
"c"	16	5'-1"	12"
"d"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"a" & "b" BARS

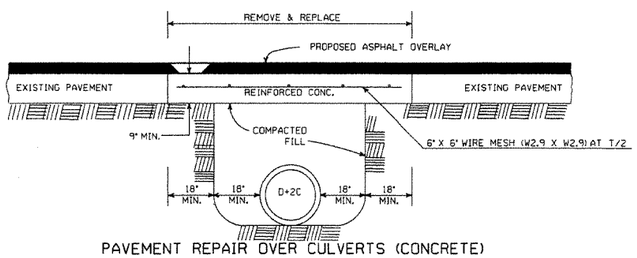
QUANTITIES

CONCRETE 3.40 CU. YDS.
REINFORCING STEEL 176 LB.

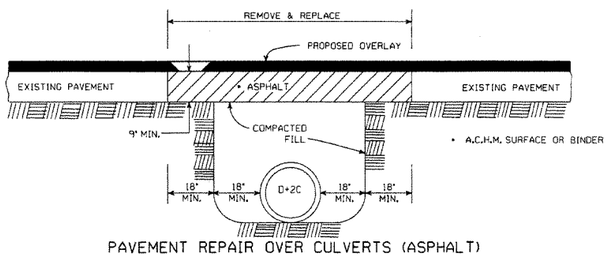
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



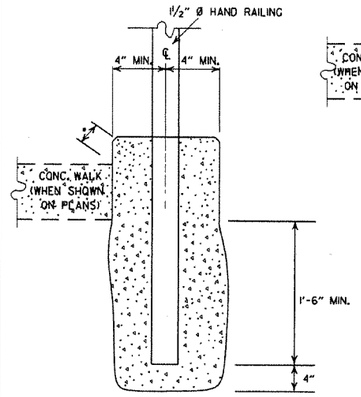
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



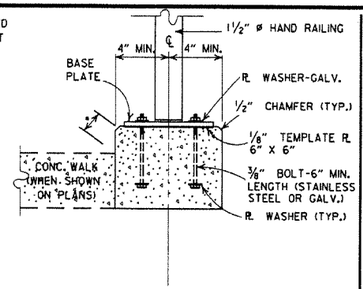
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

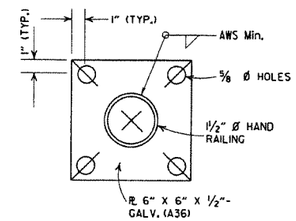
* A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

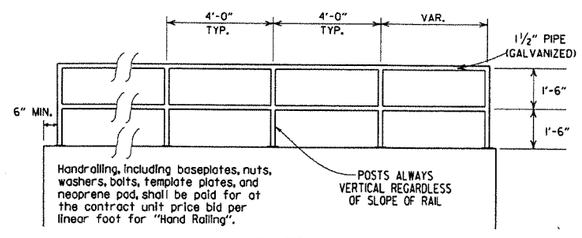


POST CONNECTION TO WALL

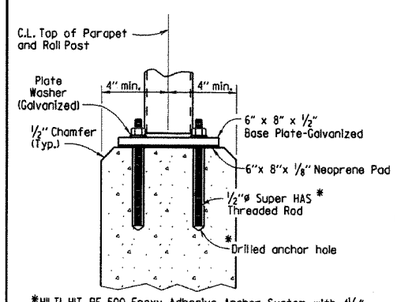


BASE PLATE

POST CONNECTION DETAILS



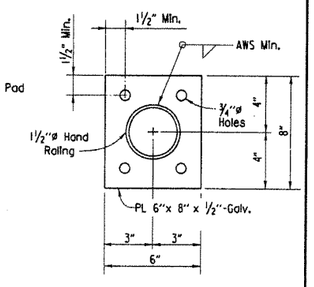
Hand railing shall conform to Section 633.



*HILTI HIT RE 500 Epoxy Adhesive Anchor System with 4½" embedment or approved equal.

The Adhesive Anchor System shall be installed in accordance with Manufacturer's recommendations.

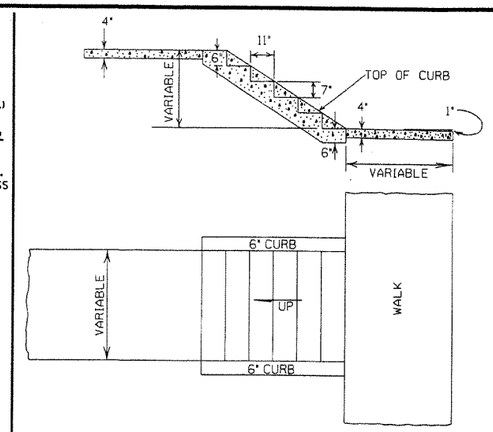
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

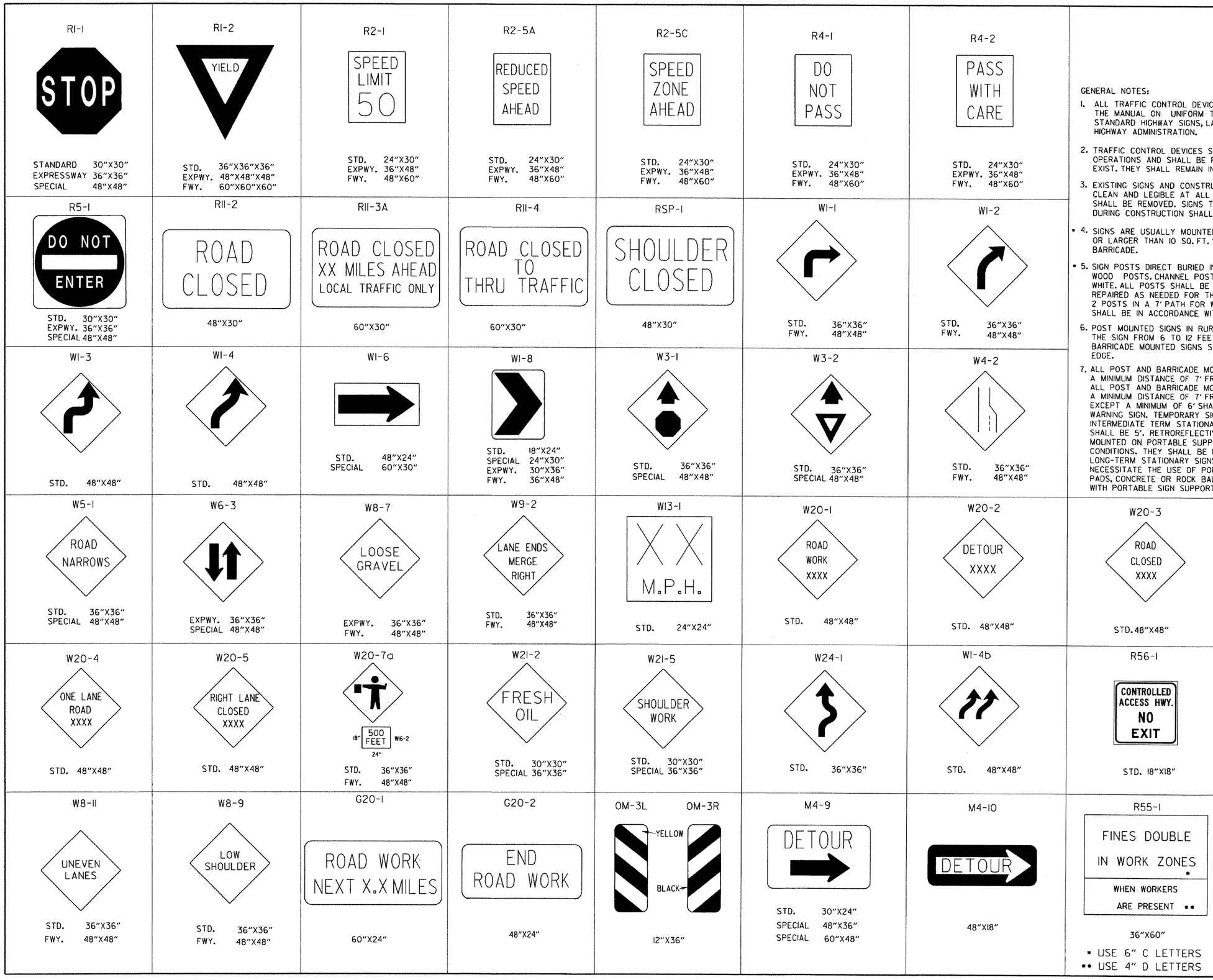
DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	**CHANGED CONST. TO CONTRACTION JOINT**	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V, BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR	649-7-15-88
	ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET.& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L. 568	-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3 567	-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1



ADVANCE DISTANCES
(XXXX)

500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.

3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, 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.

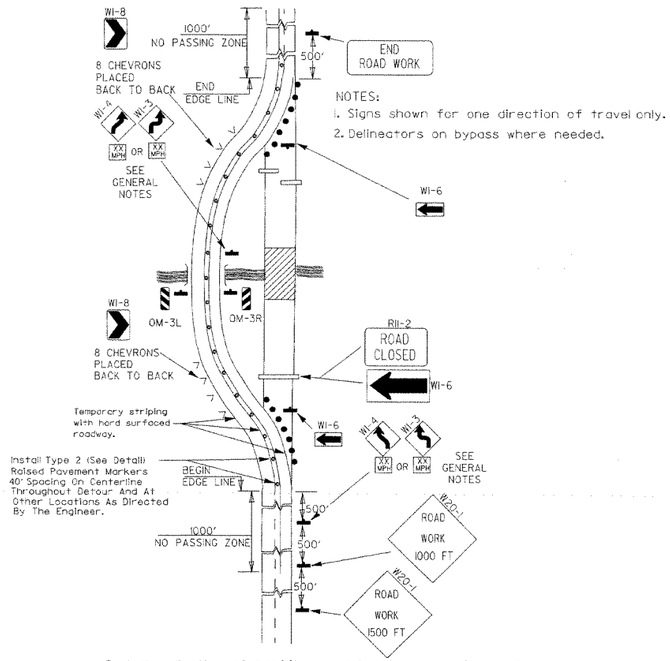
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

DATE	REVISION	FILMED
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	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	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

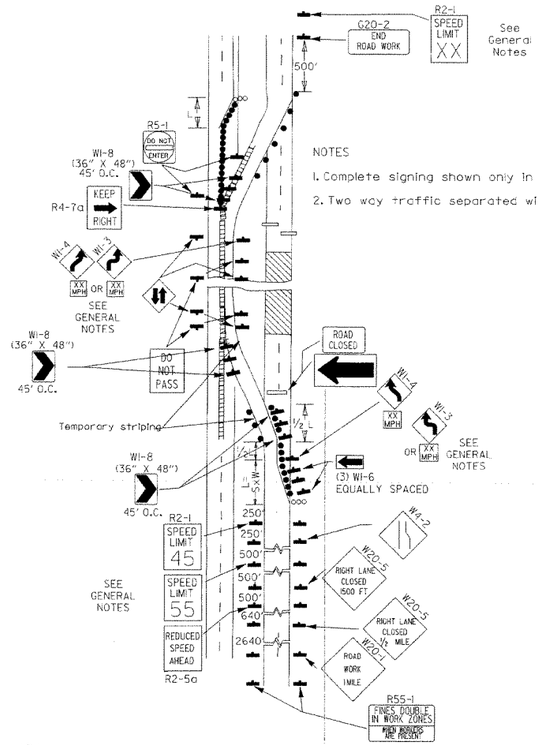
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



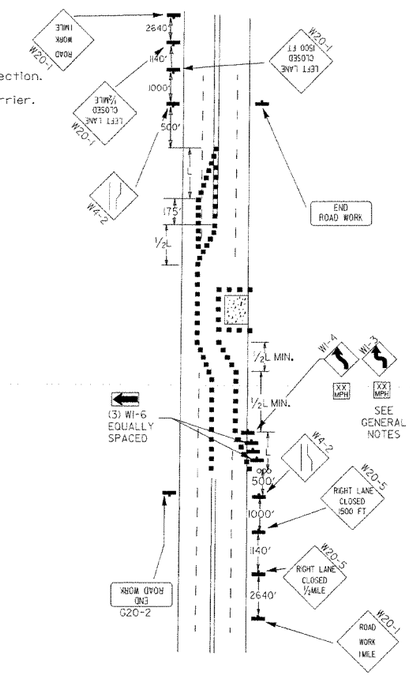
NOTES:
1. Signs shown for one direction of travel only.
2. Delineators on bypass where needed.

(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.

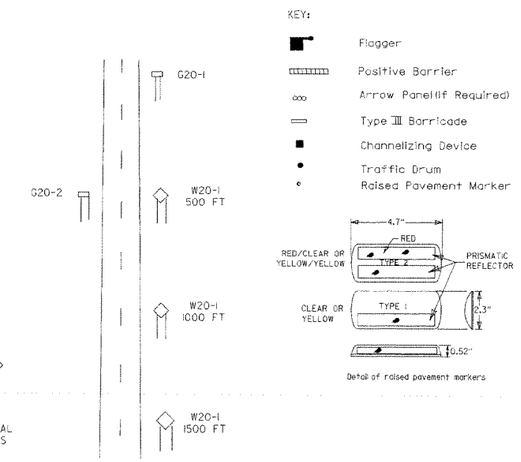


NOTES
1. Complete signing shown only in crossover direction.
2. Two way traffic separated with positive barrier.

(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.



Typical advance warning sign placement

Taper formulae:

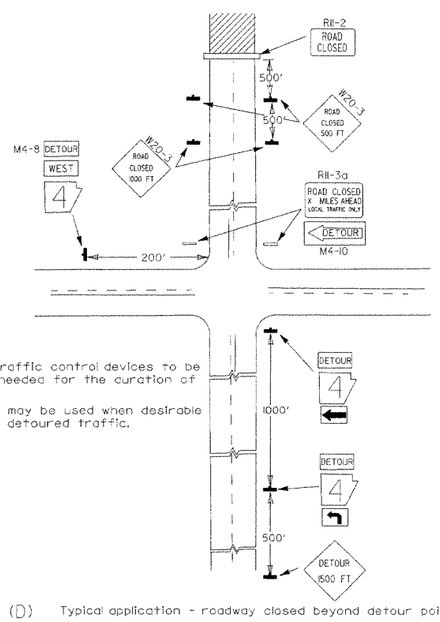
L=SxW for speeds of 45mph or more.

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

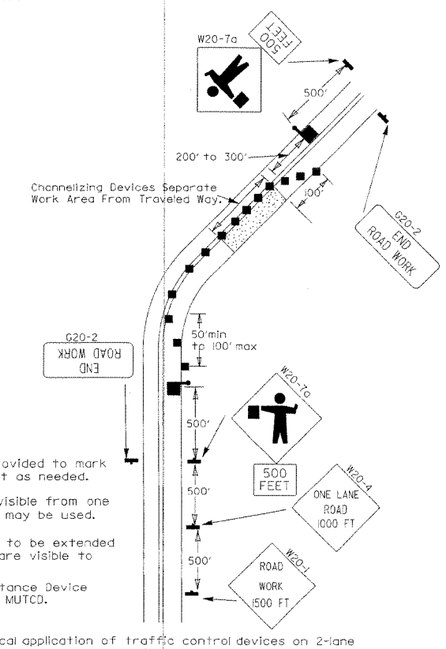
GENERAL NOTES:

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 R2-5A shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(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 1mile 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.



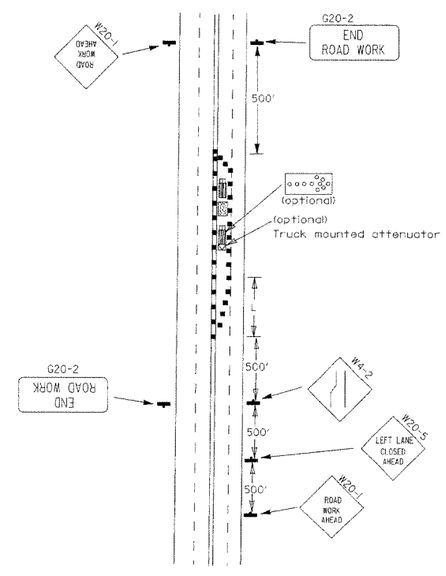
NOTES:
1. Regulatory traffic control devices to be modified as needed for the duration of the detour.
2. Street names may be used when desirable for directing detoured traffic.

(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.



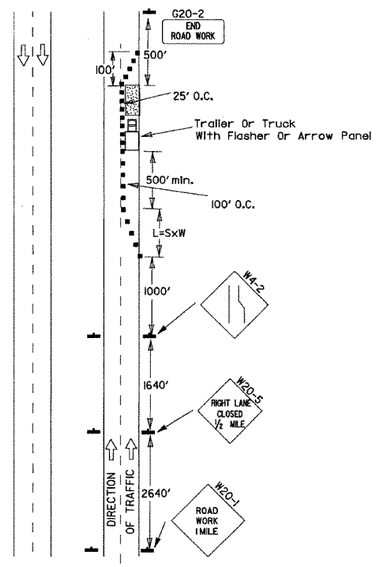
(F) Typical application - 4-lane undivided roadway with inside lane closed.

DATE	REVISION	FILMED
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	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	

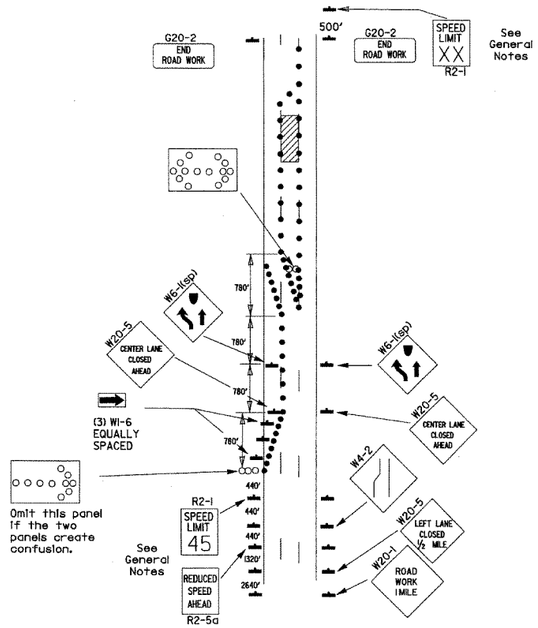
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

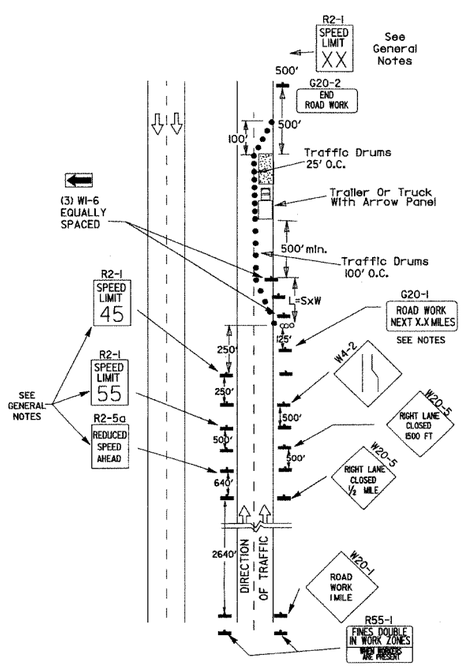
STANDARD DRAWING TC-2



(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.

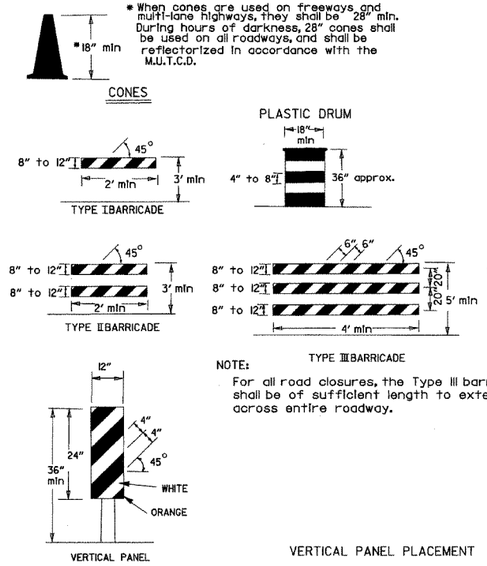
KEY:

- ooo 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 R2-5A 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 1/25' 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

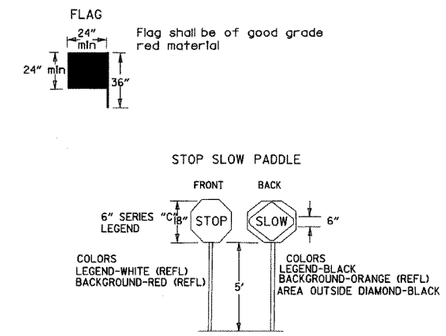


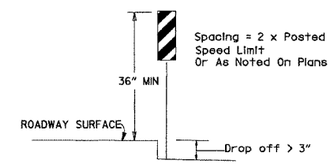
NOTE:
For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.

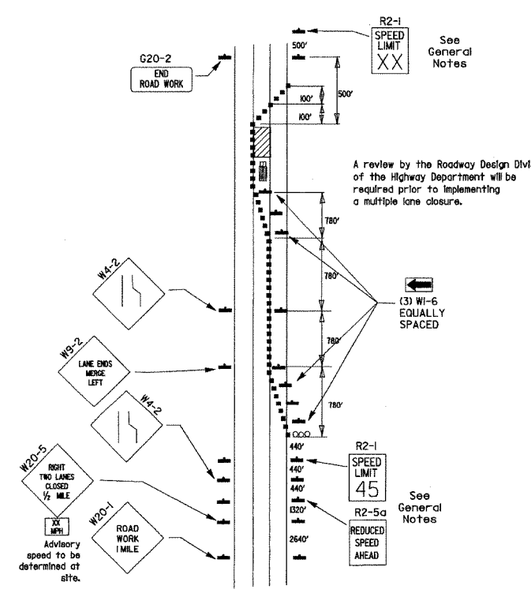
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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.





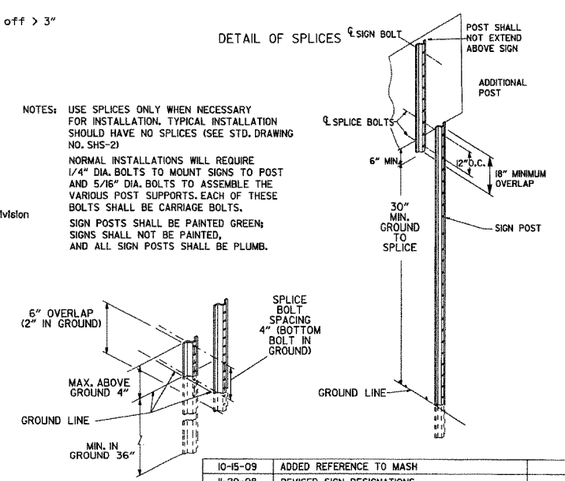


(D) Typical application - closing multiple lanes of a multilane highway.

NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.



DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

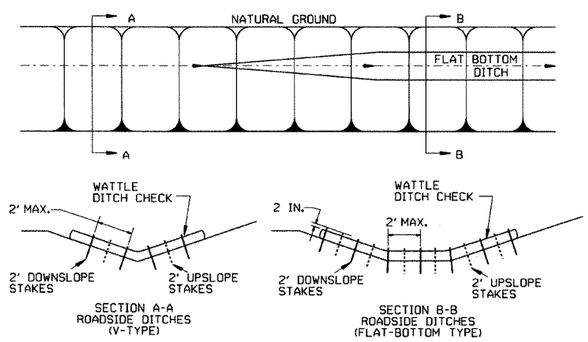
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

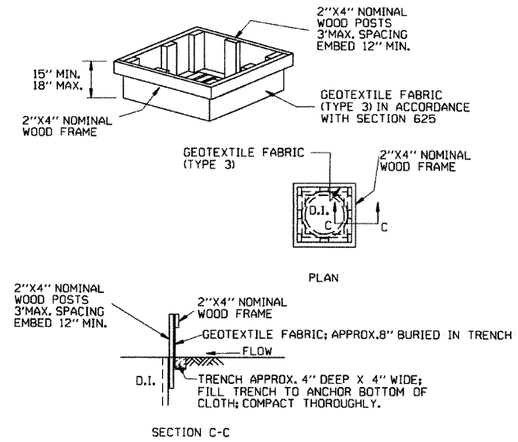
STANDARD DRAWING TC-3

GENERAL NOTES

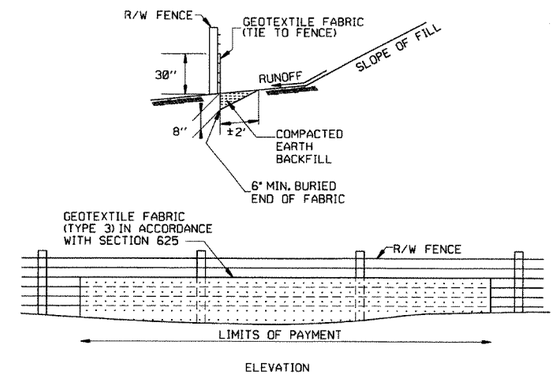
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



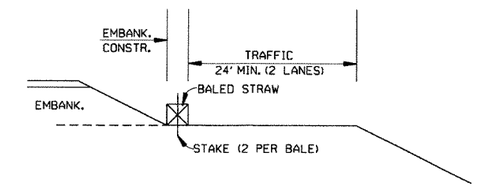
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

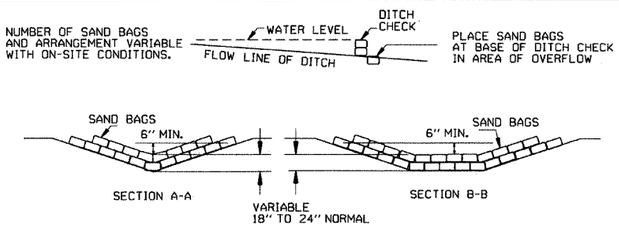
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

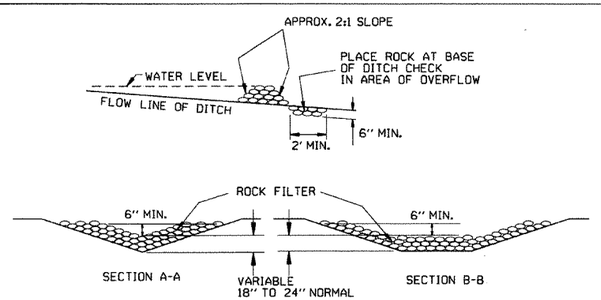
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED 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.



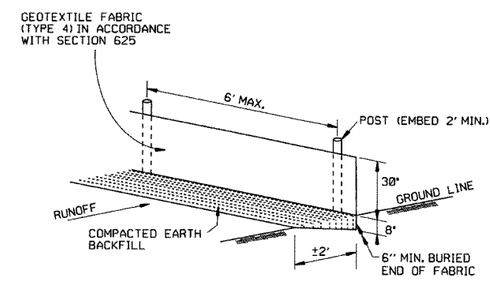
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

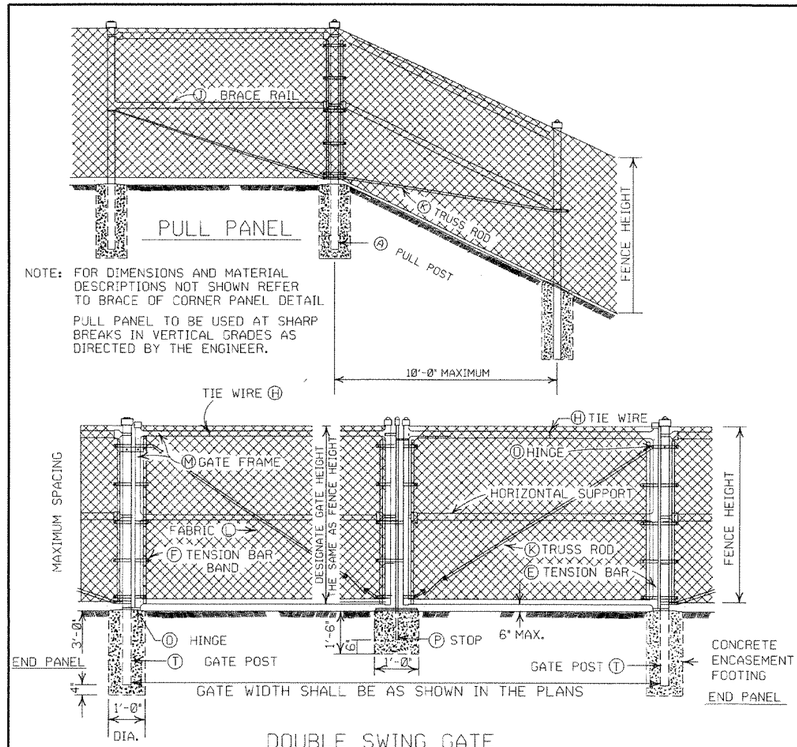
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

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



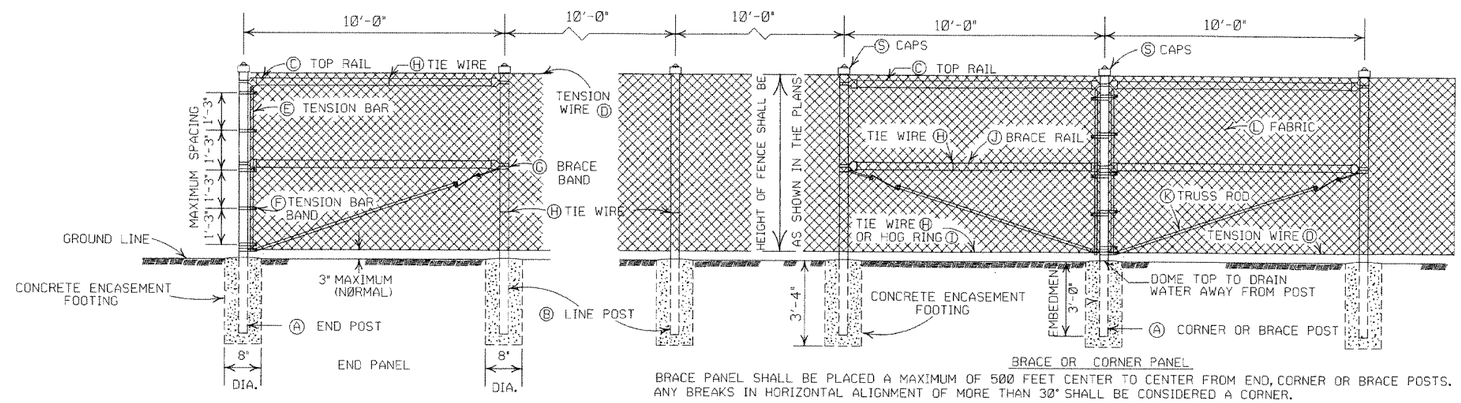
PULL PANEL

NOTE: FOR DIMENSIONS AND MATERIAL DESCRIPTIONS NOT SHOWN REFER TO BRACE OF CORNER PANEL DETAIL

PULL PANEL TO BE USED AT SHARP BREAKS IN VERTICAL GRADES AS DIRECTED BY THE ENGINEER.

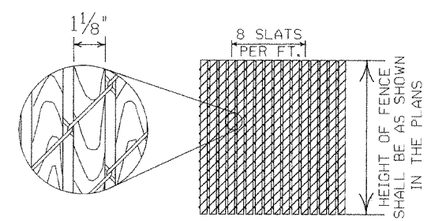
DOUBLE SWING GATE

POST SPACING DETAIL



BRACE OR CORNER PANEL

BRACE PANEL SHALL BE PLACED A MAXIMUM OF 500 FEET CENTER TO CENTER FROM END, CORNER OR BRACE POSTS. ANY BREAKS IN HORIZONTAL ALIGNMENT OF MORE THAN 30° SHALL BE CONSIDERED A CORNER.



1⅛" X ¼" REDWOOD SLATS(LENGTH TO MATCH HEIGHT OF FENCE)

DETAIL OF REDWOOD SLAT INSTALLATION

(WHERE APPLICABLE)

GENERAL NOTES:

(C) CHAIN LINK FENCE BEING PLACED ON PRIVATE PROPERTY SHALL INCLUDE A TOP RAIL. ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LIN. FT. OF CHAIN LINK FENCE.

(D) TENSION WIRE: SHALL BE SECURED TO ALL TERMINAL, PULL, BRACE OR CORNER POSTS WITH TENSION BAR BANDS.

(J) BRACE RAIL: BRACE RAILS SHALL BE PROVIDED AT ALL TERMINAL, PULL, BRACE OR CORNER POSTS HALFWAY BETWEEN THE TOP RAIL AND GROUND LEVEL WHEN TOPRAIL IS SPECIFIED AND TWELVE INCHES (12") DOWN FROM TOP OF FABRIC WHEN TOP TENSION WIRE IS SPECIFIED. BRACE RAIL SHALL EXTEND FROM SUCH POST TO THE FIRST ADJACENT LINE POST.

(L) FABRIC: SHALL CONFORM TO THE SPECIFICATIONS.

(M) GATE FRAMES: SHALL BE CONSTRUCTED OF TUBULAR MEMBERS ASSEMBLED BY USE OF HEAVY PRESSED STEEL. MALLEABLE FITTINGS OR BY WELDING. ALL GATES SHALL HAVE ONE HORIZONTAL SUPPORT EXTENDING THE WIDTH OF THE GATE AT THE MIDPOINTS OF VERTICAL FRAME MEMBERS. THE COMPLETE FRAME SHALL BE RIGID AND HAVE AMPLE STRENGTH TO BE FREE FROM SAG AND TWIST.

(O) HINGES: SHALL BE OF HEAVY PATTERN, OF ADEQUATE STRENGTH FOR GATE, AND WITH LARGE BEARING SURFACES FOR CLAMPING IN POSITION. THE HINGE SHALL BE OF THE PROPER TYPE TO ALLOW FOR THE DESIGNATED DEGREE OF SWING. THE HINGE SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. THE GATES SHALL BE CAPABLE OF BEING OPENED AND CLOSED EASILY BY ONE PERSON.

(P) LATCHES AND STOPS: SHALL BE PROVIDED FOR ALL GATES. GATES SHALL HAVE A DROP BAR LATCH. LATCHES SHALL BE ARRANGED FOR LOCKING. THE STOP FOR DROP BAR LATCHES SHALL BE SET IN CONCRETE AND ENGAGE THE PLUNGER OF THE BAR LATCH.

(S) CAPS: ALL POSTS, EXCEPT ROLL FORMED POSTS AND "T" POSTS SHALL BE CAPPED OVER THE EXTERIOR OF THE POST, AND SHALL CONFORM TO ASTM F626.

CONCRETE REQUIRED FOR THE EMBEDMENT OF ALL POSTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR CHAIN LINK FENCE.

POSTS SHALL BE SPACED EQUIDISTANT ON A MAXIMUM OF 10' CENTERS.

EXCAVATION FOR POSTS: IN OTHER THAN ROCK SHALL BE OF THE DIMENSIONS INDICATED. IF ROCK IS ENCOUNTERED BEFORE REACHING THE REQUIRED DEPTH, THE EXCAVATION SHALL BE CONTINUED TO THE DEPTH INDICATED OR 1'-6" INTO THE ROCK, WHICHEVER IS LESS, AND SHALL BE A MINIMUM OF 8 INCHES IN DIAMETER.

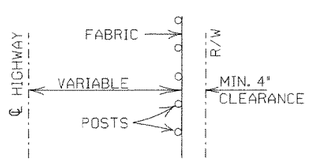
HEIGHT OF FENCE FABRIC	(A) END, PULL CORNER OR BRACE POST	(B) LINE POSTS		(C) TOP RAIL			(D) TENSION WIRE		(E) TENSION BAR		(F) TENSION BAR BAND			(G) BRACE BAND	
		SIZE	TIE SPACING	SIZE	TIE SPACING	MIN. LENGTH	SIZE	TIE SPACING	SIZE	LENGTH	SIZE	BOLT SIZE	SPACING	SIZE	BOLT SIZE
6' AND LESS	2½" O.D.	2" O.D.	1 TIE EVERY 1'-2" OF FABRIC HEIGHT	1⅝" O.D.	1 TIE EVERY 2'-0"	10'-0"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	MIN. OF 3/16" X ¾"	MIN. OF 2" LESS THAN FABRIC HEIGHT	MIN. OF ¾" X 0.074	5/16" X 1¼"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	MIN. OF ¾" X 0.105	5/16" X 1¼"
OVER 6' TO 12' INCL.	3" O.D.	2½" O.D.													

HEIGHT OF FENCE FABRIC	(H) TIE WIRE	(I) HOG RING	(J) BRACE RAIL		(K) TRUSS ROD	(L) FABRIC			(M) GATE FRAME		(N) HORIZONTAL SUPPORT		(O) HINGE TYPE 180° SWING	(T) GATE POST	
			SIZE	TIE SPACING		SIZE	MESH	SELVAGE	SIZE	TIE SPACING	SIZE	TIE SPACING		GATE WIDTH 12' AND LESS	GATE WIDTH OVER 12' TO 24' INCL.
6' AND LESS	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1⅝" O.D.	1 TIE EVERY 2'-0"	MIN. OF ⅜" ROUND WITH TIGHTNERS AND FITTINGS	9 GA.	2"	KNUCK-ING AND/OR TWIST-ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	OFFSET	3" O.D.	4" O.D.
OVER 6' TO 12' INCL.														4" O.D.	

NOTE: POST SIZES SHOWN ARE FOR STEEL. WHERE ALUMINUM IS PROVIDED, LINE POSTS SHALL HAVE AN OUT SIDE DIAMETER OF 2½" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' TO 12'. END, PULL, CORNER OR BRACE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' AND LESS; AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHTS OF 6' TO 12'. GATE POSTS WHERE GATE WIDTH IS 12' AND LESS SHALL HAVE AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHT OF 6' AND LESS. ALUMINUM TENSION WIRE SHALL BE 0.192" IN DIAMETER. MINIMUM THICKNESS OF MATERIAL FROM WHICH EXPANSION SLEEVES SHALL BE MADE WILL BE 0.078". POSTS AND RAILS MAY HAVE ANY CROSS-SECTIONAL SHAPE THAT WILL MEET THE SPECIFICATIONS.

OTHER DETAILS APPLY TO BOTH STEEL AND ALUMINUM FENCE.

ALL MISCELLANEOUS FITTINGS AND HARDWARE SHALL MEET THE REQUIREMENTS AND PRODUCTION TOLERANCES AS SET FORTH IN THE SPECIFICATIONS. 9 GAUGE ALUMINUM WIRE SHALL BE ACCEPTABLE FOR TIEING FABRIC TO TUBULAR AND ROLL FORMED MEMBERS OF STEEL FENCE.



INSTALLATION MAY BE MODIFIED AS SHOWN IN THE PLANS

TYPICAL INSTALLATION DIAGRAM

POSTS AND RAILS

SIZE O.D.	GRADE 1 AND ALUMINUM ALLOY				GRADE 2		
	O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT. STEEL	LBS. PER LINEAR FT. ALUMINUM	O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.
1⅝	1.660	0.140	2.27	0.786	1.660	0.111	1.84
2	1.900	0.145	2.72	0.940	1.900	0.122	2.28
2½	2.375	0.154	3.65	1.264	2.375	0.130	3.11
3	2.875	0.203	5.79	2.004	2.875	0.162	4.64
3½	3.500	0.216	7.58	2.621	3.500	0.160	5.71
4	4.000	0.226	9.11	3.151	4.000	0.160	6.56

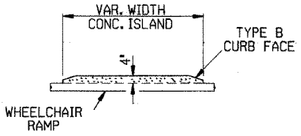
TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181

DATE	REVISION	FILMED
11-17-10	REVISED TRUSS ROD	
12-10-09	REVISED POSTS & RAILS TABLE	
5-21-09	ADDED TABLE & GEN. NOTE (C)	
8-22-02	REVISED NOTES, REMOVED TABLE, & REMOVED FENCE ALTERNATE	
4-3-97	REVISED BRACE RAIL NOTE	
10-18-96	REVISED AASHTO & ASTM REF.	
11-3-94	REVISED NOTE (L)	
10-1-92	DELETED ALTERNATE POST	10-1-92
8-15-91	DELETED ROLL FORMED POST DETAIL & ADDED NOTE	8-15-91 8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
11-17-88	REVISED O.D. SIZES	668-11-17-88
10-30-87	GENERAL REVISIONS	548-10-30-87
4-20-79	REVISED TOP RAIL & TENSION WIRE	695-4-20-79
10-2-72	REVISED AND REDRAWN	530-10-2-72

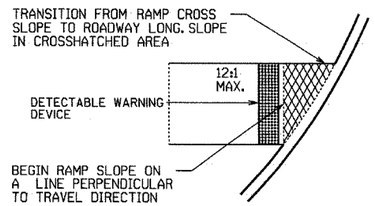
ARKANSAS STATE HIGHWAY COMMISSION

CHAIN LINK FENCE

STANDARD DRAWING WF-3



CONCRETE ISLAND DETAIL



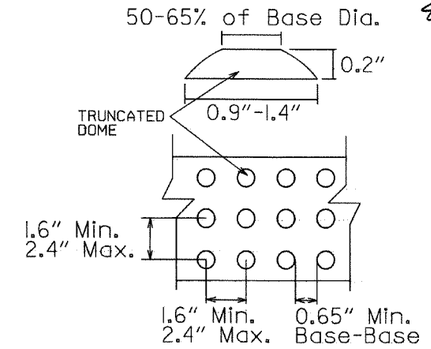
SLOPE TRANSITION DETAILS

TYPE 1 RAMP DIMENSIONS AND QUANTITIES

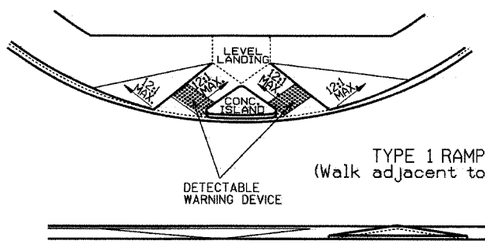
RADIUS "R"	DISTANCE "X"	DISTANCE "Y"	LENGTH "L"	RAMP AREA "A"
FEET	FEET	FEET	FEET	SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

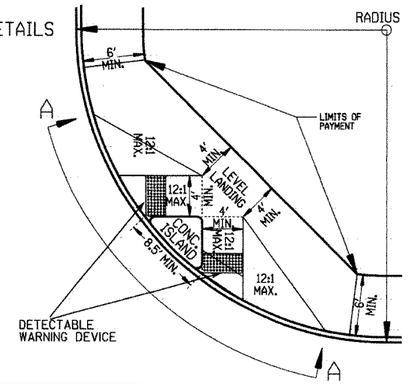
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).

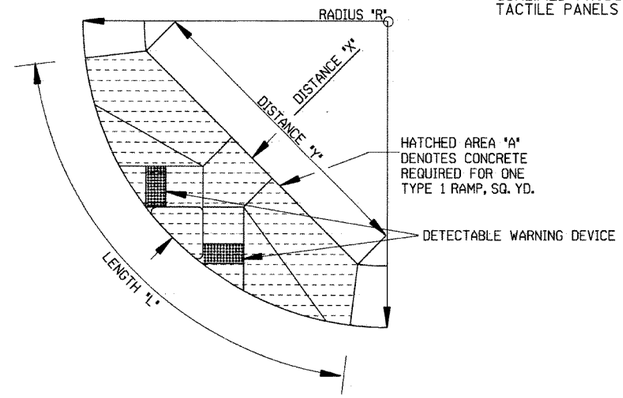


DETECTABLE WARNING DEVICE DETAIL



TYPE 1 RAMP
(Walk adjacent to curb)





SECTION A-A

NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.

GENERAL NOTES:

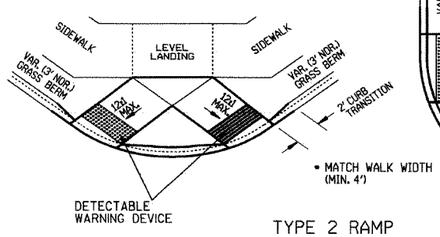
IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.

THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.

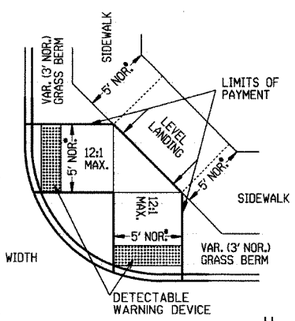
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.

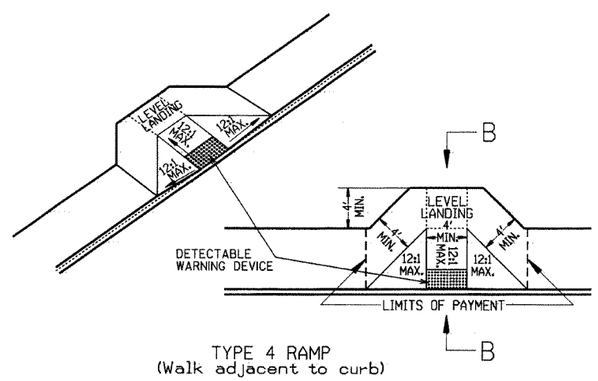
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.

THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.



TYPE 2 RAMP



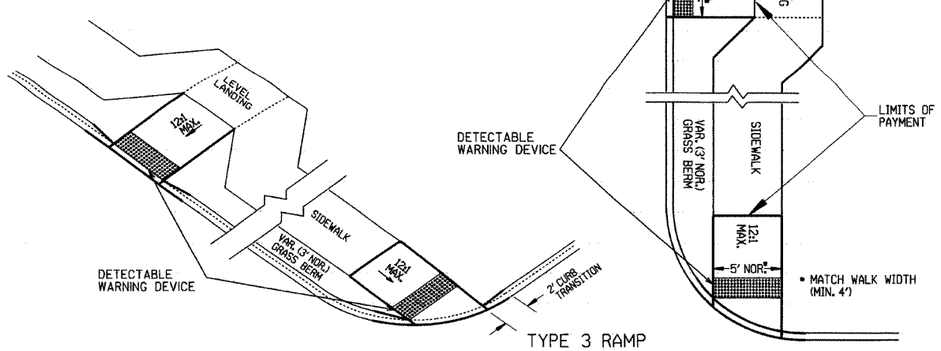


TYPE 4 RAMP
(Walk adjacent to curb)

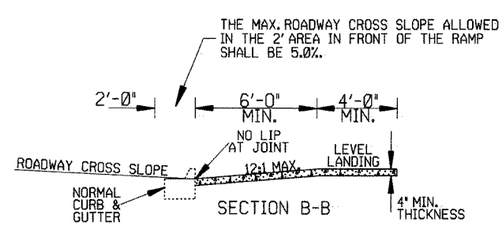
RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.
AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.



TYPE 3 RAMP



SECTION B-B

DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM8:1TO12:1MAX.SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD."CONC. ISLD."IN PAY ITEM	------
6-02-76	ISSUED-P.H.D.	299-7-28-76

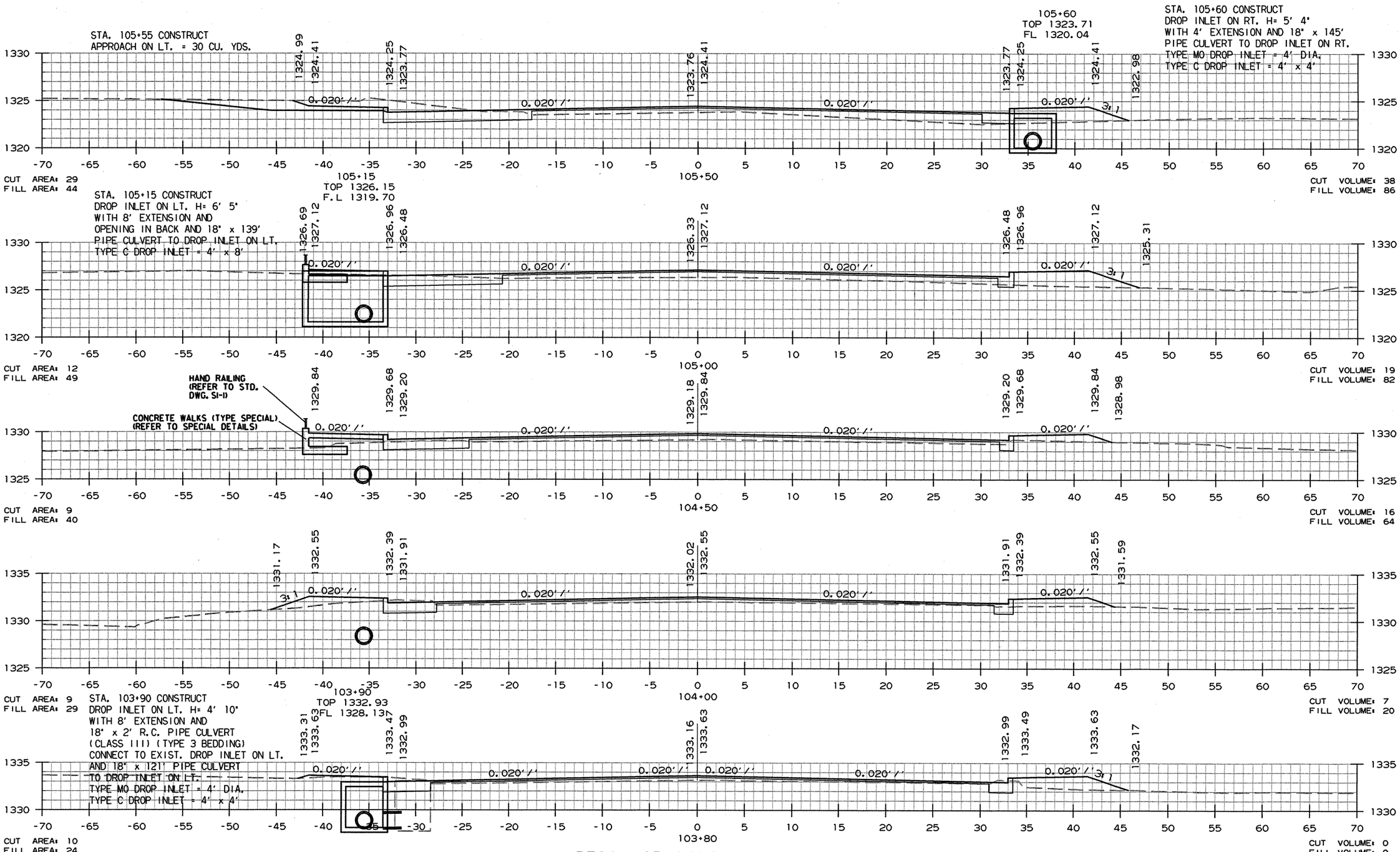
ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS

STANDARD DRAWING WR-1

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.		040489	89	113

(2) CROSS SECTIONS



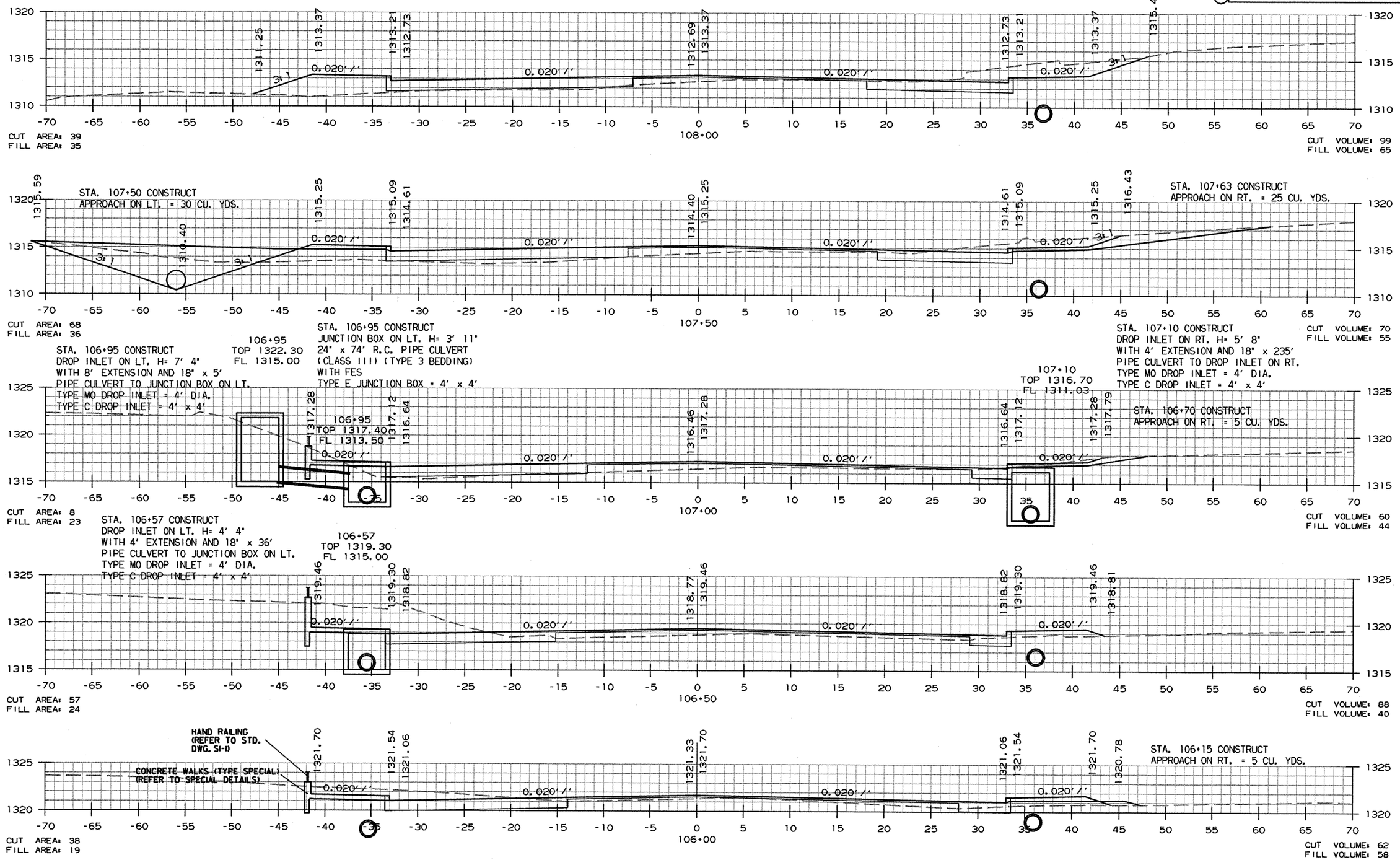
BEGIN JOB 040489 - HWY. 112
STA. 103+80

CROSS SECTION STA. 103+80 TO STA. 105+50

R040489.DGN 8/17/2012

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.		040489	90	113

(2) CROSS SECTIONS

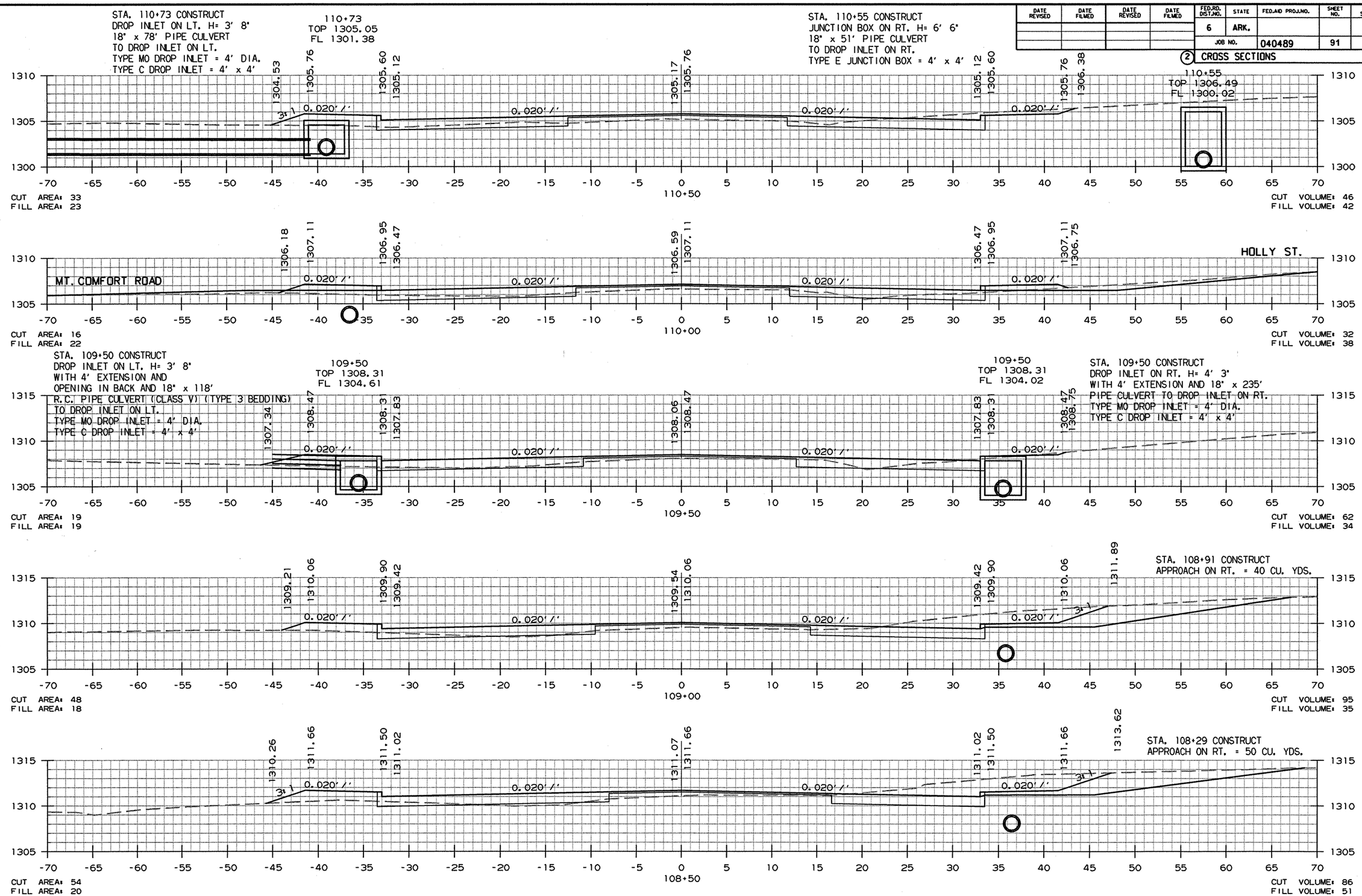


CROSS SECTION STA. 106+00 TO STA. 108+00

R040489.DGN 8/17/2012

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.		040489	91	113

(2) CROSS SECTIONS

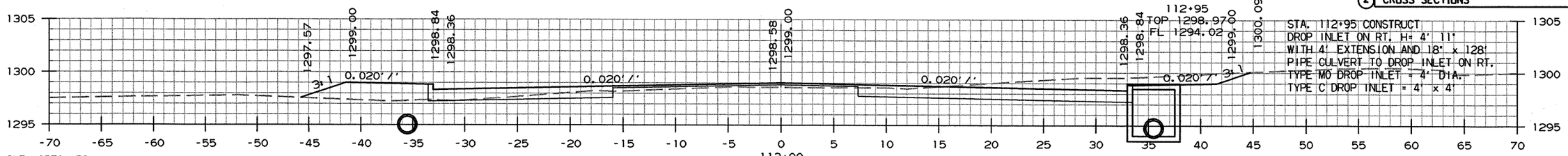


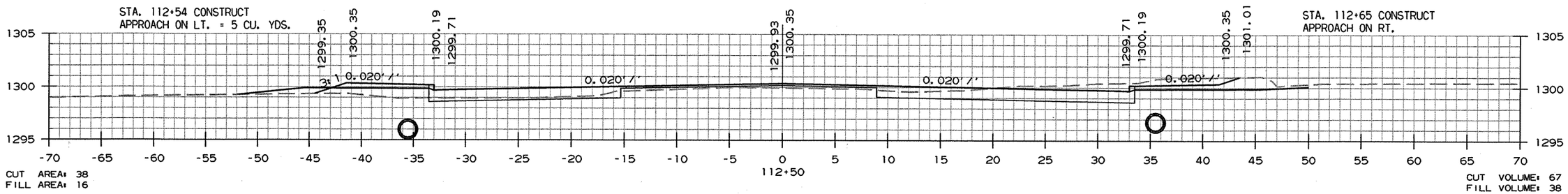
CROSS SECTION STA. 108+50 TO STA. 110+50

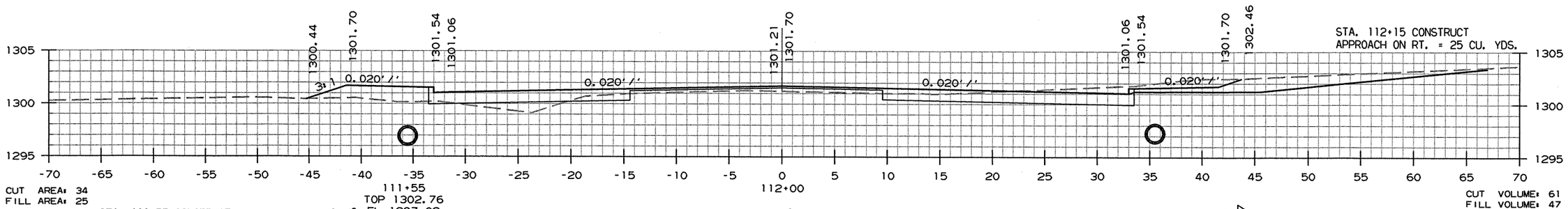
R040489.DGN 8/17/2012

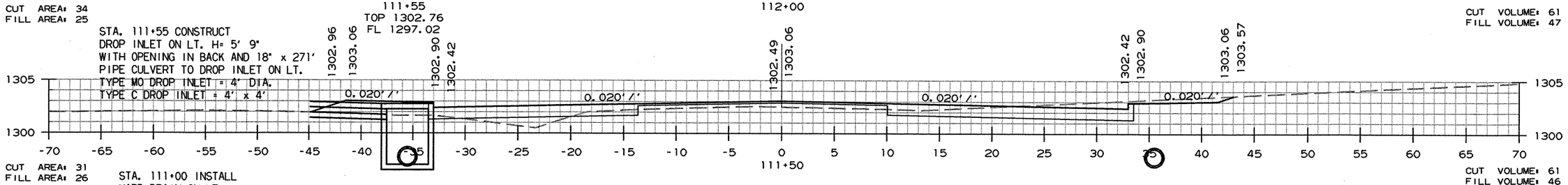
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	92	113

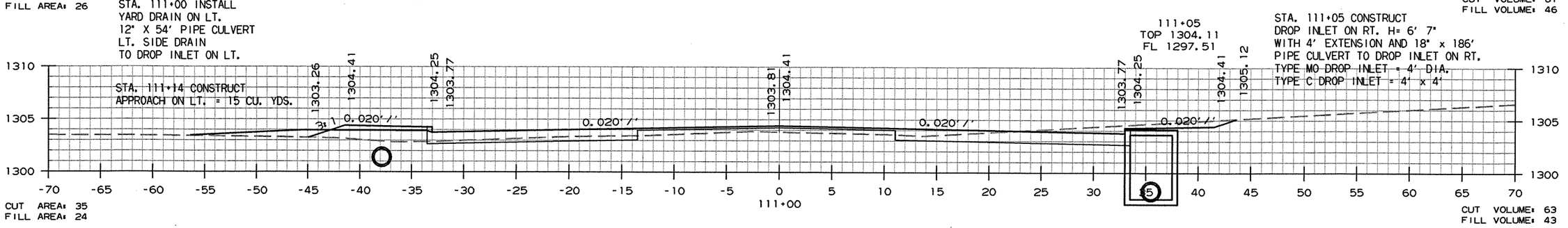
(2) CROSS SECTIONS









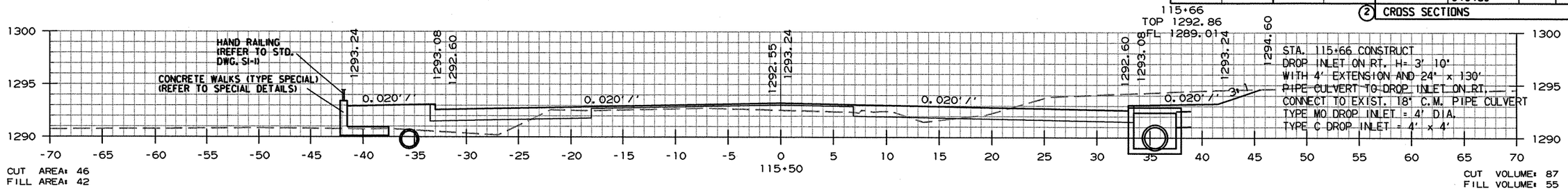


CROSS SECTION STA. 111+00 TO STA. 113+00

R040489.DGN 8/17/2012

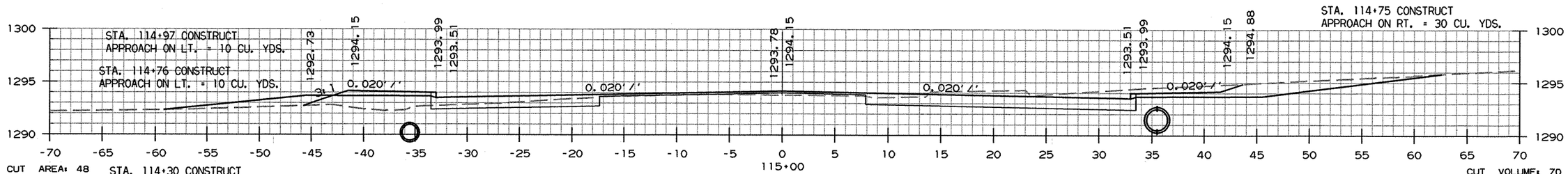
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	93	113

(2) CROSS SECTIONS



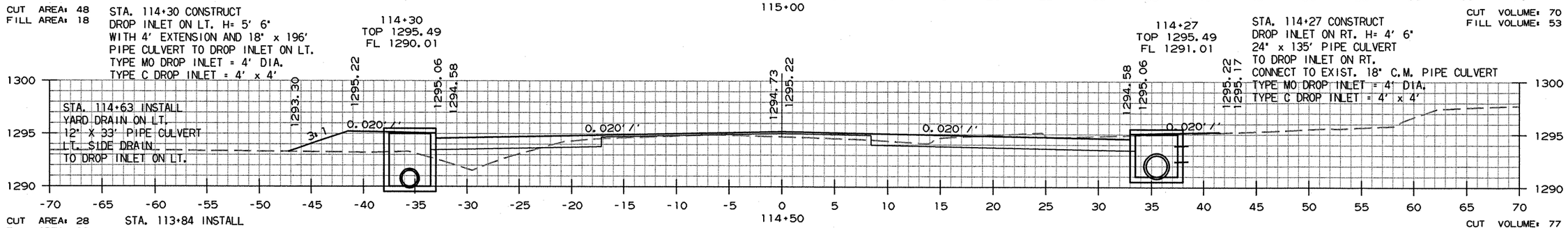
CUT AREA: 46
FILL AREA: 42

CUT VOLUME: 87
FILL VOLUME: 55



CUT AREA: 48
FILL AREA: 18

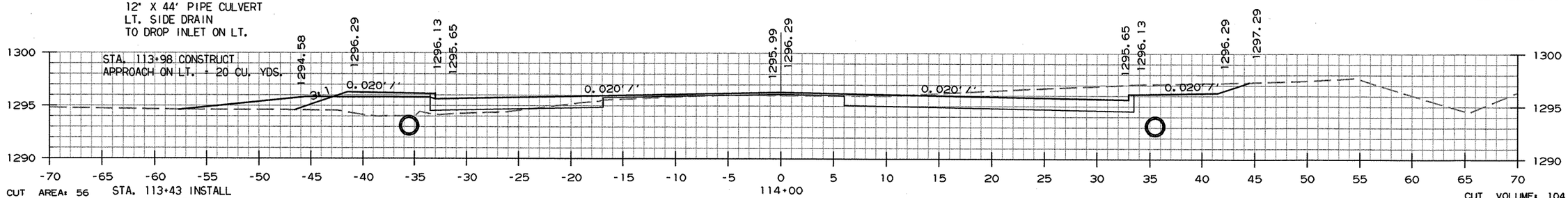
CUT VOLUME: 70
FILL VOLUME: 53



CUT AREA: 28
FILL AREA: 39

STA. 113+84 INSTALL
YARD DRAIN ON LT.
12" X 44' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

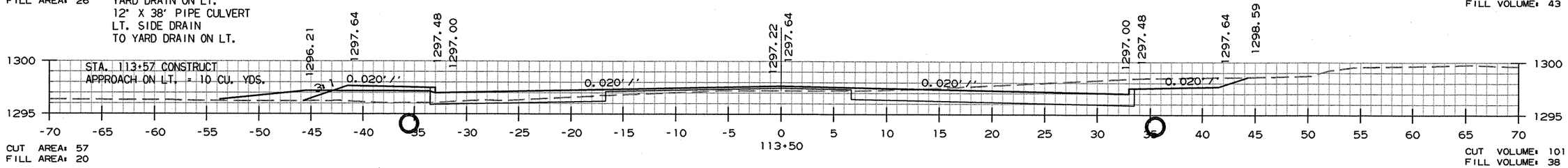
CUT VOLUME: 77
FILL VOLUME: 60



CUT AREA: 56
FILL AREA: 26

STA. 113+43 INSTALL
YARD DRAIN ON LT.
12" X 38' PIPE CULVERT
LT. SIDE DRAIN
TO YARD DRAIN ON LT.

CUT VOLUME: 104
FILL VOLUME: 43



CUT AREA: 57
FILL AREA: 20

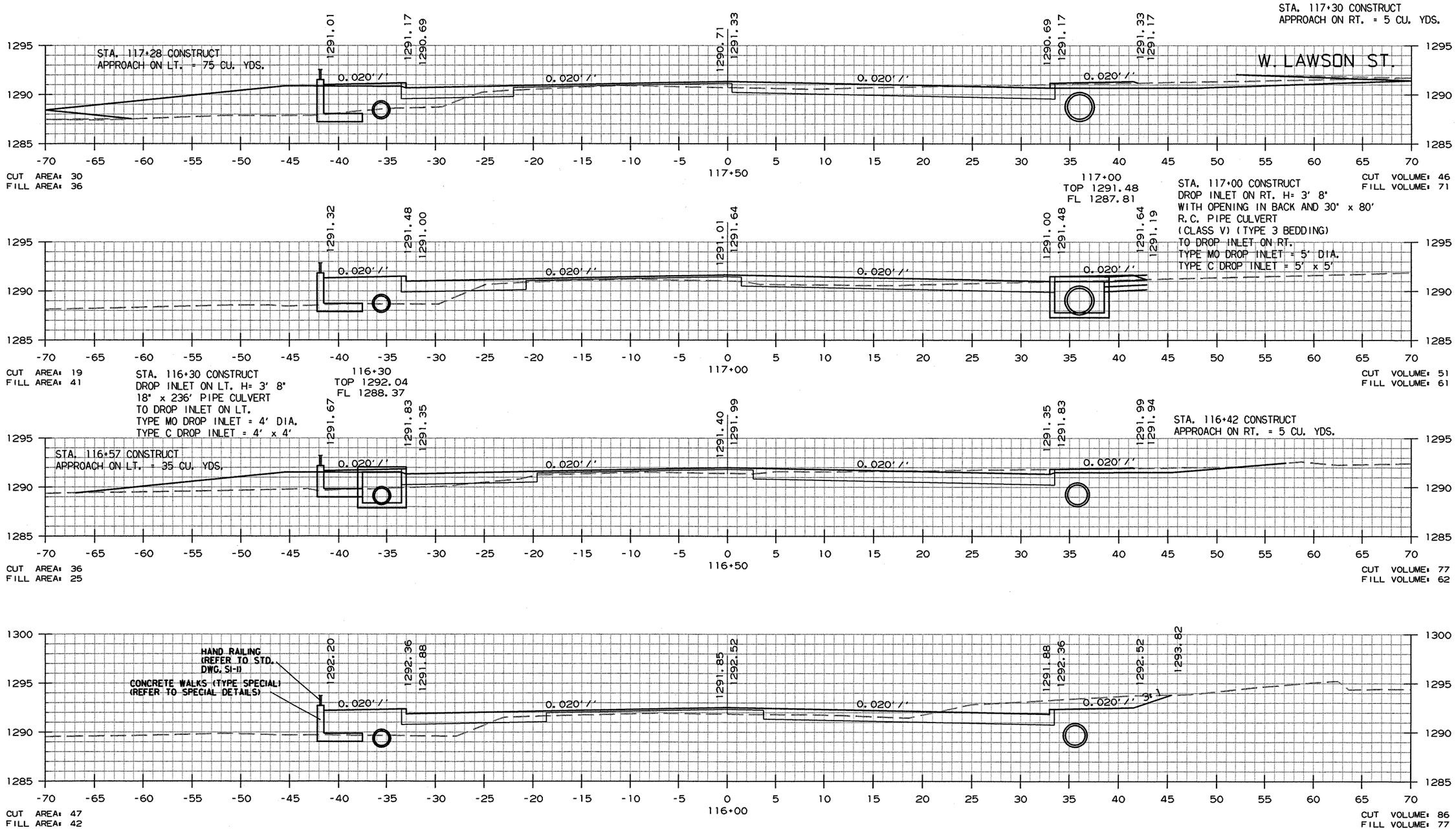
CUT VOLUME: 101
FILL VOLUME: 38

CROSS SECTION STA. 113+50 TO STA. 115+50

R040489.DGN 8/17/2012

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.		040489	94	113

(2) CROSS SECTIONS

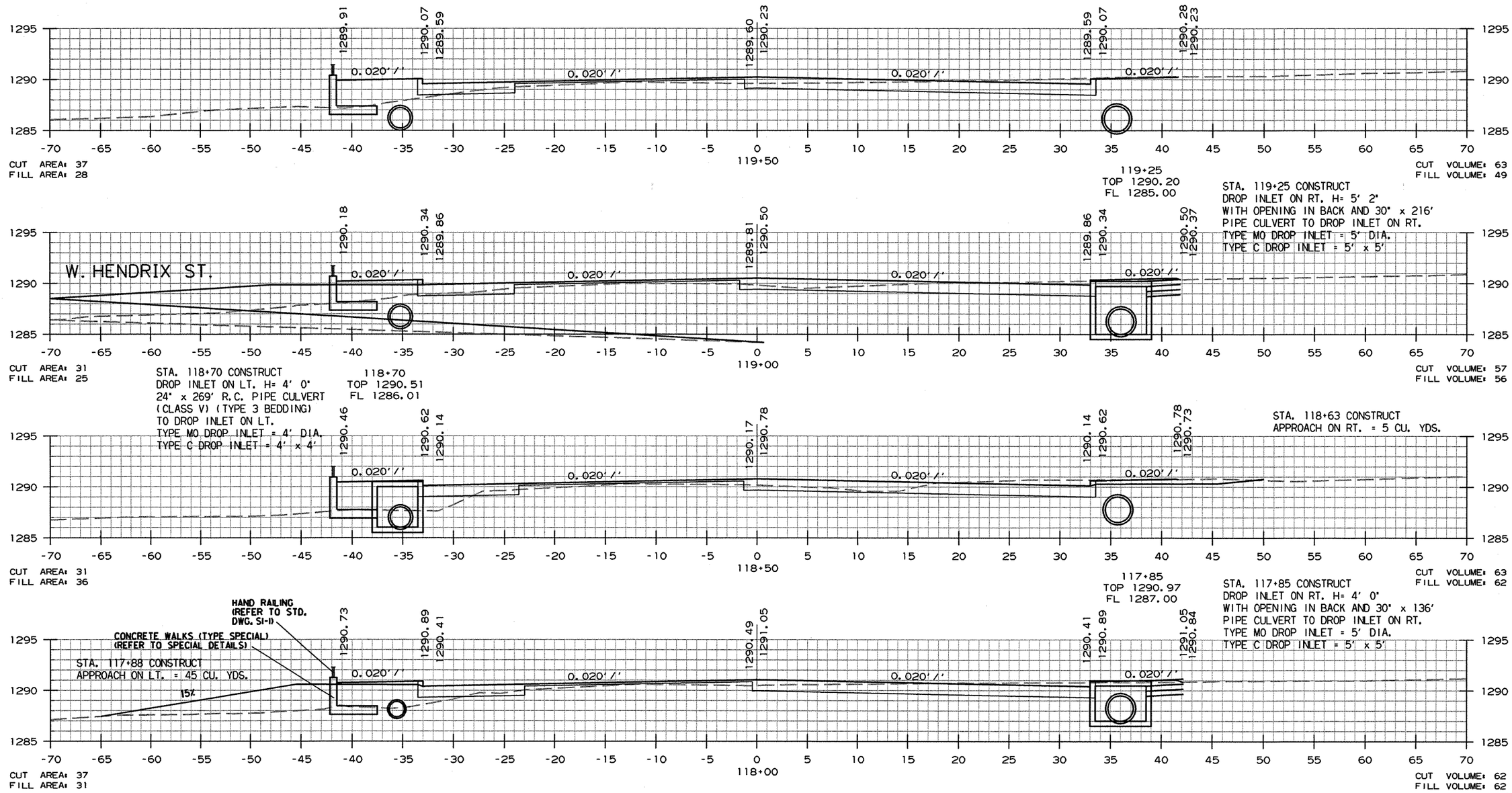


CROSS SECTION STA. 116+00 TO STA. 117+50

R040489.DGN 8/17/2012

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.		040489	95	113

(2) CROSS SECTIONS

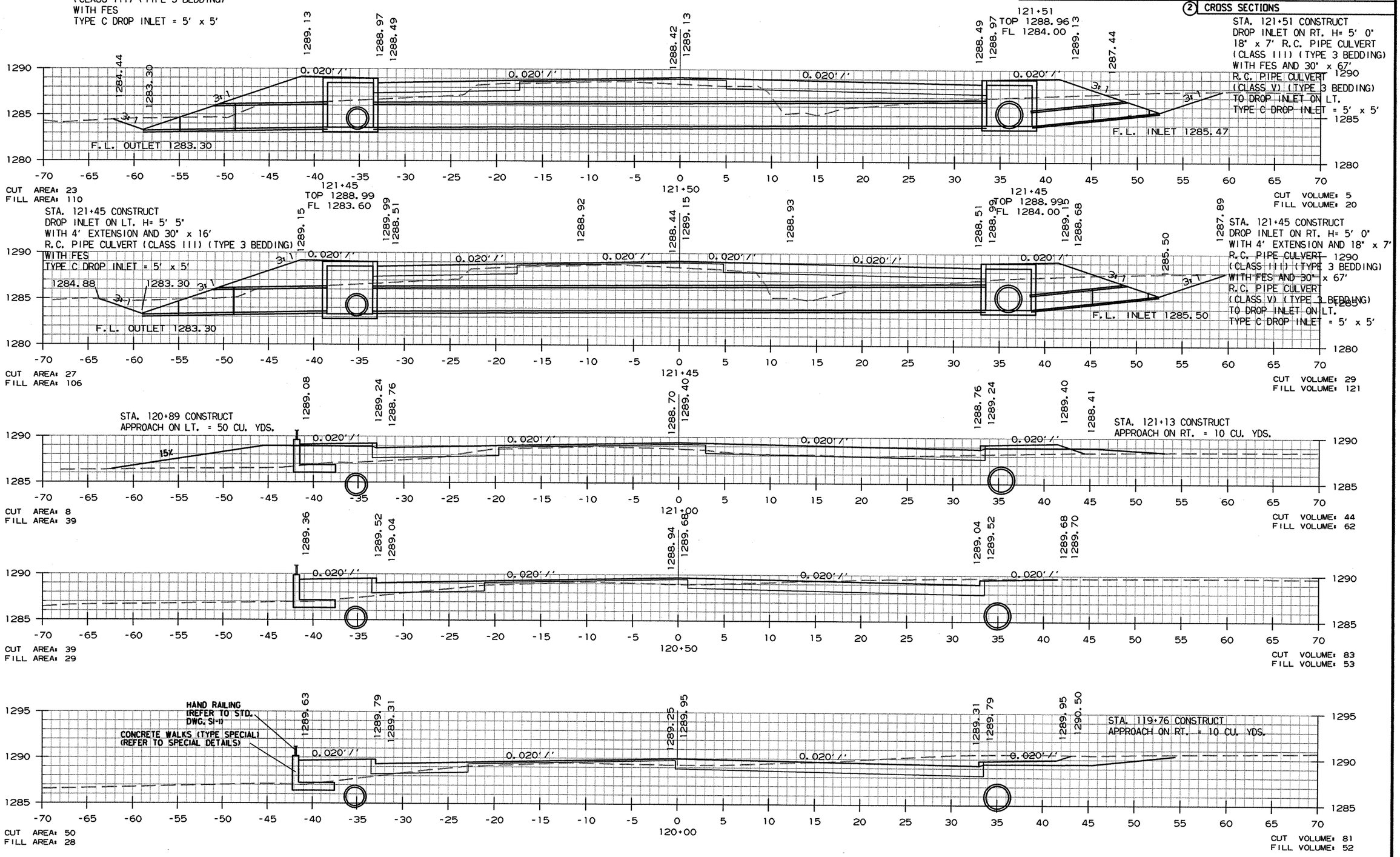


CROSS SECTION STA. 118+00 TO STA. 119+50

R040489.DGN 8/17/2012

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.		040489	96	113

(2) CROSS SECTIONS

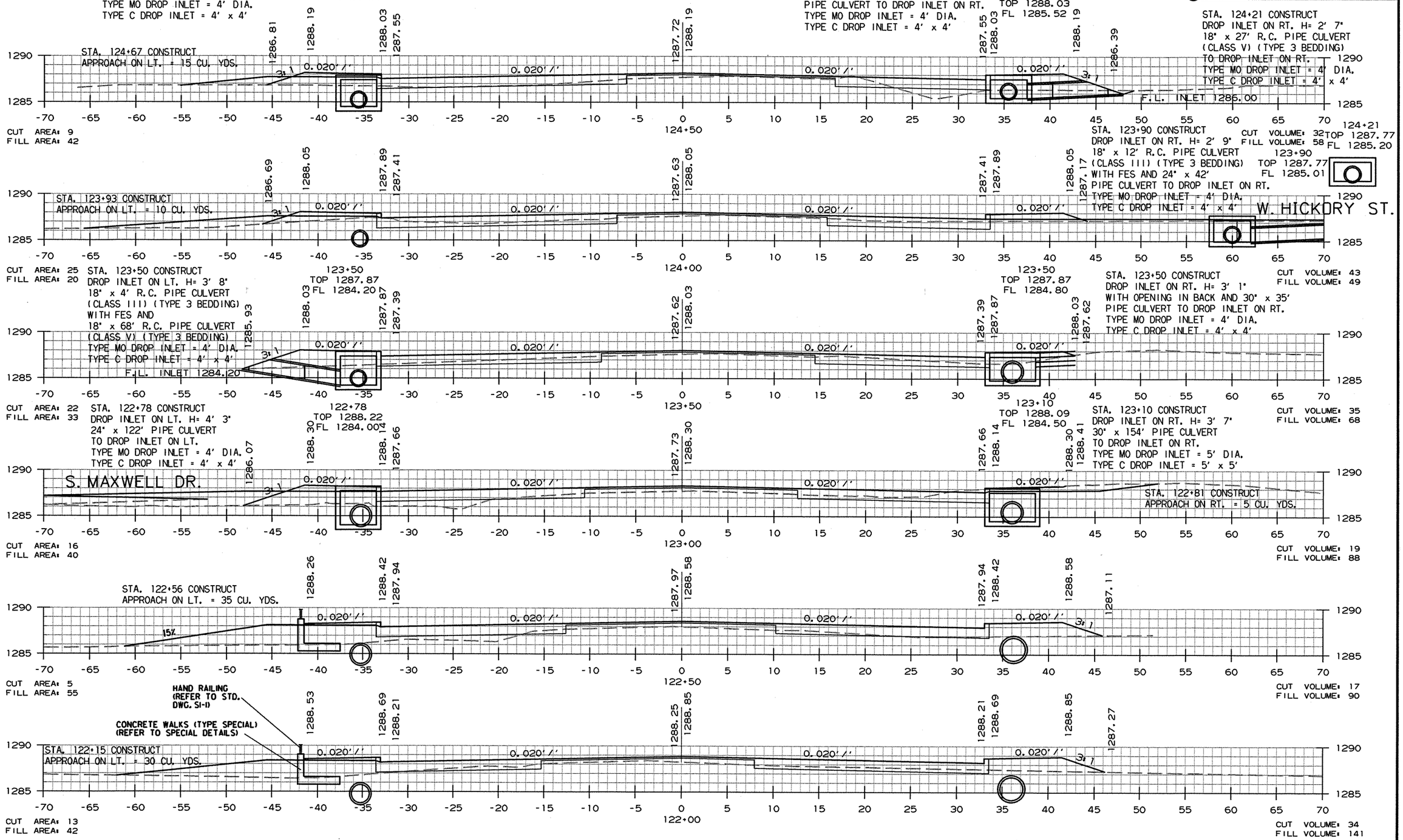


CROSS SECTION STA. 120+00 TO STA. 121+50

R040489.DGN 8/17/2012

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.		040489	97	113

(2) CROSS SECTIONS

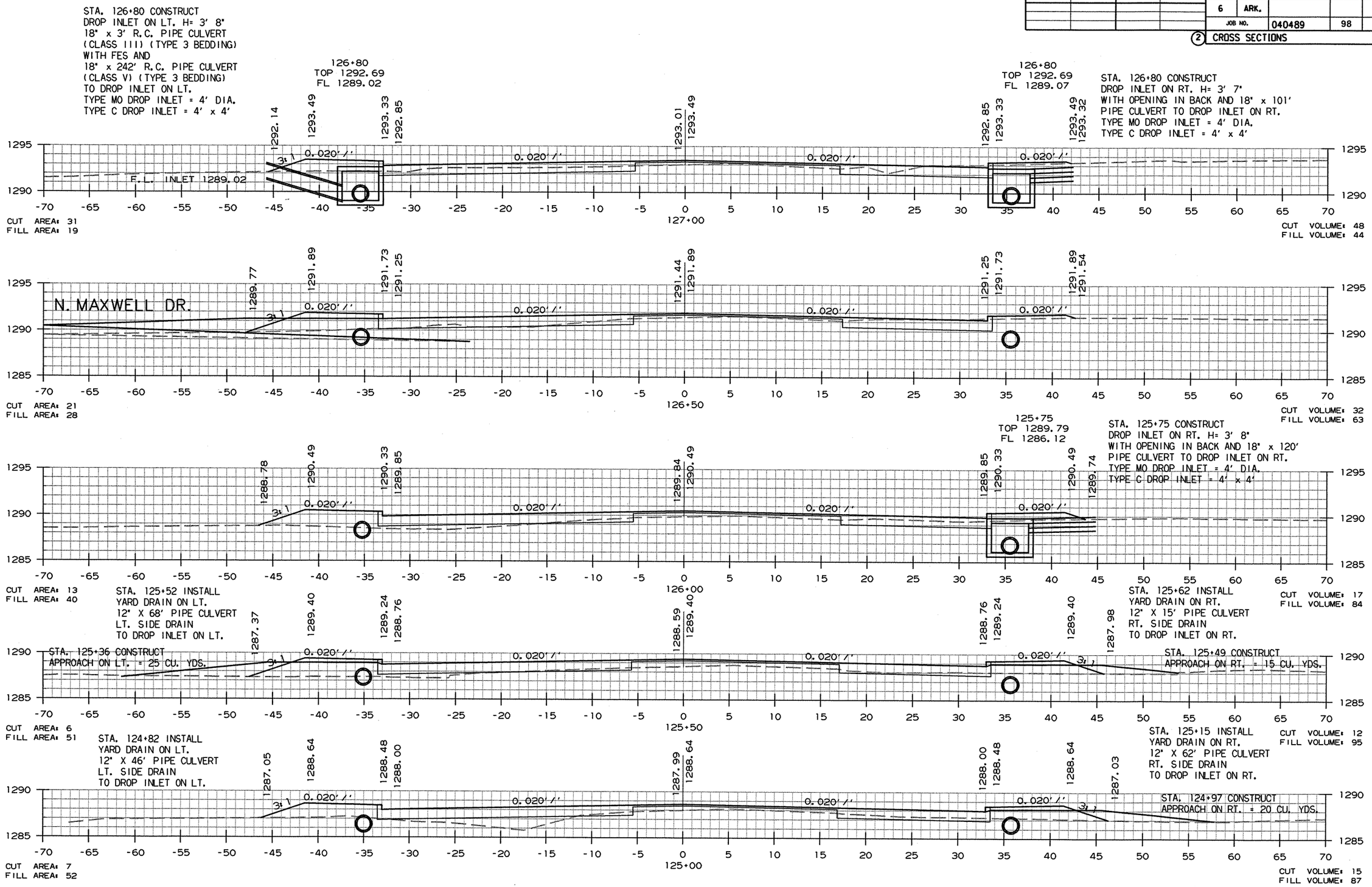


CROSS SECTION STA. 122+00 TO STA. 124+50

R040489.DGN 8/17/2012

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.		040489	98	113

(2) CROSS SECTIONS

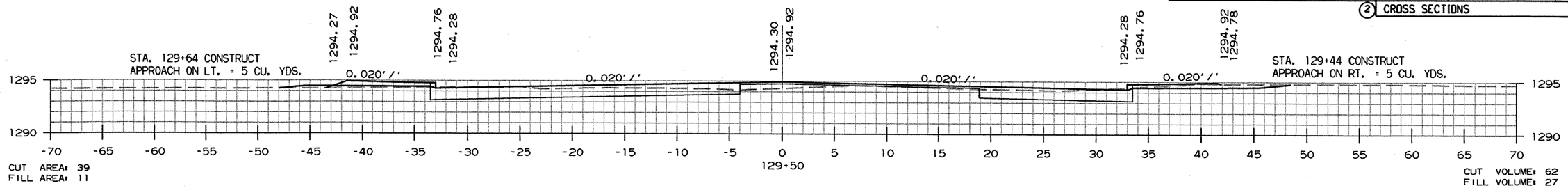


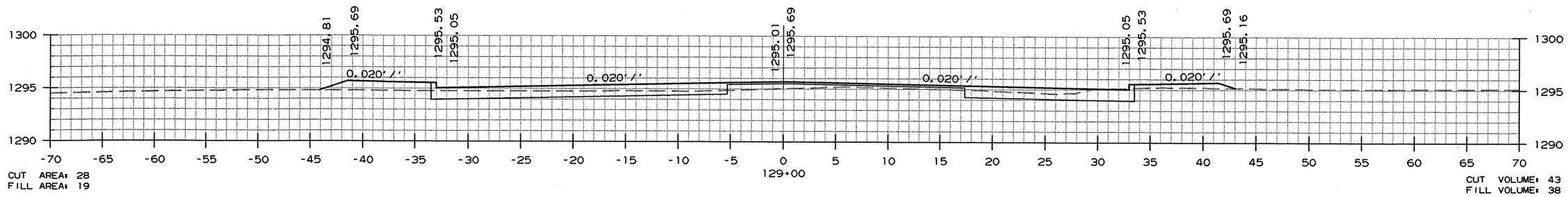
CROSS SECTION STA. 125+00 TO STA. 127+00

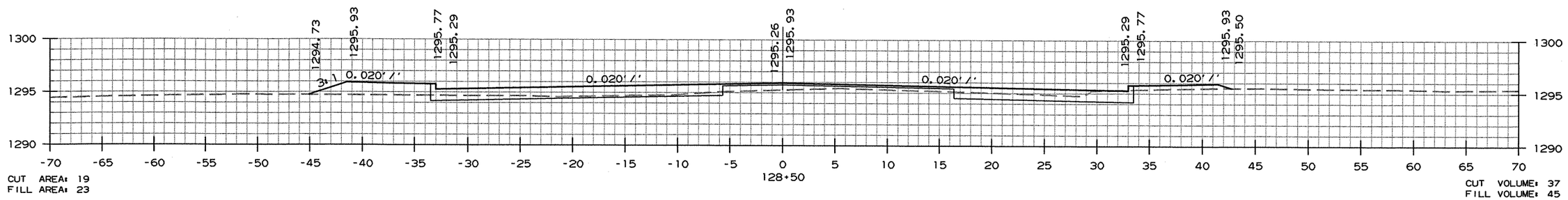
R040489.DGN 8/17/2012

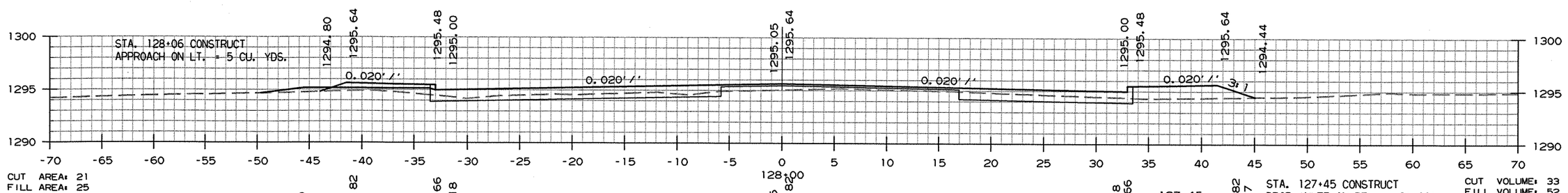
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	99	113

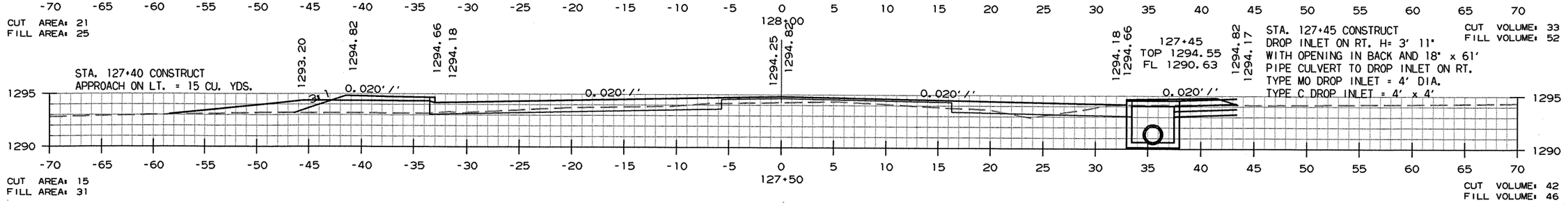
(2) CROSS SECTIONS









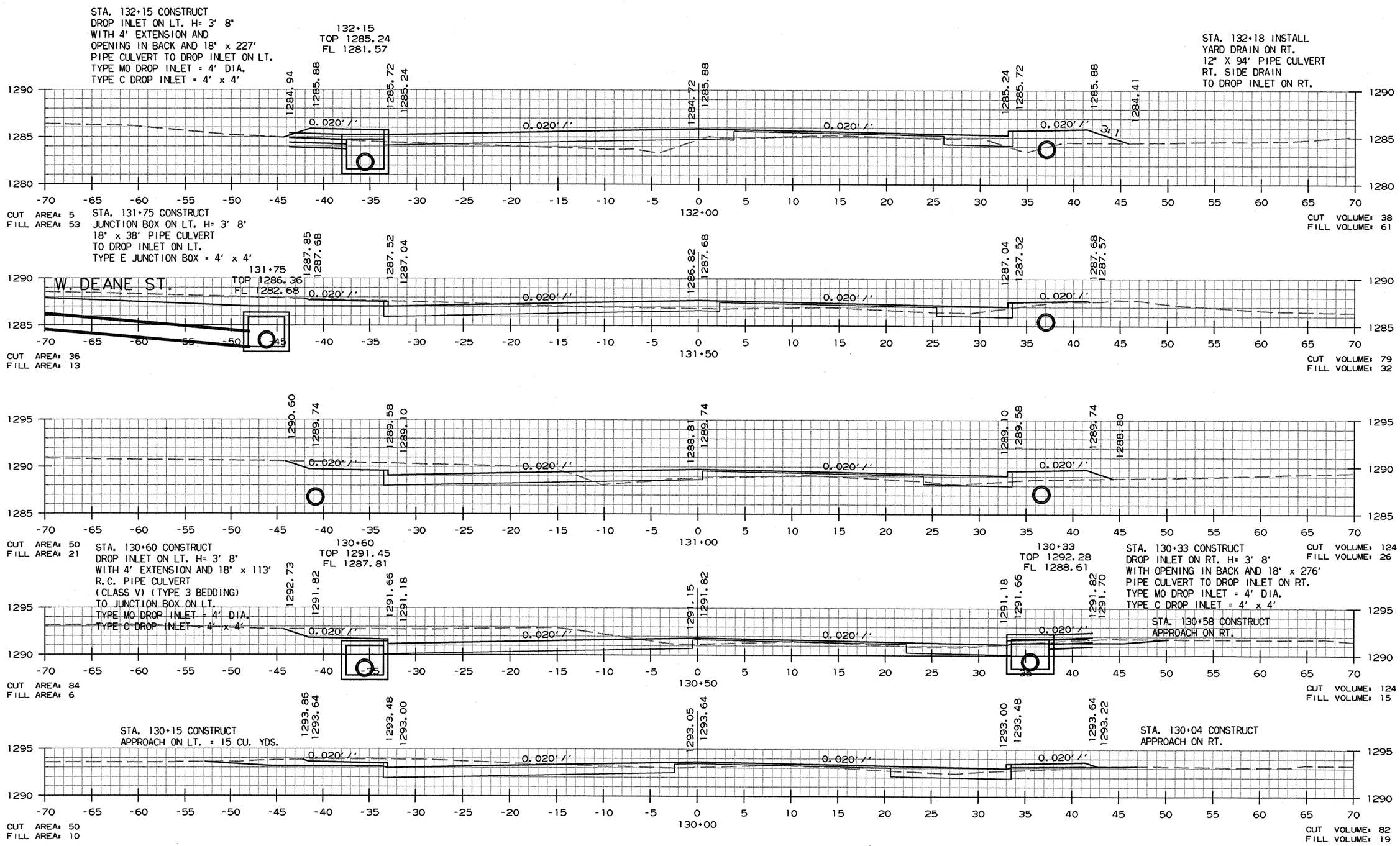


CROSS SECTION STA. 127+50 TO STA. 129+50

R040489.DGN 8/17/2012

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.		040489	100	113

(2) CROSS SECTIONS

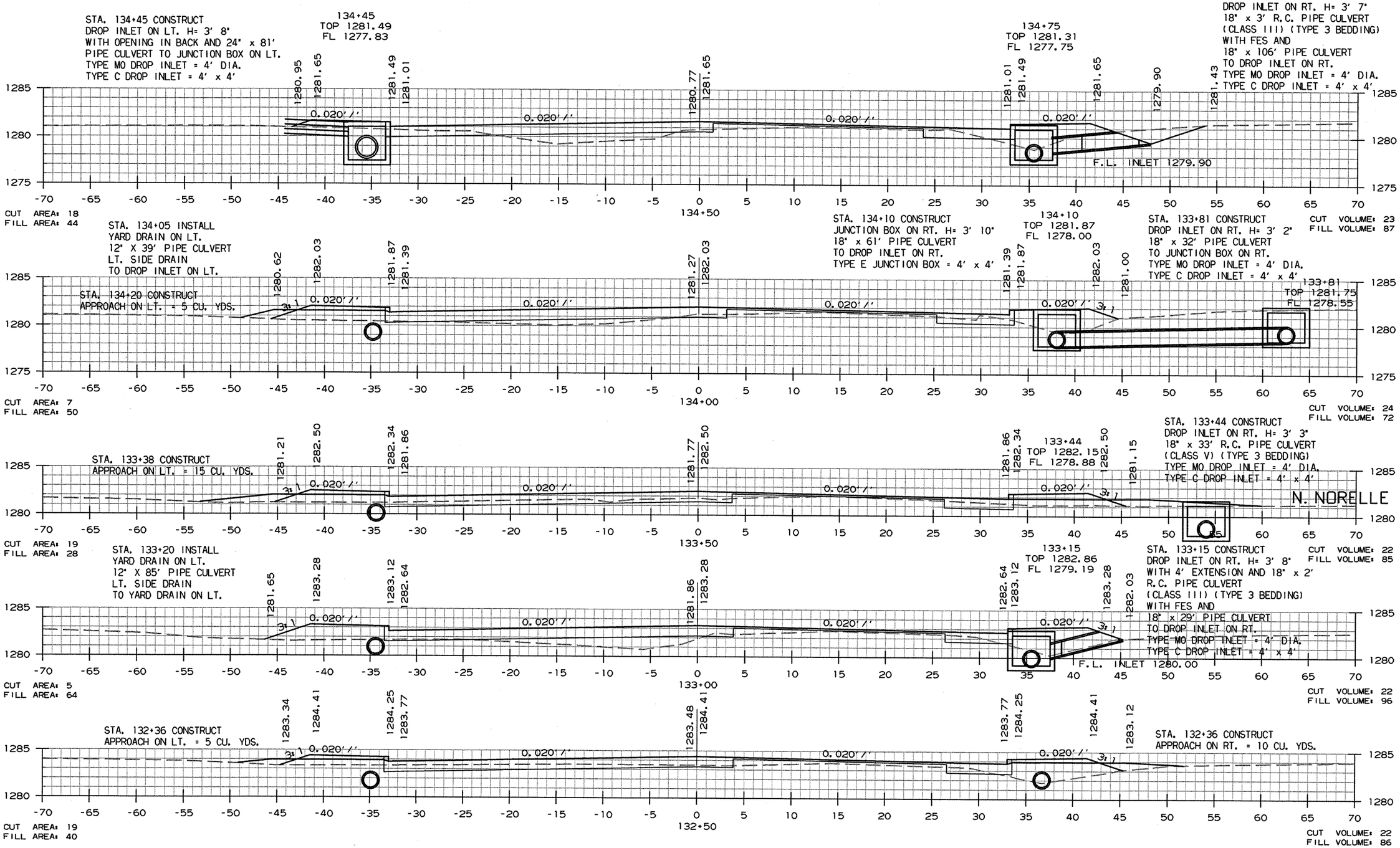


CROSS SECTION STA.130+00 TO STA.132+00

R040489.DGN 8/17/2012

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.		040489	101	113

(2) CROSS SECTIONS

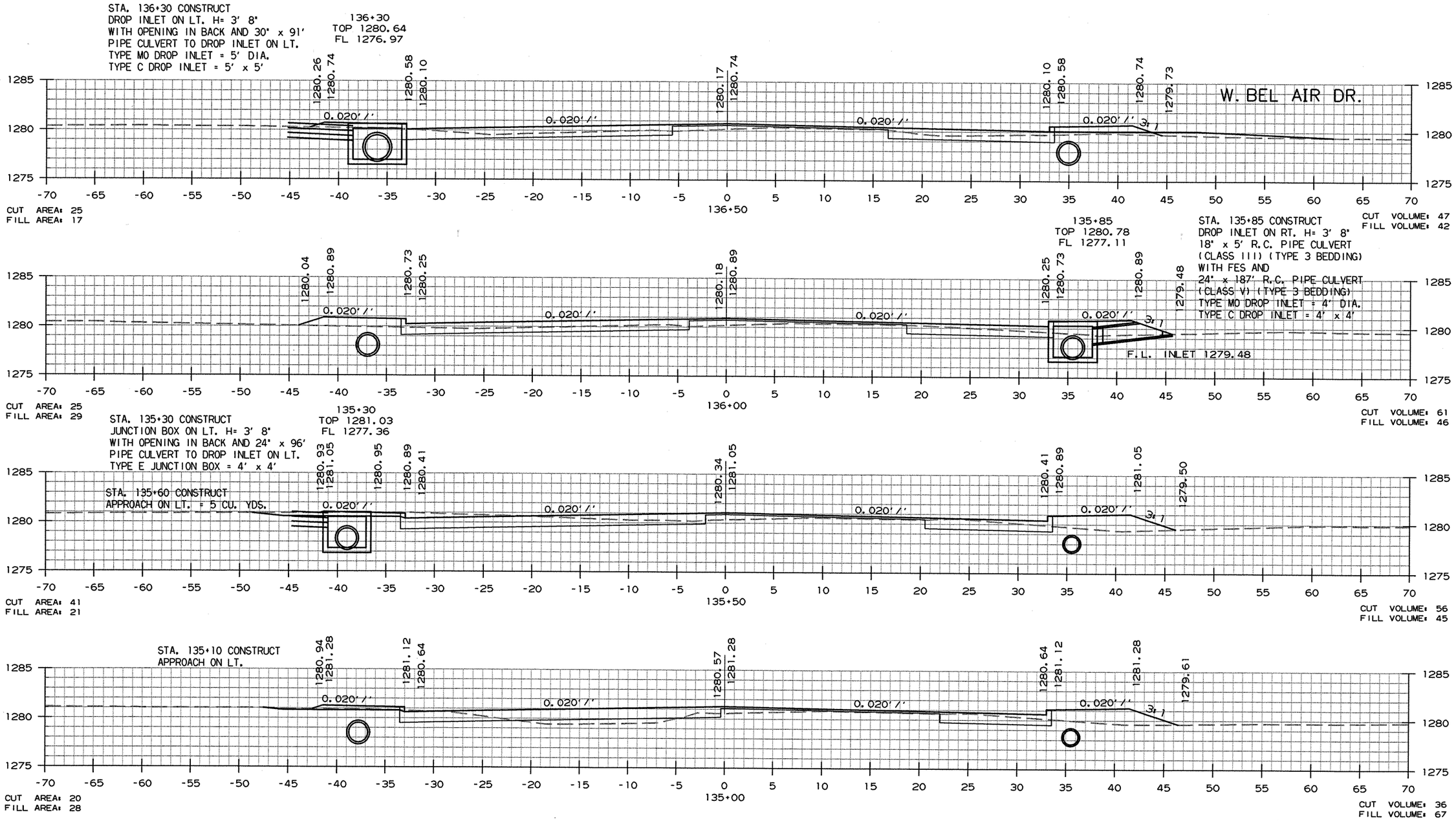


CROSS SECTION STA.132+50 TO STA.134+50

R040489.DGN 8/17/2012

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.		040489	102	113

(2) CROSS SECTIONS

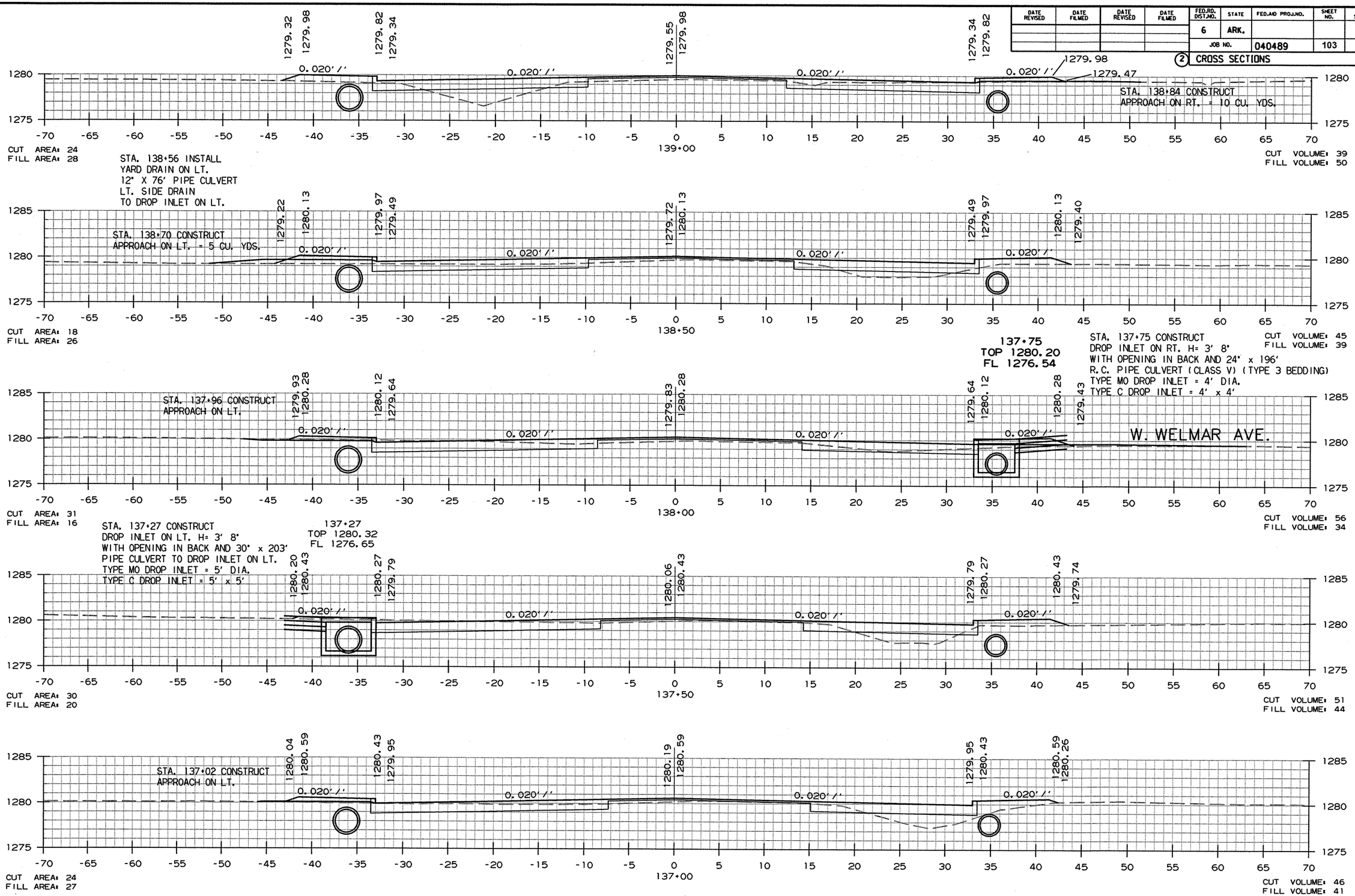


CROSS SECTION STA.135+00 TO STA.136+50

R040489.DGN 8/17/2012

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.		040489	103	113

2 CROSS SECTIONS



CROSS SECTION STA.137+00 TO STA.139+00

R040489.DGN 8/17/2012

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.		040489	104	113

(2) CROSS SECTIONS

END JOB 040489 - HWY. 112
STA. 141+00

STA. 140+80 CONSTRUCT
DROP INLET ON LT. H= 3' 11"
18' x 18' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES AND
30" x 47' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
WITH FES
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

140+80
TOP 1279.50
FL 1275.60

1278.30 1279.65 1279.49 1279.01 1279.35 1279.65 1279.01 1279.49 1279.65 1278.07

0.020'/' 3:1 0.020'/' 0.020'/' 0.020'/' 3:1

F.L. INLET 1275.58

1280 1275

-70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

CUT AREA: 21
FILL AREA: 29

STA. 140+41 INSTALL
YARD DRAIN ON LT.
12" X 39' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

141+00

1278.03 1279.66 1279.50 1279.02 1279.49 1279.66 1279.02 1279.50 1279.66 1279.02

140+75
TOP 1279.50
FL 1275.80

STA. 140+75 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 24" x 59'
R.C. PIPE CULVERT (CLASS V) (TYPE 3 BEDDING)
WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

CUT VOLUME: 25
FILL VOLUME: 89

0.020'/' 3:1 0.020'/' 0.020'/' 0.020'/'

STA. 140+54 CONSTRUCT
APPROACH ON LT. = 25 CU. YDS.

1280 1275

-70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

CUT AREA: 6
FILL AREA: 67

STA. 140+00 INSTALL
YARD DRAIN ON LT.
12" X 40' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

140+50

1278.33 1279.67 1279.51 1279.03 1279.50 1279.67 1279.03 1279.51 1279.67 1279.13

CUT VOLUME: 14
FILL VOLUME: 101

0.020'/' 3:1 0.020'/' 0.020'/' 0.020'/'

STA. 140+12 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

1280 1275

-70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

CUT AREA: 9
FILL AREA: 42

STA. 139+35 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH OPENING IN BACK AND 30" x 140'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' x 5'

139+35
TOP 1279.78
FL 1276.12

STA. 139+50 INSTALL
YARD DRAIN ON LT.
12" X 15' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

140+00

1278.75 1279.82 1279.66 1279.18 1279.57 1279.82 1279.18 1279.66 1279.82 1279.21

139+75
TOP 1279.74
FL 1276.07

STA. 139+75 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH OPENING IN BACK AND 24" x 96'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

CUT VOLUME: 15
FILL VOLUME: 79

0.020'/' 0.020'/' 0.020'/' 0.020'/'

STA. 139+63 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

1280 1275

-70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

CUT AREA: 7
FILL AREA: 44

139+50

CUT VOLUME: 29
FILL VOLUME: 67

CROSS SECTION STA. 139+50 TO STA. 141+00

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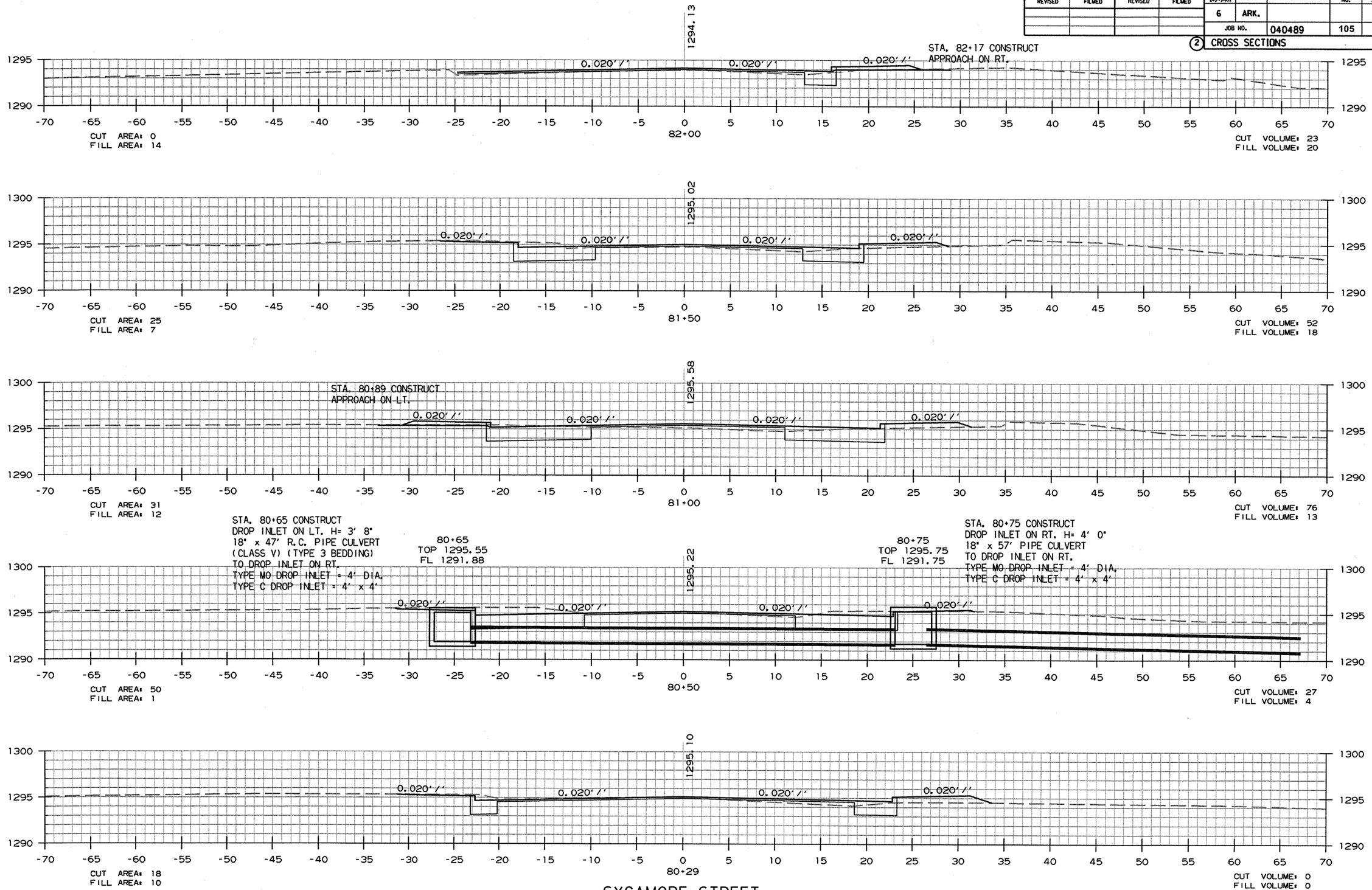
				6	ARK.			
				JOB NO.		040489	105	113

(2) CROSS SECTIONS



SYCAMORE STREET
BEGIN STA. 80+29

CROSS SECTION STA. 80+29 TO STA. 82+00

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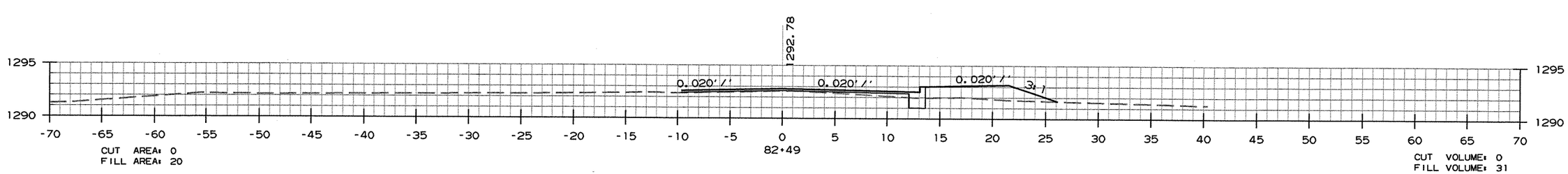
				6	ARK.			
				JOB NO.		040489	106	113

(2) CROSS SECTIONS

SYCAMORE STREET
END STA. 82+49



CROSS SECTION STA. 82+49 TO STA. 82+49

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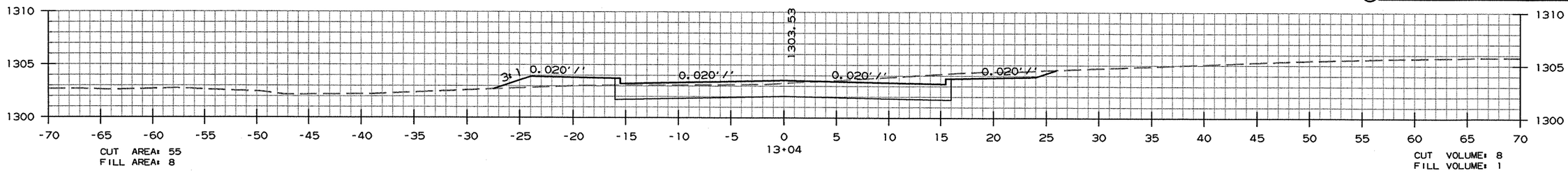
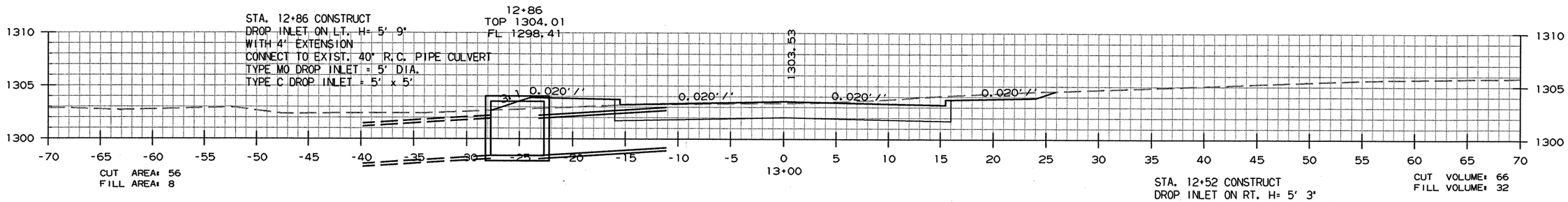
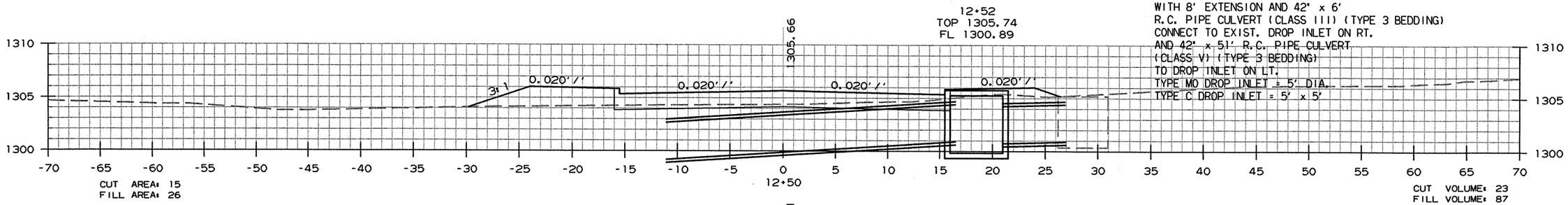
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040489	107	113

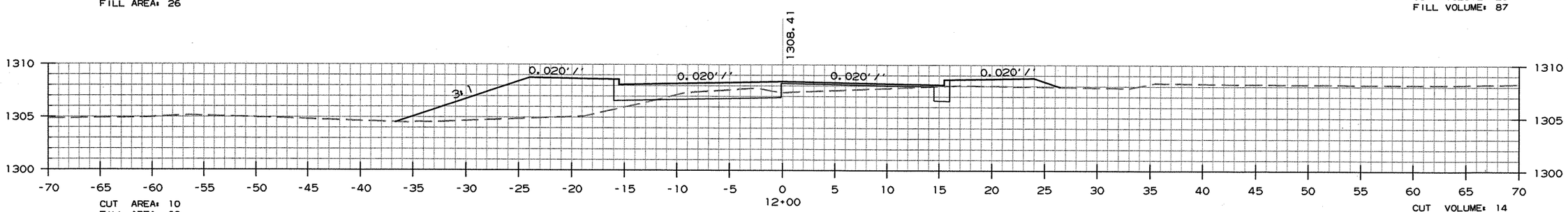
(2) CROSS SECTIONS

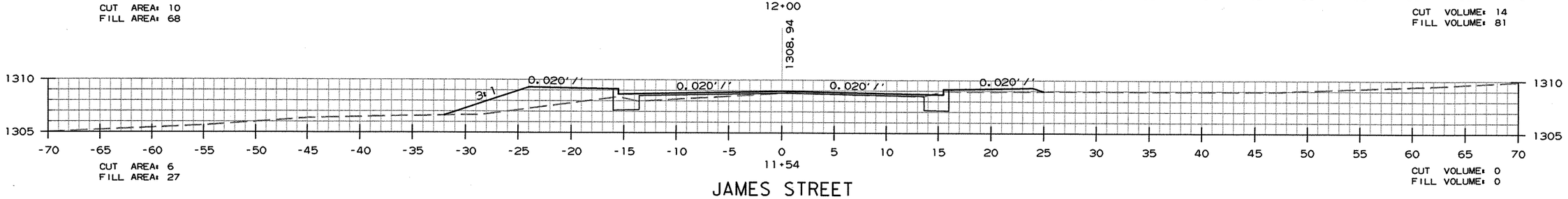
JAMES STREET
END STA. 13+04











JAMES STREET
BEGIN STA. 11+54

CROSS SECTION STA. 11+54 TO STA. 13+04

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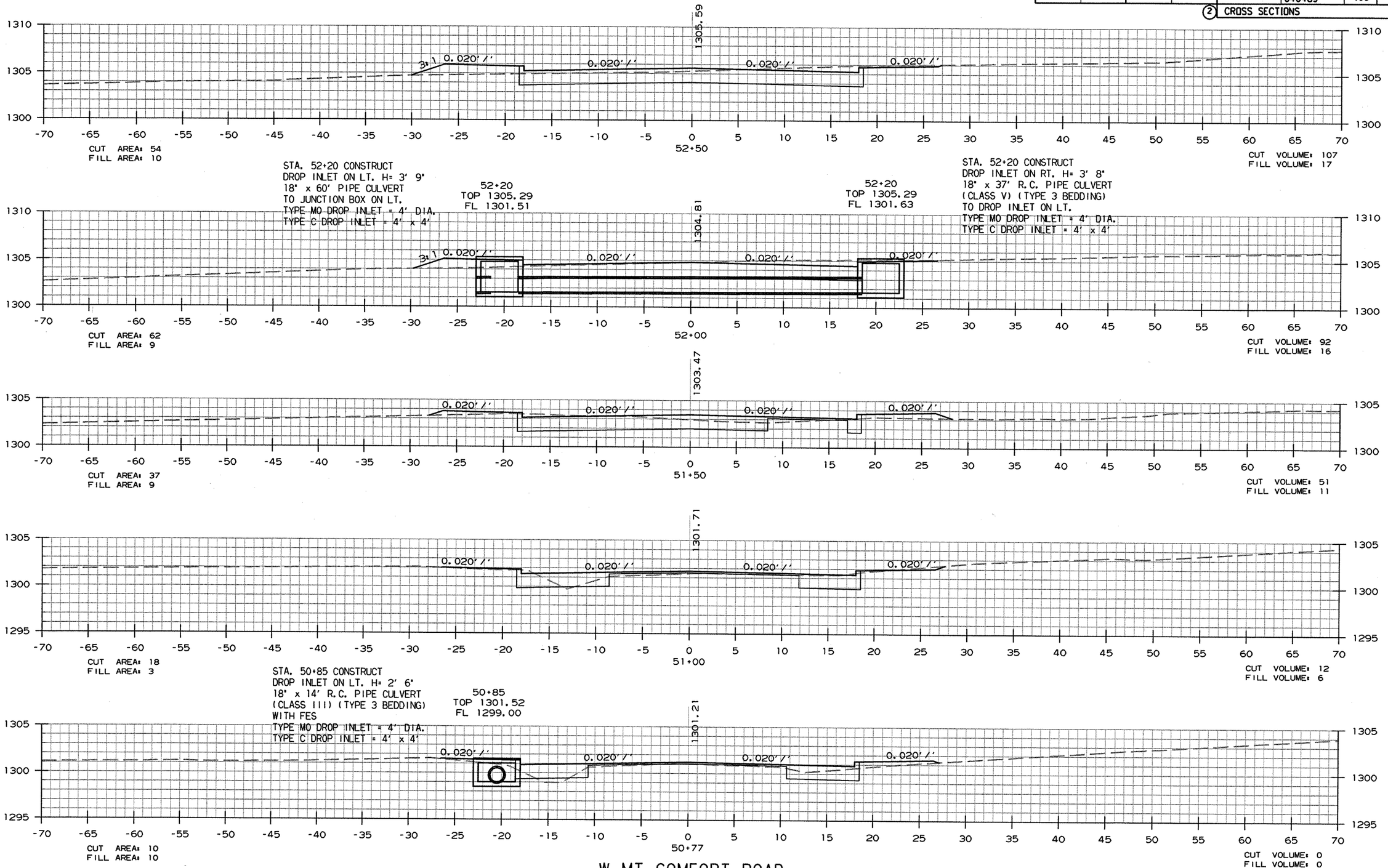
				6	ARK.			
				JOB NO.		040489	108	113

(2) CROSS SECTIONS



W. MT. COMFORT ROAD
BEGIN STA. 50+77

CROSS SECTION STA. 50+77 TO STA. 52+50

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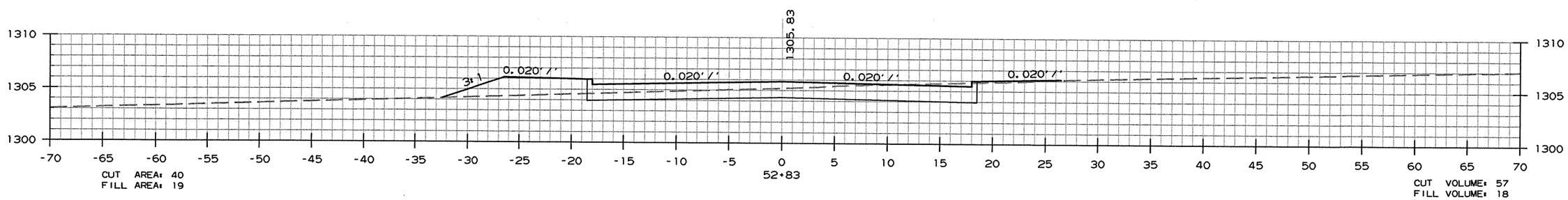
				6	ARK.			
				JOB NO.		040489	109	113

(2) CROSS SECTIONS

W. MT. COMFORT ROAD
END STA. 52+83



CROSS SECTION STA. 52+83 TO STA. 52+83

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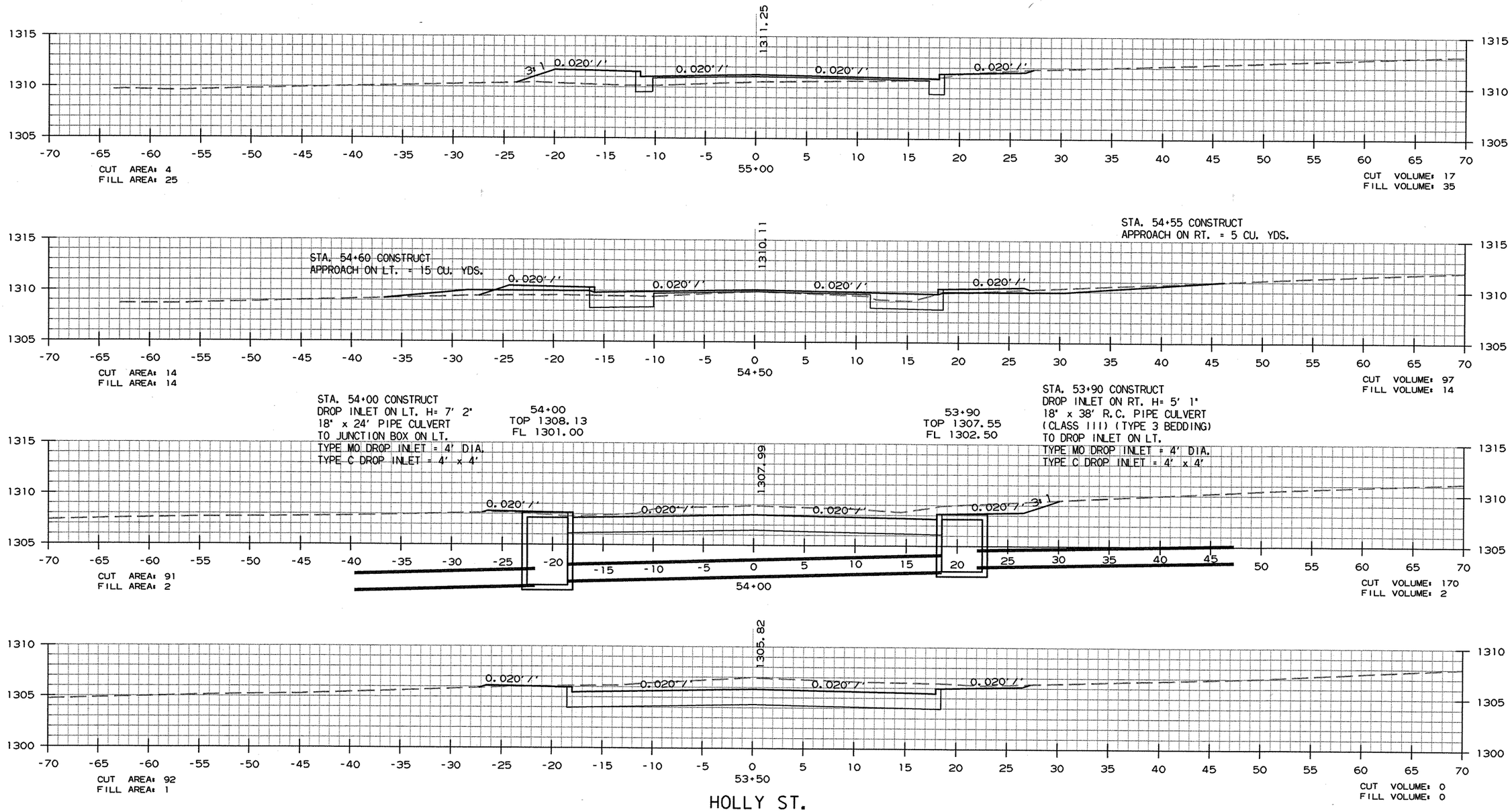
				6	ARK.			
				JOB NO.		040489	110	113

(2) CROSS SECTIONS



HOLLY ST.
BEGIN STA. 53+50

CROSS SECTION STA. 53+50 TO STA. 55+00

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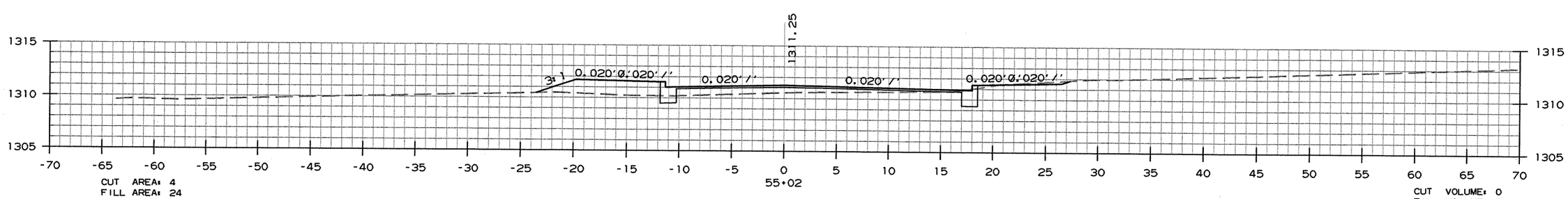
				6	ARK.			
				JOB NO.		040489	111	113

(2) CROSS SECTIONS

HOLLY ST.
END STA. 55+02



CROSS SECTION STA. 55+02 TO STA. 55+02

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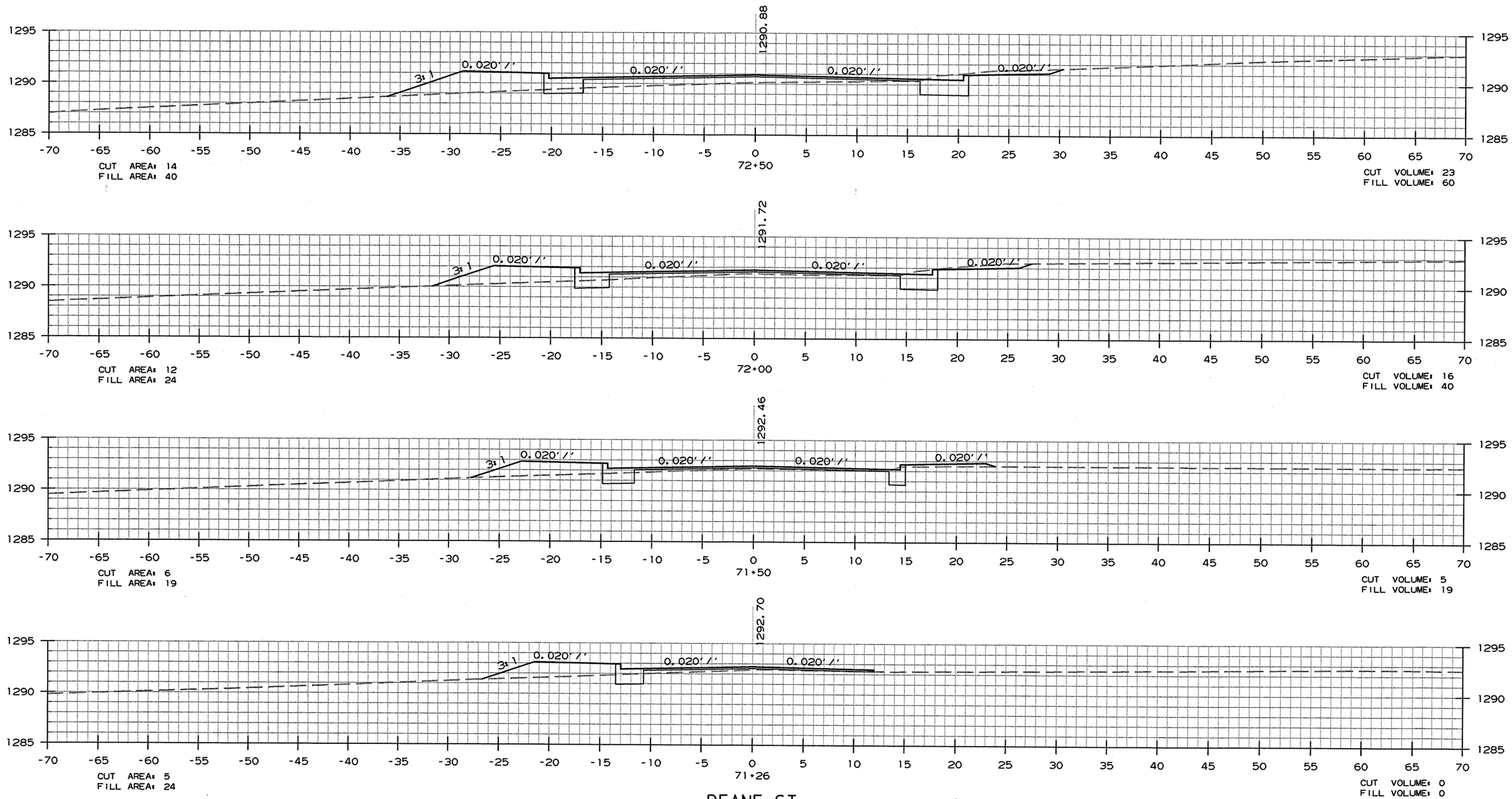
				6	ARK.			
				JOB NO.		040489	112	113

(2) CROSS SECTIONS



DEANE ST.
BEGIN STA. 71+26

CROSS SECTION STA. 71+26 TO STA. 72+50

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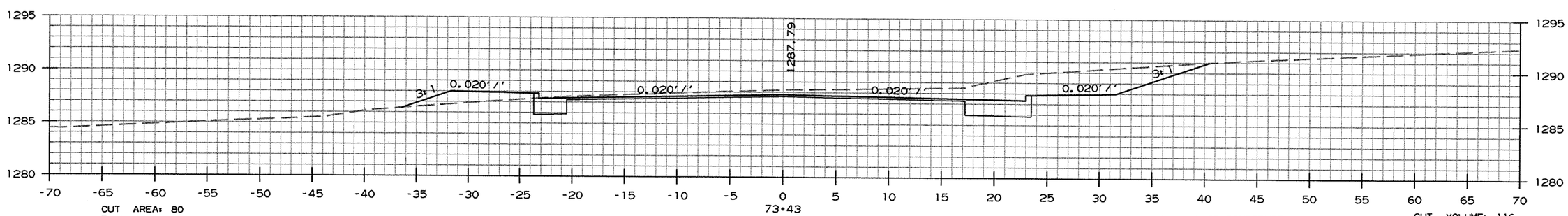
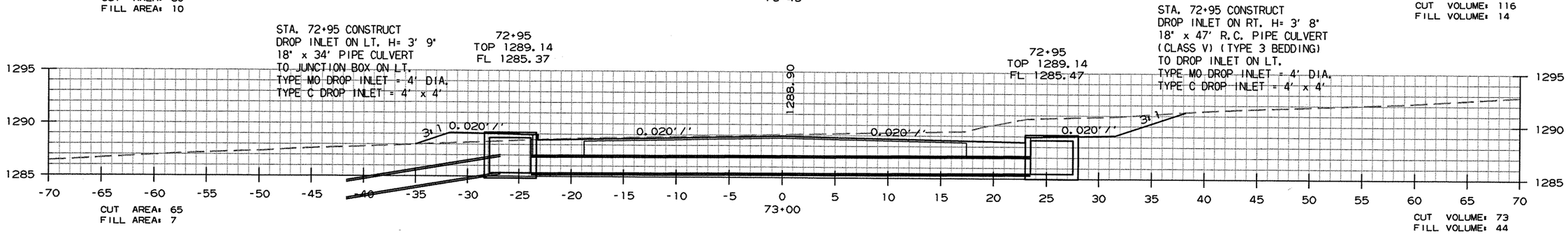
				6	ARK.			
				JOB NO.		040489	113	113

(2) CROSS SECTIONS

DEANE ST.
END STA. 73+43





CROSS SECTION STA. 73+00 TO STA. 73+43

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