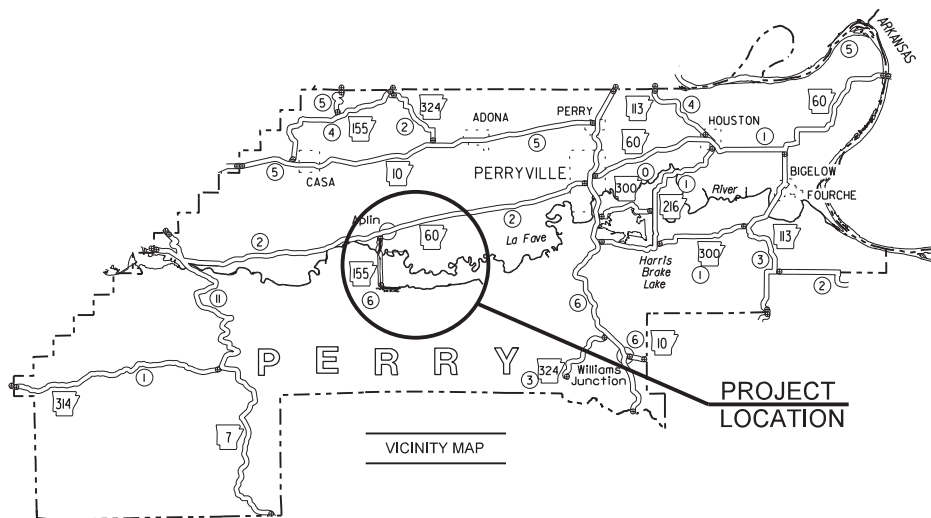


ARKANSAS DEPARTMENT OF TRANSPORTATION  
CONSTRUCTION PLANS FOR PROPOSED COUNTY ROAD

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE   | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------|---------|--------------------|-----------|--------------|
| 09-15-22     |             |              |             | 6                  | ARK.    |                    |           |              |
|              |             |              |             |                    | JOB NO. | FA5309             | 1         | 114          |
|              |             |              |             |                    |         |                    |           |              |

4

HWY. 155 - EAST (PHASE 3) (S)



HWY. 155 - EAST (PHASE 3)(S)

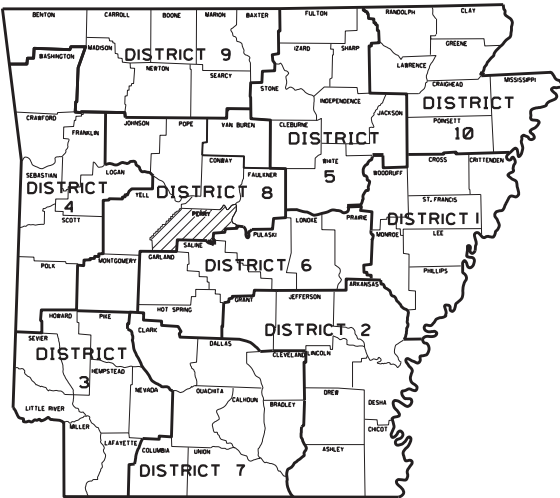
CO. RD. 14

PERRY COUNTY

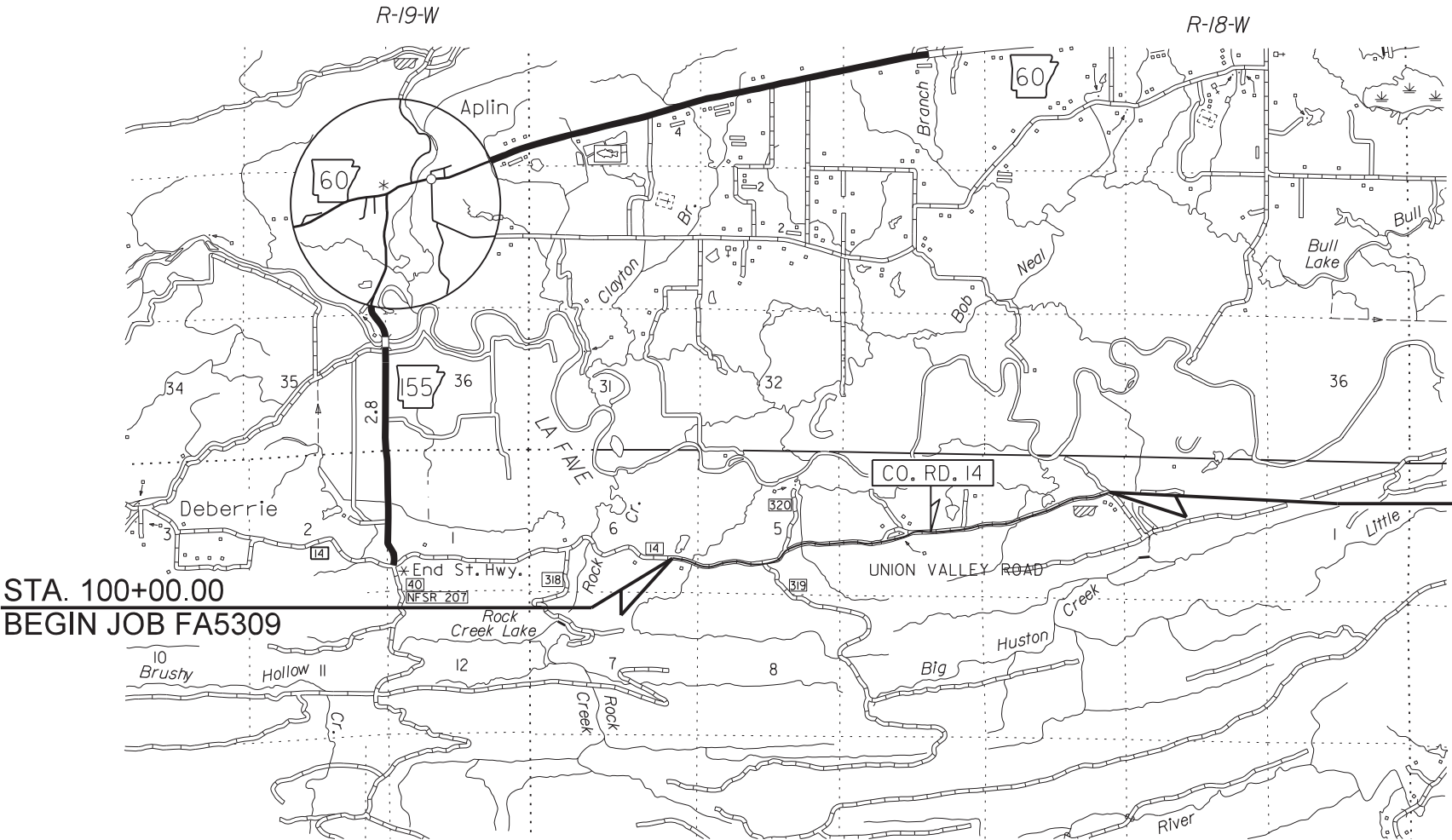
JOB FA5309

FED. AID. PROJECT - STPR-0053(30)

NOT TO SCALE



ARKANSAS HWY. DISTRICT NO. 8



DESIGN TRAFFIC DATA

|                               |        |
|-------------------------------|--------|
| DESIGN YEAR.....              | 2042   |
| 2022 ADT.....                 | 87     |
| 2042 ADT.....                 | 114    |
| 2042 DHV.....                 | 17     |
| DIRECTIONAL DISTRIBUTION..... | 0.62   |
| TRUCKS.....                   | 5%     |
| DESIGN SPEED.....             | 30 MPH |

STA. 266+50.00  
END JOB FA5309

STA. 100+00.00  
BEGIN JOB FA5309

APPROVED



*Rex Vines*  
Vines, Rex  
Sep 26 2022 9:07 AM

P.E. JOB FA5306

DEPUTY DIRECTOR  
AND CHIEF ENGINEER

| PROJECT COORDINATES |            |            |            |
|---------------------|------------|------------|------------|
|                     | BEGIN      | MID-POINT  | END        |
| LAT.                | N34°56'05" | N34°56'09" | N34°56'26" |
| LONG.               | W92°56'59" | W92°55'27" | W92°53'44" |

| LENGTH OF PROJECT CALCULATED ALONG CL CONSTRUCTION |          |         |       |       |
|----------------------------------------------------|----------|---------|-------|-------|
| GROSS LENGTH OF PROJECT                            | 16650.00 | FEET OR | 3.153 | MILES |
| NET " " ROADWAY                                    | 16650.00 | " "     | 3.153 | "     |
| NET " " BRIDGES                                    | 0.00     | " "     | 0.000 | "     |
| NET " " PROJECT                                    | 16650.00 | " "     | 3.153 | "     |

| DATE<br>REVISED                       | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|---------------------------------------|----------------|-----------------|----------------|-----------------------|-------|--------------------|--------------|-----------------|
| 10-31-2022                            |                |                 |                | 6                     | ARK.  |                    |              |                 |
|                                       |                |                 |                |                       |       | JOB NO. FA5309     | 2            | 114             |
| 4 INDEX OF SHEETS & STANDARD DRAWINGS |                |                 |                |                       |       |                    |              |                 |

INDEX OF SHEETS

| SHEET NO.      | TITLE                                      |
|----------------|--------------------------------------------|
| 1 _____        | TITLE SHEET                                |
| 2 _____        | INDEX OF SHEETS AND STANDARD DRAWINGS      |
| 3 _____        | GOVERNING SPECIFICATIONS AND GENERAL NOTES |
| 4 _____        | TYPICAL SECTIONS OF IMPROVEMENT            |
| 5 - 10 _____   | TEMPORARY EROSION CONTROL DETAILS          |
| 11 - 13 _____  | QUANTITIES                                 |
| 14 _____       | SUMMARY OF QUANTITIES AND REVISIONS        |
| 15 - 21 _____  | SURVEY CONTROL DETAILS                     |
| 22 - 33 _____  | PLAN AND PROFILE SHEETS                    |
| 34 - 114 _____ | CROSS SECTIONS                             |

NOTE: CROSS SECTIONS NOT INCLUDED IN PROSPECTIVE BIDDERS' PLANS MAY BE OBTAINED UPON REQUEST.

ROADWAY STANDARD DRAWINGS

| DRWG. NO.   | TITLE                                                         | DATE     |
|-------------|---------------------------------------------------------------|----------|
| FES-1 _____ | FLARED END SECTION _____                                      | 10-18-96 |
| FES-2 _____ | FLARED END SECTION _____                                      | 10-18-96 |
| MB-1 _____  | MAILBOX DETAILS _____                                         | 11-18-04 |
| PCC-1 _____ | CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING _____            | 02-27-14 |
| PCM-1 _____ | METAL PIPE CULVERT FILL HEIGHTS & BEDDING _____               | 02-27-14 |
| SE-2 _____  | TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC _____ | 11-07-19 |
| SHS-1 _____ | STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES _____           | 09-12-13 |
| SHS-2 _____ | U-CHANNEL POST ASSEMBLIES _____                               | 07-25-19 |
| TC-1 _____  | STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION _____      | 11-07-19 |
| TC-2 _____  | STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION _____      | 05-20-21 |
| TC-3 _____  | STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION _____      | 08-12-21 |
| TEC-1 _____ | TEMPORARY EROSION CONTROL DEVICES _____                       | 11-16-17 |
| TEC-2 _____ | TEMPORARY EROSION CONTROL DEVICES _____                       | 06-02-94 |
| TEC-3 _____ | TEMPORARY EROSION CONTROL DEVICES _____                       | 11-03-94 |
| WF-4 _____  | WIRE FENCE TYPE C AND D _____                                 | 08-22-02 |



| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO.                      | STATE | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|--------------------------------------------|-------|--------------------|--------------|-----------------|
| 09-10-2021      |                |                 |                | 6                                          | ARK.  |                    |              |                 |
| 09-15-2022      |                |                 |                | JOB NO.                                    |       | FA5309             | 3            | 114             |
| 10-31-2022      |                |                 |                | 4 GOVERNING SPECIFICATIONS & GENERAL NOTES |       |                    |              |                 |
|                 |                |                 |                |                                            |       |                    |              |                 |

GOVERNING SPECIFICATIONS

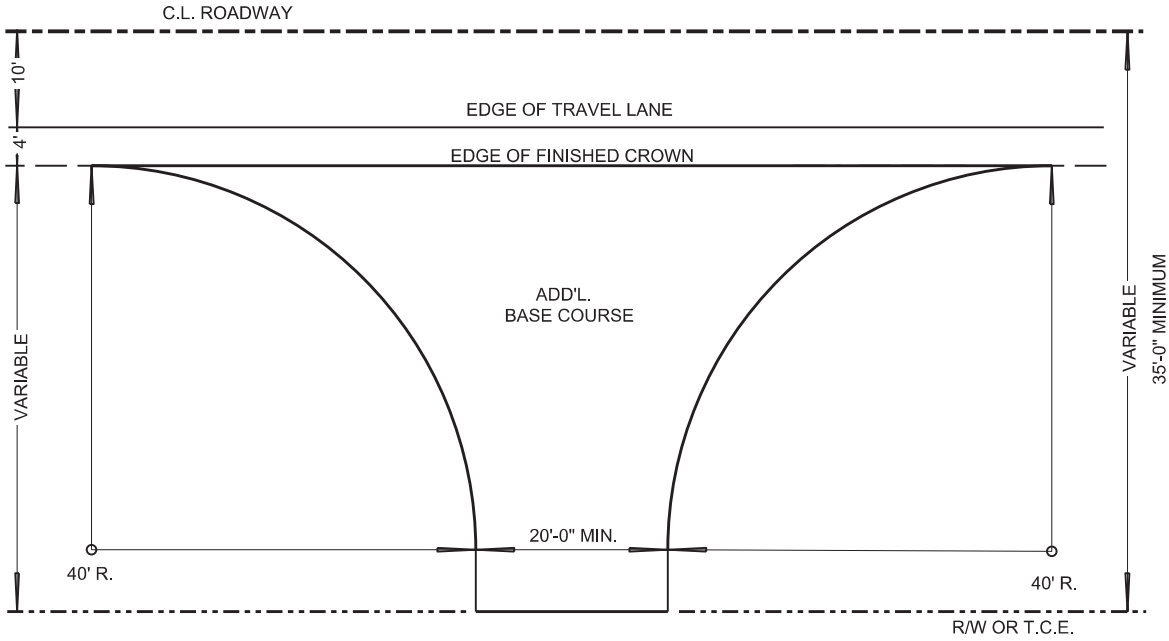
ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION,  
EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

| NUMBER     | TITLE                                                                                  |
|------------|----------------------------------------------------------------------------------------|
| ERRATA     | ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS                                         |
| FHWA-1273  | REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS                        |
| FHWA-1273  | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS                      |
| FHWA-1273  | SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)    |
| FHWA-1273  | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES                       |
| FHWA-1273  | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS                          |
| FHWA-1273  | SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS                     |
| FHWA-1273  | SUPPLEMENT - WAGE RATE DETERMINATION                                                   |
| 100-3      | CONTRACTOR'S LICENSE                                                                   |
| 100-4      | DEPARTMENT NAME CHANGE                                                                 |
| 102-2      | ISSUANCE OF PROPOSALS                                                                  |
| 105-4      | MAINTENANCE DURING CONSTRUCTION                                                        |
| 107-2      | RESTRAINING CONDITIONS                                                                 |
| 108-1      | LIQUIDATED DAMAGES                                                                     |
| 108-2      | WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER                                           |
| 110-1      | PROTECTION OF WATER QUALITY AND WETLANDS                                               |
| 210-1      | UNCLASSIFIED EXCAVATION                                                                |
| 303-1      | AGGREGATE BASE COURSE                                                                  |
| 306-1      | QUALITY CONTROL AND ACCEPTANCE                                                         |
| 604-1      | RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES             |
| 604-3      | TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)                                   |
| 606-1      | PIPE CULVERTS FOR SIDE DRAINS                                                          |
| 620-1      | MULCH COVER                                                                            |
| 621-1      | FILTER SOCKS                                                                           |
| 723-1      | GENERAL REQUIREMENTS FOR SIGNS                                                         |
| 729-1      | CHANNEL POST SIGN SUPPORT                                                              |
| 802-4      | CEMENT                                                                                 |
| JOB FA5309 | BIDDING REQUIREMENTS AND CONDITIONS                                                    |
| JOB FA5309 | BROADBAND INTERNET SERVICE FOR FIELD OFFICE                                            |
| JOB FA5309 | CARGO PREFERENCE ACT REQUIREMENTS                                                      |
| JOB FA5309 | DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES                            |
| JOB FA5309 | ESTABLISHING CONTRACT TIME - WORKING DAY CONTRACT                                      |
| JOB FA5309 | FOREST SERVICE REQUIREMENTS                                                            |
| JOB FA5309 | GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION                              |
| JOB FA5309 | LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS                                          |
| JOB FA5309 | MANDATORY ELECTRONIC CONTRACT                                                          |
| JOB FA5309 | MANDATORY ELECTRONIC DOCUMENT SUBMITTAL                                                |
| JOB FA5309 | OFF-SITE RESTRAINING CONDITIONS FOR NORTHERN LONG-EARED BATS                           |
| JOB FA5309 | PARTNERING REQUIREMENTS                                                                |
| JOB FA5309 | PRICE ADJUSTMENT FOR FUEL                                                              |
| JOB FA5309 | PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT |
| JOB FA5309 | REMOVING AND REPLACING TOPSOIL                                                         |
| JOB FA5309 | SHORING FOR CULVERTS                                                                   |
| JOB FA5309 | SPECIAL CLEARING REQUIREMENTS                                                          |
| JOB FA5309 | SPECIAL SEEDING REQUIREMENTS                                                           |
| JOB FA5309 | STORM WATER POLLUTION PREVENTION PLAN                                                  |
| JOB FA5309 | UTILITY ADJUSTMENTS                                                                    |
| JOB FA5309 | VALUE ENGINEERING                                                                      |

GENERAL NOTES

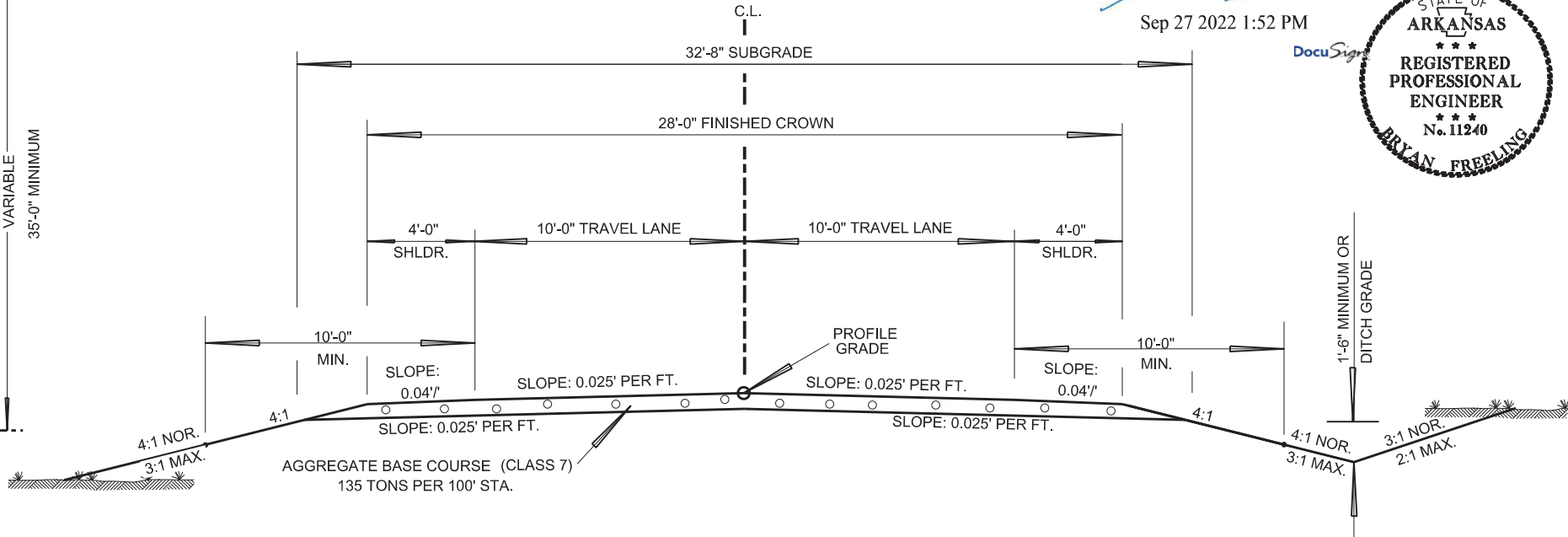
- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE MOVED BY THE OWNERS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED IF AND WHERE DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- SUPERELEVATION SHALL BE COMPUTED IN ACCORDANCE WITH STANDARD DRWG. SE-2 USING THE 30 M.P.H. DESIGN VALUES AND REVOLVE ABOUT INNER EDGE OF TRAVEL LANE UNLESS OTHERWISE SHOWN.
- THE TRAFFIC IS TO BE MAINTAINED ON THE EXISTING ROAD.
- THIS PROJECT IS COVERED UNDER A NATIONWIDE 14 SECTION 404 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, FOR PERMIT REQUIREMENTS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ANY BUILD UP OF DIRT OR DEBRIS ON SHOULDER PRIOR TO PLACEMENT OF AGGREGATE BASE COURSE CLASS 7.
- THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
- PLASTIC PIPE WILL NOT BE USED FOR CROSSDRAINS OR SIDE DRAINS ON THIS PROJECT.

| 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. | FA5309             | 4         | 114          |
| 4 TYPICAL SECS. OF IMPVT. & SPEC. DETAILS |             |              |             |                    |         |                    |           |              |



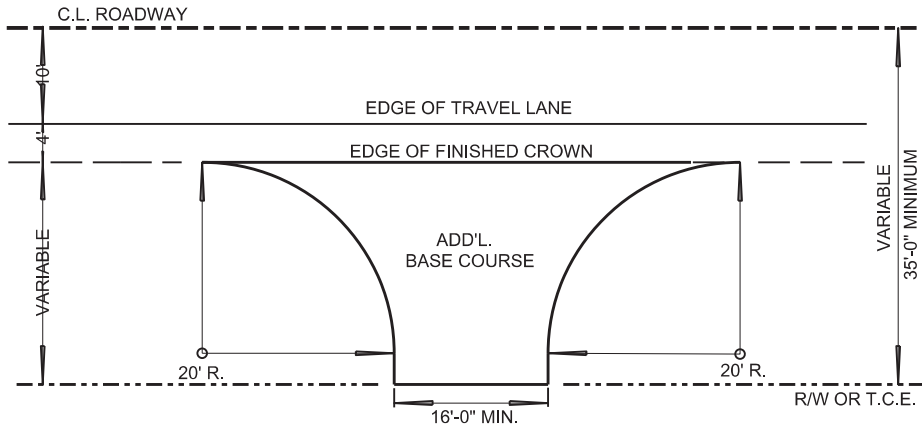
#### DETAIL OF COUNTY ROAD TURNOUT

NOTE: THE ABOVE DETAIL MAY BE MODIFIED TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.



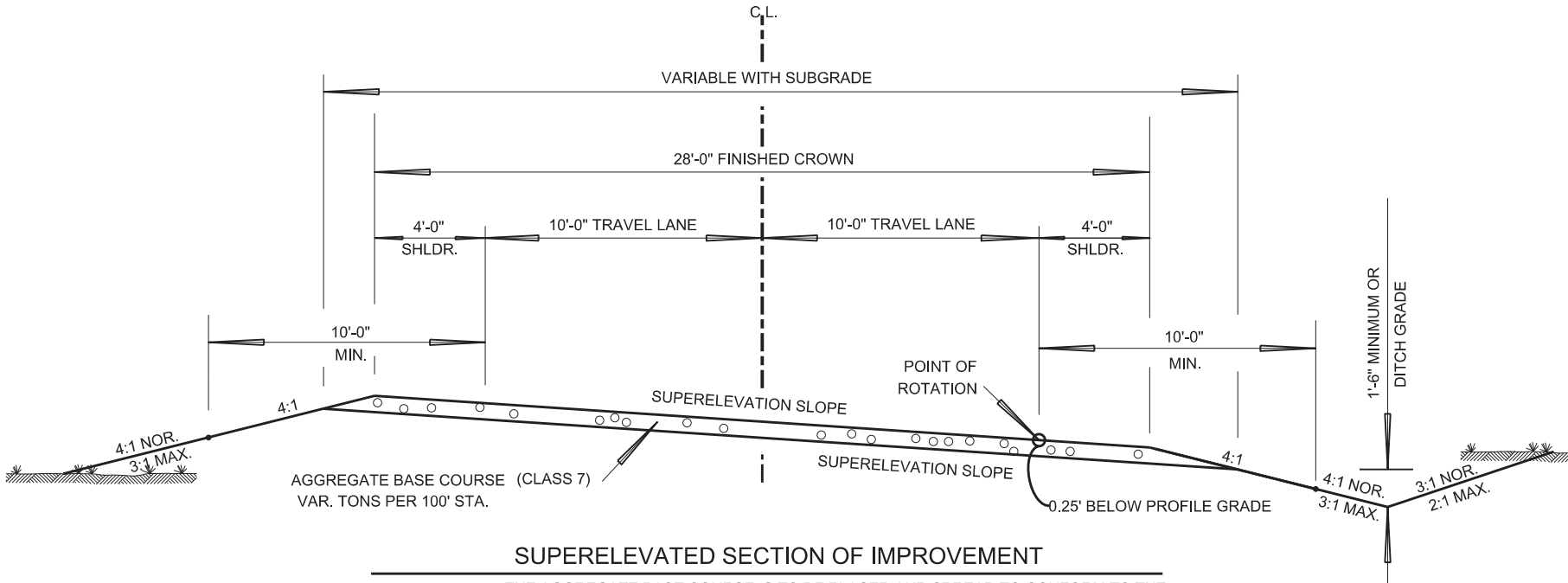
#### TYPICAL SECTION OF IMPROVEMENT

THE AGGREGATE BASE COURSE IS TO BE PLACED AND SPREAD TO CONFORM TO THE TYPICAL SECTION. THE MATERIAL IN THE BASE COURSE SHALL BE UNIFORMLY COMPACTED, STABLE AND FREE OF SEGREGATED AREAS, DENSITY REQUIREMENTS ARE NOT A PART OF THIS CONTRACT. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.



#### DETAIL OF PRIVATE ENTRANCES

NOTE: THE ABOVE DETAIL MAY BE MODIFIED TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.



#### SUPERELEVATED SECTION OF IMPROVEMENT

THE AGGREGATE BASE COURSE IS TO BE PLACED AND SPREAD TO CONFORM TO THE TYPICAL SECTION. THE MATERIAL IN THE BASE COURSE SHALL BE UNIFORMLY COMPACTED, STABLE AND FREE OF SEGREGATED AREAS, DENSITY REQUIREMENTS ARE NOT A PART OF THIS CONTRACT. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

- E 3 FILTER SOCK  
E 5 SAND BAG DITCH CHECKS  
E 6 ROCK DITCH CHECKS  
E 8 DIVERSION DITCHES  
E 11 SILT FENCE  
E 12 SLOPE DRAIN  
EROSION CONTROL LEGEND

| 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.            | FA5309 | 5                  | 114       |              |

4 TEMPORARY EROSION CONTROL DETAILS



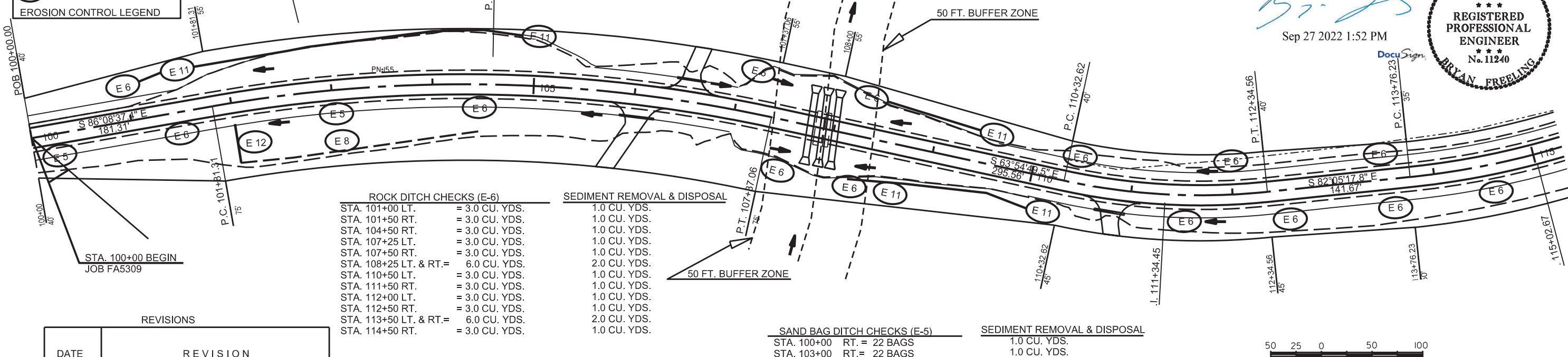
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DIVERSION DITCH (E-8)  
STA. 102+00 - STA. 104+50 RT. = 250 LIN. FT.

SLOPE DRAIN (E-12) DUMPED RIPRAP FILTER BLANKET  
STA. 102+00 RT. = 38 LIN. FT. 3 CU. YD 6 SQ. YD.

SILT FENCE (E-11)  
STA. 101+00 - STA. 105+00 LT. = 400 LIN. FT.  
STA. 108+25 - STA. 110+25 RT. = 200 LIN. FT.  
STA. 108+50 - STA. 109+50 LT. = 100 LIN. FT.

SEDIMENT REMOVAL & DISPOSAL  
15.0 CU. YDS.  
7.0 CU. YDS.  
4.0 CU. YDS.



REVISIONS

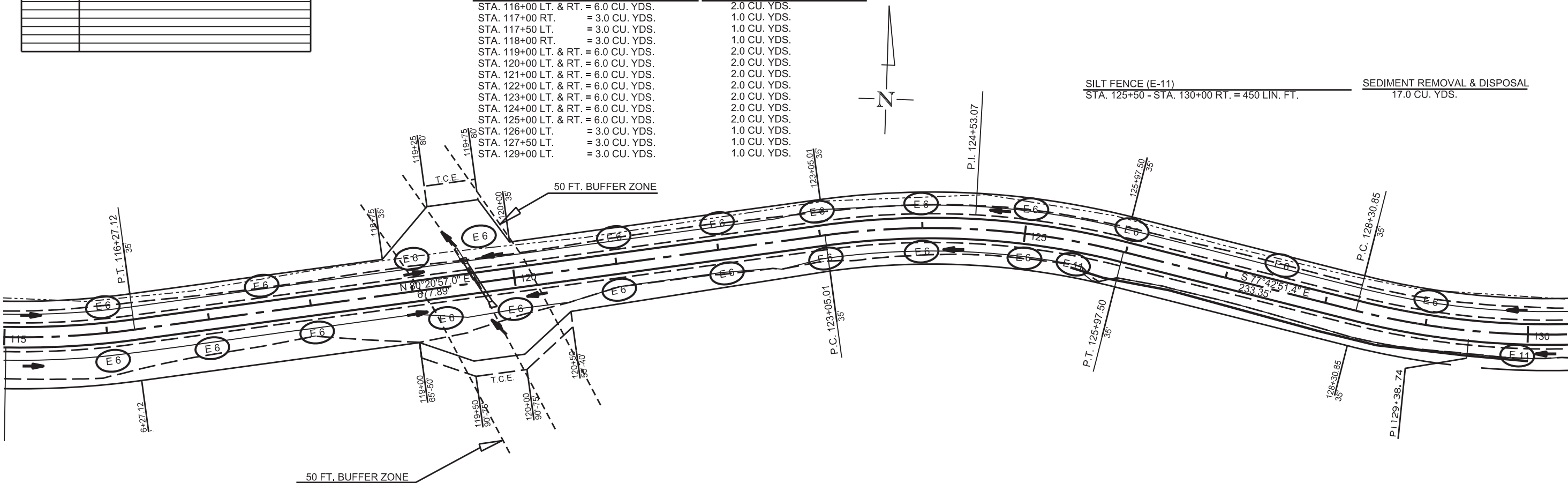
| DATE | REVISION |
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|      |          |
|      |          |

| ROCK DITCH CHECKS (E-6) |                | SEDIMENT REMOVAL & DISPOSAL |
|-------------------------|----------------|-----------------------------|
| STA. 101+00 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 101+50 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 104+50 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 107+25 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 107+50 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 108+25 LT. & RT.=  | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 110+50 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 111+50 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 112+00 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 112+50 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 113+50 LT. & RT.=  | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 114+50 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |

SAND BAG DITCH CHECKS (E-5) SEDIMENT REMOVAL & DISPOSAL  
STA. 100+00 RT. = 22 BAGS 1.0 CU. YDS.  
STA. 103+00 RT. = 22 BAGS 1.0 CU. YDS.

| ROCK DITCH CHECKS (E-6) |                | SEDIMENT REMOVAL & DISPOSAL |
|-------------------------|----------------|-----------------------------|
| STA. 116+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 117+00 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 117+50 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 118+00 RT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 119+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 120+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 121+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 122+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 123+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 124+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 125+00 LT. & RT. = | 6.0 CU. YDS.   | 2.0 CU. YDS.                |
| STA. 126+00 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 127+50 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |
| STA. 129+00 LT.         | = 3.0 CU. YDS. | 1.0 CU. YDS.                |

SILT FENCE (E-11) SEDIMENT REMOVAL & DISPOSAL  
STA. 125+50 - STA. 130+00 RT. = 450 LIN. FT. 17.0 CU. YDS.



- E 3 FILTER SOCK  
E 5 SAND BAG DITCH CHECKS  
E 6 ROCK DITCH CHECKS  
E 8 DIVERSION DITCHES  
E 11 SILT FENCE  
E 12 SLOPE DRAIN  
EROSION CONTROL LEGEND

| ROCK DITCH CHECKS (E-6) |             |              | SEDIMENT REMOVAL & DISPOSAL |              |
|-------------------------|-------------|--------------|-----------------------------|--------------|
| STA. 131+50             | LT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 134+50             | LT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 138+00             | LT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 139+50             | LT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 141+00             | LT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 142+50             | RT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 142+75             | LT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 143+50             | LT. & RT. = | 6.0 CU. YDS. |                             | 2.0 CU. YDS. |
| STA. 145+00             | RT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |

| SLOPE DRAIN (E-12) |       | DUMPED RIPRAP        | FILTER BLANKET |
|--------------------|-------|----------------------|----------------|
| STA. 145+00        | RT. = | 45 LIN. FT. 3 CU. YD | 6 SQ. YD.      |

| FILTER SOCK (E-3)         |       | SEDIMENT REMOVAL & DISPOSAL |
|---------------------------|-------|-----------------------------|
| STA. 141+00 - STA. 142+50 | LT. = | 1500 LIN. FT. 56.0 CU. YDS. |

| SAND BAG DITCH CHECKS (E-5) |       | SEDIMENT REMOVAL & DISPOSAL |
|-----------------------------|-------|-----------------------------|
| STA. 133+00                 | LT. = | 22 BAGS 1.0 CU. YDS.        |
| STA. 136+50                 | RT. = | 22 BAGS 1.0 CU. YDS.        |

| DIVERSION DITCH (E-8)     |                    |
|---------------------------|--------------------|
| STA. 143+50 - STA. 145+00 | RT. = 150 LIN. FT. |

| SILT FENCE (E-11)         |       | SEDIMENT REMOVAL & DISPOSAL |
|---------------------------|-------|-----------------------------|
| STA. 130+00 - STA. 135+50 | RT. = | 550 LIN. FT. 20.0 CU. YDS.  |
| STA. 135+00 - STA. 138+00 | LT. = | 300 LIN. FT. 11.0 CU. YDS.  |
| STA. 136+50 - STA. 142+50 | RT. = | 600 LIN. FT. 22.0 CU. YDS.  |
| STA. 143+50 - STA. 145+00 | LT. = | 150 LIN. FT. 6.0 CU. YDS.   |

| SILT FENCE (E-11)         |       | SEDIMENT REMOVAL & DISPOSAL |
|---------------------------|-------|-----------------------------|
| STA. 130+00 - STA. 135+50 | RT. = | 550 LIN. FT. 20.0 CU. YDS.  |
| STA. 135+00 - STA. 138+00 | LT. = | 300 LIN. FT. 11.0 CU. YDS.  |
| STA. 136+50 - STA. 142+50 | RT. = | 600 LIN. FT. 22.0 CU. YDS.  |
| STA. 143+50 - STA. 145+00 | LT. = | 150 LIN. FT. 6.0 CU. YDS.   |

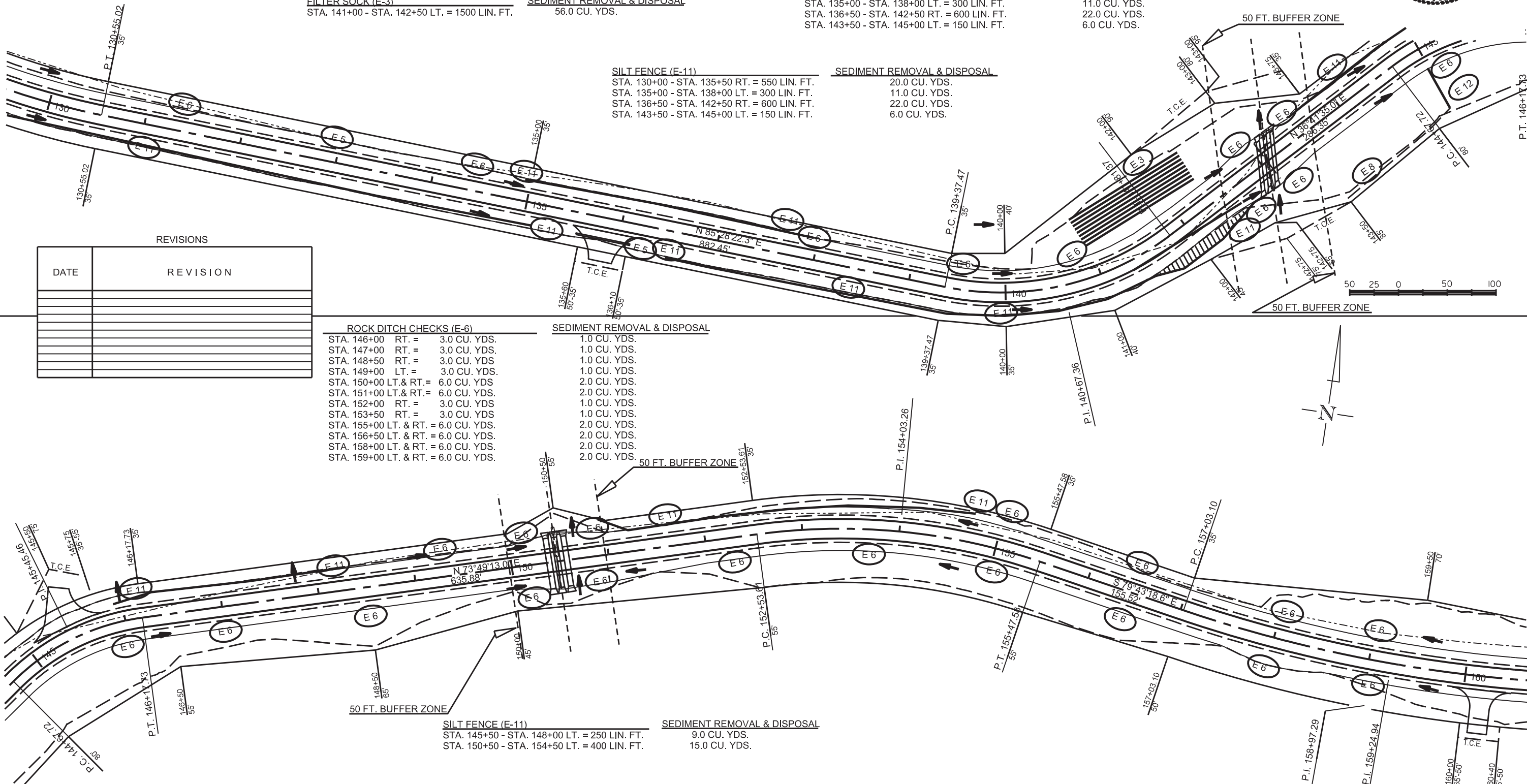
| ROCK DITCH CHECKS (E-6) |             |              | SEDIMENT REMOVAL & DISPOSAL |              |
|-------------------------|-------------|--------------|-----------------------------|--------------|
| STA. 146+00             | RT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 147+00             | RT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 148+50             | RT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 149+00             | LT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 150+00             | LT. & RT. = | 6.0 CU. YDS. |                             | 2.0 CU. YDS. |
| STA. 151+00             | LT. & RT. = | 6.0 CU. YDS. |                             | 2.0 CU. YDS. |
| STA. 152+00             | RT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 153+50             | RT. =       | 3.0 CU. YDS. |                             | 1.0 CU. YDS. |
| STA. 155+00             | LT. & RT. = | 6.0 CU. YDS. |                             | 2.0 CU. YDS. |
| STA. 156+50             | LT. & RT. = | 6.0 CU. YDS. |                             | 2.0 CU. YDS. |
| STA. 158+00             | LT. & RT. = | 6.0 CU. YDS. |                             | 2.0 CU. YDS. |
| STA. 159+00             | LT. & RT. = | 6.0 CU. YDS. |                             | 2.0 CU. YDS. |

| SILT FENCE (E-11)         |       | SEDIMENT REMOVAL & DISPOSAL |
|---------------------------|-------|-----------------------------|
| STA. 145+50 - STA. 148+00 | LT. = | 250 LIN. FT. 9.0 CU. YDS.   |
| STA. 150+50 - STA. 154+50 | LT. = | 400 LIN. FT. 15.0 CU. YDS.  |

| 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.            | FA5309 |                    | 6         | 114          |

4 TEMPORARY EROSION CONTROL DETAILS

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STATE OF ARKANSAS  
REGISTERED PROFESSIONAL ENGINEER  
No. 11240  
BRYAN FREELING



| REVISIONS |          |
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- E 3 FILTER SOCK  
E 5 SAND BAG DITCH CHECKS  
E 6 ROCK DITCH CHECKS  
E 8 DIVERSION DITCHES  
E 11 SILT FENCE  
E 12 SLOPE DRAIN  
EROSION CONTROL LEGEND

SILT FENCE (E-11)  
STA. 171+00 - STA. 172+75 LT. = 175 LIN. FT.  
STA. 173+50 - STA. 175+00 LT. = 150 LIN. FT.

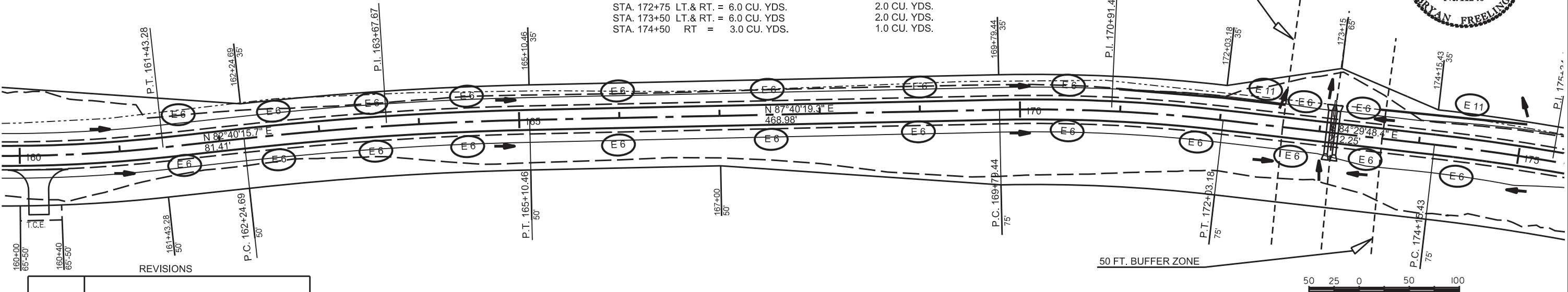
SEDIMENT REMOVAL & DISPOSAL  
6.0 CU. YDS.  
6.0 CU. YDS.

ROCK DITCH CHECKS (E-6)  
STA. 161+50 LT. & RT. = 6.0 CU. YDS.  
STA. 162+50 LT. & RT. = 6.0 CU. YDS.  
STA. 163+50 LT. & RT. = 6.0 CU. YDS.  
STA. 164+50 LT. & RT. = 6.0 CU. YDS.  
STA. 166+00 LT. & RT. = 6.0 CU. YDS.  
STA. 167+50 LT. & RT. = 6.0 CU. YDS.  
STA. 169+00 LT. & RT. = 6.0 CU. YDS.  
STA. 170+50 LT. & RT. = 6.0 CU. YDS.  
STA. 171+75 RT = 3.0 CU. YDS.  
STA. 172+75 LT. & RT. = 6.0 CU. YDS.  
STA. 173+50 LT. & RT. = 6.0 CU. YDS.  
STA. 174+50 RT = 3.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.

| 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.            | FA5309 | 7                  | 114       |              |
| 4 TEMPORARY EROSION CONTROL DETAILS |             |              |             |                    |        |                    |           |              |

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ROCK DITCH CHECKS (E-6)  
STA. 175+50 RT = 3.0 CU. YDS.  
STA. 177+00 LT. & RT. = 6.0 CU. YDS.  
STA. 178+00 LT. & RT. = 6.0 CU. YDS.  
STA. 179+00 LT. & RT. = 6.0 CU. YDS.  
STA. 181+00 LT = 3.0 CU. YDS.  
STA. 181+50 RT = 3.0 CU. YDS.  
STA. 182+50 LT. & RT. = 6.0 CU. YDS.  
STA. 184+00 RT = 3.0 CU. YDS.  
STA. 185+50 LT. & RT. = 6.0 CU. YDS.  
STA. 186+00 LT. & RT. = 6.0 CU. YDS.  
STA. 187+50 RT = 3.0 CU. YDS.  
STA. 189+50 RT = 3.0 CU. YDS.

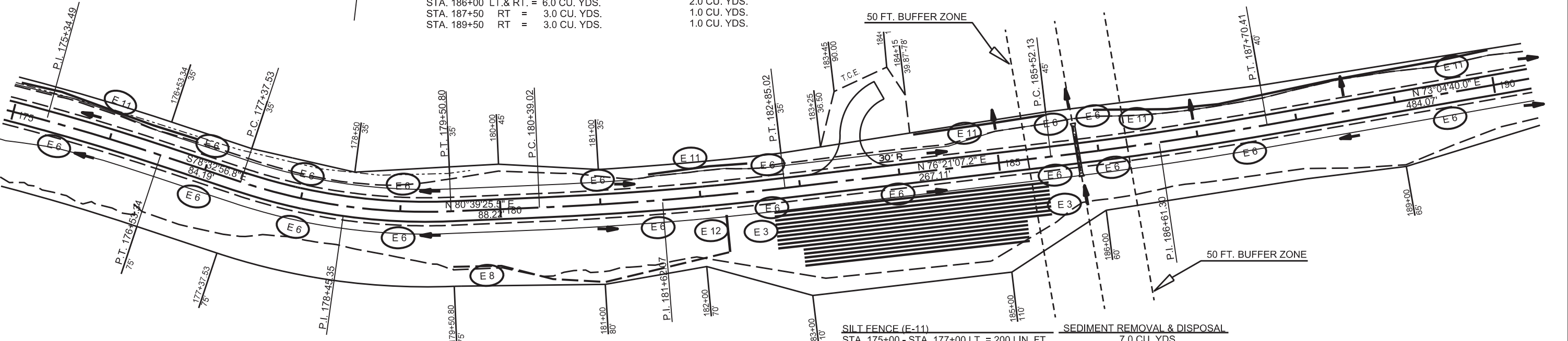
SEDIMENT REMOVAL & DISPOSAL  
1.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.

DIVERSION DITCH (E-8)  
STA. 179+50 - STA. 182+25 RT. = 275 LIN. FT.

SLOPE DRAIN (E-12) DUMPED RIPRAP FILTER BLANKET  
STA. 182+25 = 35 LIN. FT. 3 CU. YD 6 SQ. YD.

FILTER SOCK (E-3)  
STA. 182+75 - STA. 185+25 RT. = 3875 LIN. FT.

SEDIMENT REMOVAL & DISPOSAL  
144.0 CU. YDS.



SILT FENCE (E-11)  
STA. 175+00 - STA. 177+00 LT. = 200 LIN. FT.  
STA. 181+50 - STA. 182+50 LT. = 100 LIN. FT.  
STA. 184+00 - STA. 185+50 LT. = 150 LIN. FT.  
STA. 186+00 - STA. 190+00 LT. = 400 LIN. FT.

SEDIMENT REMOVAL & DISPOSAL  
7.0 CU. YDS.  
4.0 CU. YDS.  
6.0 CU. YDS.  
15.0 CU. YDS.

TEMPORARY EROSION CONTROL DETAILS

- E 3 FILTER SOCK  
E 5 SAND BAG DITCH CHECKS  
E 6 ROCK DITCH CHECKS  
E 8 DIVERSION DITCHES  
E 11 SILT FENCE  
E 12 SLOPE DRAIN
- EROSION CONTROL LEGEND

SILT FENCE (E-11)  
STA. 190+00 - STA. 192+00 LT. = 220 LIN. FT.  
STA. 193+00 - STA. 194+50 LT. = 170 LIN. FT.  
STA. 195+00 - STA. 195+50 LT. = 70 LIN. FT.  
STA. 198+00 - STA. 198+50 LT. = 50 LIN. FT.  
STA. 199+00 - STA. 200+50 LT. = 150 LIN. FT.

SEDIMENT REMOVAL & DISPOSAL  
8.0 CU. YDS.  
6.0 CU. YDS.  
3.0 CU. YDS.  
2.0 CU. YDS.  
6.0 CU. YDS.

SAND BAG DITCH CHECKS (E-5)  
STA. 191+50 RT. = 22 BAGS  
STA. 193+50 RT. = 22 BAGS  
STA. 202+00 LT. & RT. = 44 BAGS

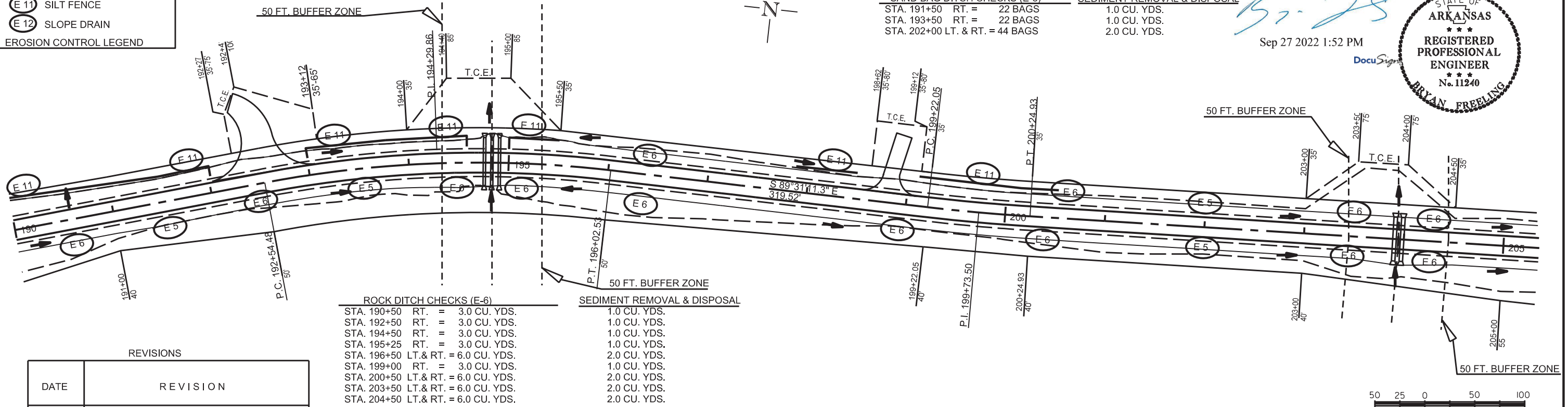
SEDIMENT REMOVAL & DISPOSAL  
1.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.

4 TEMPORARY EROSION CONTROL DETAILS



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ROCK DITCH CHECKS (E-6)  
STA. 190+50 RT. = 3.0 CU. YDS.  
STA. 192+50 RT. = 3.0 CU. YDS.  
STA. 194+50 RT. = 3.0 CU. YDS.  
STA. 195+25 RT. = 3.0 CU. YDS.  
STA. 196+50 LT. & RT. = 6.0 CU. YDS.  
STA. 199+00 RT. = 3.0 CU. YDS.  
STA. 200+50 LT. & RT. = 6.0 CU. YDS.  
STA. 203+50 LT. & RT. = 6.0 CU. YDS.  
STA. 204+50 LT. & RT. = 6.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.

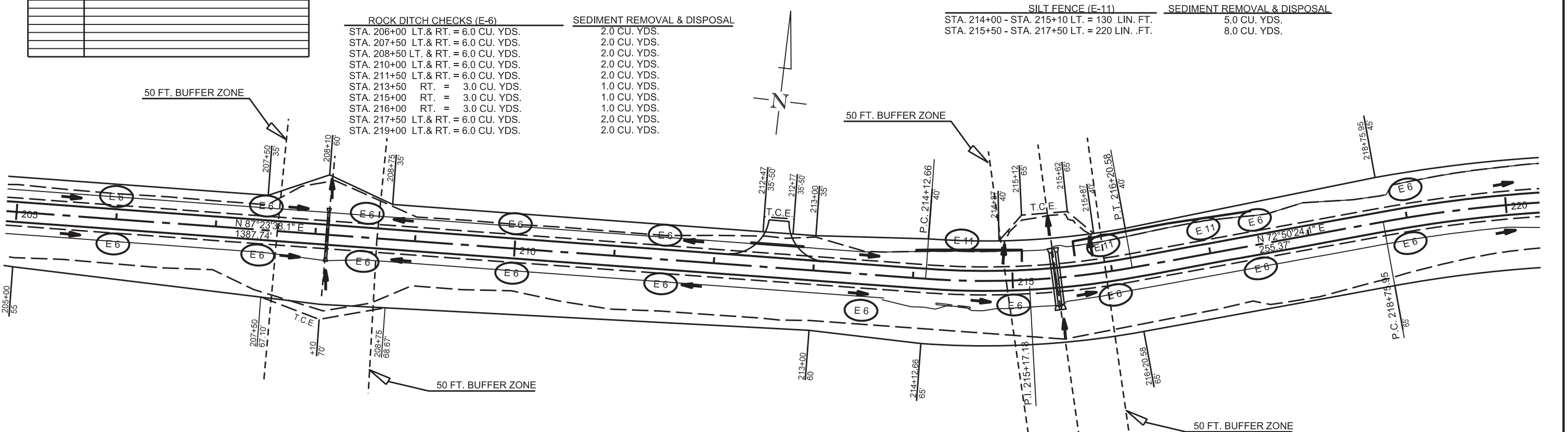
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ROCK DITCH CHECKS (E-6)  
STA. 206+00 LT. & RT. = 6.0 CU. YDS.  
STA. 207+50 LT. & RT. = 6.0 CU. YDS.  
STA. 208+50 LT. & RT. = 6.0 CU. YDS.  
STA. 210+00 LT. & RT. = 6.0 CU. YDS.  
STA. 211+50 LT. & RT. = 6.0 CU. YDS.  
STA. 213+50 RT. = 3.0 CU. YDS.  
STA. 215+00 RT. = 3.0 CU. YDS.  
STA. 216+00 RT. = 3.0 CU. YDS.  
STA. 217+50 LT. & RT. = 6.0 CU. YDS.  
STA. 219+00 LT. & RT. = 6.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.

SILT FENCE (E-11)  
STA. 214+00 - STA. 215+10 LT. = 130 LIN. FT.  
STA. 215+50 - STA. 217+50 LT. = 220 LIN. FT.

SEDIMENT REMOVAL & DISPOSAL  
5.0 CU. YDS.  
8.0 CU. YDS.



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 |
|--------------|-------------|--------------|-------------|--------------------|---------|--------------------|-----------|--------------|
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4 TEMPORARY EROSION CONTROL DETAILS

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- EROSION CONTROL LEGEND
- E 3 FILTER SOCK
  - E 5 SAND BAG DITCH CHECKS
  - E 6 ROCK DITCH CHECKS
  - E 8 DIVERSION DITCHES
  - E 11 SILT FENCE
  - E 12 SLOPE DRAIN

SAND BAG DITCH CHECKS (E-5)  
STA. 224+50 LT. & RT. = 44 BAGS  
STA. 226+50 LT. & RT. = 44 BAGS

SEDIMENT REMOVAL & DISPOSAL  
2.0 CU. YDS.  
2.0 CU. YDS.

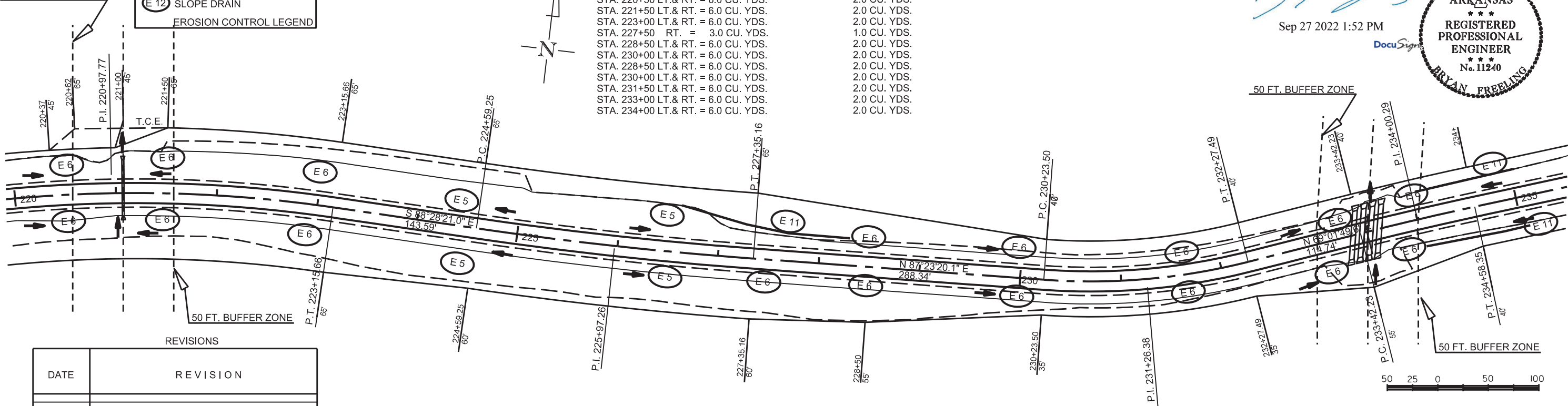
SILT FENCE (E-11)  
STA. 226+50 - STA. 228+50 LT. = 200 LIN. FT.  
STA. 234+00 - STA. 235+00 LT. = 100 LIN. FT.  
STA. 234+00 - STA. 235+00 RT. = 100 LIN. FT.

SEDIMENT REMOVAL & DISPOSAL  
7.0 CU. YDS.  
4.0 CU. YDS.  
4.0 CU. YDS.

ROCK DITCH CHECKS (E-6)  
STA. 220+50 LT. & RT. = 6.0 CU. YDS.  
STA. 221+50 LT. & RT. = 6.0 CU. YDS.  
STA. 223+00 LT. & RT. = 6.0 CU. YDS.  
STA. 227+50 RT. = 3.0 CU. YDS.  
STA. 228+50 LT. & RT. = 6.0 CU. YDS.  
STA. 230+00 LT. & RT. = 6.0 CU. YDS.  
STA. 228+50 LT. & RT. = 6.0 CU. YDS.  
STA. 230+00 LT. & RT. = 6.0 CU. YDS.  
STA. 231+50 LT. & RT. = 6.0 CU. YDS.  
STA. 233+00 LT. & RT. = 6.0 CU. YDS.  
STA. 234+00 LT. & RT. = 6.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.

50 FT. BUFFER ZONE



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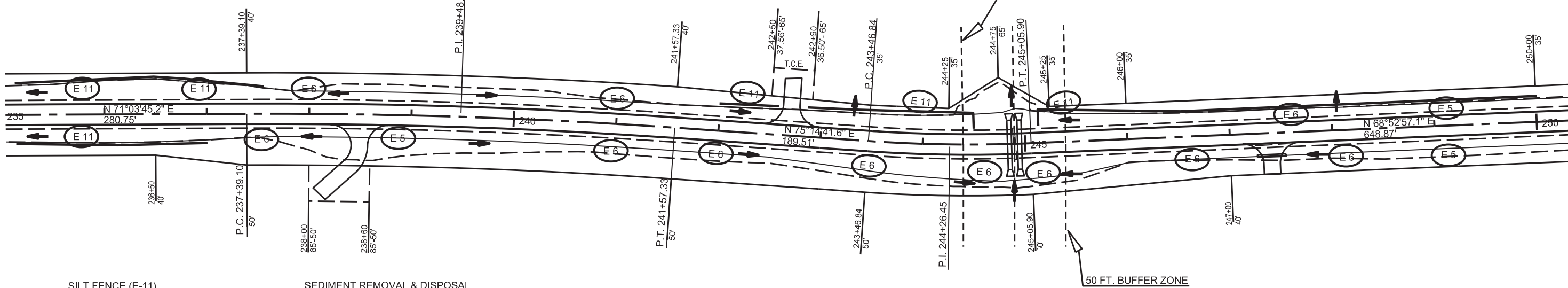
ROCK DITCH CHECKS (E-6)  
STA. 237+50 RT. = 3.0 CU. YDS.  
STA. 238+00 LT. = 3.0 CU. YDS.  
STA. 241+00 LT. & RT. = 6.0 CU. YDS.  
STA. 242+00 RT. = 3.0 CU. YDS.  
STA. 243+50 RT. = 3.0 CU. YDS.  
STA. 244+50 RT. = 3.0 CU. YDS.  
STA. 245+00 RT. = 3.0 CU. YDS.  
STA. 246+50 RT. = 3.0 CU. YDS.  
STA. 247+50 LT. = 3.0 CU. YDS.  
STA. 248+00 RT. = 3.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
1.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.

SAND BAG DITCH CHECKS (E-5)  
STA. 239+00 RT. = 22 BAGS  
STA. 249+00 LT. & RT. = 44 BAGS

SEDIMENT REMOVAL & DISPOSAL  
1.0 CU. YDS.  
2.0 CU. YDS.

50 FT. BUFFER ZONE



SILT FENCE (E-11)  
STA. 235+00 - STA. 237+50 LT. = 250 LIN. FT.  
STA. 235+00 - STA. 237+00 RT. = 200 LIN. FT.  
STA. 242+50 - STA. 244+50 LT. = 200 LIN. FT.  
STA. 245+00 - STA. 250+00 LT. = 500 LIN. FT.

SEDIMENT REMOVAL & DISPOSAL  
9.0 CU. YDS.  
7.0 CU. YDS.  
7.0 CU. YDS.  
19.0 CU. YDS.

- E 3 FILTER SOCK
  - E 5 SAND BAG DITCH CHECKS
  - E 6 ROCK DITCH CHECKS
  - E 8 DIVERSION DITCHES
  - E 11 SILT FENCE
  - E 12 SLOPE DRAIN
- EROSION CONTROL LEGEND

SILT FENCE (E-11)  
STA. 250+00 - STA. 259+50 LT. = 950 LIN. FT.  
STA. 264+00 - STA. 265+00 LT. = 100 LIN. FT.

SAND BAG DITCH CHECKS (E-5)  
STA. 263+00 LT. & RT. = 44 BAGS

SEDIMENT REMOVAL & DISPOSAL  
35.0 CU. YDS.  
4.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
2.0 CU. YDS.

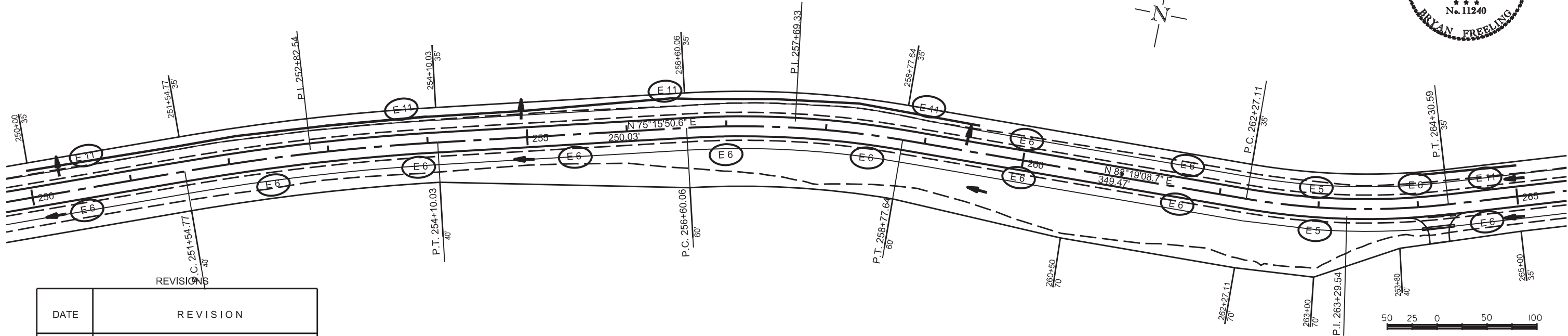
ROCK DITCH CHECKS (E-6)  
STA. 250+50 RT. = 3.0 CU. YDS.  
STA. 252+50 RT. = 3.0 CU. YDS.  
STA. 254+00 RT. = 3.0 CU. YDS.  
STA. 255+50 RT. = 3.0 CU. YDS.  
STA. 257+00 RT. = 3.0 CU. YDS.  
STA. 258+50 RT. = 3.0 CU. YDS.  
STA. 260+00 LT. & RT. = 6.0 CU. YDS.  
STA. 261+50 LT. & RT. = 6.0 CU. YDS.  
STA. 264+00 LT. = 3.0 CU. YDS.  
STA. 264+50 RT. = 3.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.  
2.0 CU. YDS.  
2.0 CU. YDS.  
1.0 CU. YDS.  
1.0 CU. YDS.

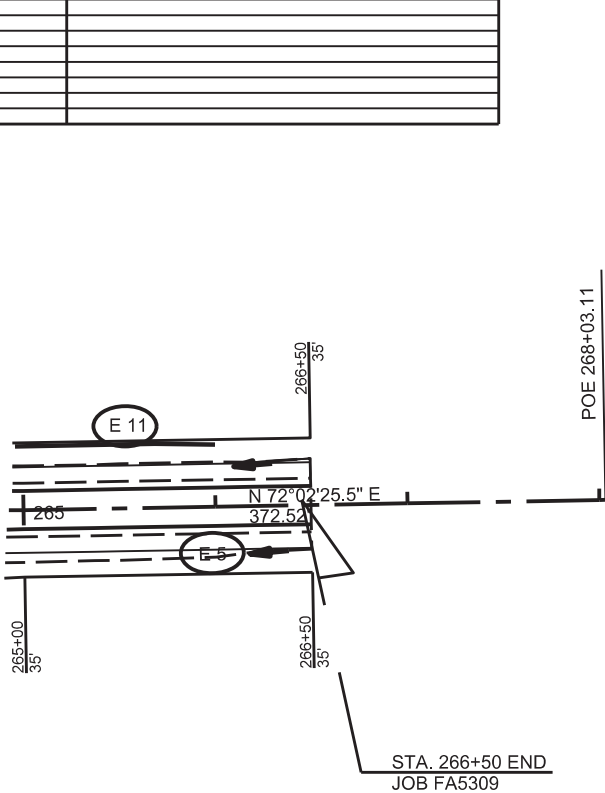
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|              |             |              |             | 6                  | ARK.   |                    |           |              |
|              |             |              |             | JOB NO.            | FA5309 |                    | 10        | 114          |

4 TEMPORARY EROSION CONTROL DETAILS

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SILT FENCE (E-11)  
STA. 265+00 - STA. 266+00 LT. = 100 LIN. FT.

SAND BAG DITCH CHECKS (E-5)  
STA. 260+00 RT. = 22 BAGS

SEDIMENT REMOVAL & DISPOSAL  
4.0 CU. YDS.

SEDIMENT REMOVAL & DISPOSAL  
1.0 CU. YDS.

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|-----------------|----------------|-----------------|----------------|-----------------------|------------|--------------------|--------------|-----------------|
|                 |                |                 |                | 6                     | ARK.       |                    |              |                 |
|                 |                |                 |                | JOB NO.               |            | FA5309             | 11           | 114             |
|                 |                |                 |                | 4                     | QUANTITIES |                    |              |                 |

REMOVAL AND DISPOSAL ITEMS

| STATION | STATION | DESCRIPTION                             | REMOVAL & DISPOSAL OF PIPE CULVERTS | REMOVAL & DISPOSAL OF FENCE | REMOVAL & DISPOSAL OF GATES |
|---------|---------|-----------------------------------------|-------------------------------------|-----------------------------|-----------------------------|
|         |         |                                         | EACH                                | LIN. FT.                    | EACH                        |
| 100+00  | 105+45  | FENCE ON LT.                            |                                     | 595                         |                             |
| 100+00  | 106+35  | FENCE ON RT.                            |                                     | 670                         |                             |
| 105+93  |         | GATE ON RT.                             |                                     |                             | 1                           |
| 107+89  |         | DBL. 60" X 34' PIPE CULVERT             | 2                                   |                             |                             |
| 119+64  |         | 36" X 32' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 143+03  |         | 48" X 28' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 150+48  |         | 36" X 30' PIPE CULVERT                  | 1                                   |                             |                             |
| 173+13  |         | 18" X 30' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 185+79  |         | 18" X 30' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 193+60  | 211+45  | FENCE ON LT.                            |                                     | 1813                        |                             |
| 194+83  |         | TRP. 18" X 32' R.C. & C.M. PIPE CULVERT | 3                                   |                             |                             |
| 198+80  |         | GATE ON LT.                             |                                     |                             | 1                           |
| 203+95  |         | 18" X 30' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 208+12  |         | 24" X 30' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 213+75  | 229+64  | FENCE ON LT.                            |                                     | 1590                        |                             |
| 214+41  |         | 18" X 52' C.M. PIPE CULVERT ON RT.      | 1                                   |                             |                             |
| 215+44  |         | 24" X 30' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 221+07  |         | 18" X 30' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 233+48  |         | 30" X 28' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 242+90  | 261+61  | FENCE ON LT.                            |                                     | 1883                        |                             |
| 244+90  |         | 24" X 30' C.M. PIPE CULVERT             | 1                                   |                             |                             |
| 247+40  |         | 15" X 30' C.M. PIPE CULVERT - R.S.D.    | 1                                   |                             |                             |
| 263+36  | 265+70  | FENCE ON LT.                            |                                     | 230                         |                             |
| 264+23  |         | 18" X 28' C.M. PIPE CULVERT - R.S.D.    | 1                                   |                             |                             |
|         |         |                                         |                                     |                             |                             |
|         |         |                                         |                                     |                             |                             |
|         |         |                                         |                                     |                             |                             |
|         |         |                                         |                                     |                             |                             |
| TOTALS: |         |                                         | 19                                  | 6781                        | 2                           |

CLEARING AND GRUBBING

| STATION | STATION | CLEARING | GRUBBING |
|---------|---------|----------|----------|
|         |         | STATION  |          |
| 100+00  | 266+50  | 167      | 167      |
|         |         |          |          |
|         |         |          |          |
| TOTALS: |         | 167      | 167      |

REMOVING AND REPLACING TOPSOIL

| LOCATION       | REMOVING AND REPLACING TOPSOIL* |
|----------------|---------------------------------|
|                | CU. YDS.                        |
| ENTIRE PROJECT | 7500                            |
|                |                                 |
|                |                                 |
| TOTAL:         | 7500                            |

\*QUANTITY ESTIMATED TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

EROSION CONTROL

| STATION   | STATION   | LOCATION                      | LIME | SEEDING | MULCH COVER | SPECIAL SEEDING | SPECIAL MULCH COVER | SPECIAL SECOND SEEDING APPLICATION | WATER   |
|-----------|-----------|-------------------------------|------|---------|-------------|-----------------|---------------------|------------------------------------|---------|
|           |           |                               | TON  | ACRE    | ACRE        | ACRE            | ACRE                | ACRE                               | M. GAL. |
| 100+00.00 | 110+32.62 | MAIN LANES                    | 8.0  | 3.98    | 3.98        |                 |                     |                                    | 406.0   |
| 110+32.62 | 180+39.62 | U.S. NATIONAL FOREST LAND LT. | 12.6 |         |             | 6.28            | 6.28                | 6.28                               | 640.6   |
| 110+32.62 | 185+27.00 | U.S. NATIONAL FOREST LAND RT. | 12.6 |         |             | 6.28            | 6.28                | 6.28                               | 640.6   |
| 180+39.62 | 266+50.00 | MAIN LANES                    | 8.0  | 3.98    | 3.98        |                 |                     |                                    | 406.0   |
| 140+50.00 | 142+60.00 | EXISTING ROADWAY              | 0.2  | 0.10    | 0.10        |                 |                     |                                    | 10.2    |
|           |           |                               |      |         |             |                 |                     |                                    |         |
| TOTALS:   |           |                               | 41.4 | 8.06    | 8.06        | 12.56           | 12.56               | 12.56                              | 2103.4  |
| USE:      |           |                               | 41   | 8.06    | 8.06        | 12.56           | 12.56               | 12.56                              | 2103.4  |

BASIS OF ESTIMATE:  
LIME\_\_\_\_\_2 TON PER ACRE SEEDING  
WATER\_\_\_\_\_102.0 M. GAL. PER ACRE SEEDING

TEMPORARY EROSION CONTROL

| LOCATION        | TEMPORARY SEEDING | MULCH COVER | WATER   | FILTER SOCKS (E-3) | SAND BAG DITCH CHECK (E-5) | ROCK DITCH CHECK (E-6) | DIVERSION DITCH (E-8) | SILT FENCE (E-11) | PIPE FOR SLOPE DRAIN (E-12) | DUMPED RIPRAP | FILTER BLANKET | SEDIMENT REMOVAL & DISPOSAL |
|-----------------|-------------------|-------------|---------|--------------------|----------------------------|------------------------|-----------------------|-------------------|-----------------------------|---------------|----------------|-----------------------------|
|                 | ACRE              | ACRE        | M. GAL. | LIN. FT.           | BAG                        | CU. YD.                | CU. YD.               | LIN. FT.          | LIN. FT.                    | CU. YD.       | SQ. YD.        | CU. YD.                     |
| ENTIRE PROJECT  |                   |             |         | 5375               | 396                        | 534                    | 675                   | 8285              | 118                         | 9             | 18             | 702                         |
| ENTIRE PROJECT  | 15.57             | 15.57       | 317.6   |                    |                            |                        |                       |                   |                             |               |                |                             |
| ENTIRE PROJECT* |                   |             |         | 100                |                            |                        |                       |                   |                             |               |                | 4                           |
|                 |                   |             |         |                    |                            |                        |                       |                   |                             |               |                |                             |
| TOTALS:         | 15.57             | 15.57       | 317.6   | 5475               | 396                        | 534                    | 675                   | 8285              | 118                         | 9             | 18             | 706                         |

BASIS OF ESTIMATE:  
WATER FOR TEMPORARY SEEDING\_\_\_\_\_20.4 M. GAL. PER ACRE TEMPORARY SEEDING  
NOTE: TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND CN THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROISION AND SEDIMENTATION OF U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.  
\*QUANTITIES ESTIMATED TO BE USED IF AND WHEN DIRECTED BY ENGINEER.

AF45309.DGN

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE      | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|-----------------------|------------|--------------------|--------------|-----------------|
|                 |                |                 |                | 6                     | ARK.       |                    |              |                 |
|                 |                |                 |                |                       | JOB NO.    | FA5309             | 12           | 114             |
|                 |                |                 |                | 4                     | QUANTITIES |                    |              |                 |

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

| STATION | SIDE      | STANDARD SIGN NO. |         |       |         |       |         |       |         |       |         |        |         |       |         |       |         | SUPPORT ASSEMBLY |        | STANDARD<br>DRAWING NO. |
|---------|-----------|-------------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|--------|---------|-------|---------|-------|---------|------------------|--------|-------------------------|
|         |           | W1-2L             |         | W1-2R |         | W1-4L |         | W1-4R |         | W1-5R |         | W13-1P |         | OM-3L |         | OM-3R |         | TYPE A           | TYPE C |                         |
|         |           | NO.               | SQ. FT. | NO.   | SQ. FT. | NO.   | SQ. FT. | NO.   | SQ. FT. | NO.   | SQ. FT. | NO.    | SQ. FT. | NO.   | SQ. FT. | NO.   | SQ. FT. | EACH             |        |                         |
| 100+06  | RT.       |                   |         |       |         |       |         |       |         | 1     | 5.00    | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 107+84  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 119+56  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 2*     | SHS-1, SHS-2            |
| 131+55  | LT.       |                   |         |       |         |       |         |       |         | 1     | 5.00    | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 138+37  | LT.       |                   |         |       |         | 1     | 5.00    |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 143+07  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 147+18  | LT.       |                   |         |       |         | 1     | 5.00    |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 150+47  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 151+53  | RT.       |                   |         |       |         |       |         | 1     | 5.00    |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 162+43  | RT.       |                   |         |       |         |       |         | 1     | 5.00    |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 168+79  | LT.       |                   |         |       |         |       |         | 1     | 5.00    |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 173+03  | RT.       |                   |         | 1     | 5.00    |       |         |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 173+13  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 180+51  | RT.       |                   |         | 1     | 5.00    |       |         |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 185+78  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 2*     | SHS-1, SHS-2            |
| 191+54  | LT.       |                   |         | 1     | 5.00    |       |         |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 194+84  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 197+03  | RT.       | 1                 | 5.00    |       |         |       |         |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 203+95  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 208+12  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 2*     | SHS-1, SHS-2            |
| 213+13  | LT.       |                   |         |       |         | 1     | 5.00    |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 215+45  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 221+08  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 2*     | SHS-1, SHS-2            |
| 224+16  | RT.       |                   |         |       |         | 1     | 5.00    |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 229+24  | LT.       | 1                 | 5.00    |       |         |       |         |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 233+27  | RT.       |                   |         | 1     | 5.00    |       |         |       |         |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 233+49  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 244+90  | LT. & RT. |                   |         |       |         |       |         |       |         |       |         |        |         | 2     | 6.00    | 2     | 6.00    |                  | 4      | SHS-1, SHS-2            |
| 255+60  | LT.       |                   |         |       |         |       |         | 1     | 5.00    |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| 265+30  | RT.       |                   |         |       |         |       |         | 1     | 5.00    |       |         | 1      | 2.25    |       |         |       |         | 1                |        | SHS-1, SHS-2            |
| TOTALS: |           | 2                 | 10.00   | 4     | 20.00   | 4     | 20.00   | 5     | 25.00   | 2     | 10.00   | 17     | 38.25   | 26    | 78.00   | 26    | 78.00   | 17               | 44     |                         |

NOTES: ALL STANDARD SIGN BLANKS TO BE 0.080" THICK. REFER TO STANDARD DRAWING SHS-2 FOR CHANNEL POST SPLICING DETAILS.  
LOCATIONS ARE APPROXIMATE AND MAY BE MOVED AT THE DIRECTION OF THE ENGINEER.  
\*TWO OM-3'S PLACED BACK TO BACK ON EACH SIDE OF A SINGLE TYPE C SUPPORT ASSEMBLY.

MAILBOXES

| LOCATION      | MAILBOXES | MAILBOX<br>SUPPORTS<br>(SINGLE) |
|---------------|-----------|---------------------------------|
|               | EACH      |                                 |
| 106+43 ON RT. | 1         | 1                               |
| 212+47 ON LT. | 1         | 1                               |
| TOTALS:       | 2         | 2                               |

FENCE REMOVED AND RECONSTRUCTED

| STATION | STATION | SIDE | FENCE REMOVED<br>&<br>RECONSTRUCTED | GATES REMOVED &<br>RECONSTRUCTED |
|---------|---------|------|-------------------------------------|----------------------------------|
|         |         |      | LIN. FT.                            | EACH                             |
| 211+45  | 212+40  | LT.  | 90                                  |                                  |
| 212+90  | 213+75  | LT.  | 90                                  |                                  |
| 238+38  |         | RT.  |                                     | 1                                |
| TOTALS: |         |      | 180                                 | 1                                |

FENCING & GATE

| STATION | STATION | SIDE | WIRE FENCE |             | ALTERNATE         |                         |
|---------|---------|------|------------|-------------|-------------------|-------------------------|
|         |         |      | TYPE<br>D  | TYPE<br>D-1 | 16' STEEL<br>GATE | 16'<br>ALUMINUM<br>GATE |
|         |         |      | LIN. FT.   | LIN. FT.    | EACH              | EACH                    |
| 100+00  | 105+45  | LT.  | 550        |             |                   |                         |
| 100+00  | 106+35  | RT.  | 600        |             |                   |                         |
| 105+93  |         | RT.  |            |             | 1                 | 1                       |
| 193+50  | 211+45  | LT.  |            | 1795        |                   |                         |
| 198+80  |         |      |            |             | 1                 | 1                       |
| 213+75  | 229+64  | LT.  |            | 1615        |                   |                         |
| 242+90  | 261+61  | LT.  | 1883       |             |                   |                         |
| 263+36  | 265+70  | LT.  | 230        |             |                   |                         |
| TOTALS: |         |      | 3263       | 3410        | 2                 | 2                       |

TRAFFIC CONTROL DEVICES

| LOCATION                       | W20-1 |         |       |         |      |         |       |         | W5-1<br>(ROAD NARROWS)* |         | W20-4<br>(ONE LANE ROAD<br>XXXX)* |         | G20-1<br>(ROAD WORK<br>NEXT XX MILES) |         | G20-2<br>(END ROAD WORK) |         | BARRICADES<br>(TYPE III)* | TRAFFIC<br>DRUMS* |
|--------------------------------|-------|---------|-------|---------|------|---------|-------|---------|-------------------------|---------|-----------------------------------|---------|---------------------------------------|---------|--------------------------|---------|---------------------------|-------------------|
|                                | 1500' |         | 1000' |         | 500' |         | AHEAD |         | NO.                     | SQ. FT. | NO.                               | SQ. FT. | NO.                                   | SQ. FT. | NO.                      | SQ. FT. | LIN. FT.                  | EACH              |
|                                | NO.   | SQ. FT. | NO.   | SQ. FT. | NO.  | SQ. FT. | NO.   | SQ. FT. |                         |         |                                   |         |                                       |         |                          |         |                           |                   |
| BEGINNING OF JOB               | 1     | 16.0    | 1     | 16.0    | 1    | 16.0    |       |         | 1                       | 9.0     | 1                                 | 16.0    | 1                                     | 10.0    | 1                        | 8.0     | 48.00                     | 10                |
| STA. 135+85 RT. (CO. RD. 319)  |       |         |       |         |      |         | 1     | 16.0    |                         |         |                                   |         |                                       |         |                          |         |                           |                   |
| STA. 145+25 LT. (CO. RD. 320)  |       |         |       |         |      |         | 1     | 16.0    |                         |         |                                   |         |                                       |         |                          |         |                           |                   |
| COUNTY RD. ON LT AT END OF JOB |       |         |       |         |      |         | 1     | 16.0    |                         |         |                                   |         |                                       |         |                          |         |                           |                   |
| END OF JOB                     | 1     | 16.0    | 1     | 16.0    | 1    | 16.0    |       |         | 1                       | 9.0     | 1.0                               | 16.0    | 1                                     | 10.0    | 1                        | 8.0     | 48.00                     | 10                |
| TOTALS:                        | 2     | 32.0    | 2     | 32.0    | 2    | 32.0    | 3     | 48.0    | 2                       | 18.0    | 2                                 | 32.0    | 2                                     | 20.0    | 2                        | 16.0    | 96.0                      | 20.0              |

NOTE: REFER TO STANDARD DRAWINGS TC-1, TC-2, AND TC-3.  
\*QUANTITIES ESTIMATED TO BE USED IF AND WHEN DIRECTED BY ENGINEER.

QUANTITIES

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE      | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|------------------|------------|------------------|-----------|--------------|
| 09-15-2022   |             |              |             | 6                | ARK.       |                  |           |              |
| 11-01-2022   |             |              |             | JOB NO.          |            | FA5309           | 13        | 114          |
|              |             |              |             | 4                | QUANTITIES |                  |           |              |

EARTHWORK

| STATION | STATION | LOCATION     | UNCLASSIFIED EXCAVATION | COMPACTED EMBANKMENT |
|---------|---------|--------------|-------------------------|----------------------|
|         |         |              | CU. YD.                 |                      |
| 100+00  | 266+50  | MAIN LANES   | 43501.0                 | 27650.0              |
| 141+42  | 142+64  | OBLITERATION | 120.0                   |                      |
| 106+04  | 106+04  | DRIVEWAY RT. | 25.0                    |                      |
| 106+54  | 106+54  | DRIVEWAY LT. | 20.0                    | 15.0                 |
| 110+83  | 110+83  | DRIVEWAY RT. | 25.0                    | 15.0                 |
| 135+85  | 135+85  | DRIVEWAY RT. | 3.0                     | 31.0                 |
| 145+51  | 145+51  | DRIVEWAY LT. |                         | 125.0                |
| 160+18  | 160+18  | DRIVEWAY RT. | 75.0                    |                      |
| 183+50  | 183+50  | DRIVEWAY LT. | 150.0                   |                      |
| 192+50  | 192+50  | DRIVEWAY LT. | 150.0                   | 75.0                 |
| 198+90  | 198+90  | DRIVEWAY LT. | 50.0                    | 41.0                 |
| 212+62  | 212+62  | DRIVEWAY LT. | 50.0                    |                      |
| 238+49  | 238+49  | DRIVEWAY RT. | 115.0                   | 15.0                 |
| 242+58  | 242+58  | DRIVEWAY LT. |                         | 32.0                 |
| 247+40  | 247+40  | DRIVEWAY RT. | 15.0                    | 10.0                 |
| 364+19  | 364+19  | DRIVEWAY RT. | 15.0                    |                      |
| TOTALS: |         |              | 44314                   | 28009                |

4" PIPE UNDERDRAIN

| LOCATION       | 4' PIPE UNDERDRAIN | UNDERDRAIN OUTLET PROTECTORS |
|----------------|--------------------|------------------------------|
|                | LIN. FT.           | EACH                         |
| ENTIRE PROJECT | 200                | 10                           |
|                |                    |                              |
|                |                    |                              |
| TOTAL:         | 200                | 10                           |

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

BASE COURSE

| STATION | STATION | LOCATION               | LENGTH  | AGGREGATE BASE COURSE (CLASS 7) |         |            |           |
|---------|---------|------------------------|---------|---------------------------------|---------|------------|-----------|
|         |         |                        | FEET    | TONS PER STATION                | NORMAL  | ADDITIONAL | TOTAL TON |
| 100+00  | 266+50  | MAIN LANES             | 16650.0 | 135                             | 22477.5 |            | 22477.5   |
| 106+04  |         | DRIVE ON RT.           |         |                                 |         | 61.8       | 61.8      |
| 106+54  |         | DRIVE ON LT.           |         |                                 |         | 40.8       | 40.8      |
| 110+83  |         | DRIVE ON RT.           |         |                                 |         | 35.1       | 35.1      |
| 135+85  |         | CO. RD. TURNOUT ON RT. |         |                                 |         | 50.6       | 50.6      |
| 145+51  |         | CO. RD. TURNOUT ON LT. |         |                                 |         | 73.3       | 73.3      |
| 160+18  |         | DRIVE ON RT.           |         |                                 |         | 57.0       | 57.0      |
| 183+50  |         | CO. RD. TURNOUT ON LT. |         |                                 |         | 105.9      | 105.9     |
| 192+50  |         | CO. RD. TURNOUT ON LT. |         |                                 |         | 134.9      | 134.9     |
| 198+90  |         | DRIVE ON LT.           |         |                                 |         | 54.4       | 54.4      |
| 212+62  |         | CO. RD. TURNOUT ON LT. |         |                                 |         | 60.9       | 60.9      |
| 238+49  |         | DRIVE ON RT.           |         |                                 |         | 64.7       | 64.7      |
| 242+58  |         | DRIVE ON LT.           |         |                                 |         | 40.0       | 40.0      |
| 247+40  |         | DRIVE ON RT.           |         |                                 |         | 30.4       | 30.4      |
| 264+19  |         | DRIVE ON RT.           |         |                                 |         | 35.4       | 35.4      |
| ENTIRE  | PROJECT | MAINTENANCE OF TRAFFIC |         |                                 |         |            | 3000.0    |
| TOTALS: |         |                        |         |                                 | 22477.5 | 845.2      | 26322.7   |

30-28

Nov 3 2022 8:32 AM

DocuSign

STATE OF ARKANSAS

REGISTERED PROFESSIONAL ENGINEER

Nº. 11240

BRYAN FREELING

STRUCTURES

| STATION | DESCRIPTION                                              | 42"               |                    | CROSS DRAIN ALTERNATES |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        | SIDE DRAINS        |        |                    | FLARED END SECTIONS ALTERNATES |                    |           |     |           |           |           |     |     | SELECTED<br>PIPE<br>BEDDING* | SOLID<br>SODDING | WATER     | STANDARD DRAWING NUMBER |           |           |         |                            |                            |  |     |
|---------|----------------------------------------------------------|-------------------|--------------------|------------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------------------------------|--------------------|-----------|-----|-----------|-----------|-----------|-----|-----|------------------------------|------------------|-----------|-------------------------|-----------|-----------|---------|----------------------------|----------------------------|--|-----|
|         |                                                          |                   |                    | 24"                    |        | 30"                |        | 42"                |        | 48"                |        | 72"                |        | 36" x 23"          |        | 35" X 24"          |        |                    |        |                    | 44" X 27"                      |                    | 42" X 29" |     | 59" X 36" |           | 57" X 38" |     | 24" |                              |                  |           |                         | 30"       |           | 42"     |                            | 48"                        |  | 72" |
|         |                                                          | R.C.P.<br>CLASS V | FLARED END SECTION | R.C.P.<br>CLASS IV     | C.M.P. | R.C.P.<br>CLASS IV | C.M.P. | R.C.P.<br>CLASS IV | C.M.P. | R.C.P.<br>CLASS IV | C.M.P. | R.C.P.<br>CLASS IV | C.M.P. | R.C.P.<br>CLASS IV | C.M.P. | R.C.P.<br>CLASS IV | C.M.P. | R.C.P.<br>CLASS IV | C.M.P. | R.C.P.<br>CLASS IV | C.M.P.                         | R.C.P.<br>CLASS IV | C.M.P.    | 18" | 24"       | 28" x 20" | 24"       | 30" | 42" | 48"                          | 72"              | 35" x 24" |                         | 44" X 27" | 59" X 36" | CU. YD. | SQ. YD.                    | M. GALLON                  |  |     |
|         |                                                          | LIN. FT.          | EACH               | LIN. FT.               |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        | LIN. FT.           |        |                    | EACH                           |                    |           |     |           |           |           |     |     | CU. YD.                      | SQ. YD.          | M. GALLON |                         |           |           |         |                            |                            |  |     |
| 106+04  | INSTALL PIPE CULVERT - R.S.D.                            |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                | 34                 |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | PCC-1, PCM-1               |                            |  |     |
| 106+54  | INSTALL PIPE CULVERT - L.S.D.                            |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                | 28                 |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | PCC-1, PCM-1               |                            |  |     |
| 107+89  | CONST. TRP. PIPE CULVERT W/F.E.S. LT. & RT.              |                   |                    |                        |        |                    |        |                    |        |                    |        | 192                | 204    |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     | 6   |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 110+83  | INSTALL PIPE CULVERT - R.S.D.                            |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    | 36        |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | PCC-1, PCM-1               |                            |  |     |
| 119+64  | CONST. PIPE CULVERT W/ F.F.S. LT. & RT. (24° RFS)        | 44                | 2                  |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 135+85  | INSTALL PIPE CULVERT - R.S.D.                            |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                | 62                 |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | PCC-1, PCM-1               |                            |  |     |
| 143+07  | CONST. TRP. PIPE CULVERT W/F.E.S. LT. & RT. (30° LFS)    |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     | 6   |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 150+48  | CONST. TRP. ARCH PIPE CULVERT W/ F.E.S. LT. & RT.        |                   |                    |                        |        |                    |        | 130                | 138    |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 173+12  | CONST. DBL. PIPE CULVERT W/F.E.S. LT. & RT.              |                   |                    |                        |        |                    |        |                    |        | 80                 | 92     |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     | 4                            |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 185+79  | CONST. ARCH PIPE CULVERT W/F.E.S. LT. & RT.              |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        | 42                 | 48     |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 194+83  | CONST. TRP. ARCH PIPE CULVERT W/F.E.S. LT. & RT.         |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        | 126                | 144    |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 203+95  | CONST. DBL. PIPE CULVERT W/F.E.S. LT. & RT.              |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        | 80                 | 92     |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 208+12  | CONST. PIPE CULVERT W/ F.E.S. LT. & RT.                  |                   |                    | 40                     | 46     |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           | 2         |           |     |     |                              |                  |           |                         |           |           |         |                            | FES-1, FES-2, PCC-1, PCM-1 |  |     |
| 212+62  | INSTALL PIPE CULVERT - L.S.D.                            |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                | 56                 |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | PCC-1, PCM-1               |                            |  |     |
| 215+44  | CONST. DBL. PIPE CULVERT W/ F.E.S. LT. & RT.             |                   |                    |                        |        | 100                | 108    |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           | 4   |     |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 221+07  | CONST. PIPE CULVERT W/ F.E.S. LT. & RT.                  |                   |                    | 52                     | 58     |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           | 2         |           |     |     |                              |                  |           |                         |           |           |         |                            | FES-1, FES-2, PCC-1, PCM-1 |  |     |
| 233+48  | CONST. QUAD. ARCH PIPE CULVERT W/FES LT. & RT. (18° LFS) |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         |                            | FES-1, FES-2, PCC-1, PCM-1 |  |     |
| 244+90  | CONST. DBL. PIPE CULVERT W/F.E.S. LT. & RT.              |                   |                    |                        |        |                    |        |                    |        |                    | 88     | 96                 |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         | FES-1, FES-2, PCC-1, PCM-1 |                            |  |     |
| 247+40  | INSTALL ARCH PIPE CULVERT - R.S.D.                       |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         |                            | PCC-1, PCM-1               |  |     |
| 264+19  | INSTALL ARCH PIPE CULVERT - R.S.D.                       |                   |                    |                        |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |        |                    |                                |                    |           |     |           |           |           |     |     |                              |                  |           |                         |           |           |         |                            | PCC-1, PCM-1               |  |     |
| TOTALS: |                                                          | 44                | 2                  | 92                     | 104    | 100                | 108    | 210                | 230    | 88                 | 96     | 192                | 204    | 42                 | 48     | 206                | 236    | 310                | 352    | 180                | 36                             | 60                 | 4         | 4   | 10        | 4         | 6         | 2   | 10  | 14                           | 100              | 813       | 10.3                    |           |           |         |                            |                            |  |     |

BASIS OF ESTIMATE:  
WATER \_\_\_\_\_ 12.6 GALLON PER SQ. YD. SOLID SODDING  
NOTE: FOR CLASS III 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 TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION 2014.

QUANTITIES

| SUMMARY OF QUANTITIES |                                                                                          |                          |          |
|-----------------------|------------------------------------------------------------------------------------------|--------------------------|----------|
| ITEM NO.              | ITEM                                                                                     | QUANTITY                 | UNIT     |
| SP & 201              | CLEARNG                                                                                  | 167                      | STATION  |
| 201                   | GRUBBING                                                                                 | 167                      | STATION  |
| 202                   | REMOVAL AND DISPOSAL OF FENCE                                                            | 6781                     | LN. FT.  |
| 202                   | REMOVAL AND DISPOSAL OF GATES                                                            | 2                        | EACH     |
| 202                   | REMOVAL AND DISPOSAL OF PIPE CULVERTS                                                    | 19                       | EACH     |
| 208                   | FENCE REMOVED AND RECONSTRUCTED                                                          | 180                      | LN. FT.  |
| 208                   | GATES REMOVED AND RECONSTRUCTED                                                          | 1                        | EACH     |
| SP & 210              | UNCLASSIFIED EXCAVATION                                                                  | 44314                    | CU. YD.  |
| SP & 210              | COMPACTED EMBANKMENT                                                                     | 28009                    | CU. YD.  |
| SP                    | REMOVING AND REPLACING TOPSOIL                                                           | 7500                     | CU. YD.  |
| SP, SS, & 303         | AGGREGATE BASE COURSE (CLASS 7)                                                          | 26323                    | TON      |
| 601                   | MOBLIZATION                                                                              | 1.00                     | LUMP SUM |
| SP & 602              | FURNISHNG FIELD OFFICE                                                                   | 1                        | EACH     |
| 603                   | MAINTENANCE OF TRAFFIC                                                                   | 1.00                     | LUMP SUM |
| SS & 604              | SIGNS                                                                                    | 230                      | SQ. FT.  |
| SS & 604              | BARRICADES                                                                               | 96                       | LN. FT.  |
| SS & 604              | TRAFFIC DRUMS                                                                            | 20                       | EACH     |
| SS & 606              | 24" REINFORCED CONCRETE PIPE CULVERTS (CLASS M)                                          | (ALTERNATE NO. 1) 92     | LN. FT.  |
| SS & 606              | 24" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)                             | (ALTERNATE NO. 2) 104    | LN. FT.  |
| SS & 606              | 24" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)                            | (ALTERNATE NO. 3) 104    | LN. FT.  |
| SS & 606              | 24" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)          | (ALTERNATE NO. 4) 104    | LN. FT.  |
| SS & 606              | 30" REINFORCED CONCRETE PIPE CULVERTS (CLASS M)                                          | (ALTERNATE NO. 1) 100    | LN. FT.  |
| SS & 606              | 30" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)                             | (ALTERNATE NO. 2) 108    | LN. FT.  |
| SS & 606              | 30" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)                            | (ALTERNATE NO. 3) 108    | LN. FT.  |
| SS & 606              | 30" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (16 GAUGE)           | (ALTERNATE NO. 4) 108    | LN. FT.  |
| SS & 606              | 42" REINFORCED CONCRETE PIPE CULVERTS (CLASS M)                                          | (ALTERNATE NO. 1) 210    | LN. FT.  |
| SS & 606              | 42" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)                             | (ALTERNATE NO. 2) 230    | LN. FT.  |
| SS & 606              | 42" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)                            | (ALTERNATE NO. 3) 230    | LN. FT.  |
| SS & 606              | 42" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (14 GAUGE)           | (ALTERNATE NO. 4) 230.00 | LN. FT.  |
| SS & 606              | 42" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)                                          | 44.0                     | LN. FT.  |
| SS & 606              | 48" REINFORCED CONCRETE PIPE CULVERTS (CLASS M)                                          | (ALTERNATE NO. 1) 88.00  | LN. FT.  |
| SS & 606              | 48" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)                             | (ALTERNATE NO. 2) 96.00  | LN. FT.  |
| SS & 606              | 48" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)                            | (ALTERNATE NO. 3) 96     | LN. FT.  |
| SS & 606              | 48" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (14 GAUGE)           | (ALTERNATE NO. 4) 96     | LN. FT.  |
| SS & 606              | 72" REINFORCED CONCRETE PIPE CULVERTS (CLASS M)                                          | (ALTERNATE NO. 1) 192    | LN. FT.  |
| SS & 606              | 72" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)                             | (ALTERNATE NO. 2) 204    | LN. FT.  |
| SS & 606              | 72" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)                            | (ALTERNATE NO. 3) 204    | LN. FT.  |
| SS & 606              | 72" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (16 GAUGE)           | (ALTERNATE NO. 4) 204    | LN. FT.  |
| SS & 606              | 44" X 27" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS M)                               | (ALTERNATE NO. 1) 206    | LN. FT.  |
| SS & 606              | 42" X 29" ALUMINUM COATED CORRUGATED STEEL ARCH PIPE CULVERTS (14 GAUGE)                 | (ALTERNATE NO. 2) 236    | LN. FT.  |
| SS & 606              | 42" X 29" ASPHALT COATED CORRUGATED STEEL ARCH PIPE CULVERTS (14 GAUGE)                  | (ALTERNATE NO. 3) 236    | LN. FT.  |
| SS & 606              | 42" X 29" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PPE CULVERT (14 GAUGE) | (ALTERNATE NO. 4) 236    | LN. FT.  |
| SS & 606              | 36" X 23" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS M)                               | (ALTERNATE NO. 1) 42     | LN. FT.  |
| SS & 606              | 35" X 24" ALUMINUM COATED CORRUGATED STEEL ARCH PIPE CULVERTS (14 GAUGE)                 | (ALTERNATE NO. 2) 48     | LN. FT.  |
| SS & 606              | 35" X 24" ASPHALT COATED CORRUGATED STEEL ARCH PIPE CULVERTS (14 GAUGE)                  | (ALTERNATE NO. 3) 48     | LN. FT.  |
| SS & 606              | 35" X 24" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PPE CULVERT (14 GAUGE) | (ALTERNATE NO. 4) 48     | LN. FT.  |
| SS & 606              | 59" X 36" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS M)                               | (ALTERNATE NO. 1) 310    | LN. FT.  |
| SS & 606              | 57" X 38" ALUMINUM COATED CORRUGATED STEEL ARCH PIPE CULVERTS (12 GAUGE)                 | (ALTERNATE NO. 2) 352    | LN. FT.  |
| SS & 606              | 57" X 38" ASPHALT COATED CORRUGATED STEEL ARCH PIPE CULVERTS (12 GAUGE)                  | (ALTERNATE NO. 3) 352    | LN. FT.  |
| SS & 606              | 57" X 38" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PPE CULVERT (12 GAUGE) | (ALTERNATE NO. 4) 352    | LN. FT.  |
| SS & 606              | 24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS                            | (ALTERNATE NO. 1) 4      | EACH     |
| SS & 606              | 24" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS                               | (ALTERNATE NO. 2) 4      | EACH     |
| SS & 606              | 30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS                            | (ALTERNATE NO. 1) 4      | EACH     |
| SS & 606              | 30" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS                               | (ALTERNATE NO. 2) 4      | EACH     |
| SS & 606              | 42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS                            | 2                        | EACH     |
| SS & 606              | 42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS                            | (ALTERNATE NO. 1) 10     | EACH     |
| SS & 606              | 42" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS                               | (ALTERNATE NO. 2) 10     | EACH     |
| SS & 606              | 48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS                            | (ALTERNATE NO. 1) 4      | EACH     |
| SS & 606              | 48" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS                               | (ALTERNATE NO. 2) 4      | EACH     |
| SS & 606              | 72" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS                            | (ALTERNATE NO. 1) 8      | EACH     |
| SS & 606              | 72" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS                               | (ALTERNATE NO. 2) 8      | EACH     |
| SS & 606              | 36" X 23" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS                 | (ALTERNATE NO. 1) 2      | EACH     |
| SS & 606              | 35" X 24" FLARED END SECTIONS FOR CORRUGATED STEEL ARCH PIPE CULVERT                     | (ALTERNATE NO. 2) 2      | EACH     |
| SS & 606              | 44" X 27" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS                 | (ALTERNATE NO. 1) 10     | EACH     |
| SS & 606              | 42" X 29" FLARED END SECTIONS FOR CORRUGATED STEEL ARCH PIPE CULVERTS                    | (ALTERNATE NO. 2) 10     | EACH     |
| SS & 606              | 59" X 36" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS                 | (ALTERNATE NO. 1) 14     | EACH     |
| SS & 606              | 57" X 38" FLARED END SECTIONS FOR CORRUGATED STEEL ARCH PIPE CULVERTS                    | (ALTERNATE NO. 2) 14     | EACH     |
| SS & 606              | 18" SIDE DRAIN                                                                           | 180                      | LN. FT.  |
| SS & 606              | 24" SIDE DRAIN                                                                           | 36                       | LN. FT.  |
| SS & 606              | 28" X 20" SIDE DRAIN                                                                     | 60                       | LN. FT.  |
| SS & 606              | SELECTED PIPE BEDDING                                                                    | 100                      | CU. YD.  |
| SS & 611              | 4" PIPE UNDERDRAINS                                                                      | 200                      | LN. FT.  |
| SS & 611              | UNDERDRAIN OUTLET PROTECTORS                                                             | 10                       | EACH     |
| SS & 619              | WIRE FENCE (TYPE D)                                                                      | 3263                     | LN. FT.  |
| SS & 619              | WIRE FENCE (TYPE D-1)                                                                    | 3410                     | LN. FT.  |
| SS & 619              | 16" STEEL GATES                                                                          | (ALTERNATE NO. 1) 2      | EACH     |
| SS & 619              | 16" ALUMINUM GATES                                                                       | (ALTERNATE NO. 2) 2      | EACH     |
| 620                   | LIME                                                                                     | 41                       | TON      |
| 620                   | SEEDNG                                                                                   | 8.06                     | ACRE     |
| SP & 620              | SPECIAL SEEDING                                                                          | 12.56                    | ACRE     |
| SS & 620              | MULCH COVER                                                                              | 23.63                    | ACRE     |
| SP, SS, & 620         | SPECIAL MULCH COVER                                                                      | 12.56                    | ACRE     |
| 620                   | WATER                                                                                    | 2431.3                   | M. GAL.  |
| 621                   | TEMPORARY SEEDNG                                                                         | 15.57                    | ACRE     |
| 621                   | SLT FENCE                                                                                | 8285                     | LN. FT.  |
| 621                   | SAND BAG DITCH CHECKS                                                                    | 396                      | BAG      |
| 621                   | DIVERSION DITCH                                                                          | 675                      | LN. FT.  |
| 621                   | SEDIMENT REMOVAL AND DISPOSAL                                                            | 706.0                    | CU. YD.  |
| 621                   | PIPE FOR SLOPE DRAINS                                                                    | 118                      | LN. FT.  |
| 621                   | ROCK DITCH CHECKS                                                                        | 534                      | CU. YD.  |
| SS & 621              | FILTER SOCK (18")                                                                        | 5475                     | LN. FT.  |
| SP & 623              | SPECIAL SECOND SEEDING APPLICATION                                                       | 12.56                    | ACRE     |
| 624                   | SOLID SODDING                                                                            | 813                      | SQ. YD.  |
| 635                   | ROADWAY CONSTRUCTION CONTROL                                                             | 1.00                     | LUMP SUM |
| 637                   | MAILBOXES                                                                                | 2                        | EACH     |
| 637                   | MAILBOX SUPPORTS (SINGLE)                                                                | 2                        | EACH     |
| SS & 726              | STANDARD SIGN                                                                            | 279.25                   | SQ. FT.  |
| SS & 729              | CHANNEL POST SIGN SUPPORT (TYPE A)                                                       | 17                       | EACH     |
| SS & 729              | CHANNEL POST SIGN SUPPORT (TYPE C)                                                       | 44                       | EACH     |
| SS & 816              | FILTER BLANKET                                                                           | 18                       | SQ. YD.  |
| SS & 816              | DUMPED RIPRAP                                                                            | 9                        | CU. YD.  |
|                       |                                                                                          |                          |          |
|                       |                                                                                          |                          |          |

\* DENOTES ALTERNATE BID ITEMS

| DATE REVISED                          | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE   | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---------------------------------------|-------------|--------------|-------------|--------------------|---------|--------------------|-----------|--------------|
| 09-10-2021                            |             | 11-01-2022   |             | 6                  | ARK.    |                    |           |              |
| 09-15-2022                            |             |              |             |                    | JOB NO. | FA5309             | 14        | 114          |
| 10-31-2022                            |             |              |             |                    |         |                    |           |              |
| 4 SUMMARY OF QUANTITIES AND REVISIONS |             |              |             |                    |         |                    |           |              |



Nov 3 2022 8:33 AM

*DocuSign*

STATE OF  
ARKANSAS  
\*\*\*  
REGISTERED  
PROFESSIONAL  
ENGINEER  
No. 11240  
BRYAN FREELING

| DATE       | REVISION                                                                                                                                                                                                                                                                                      | SHEET NUMBER   |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 9/10/2021  | ADDED FOREST SERVICE REQUIREMENTS SPECIAL PROVISION. REVISED PE STAMP.                                                                                                                                                                                                                        | 3 & 14         |
| 9/15/2022  | ADDED PAY ITEMS 4" PIPE UNDERDRAINS AND PIPE UNDERDRAIN OUTLET PROTECTORS. ADDED SS-801. ADDED SPECIAL PROVISION PRICE ADJUSTMENT FOR FUEL. REVISED DESIGN YEAR. REVISED PE STAMP. REVISED EARTHWORK QUANTITY SHEET. REVISED STORM WATER POLLUTION CONTROL SP. REVISED SUMMARY OF QUANTITIES. | 1, 3, 13, & 14 |
| 10/31/2022 | ADDED SUMMARY OF QUANTITIES & REVISIONS BOX TITLE BLOCK TO SHEET 14. REVISED STANDARD DRAWING TC-3 DATE ON SHEET 2. REVISED SPECIAL PROVISION UTILITY ADJUSTMENTS. REMOVED SPECIAL PROVISION DELAY IN RIGHT OF WAY OCCUPANCY.                                                                 | 2, 3, & 14     |
| 11/1/2022  | ADDED 42" FLARED END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS TO STRUCTURES QUANTITY BOX AND SUMMARY OF QUANTITIES.                                                                                                                                                                      | 13 & 14        |
|            |                                                                                                                                                                                                                                                                                               |                |
|            |                                                                                                                                                                                                                                                                                               |                |

AFA5309.DGN

SURVEY CONTROL COORDINATES

Project Name: sFA5306 comb  
Date: 6/17/2016  
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON OPUS SOLUTION AT PTS 154 - 172 - 175  
PROJECTED TO GROUND.  
Units: U.S. SURVEY FOOT

| Point Name | Northing    | Easting      | Elev    | Feature Description                    |
|------------|-------------|--------------|---------|----------------------------------------|
| 15         | 220561.6932 | 1024942.1114 | 303.730 | CTL STD AHTD MON.STAMPED PN:15         |
| 16         | 220502.4533 | 1025310.8692 | 309.800 | CTL STD AHTD MON.STAMPED PN:16         |
| 150        | 220702.1424 | 1025909.2517 | 318.330 | CTL STD AHTD MON.STAMPED PN:150        |
| 151        | 220680.8201 | 1026196.6122 | 315.590 | CTL STD AHTD MON.STAMPED PN:151        |
| 152        | 220313.1983 | 1026592.9195 | 319.620 | CTL STD AHTD MON.STAMPED PN:152        |
| 153        | 220300.8401 | 1027108.1466 | 315.850 | CTL STD AHTD MON.STAMPED PN:153        |
| 154        | 220266.2286 | 1027614.5616 | 317.450 | CTL STD AHTD MON.STAMPED PN:154        |
| 155        | 220232.2010 | 1027979.0444 | 324.205 | CTL STD AHTD MON.STAMPED PN:155        |
| 156        | 220130.9744 | 1028235.8264 | 340.412 | CTL STD AHTD MON.STAMPED PN:156        |
| 157        | 219933.8643 | 1028719.7831 | 352.274 | CTL STD AHTD MON.STAMPED PN:157        |
| 158        | 219920.0441 | 1029139.1537 | 358.201 | CTL STD AHTD MON.STAMPED PN:158        |
| 159        | 219986.6751 | 1029505.5135 | 345.502 | CTL STD AHTD MON.STAMPED PN:159        |
| 160        | 220042.4060 | 1030054.3491 | 371.289 | CTL STD AHTD MON.STAMPED PN:160        |
| 161        | 219965.6148 | 1030537.3688 | 379.165 | CTL STD AHTD MON.STAMPED PN:161        |
| 162        | 220070.0155 | 1031654.0504 | 340.249 | CTL STD AHTD MON.STAMPED PN:162        |
| 163        | 220419.5540 | 1031869.4138 | 325.074 | CTL STD AHTD MON.STAMPED PN:163        |
| 164        | 220655.1757 | 1032674.0035 | 322.016 | CTL STD AHTD MON.STAMPED PN:164        |
| 165        | 220581.8815 | 1033316.3026 | 357.826 | CTL STD AHTD MON.STAMPED PN:165        |
| 166        | 220653.0427 | 1033884.5436 | 325.154 | CTL STD AHTD MON.STAMPED PN:166        |
| 167        | 220655.0547 | 1034651.1647 | 320.957 | CTL STD AHTD MON.STAMPED PN:167        |
| 168        | 220575.1684 | 1035039.8579 | 334.930 | CTL STD AHTD MON.STAMPED PN:168        |
| 169        | 220590.1897 | 1035318.7923 | 354.755 | CTL STD AHTD MON.STAMPED PN:169        |
| 170        | 220712.4606 | 1035966.9345 | 334.836 | CTL STD AHTD MON.STAMPED PN:170        |
| 171        | 220783.3057 | 1036228.8936 | 339.139 | CTL STD AHTD MON.STAMPED PN:171        |
| 172        | 220917.0688 | 1036586.0153 | 317.769 | CTL STD AHTD MON.STAMPED PN:172        |
| 173        | 220945.5793 | 1037146.3341 | 321.471 | CTL STD AHTD MON.STAMPED PN:173        |
| 174        | 220953.7804 | 1037755.3298 | 318.420 | CTL STD AHTD MON.STAMPED PN:174        |
| 175        | 221015.1454 | 1038551.7443 | 327.701 | CTL STD AHTD MON.STAMPED PN:175        |
| 176        | 221169.5268 | 1039322.4425 | 313.619 | CTL STD AHTD MON.STAMPED PN:176        |
| 177        | 221178.2790 | 1039902.1747 | 314.036 | CTL STD AHTD MON.STAMPED PN:177        |
| 178        | 221211.2145 | 1040370.6671 | 304.038 | CTL STD AHTD MON.STAMPED PN:178        |
| 179        | 221452.3103 | 1041068.0911 | 302.986 | CTL STD AHTD MON.STAMPED PN:179        |
| 180        | 221633.8802 | 1041691.5669 | 294.175 | CTL STD AHTD MON.STAMPED PN:180        |
| 181        | 221905.5834 | 1042402.4531 | 297.509 | CTL STD AHTD MON.STAMPED PN:181        |
| 182        | 222043.9566 | 1043085.9729 | 304.428 | CTL STD AHTD MON.STAMPED PN:182        |
| 183        | 222061.7759 | 1043533.9200 | 314.639 | CTL STD AHTD MON.STAMPED PN:183        |
| 184        | 222210.4523 | 1043931.3093 | 330.579 | CTL STD AHTD MON.STAMPED PN:184        |
| 911        | 220262.8215 | 1027930.1126 | 316.235 | TBM 80 D SPIKE                         |
| 912        | 219843.0359 | 1029142.3487 | 367.505 | TBM TBM,NORTH OF CTL 158 HAND HELD GPS |
| 913        | 220089.4038 | 1030085.1676 | 379.947 | TBM RR SPIKE,S OF CTL 160 HANDHELD GPS |
| 914        | 219895.2877 | 1031093.1025 | 359.862 | TBM RRS,N OF CTL 707 HANDHELD GPS      |
| 915        | 220479.0669 | 1031864.4617 | 325.408 | TBM RRS,N OF 163 HAND HELD GPS         |
| 916        | 220507.0454 | 1033321.4787 | 362.193 | TBM 11" SHORT LEAF PINE                |
| 917        | 220579.2055 | 1034702.1315 | 325.397 | TBM 10" POST OAK                       |
| 918        | 220617.9071 | 1035306.6481 | 356.748 | TBM CHIZLED SQUARE,N OF 169 HAND HELD  |
| 919        | 220766.5135 | 1035948.6712 | 330.398 | TBM 15" SHOST LEAF PINE                |
| 920        | 220898.1705 | 1037518.8800 | 321.782 | TBM RR SPIKE,SE TV 1174 HANDHELD GPS   |
| 921        | -99999.0000 | -99999.0000  | 330.786 | TBM N BOLT ON TOP FH                   |
| 922        | 221397.9614 | 1041061.3130 | 309.451 | TBM RR SPIKE,S OF CTL 179 HANDHELD     |
| 923        | 221864.4418 | 1042426.6935 | 300.160 | TBM RR SPIKE,S CTL181 HANDHELD GPS     |
| 924        | 222250.8309 | 1043925.7052 | 329.738 | TBM RR SPIKE                           |

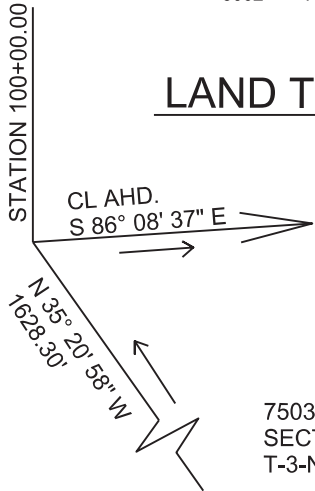
\*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped  
\*(standard markings common to all caps), or as indicated  
(other markings indicated in the point description of the individual point).  
ALL DISTANCES ARE GROUND.  
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.  
A PROJECT CAF OF 0.9999842075 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.  
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.  
GRID DISTANCE = GROUND DISTANCE X CAF.  
GRID COORDINATES ARE STORED UNDER FILE NAME.sFA5306gi east.CTL  
HORIZONTAL DATUM: NAD 83 (1997)  
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE  
AT A SPECIFIC POINT.

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

BASIS OF BEARING:  
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE  
DETERMINED FROM OPUS SOLUTION AT PTS 154 - 172 - 175  
CONVERGENCE ANGLE: 00 32 16 LEFT AT LT:34-56-08 LG:092-55-27  
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

CENTERLINE CONSTRUCTION

| POINT NO. | TYPE | STATION   | NORTHING    | EASTING      |
|-----------|------|-----------|-------------|--------------|
| 8000      | POB  | 100+00.00 | 220258.0735 | 1027611.8774 |
| 8001      | PC   | 101+81.31 | 220245.8798 | 1027792.7748 |
| 8003      | PT   | 107+37.06 | 220103.2094 | 1028326.2981 |
| 8004      | PC   | 110+32.62 | 219973.2426 | 1028591.7547 |
| 8006      | PT   | 112+34.56 | 219914.4520 | 1028784.0626 |
| 8007      | PC   | 113+76.23 | 219894.9516 | 1028924.3836 |
| 8009      | PT   | 116+27.12 | 219898.7443 | 1029174.2673 |
| 8010      | PC   | 123+05.01 | 220012.3878 | 1029842.5622 |
| 8012      | PT   | 125+97.50 | 220005.7041 | 1030133.1894 |
| 8013      | PC   | 128+30.85 | 219956.0509 | 1030361.1926 |
| 8015      | PT   | 130+55.02 | 219940.9390 | 1030584.0486 |
| 8016      | PC   | 139+37.47 | 220010.5918 | 1031463.7454 |
| 8018      | PT   | 141+81.37 | 220124.9977 | 1031670.8458 |
| 8019      | PC   | 144+67.72 | 220354.6098 | 1031841.9501 |
| 8021      | PT   | 146+17.73 | 220438.6122 | 1031963.0692 |
| 8022      | PC   | 152+53.61 | 220615.8003 | 1032573.7608 |
| 8024      | PT   | 155+47.58 | 220630.7995 | 1032864.7462 |
| 8025      | PC   | 157+03.10 | 220603.0516 | 1033017.7644 |
| 8027      | PT   | 161+43.28 | 220591.7686 | 1033456.0679 |
| 8028      | PC   | 162+24.69 | 220602.1545 | 1033536.8183 |
| 8030      | PT   | 165+10.46 | 220626.2011 | 1033821.4854 |
| 8031      | PC   | 169+79.44 | 220645.2505 | 1034290.0706 |
| 8033      | PT   | 172+03.18 | 220639.0563 | 1034513.5585 |
| 8034      | PC   | 174+15.43 | 220618.7016 | 1034724.8254 |
| 8036      | PT   | 176+53.34 | 220583.6466 | 1034960.0282 |
| 8037      | PC   | 177+37.53 | 220566.9318 | 1035042.5460 |
| 8039      | PT   | 179+50.80 | 220563.0303 | 1035254.6116 |
| 8040      | PC   | 180+39.02 | 220577.3515 | 1035341.6567 |
| 8042      | PT   | 182+85.02 | 220626.3661 | 1035582.6689 |
| 8043      | PC   | 185+52.13 | 220689.3930 | 1035842.2398 |
| 8045      | PT   | 187+70.41 | 220746.9292 | 1036052.7714 |
| 8046      | PC   | 192+54.48 | 220887.8288 | 1036515.8812 |
| 8048      | PT   | 196+02.53 | 220937.4058 | 1036859.0303 |
| 8049      | PC   | 199+22.05 | 220934.7280 | 1037178.5410 |
| 8051      | PT   | 200+24.93 | 220936.6362 | 1037281.3864 |
| 8052      | PC   | 214+12.66 | 220999.7349 | 1038667.6863 |
| 8054      | PT   | 216+20.58 | 221035.3246 | 1038871.9637 |
| 8055      | PC   | 218+75.95 | 221110.6699 | 1039115.9683 |
| 8057      | PT   | 223+15.66 | 221170.2036 | 1039549.6602 |
| 8058      | PC   | 224+59.25 | 221166.3758 | 1039693.2056 |
| 8060      | PT   | 227+35.16 | 221168.9841 | 1039969.0387 |
| 8061      | PC   | 230+23.50 | 221182.1201 | 1040257.0860 |
| 8063      | PT   | 232+27.49 | 221223.6221 | 1040455.9124 |
| 8064      | PC   | 233+42.23 | 221264.6840 | 1040563.0523 |
| 8066      | PT   | 234+58.35 | 221304.3092 | 1040672.1973 |
| 8067      | PC   | 237+39.10 | 221395.4228 | 1040937.7521 |
| 8069      | PT   | 241+57.33 | 221516.6018 | 1041337.9477 |
| 8070      | PC   | 243+46.84 | 221564.8675 | 1041521.2073 |
| 8072      | PT   | 245+05.90 | 221613.8260 | 1041672.4583 |
| 8073      | PC   | 251+54.77 | 221847.6033 | 1042277.7564 |
| 8075      | PT   | 254+10.03 | 221926.1320 | 1042520.4992 |
| 8076      | PC   | 256+60.06 | 221989.7301 | 1042762.3025 |
| 8078      | PT   | 258+77.64 | 222020.7284 | 1042977.1915 |
| 8079      | PC   | 262+27.11 | 222030.9794 | 1043326.5055 |
| 8081      | PT   | 264+30.59 | 222065.5685 | 1043526.3335 |
| 8082      | POE  | 268+03.11 | 222180.4335 | 1043880.7022 |



75037-"STD ALUM MU-FE COR N.&W."  
SECTION CORNER SECS. 5,6,7, & 8  
T-3-N , R-18-W



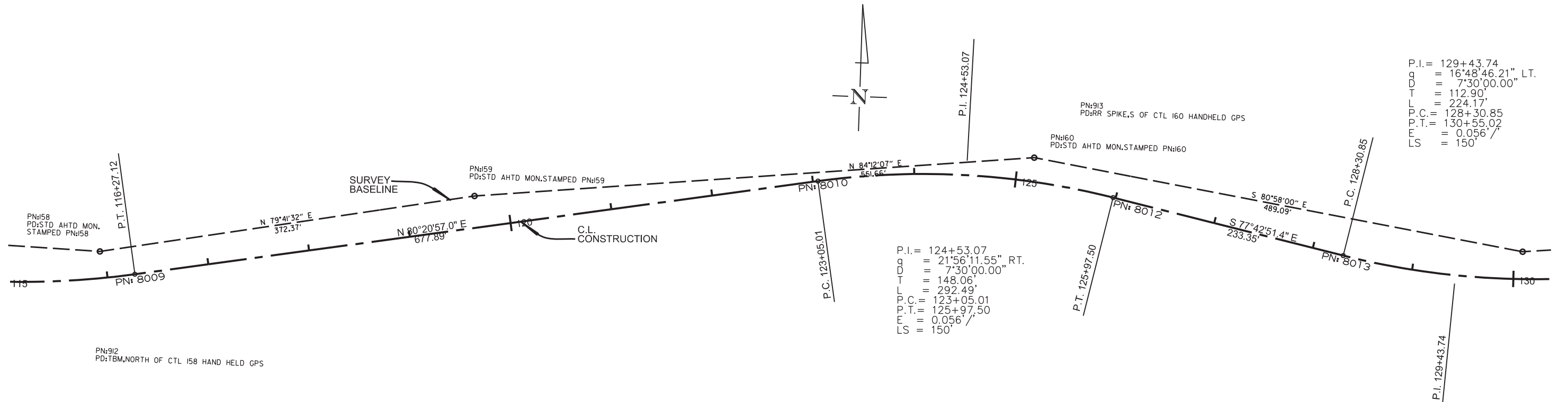
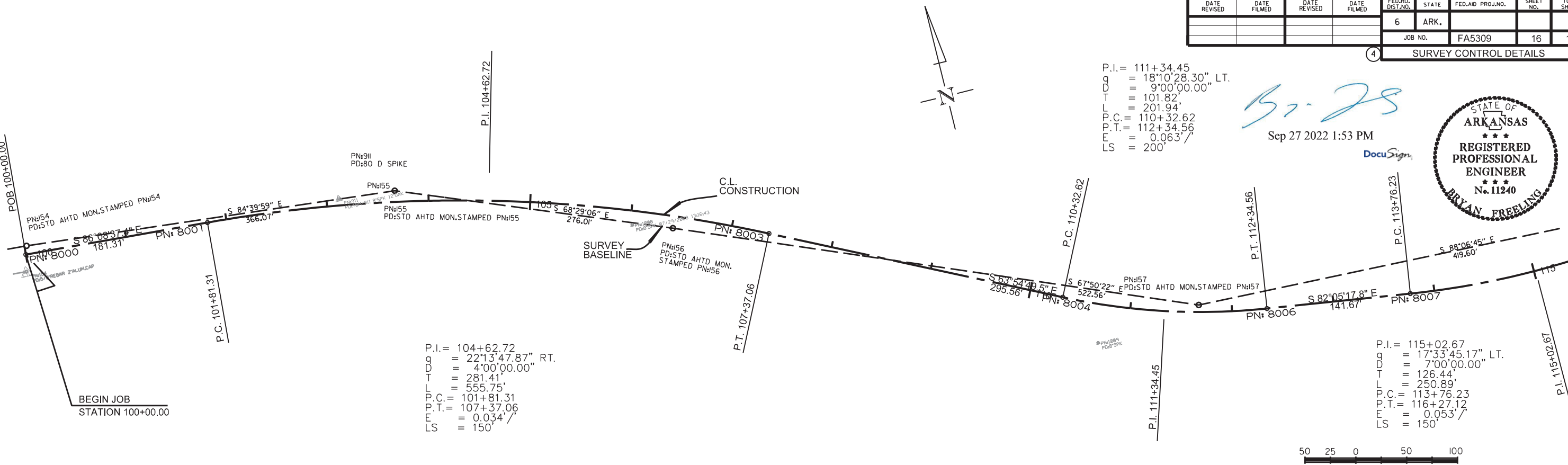
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|--------------|-------------|--------------|-------------|--------------------|------------------------|--------------------|-----------|--------------|
|              |             |              |             | 6                  | ARK.                   |                    |           |              |
|              |             |              |             |                    | JOB NO.                | FA5309             | 15        | 114          |
|              |             |              |             | 4                  | SURVEY CONTROL DETAILS |                    |           |              |

*B. J. 28*  
Sep 27 2022 1:53 PM  
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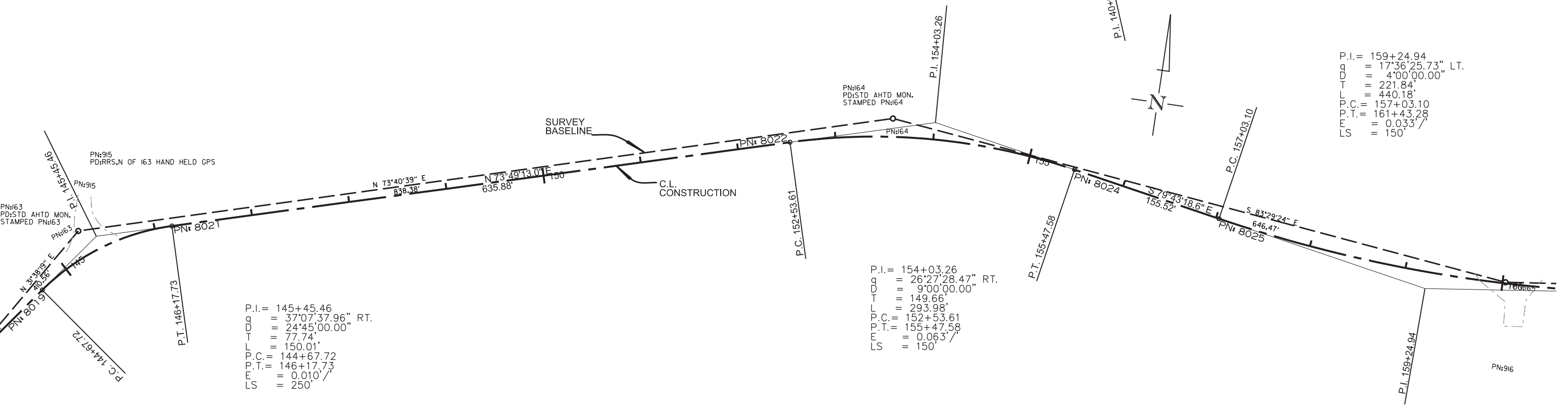
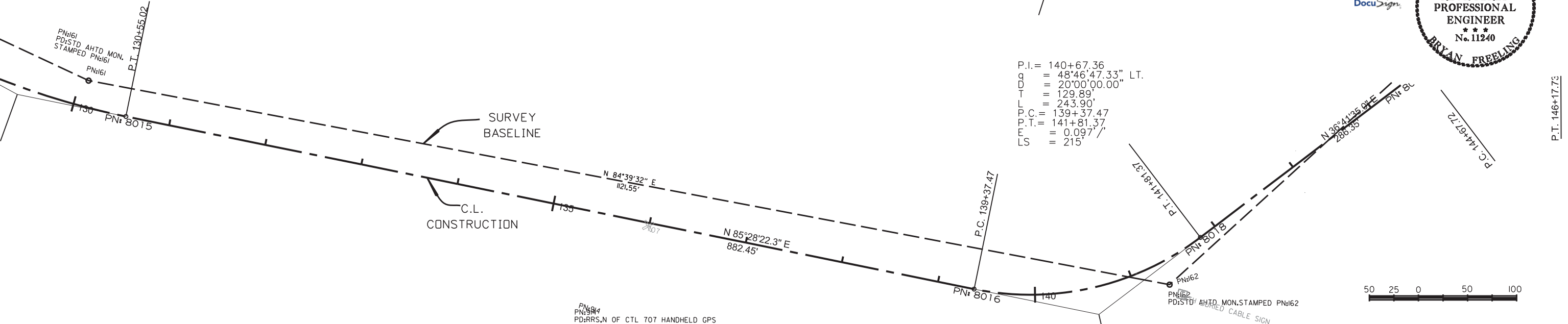
SURVEY CONTROL DETAILS

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO.       | STATE  | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------------|--------|--------------------|-----------|--------------|
|              |             |              |             | 6                        | ARK.   |                    |           |              |
|              |             |              |             | JOB NO.                  | FA5309 |                    | 16        | 114          |
|              |             |              |             | 4 SURVEY CONTROL DETAILS |        |                    |           |              |



| DATE REVISED             | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                          |             |              |             | 6                  | ARK.  |                    |           |              |
|                          |             |              |             |                    |       | JOB NO.            | FA5309    | 17           |
|                          |             |              |             |                    |       |                    |           | 114          |
| 4 SURVEY CONTROL DETAILS |             |              |             |                    |       |                    |           |              |

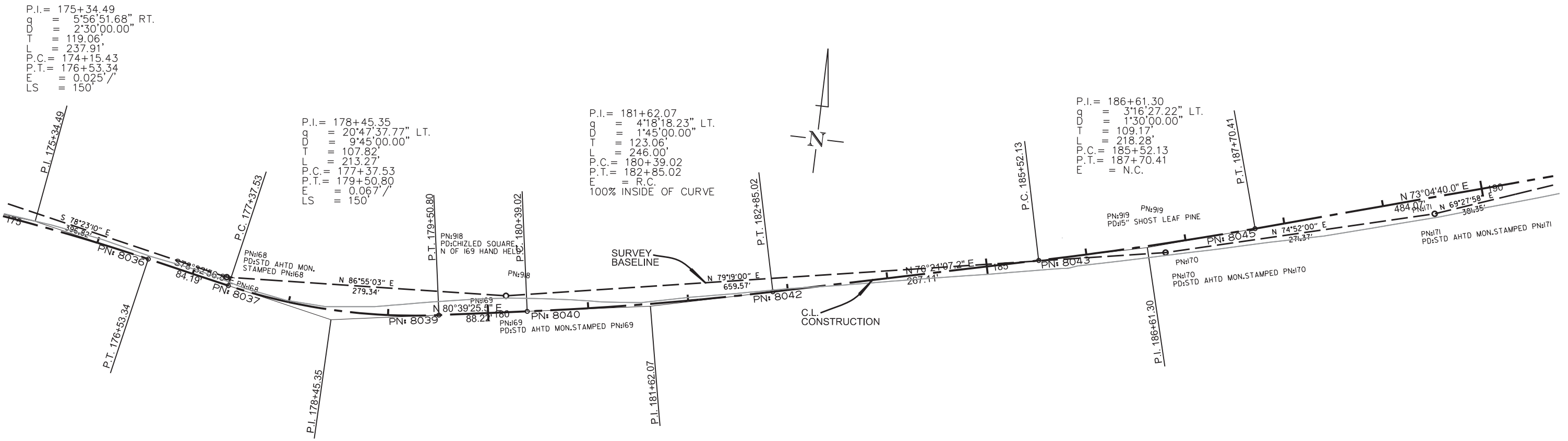
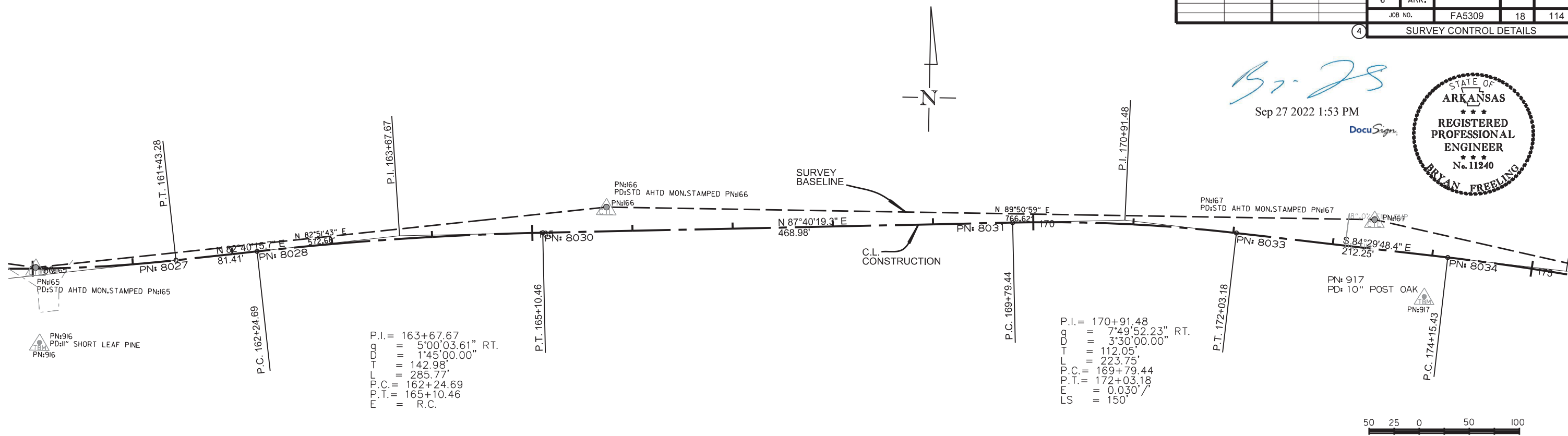
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SURVEY CONTROL DETAILS

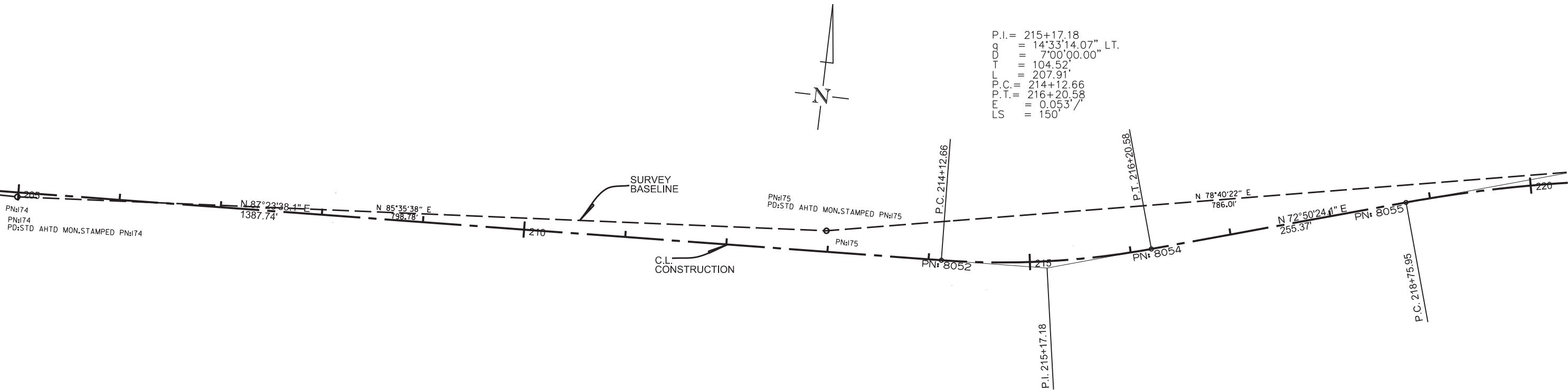
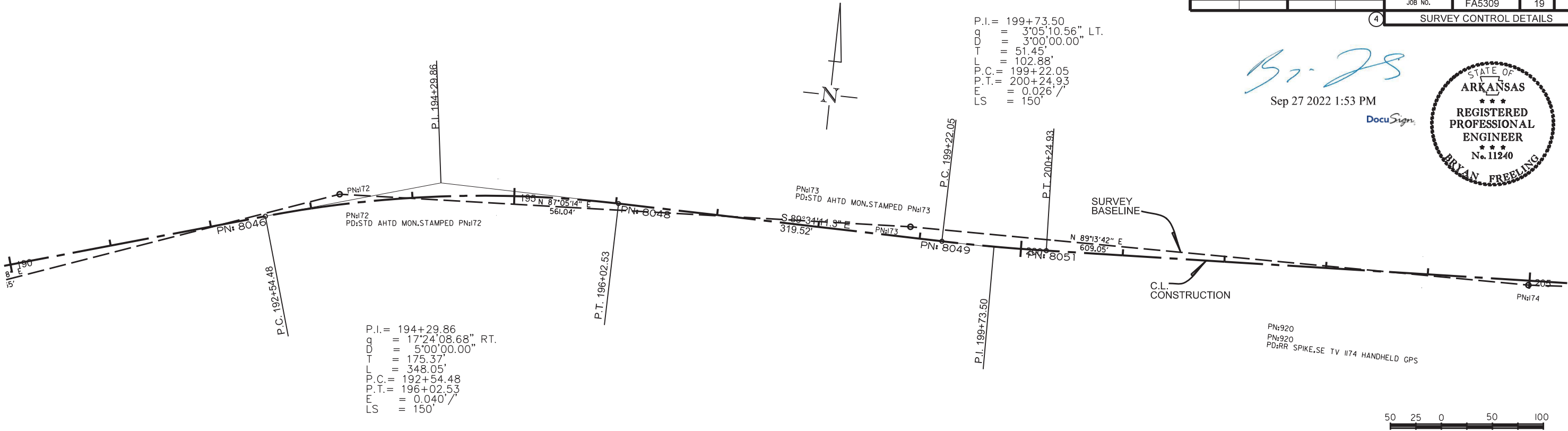
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|--------------------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                          |             |              |             | 6                  | ARK.  |                    |           |              |
|                          |             |              |             |                    |       | JOB NO.            | FA5309    | 18 114       |
| 4 SURVEY CONTROL DETAILS |             |              |             |                    |       |                    |           |              |

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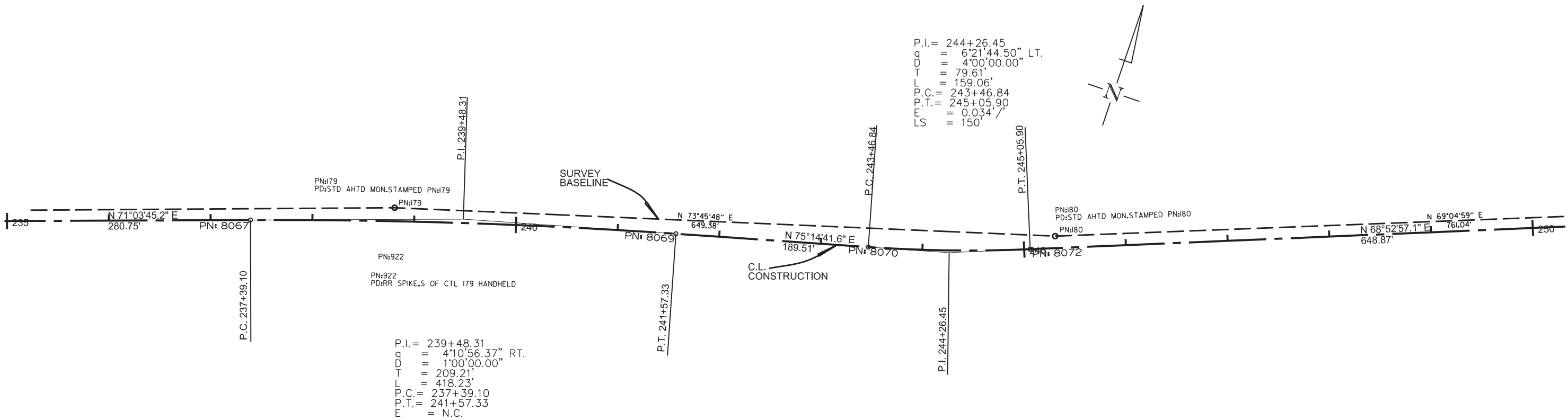
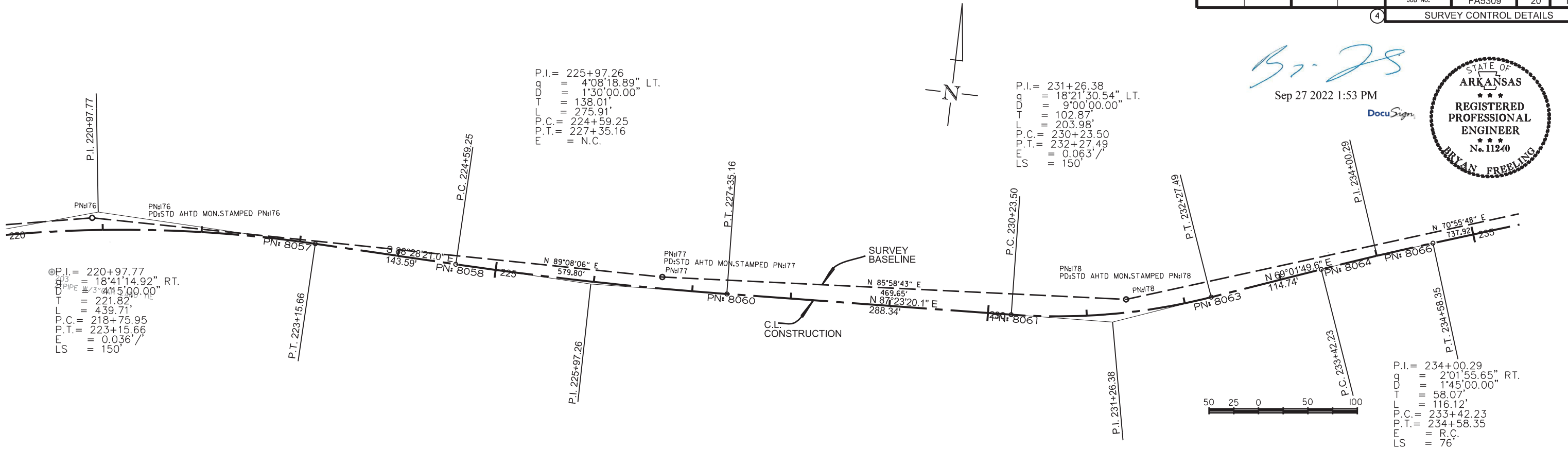
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|--------------------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                          |             |              |             | 6                  | ARK.  |                    |           |              |
|                          |             |              |             |                    |       | JOB NO.            | FA5309    | 19           |
|                          |             |              |             |                    |       |                    |           | 114          |
| 4 SURVEY CONTROL DETAILS |             |              |             |                    |       |                    |           |              |

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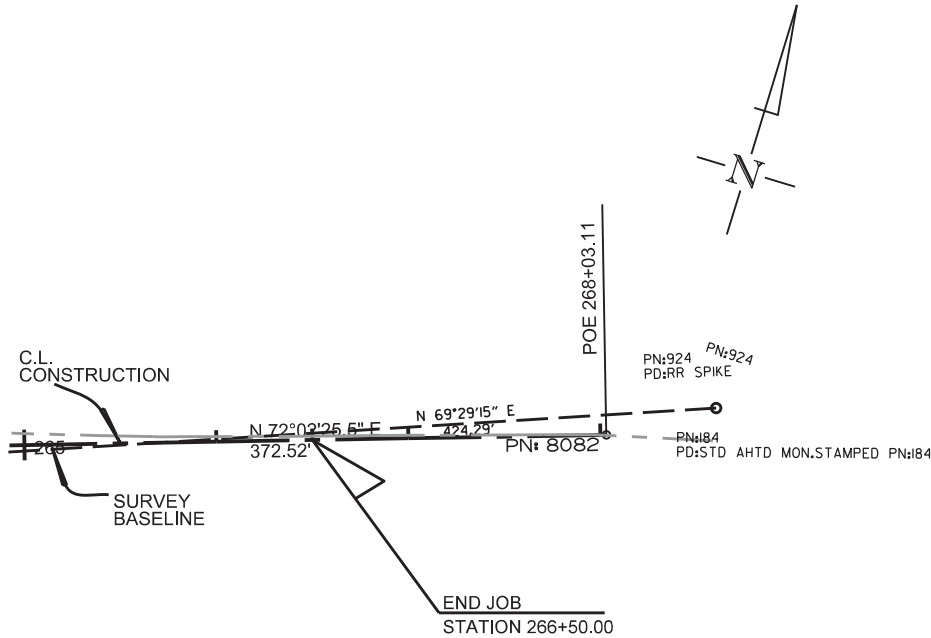
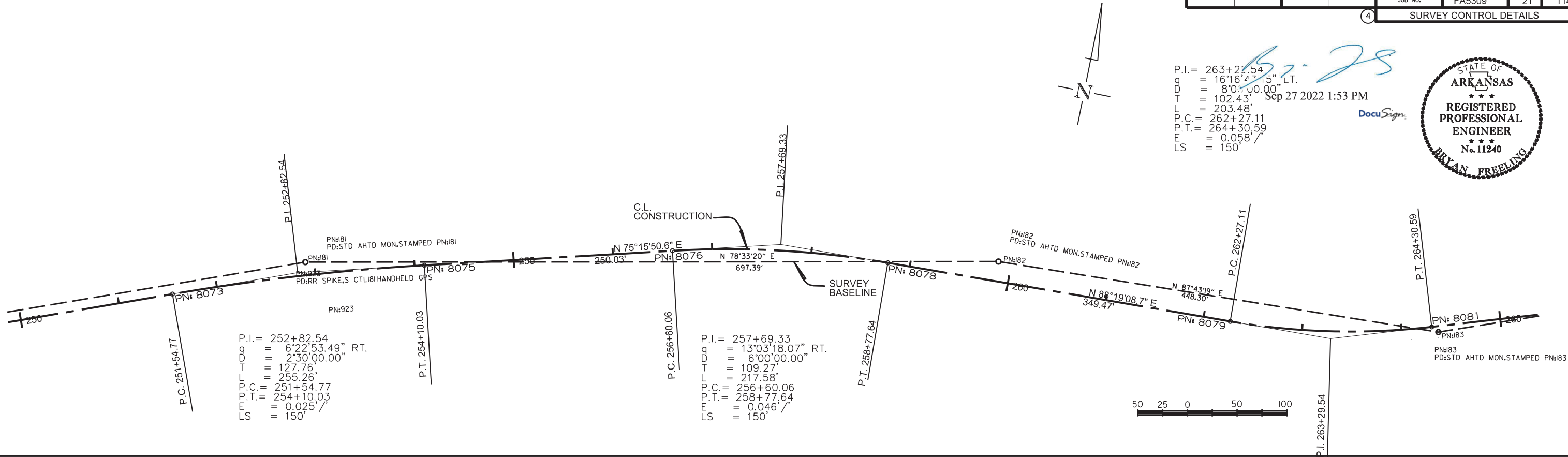


SURVEY CONTROL DETAILS

| DATE REVISED             | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                          |             |              |             | 6                  | ARK.  |                    |           |              |
|                          |             |              |             |                    |       | JOB NO.            | FA5309    | 20           |
|                          |             |              |             |                    |       |                    |           | 114          |
| 4 SURVEY CONTROL DETAILS |             |              |             |                    |       |                    |           |              |



| DATE<br>REVISED          | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|--------------------------|----------------|-----------------|----------------|-----------------------|-------|--------------------|--------------|-----------------|
|                          |                |                 |                | 6                     | ARK.  |                    |              |                 |
|                          |                |                 |                |                       |       | JOB NO.            | FA5309       | 21              |
|                          |                |                 |                |                       |       |                    |              | 114             |
| 4 SURVEY CONTROL DETAILS |                |                 |                |                       |       |                    |              |                 |



STA. 106+54 INSTALL  
18" X 28' PIPE CULVERT  
LT. SIDE DRAIN  
CONSTRUCT APPROACH =  
20 CU.YD. UNCLASSIFIED EXCAVATION  
25 CU. YD. COMPACTED EMBANKMENT  
40.8 TON AGGREGATE BASE COURSE (CLASS 7)

P.I. = 111 + 34.45  
 q = 18°10'28.30" LT.  
 D = 9°00'00.00"  
 T = 101.82'  
 L = 201.94'  
 P.C. = 110 + 32.62  
 P.T. = 112 + 34.56  
 E = 0.063'/  
 LS = 200'

BEGIN SUPER STATION 108+82.62  
MAX SUPER STATION 110+82.62  
MAX SUPER STATION 111+34.56  
END SUPER STATION 113+34.56

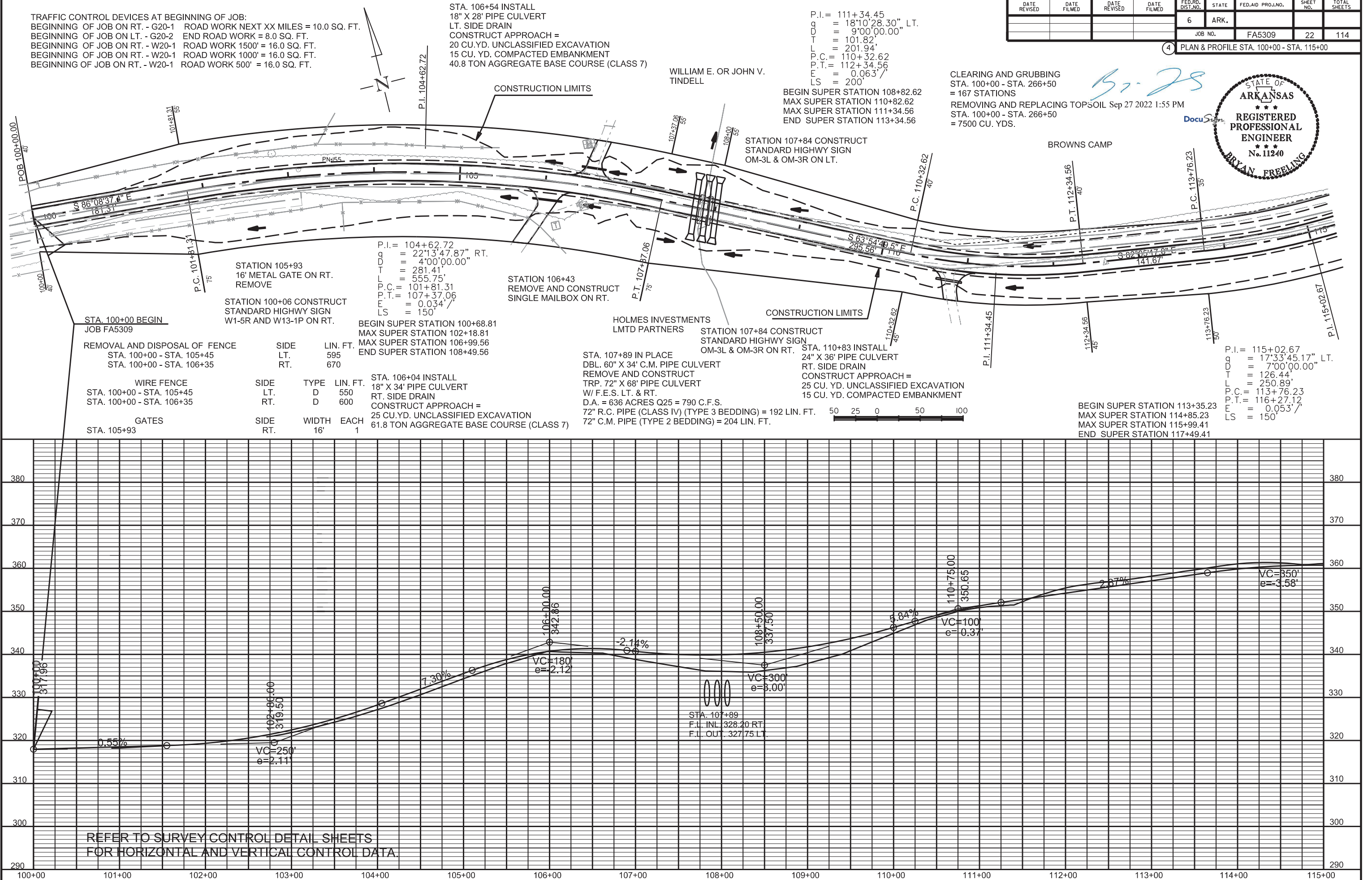
CLEARING AND GRUBBING  
STA. 100+00 - STA. 266+50  
= 167 STATIONS  
REMOVING AND REPLACING TOPSOIL Sep 27 2022 1:55 PM  
STA. 100+00 - STA. 266+50  
= 7500 CU. YDS.

PM

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3-76.23

STATE OF  
ARKANSAS  
\*\*\*  
REGISTERED  
PROFESSIONAL  
ENGINEER  
\*\*\*  
No. 11240  
BRYAN FREELING



| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|-----------------------|-------|--------------------|--------------|-----------------|
|                 |                |                 |                | 6                     | ARK.  |                    |              |                 |
|                 |                |                 |                |                       |       | JOB NO.            | FA5309       | 23              |
|                 |                |                 |                |                       |       |                    |              | 114             |

4 PLAN & PROFILE STA. 115+00 - STA. 130+00



Sep 27 2022 1:55 PM

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P.I. = 129+43.74  
q = 16'48.46.21" LT.  
D = 7'30'00.00"  
T = 112.90'  
L = 224.17'  
P.C. = 128+30.85  
P.T. = 130+55.02  
E = 0.056'/  
LS = 150'

BEGIN SUPER STATION 127+18.35  
MAX SUPER STATION 128+68.35  
MAX SUPER STATION 130+17.52  
END SUPER STATION 131+67.52

P.I. = 124+53.07  
q = 21'56'11.55" RT.  
D = 7'30'00.00"  
T = 148.06'  
L = 292.49'  
P.C. = 123+05.01  
P.T. = 125+97.50  
E = 0.056'/  
LS = 150'

BEGIN SUPER STATION 121+92.51  
MAX SUPER STATION 123+42.51  
MAX SUPER STATION 125+60.00  
END SUPER STATION 127+10.00

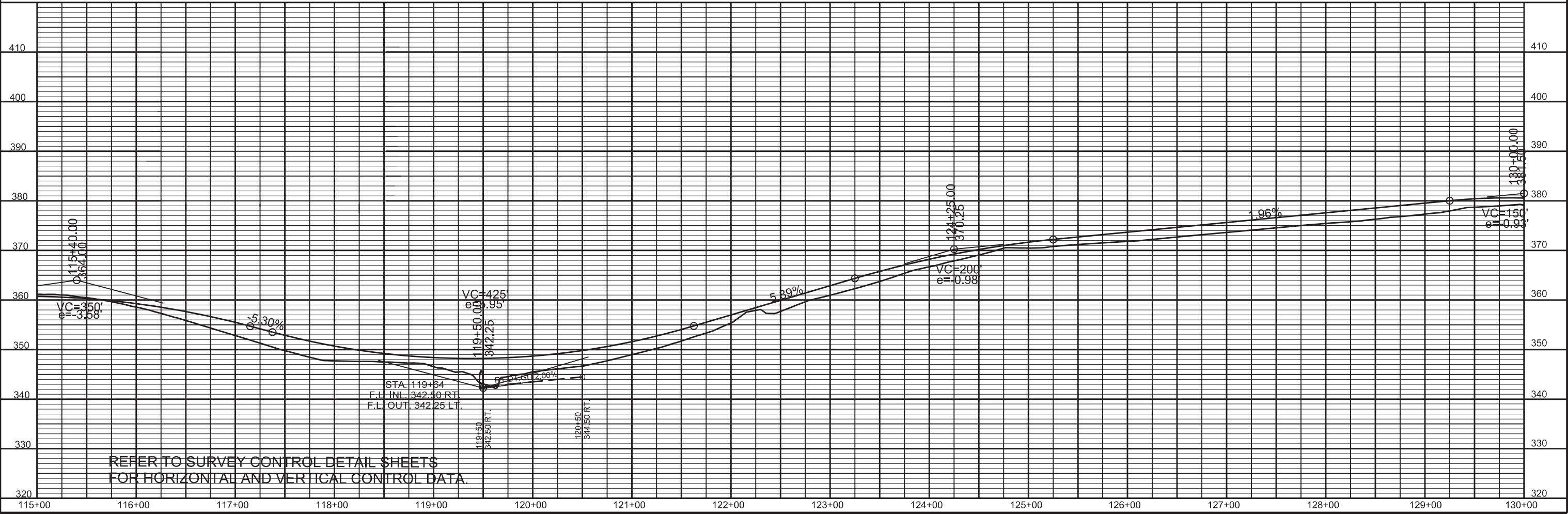
STA. 119+64 IN PLACE  
36" X 32' C.M. PIPE CULVERT  
(24° RT. FWD. SKEW)  
REMOVE AND CONSTRUCT  
42" X 44' PIPE CULVERT  
W/ F.E.S. LT. & RT.  
(20° RT. FWD. SKEW)  
D.A. = 24 ACRES, Q25 = 76 C.F.S.  
42" R.C. PIPE (CLASS V)(TY. 3 BED.) = 44 LIN. FT.  
42" C.M./PLASTIC PIPE (TYPE 2 BED.) = 50 LIN. FT.

STATION 119+56 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON RT.

U.S. NATIONAL FOREST

STATION 119+56 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON LT.

U.S. NATIONAL FOREST



TRAFFIC CONTROL DEVICES:  
STA. 135+85 RT. (CR 319) W20-1 ROAD WORK AHEAD = 16.0 SQ. FT.

| 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.            | FA5309 | 24                 | 114       |              |

4 PLAN & PROFILE STA. 130+00 - STA. 145+00

Sep 27 2022 1:55 PM



STA. 143+07 IN PLACE  
48" X 44' C.M. PIPE CULVERT  
(40° LT. FWD. SKEW)  
REMOVE AND CONSTRUCT  
AT STA. 143+07  
TRP. 42" X 46' PIPE CULVERT  
W/ F.E.S. LT. & RT.  
(30° LT. FWD. SKEW)  
D.A. = 92 AC., Q25 = 220 C.F.S.  
42" R.C. PIPE (CLASS IV) (TY. 3 BED.) = 126 LIN. FT.  
42" C.M./PLASTIC PIPE (TYPE 2 BED.) = 138 LIN. FT.

P.I. = 140+67.36  
q = 48°46'47.33" LT.  
D = 20°00'00.00"  
T = 129.89'  
L = 243.90'  
P.C. = 139+37.47  
P.T. = 141+81.37  
E = 0.097'  
LS = 215'

STATION 143+07 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON LT.

BEGIN SUPER STATION 137+76.22  
MAX SUPER STATION 139+91.22  
MA. SUPER STATION 140+76.37  
END SUPER STATION 142+91.37

STATION 138+37 CONSTRUCT  
STANDARD HIGHWAY SIGN  
W1-4L AND W13-1P ON LT.

STATION 131+55 CONSTRUCT  
STANDARD HIGHWAY SIGN  
W1-5R AND W13-1P ON LT.

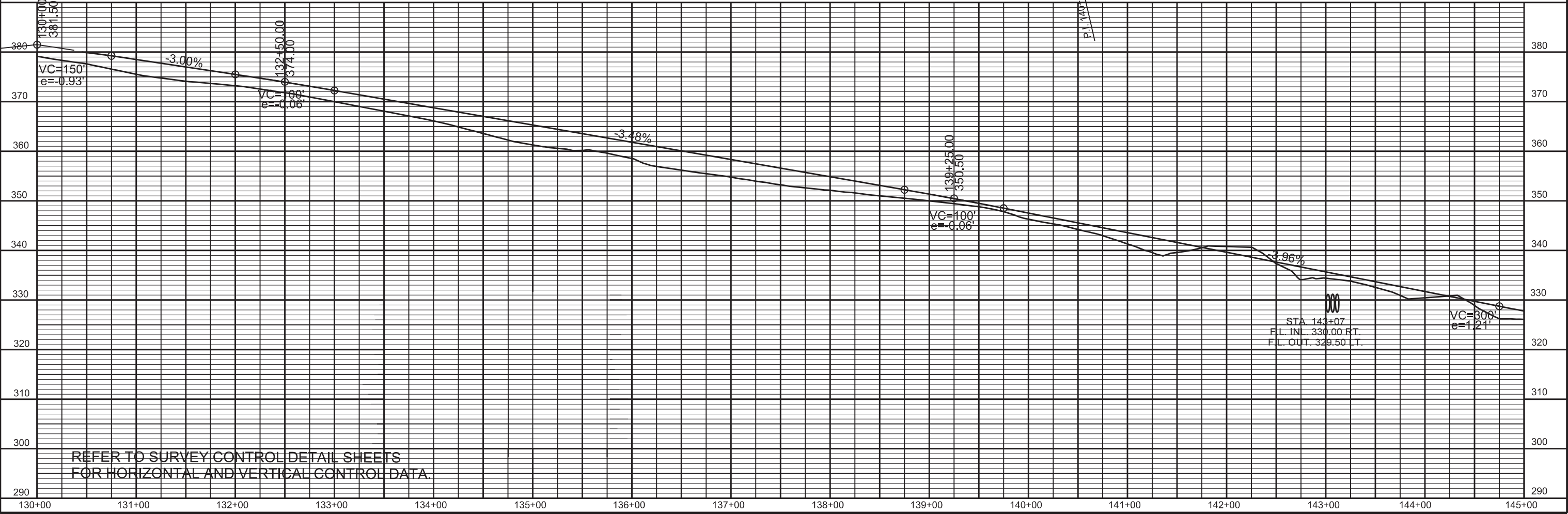
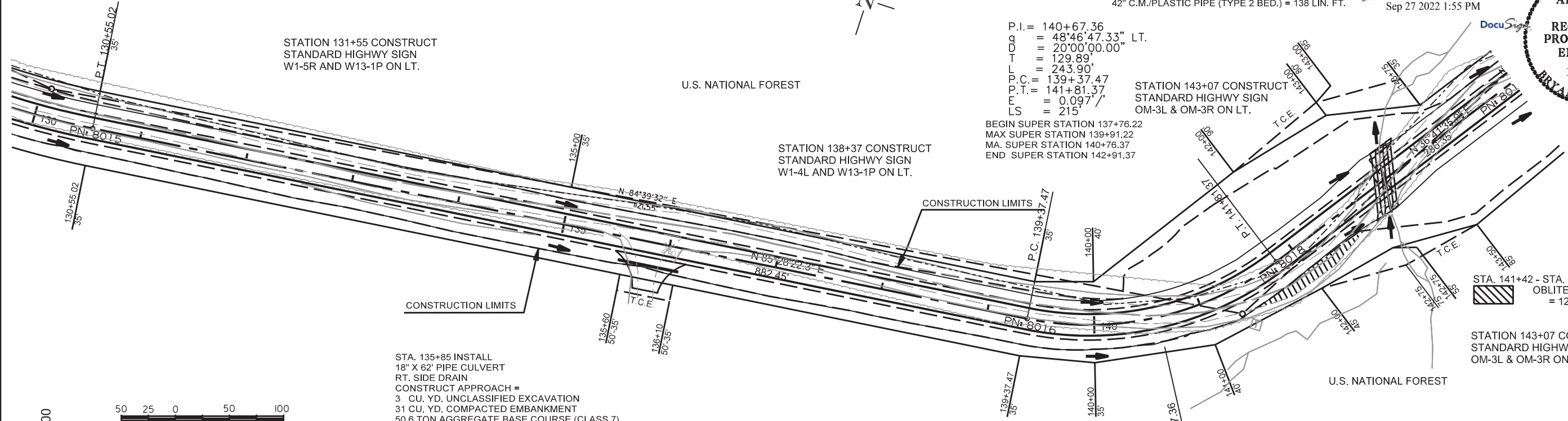
U.S. NATIONAL FOREST

U.S. NATIONAL FOREST

STA. 141+42 - STA. 142+64 ON RT.  
OBLITERATION AREA  
= 120 CU. YDS.

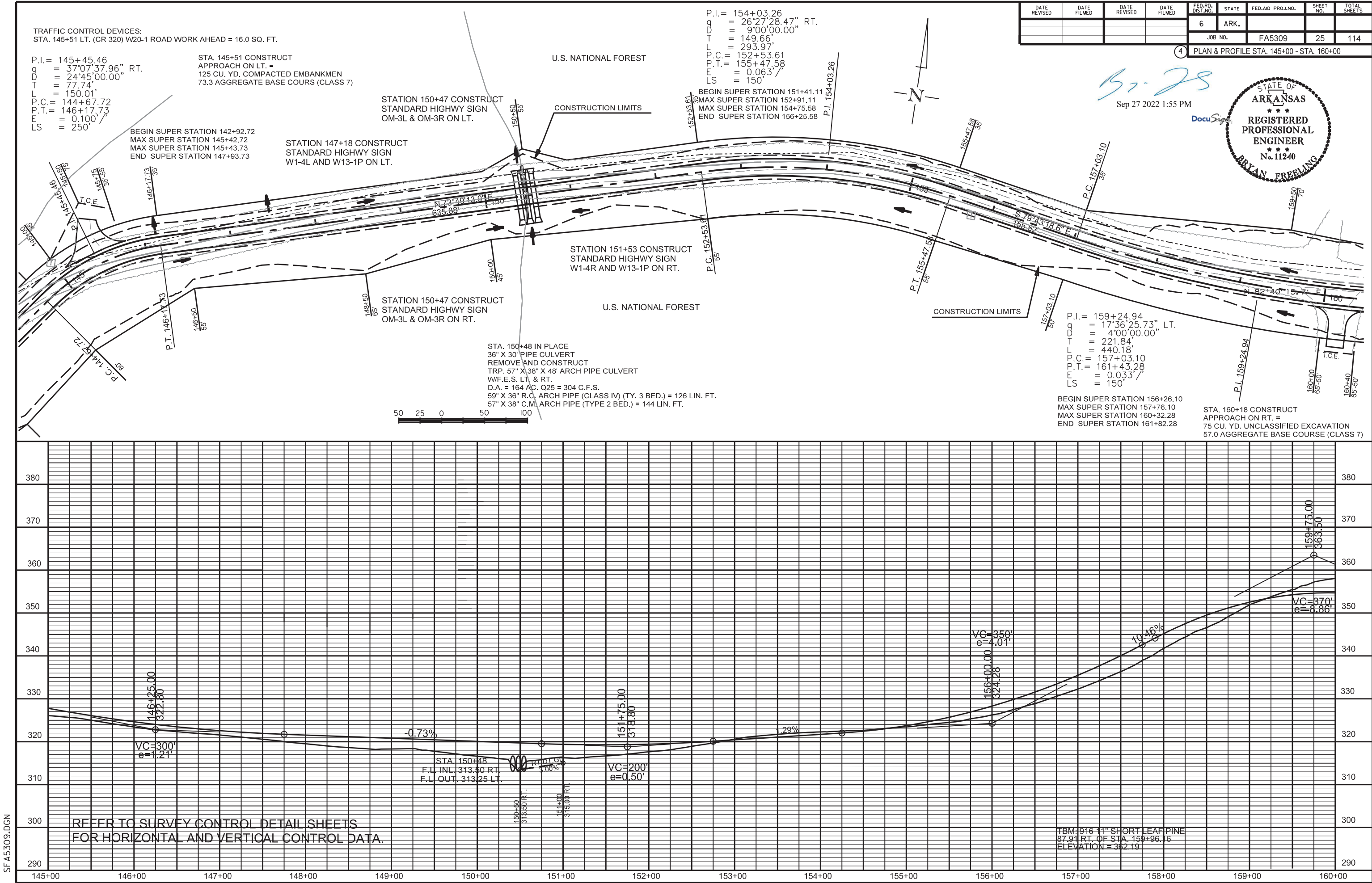
STATION 143+07 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON RT.

STA. 135+85 INSTALL  
18" X 62' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH =  
3 CU. YD. UNCLASSIFIED EXCAVATION  
31 CU. YD. COMPACTED EMBANKMENT  
50.6 TON AGGREGATE BASE COURSE (CLASS 7)



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

SFA5309.DGN





P.I. = 163+67.67  
q = 5'00'03.61" RT.  
D = 1'45'00.00"  
T = 142.98'  
L = 285.77'  
P.C. = 162+24.69  
P.T. = 165+10.46  
E = R.C.  
LS = 72' INSIDE CURVE

U.S. NATIONAL FOREST



P.I. = 170+91.48  
q = 7'49'52.23" RT.  
D = 3'30'00.00"  
T = 112.05'  
L = 223.74'  
P.C. = 169+79.44  
P.T. = 172+03.18  
E = 0.030' /'  
LS = 150'

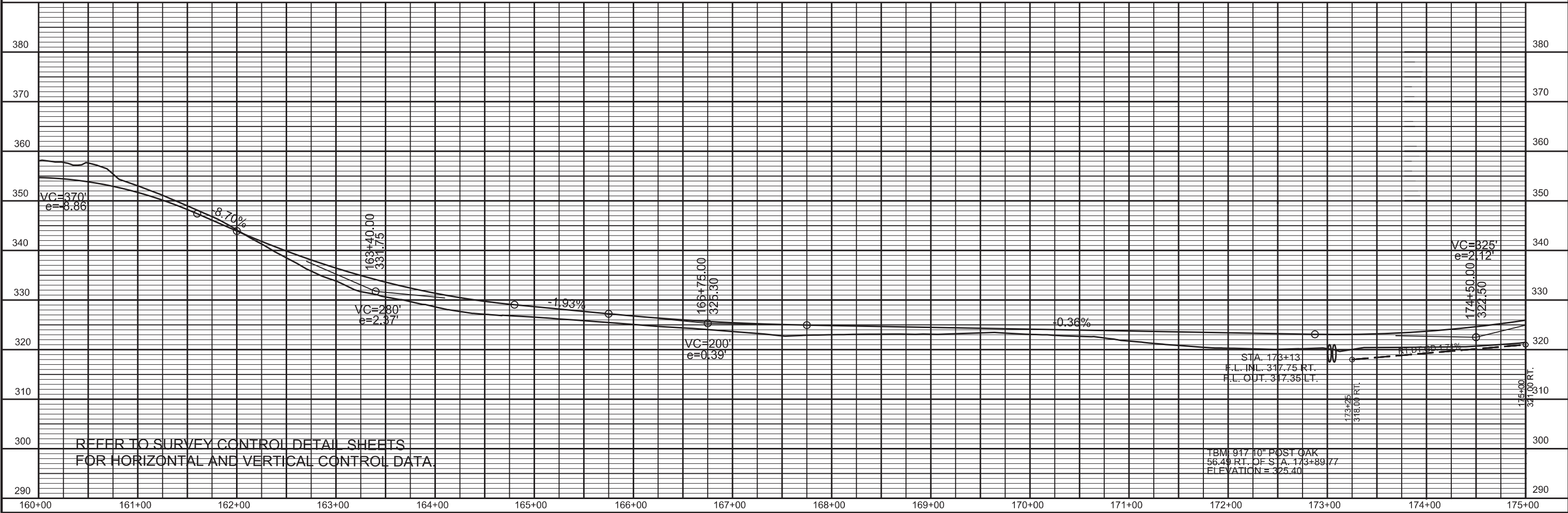
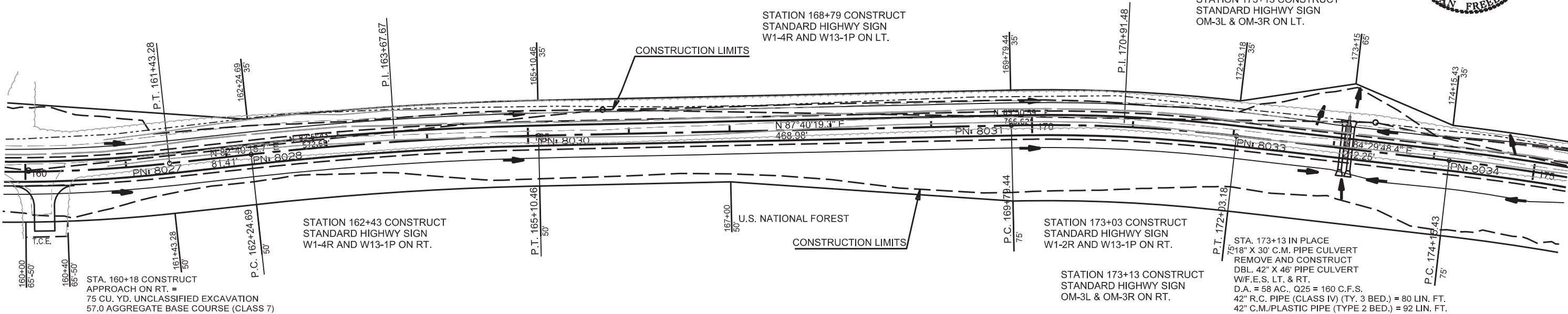
BEGIN SUPER STATION 168+66.94  
MAX SUPER STATION 170+16.94  
MAX SUPER STATION 171+59.18  
END SUPER STATION 173+09.18

| 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.            | FA5309 | 26                 | 114       |              |

PLAN & PROFILE STA. 160+00 - STA. 175+00

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

TBM 917 10" POST OAK  
56.49 RT. OF STA. 173+89.77  
ELEVATION = 325.40

SFA5309.DGN

P.I. = 175+34.49  
q = 5'56"51.68" RT.  
D = 2'30'00.00"  
T = 119.06'  
L = 237.91'  
P.C. = 174+15.43  
P.T. = 176+53.34  
E = 0.025' /  
LS = 150'

BEGIN SUPER STATION 173+10.43  
MAX SUPER STATION 174+60.43  
MAX SUPER STATION 175+42.34  
END SUPER STATION 176+92.34

BEGIN SUPER STATION 176+93.53  
MAX SUPER STATION 178+43.53  
MAX SUPER STATION 178+50.80  
END SUPER STATION 180+00.80

P.I. = 178+45.35  
q = 20'47'37.77" LT.  
D = 9'45'00.00"  
T = 107.82'  
L = 213.27'  
P.C. = 177+37.53  
P.T. = 179+50.80  
E = 0.067' /  
LS = 150'

LEON & BETTY  
BURKE

BEGIN REVERSE CROWN STA. 180+39.02  
100% TRANSITION BEGIN FULL REVERSE CROWN STA. 181+11.02  
100% TRANSITION END FULL REVERSE CROWN STA. 182+13.02  
END REVERSE CROWN STA. 182+85.02

P.I. = 181+62.07  
q = 4'18'18.23" LT.  
D = 1'45'00.00"  
T = 123.06'  
L = 246.00'  
P.C. = 180+39.02  
P.T. = 182+85.02  
E = R.C.  
LS = 76'  
100% INSIDE CURVE

STA. 183+50 CONSTRUCT  
APPROACH ON LT. =  
150 CU. YD. UNCLASSIFIED EXCAVATION  
105.9 TON AGGREGATE BASE COURSE (CLASS 7)

STATION 185+78 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON LT.

P.I. = 186+61.30  
q = 3'16'27.22" LT.  
D = 1'30'00.00"  
T = 109.17'  
L = 218.28'  
P.C. = 185+52.13  
P.T. = 187+70.41  
E = N.C.

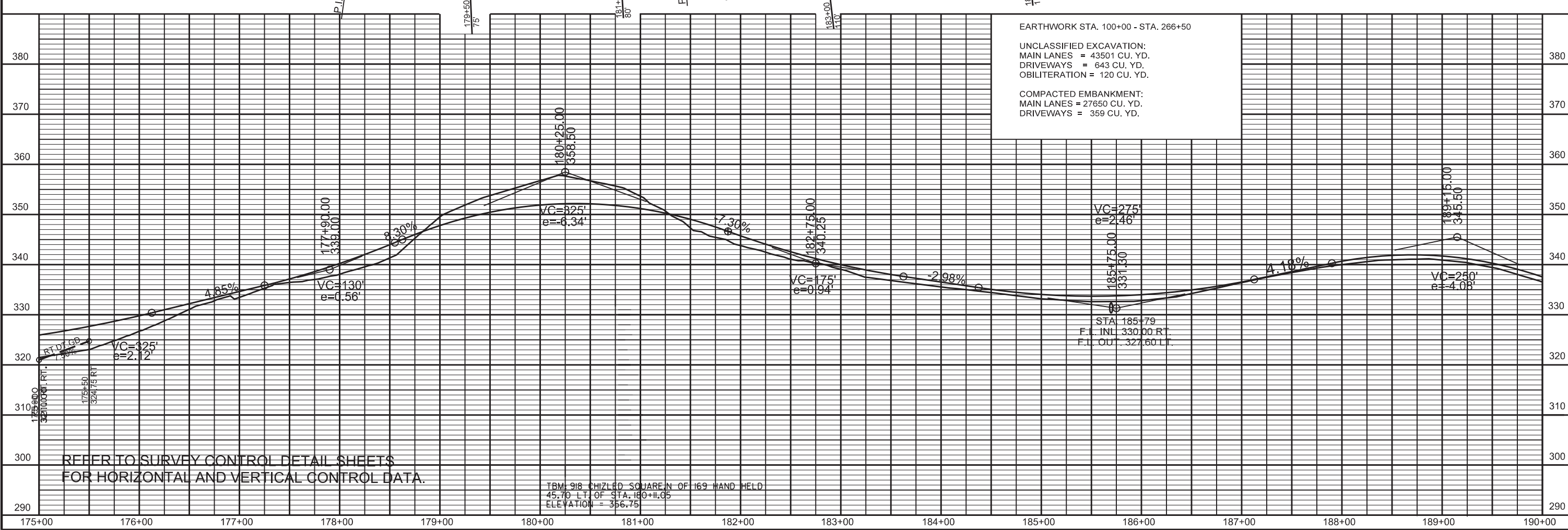
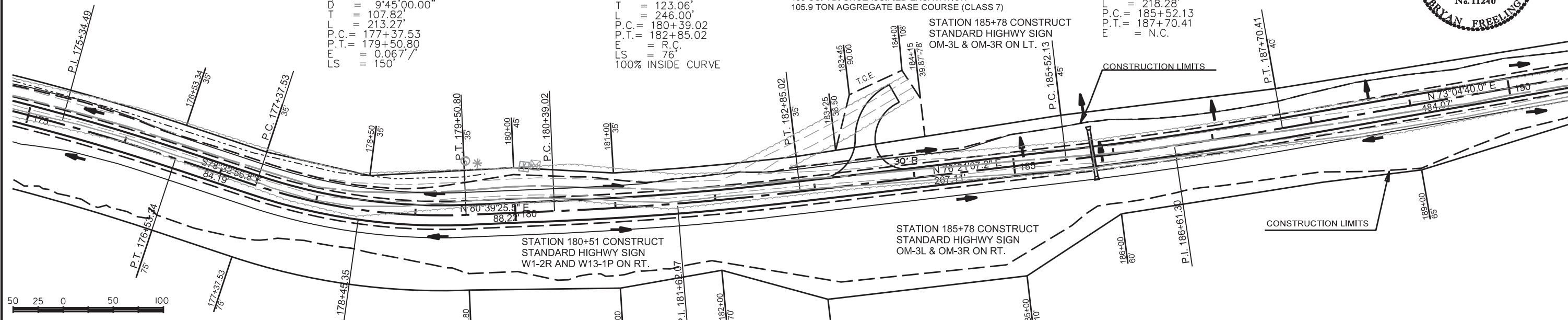
STA. 185+79 IN PLACE  
18" X 30" C.M. PIPE CULVERT  
REMOVE AND CONSTRUCT  
35" X 24" X 48' ARCH PIPE CULVERT  
W/ F.E.S. LT. & RT.  
D.A. = 10 AC., Q25 = 42 C.F.S.  
36" X 23" R.C. ARCH PIPE (CLASS IV) (TY. 3 BED.) = 42 LIN. FT.  
35" X 24" C.M. ARCH PIPE (TYPE 2 BED.) = 48 LIN. FT.

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|-----------------------|-------|-----------------------|--------------|-----------------|
|                 |                |                 |                | 6                     | ARK.  |                       |              |                 |
|                 |                |                 |                | JOB NO.               |       | FA5309                | 27           | 114             |

4 PLAN & PROFILE STA. 175+00 - STA. 190+00

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

TBM 9/8 CHIZED SQUARE IN OF 169 HAND HELD  
45.70 LT. OF STA. 180+11.05  
ELEVATION = 366.75

EARTHWORK STA. 100+00 - STA. 266+50

UNCLASSIFIED EXCAVATION:  
MAIN LANES = 43501 CU. YD.  
DRIVEWAYS = 643 CU. YD.  
OBILITERATION = 120 CU. YD.

COMPACTED EMBANKMENT:  
MAIN LANES = 27650 CU. YD.  
DRIVEWAYS = 359 CU. YD.

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE   | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|-----------------------|---------|--------------------|--------------|-----------------|
|                 |                |                 |                | 6                     | ARK.    |                    |              |                 |
|                 |                |                 |                |                       | JOB NO. | FA5309             | 28           | 114             |

4 PLAN & PROFILE STA. 190+00 - STA. 205+00

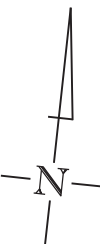
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P.I. = 194+29.86  
Q.D. = 17°24'08.68" RT.  
D = 5'00'00.00"  
L = 175.37'  
P.C. = 192+54.48  
P.T. = 196+02.53  
E = 0.040'/  
LS = 150'

REMOVAL AND DISPOSAL OF FENCE  
STA. 193+60 - STA. 211+45  
SIDE LT. LIN. FT. 1813  
WIRE FENCE  
STA. 193+50 - STA. 211+45  
SIDE LT. TYPE D-1 LIN. FT. 1795  
GATES  
STA. 198+80  
SIDE LT. TYPE 16'-0" EACH 1



STA. 192+50 CONSTRUCT  
APPROACH ON LT. = 1  
150 CU. YD. UNCLASSIFIED EXCAVATION  
75 CU. YD. COMPACTED EMBANKMENT  
134.9 TON AGGREGATE BASE COURSE (CLASS 7)

BEGIN SUPER STATION 191+41.98  
MAX SUPER STATION 192+91.98  
MAX SUPER STATION 195+65.03  
END SUPER STATION 197+15.03

STATION 191+54 CONSTRUCT  
STANDARD HIGHWAY SIGN  
W1-2R AND W13-1P ON LT.

STATION 194+84 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON LT.

STA. 198+90 CONSTRUCT  
APPROACH ON LT. =  
50 CU. YD. UNCLASSIFIED EXCAVATION  
41 CU. YD. COMPACTED EMBANKMENT  
54.4 TON AGGREGATE BASE COURSE (CLASS 7)

STA. 203+95 IN PLACE  
18" X 30" C.M. PIPE CULVERT  
REMOVE AND CONSTRUCT  
DBL. 42" X 29" X 46' ARCH PIPE  
W/ F.E.S. LT. & RT.  
D.A. = 33 AC., Q25 = 107 C.F.S.  
44" X 27" R.C. ARCH PIPE (CLASS IV) (TY. 3 BED.) = 80 LIN. FT.  
42" X 29" C.M. ARCH PIPE (TYPE 2 BEDDING) = 92 LIN. FT.

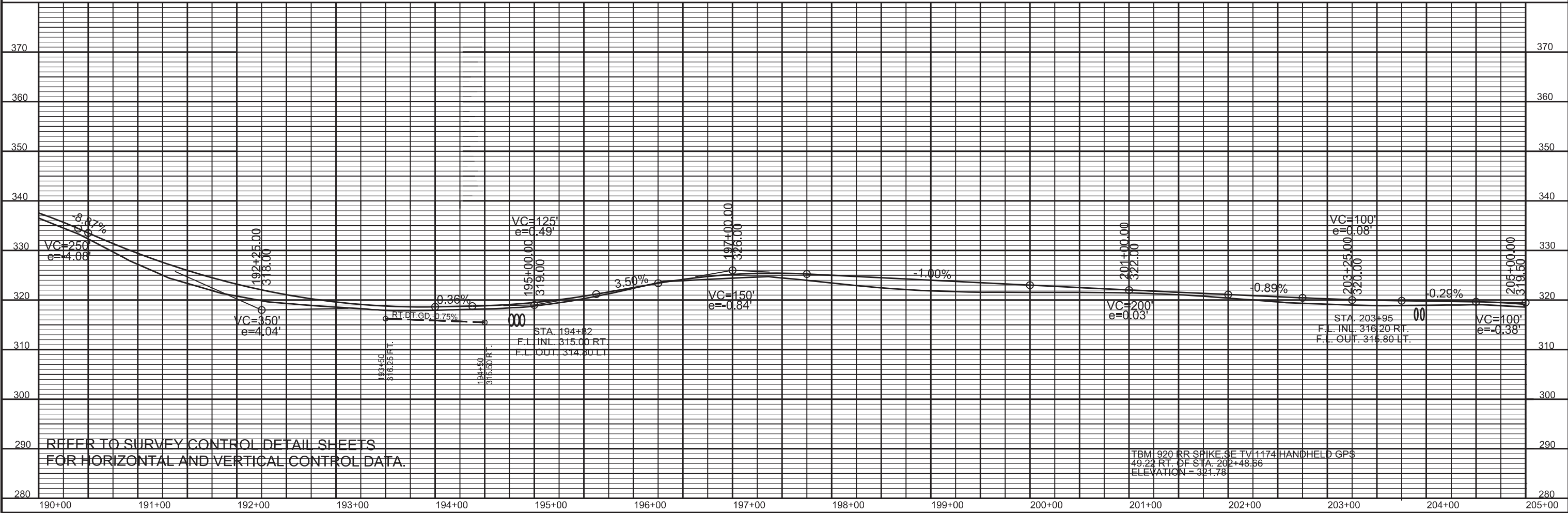
STATION 203+95 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON LT.

STA. 194+82 IN PLACE  
TRP. 18" X 32' PIPE CULVERT  
(2 R.C. PIPES & 1 C.M. PIPE)  
(10' LT. FWD. SKEW)  
REMOVE AND CONSTRUCT  
TRP. 42" X 29" X 48' ARCH PIPE CULVERT  
W/ F.E.S. LT. & RT.  
D.A. = 51 AC., Q25 = 144 C.F.S.  
44" X 27" R.C. ARCH PIPE (CLASS IV) (TY. 2 BED.) = 126 LIN. FT.  
42" X 29" C.M. ARCH PIPE (TYPE 2 BEDDING) = 144 LIN. FT.

STATION 197+03 CONSTRUCT  
STANDARD HIGHWAY SIGN  
W1-2L AND W13-1P ON RT.  
P.I. = 199+73.50  
Q.D. = 3°05'10.56" LT.  
D = 3'00'00.00"  
L = 51.45'  
P.C. = 199+22.05  
P.T. = 200+24.93  
E = 0.026'/  
LS = 150'

BEG SUPER STATION 198+09.55  
MAX SUPER STATION 199+59.55  
MAX SUPER STATION 199+87.43  
END SUPER STATION 201+37.43

STATION 203+95 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON RT.



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STA. 221+07 IN PLACE  
18" X 30" C.M. PIPE CULVERT  
REMOVE AND CONSTRUCT  
24" X 56" PIPE CULVERT  
W/ F.E.S. LT. & RT.  
D.A. = 5 AC., Q25 = 20 C.F.S.  
24" R.C. PIPE (CLASS IV) (TY. 3 BED.) = 50 LIN. FT.  
24" C.M./PLASTIC PIPE (TYPE 2 BED.) = 56 LIN. FT.

ROBERT M.HILL SR.  
REVOCABLE TRUST



STA. 233+48 IN PLACE  
30" X 28" C.M. PIPE CULVERT  
(18° LT. FWD. SKEW)  
REMOVE AND CONSTRUCT  
QUAD. 57" X 38" X 52' ARCH PIPE CULVERT  
(18° LT. FWD. SKEW) W/ F.E.S. LT. & RT.  
D.A. = 196 AC., Q25 = 350 C.F.S.  
59" X 36" R.C. ARCH PIPE (CLASS IV) (TY. 3 BED.) = 184 LIN. FT.  
57" X 38" C.M. ARCH PIPE (TYPE 2 BEDDING) = 208 LIN. FT.

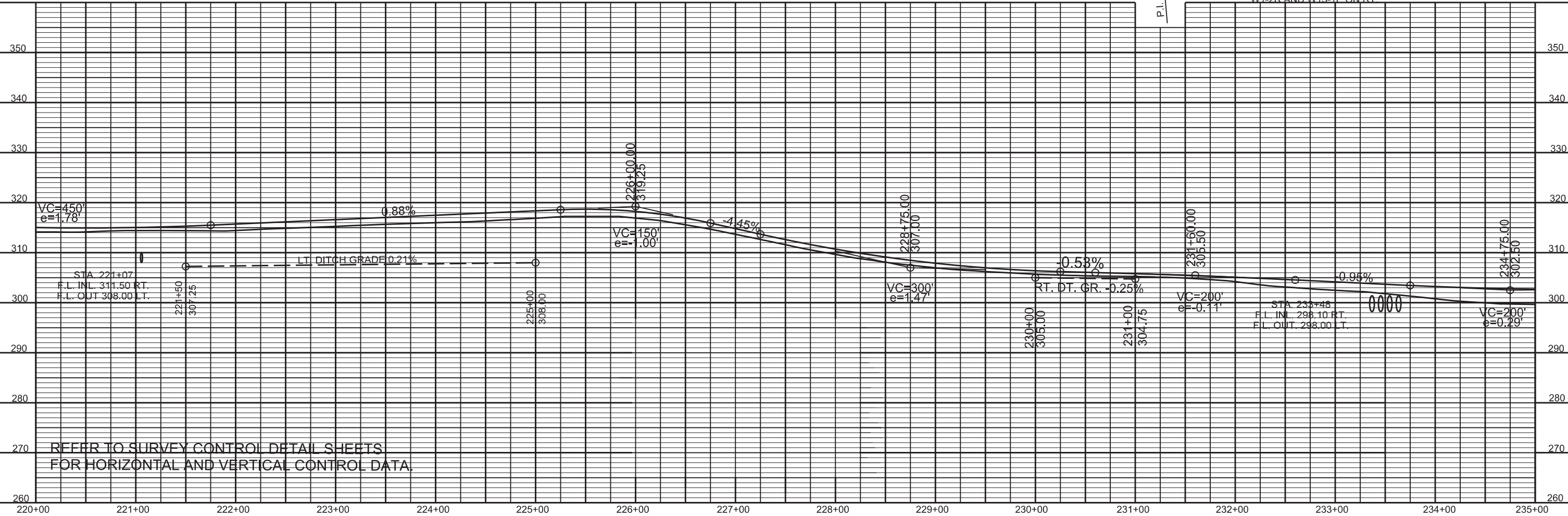
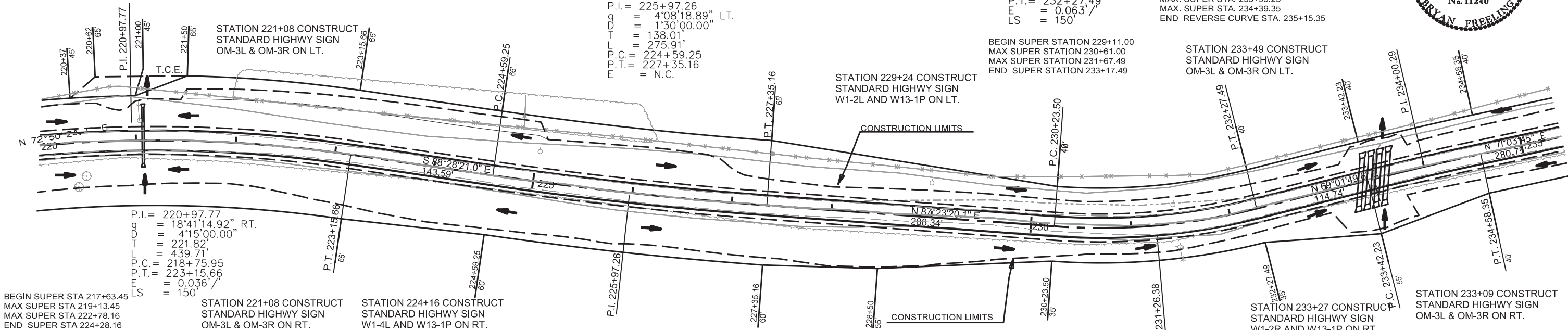
P.I. = 225+97.26  
Q  
D  
T  
L  
P.C. = 224+59.25  
P.T. = 227+35.16  
E  
LS = N.C.

P.I. = 231+26.38  
Q  
D  
T  
L  
P.C. = 230+23.50  
P.T. = 232+27.49  
E  
LS = 150'

P.I. = 234+00.27  
Q  
D  
T  
L  
P.C. = 233+42.23  
P.T. = 234+58.35  
E  
LS = 76'

BEG. REVERSE CURVE STA. 233+23.23  
MAX. SUPER STA. 233+99.23  
MAX. SUPER STA. 234+39.35  
END REVERSE CURVE STA. 235+15.35

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

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE  | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|-----------------------|--------|--------------------|--------------|-----------------|
|                 |                |                 |                | 6                     | ARK.   |                    |              |                 |
|                 |                |                 |                | JOB NO.               | FA5309 |                    | 31           | 114             |

4 PLAN & PROFILE STA. 235+00 - STA. 250+00

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P.I. = 239+48.31  
S = 4°10'56.37" RT.  
D = 1°00'00.00"  
T = 209.21'  
L = 418.23'  
P.C. = 237+39.10  
P.T. = 241+57.33  
E = N.C.

STA. 242+58 CONSTRUCT  
APPROACH ON LT. =  
31 CU. YD. COMPACTED EMBANKMENT  
40.0 TON AGGREGATE BASE COURSE (CLASS 7)

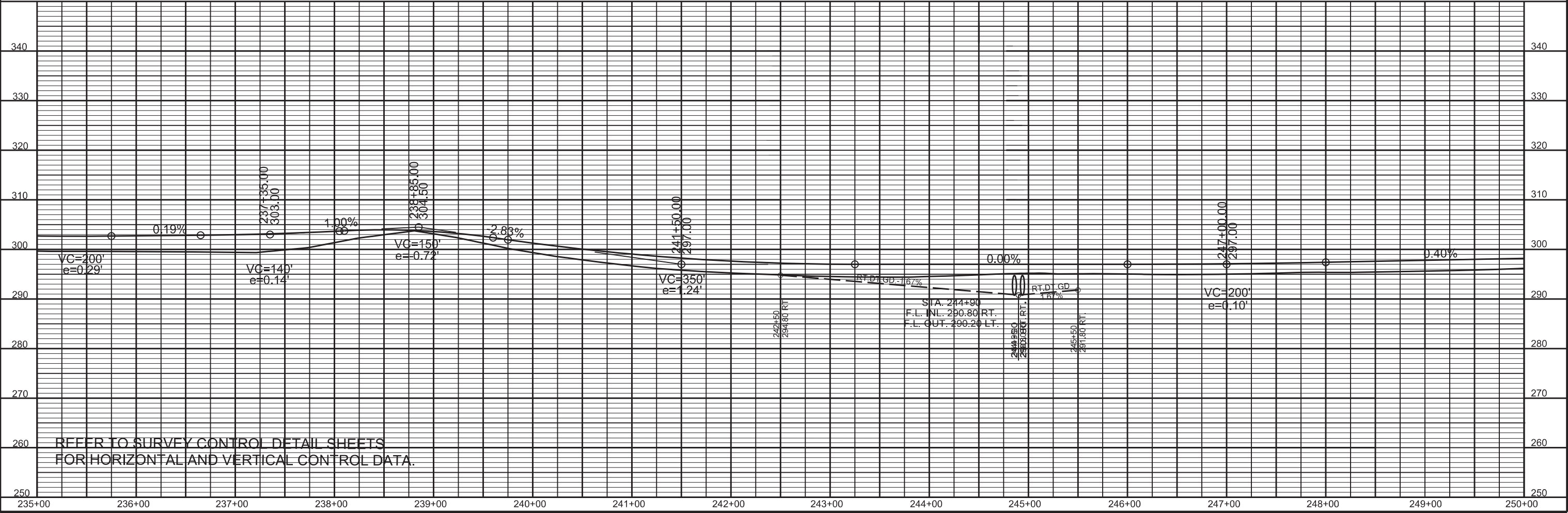
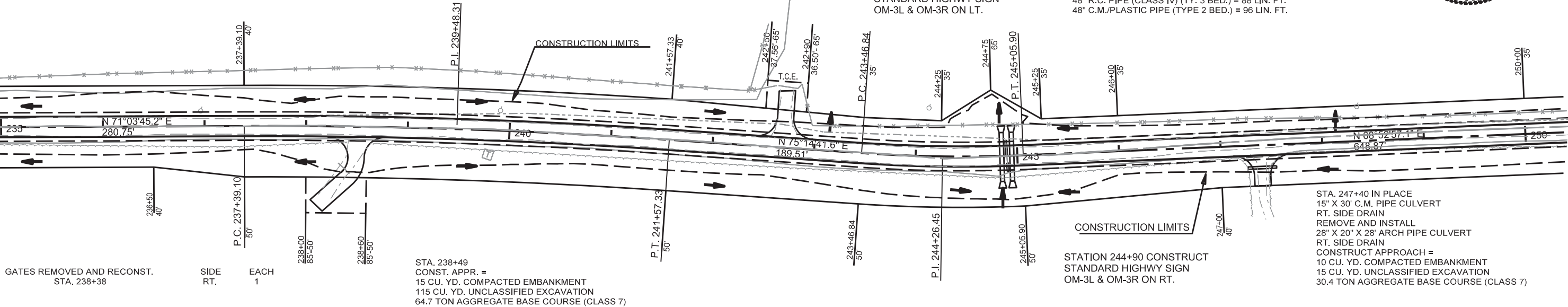
P.I. = 244+26.45  
S = 6°21'44.50" LT.  
D = 4°00'00.00"  
T = 79.61'  
L = 159.06'  
P.C. = 243+46.84  
P.T. = 245+05.90  
E = 0.034°  
LS = 150'

BEG SUPER STATION 242+34.34  
MAX SUPER STATION 243+84.34  
MAX SUPER STATION 244+68.40  
END SUPER STATION 246+18.40

STATION 244+90 CONSTRUCT  
STANDARD HIGHWAY SIGN  
OM-3L & OM-3R ON LT.

STA. 244+90 IN PLACE  
24" X 30" C.M. PIPE CULVERT  
REMOVE AND CONSTRUCT  
DBL. 48" X 48" PIPE CULVERT  
W/ F.E.S. LT. & RT.  
D.A. = 94 AC., Q25 = 197 C.F.S.  
48" R.C. PIPE (CLASS IV) (TY. 3 BED.) = 88 LIN. FT.  
48" C.M./PLASTIC PIPE (TYPE 2 BED.) = 96 LIN. FT.

STA. 247+40 IN PLACE  
15" X 30" C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
28" X 20" X 28' ARCH PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH =  
10 CU. YD. COMPACTED EMBANKMENT  
15 CU. YD. UNCLASSIFIED EXCAVATION  
30.4 TON AGGREGATE BASE COURSE (CLASS 7)



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

SFA5309.DGN

|                                                                                         |      |          |
|-----------------------------------------------------------------------------------------|------|----------|
| REMOVAL AND DISPOSAL OF FENCE<br>STA. 242+90 - STA. 261+61<br>STA. 263+36 - STA. 265+70 | SIDE | LIN. FT. |
|                                                                                         | LT.  | 1883     |
|                                                                                         | LT.  | 230      |
| WIRE FENCE<br>STA. 242+90 - STA. 261+61<br>STA. 263+36 - STA. 265+70                    | SIDE | LIN. FT. |
|                                                                                         | LT.  | 1883     |
|                                                                                         | LT.  | 230      |

P.I.= 257+69.33  
D = 13'03"18.07" RT.  
T = 6'00'00.00"  
L = 109.27'  
P.C.= 256+60.06  
P.T.= 258+77.64  
E = 0.046'/  
LS = 150'

| 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.            | FA5309 | 32                 | 114       |              |

4 PLAN & PROFILE STA. 250+00 - STA. 265+00



P.I.= 263+29.54  
D = 16'16"43.15" LT.  
T = 8'00'00.00"  
L = 102.43'  
P.C.= 262+27.11  
P.T.= 264+30.59  
E = 0.058'/  
LS = 150'  
BEG SUPER STATION 261+14.61  
MAX SUPER STATION 262+64.61  
MAX SUPER STATION 263+93.09  
END SUPER STATION 265+43.09

STA. 264+19 IN PLACE  
18 X 28' C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
28" X 20" X 32' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH =  
15 CU. YD. UNCLASSIFIED EXCAVATION  
35.4 AGGREGATE BASE COURSE (CLASS 7)

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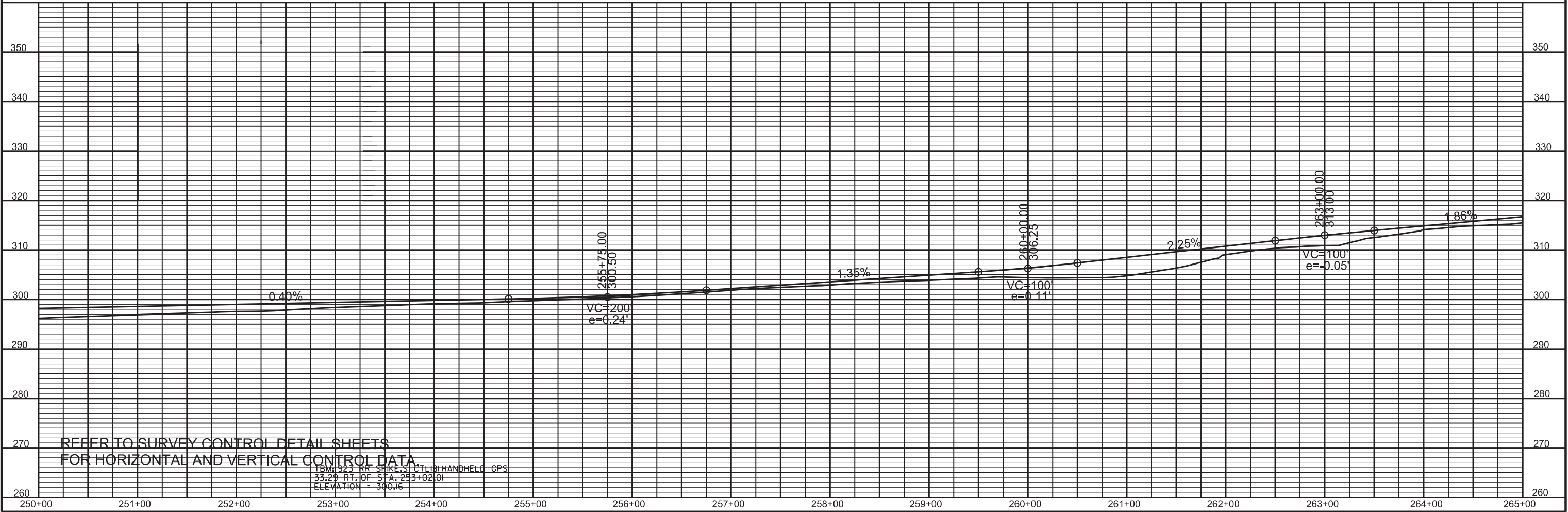
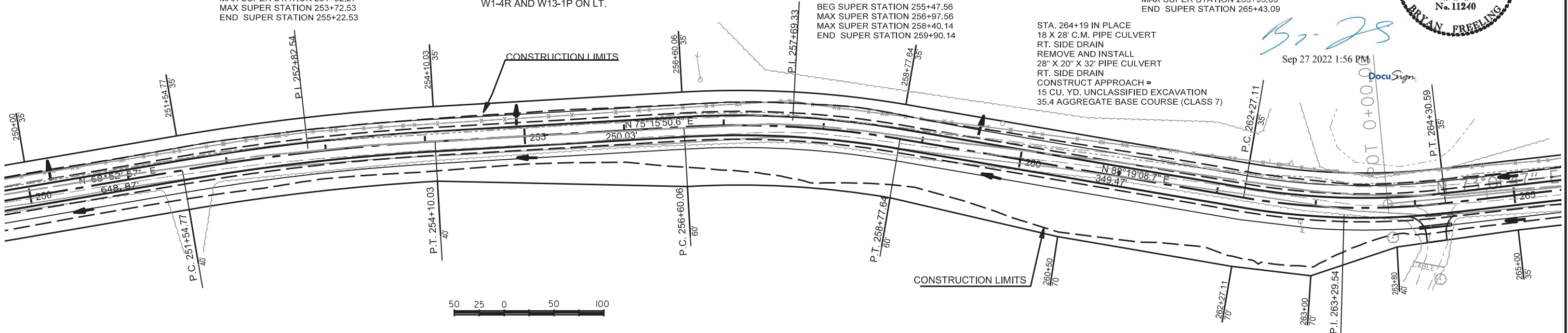
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P.I.= 252+82.54  
D = 6'22"53.49" RT.  
T = 2'30'00.00"  
L = 127.76'  
P.C.= 251+54.77  
P.T.= 254+10.03  
E = 0.025'/  
LS = 150'  
BEGIN SUPER STATION 250+42.27  
MAX SUPER STATION 251+92.27  
MAX SUPER STATION 253+72.53  
END SUPER STATION 255+22.53

STATION 255+60 CONSTRUCT  
STANDARD HIGHWAY SIGN  
W1-4R AND W13-1P ON LT.

BEG SUPER STATION 255+47.56  
MAX SUPER STATION 256+97.56  
MAX SUPER STATION 258+40.14  
END SUPER STATION 259+90.14



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

TBM 923 RT. SHIKE, S. CT. 181 HANDHELD GPS  
33.29 RT. OF STA. 253+02.01  
ELEVATION = 300.16

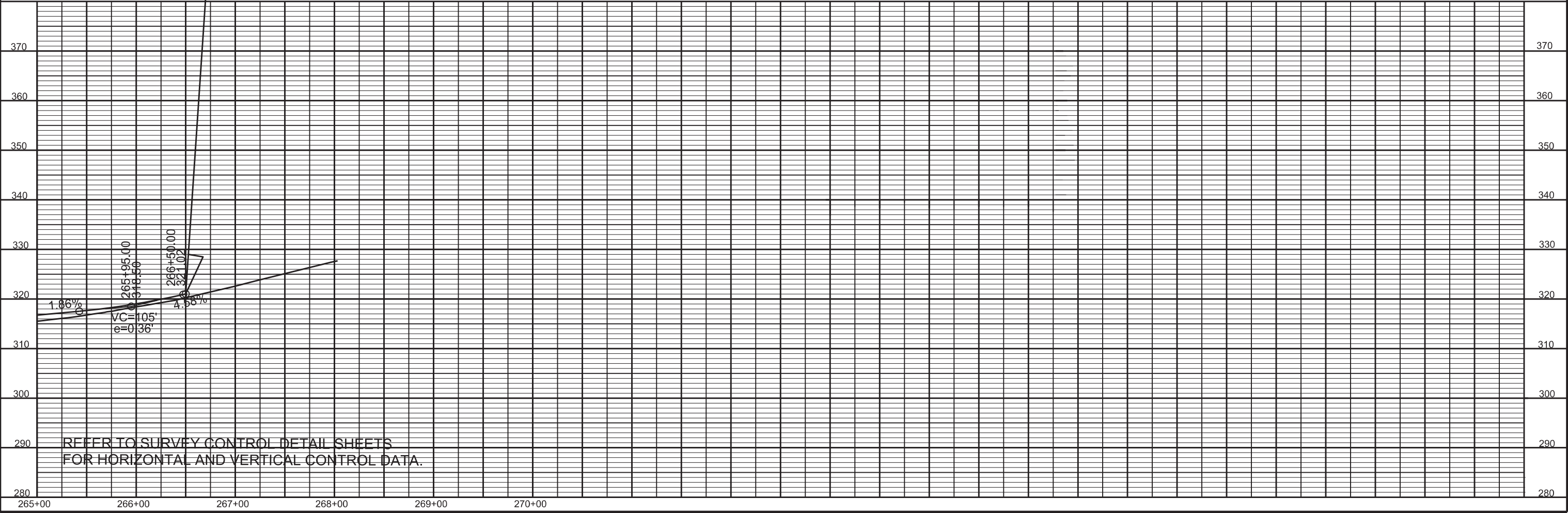
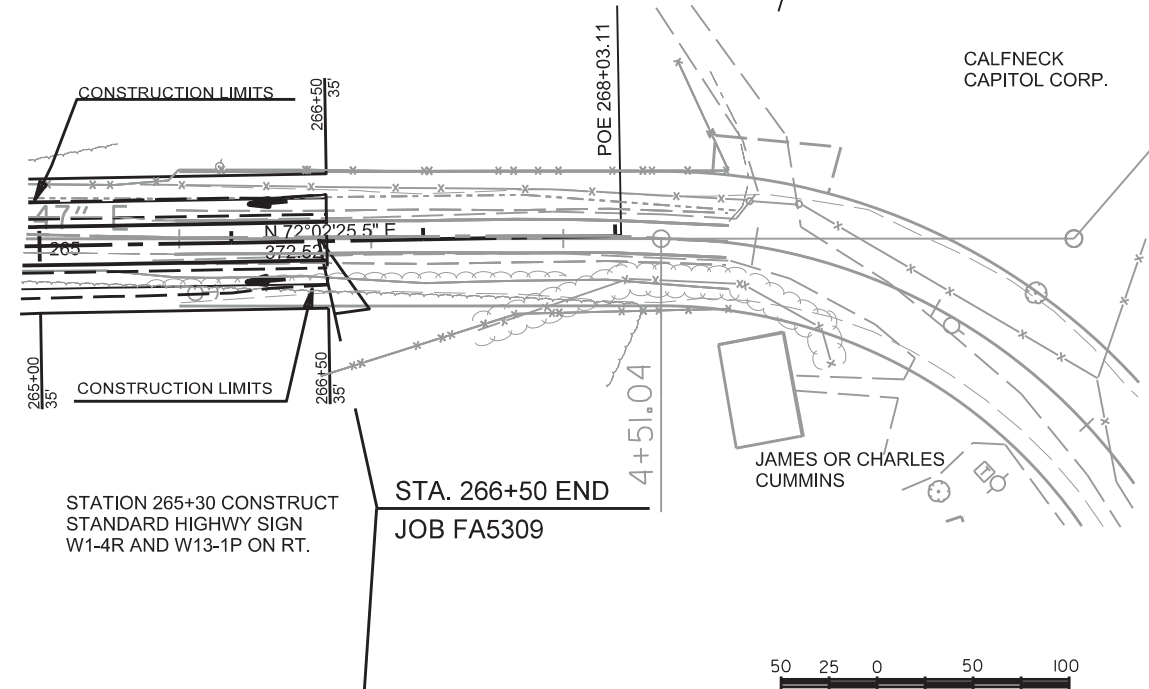
TRAFFIC CONTROL DEVICES AT END OF JOB:  
END OF JOB ON LT. - G20-1 ROAD CONSTRUCTION NEXT XX MILES = 10.0 SQ. FT.  
END OF JOB ON RT. - G20-2 END ROAD WORK = 8.0 SQ. FT.  
END OF JOB ON LT. - W20-1 ROAD WORK 1500' = 16.0 SQ. FT.  
END OF JOB ON LT. - W20-1 ROAD WORK 1000' = 16.0 SQ. FT.  
END OF JOB ON LT. - W20-1 ROAD WORK 500' = 16.0 SQ. FT.

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED. RD.<br>DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|-----------------------|-------|--------------------|--------------|-----------------|
|                 |                |                 |                | 6                     | ARK.  |                    |              |                 |
|                 |                |                 |                | JOB NO.               |       | FA5309             | 33           | 114             |

4 PLAN & PROFILE STA. 265+00 - STA. 266+50

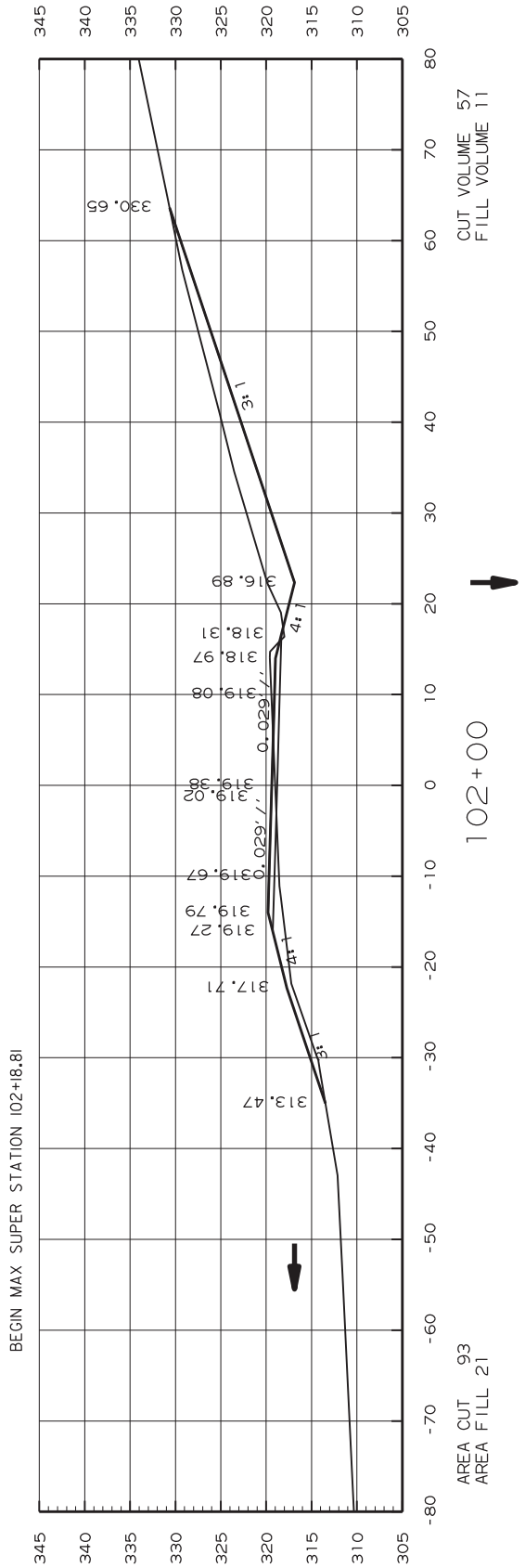
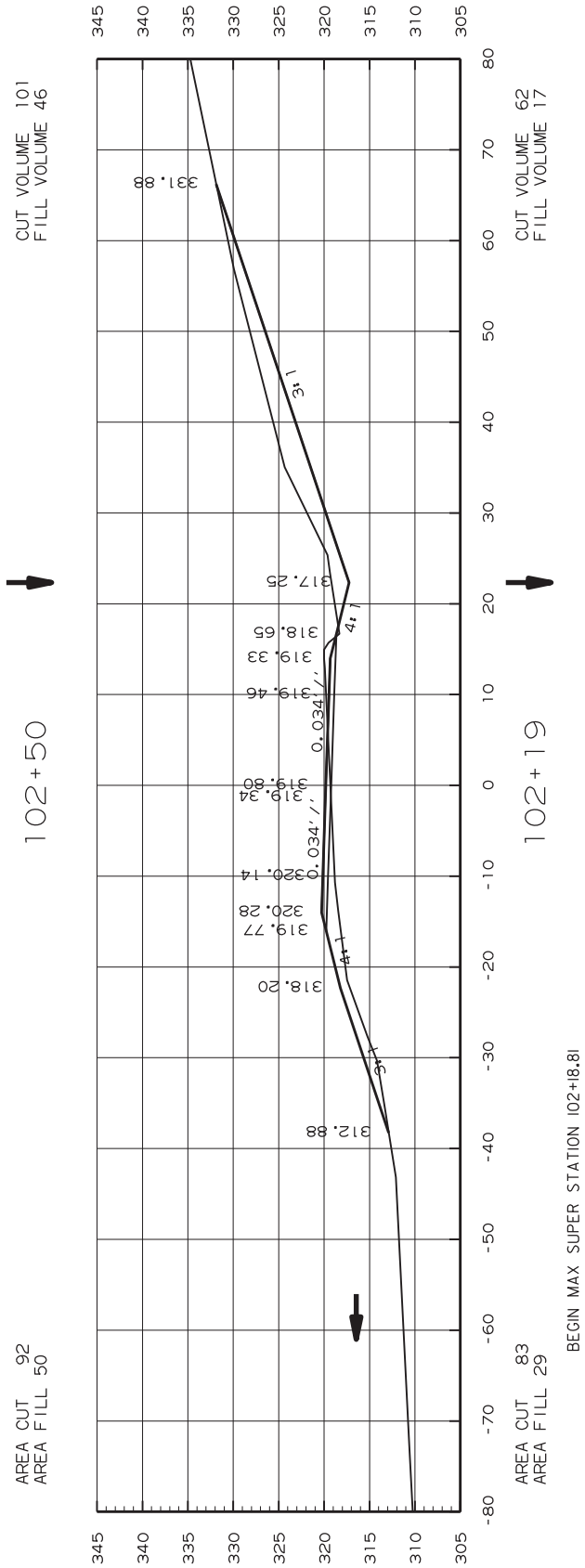
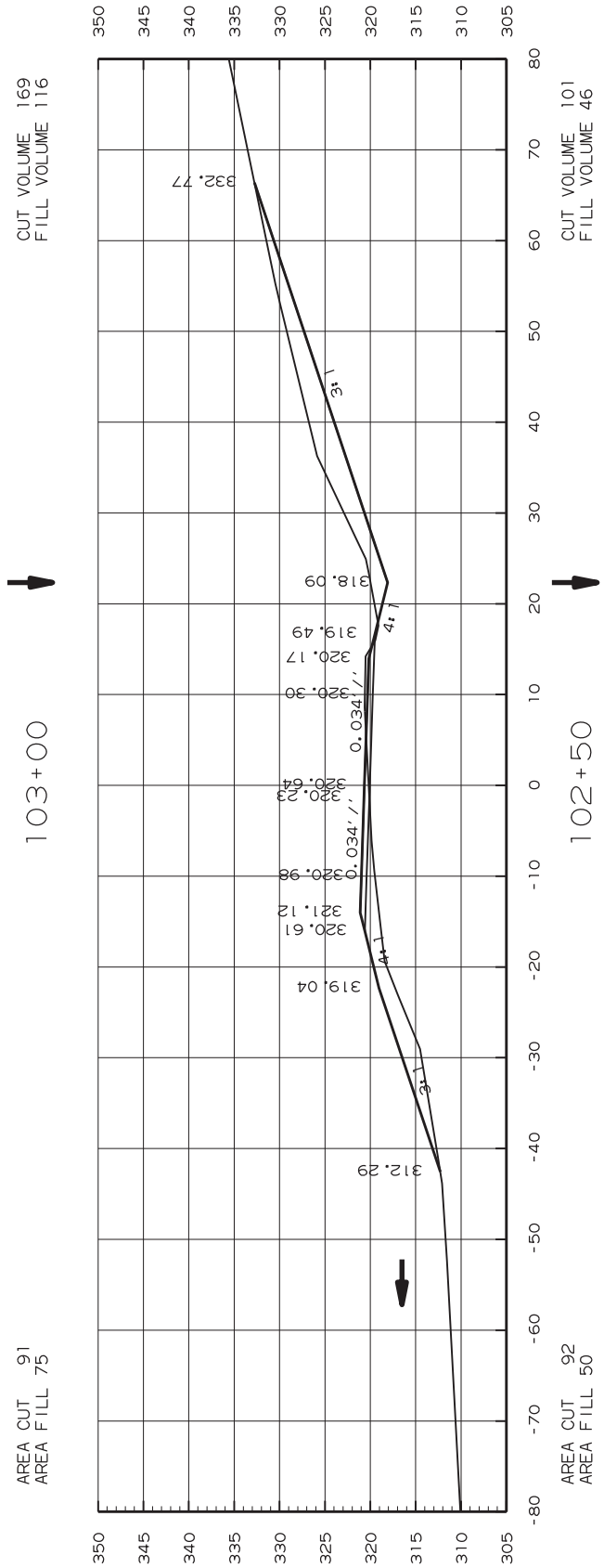
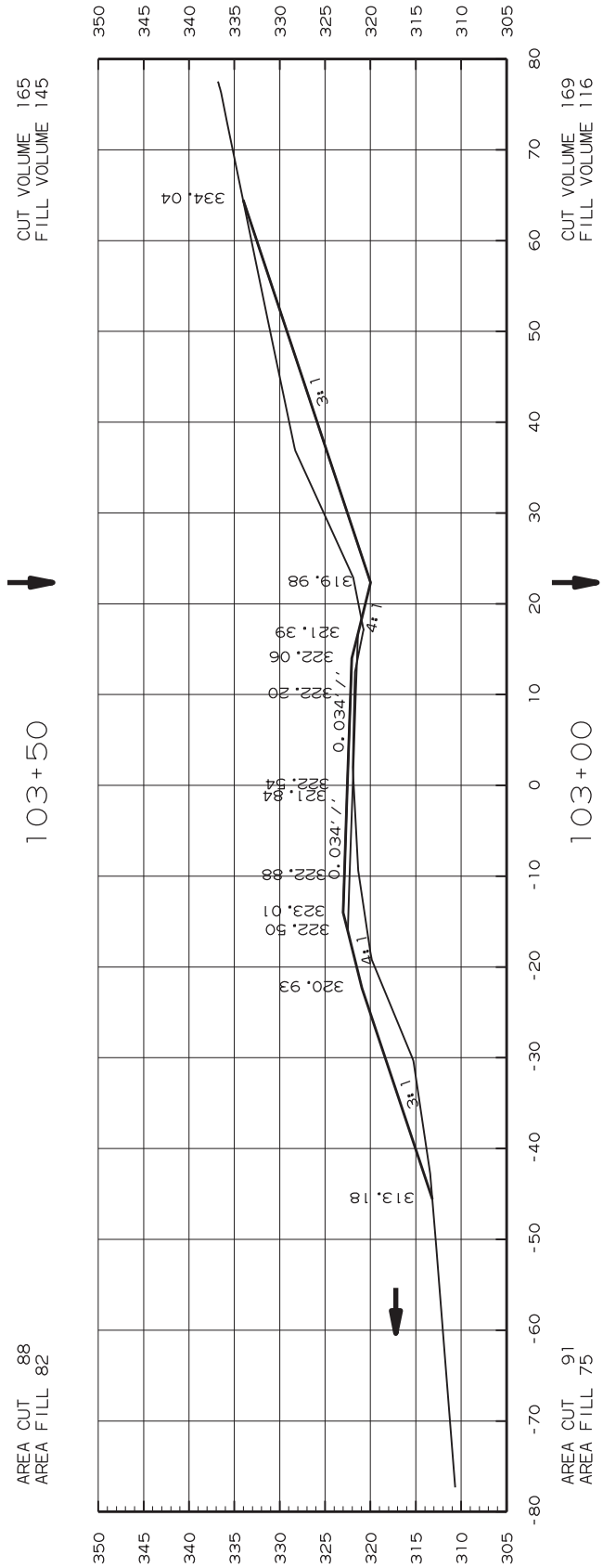
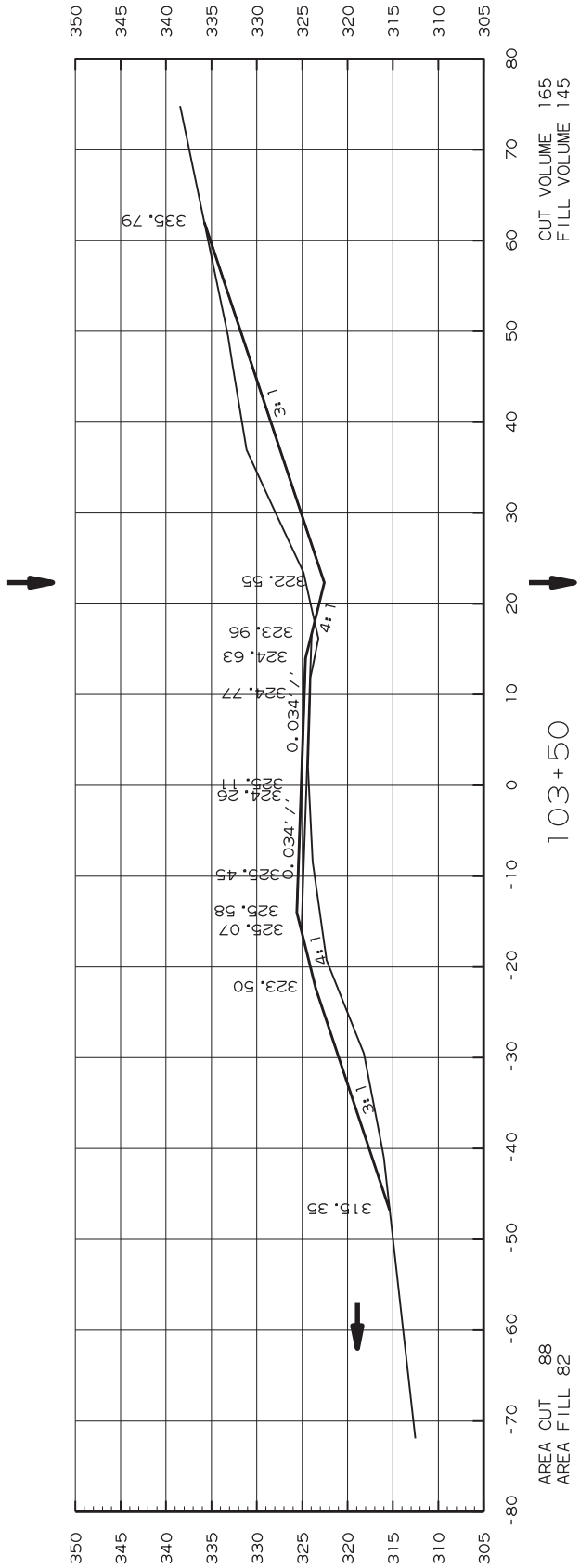
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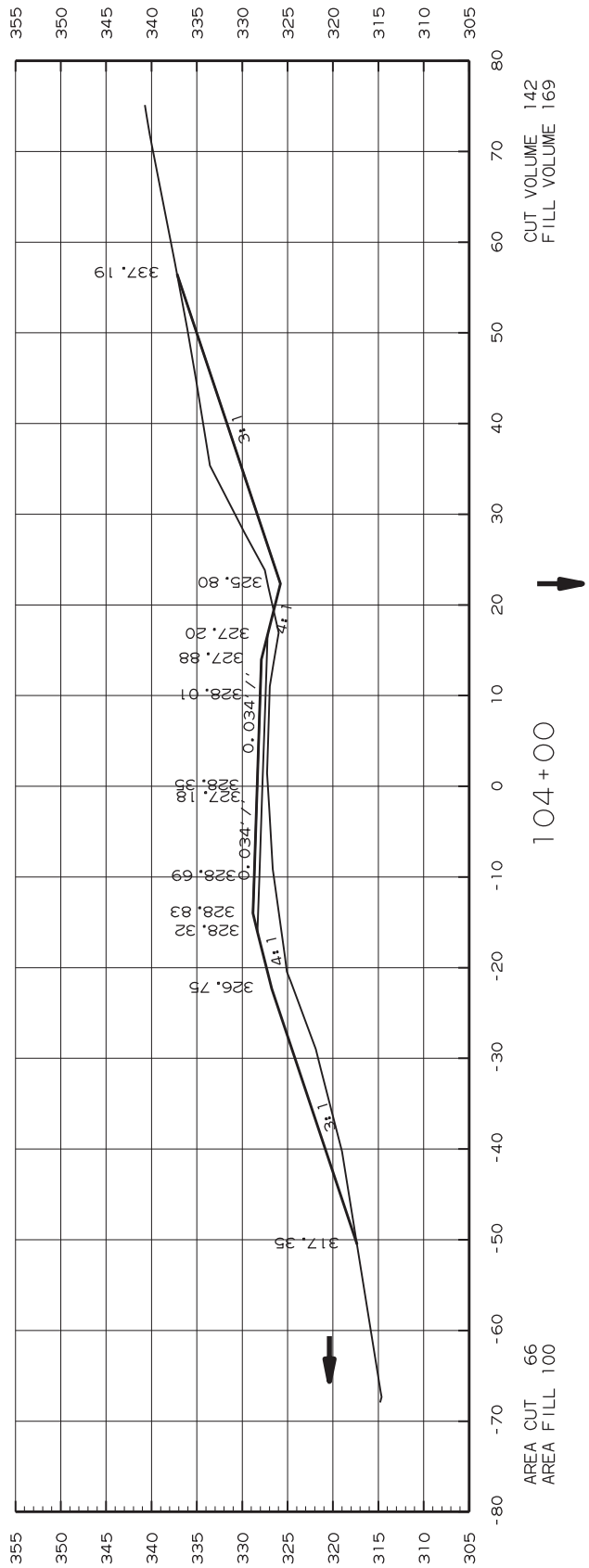
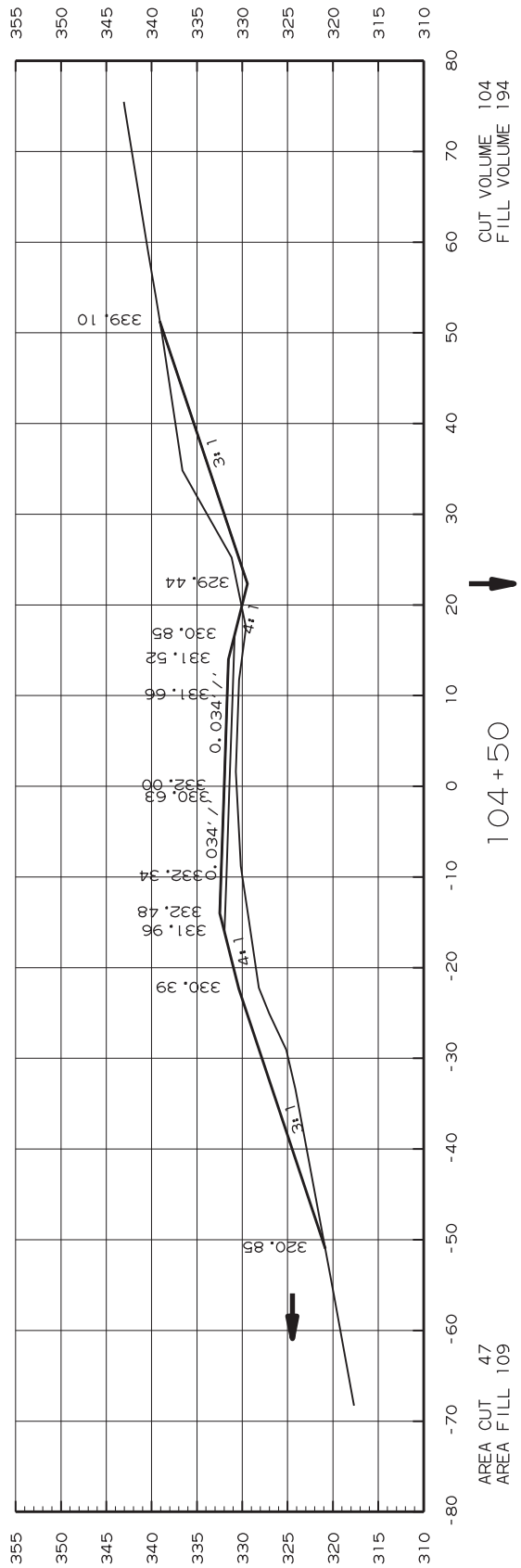
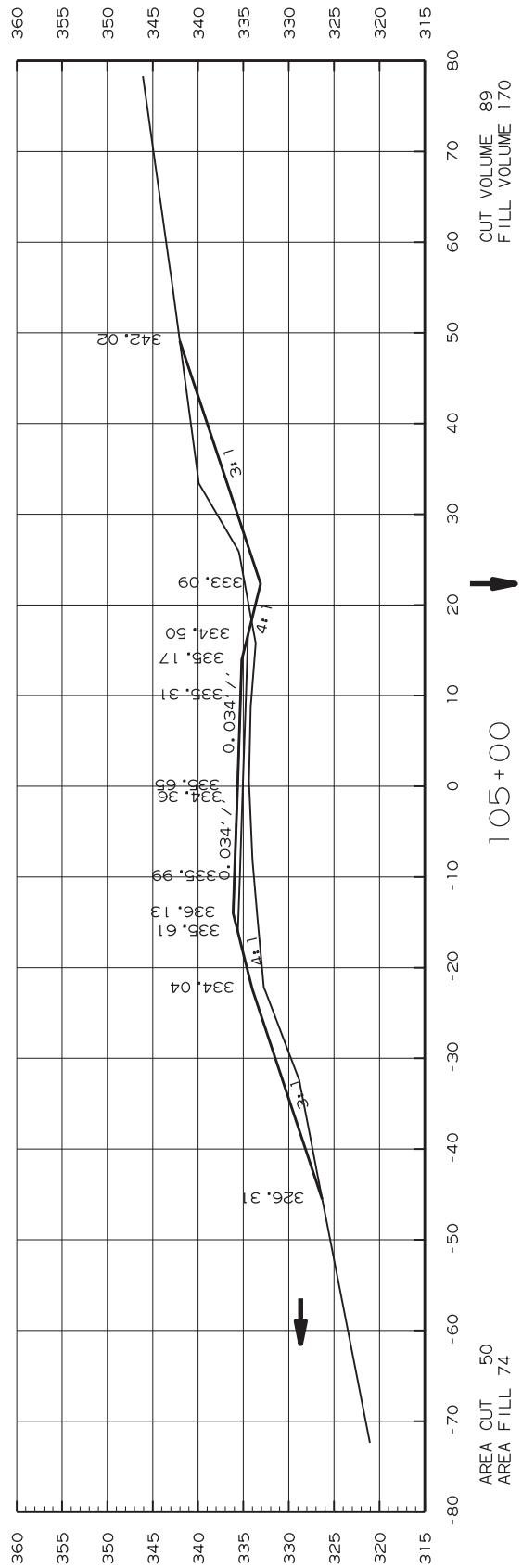
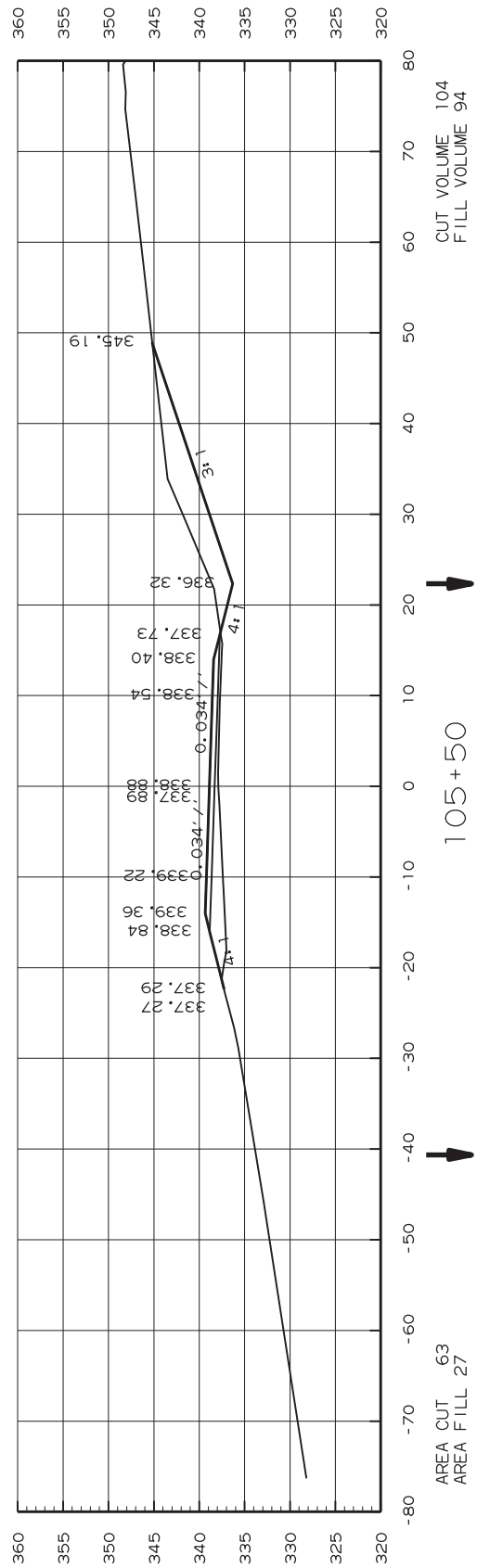
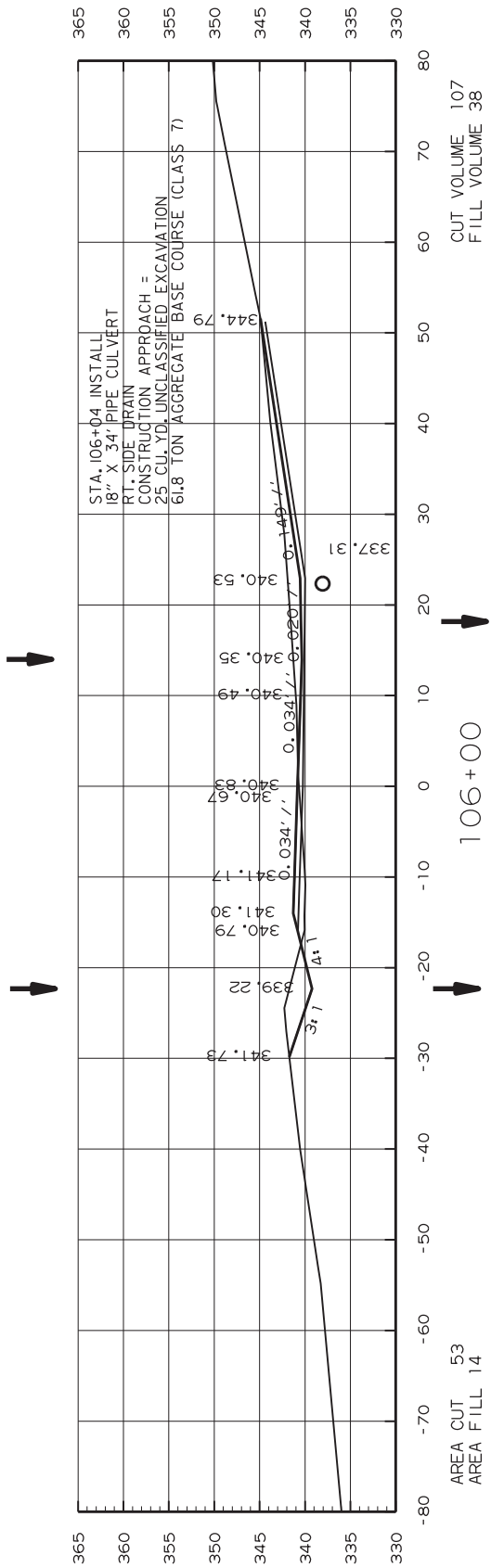
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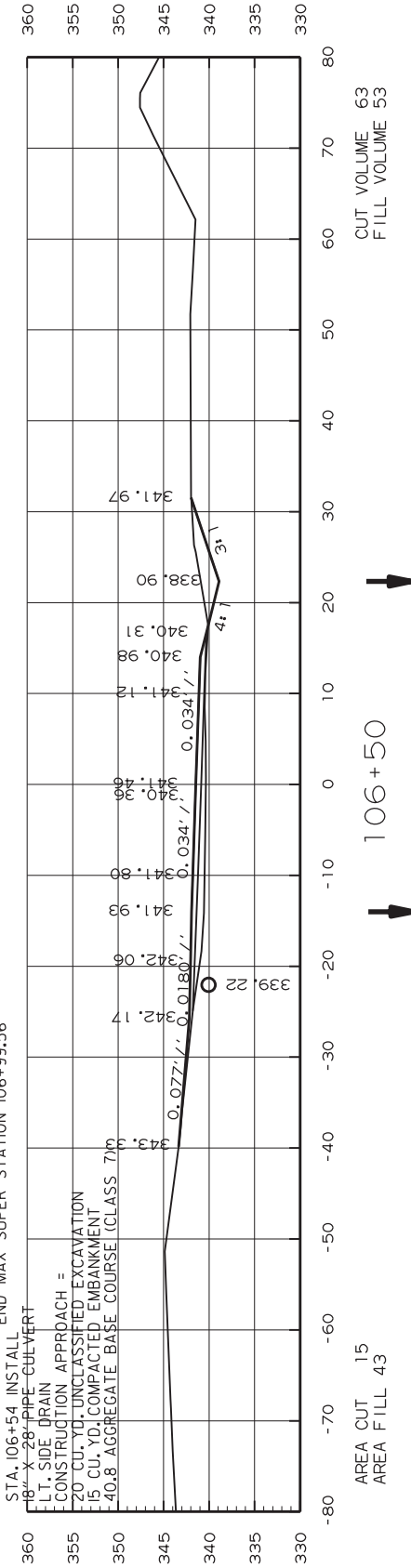
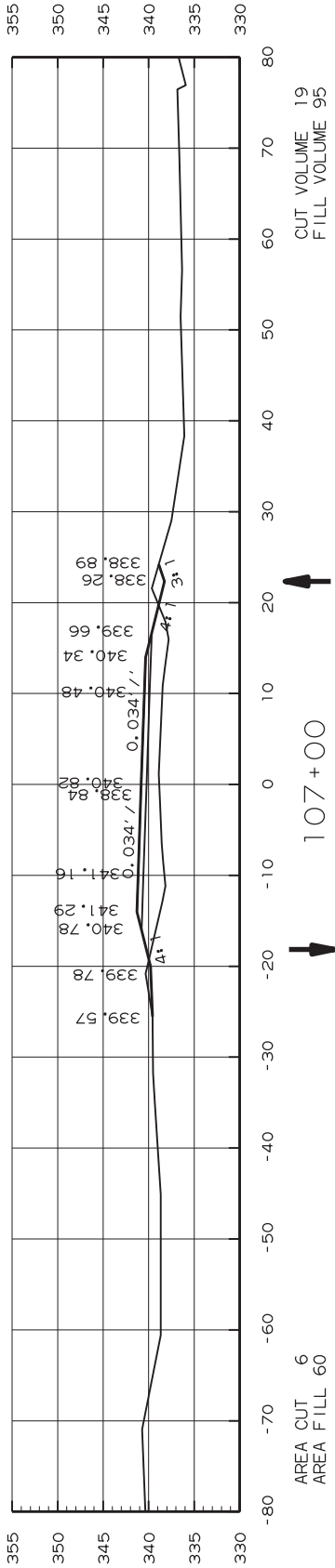
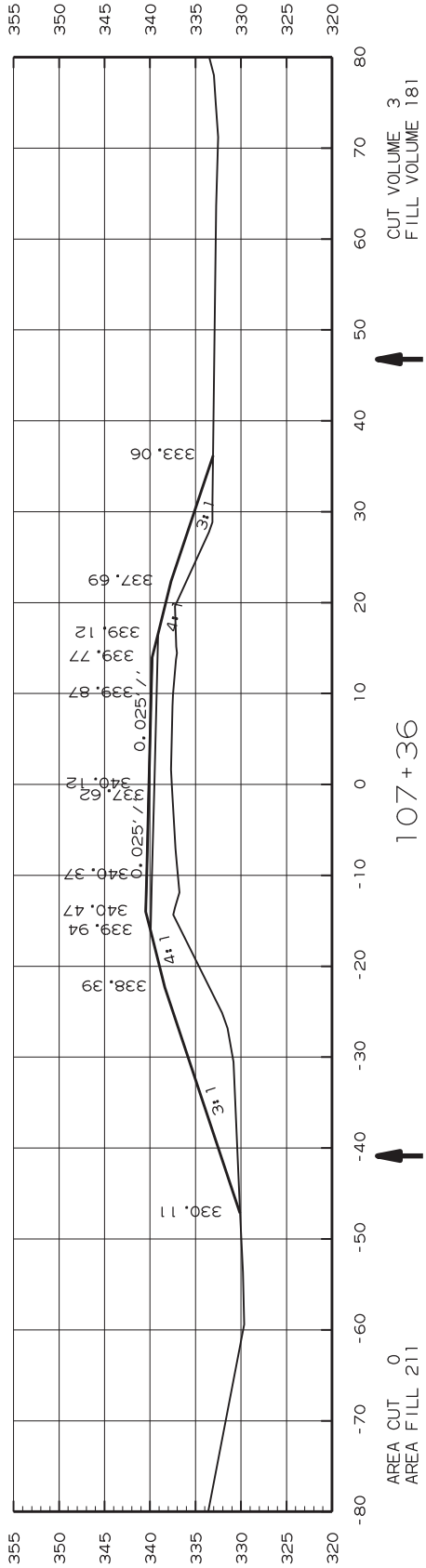
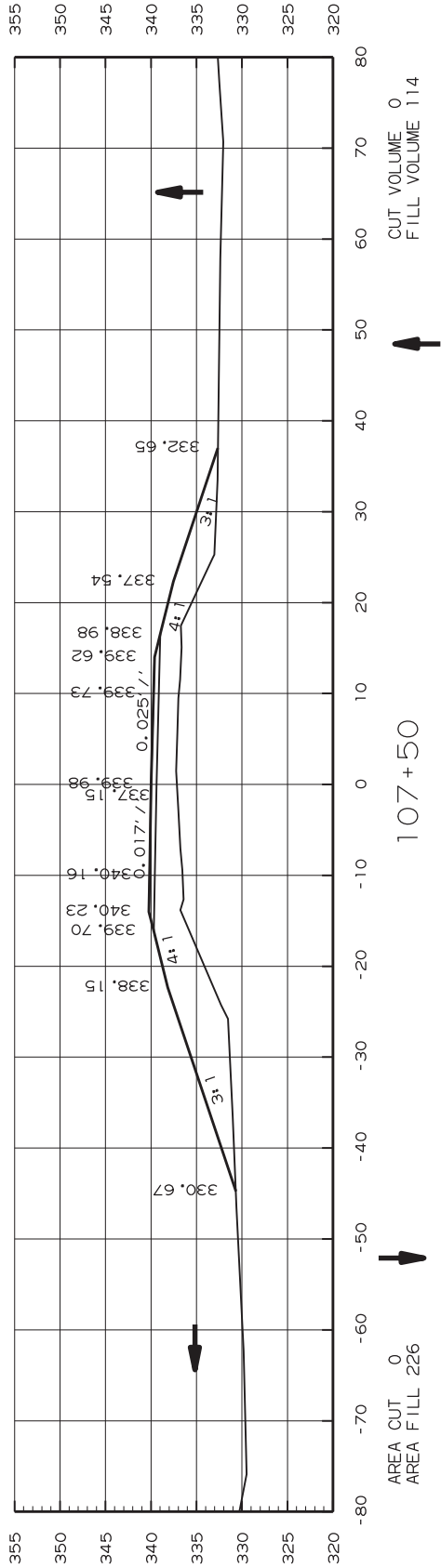


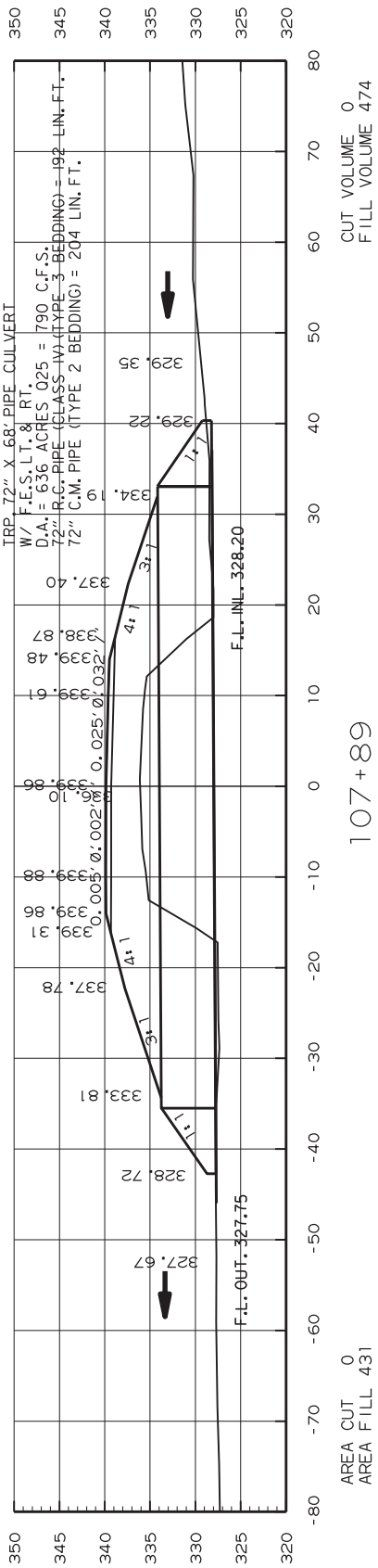
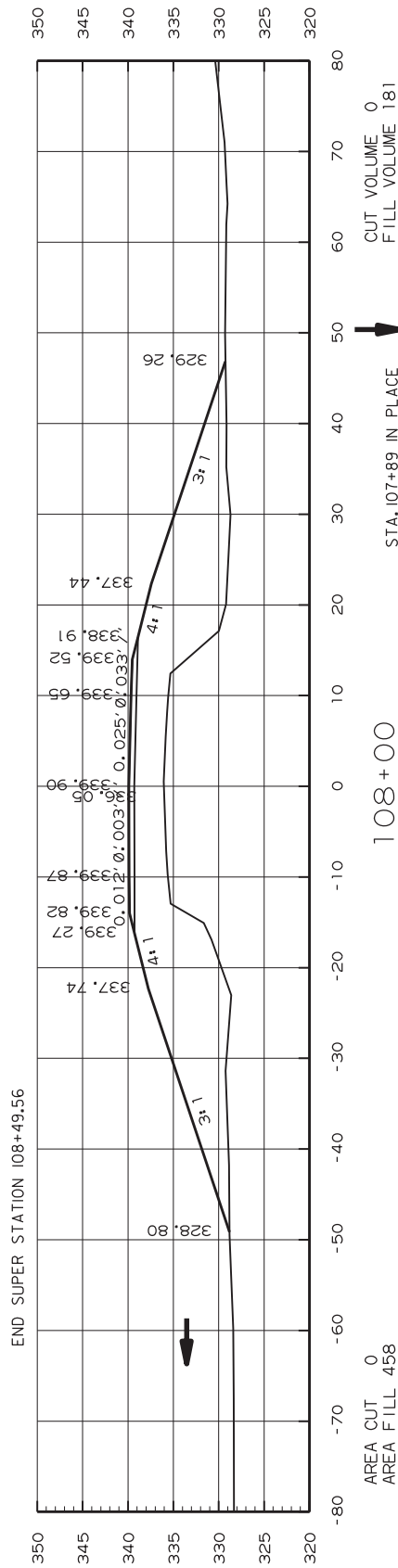
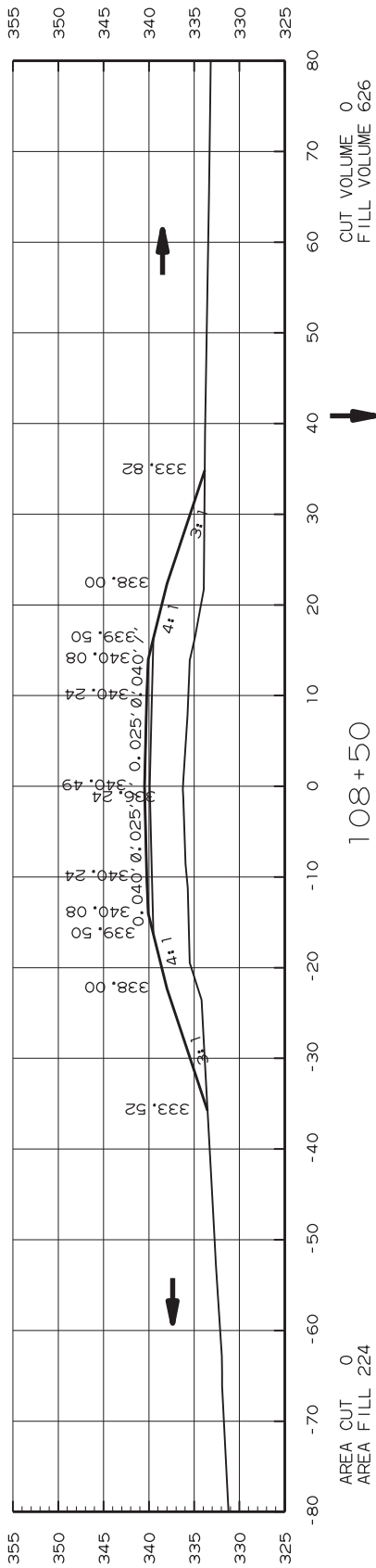
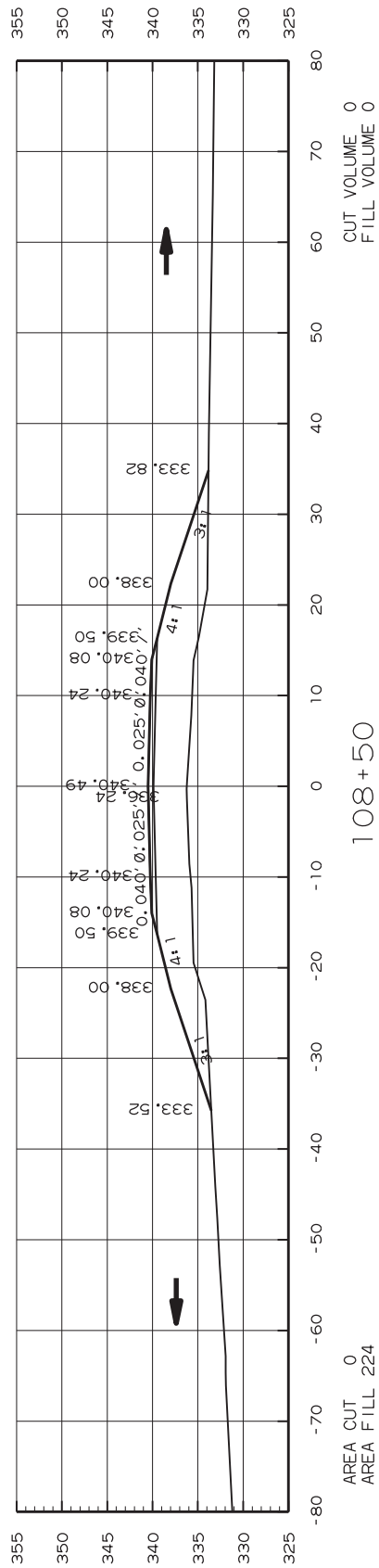
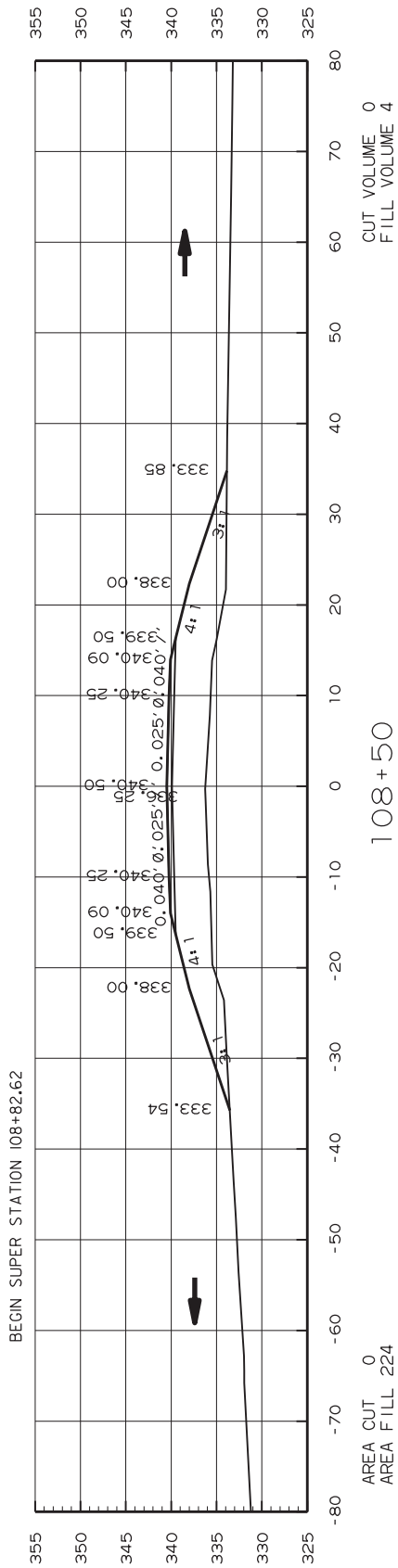
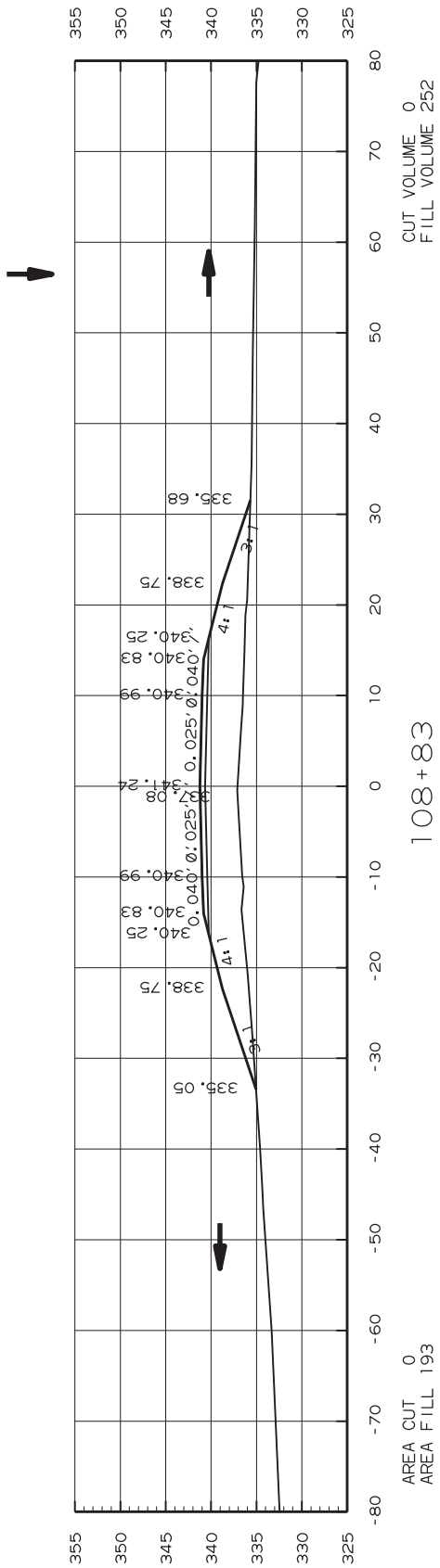
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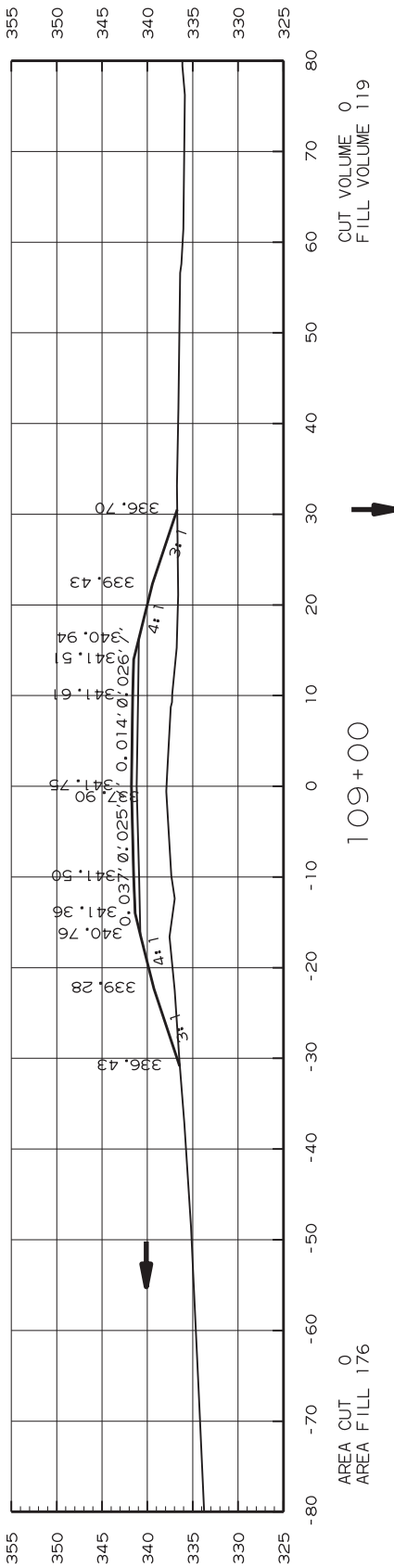
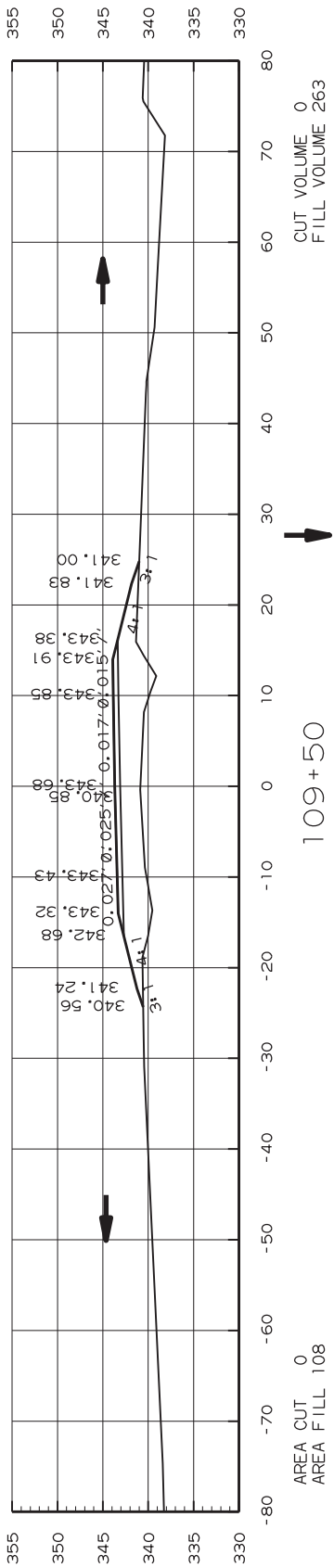
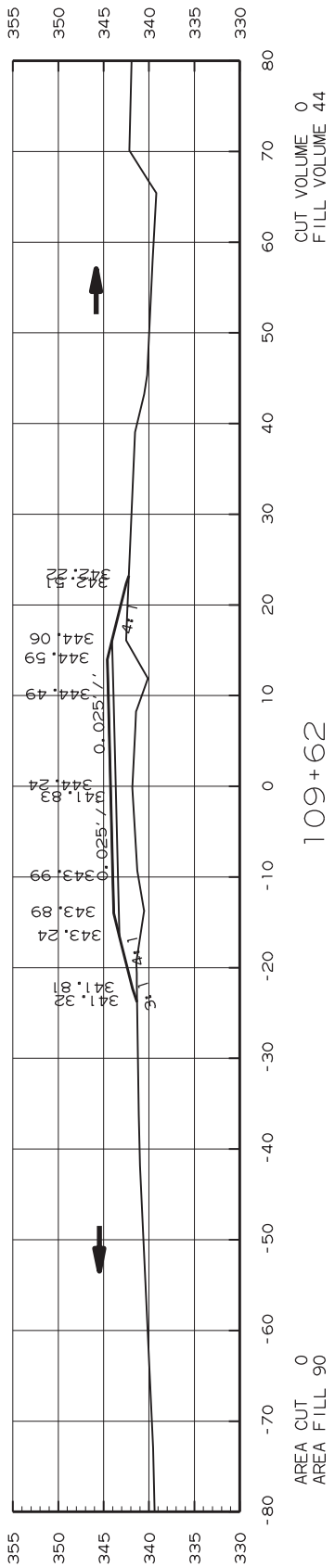
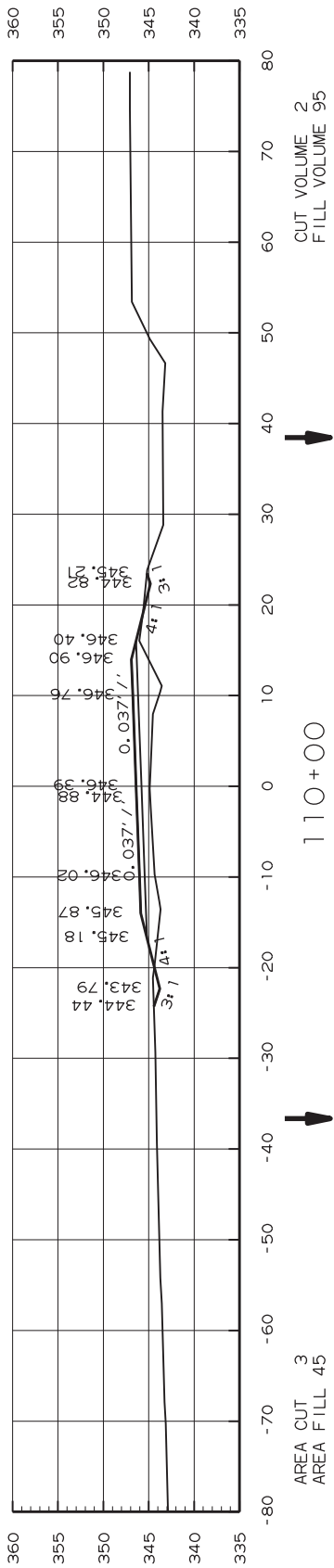
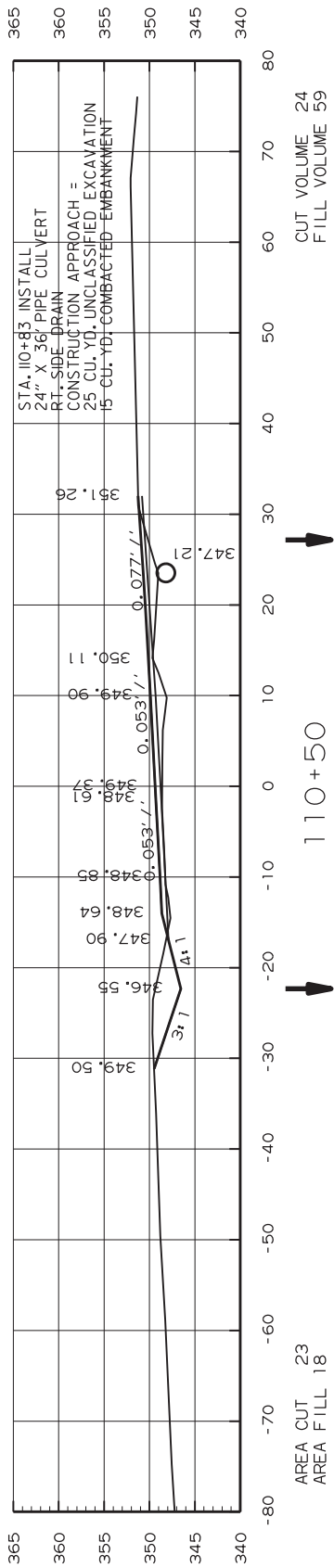
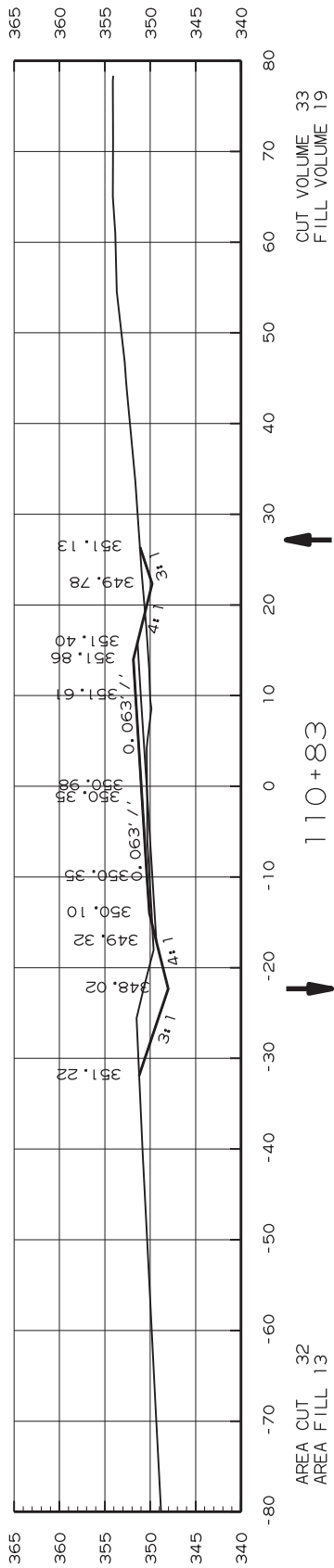
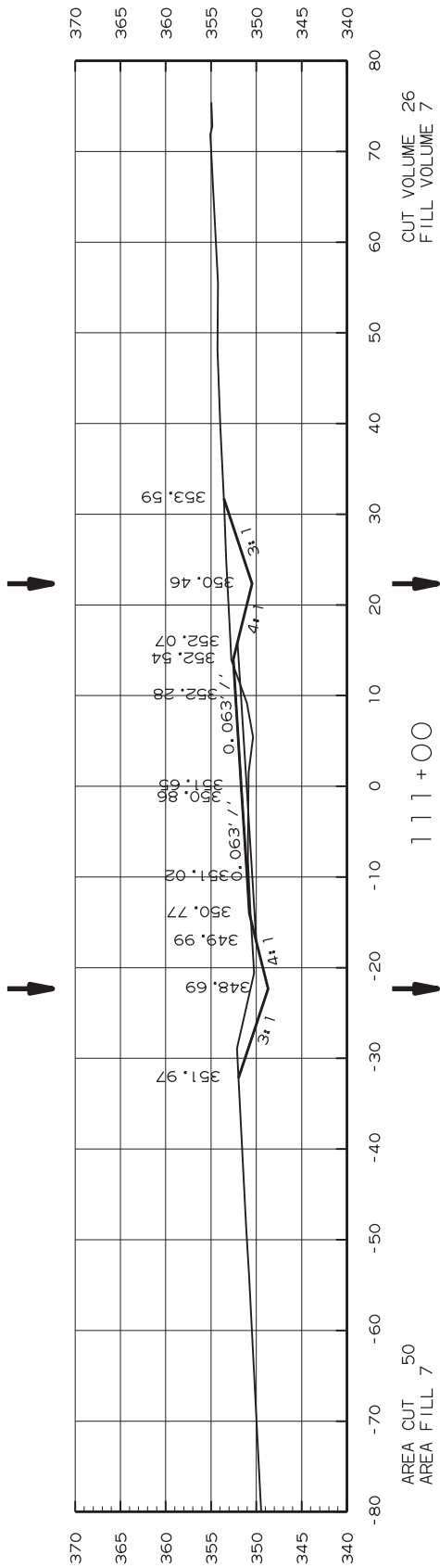




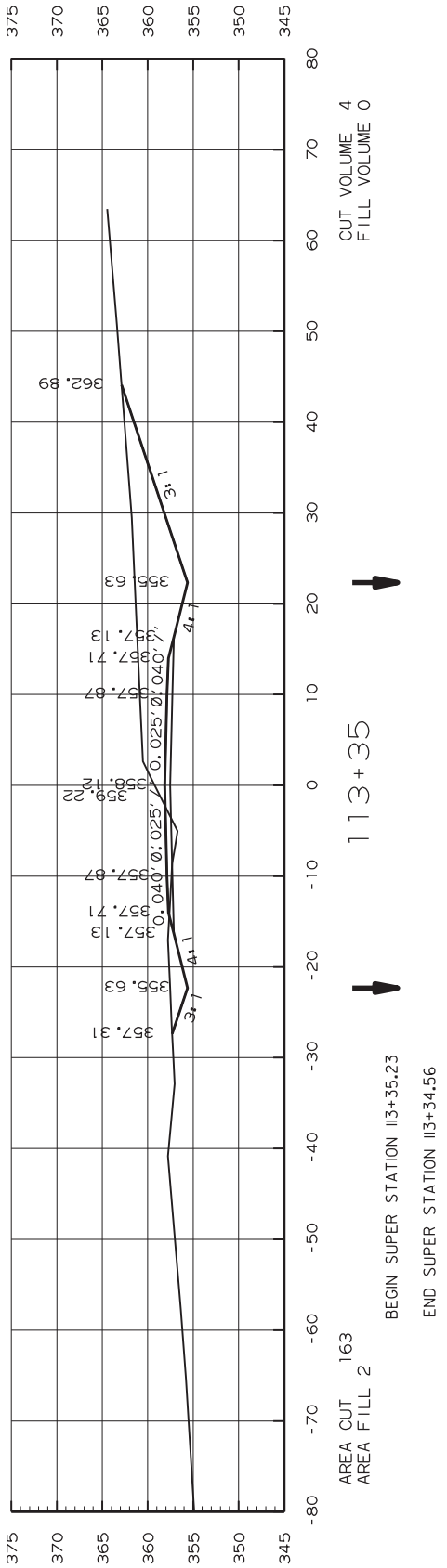
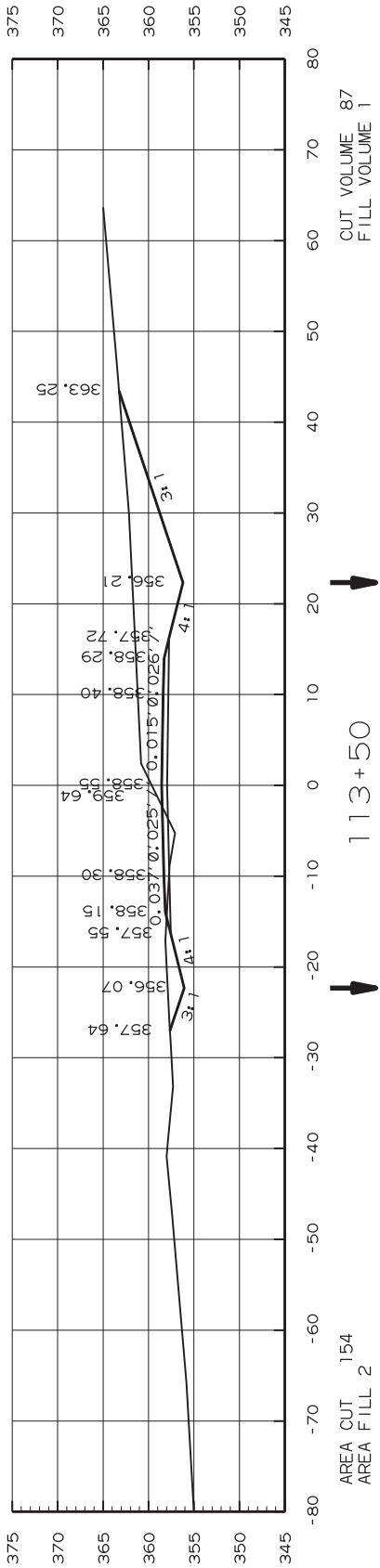
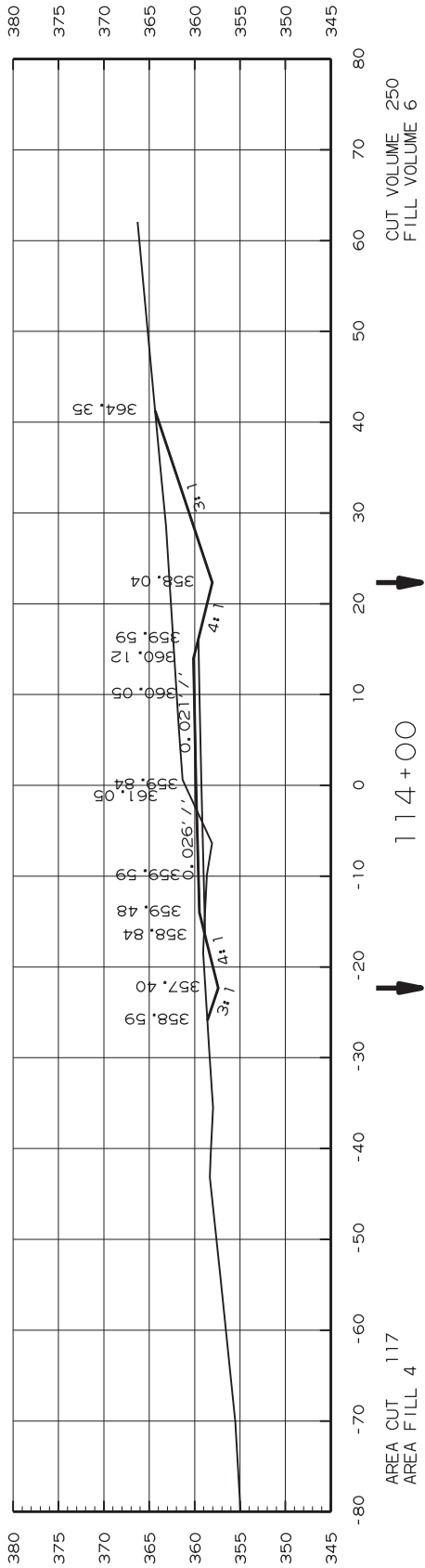
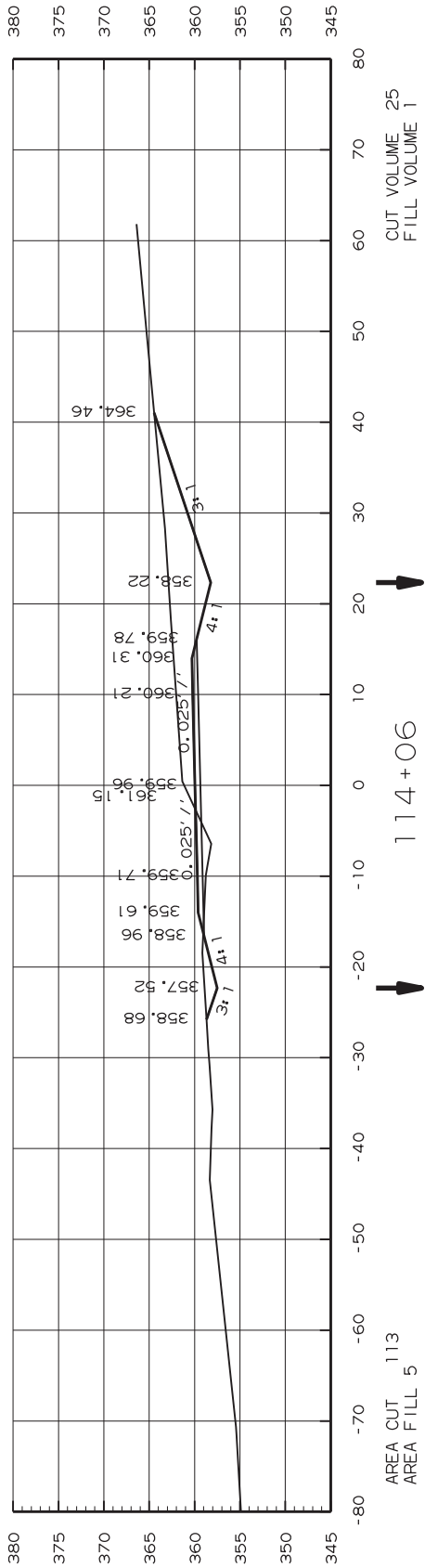
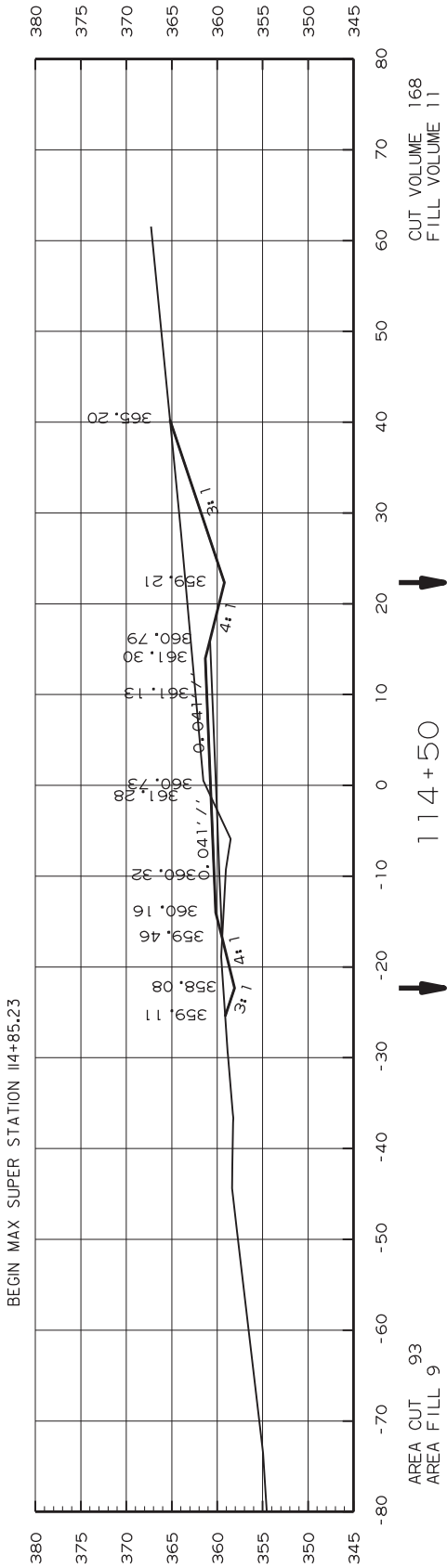
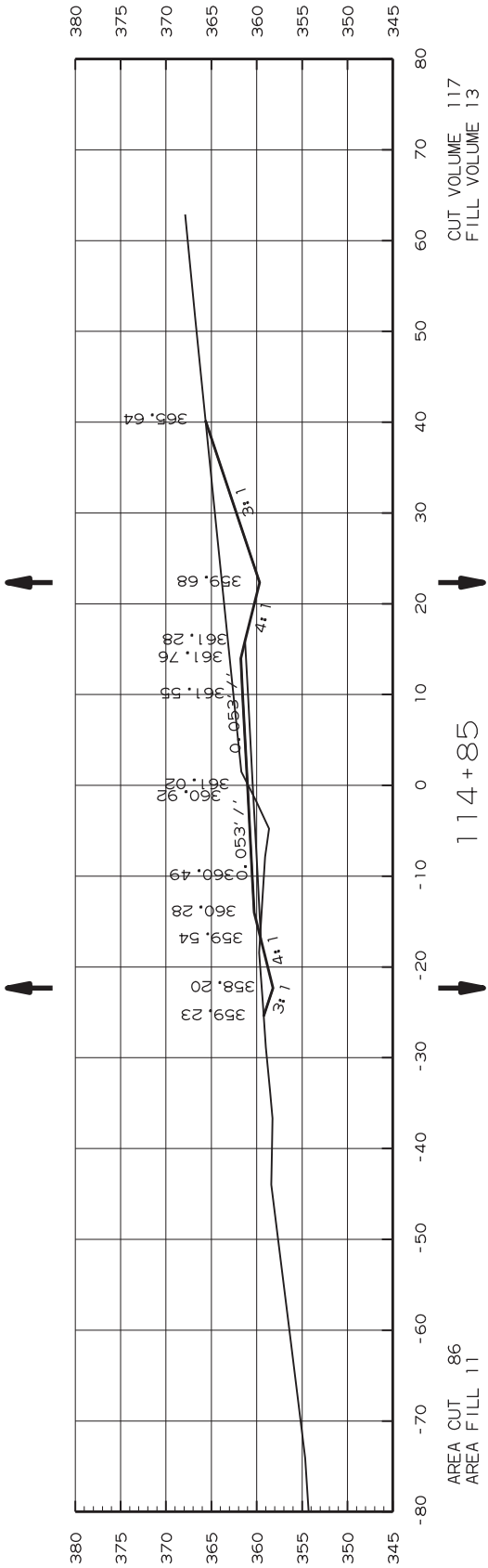


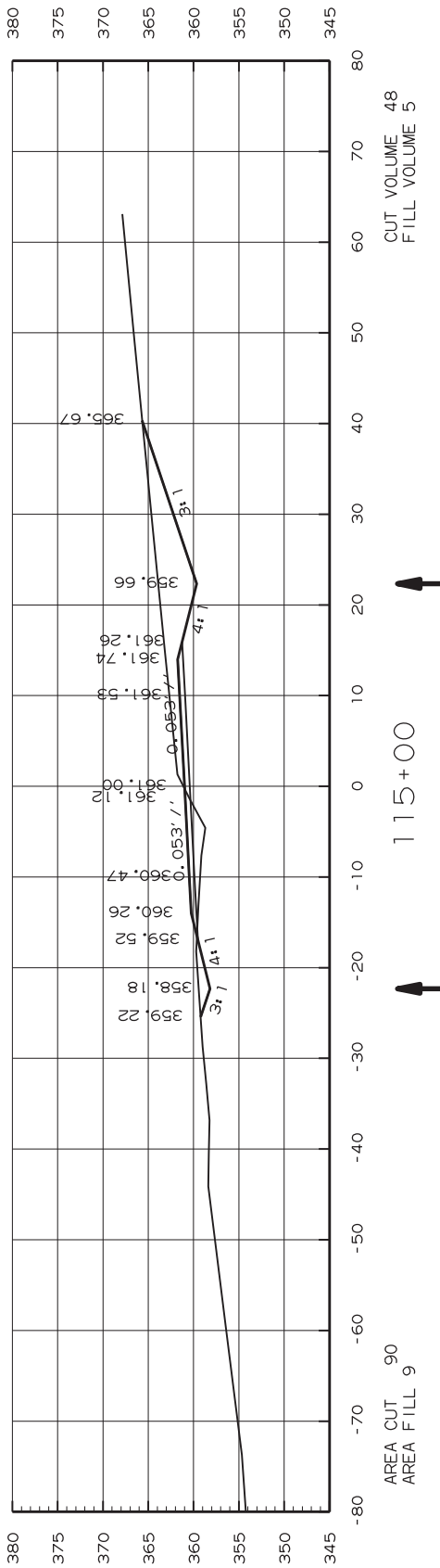
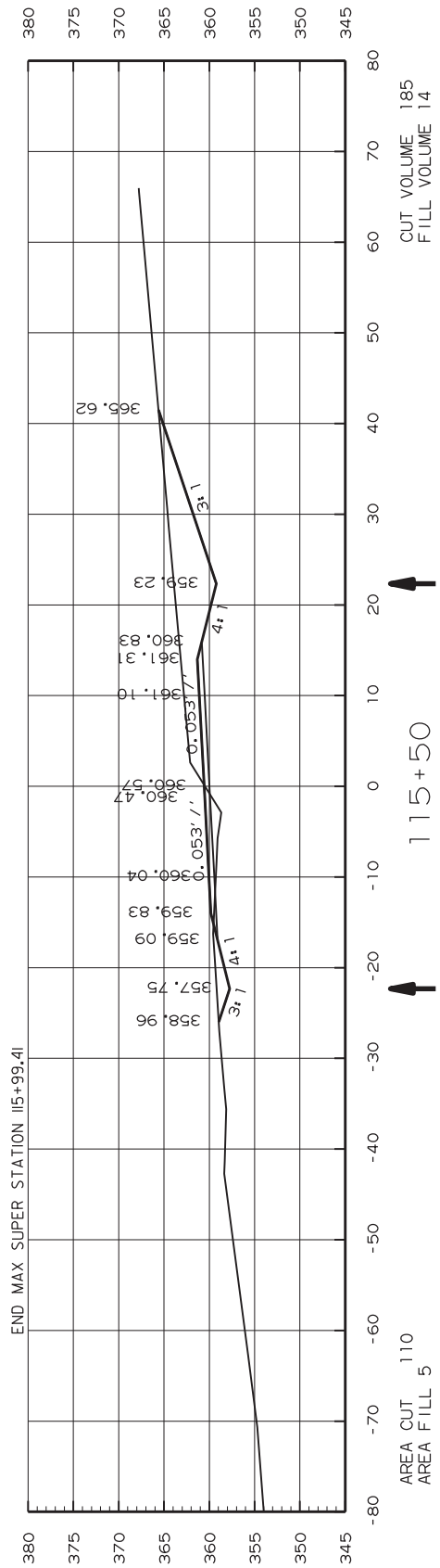
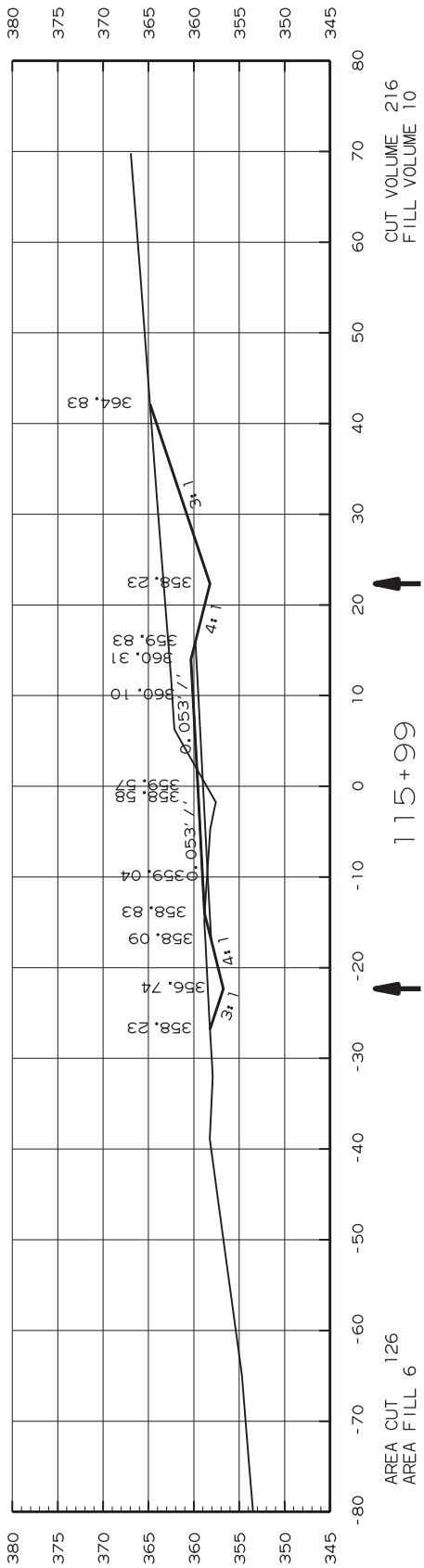
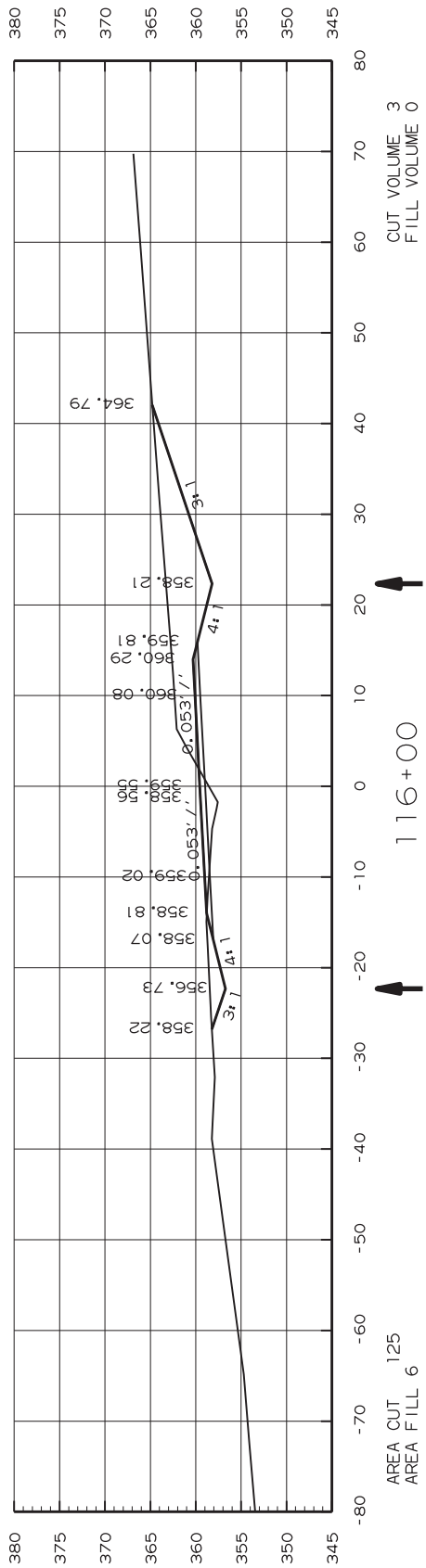
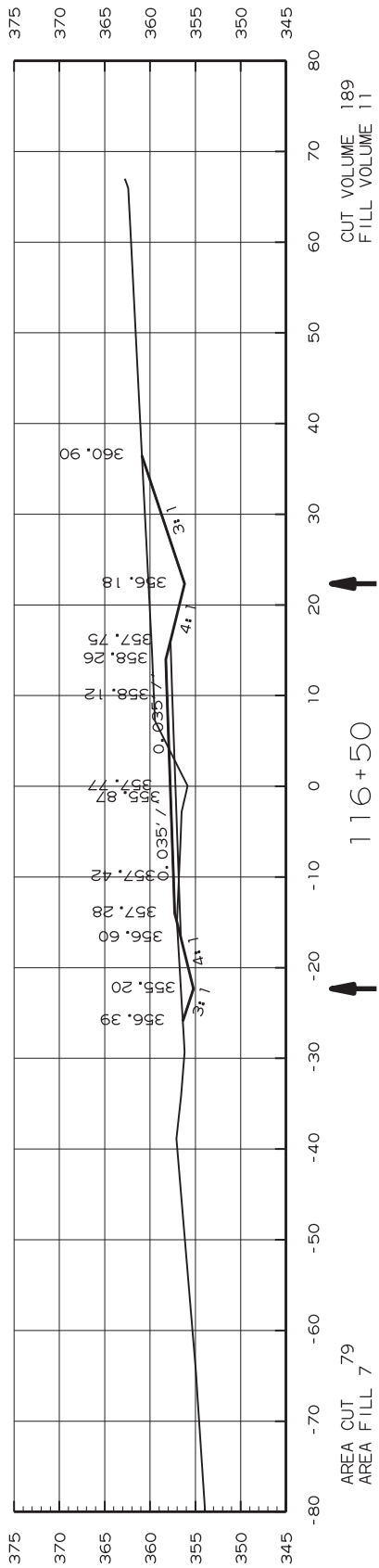
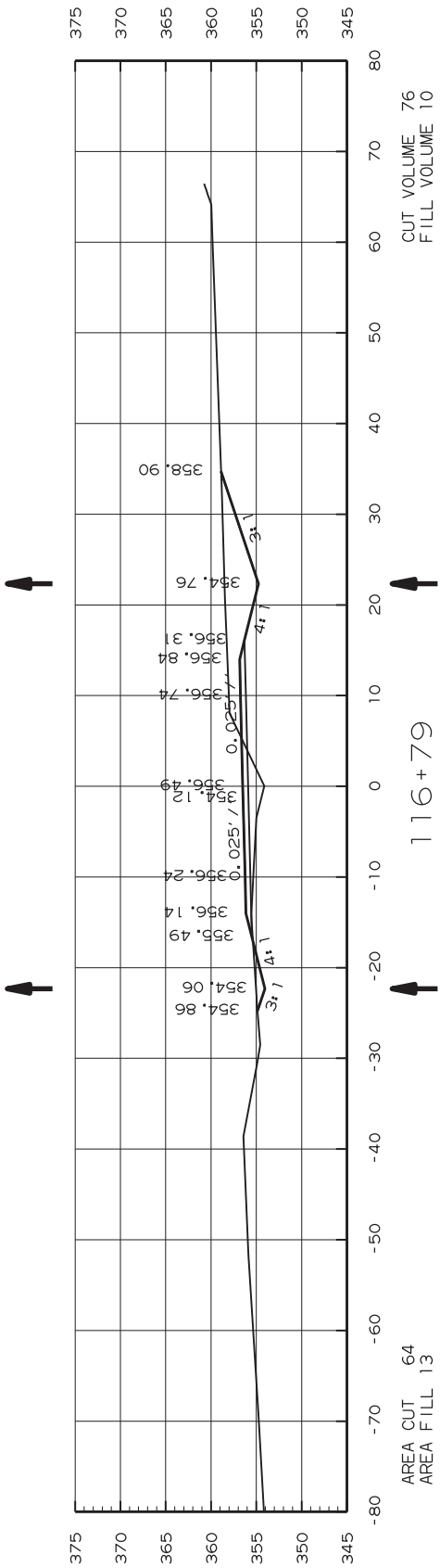


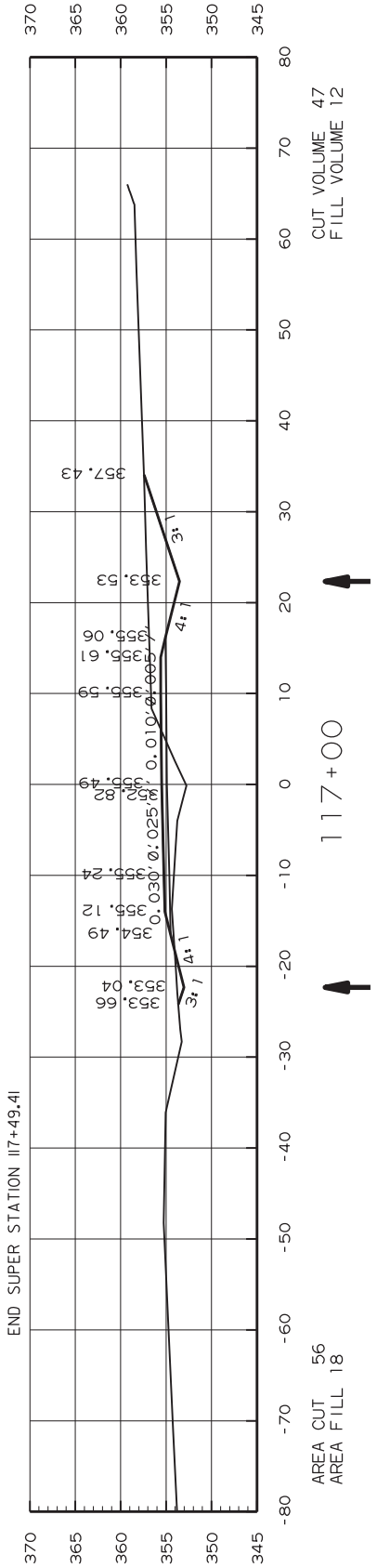
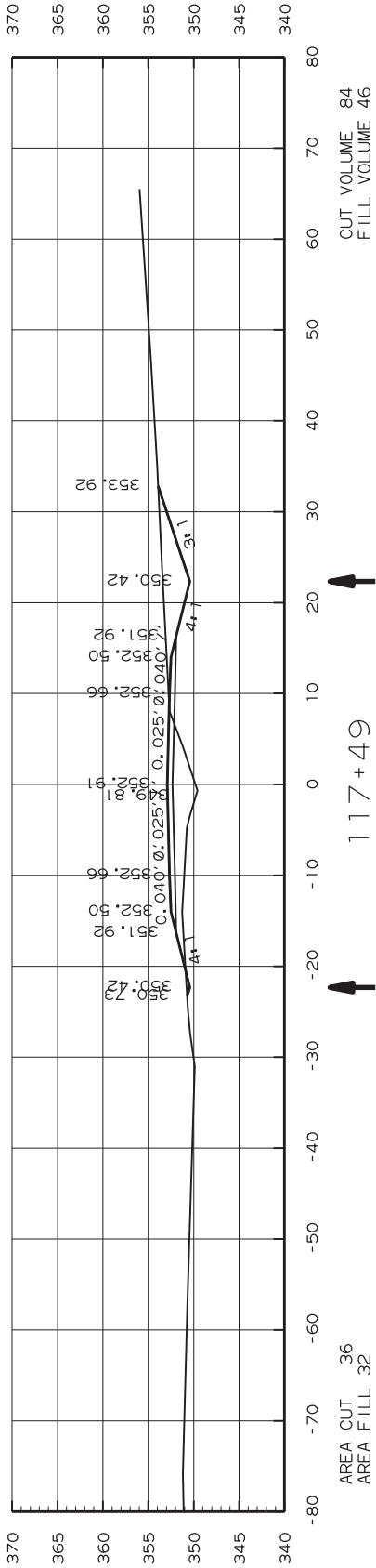
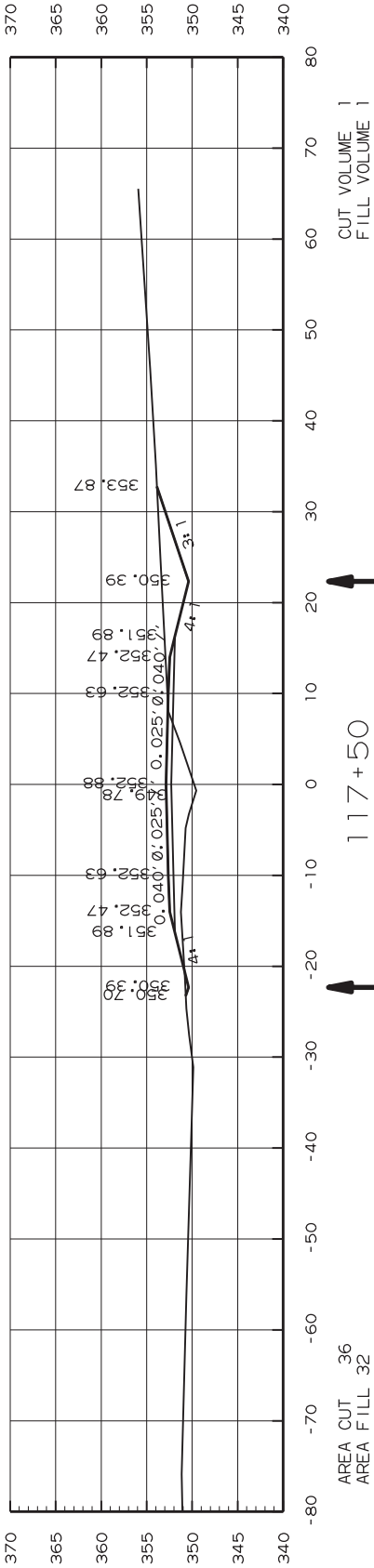
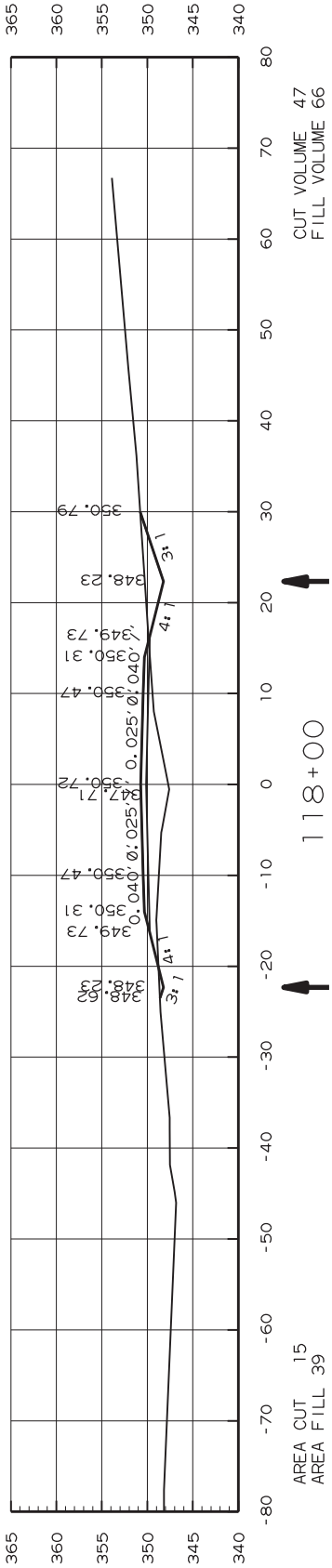
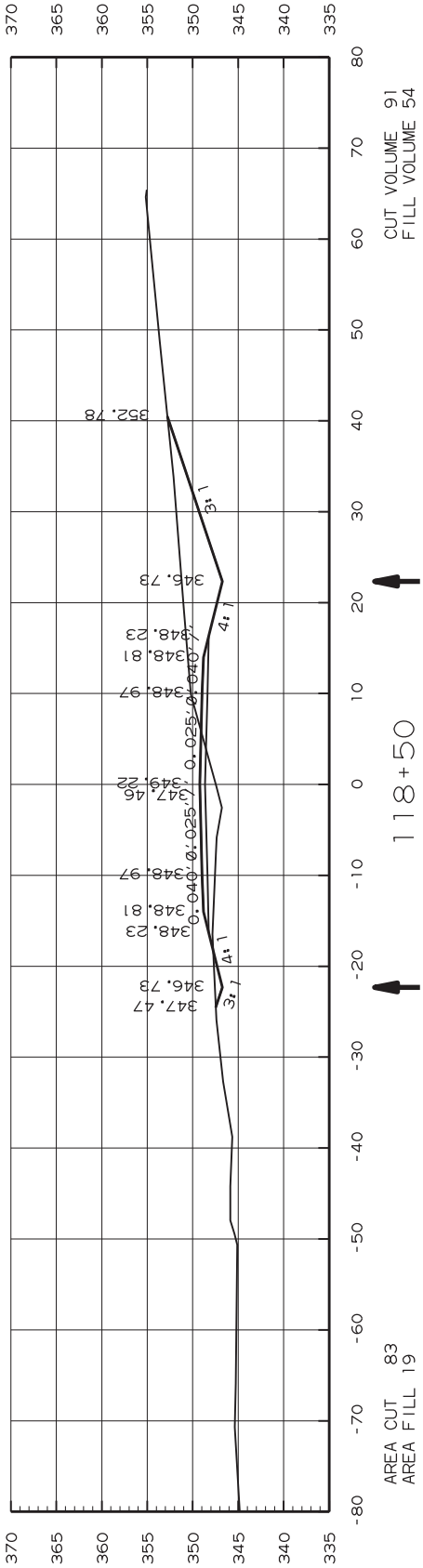
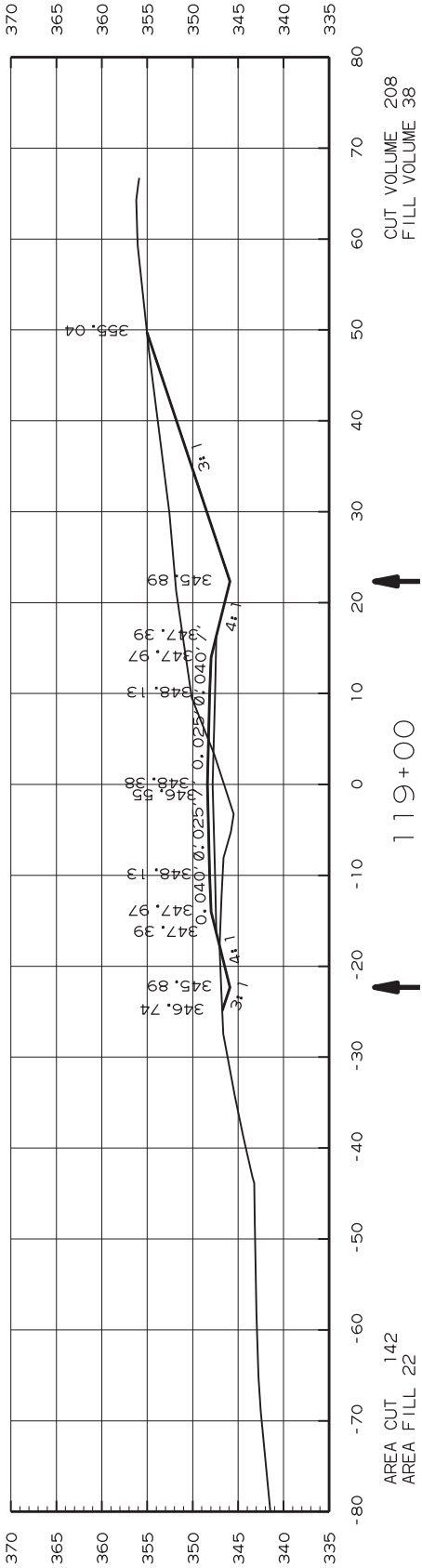


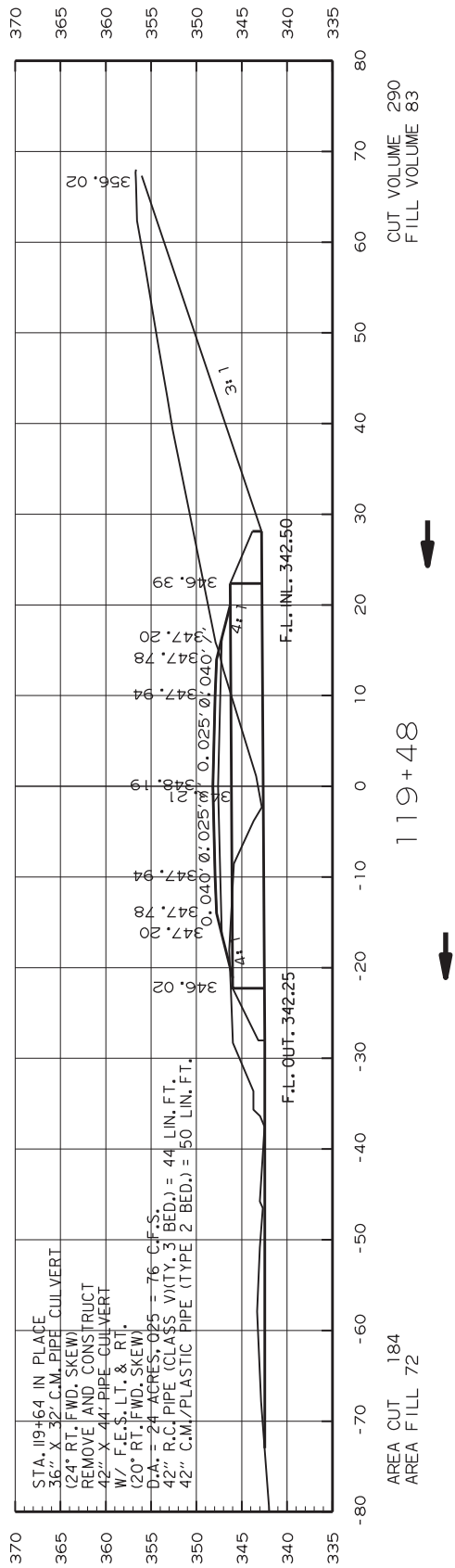
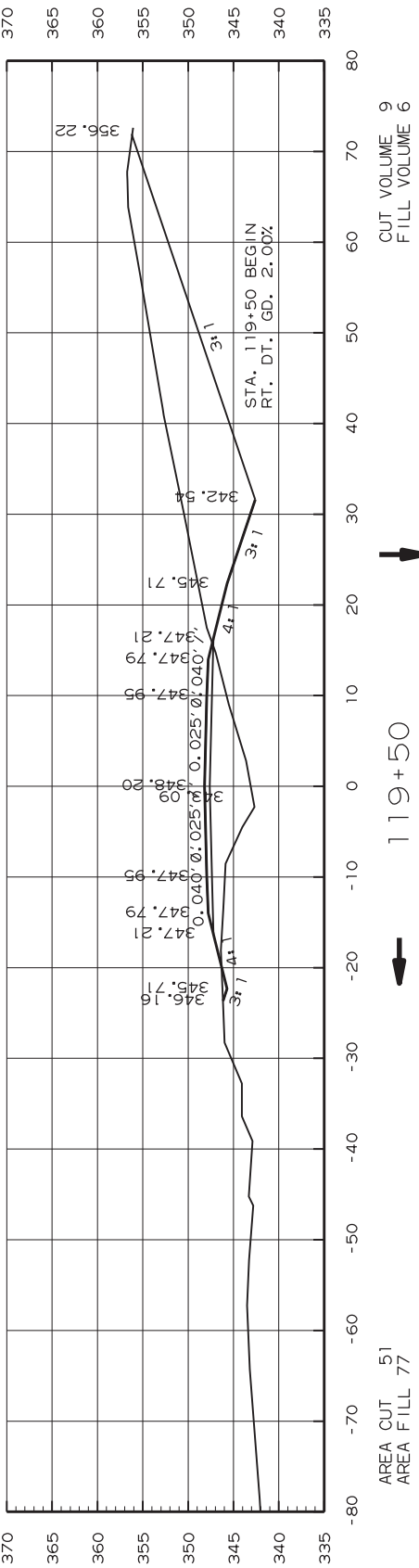
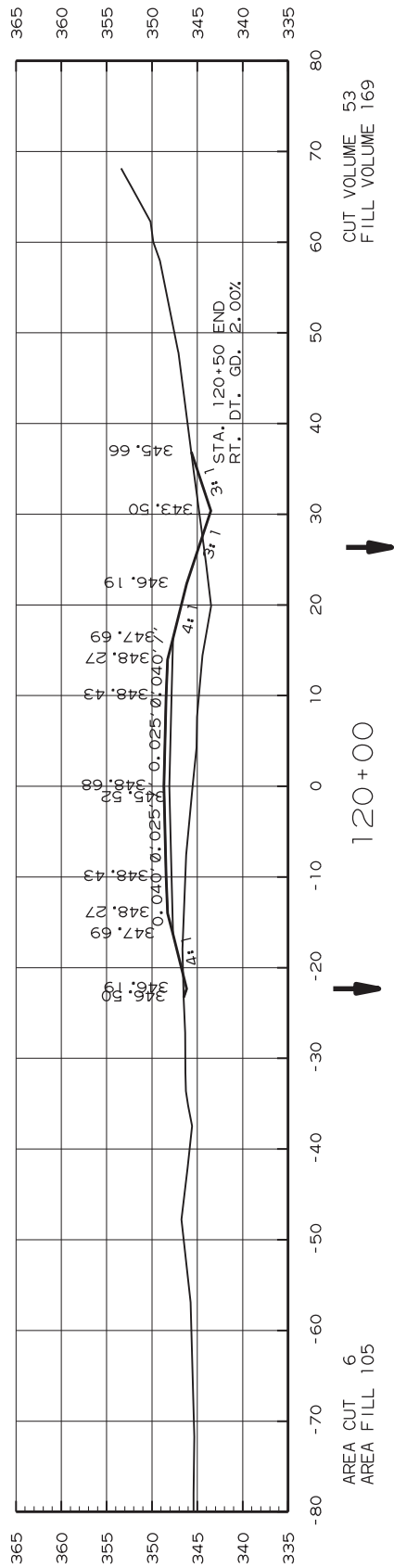
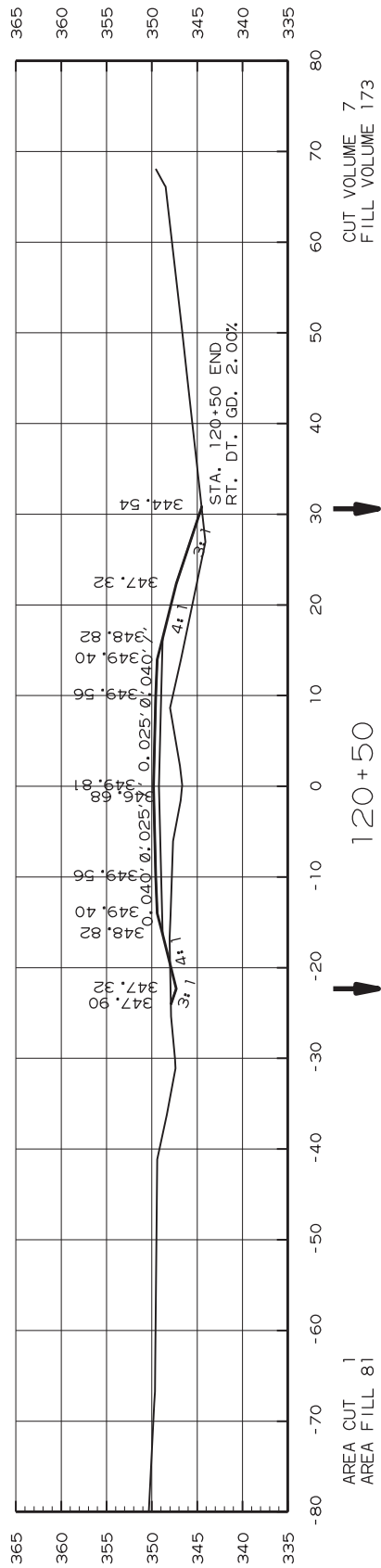
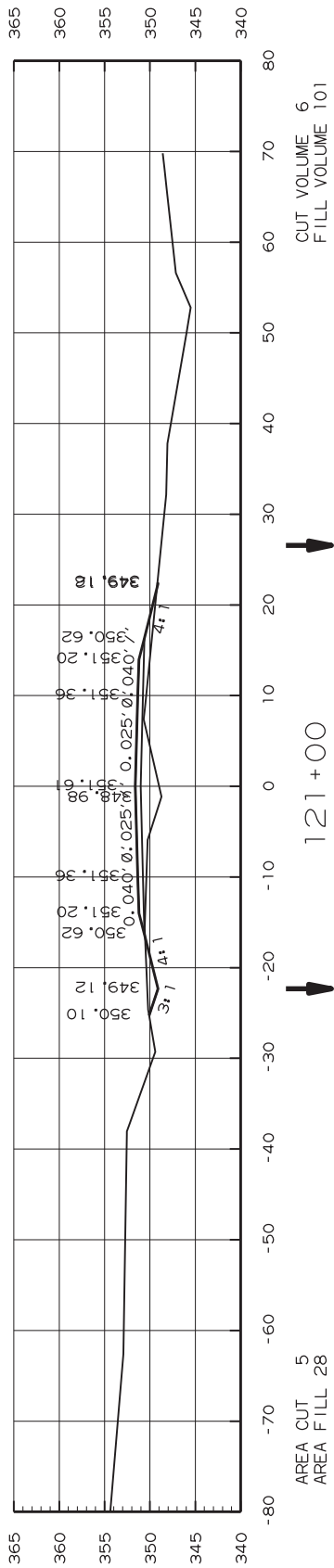
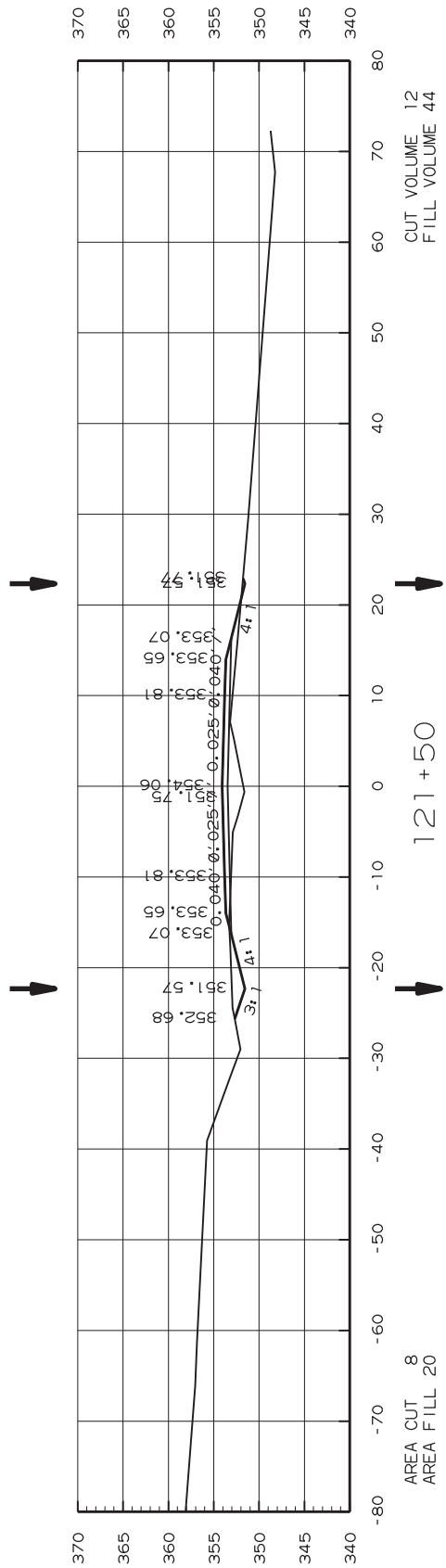




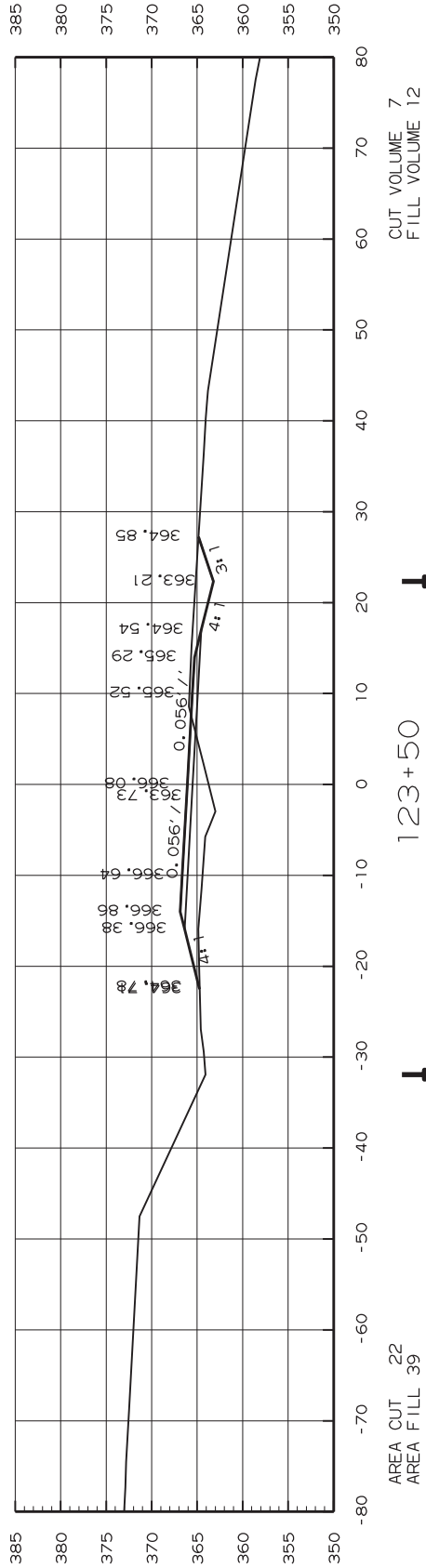
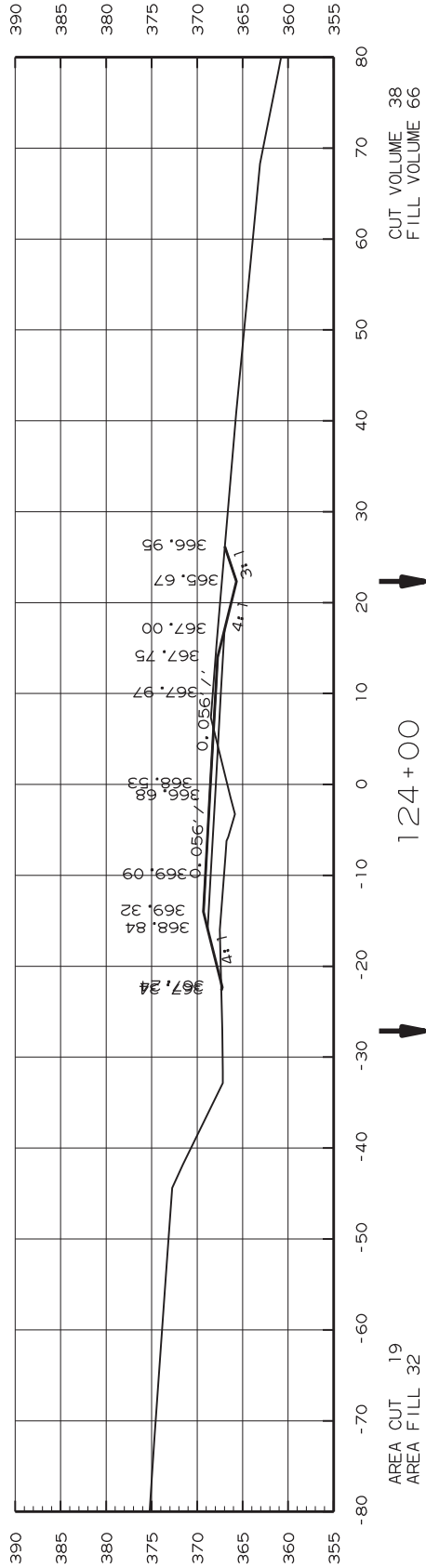
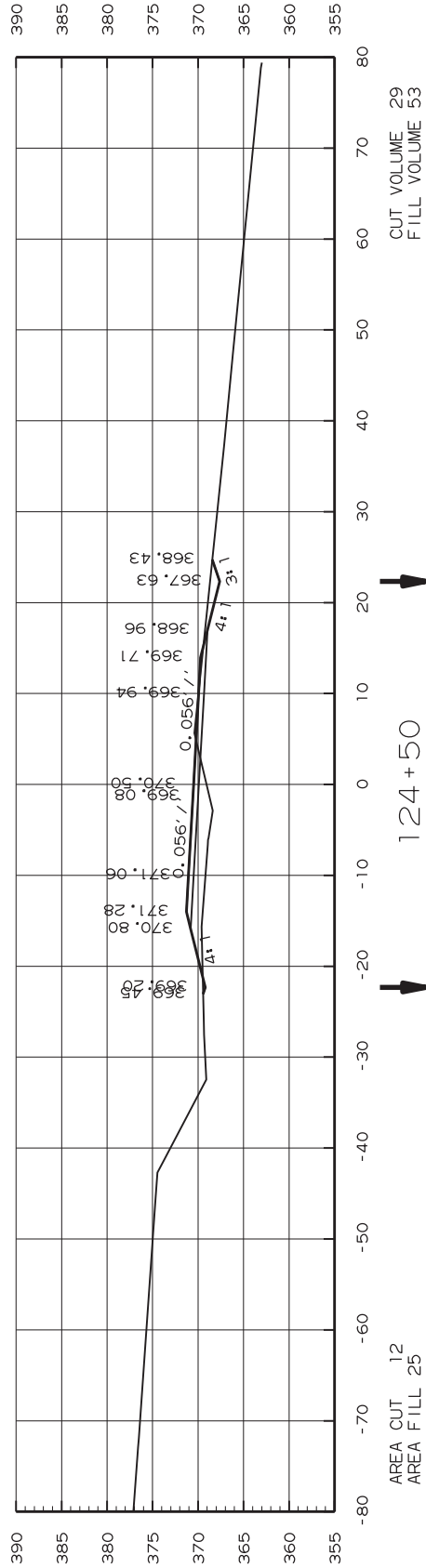
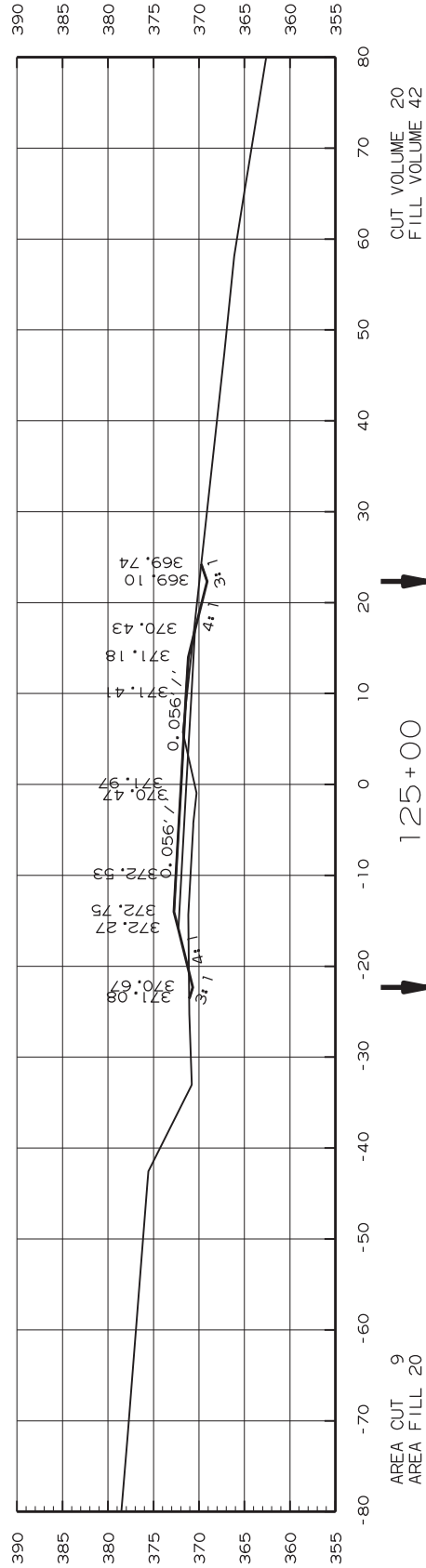
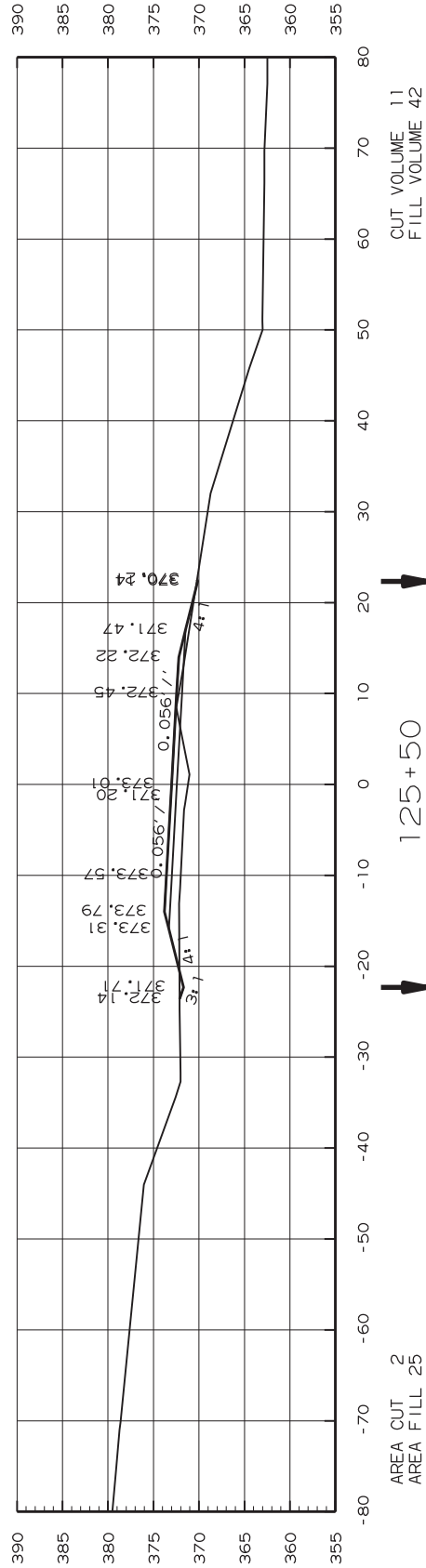
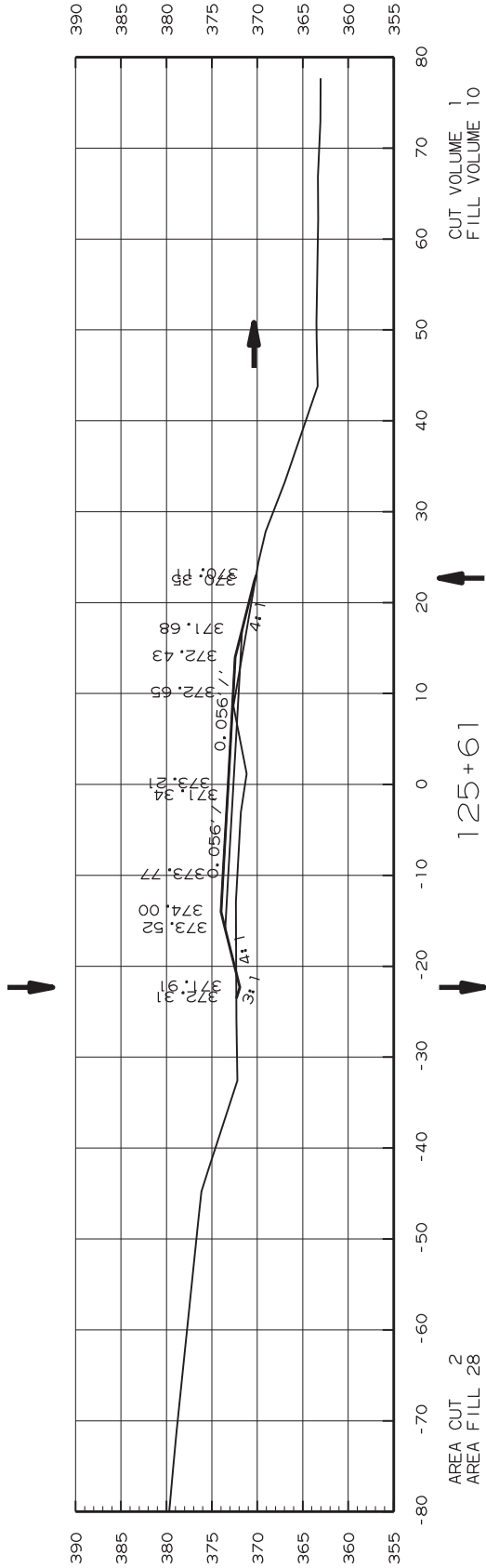


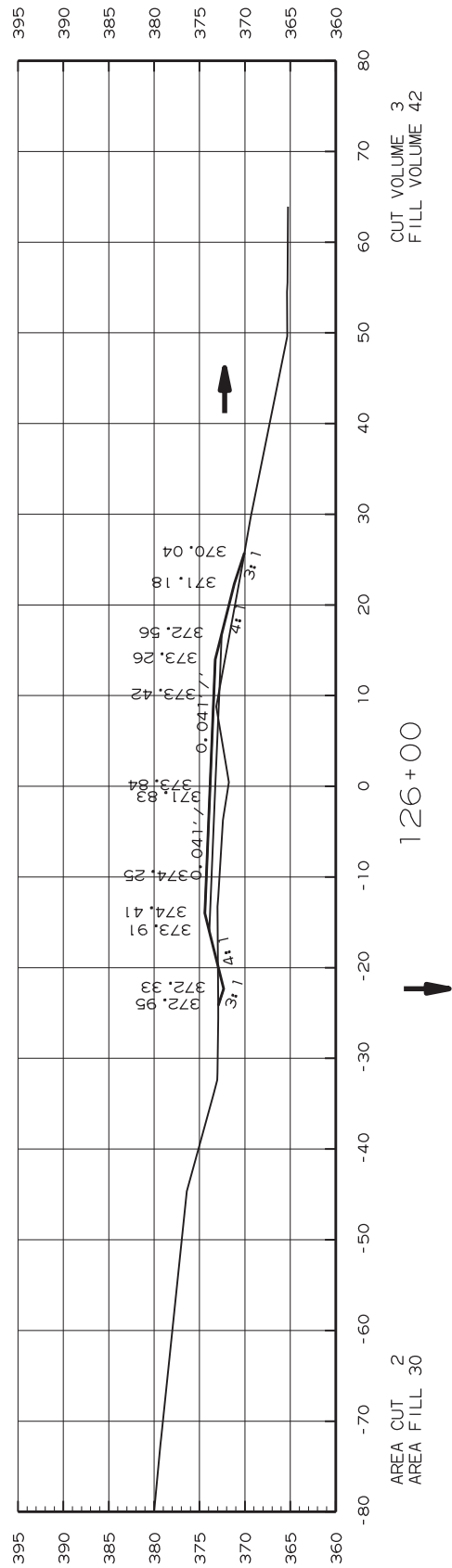
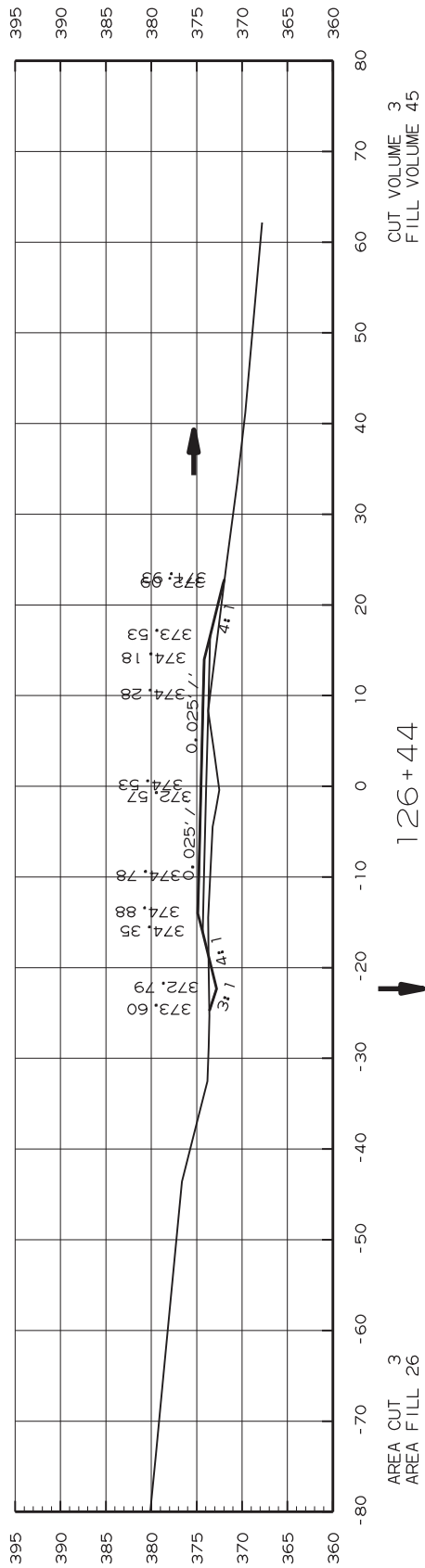
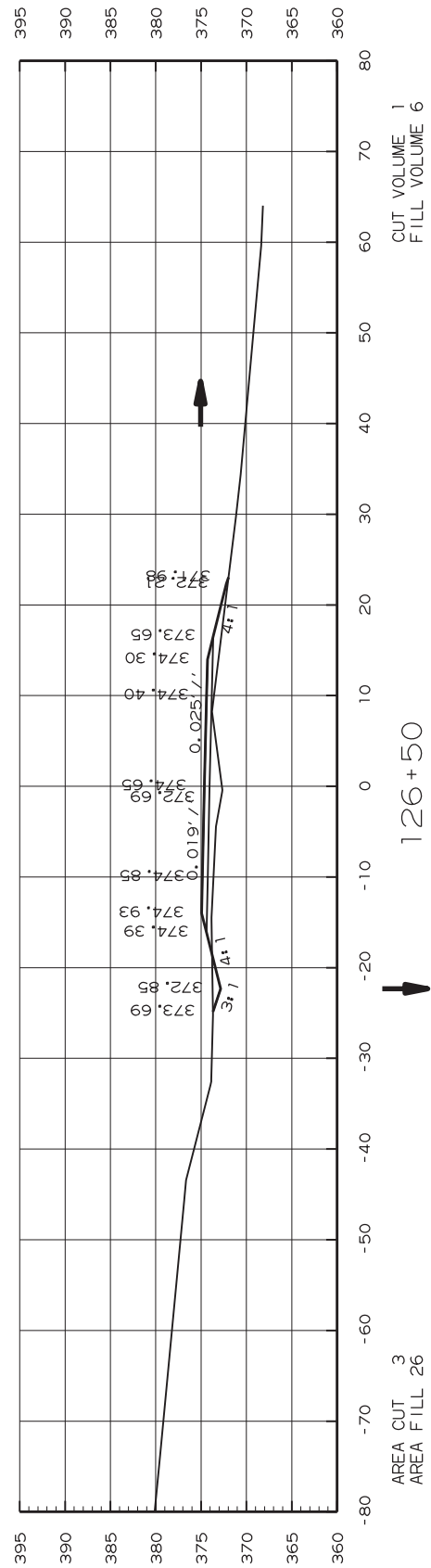
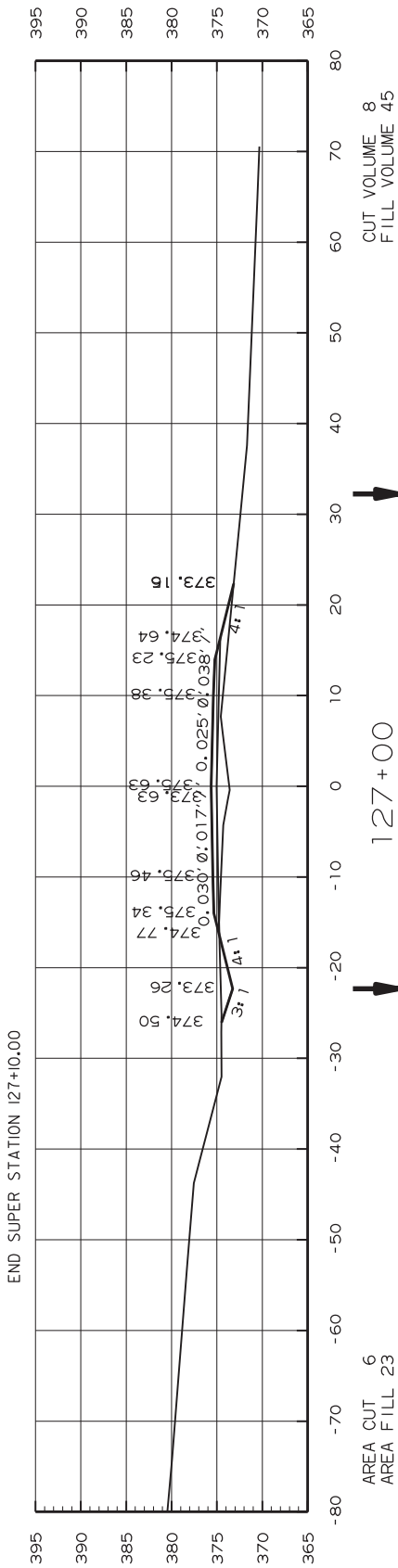
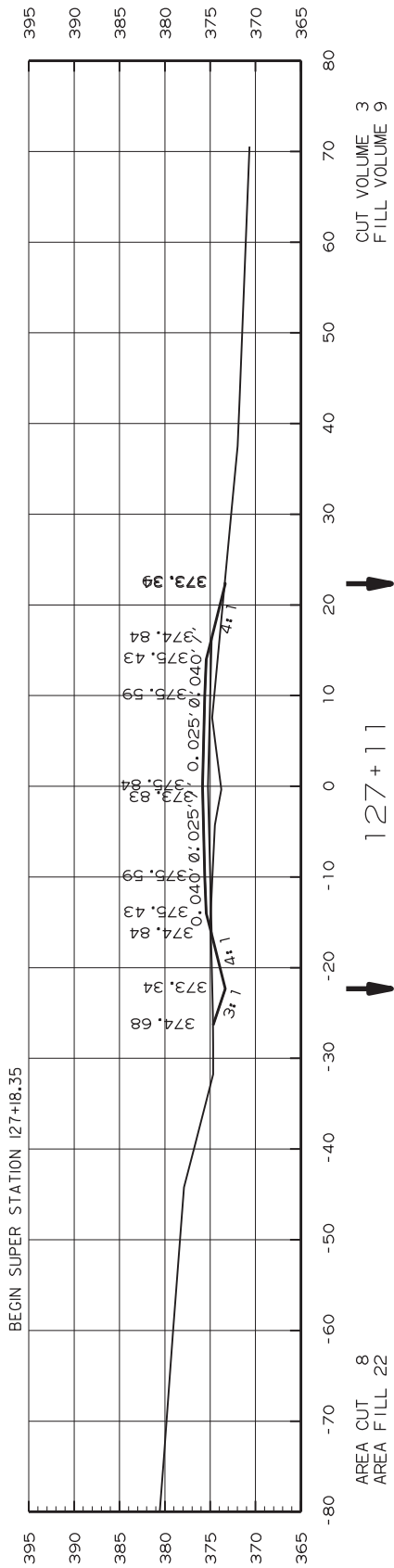
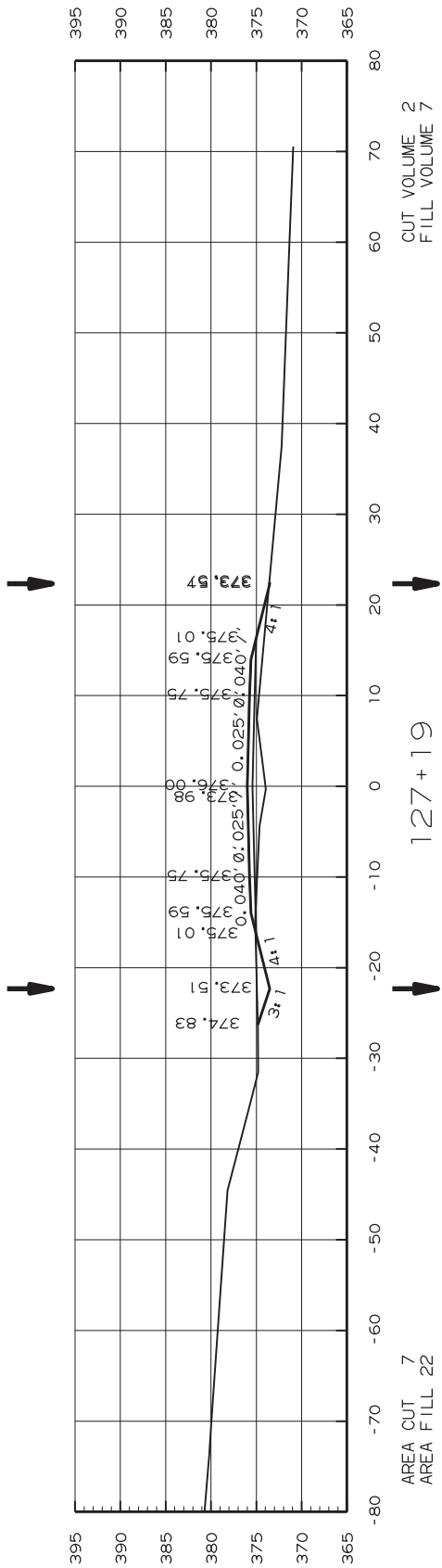


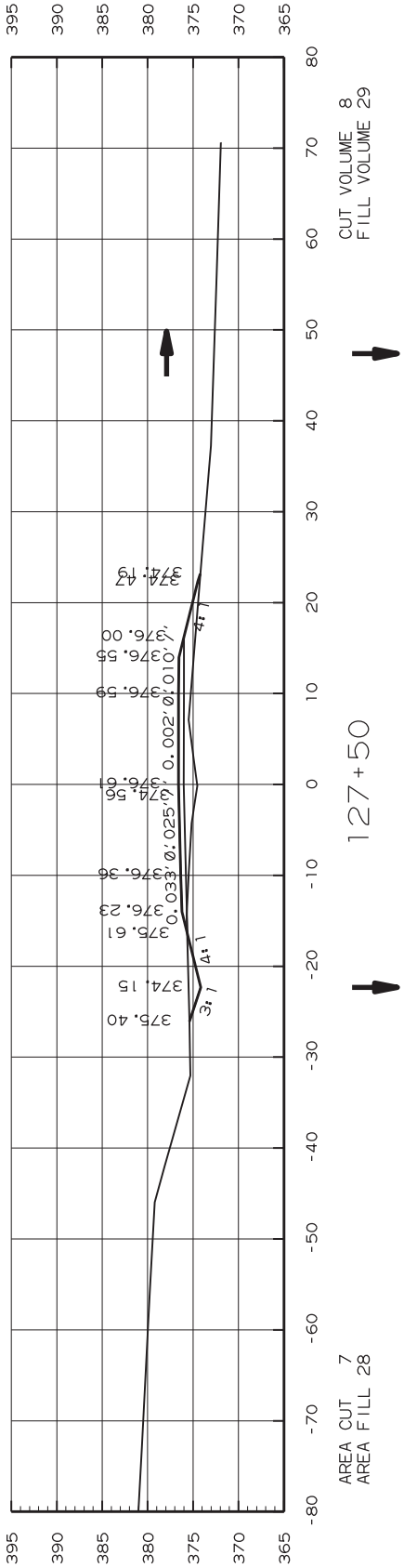
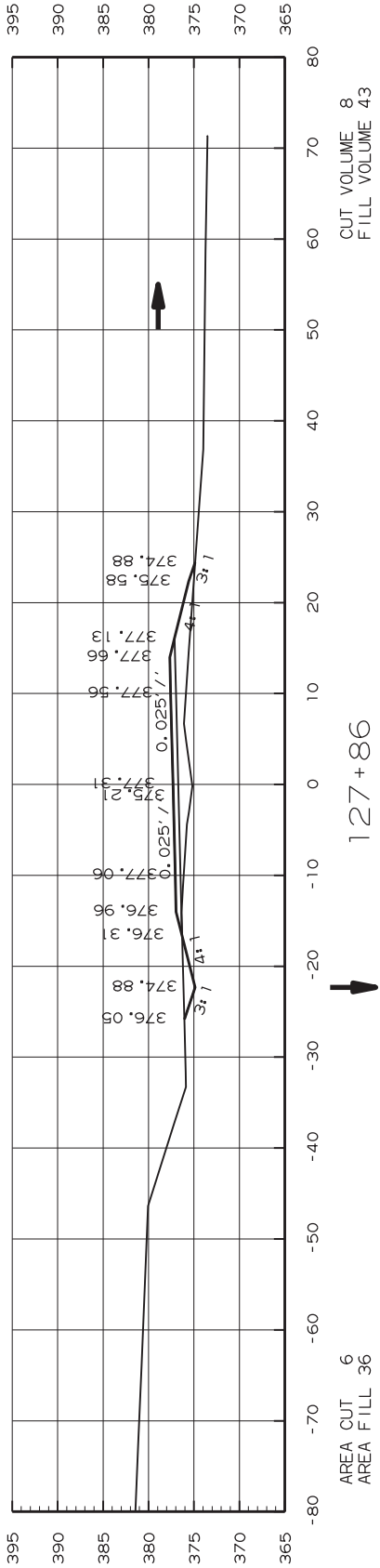
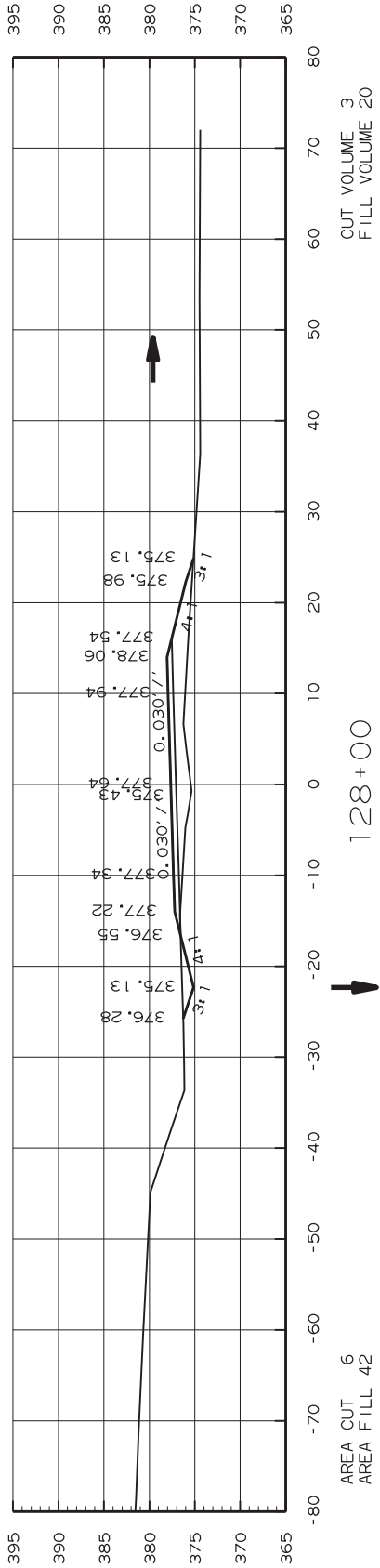
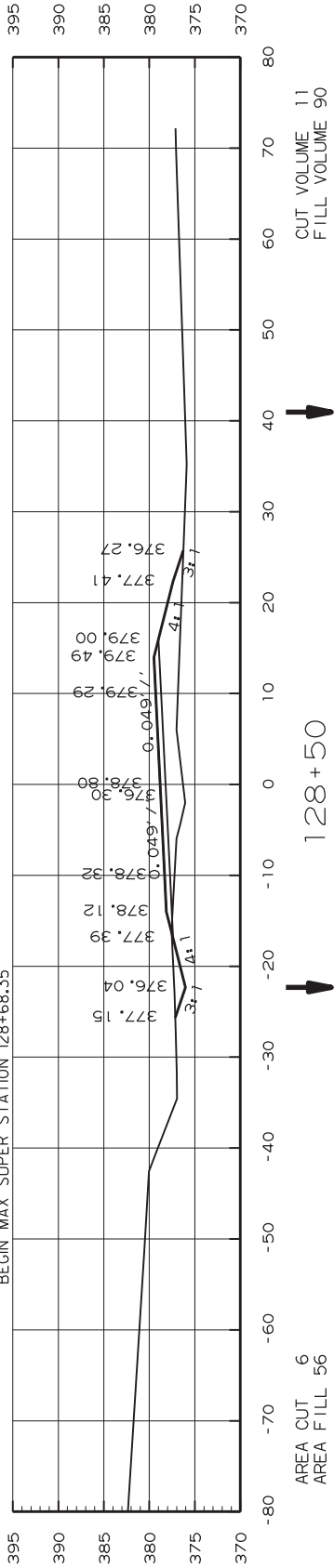
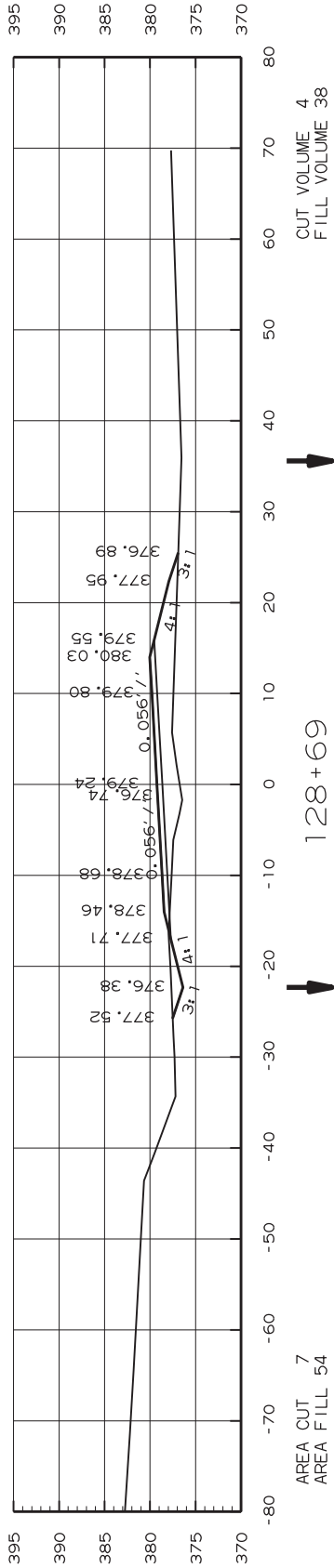
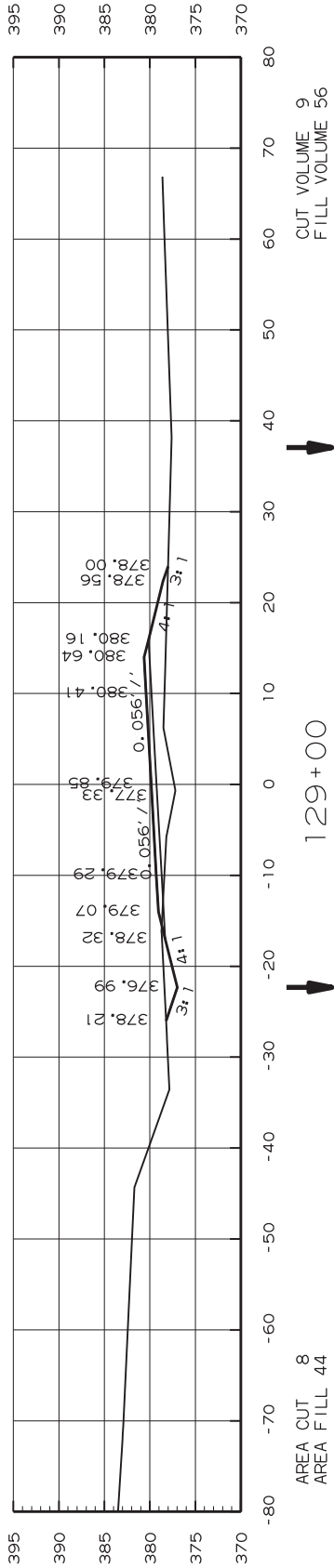
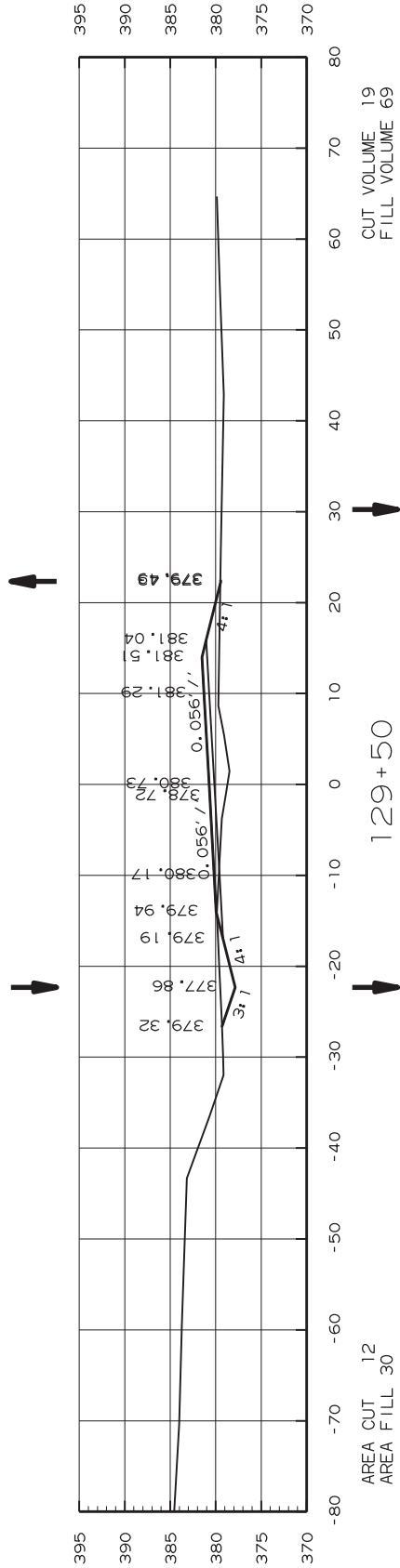




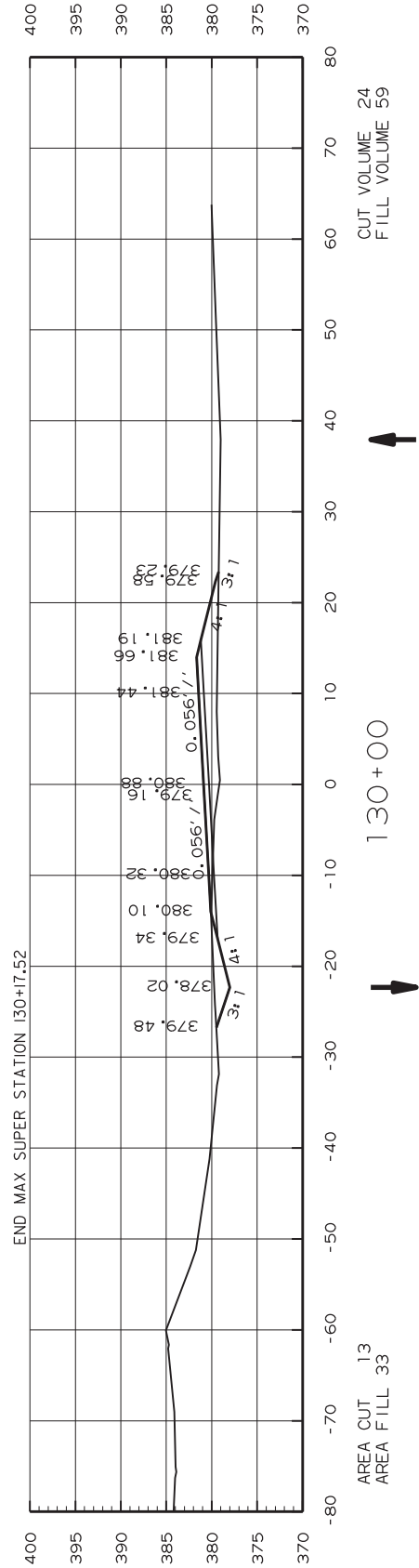
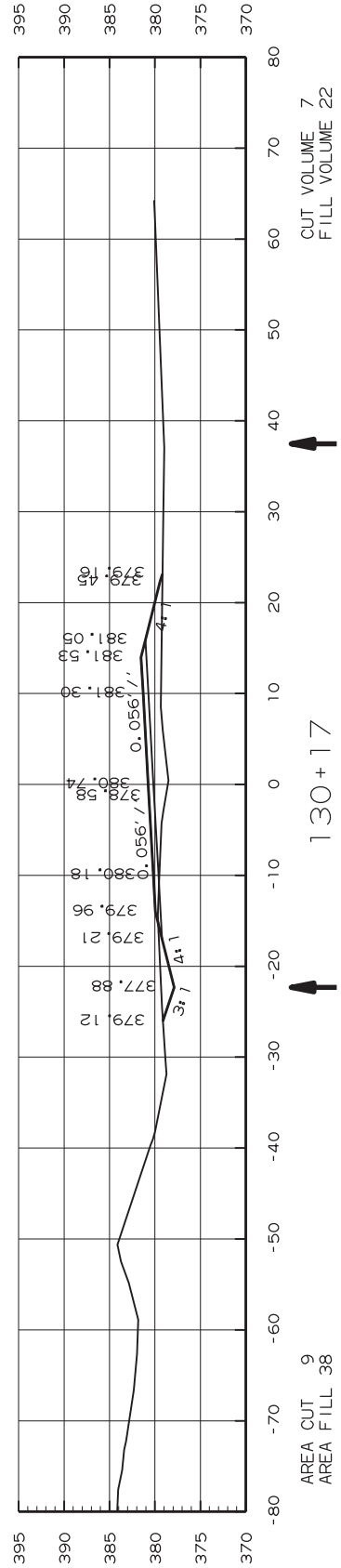
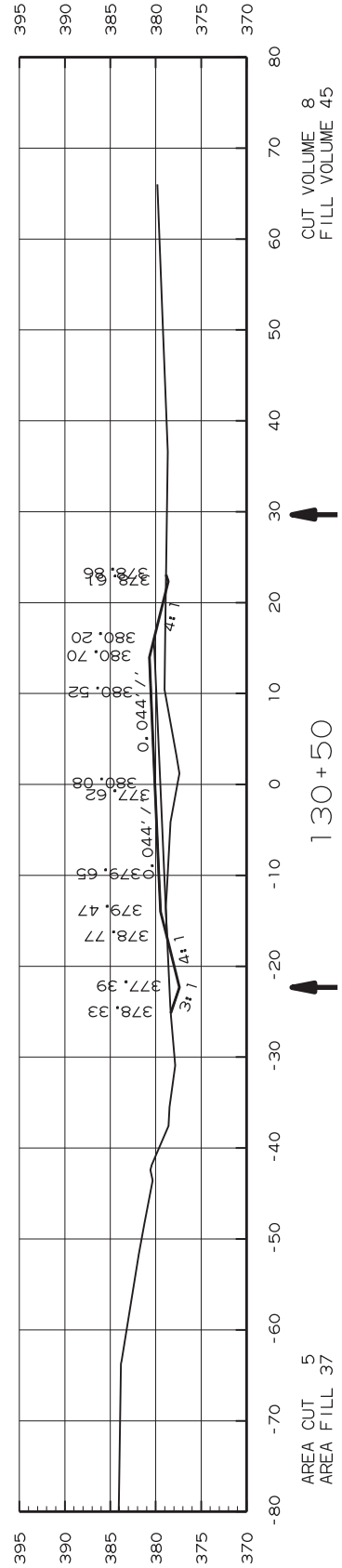
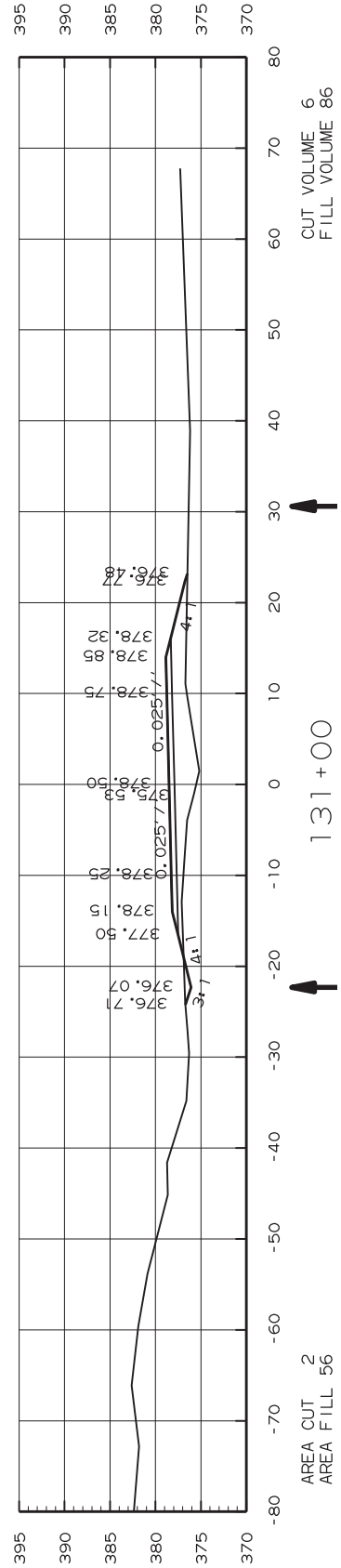
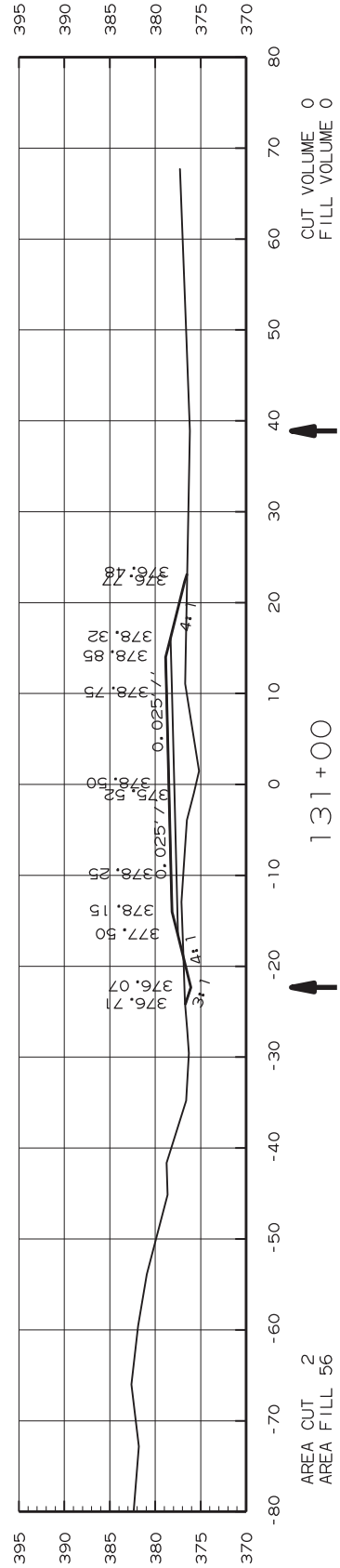
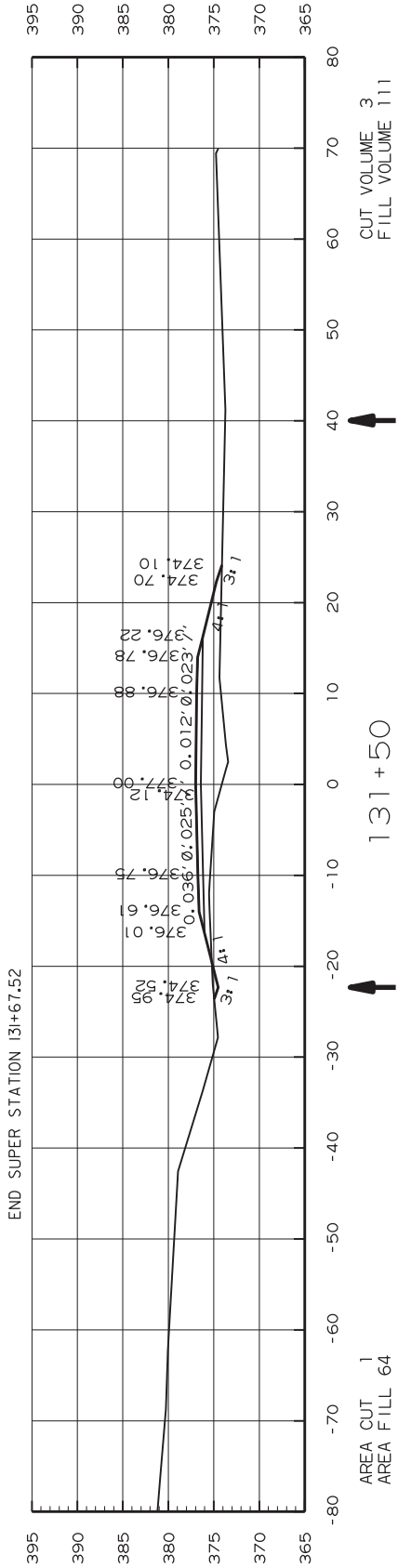
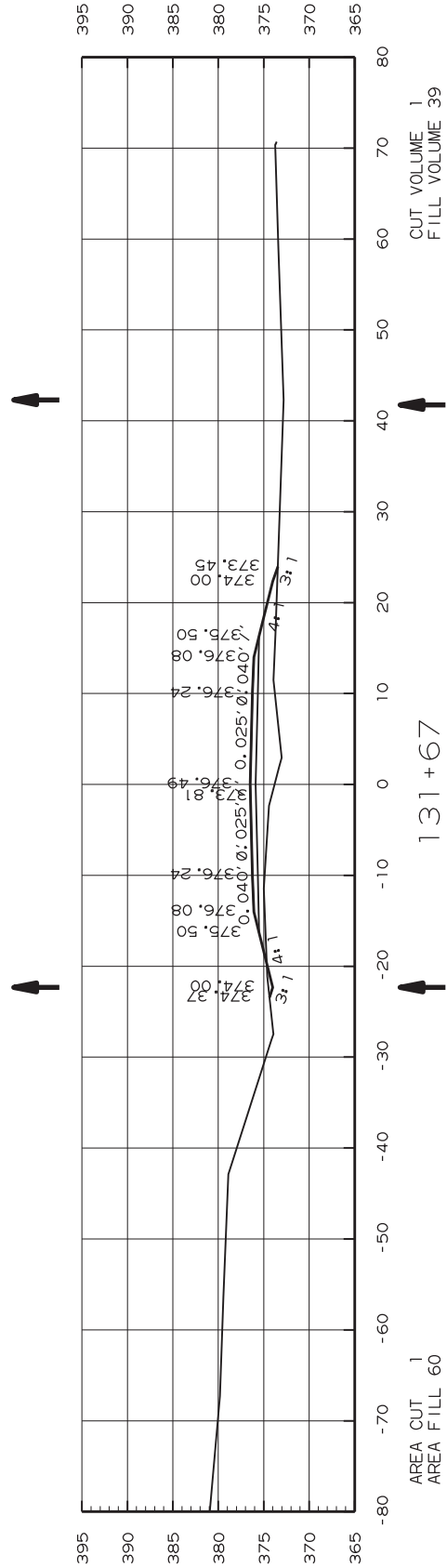


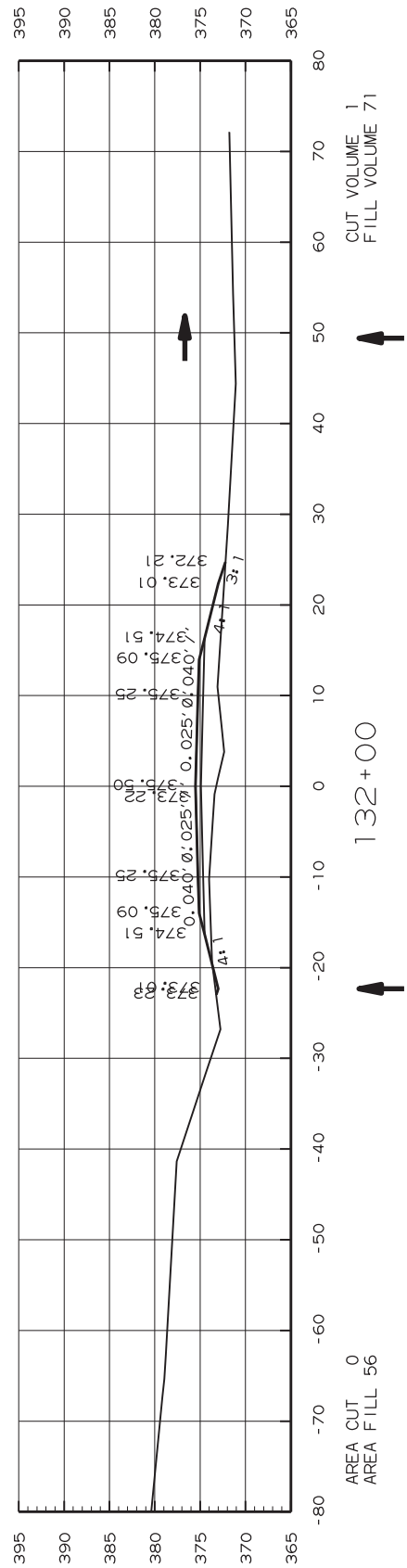
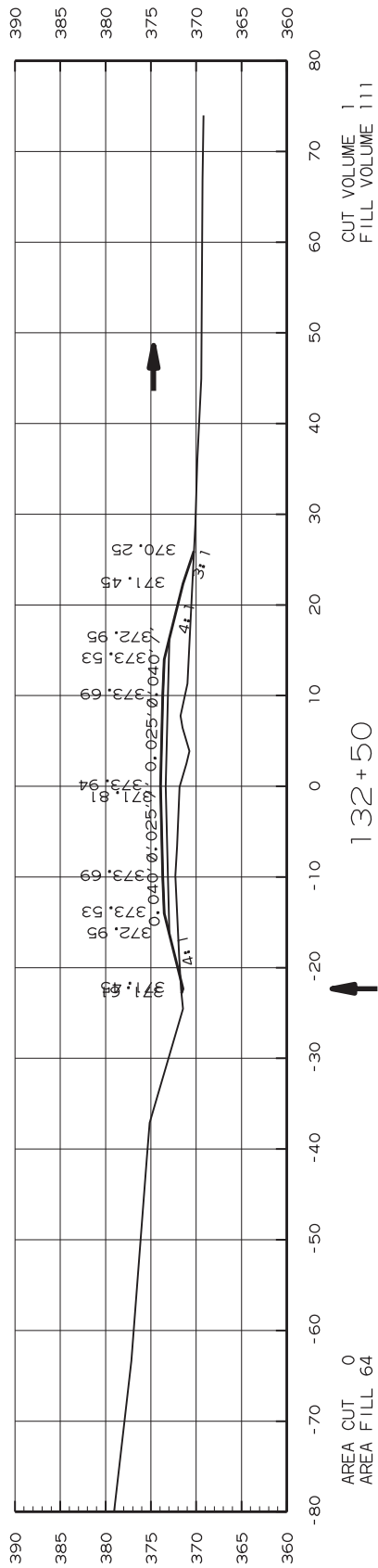
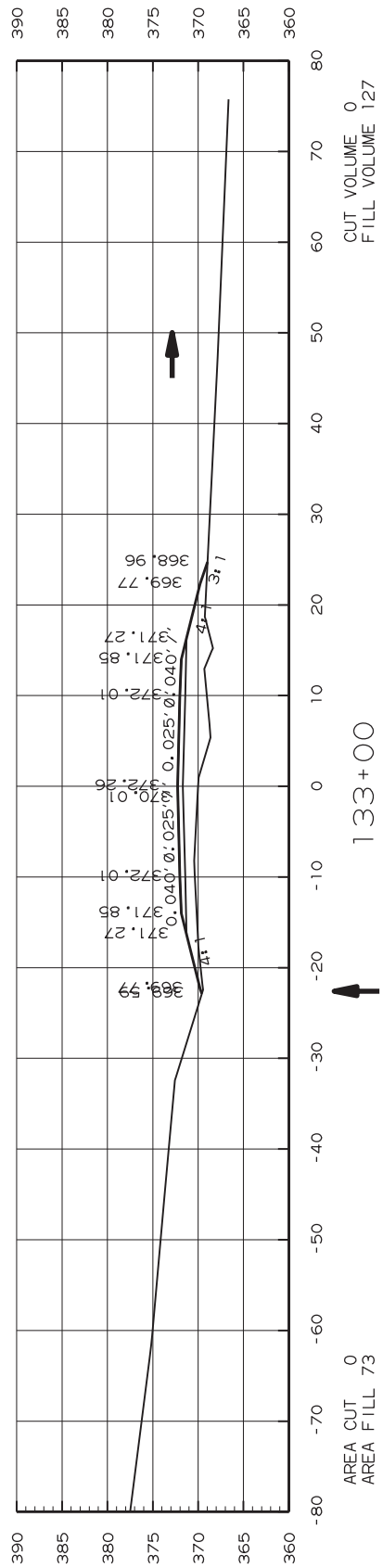
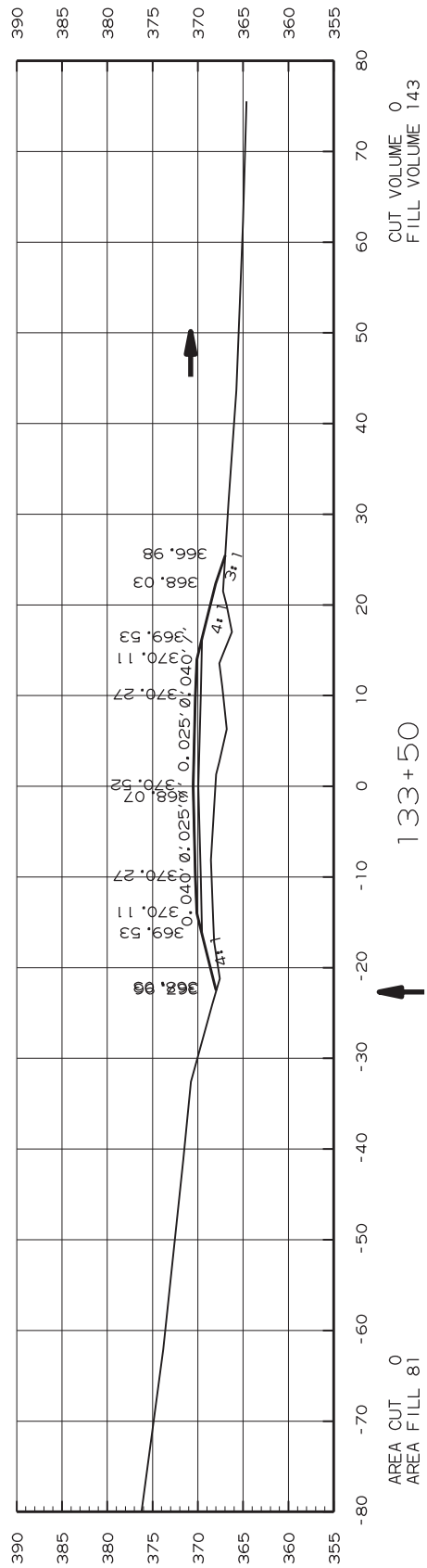
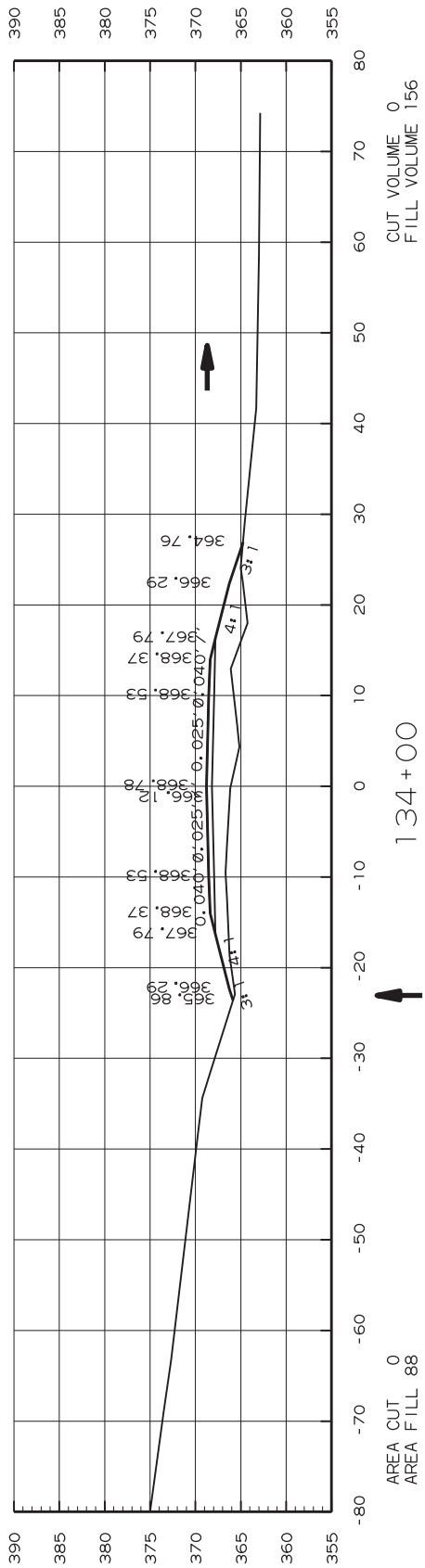
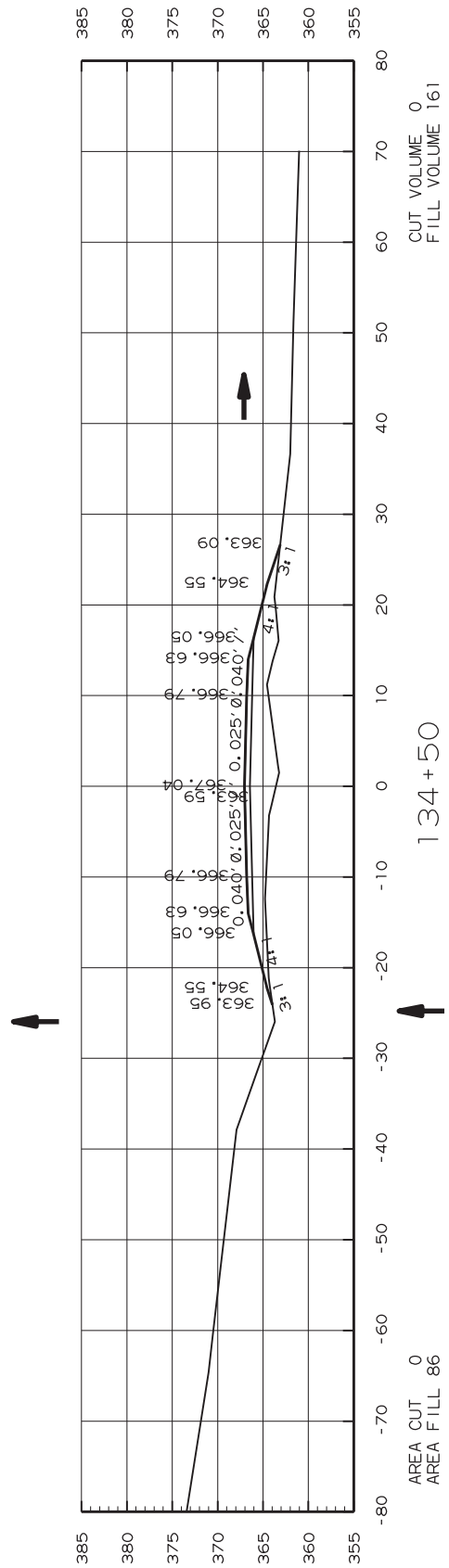


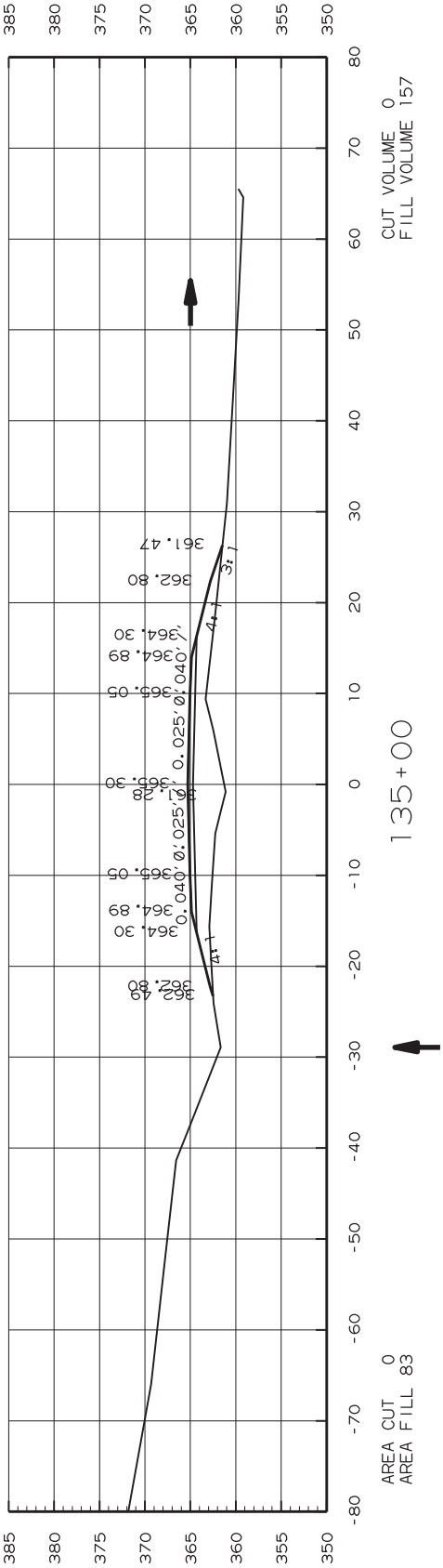
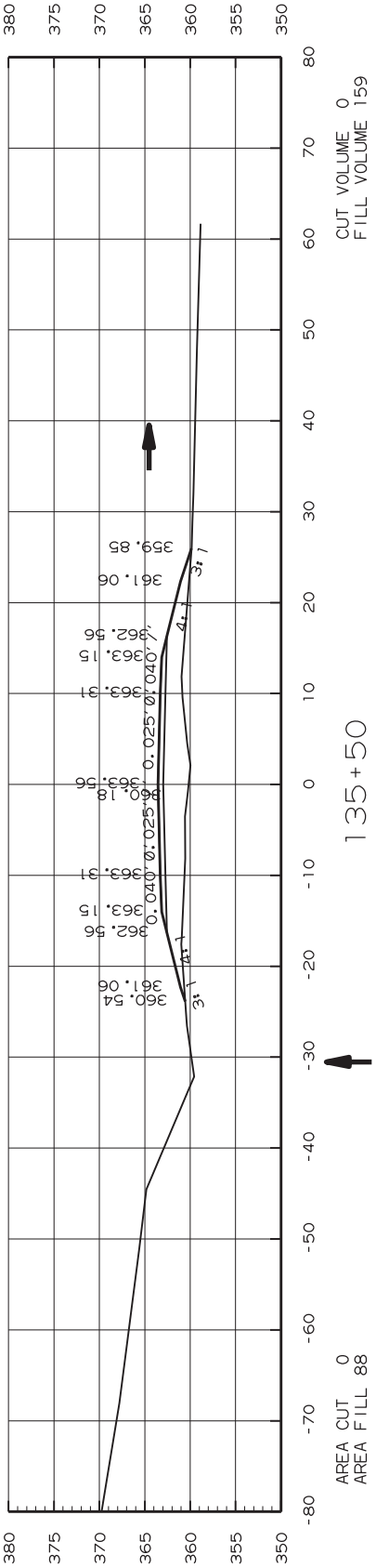
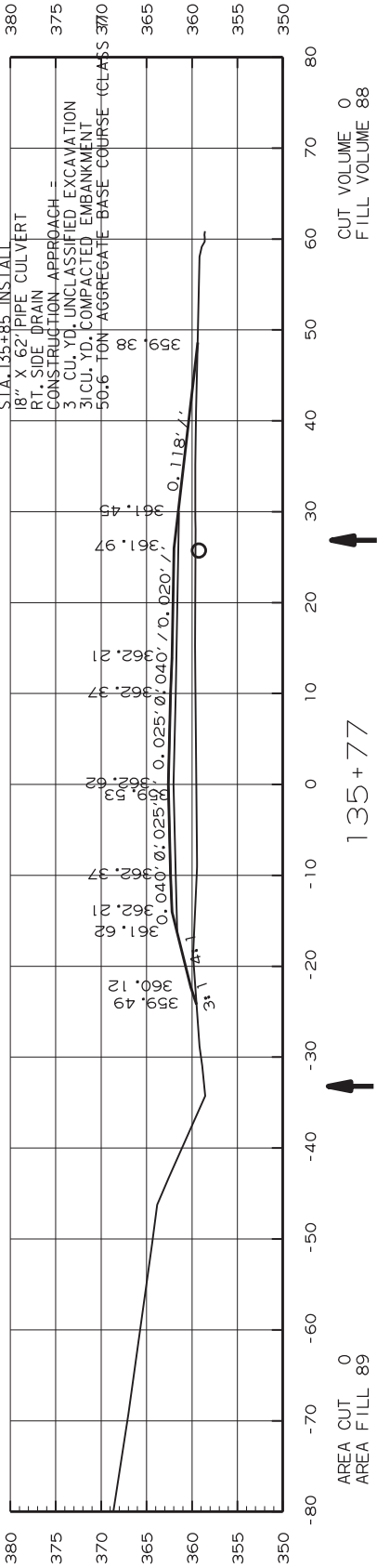
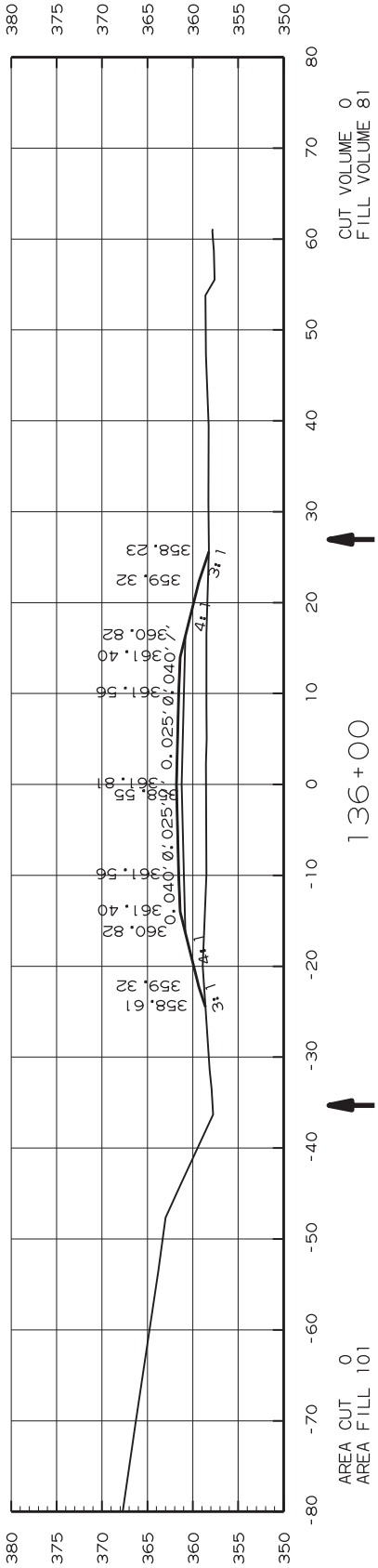
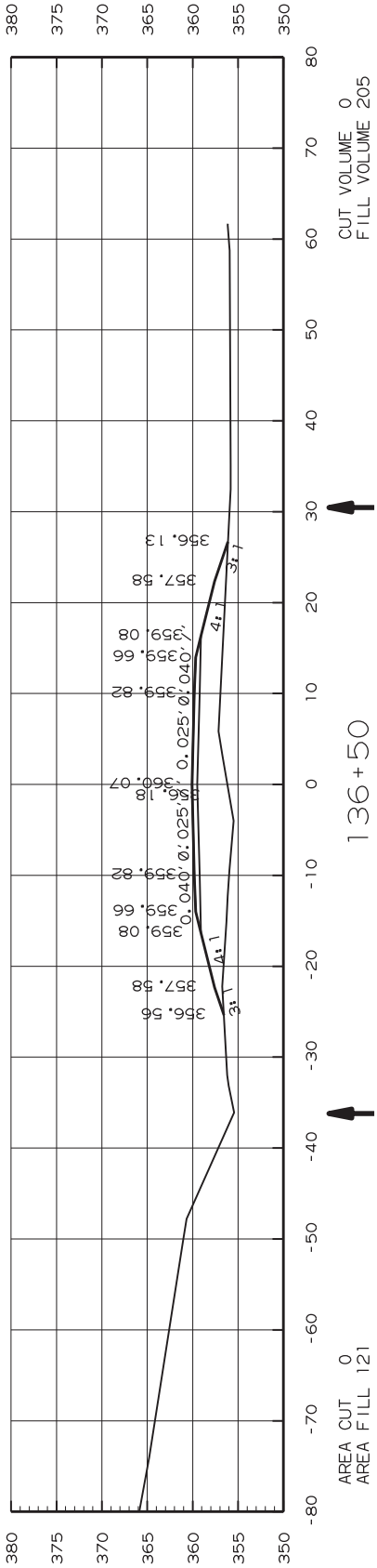
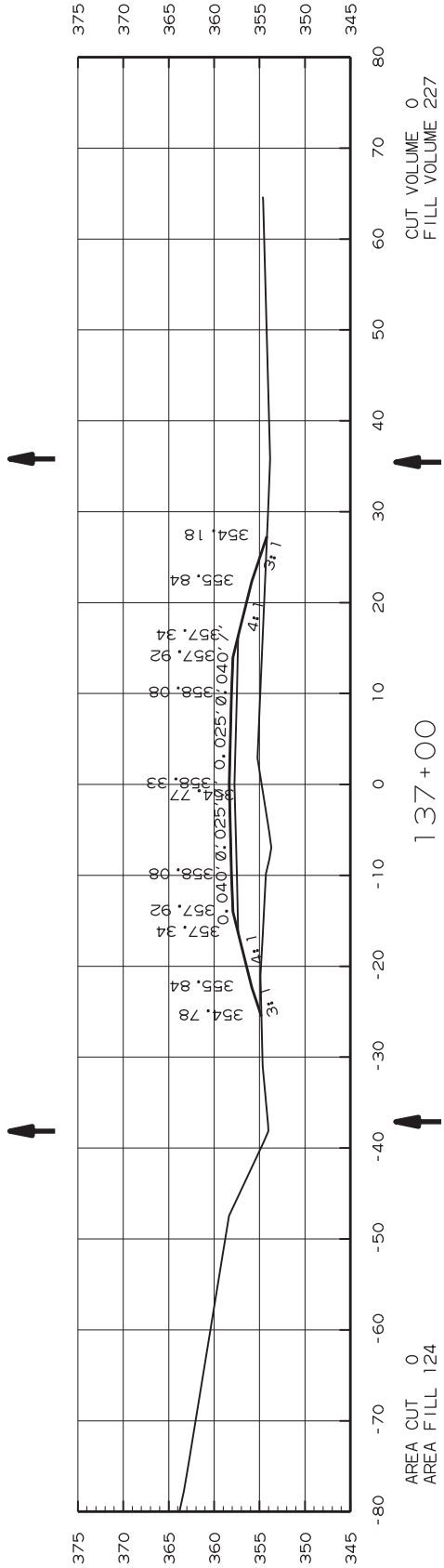


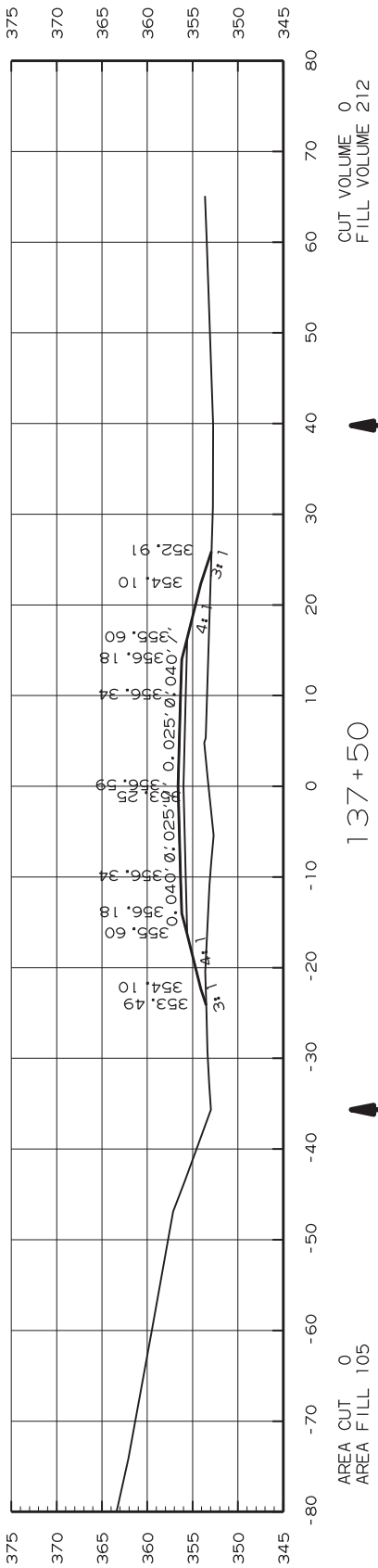
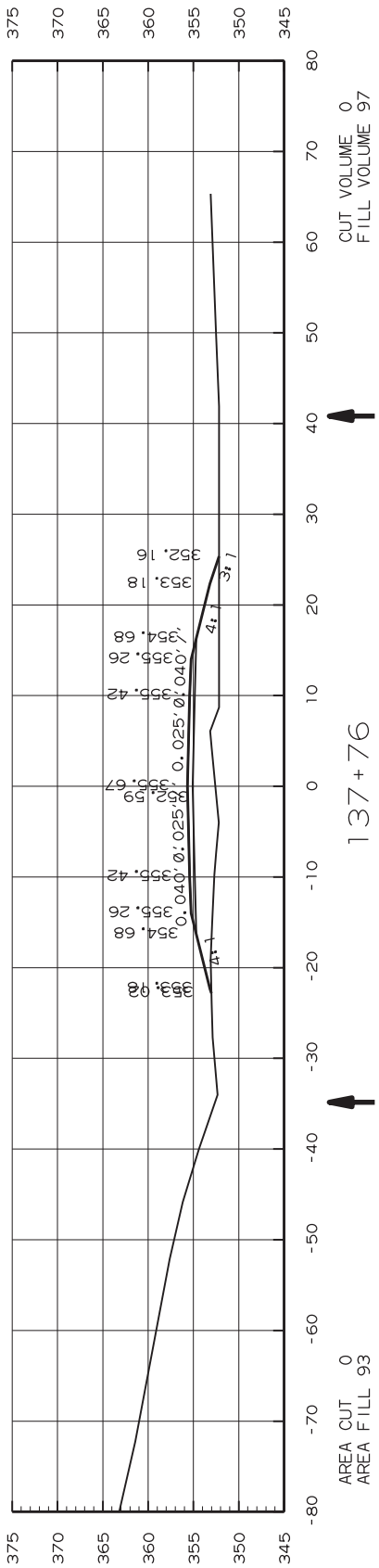
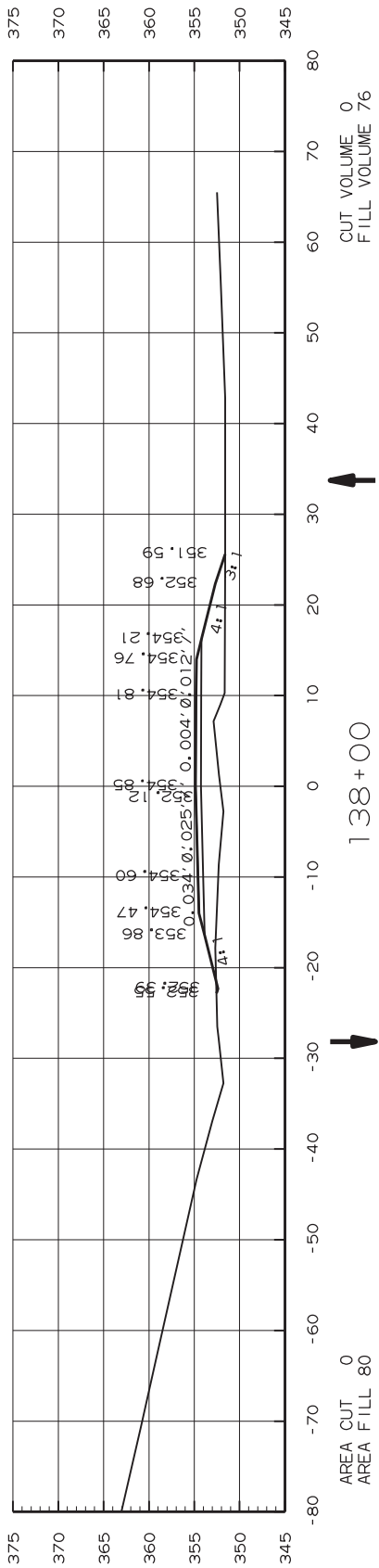
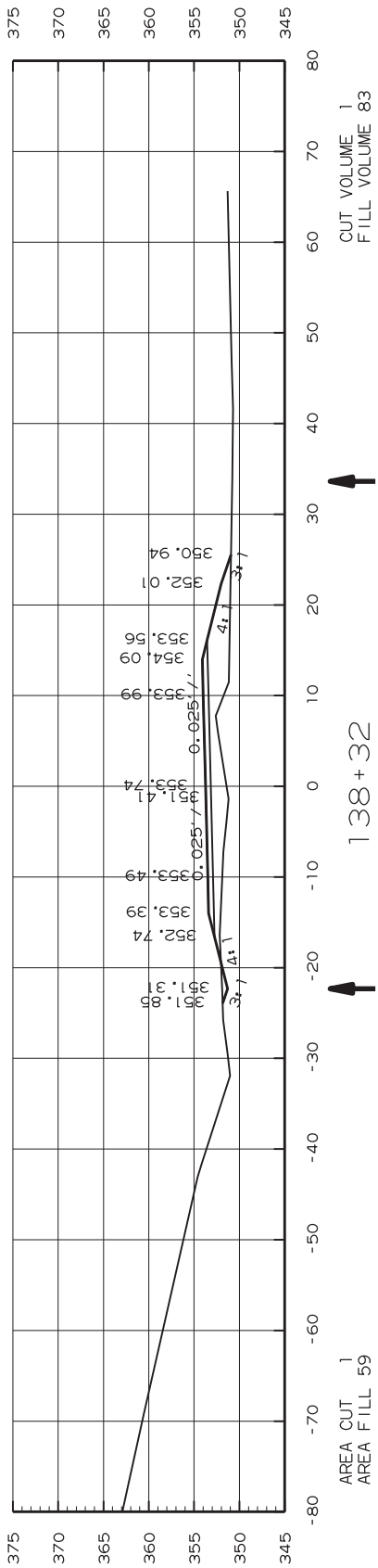
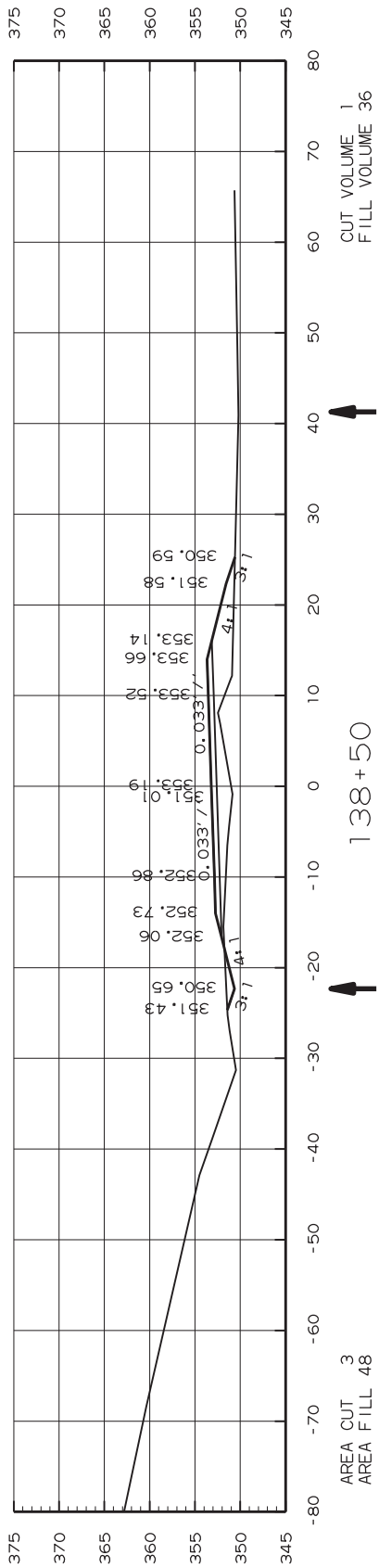
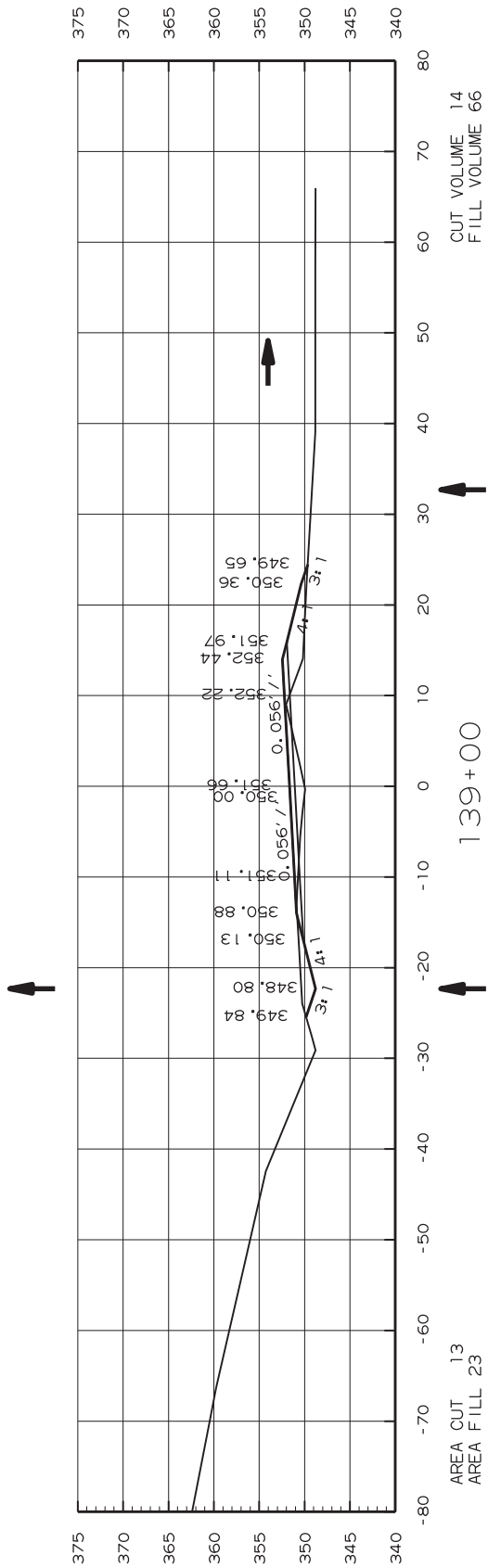


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|----------------|-------------|--------------|-------------|--------------------|--------|--------------------|-----------|--------------|
|                |             |              |             | 6                  | ARK.   |                    |           |              |
|                |             |              |             | JOB NO.            | FA5309 |                    | 48        | 114          |
| CROSS SECTIONS |             |              |             |                    |        |                    |           |              |





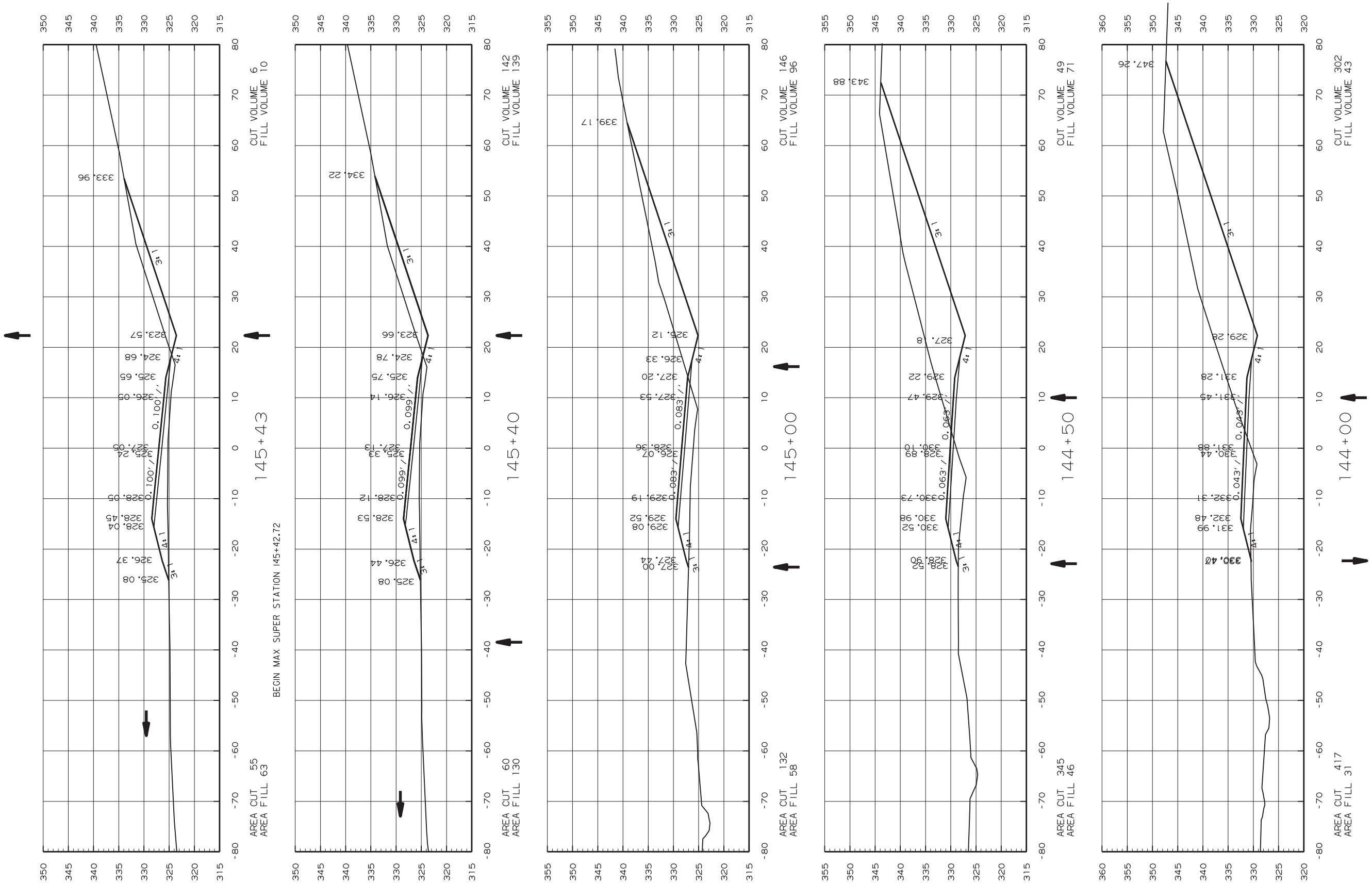




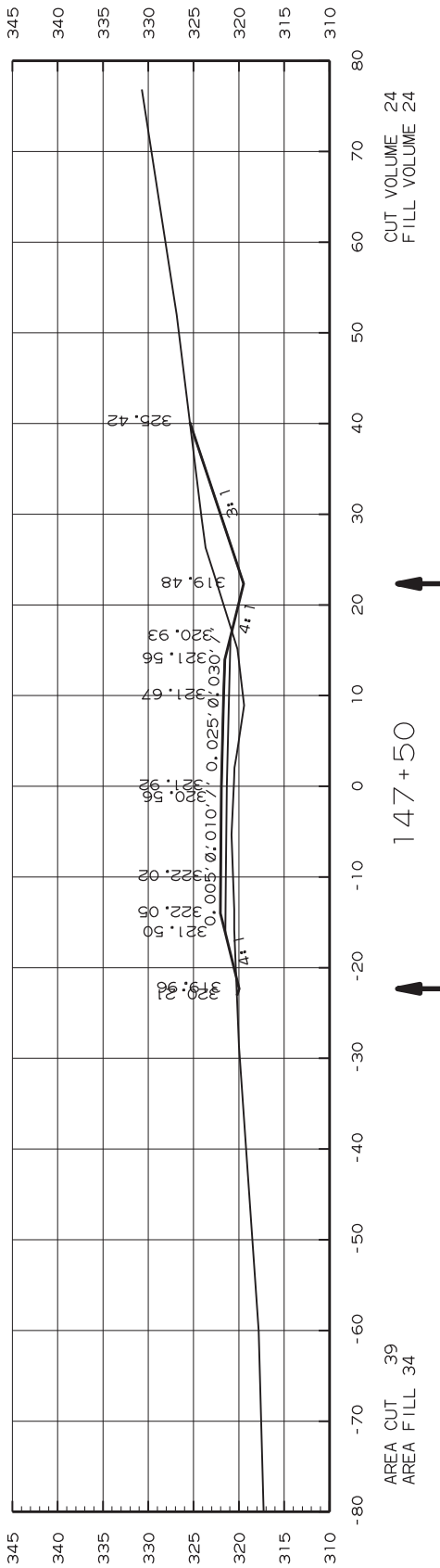
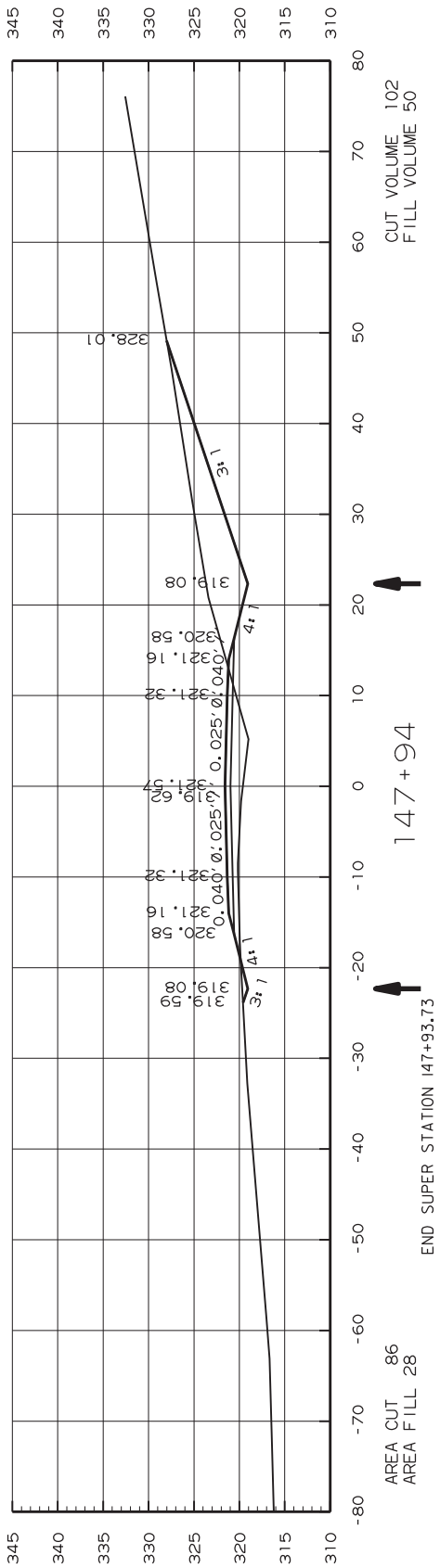
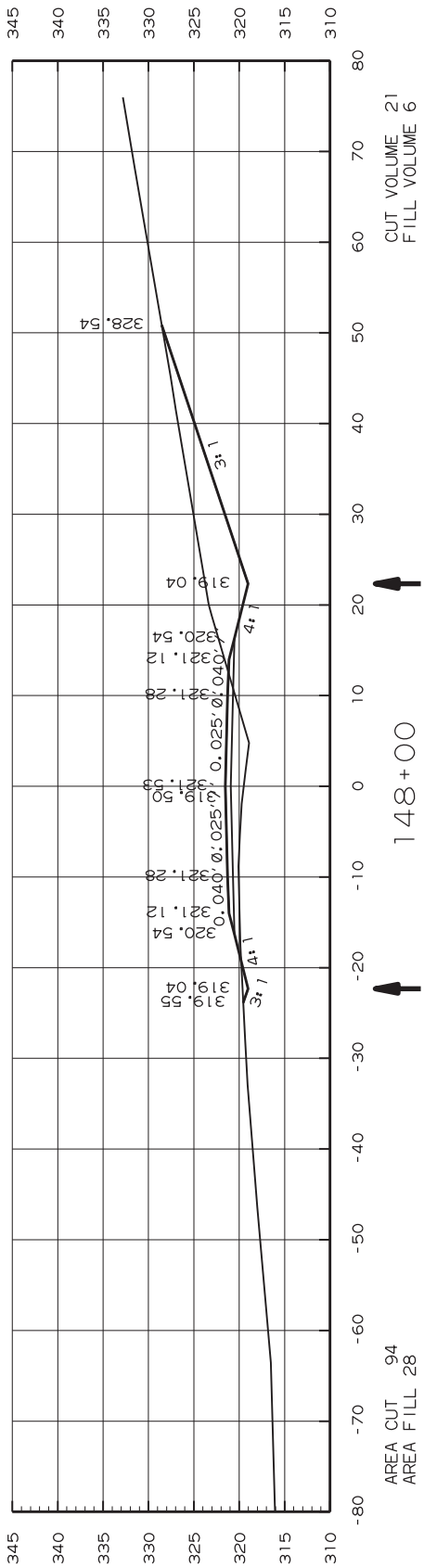
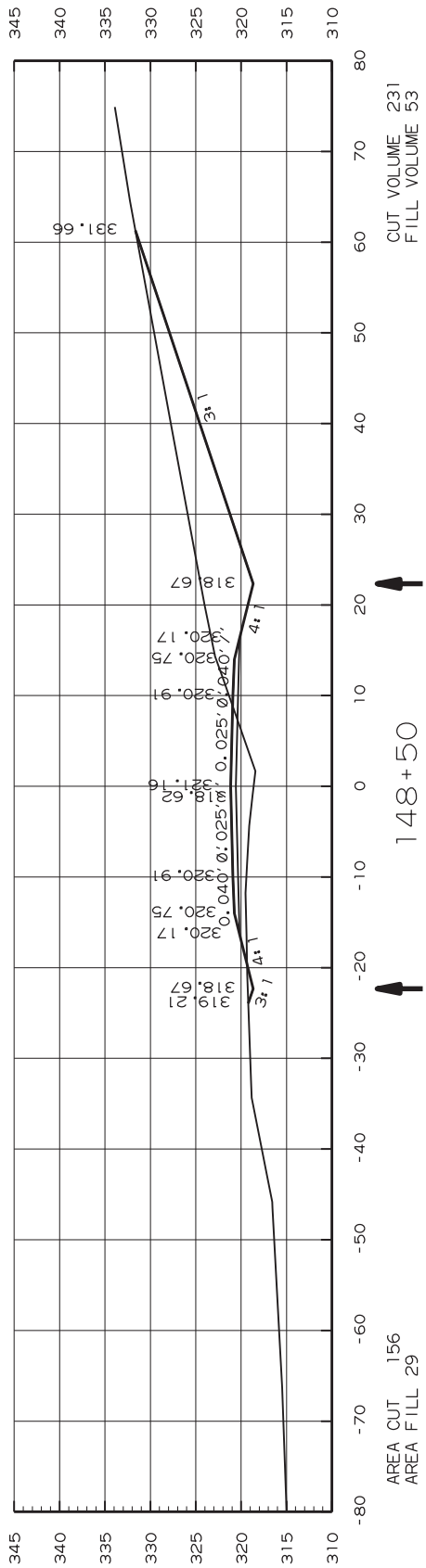
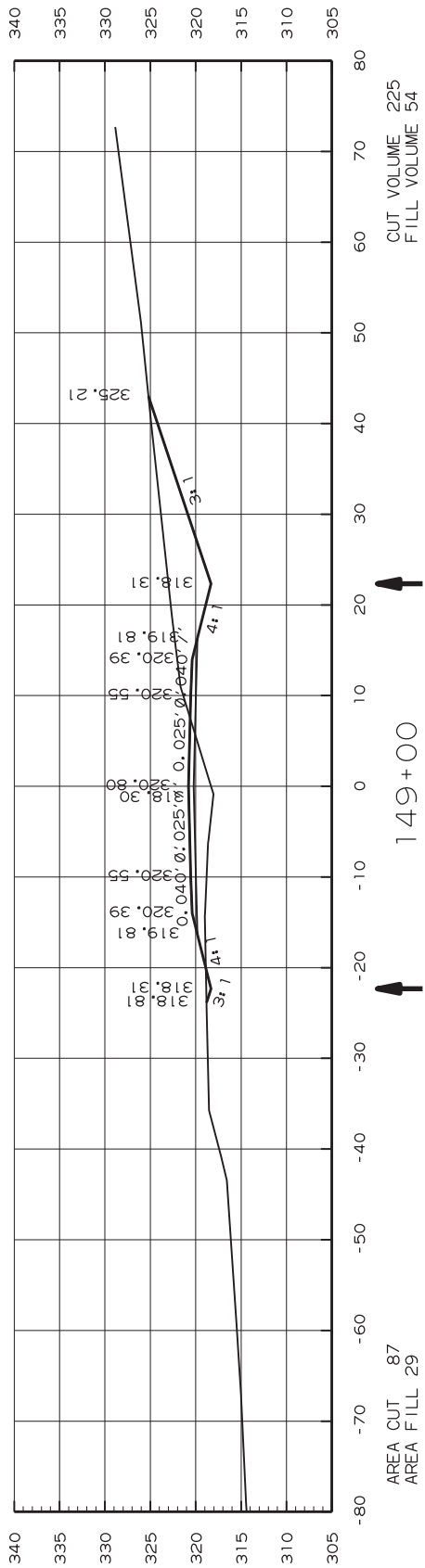
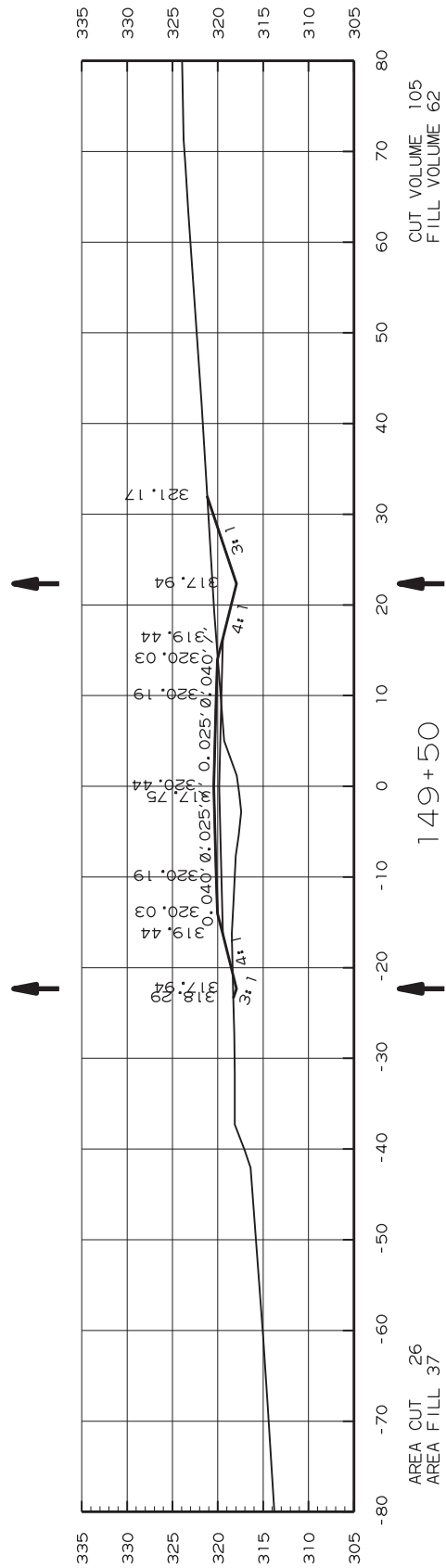


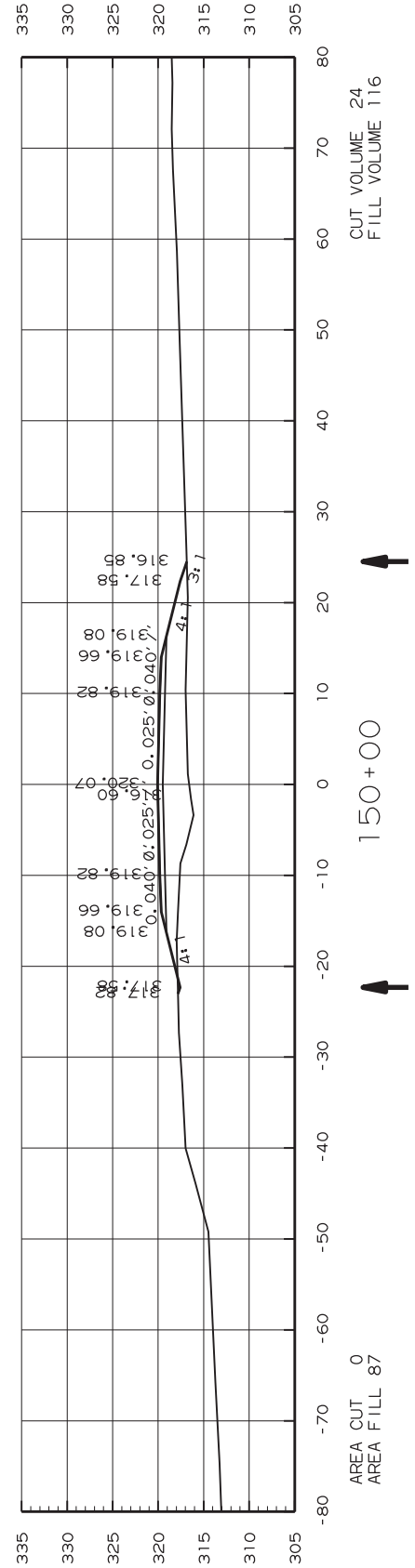
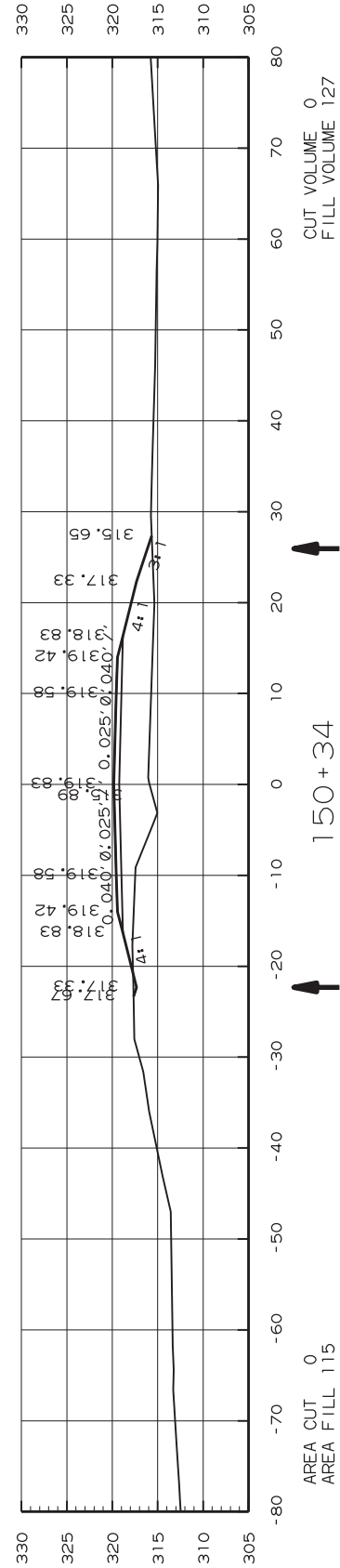
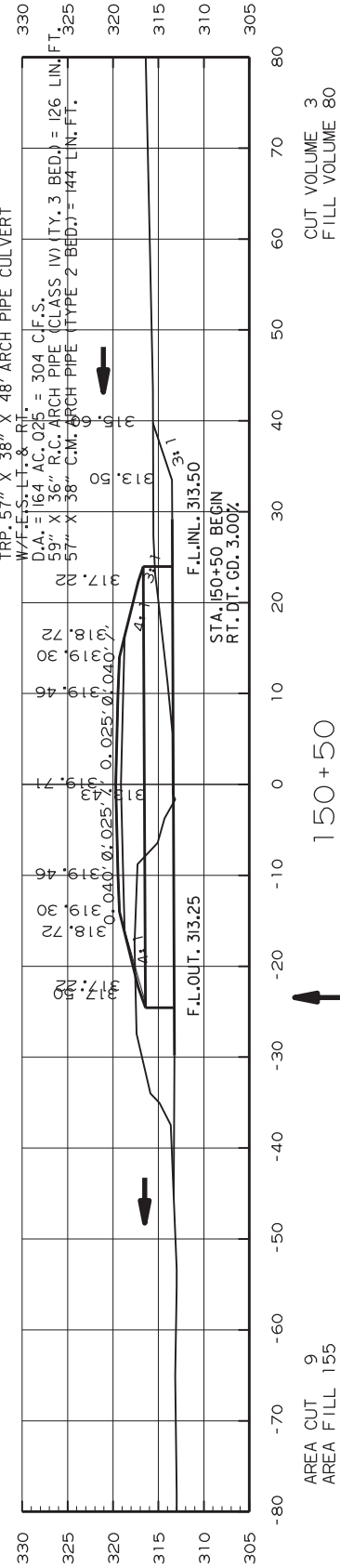
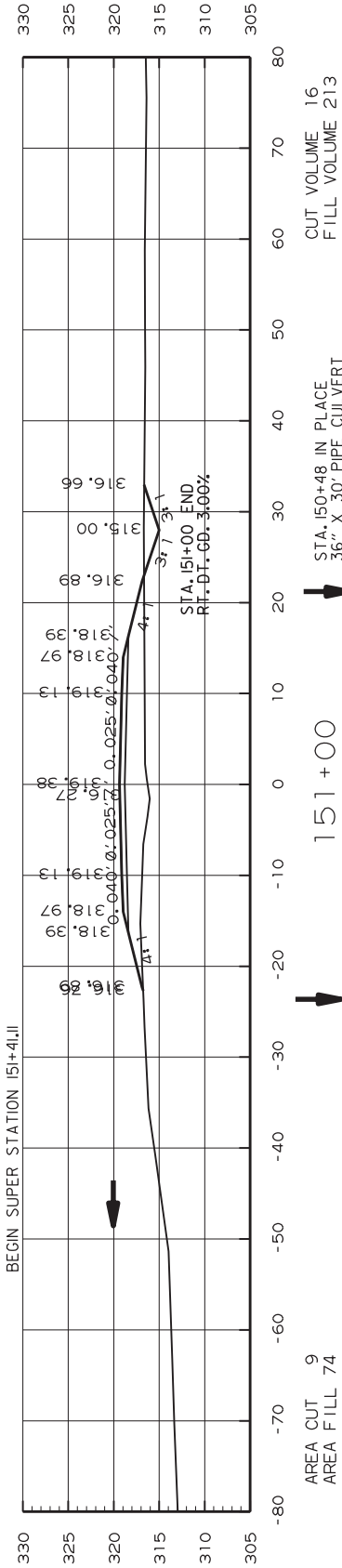
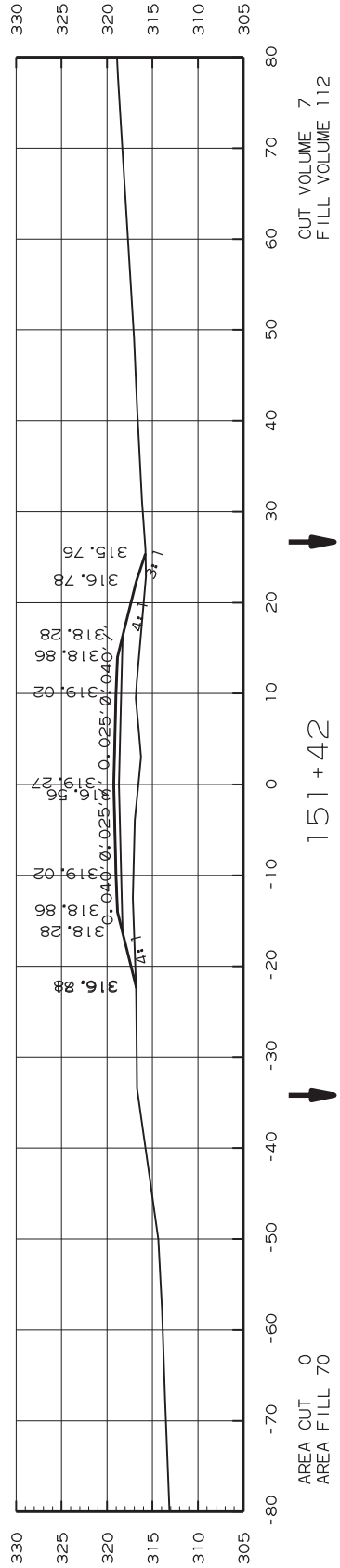
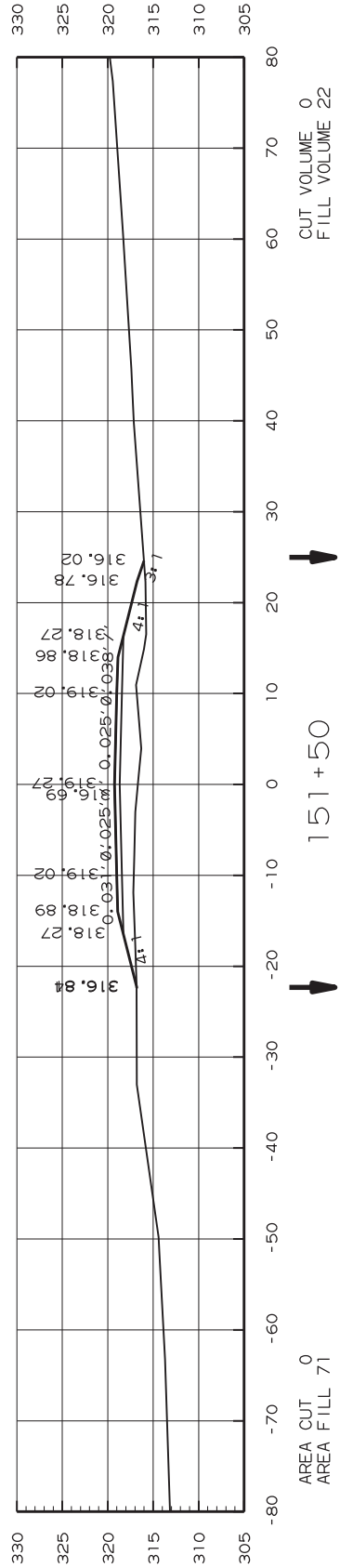
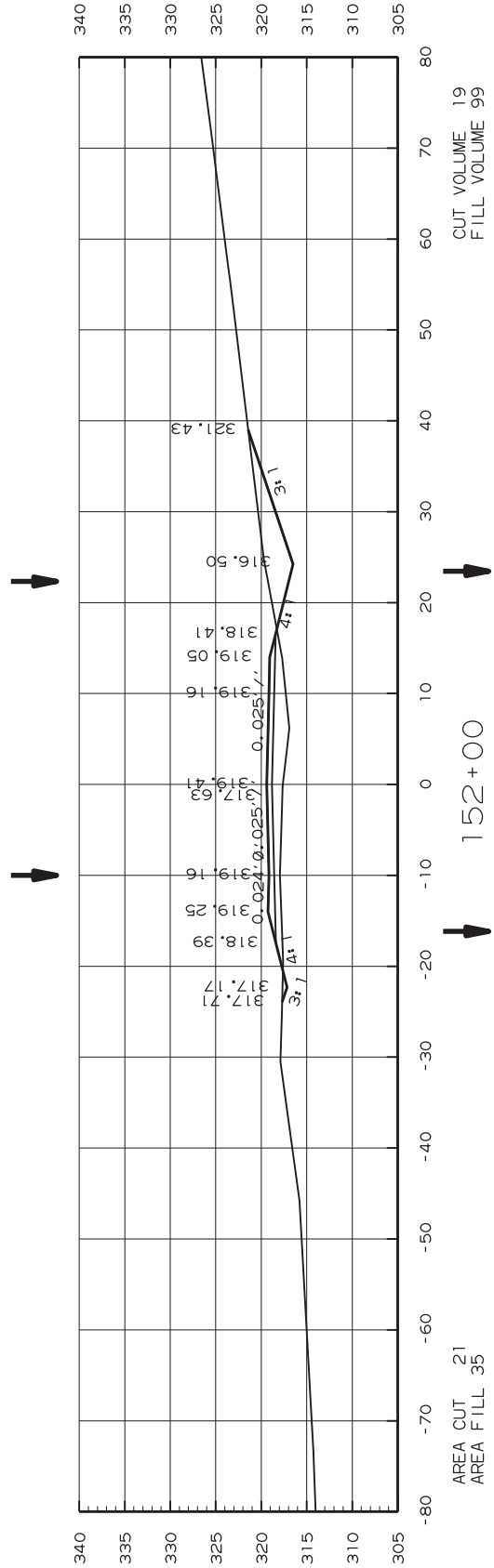








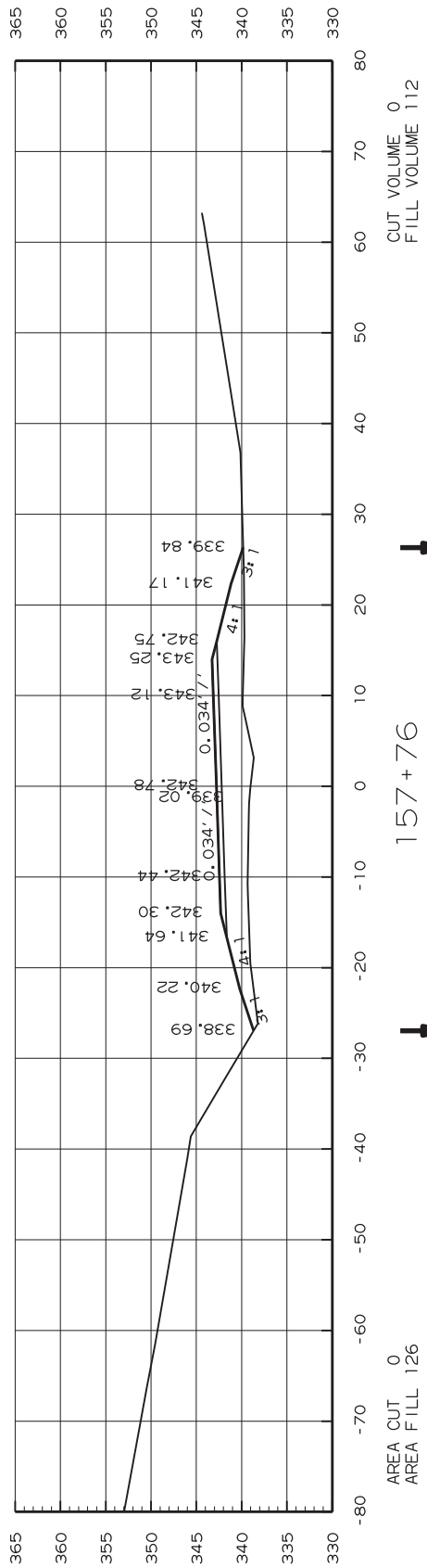
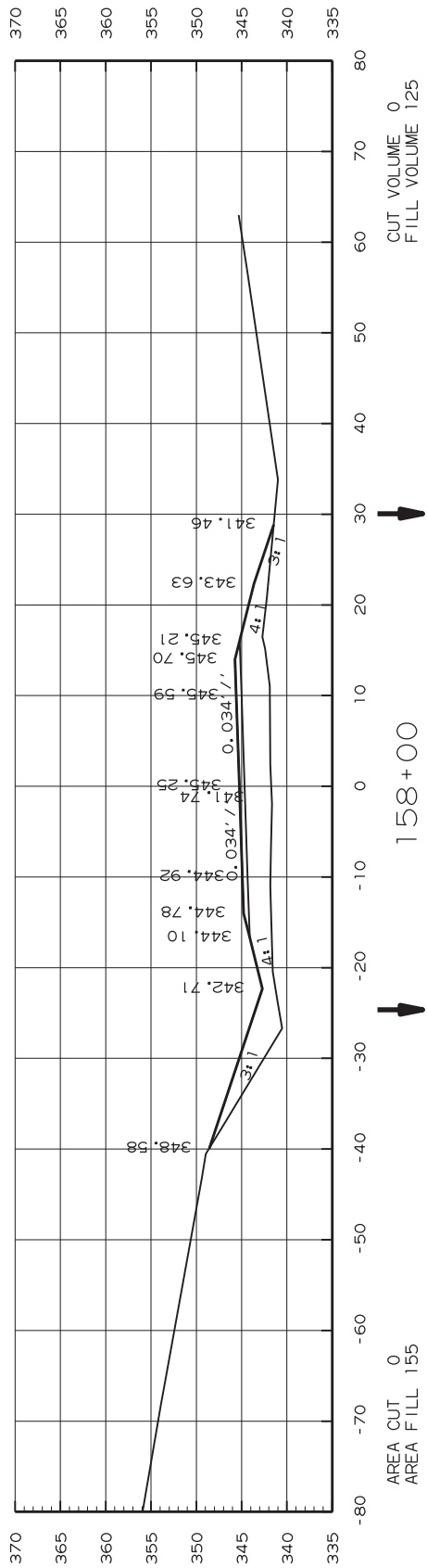
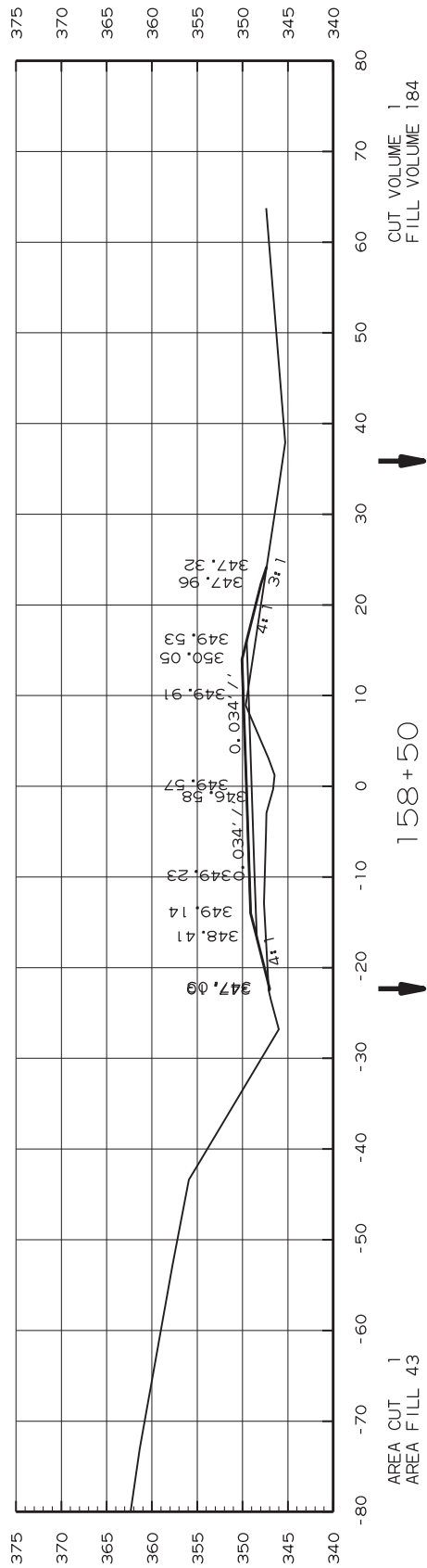
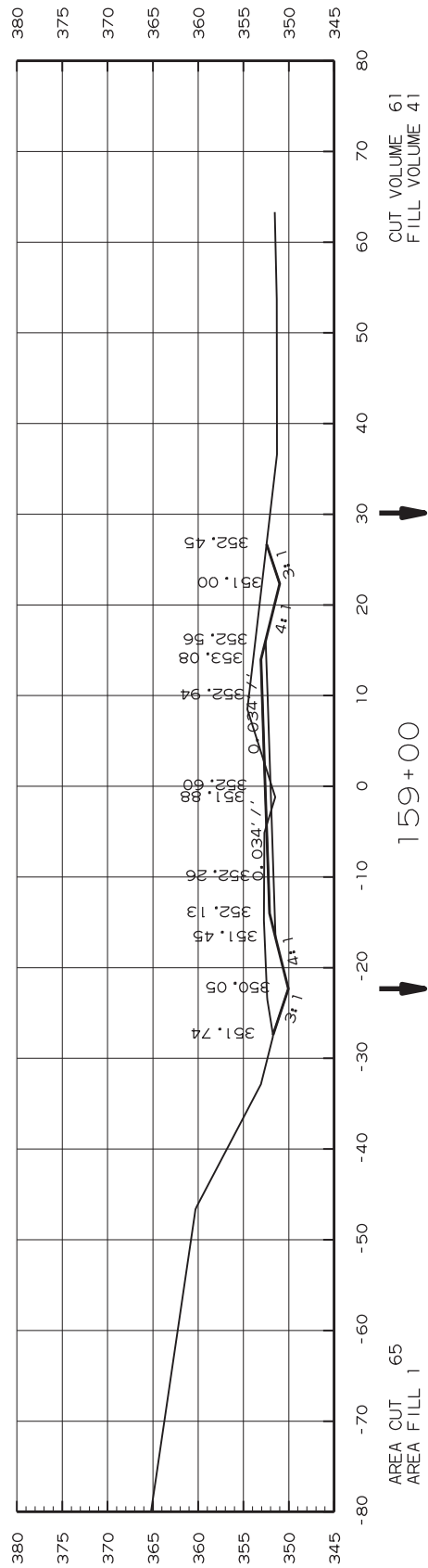
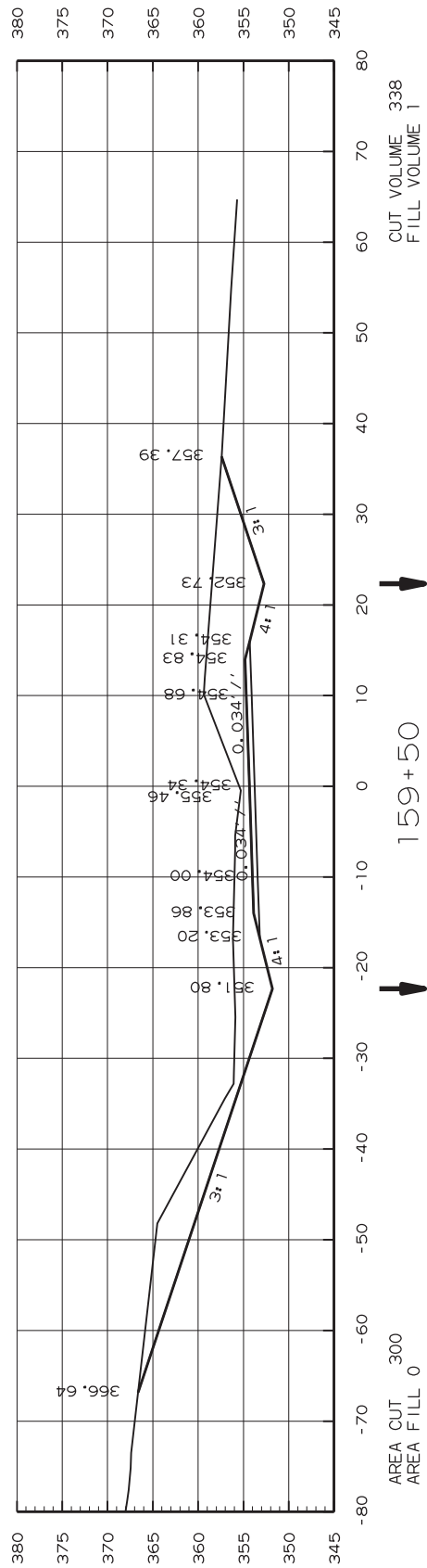
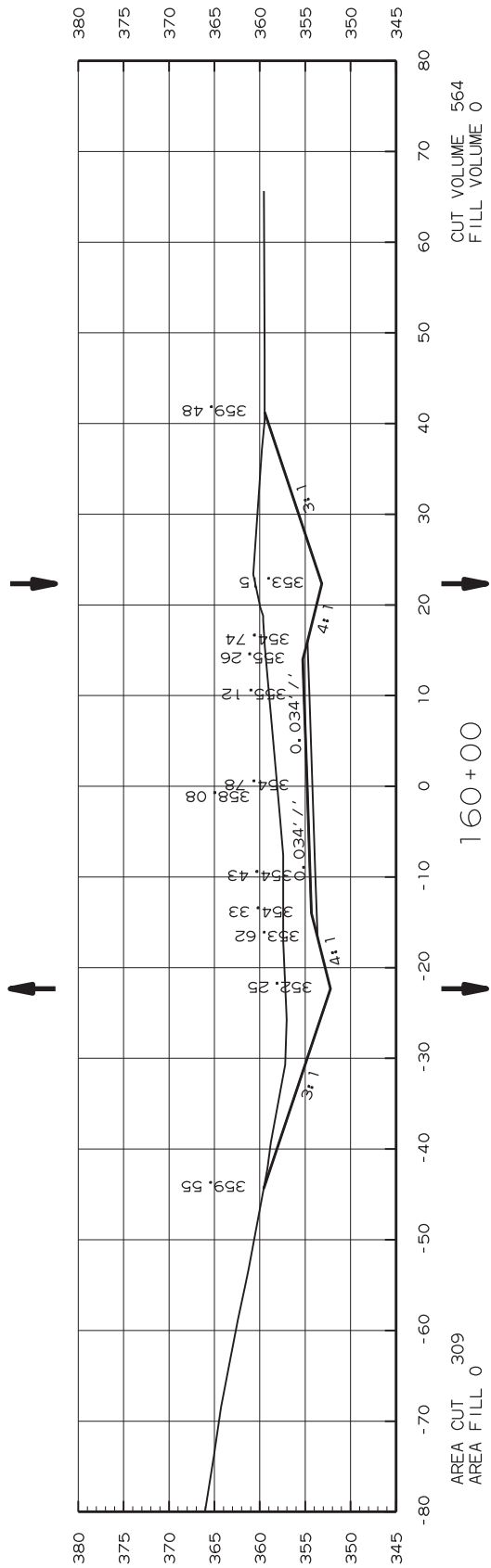


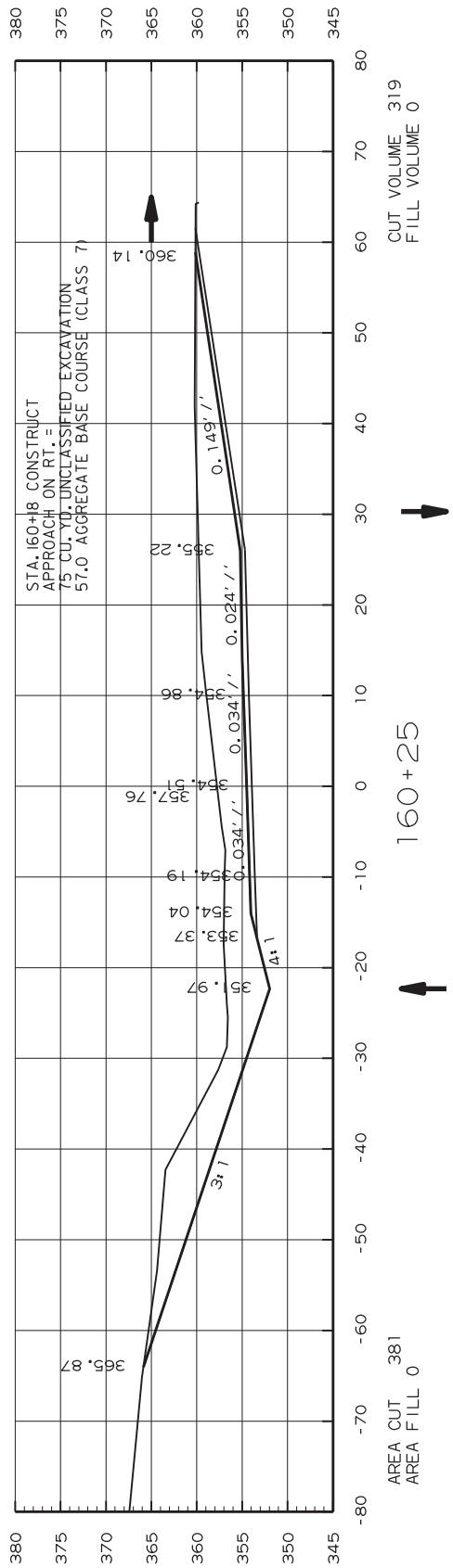
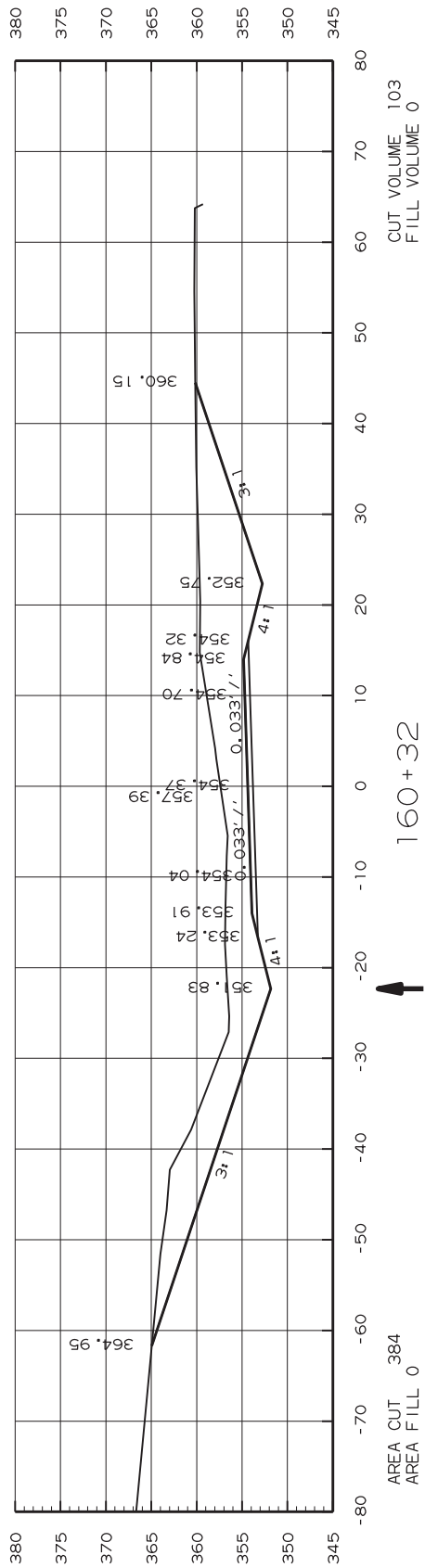
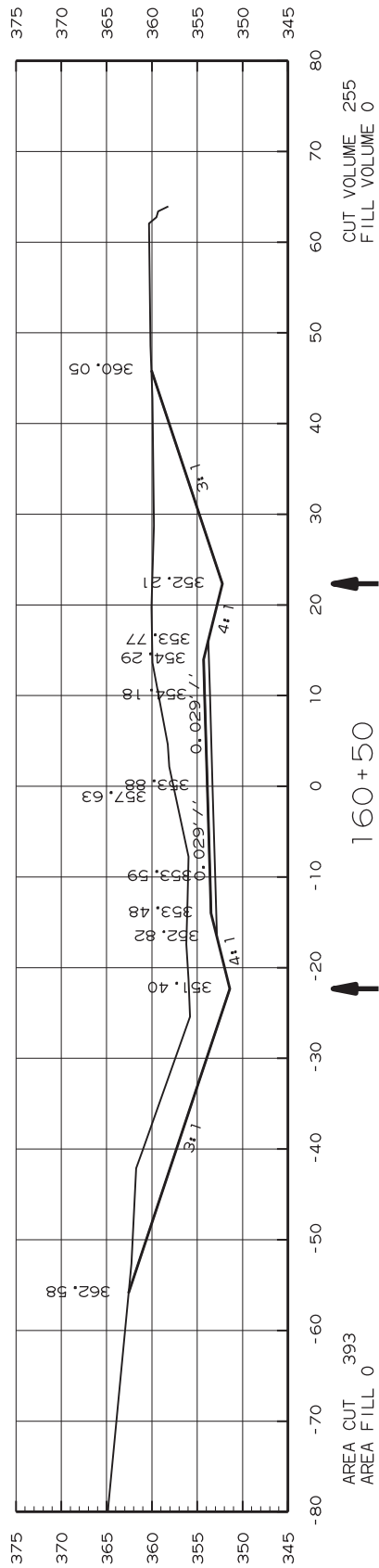
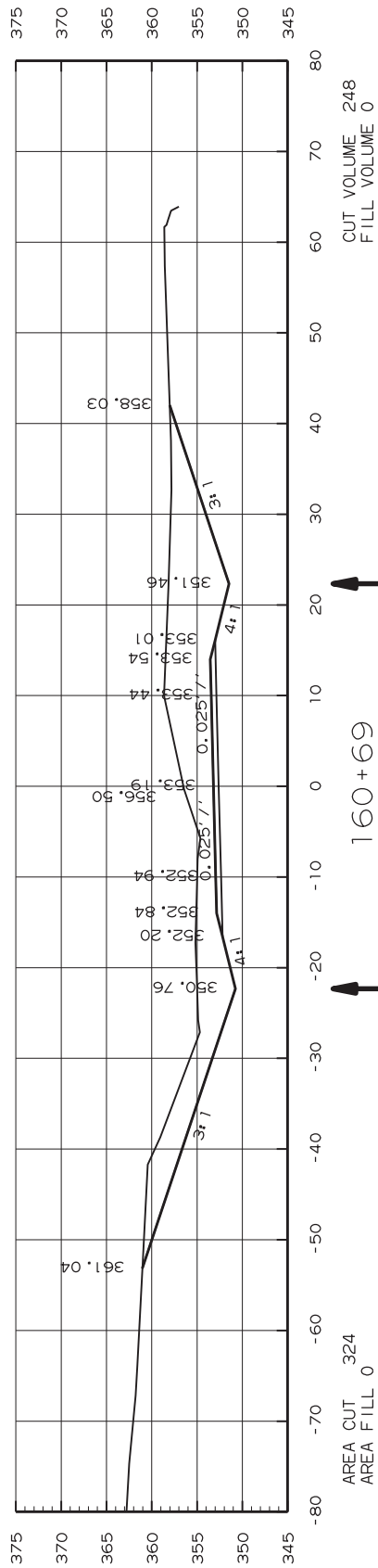
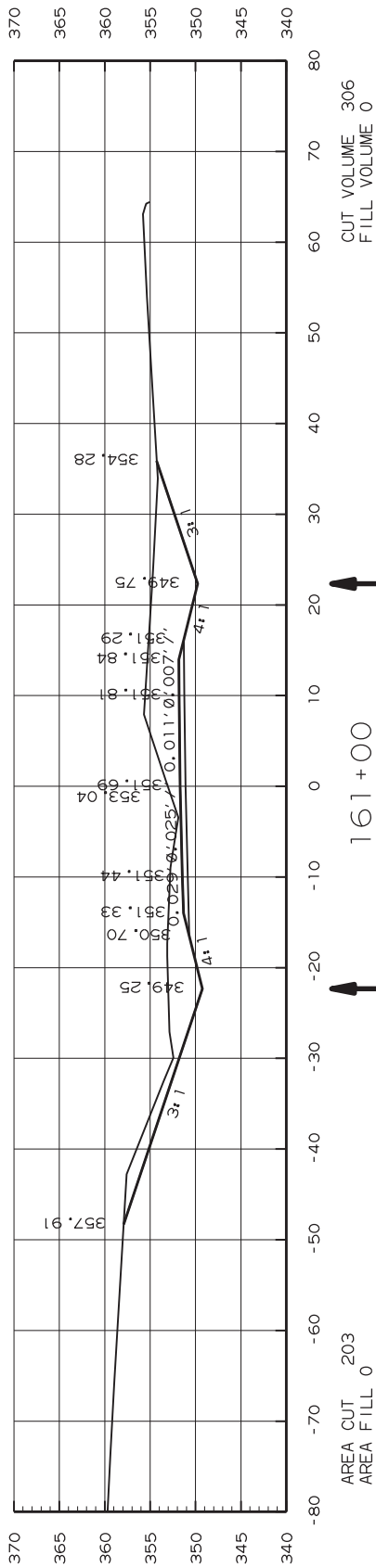
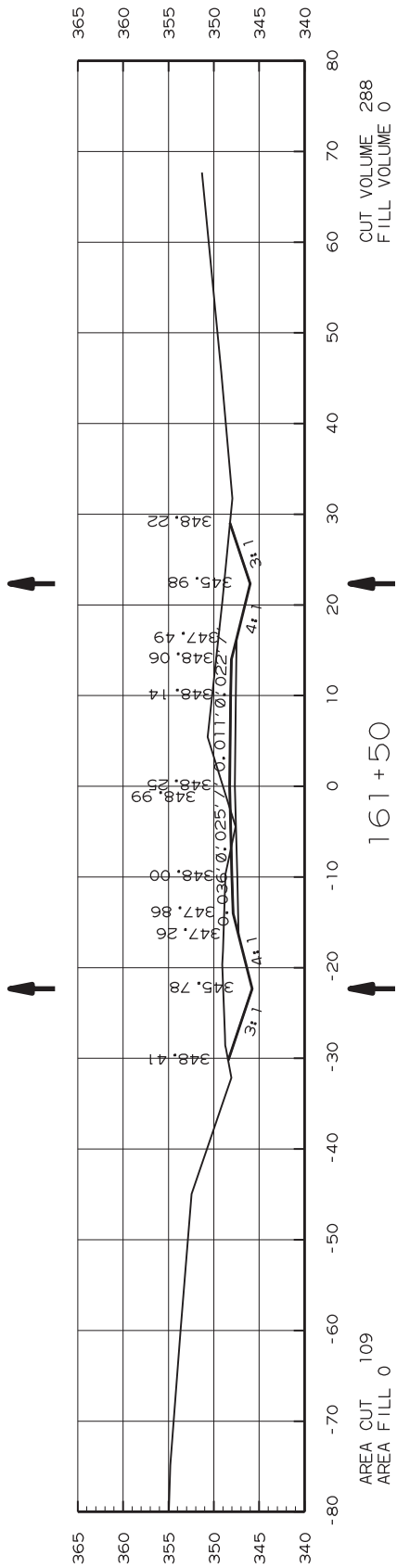




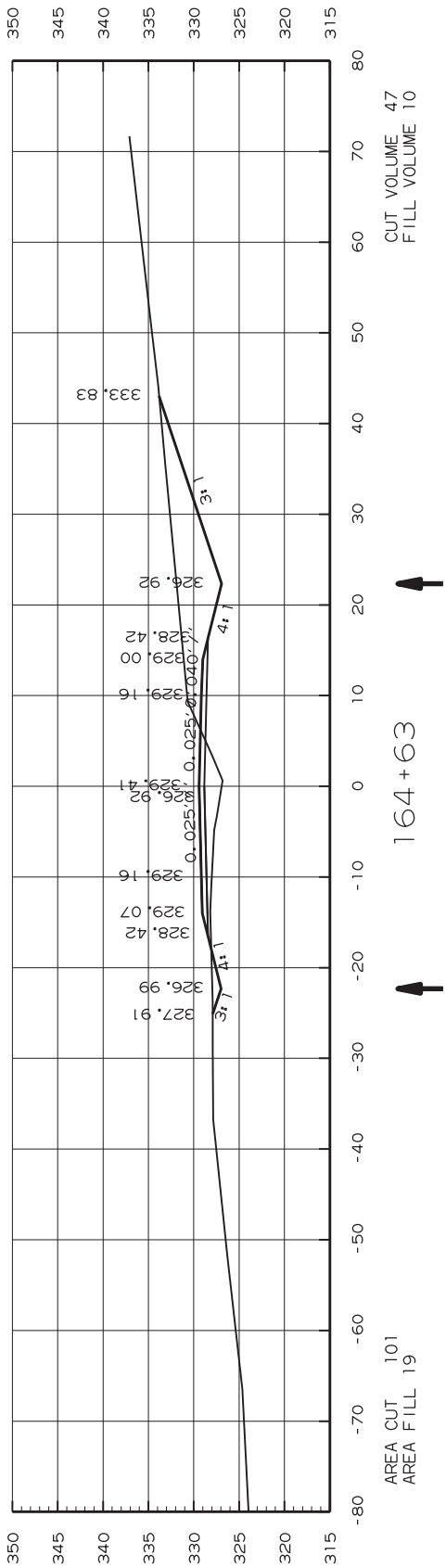
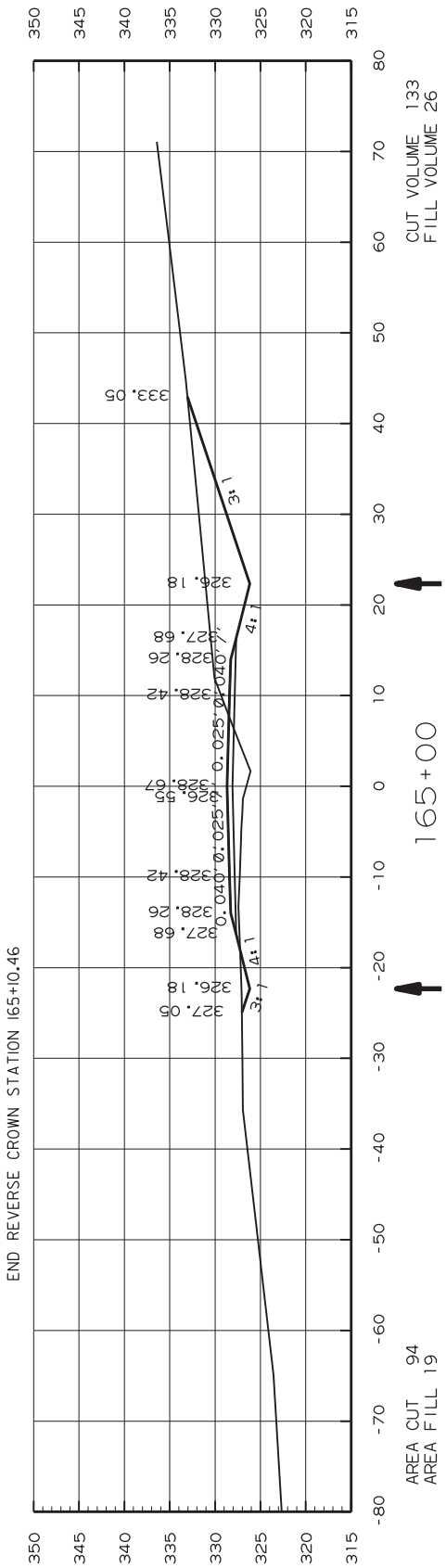
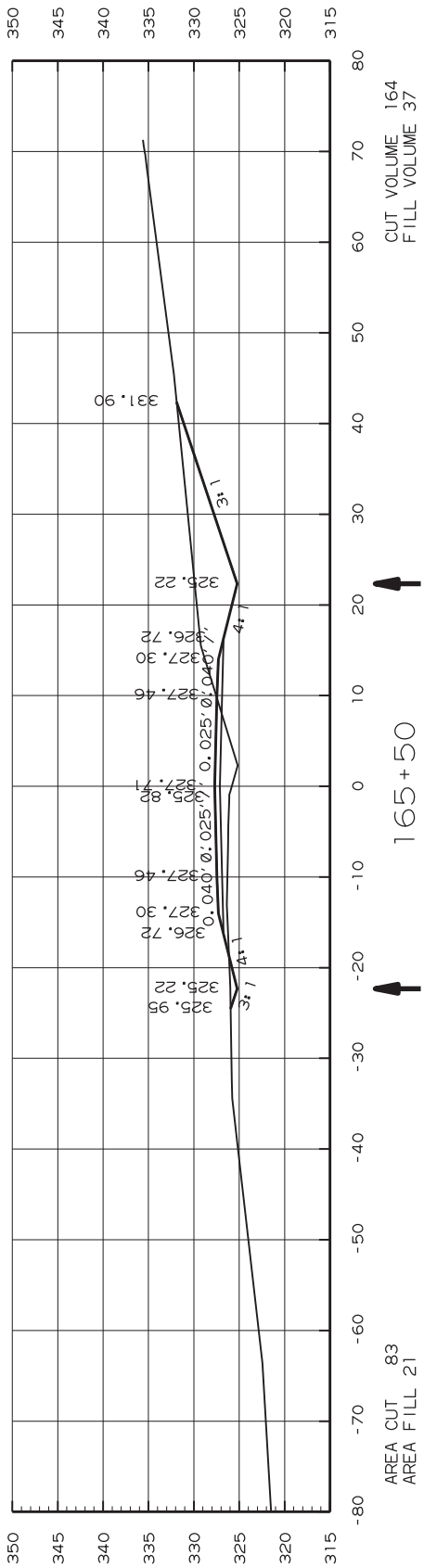
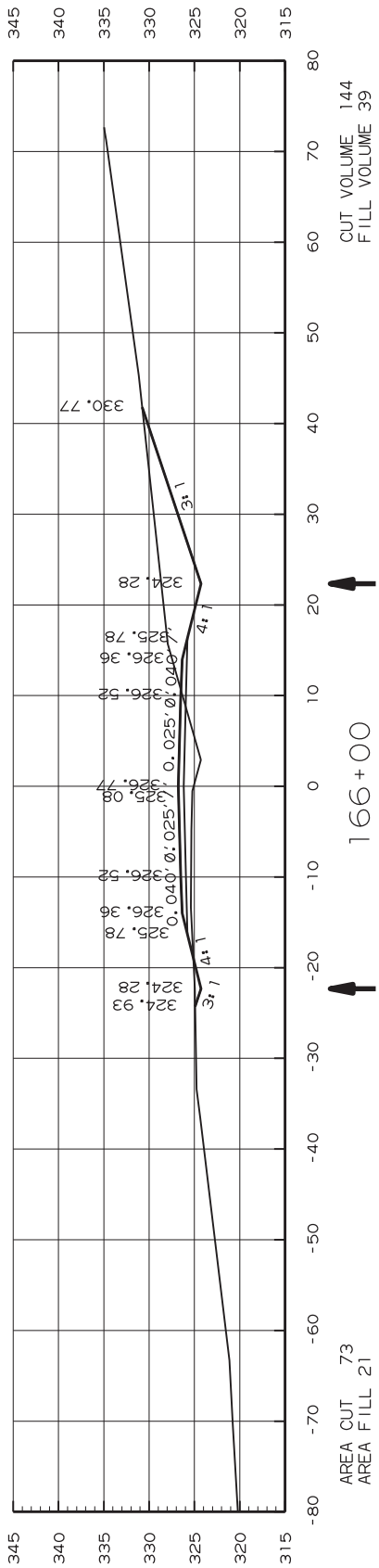
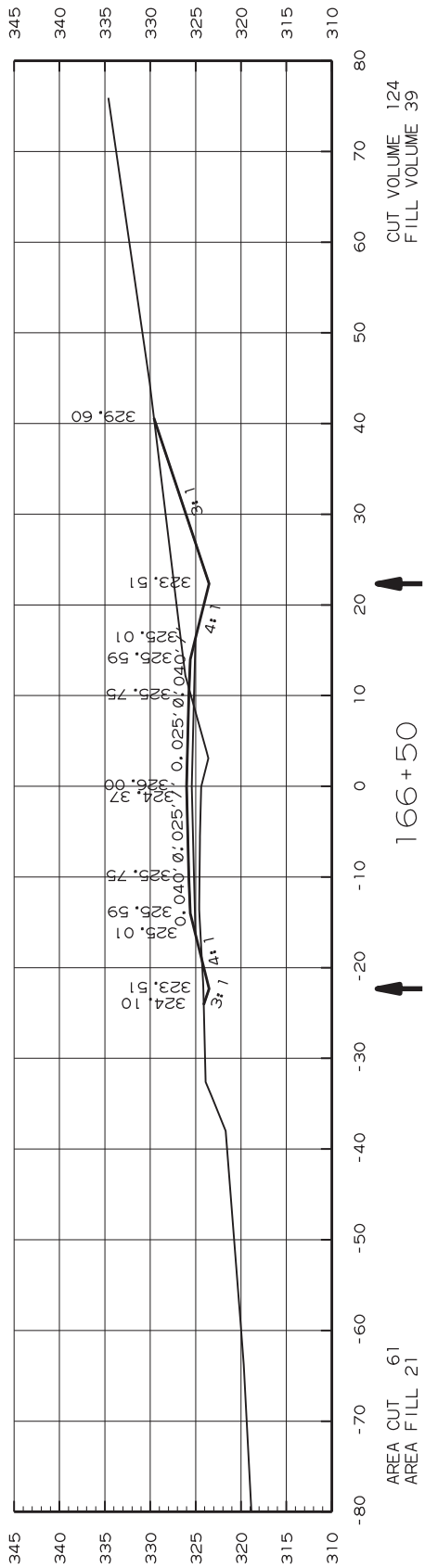
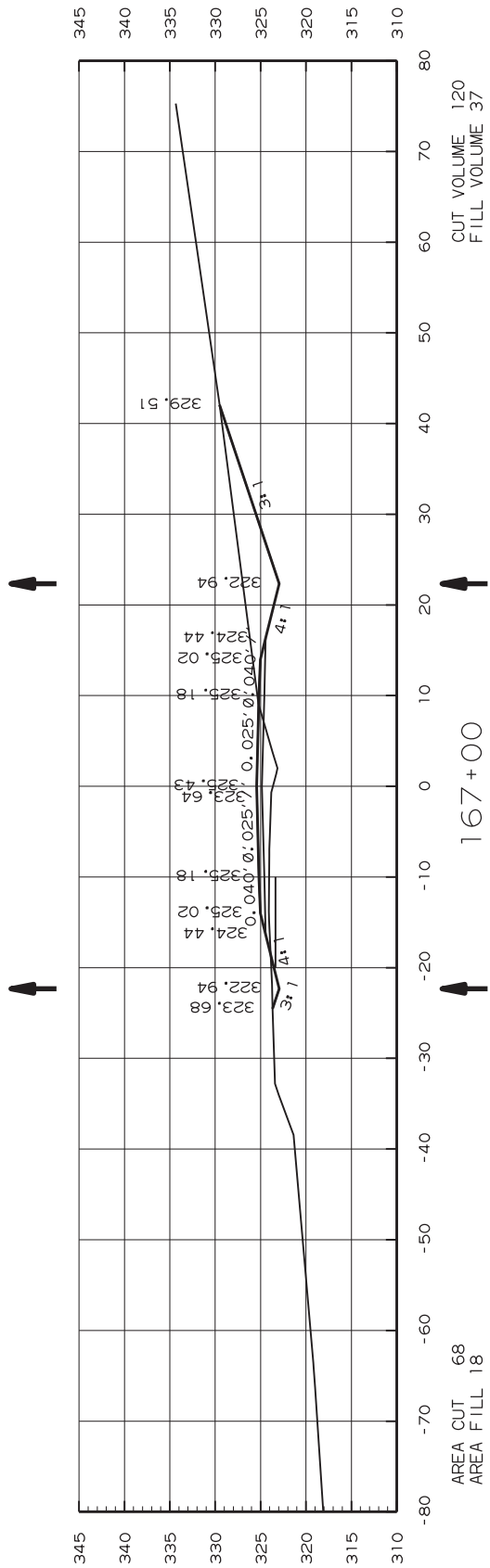


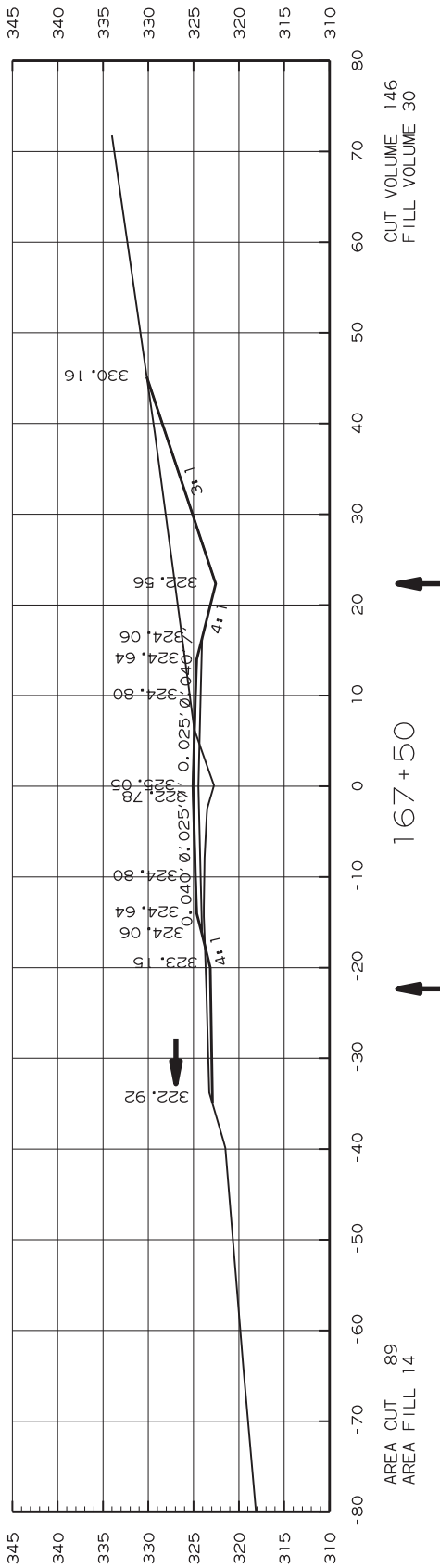
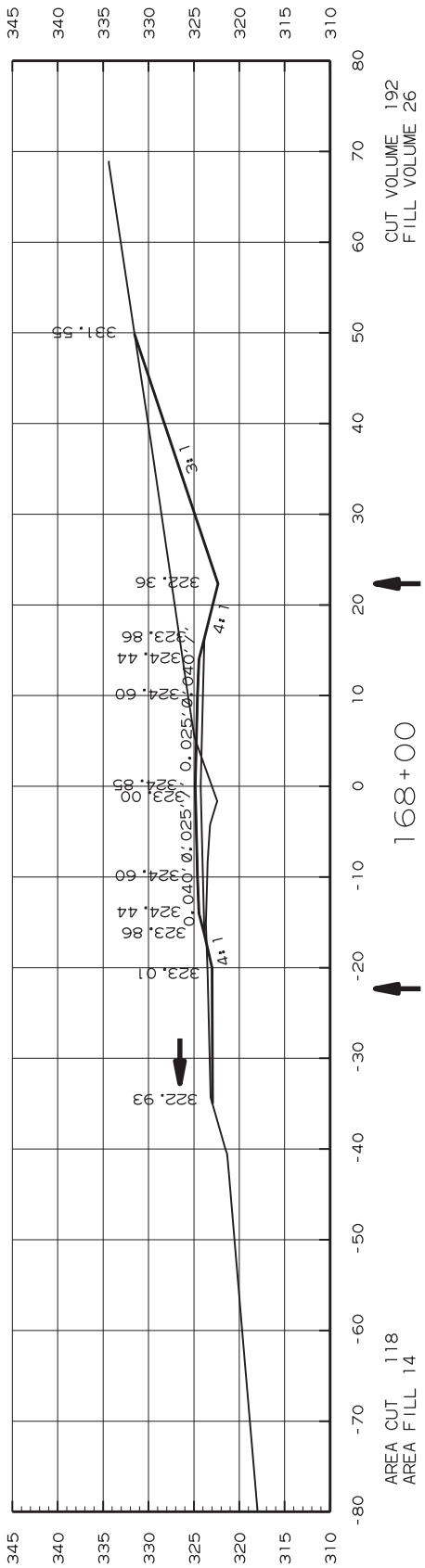
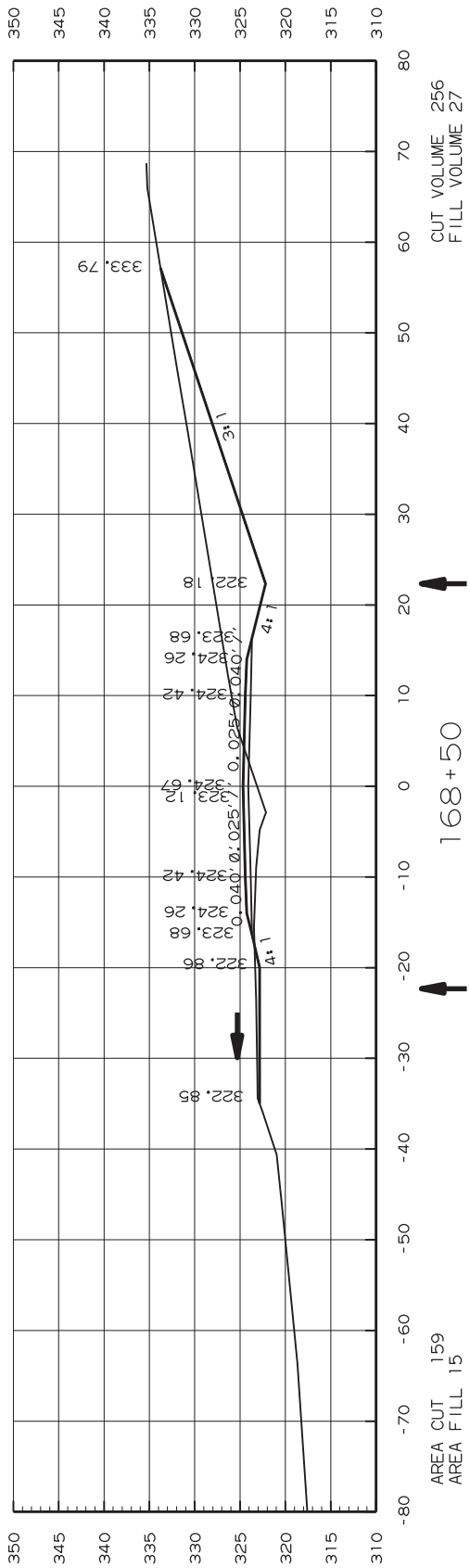
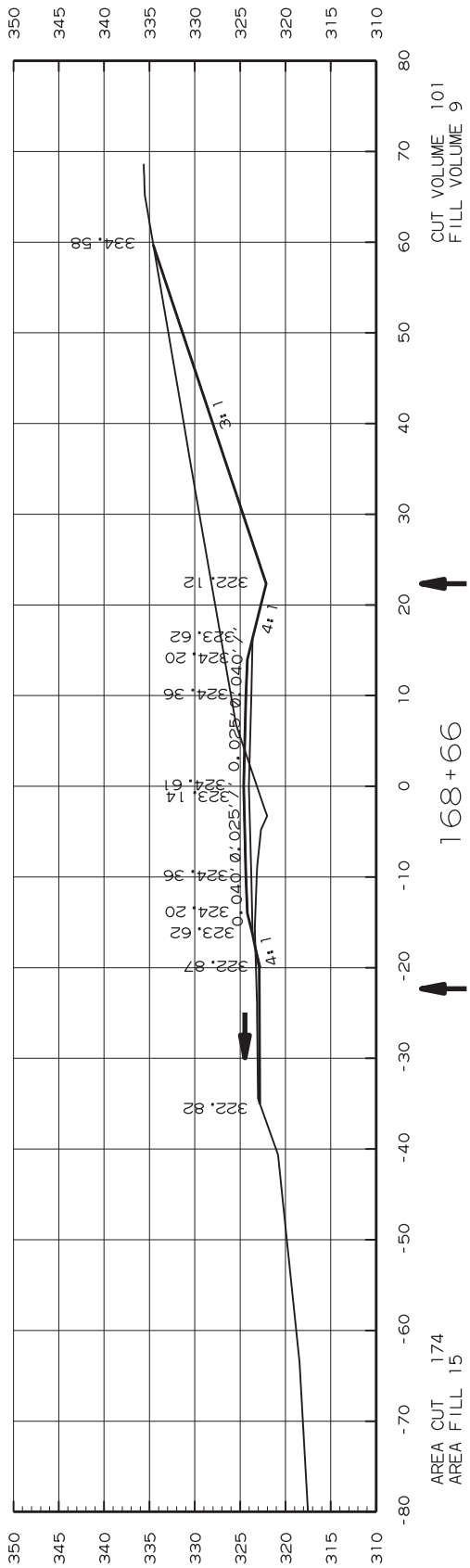
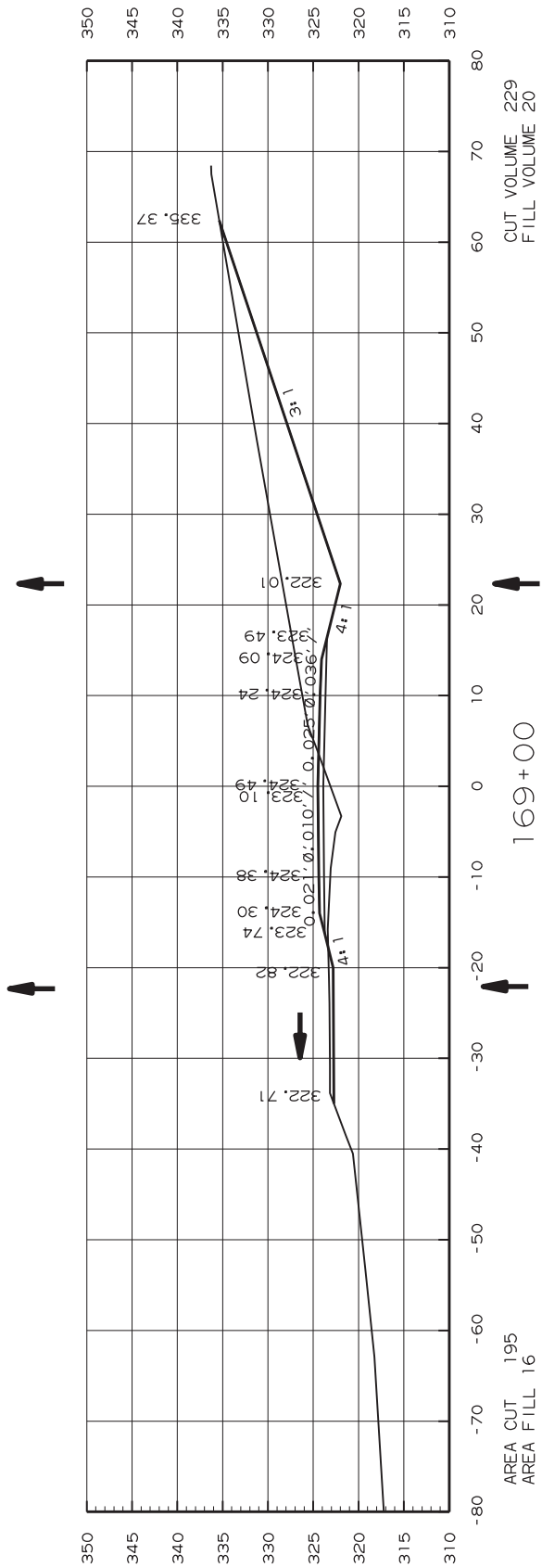


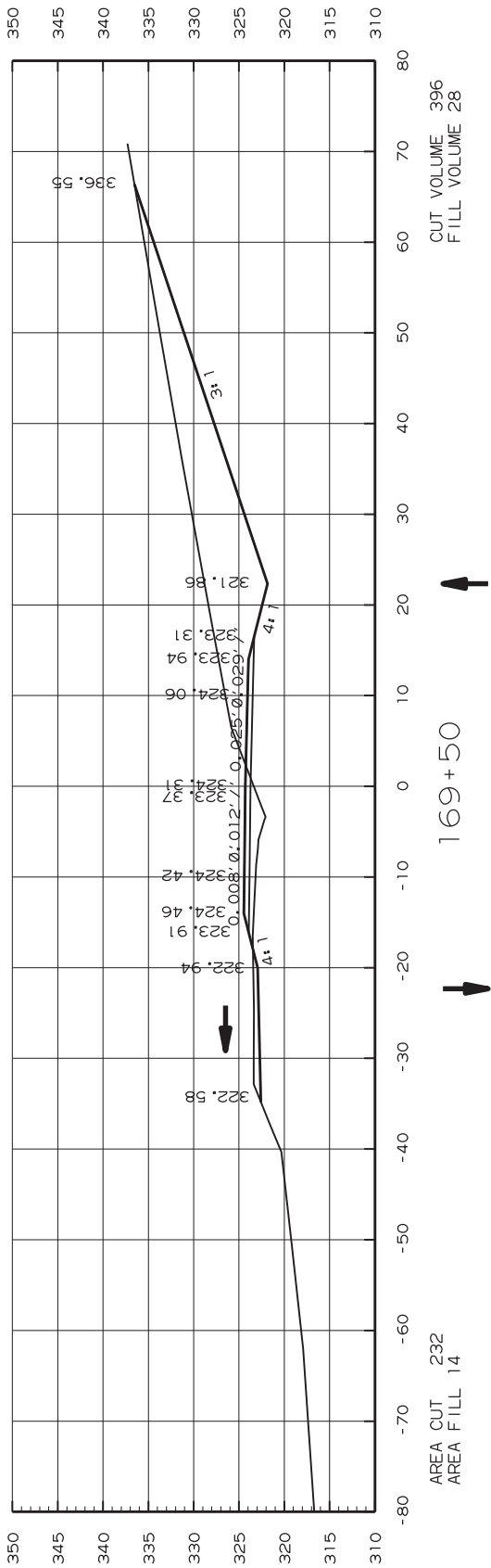
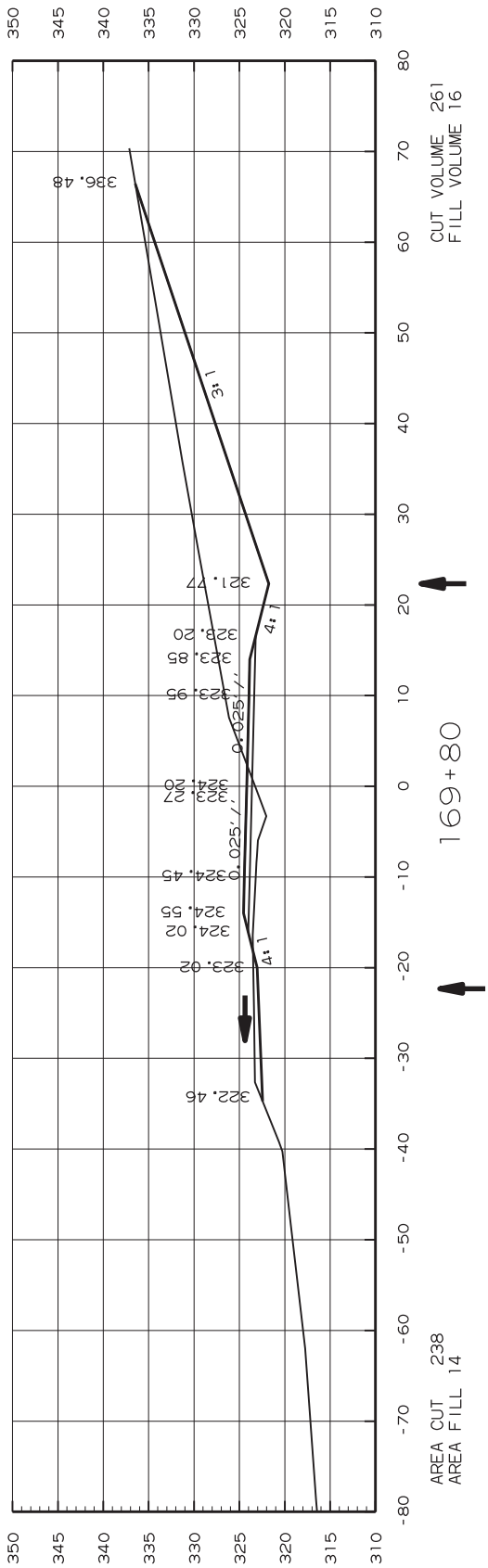
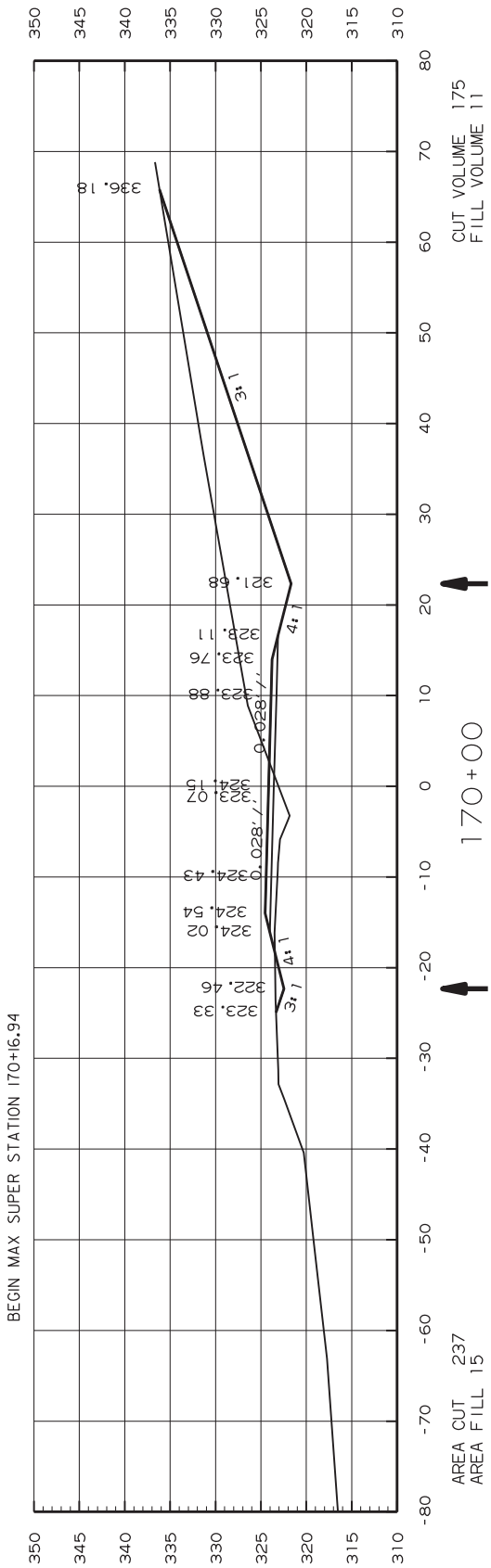
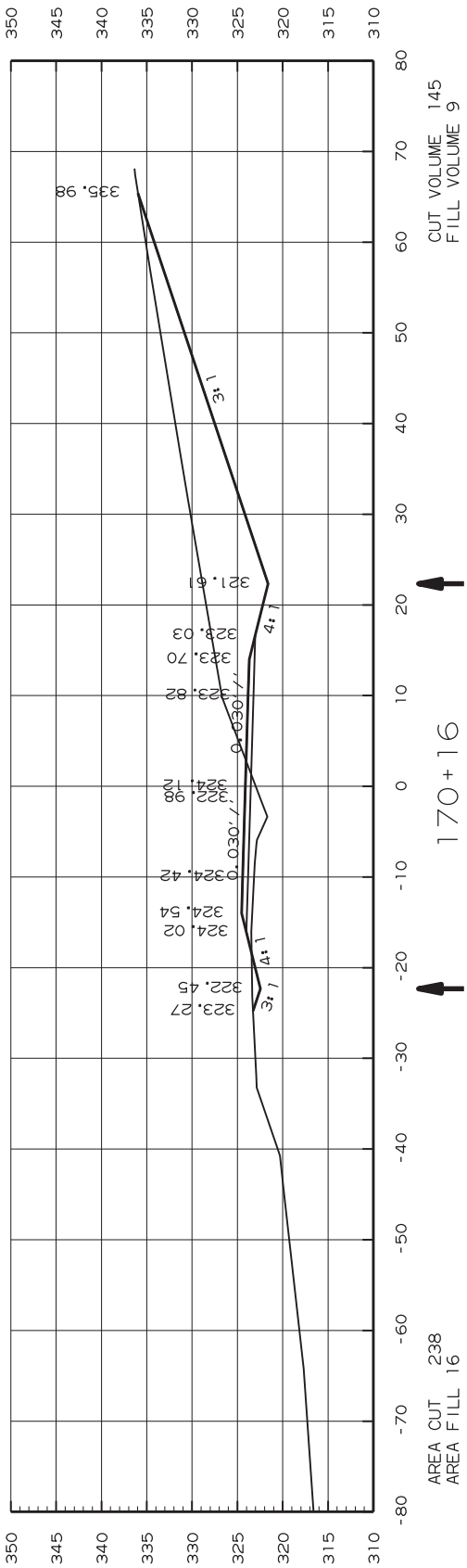
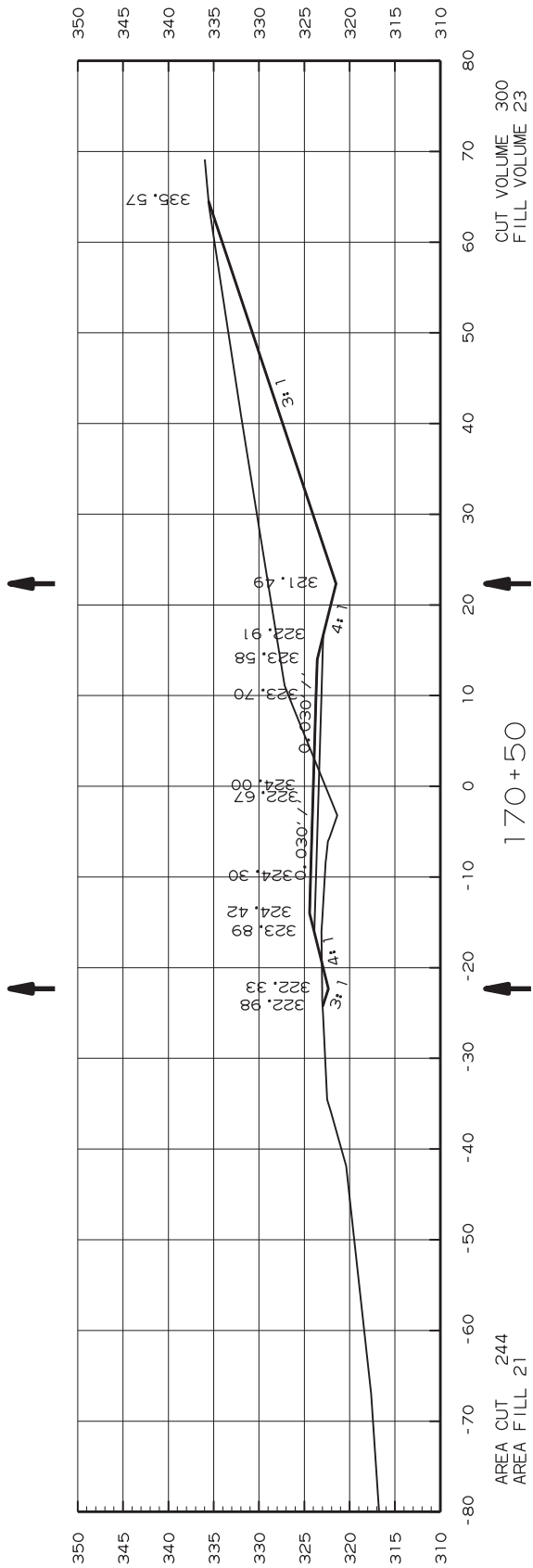


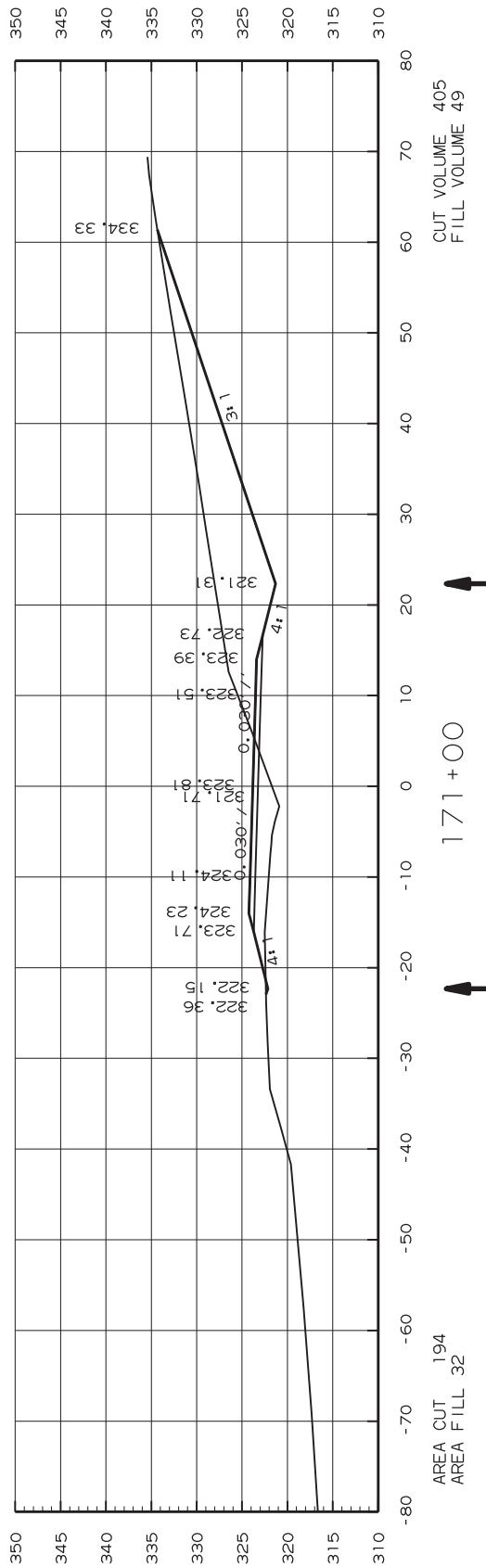
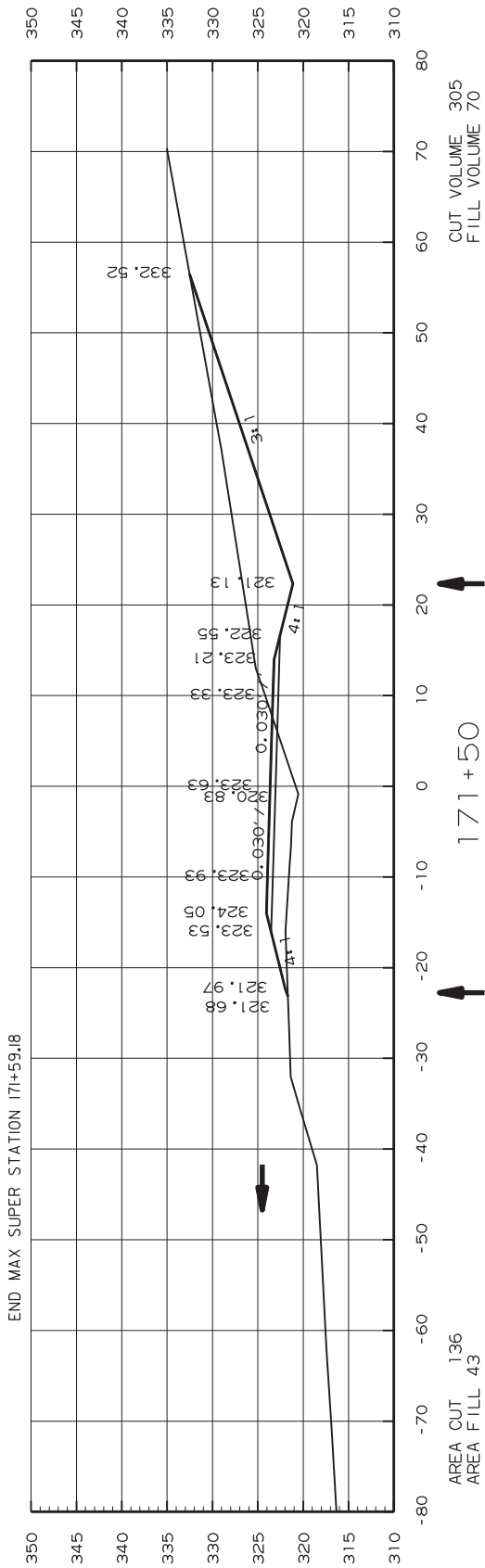
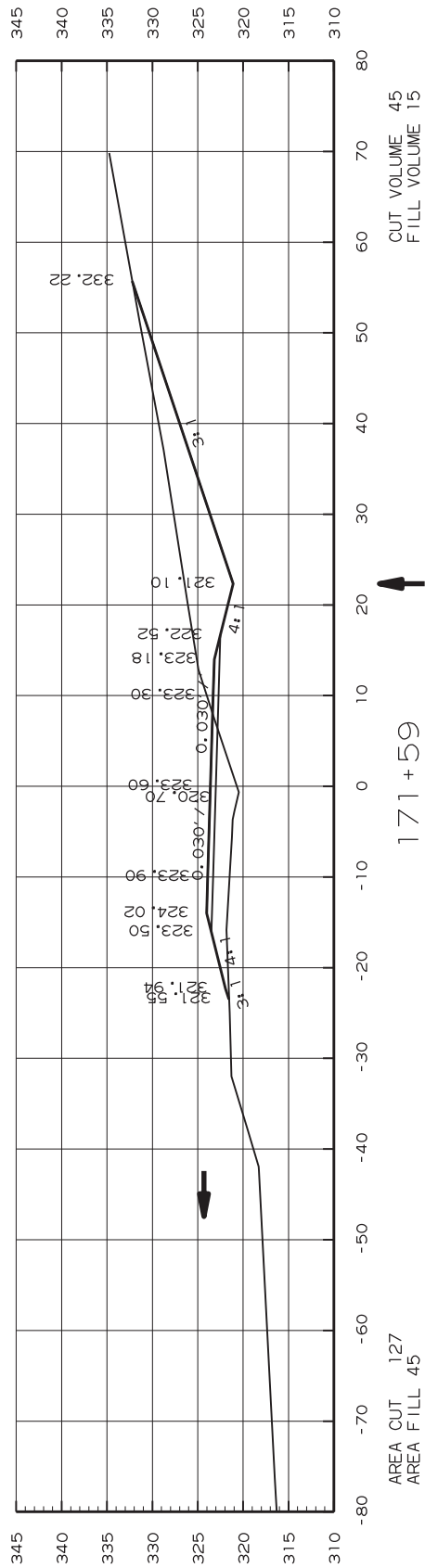
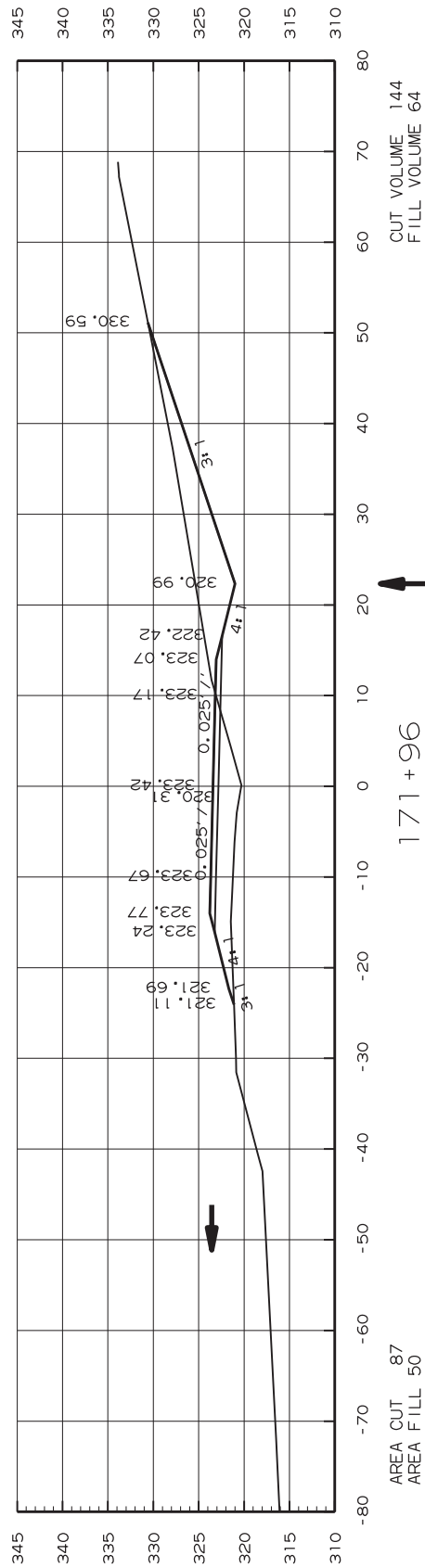
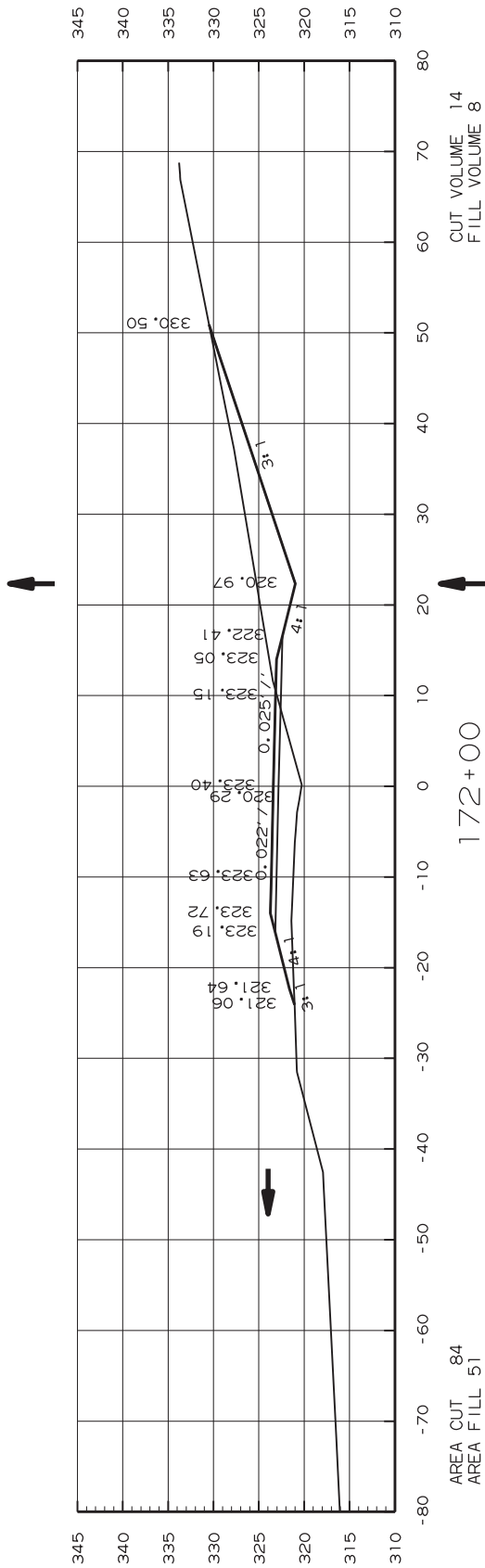


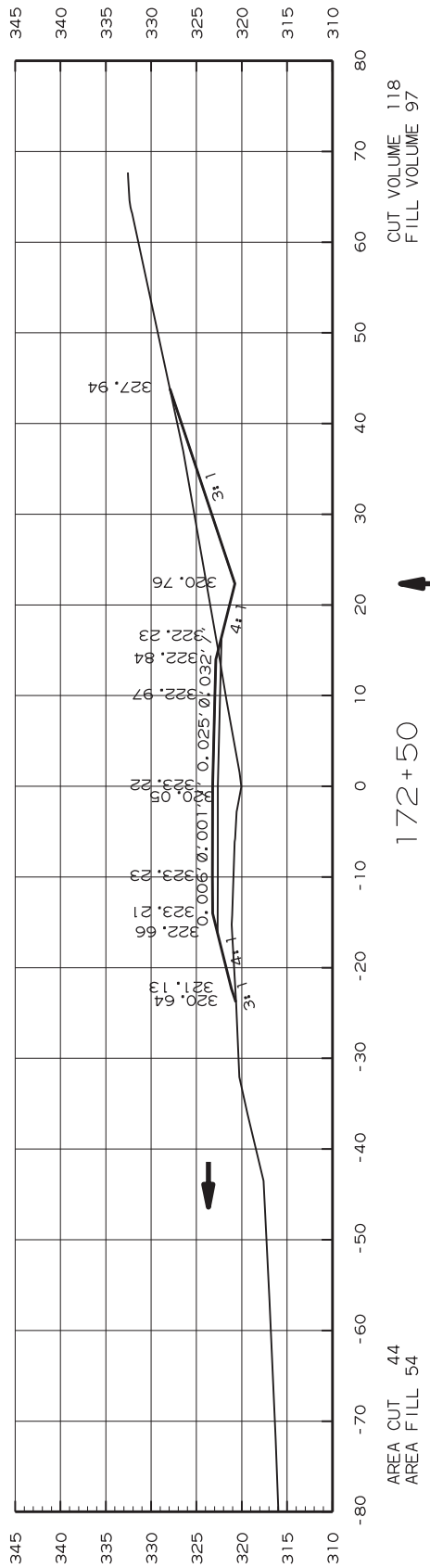
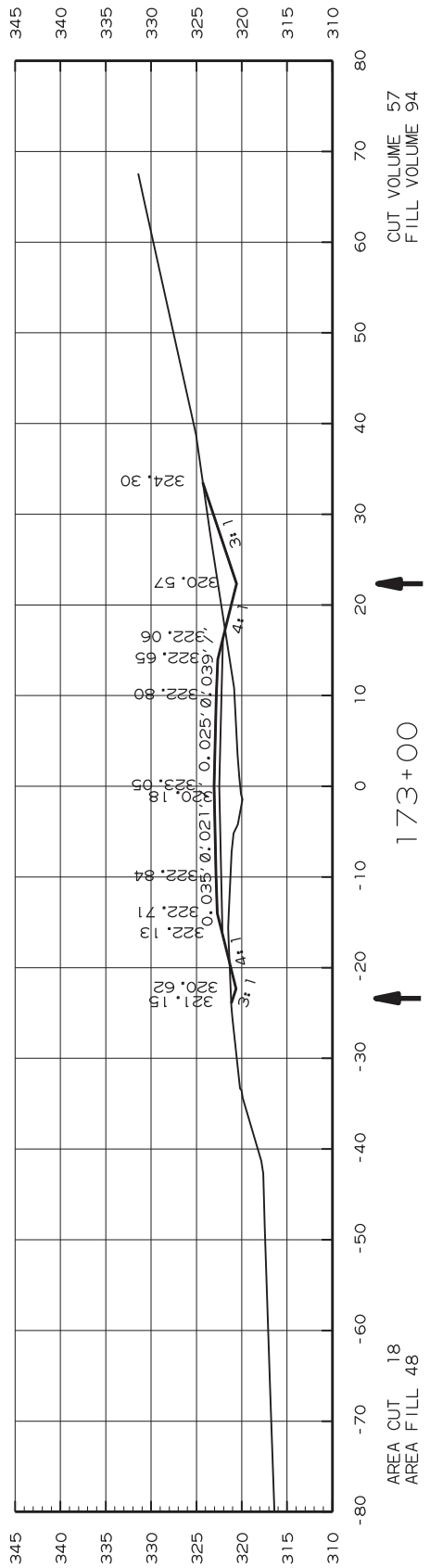
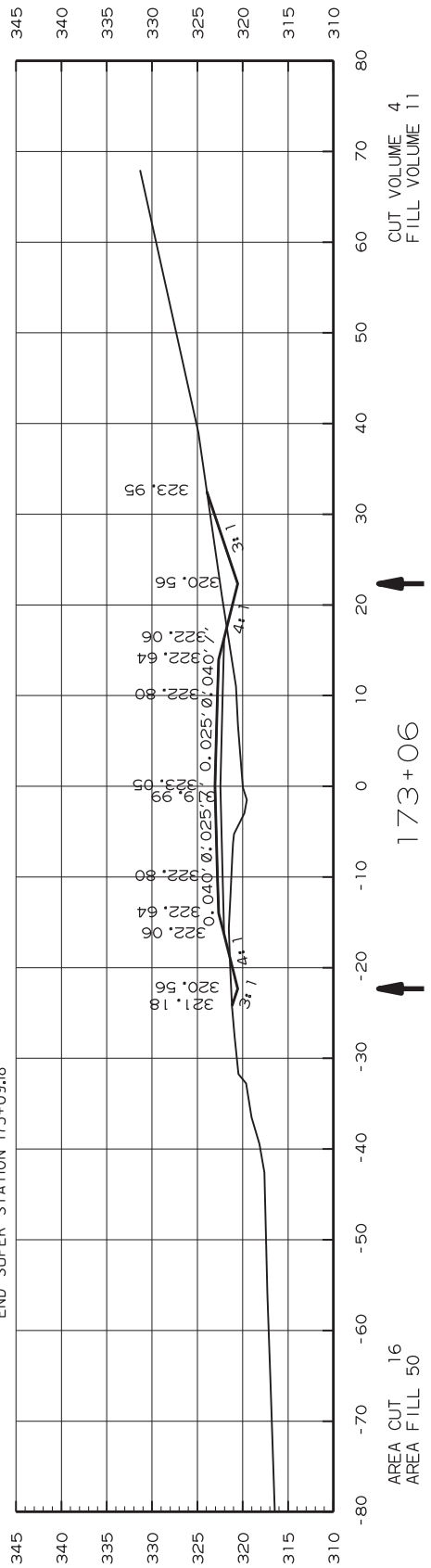
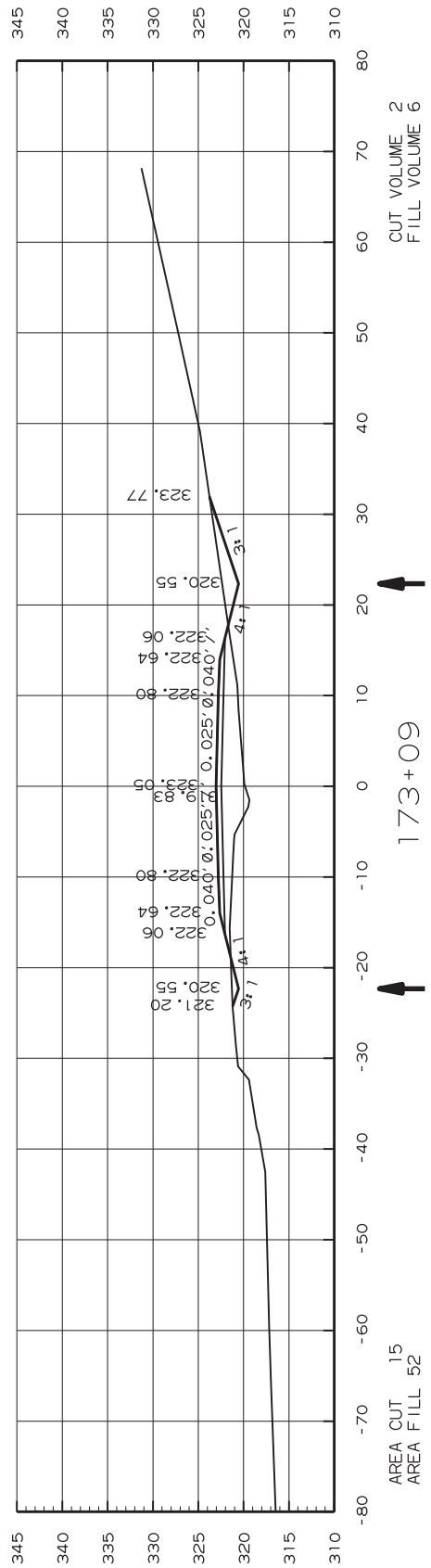
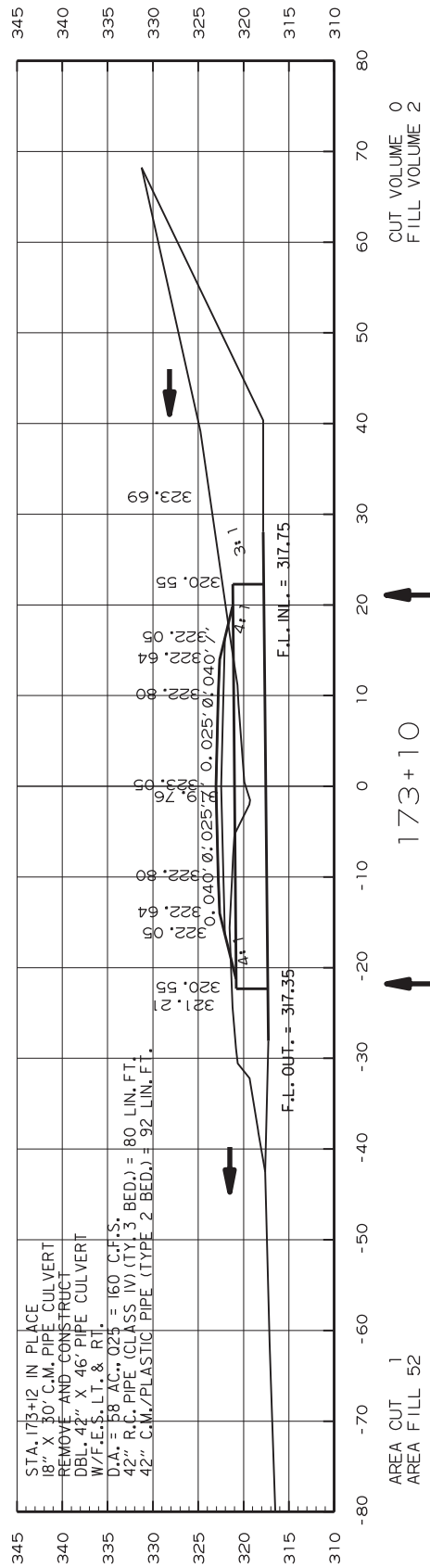
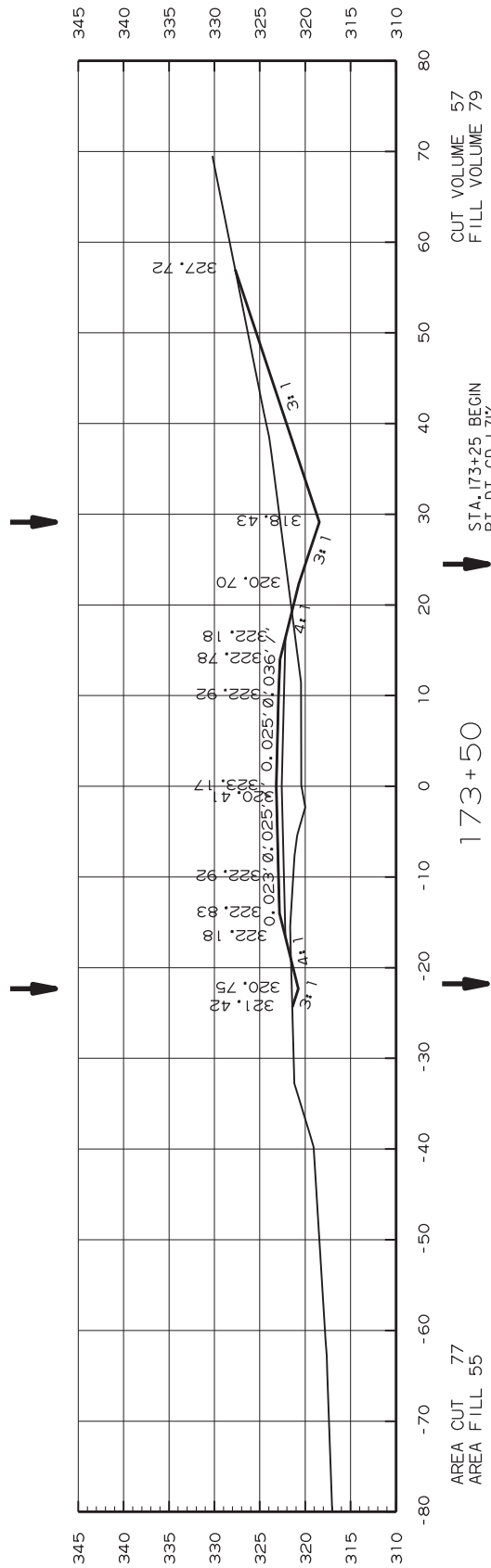




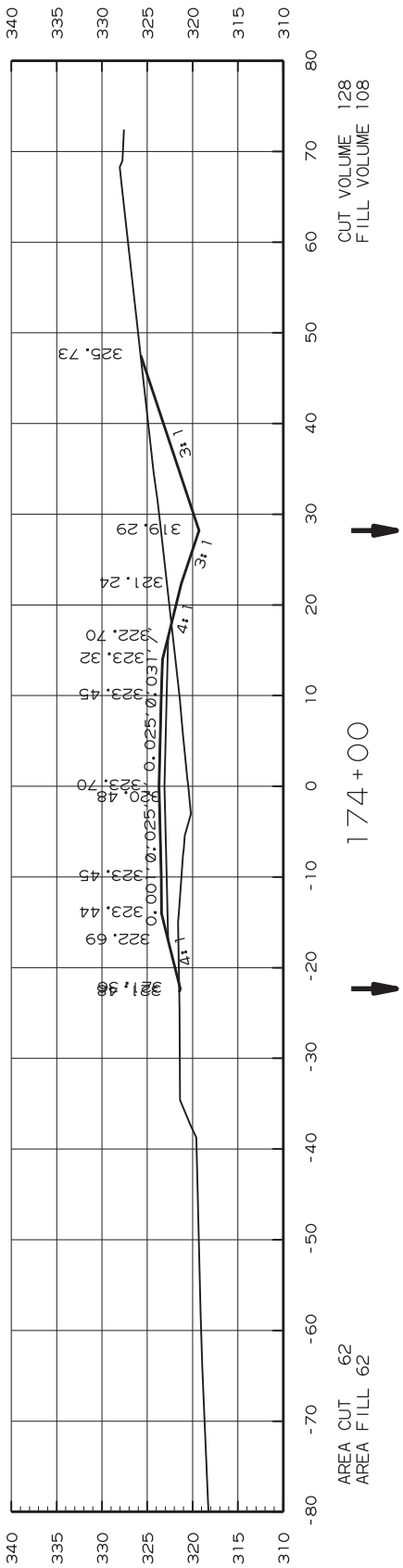
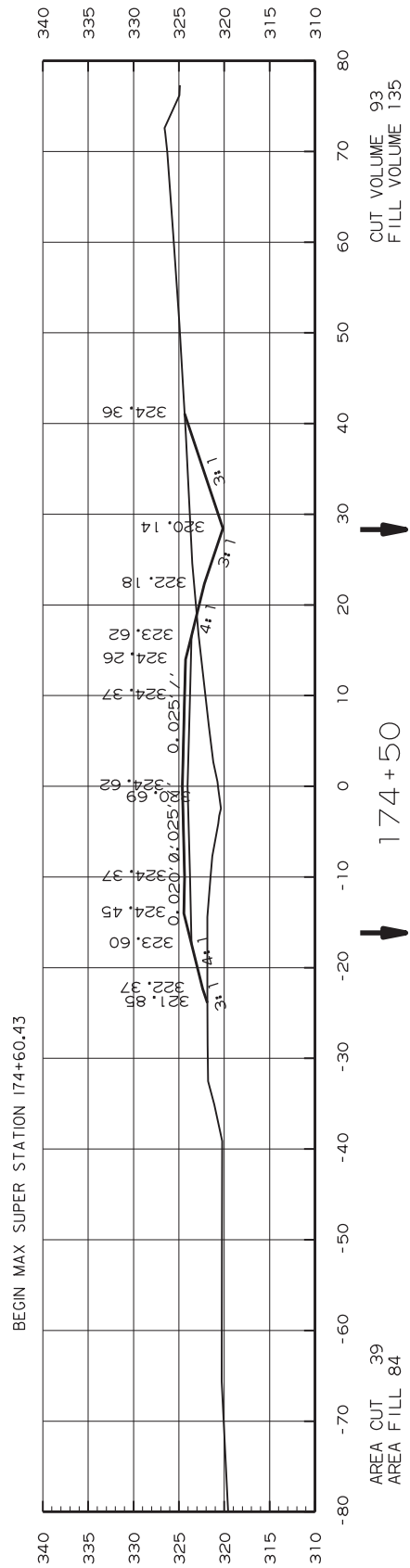
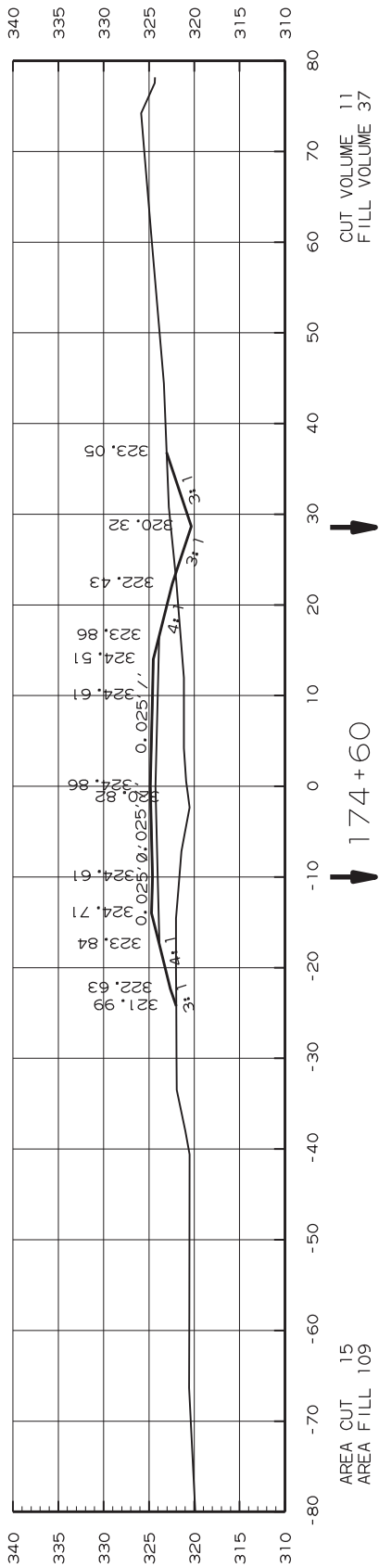
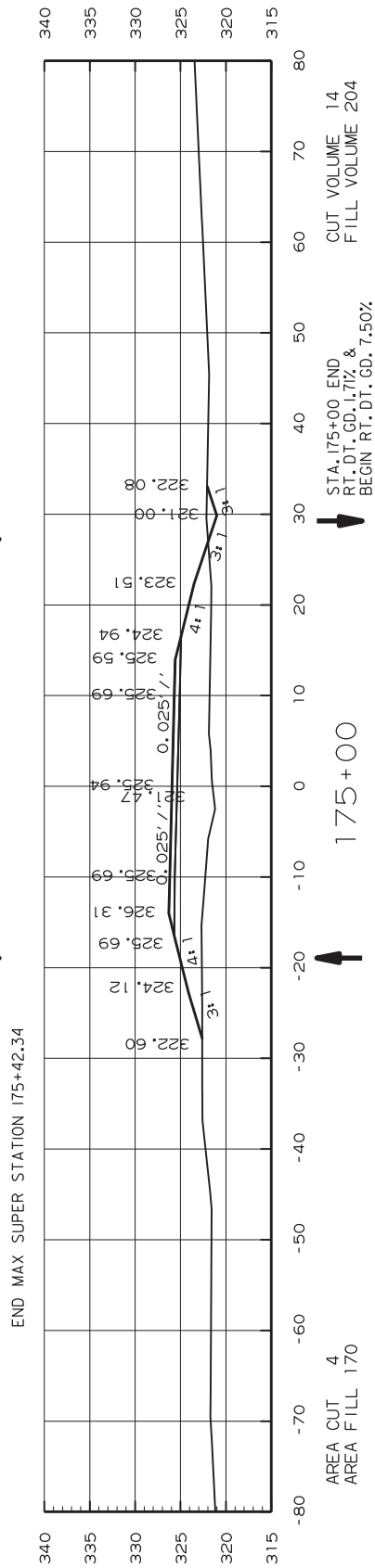
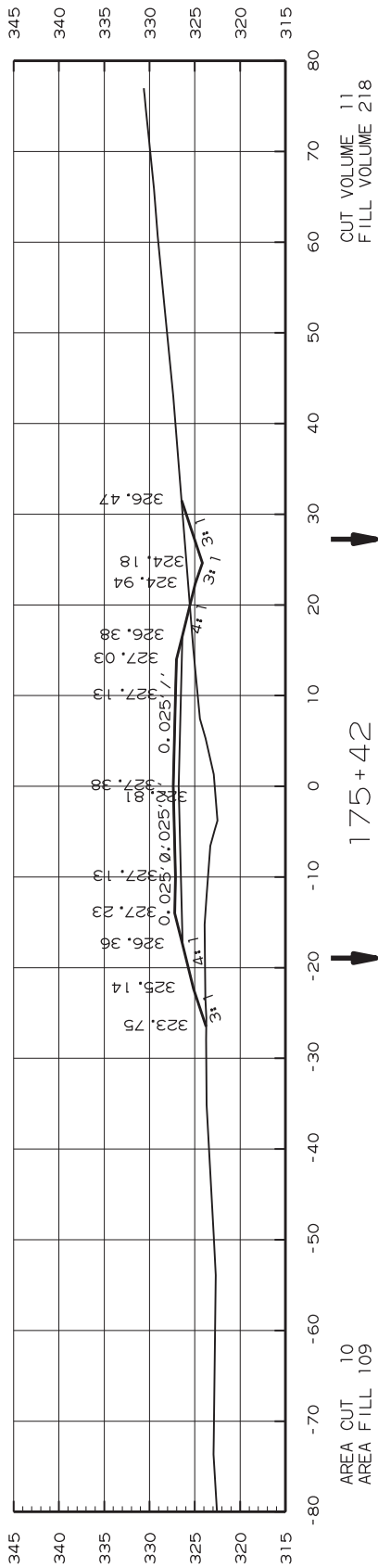
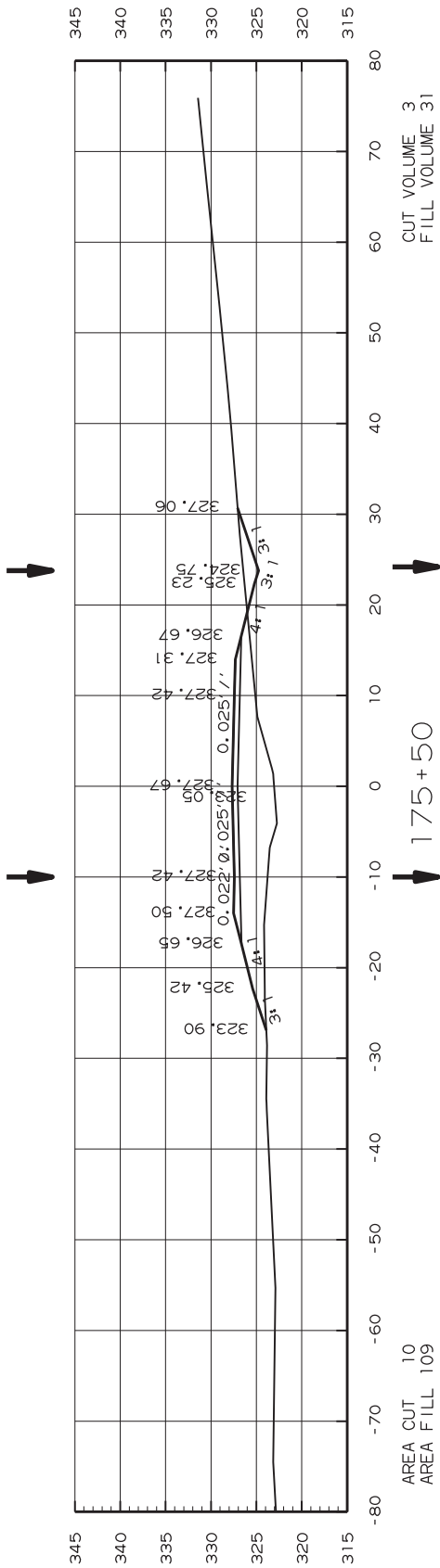


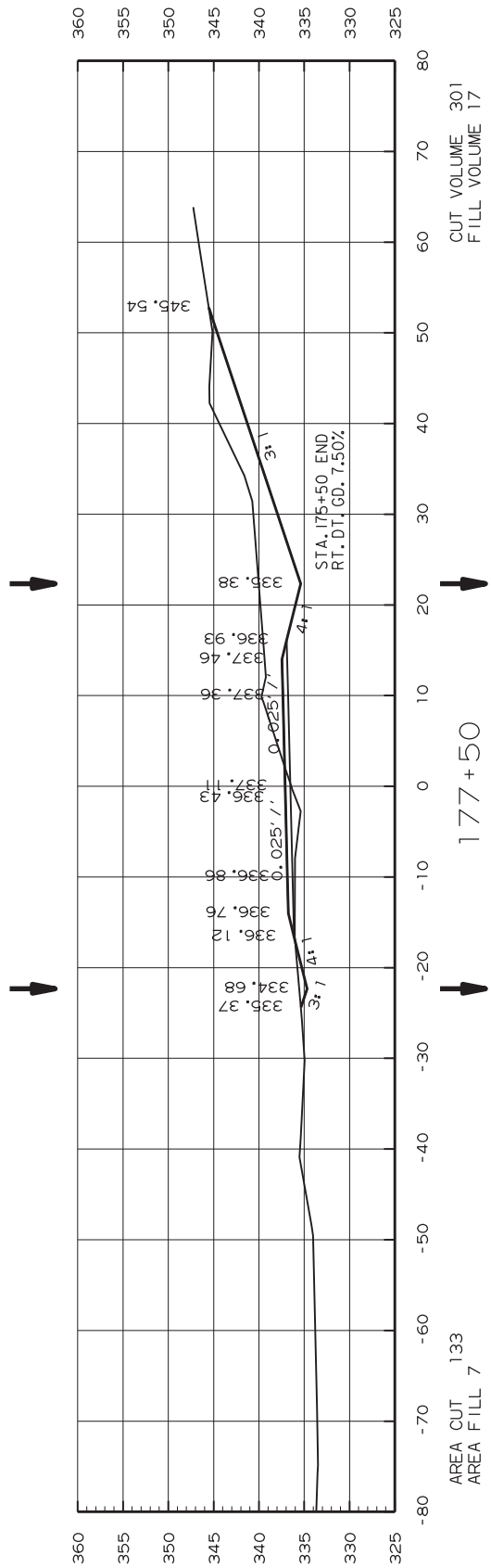


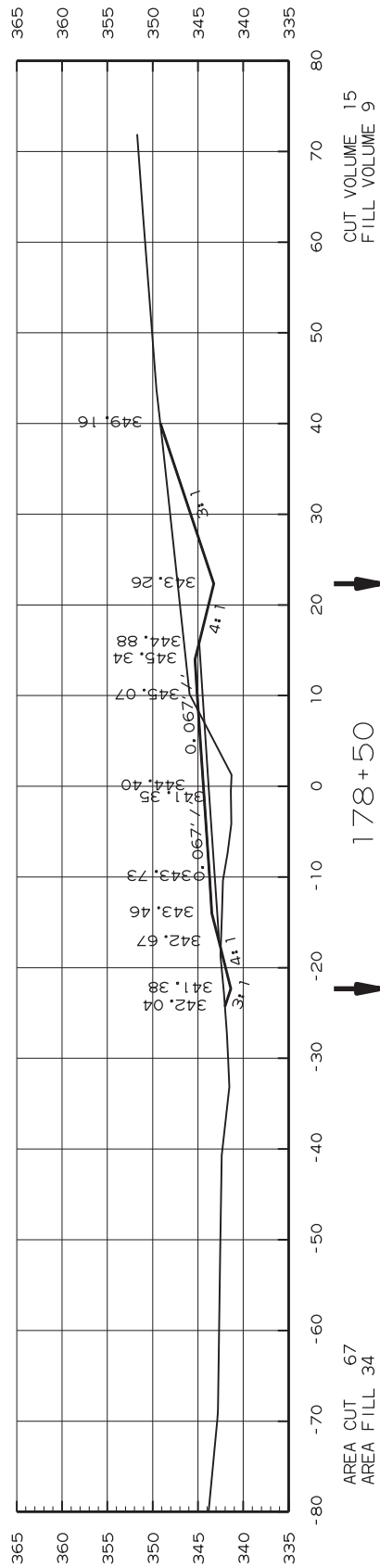
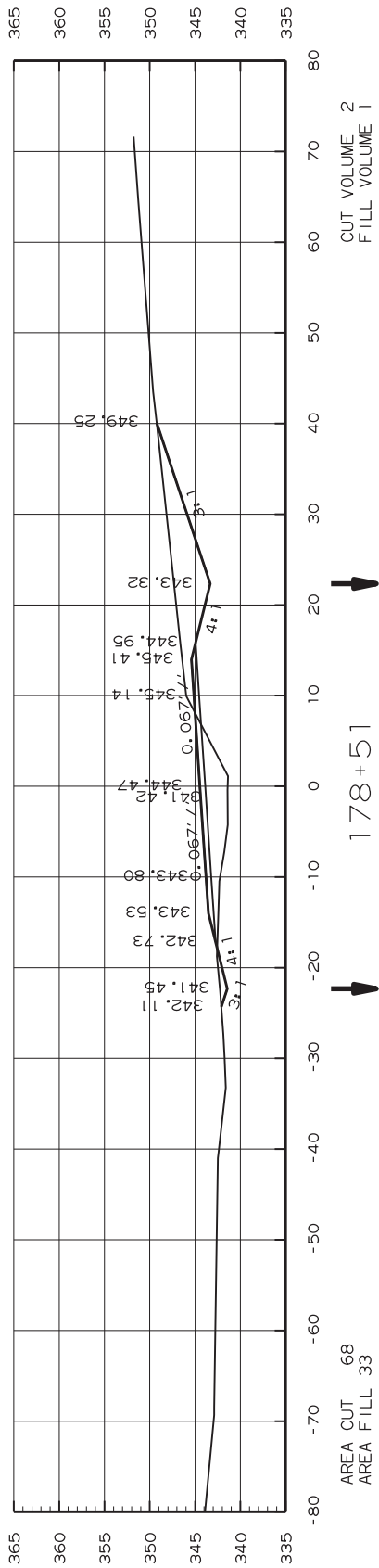
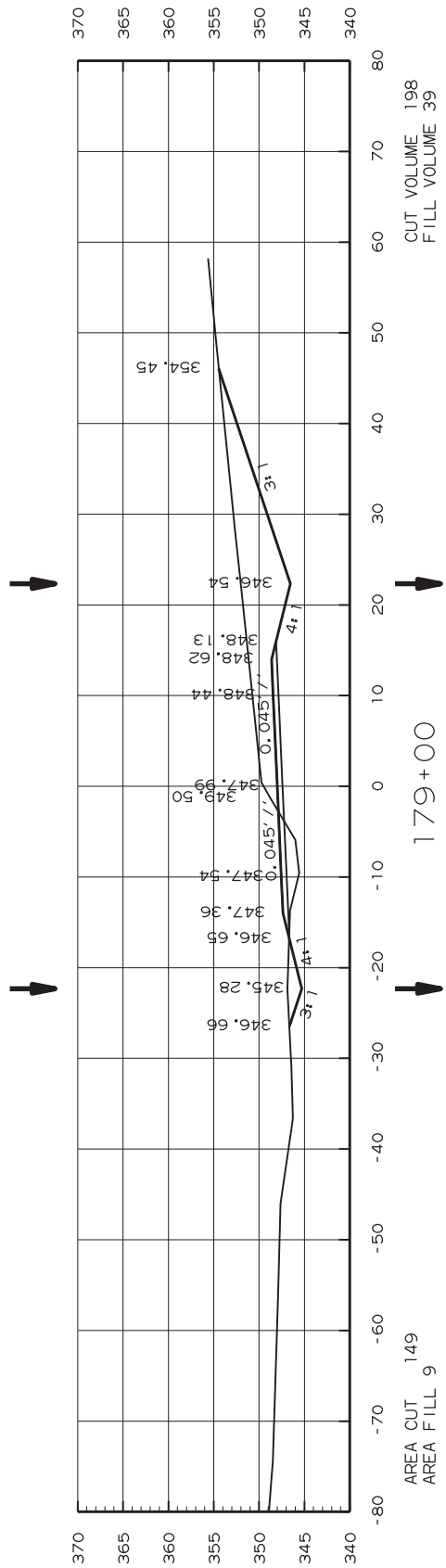




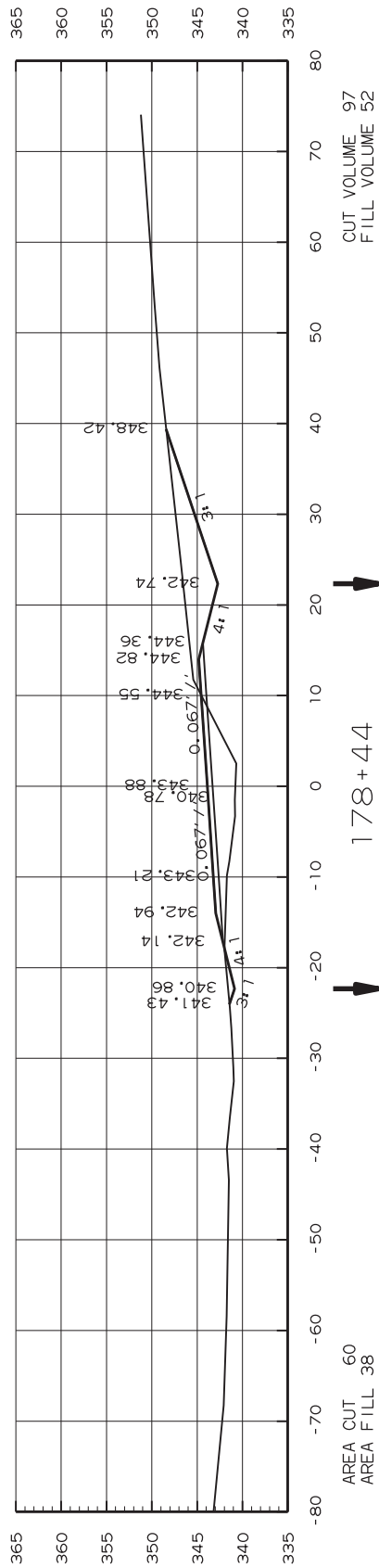
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|------------------|-------------|---------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                  |             |               |             | 6                  | ARK.  |                    |           |              |
|                  |             |               |             | JOB NO.            |       | FA5309             | 70        | 114          |
| 4 CROSS SECTIONS |             |               |             |                    |       |                    |           |              |



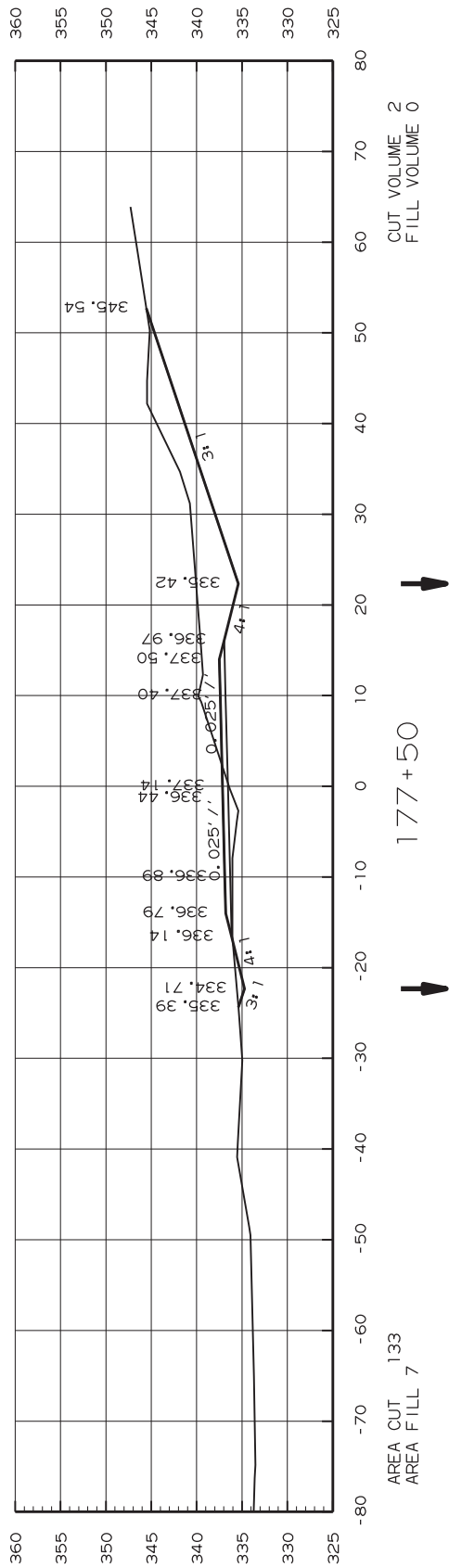
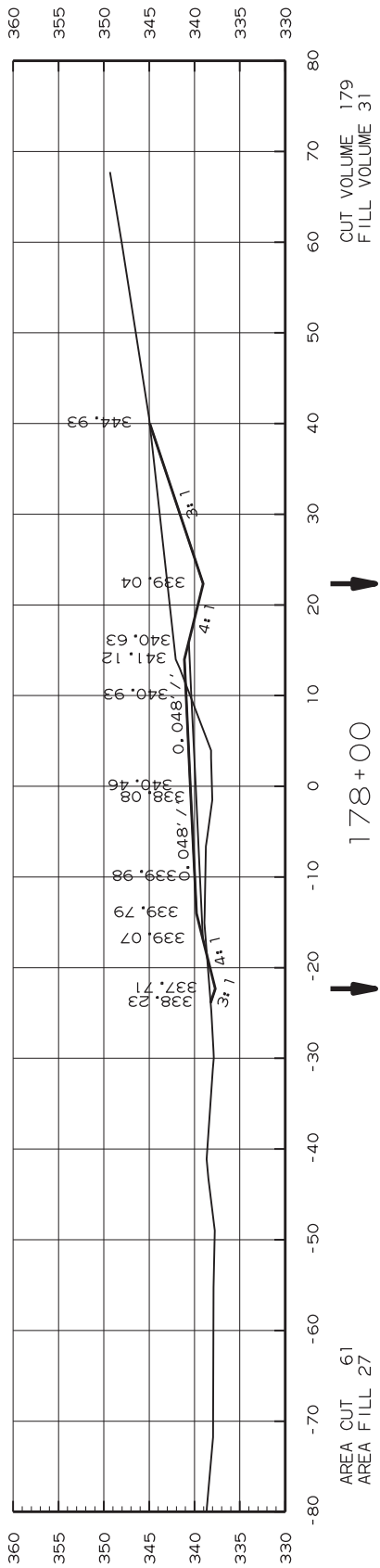


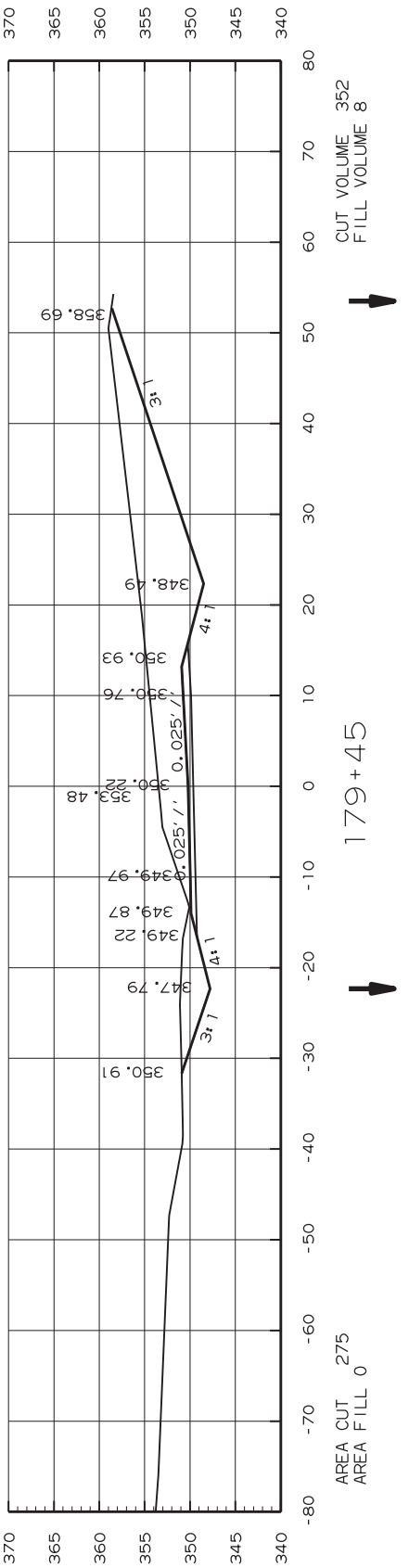
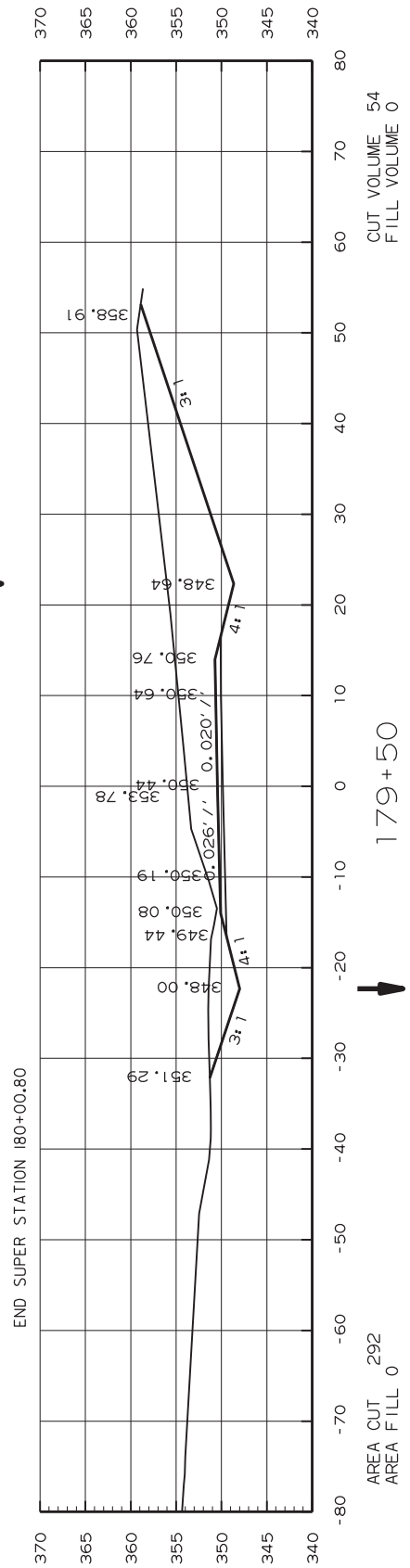
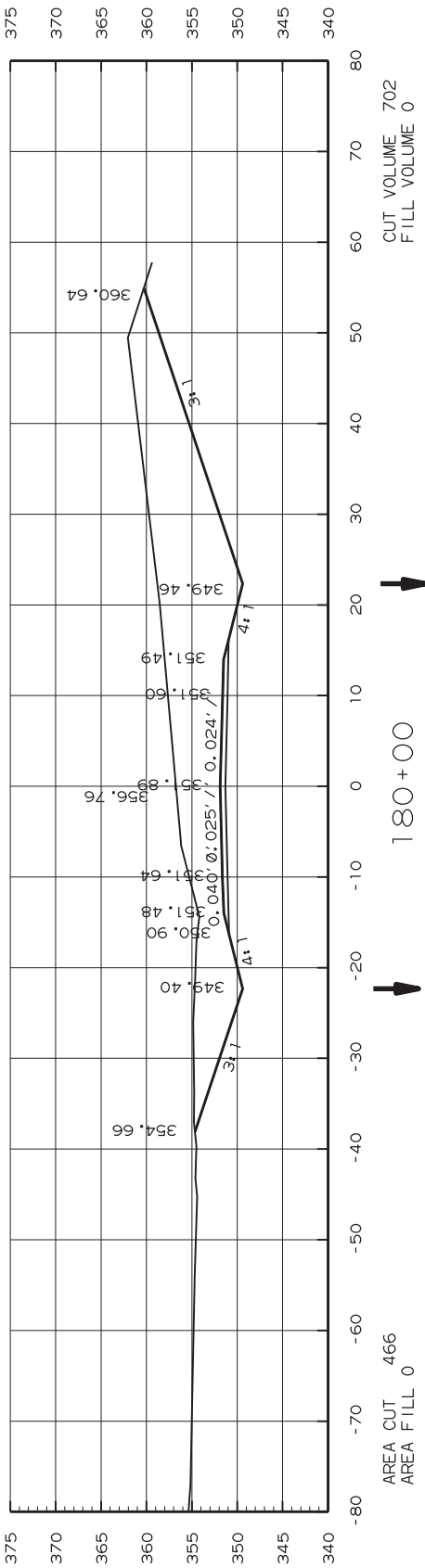
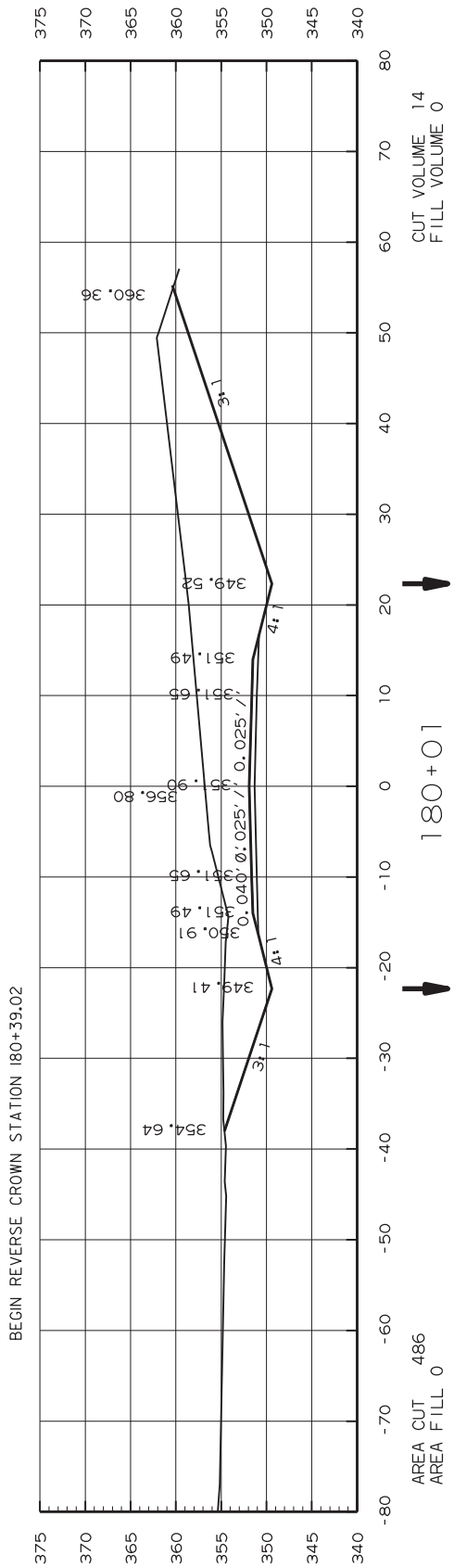
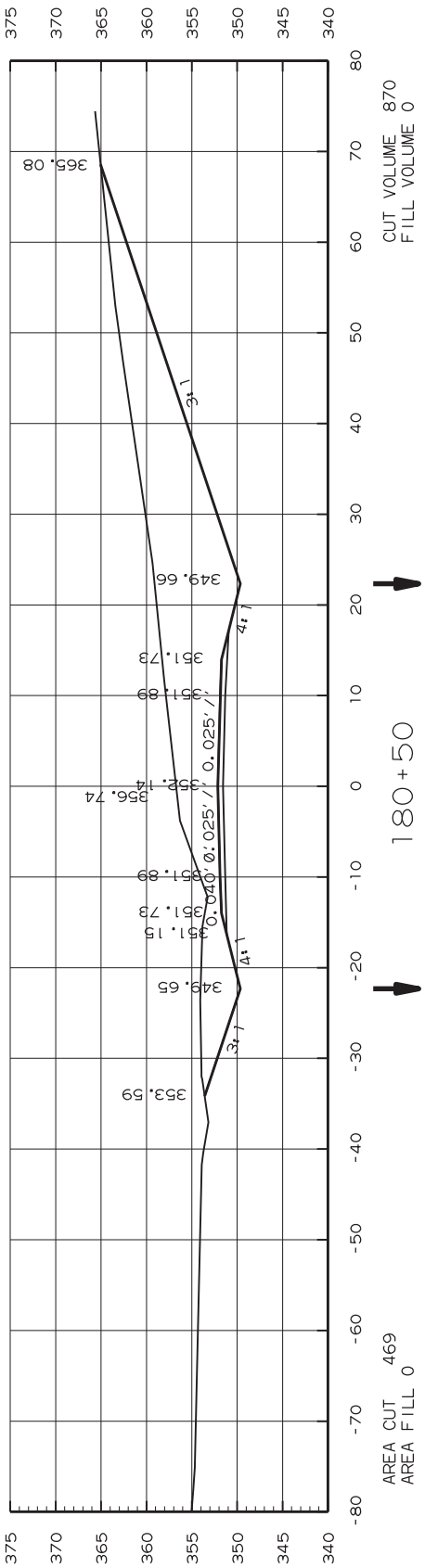
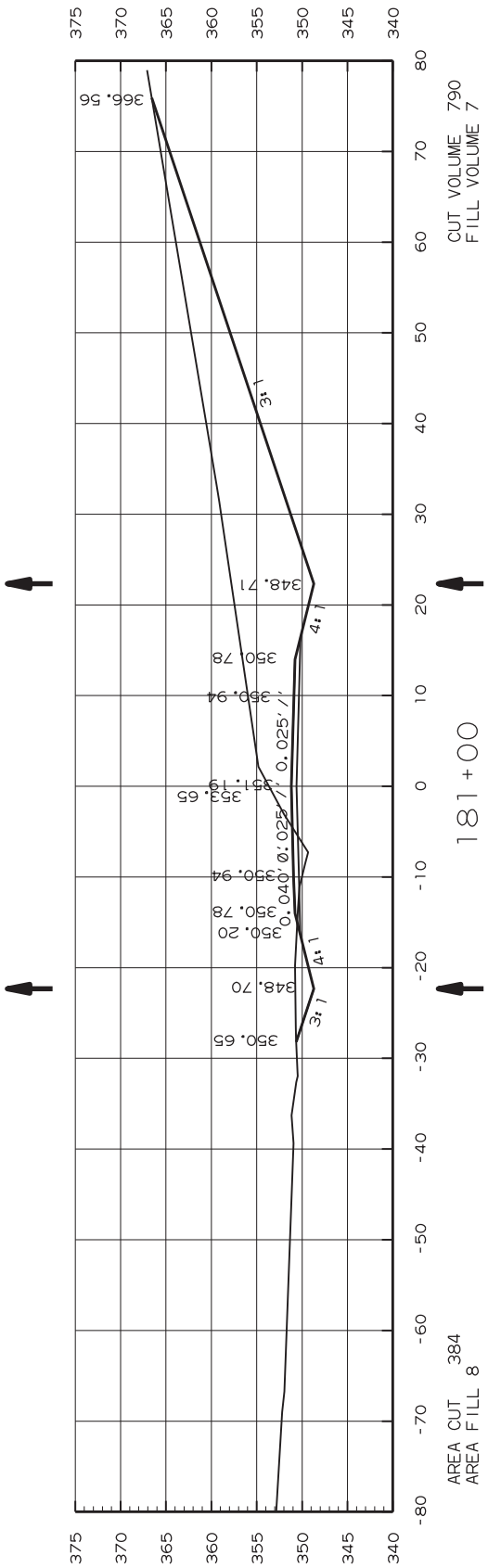


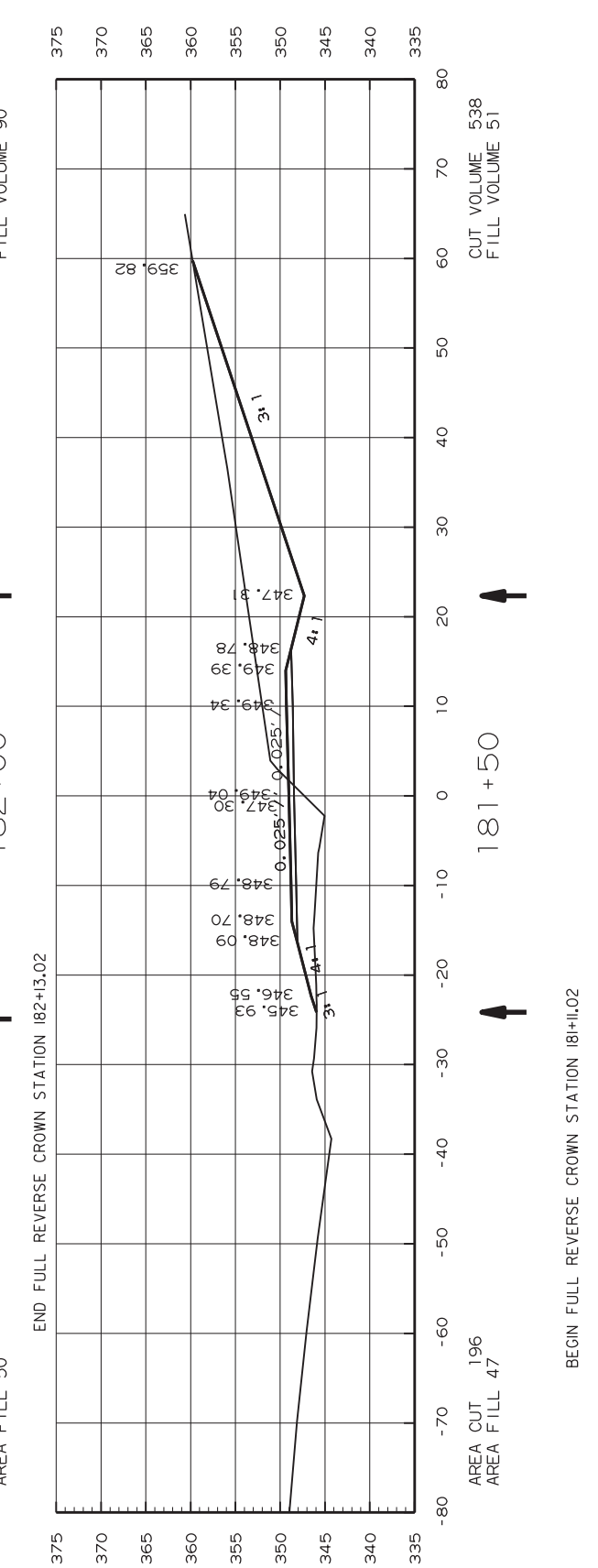
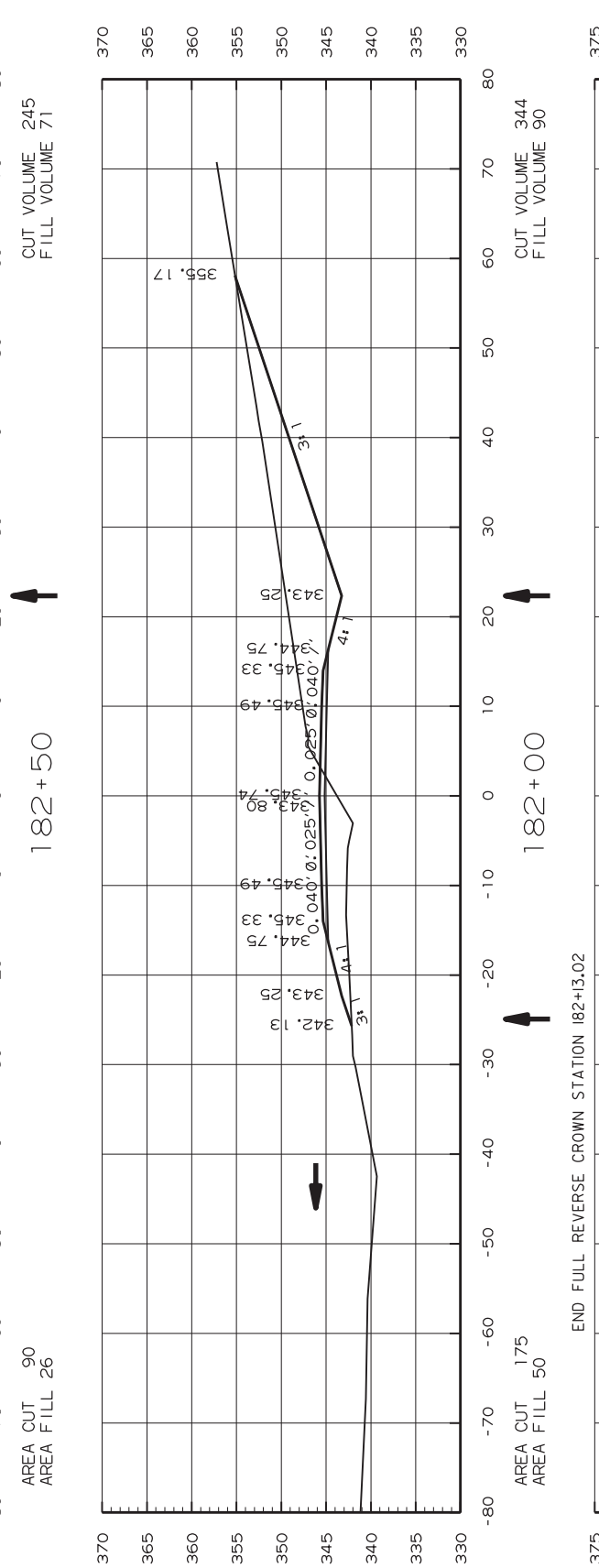
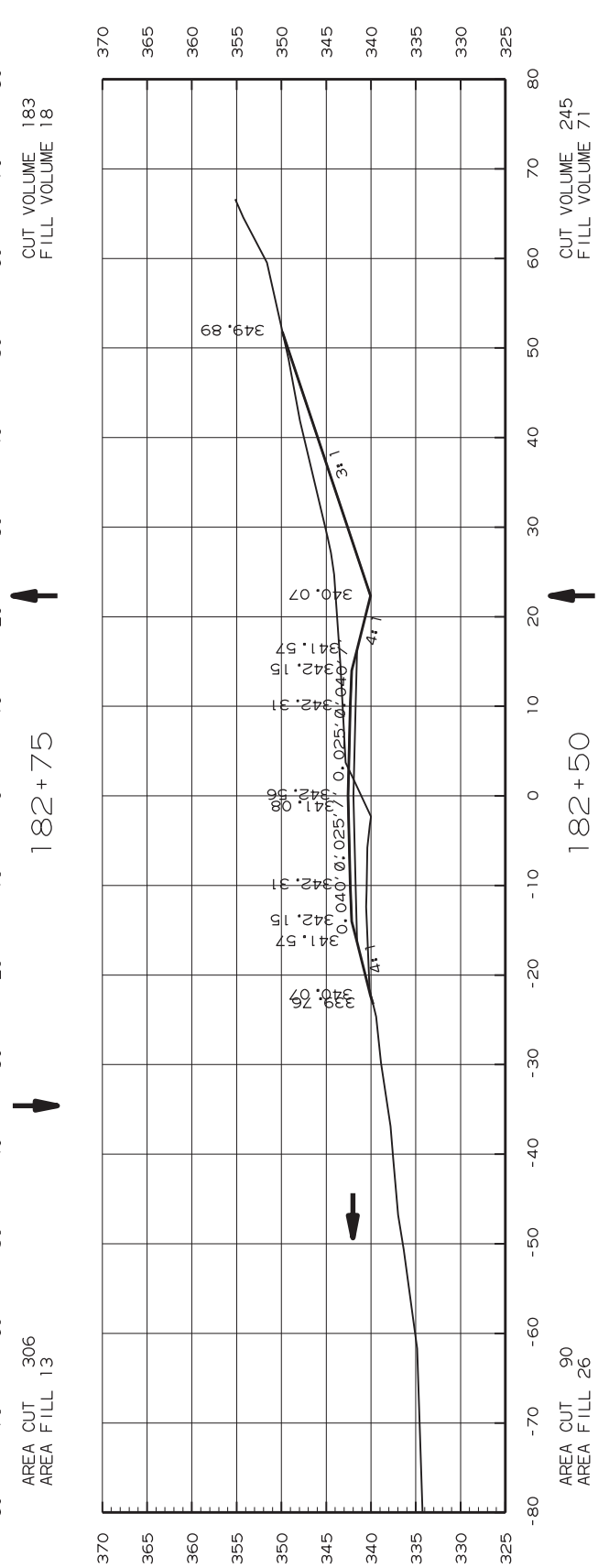
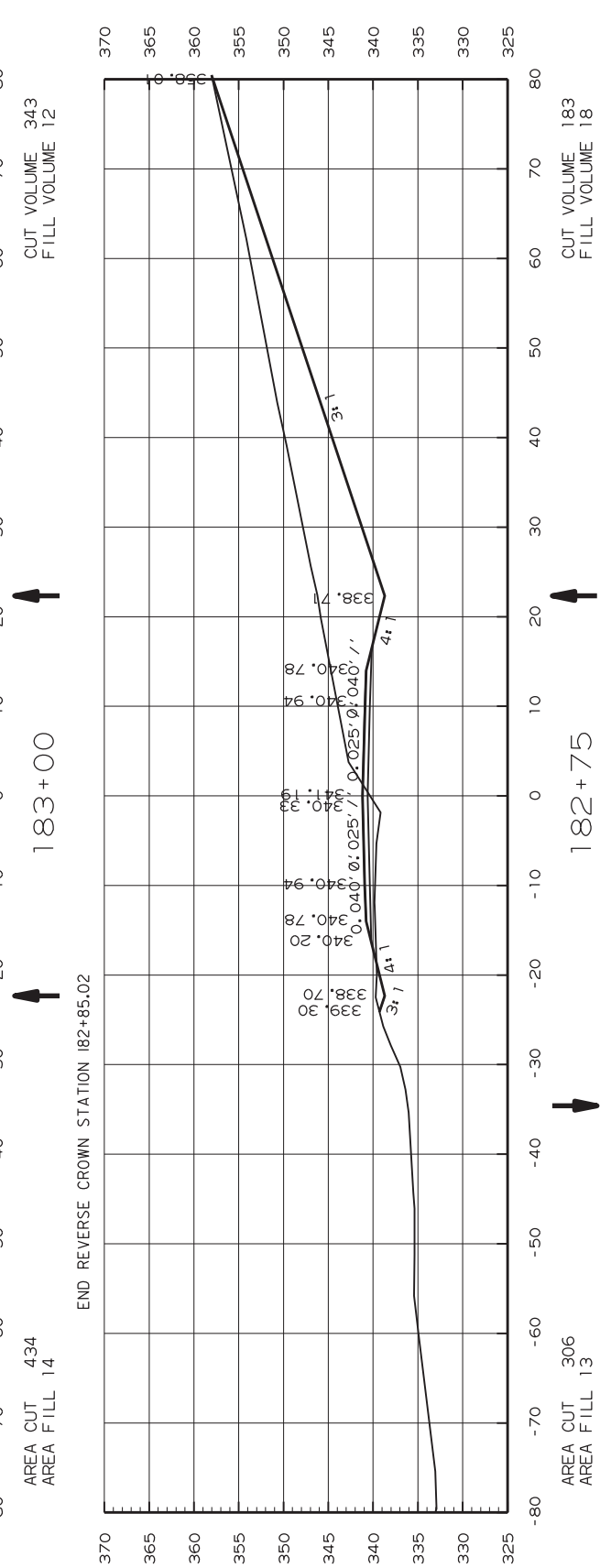
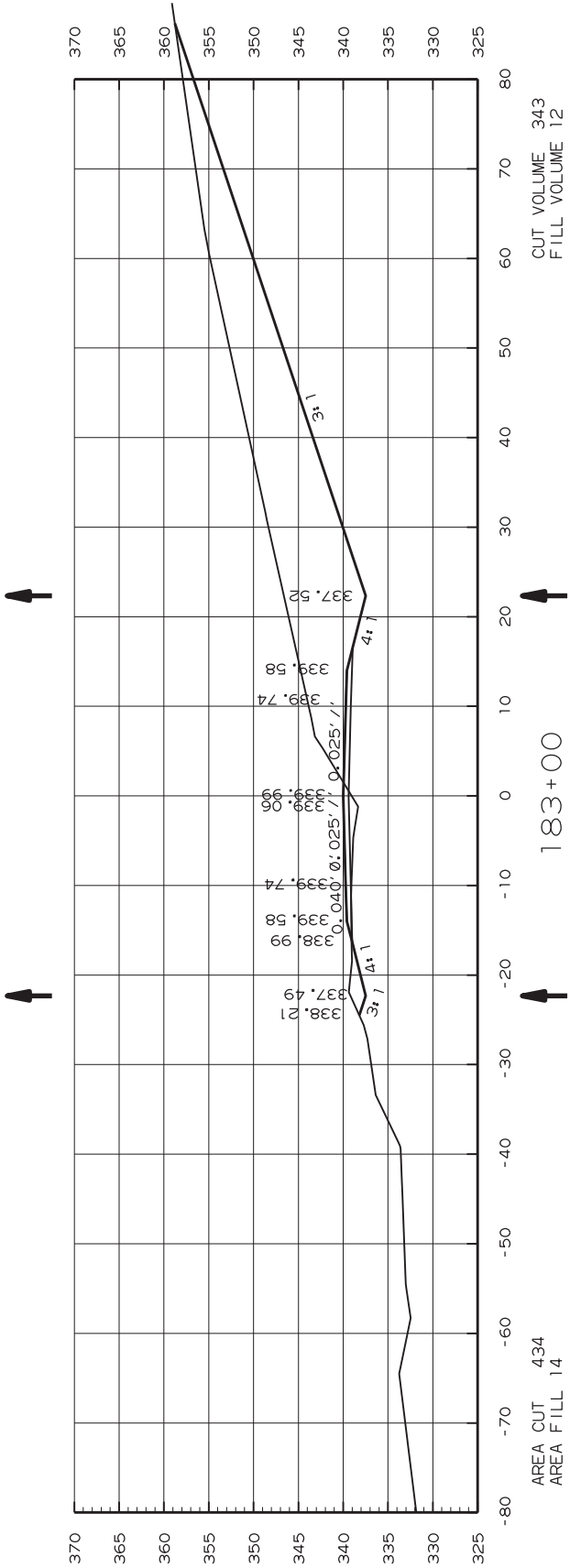
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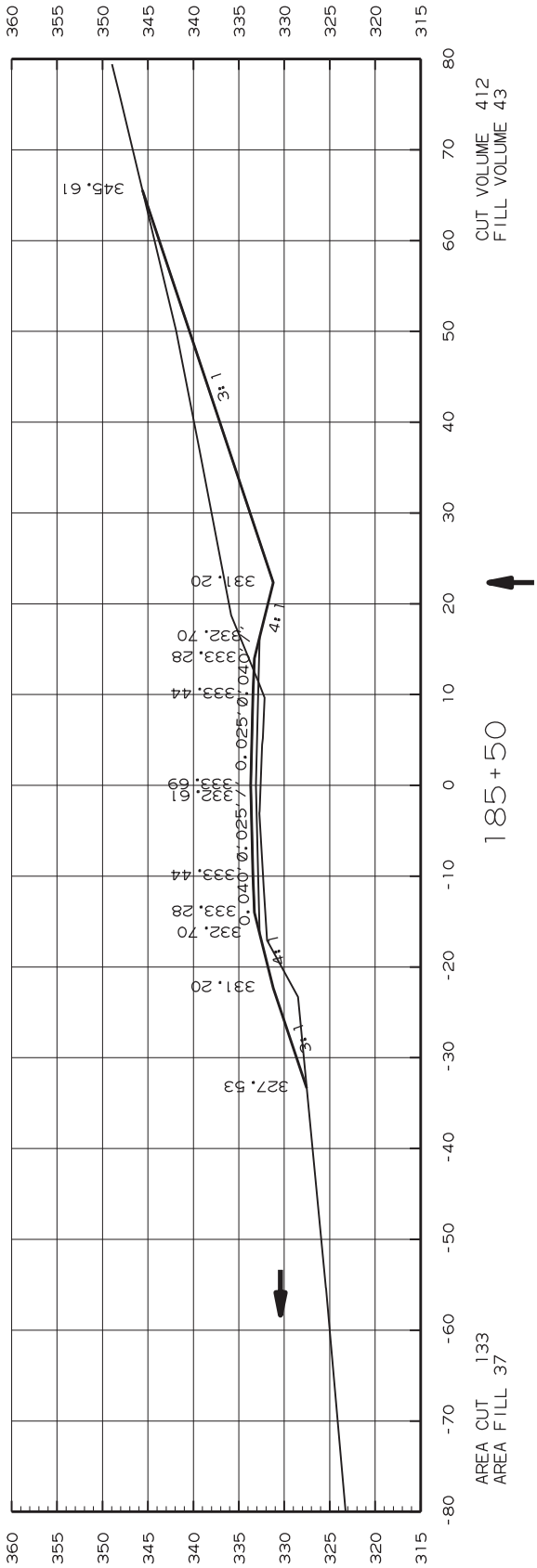
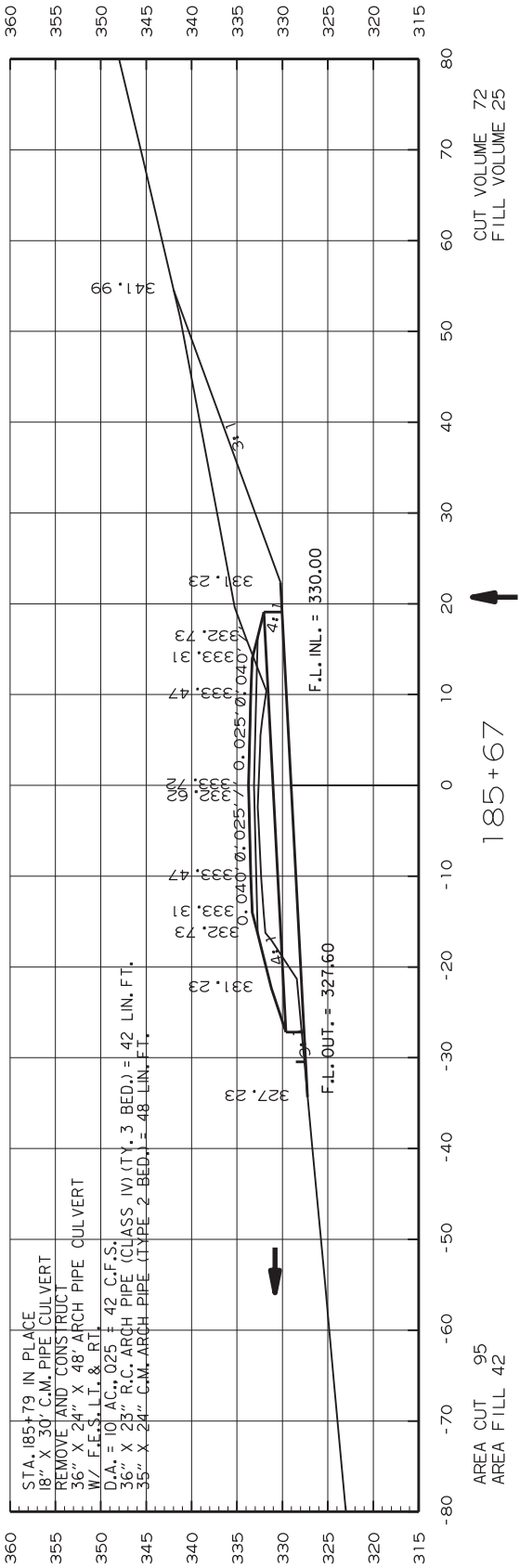
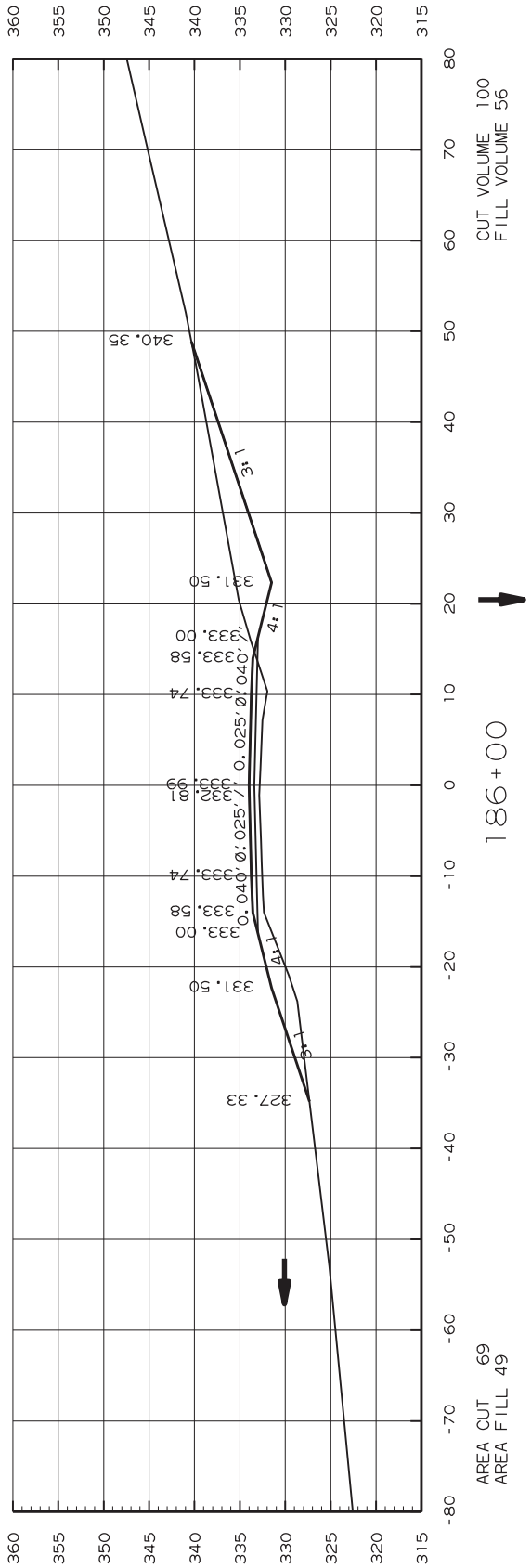
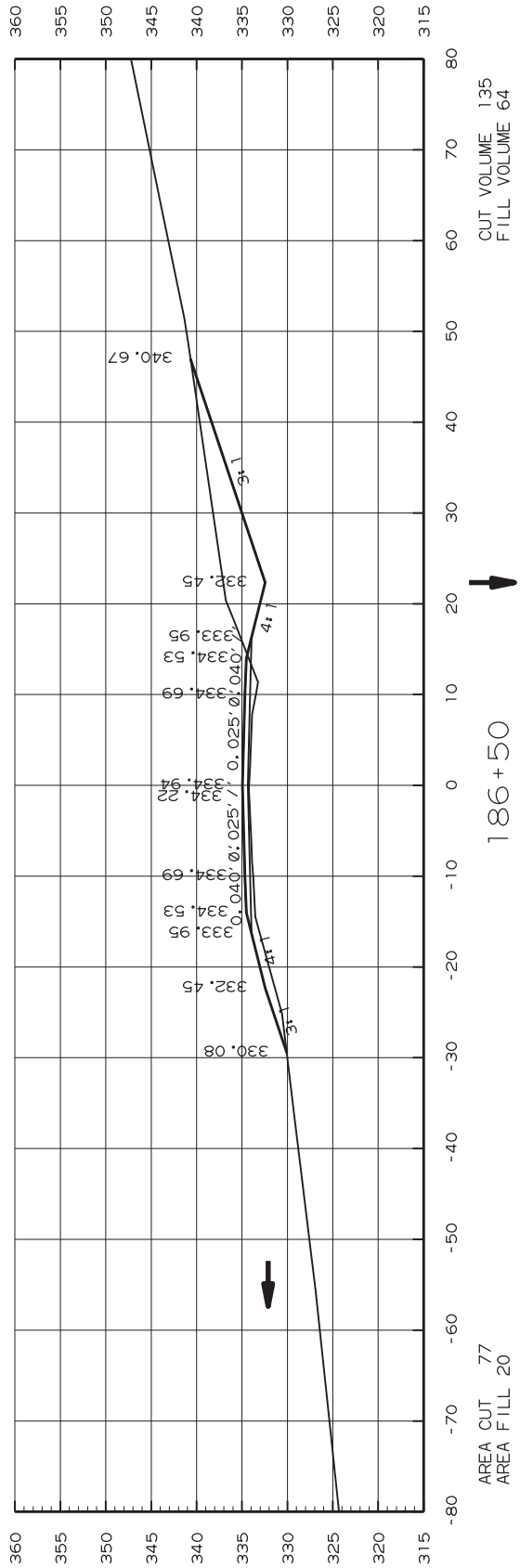
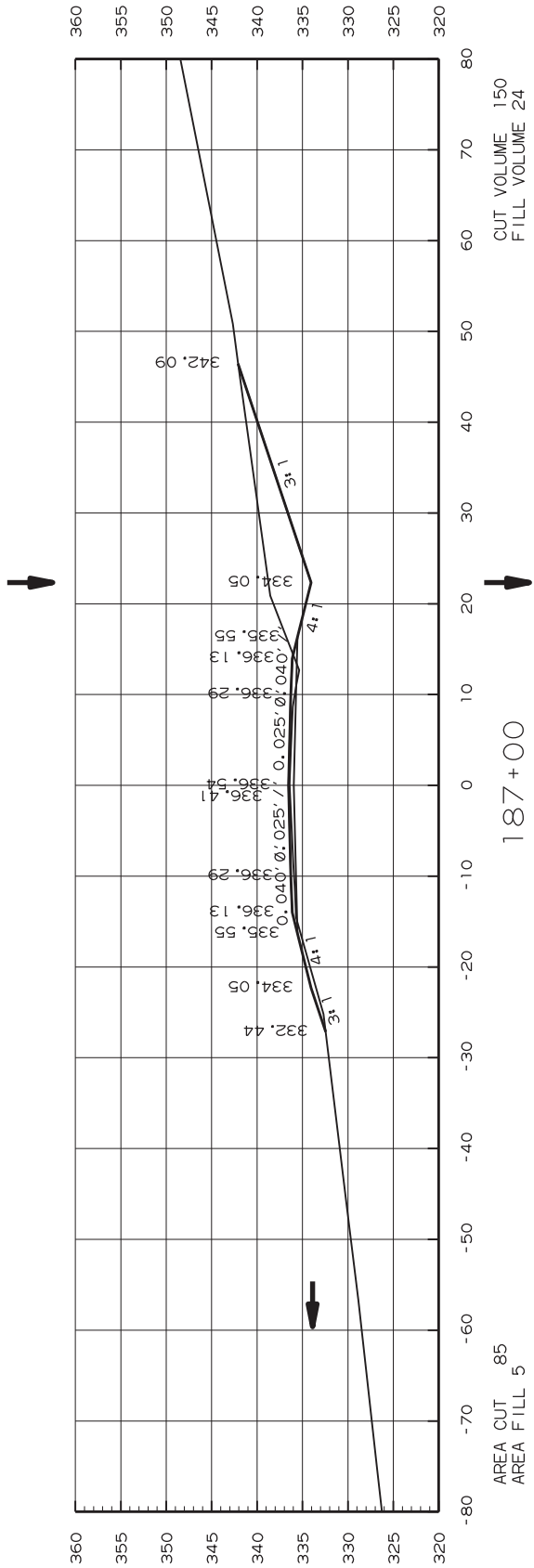
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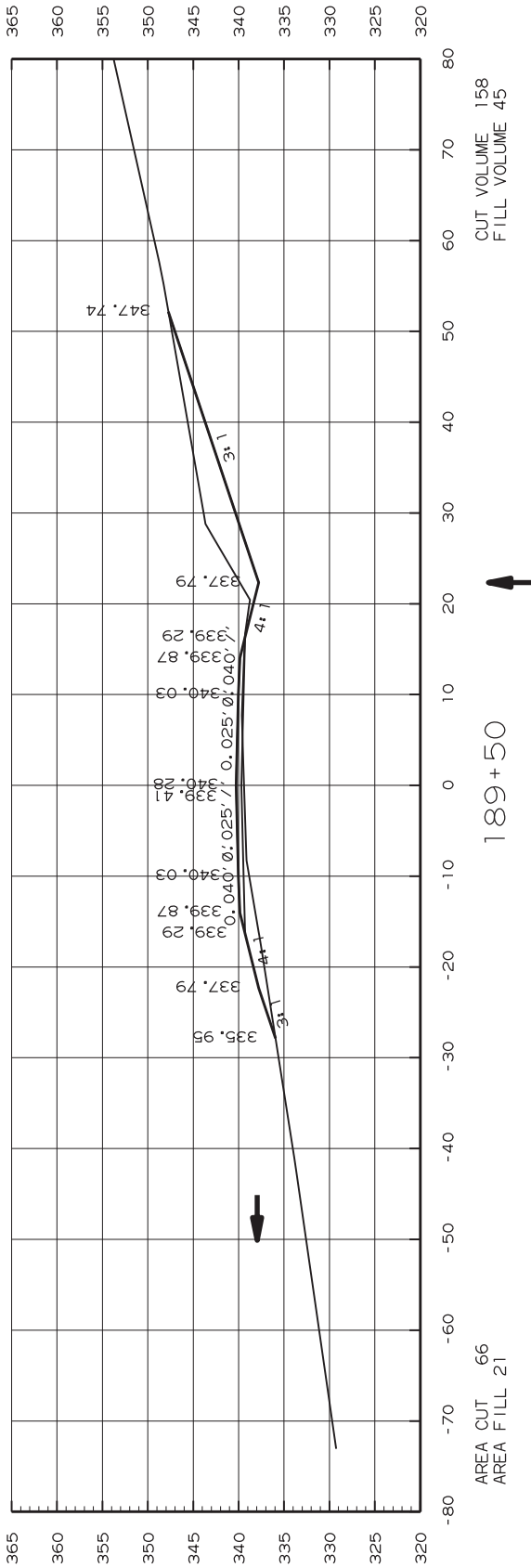
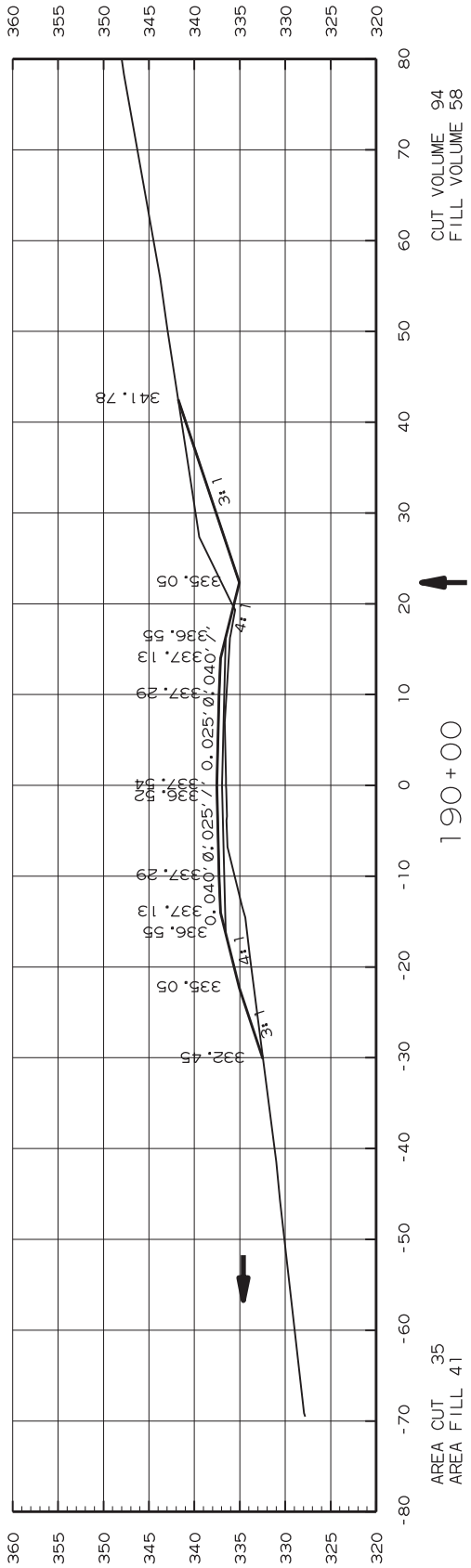
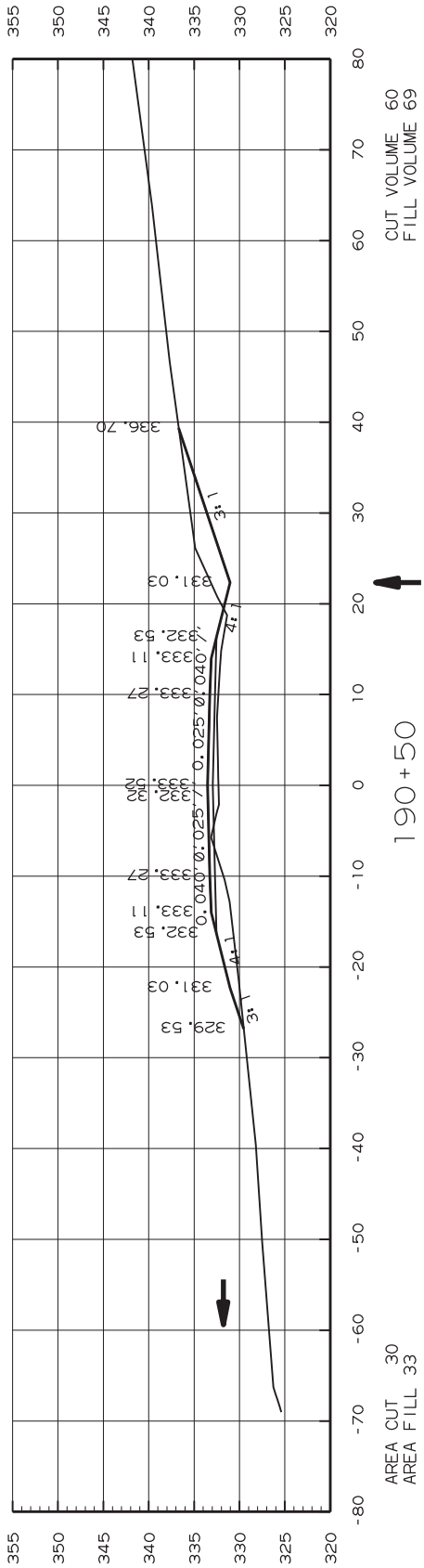
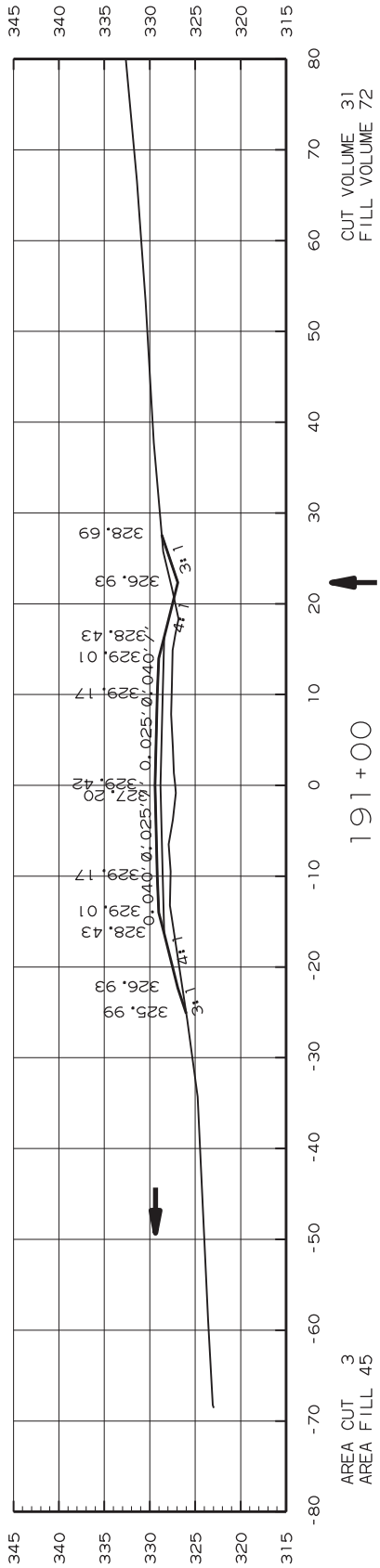
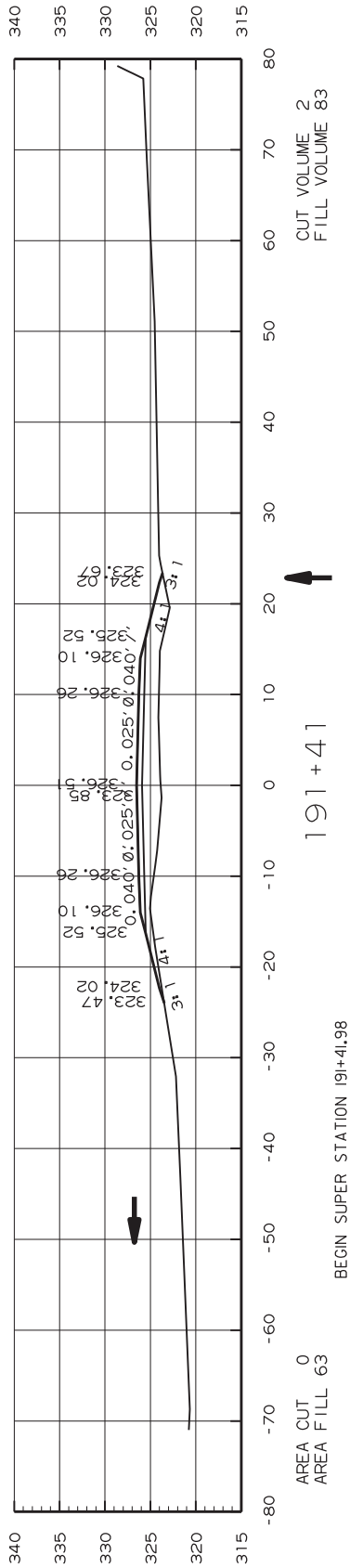
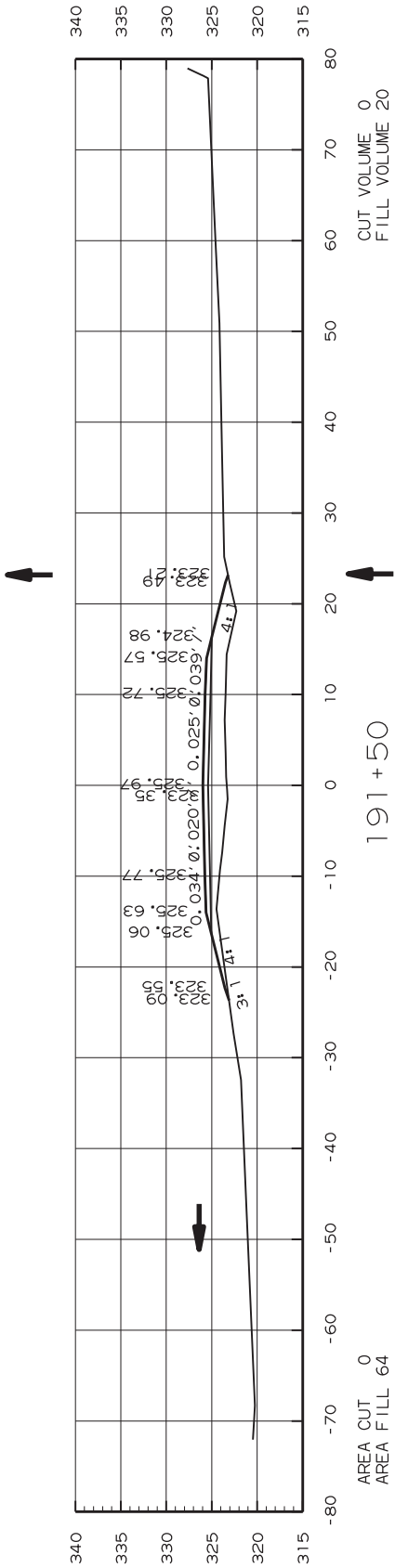




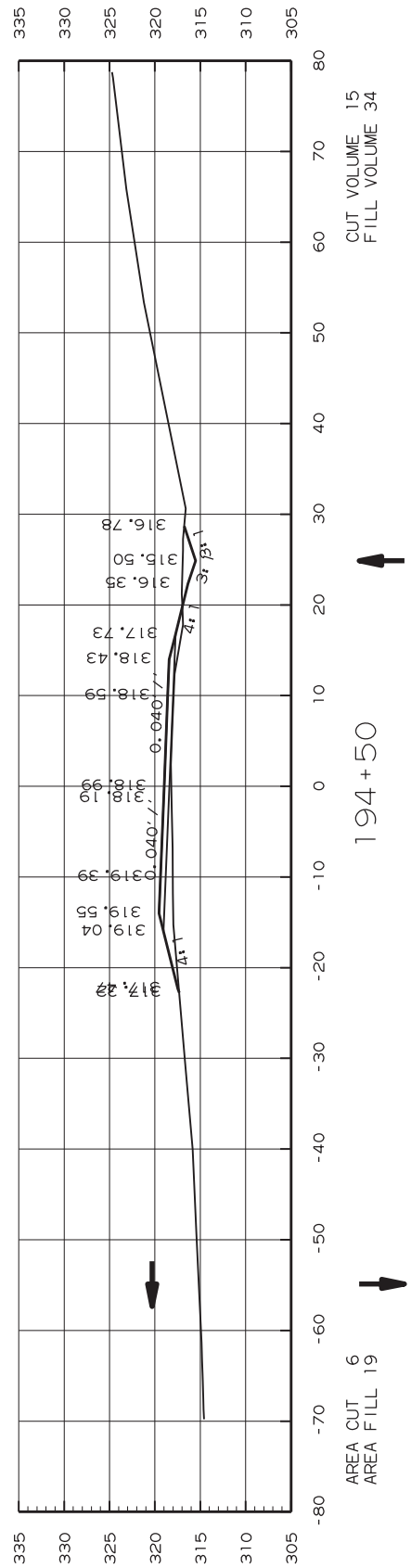
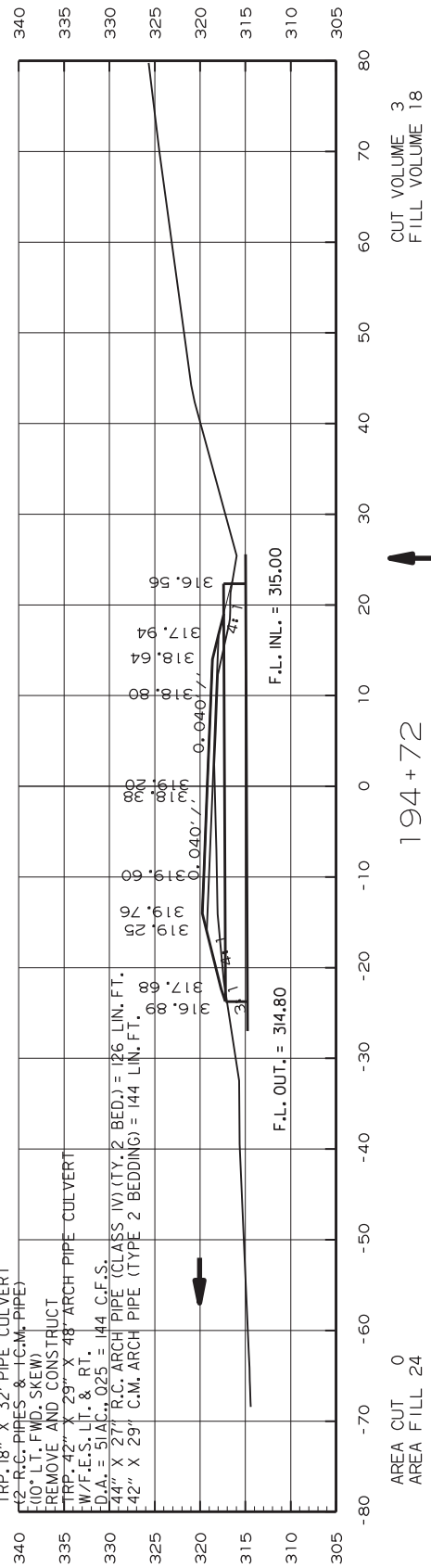
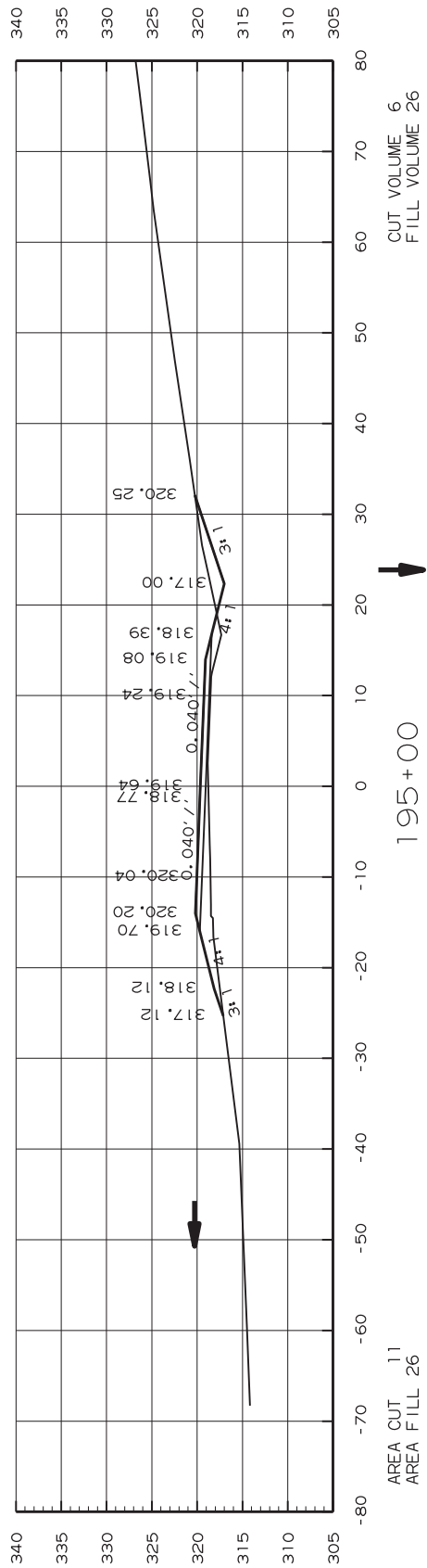
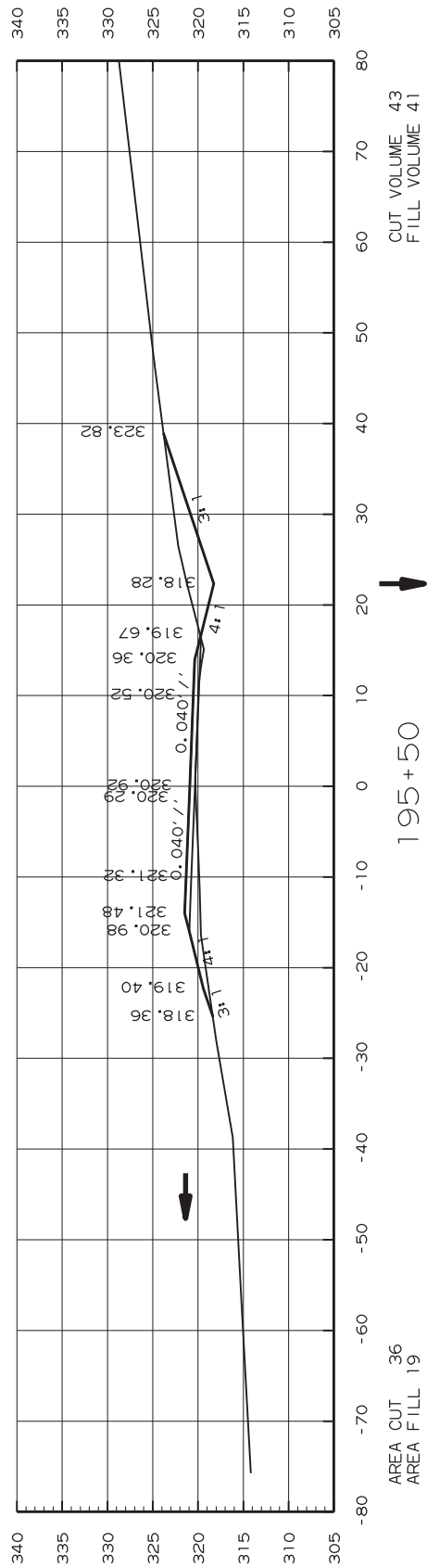
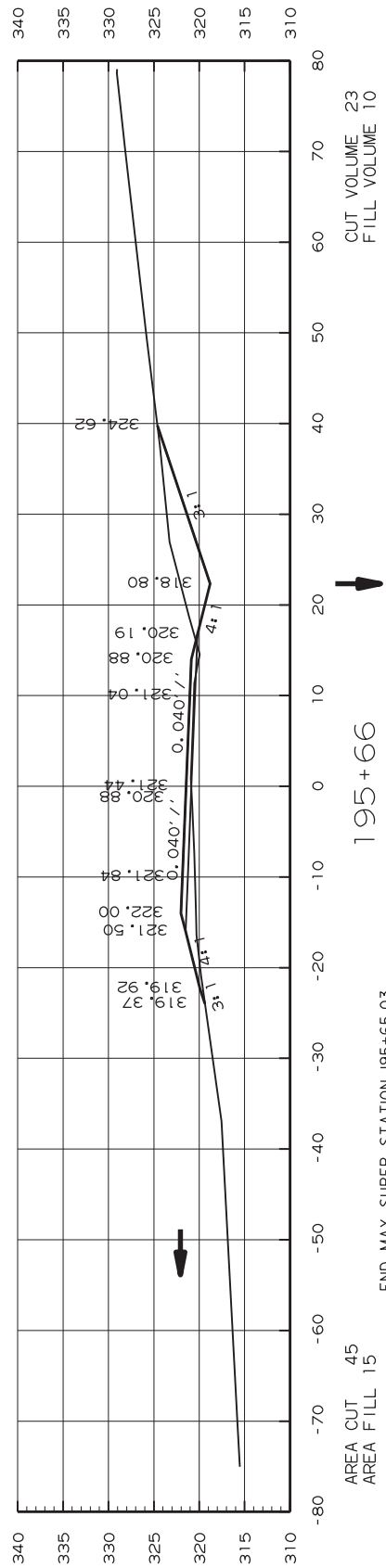
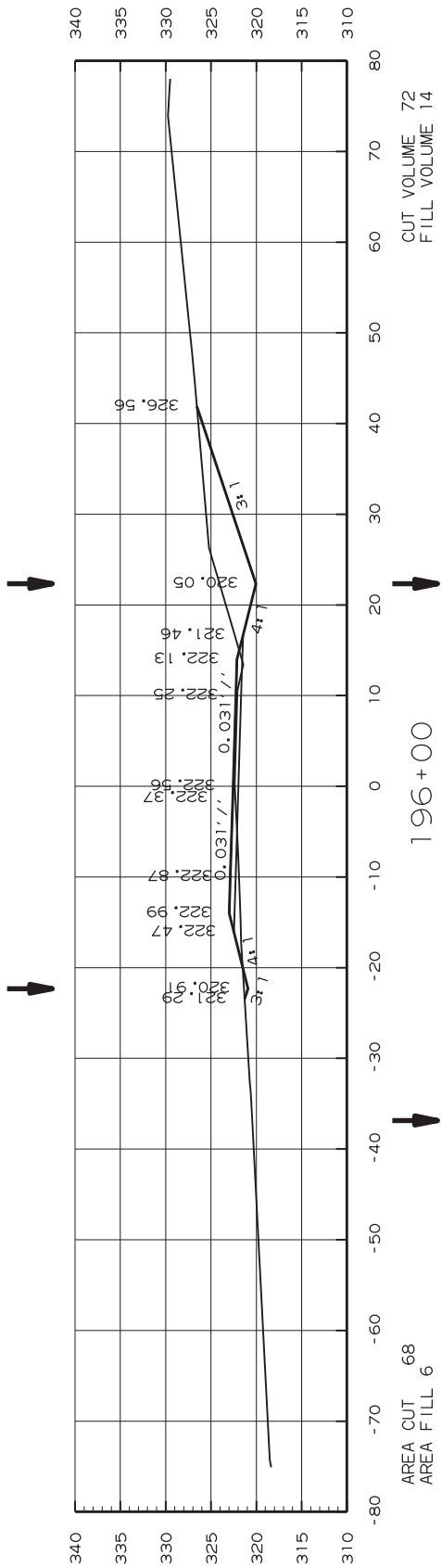


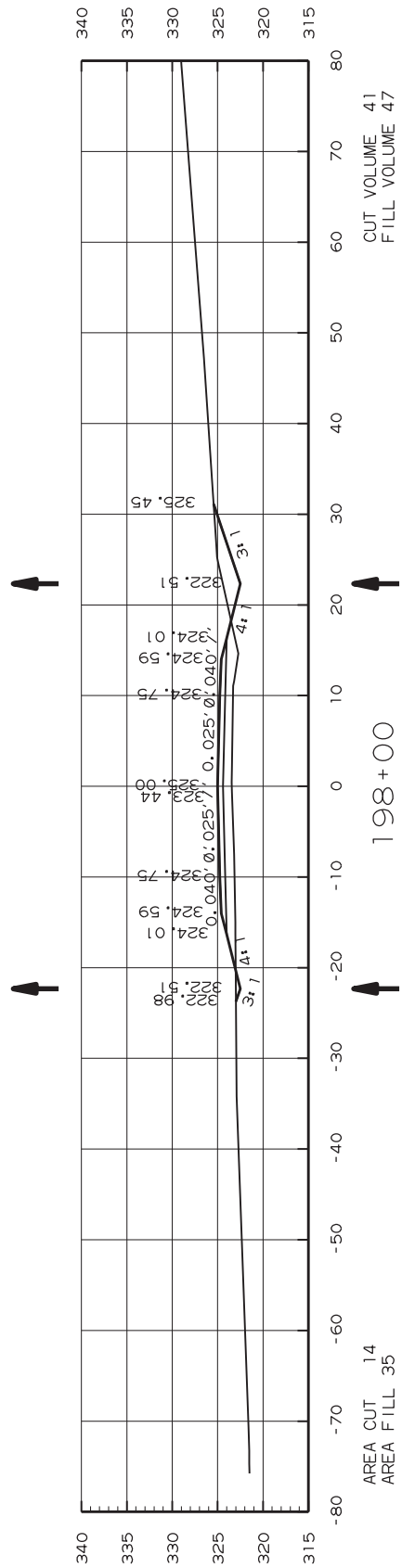




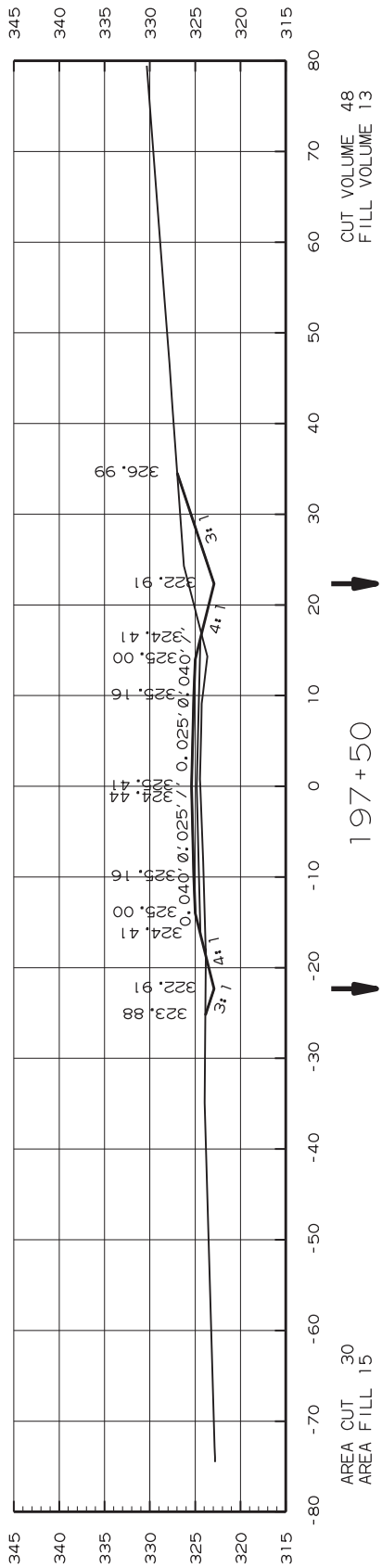




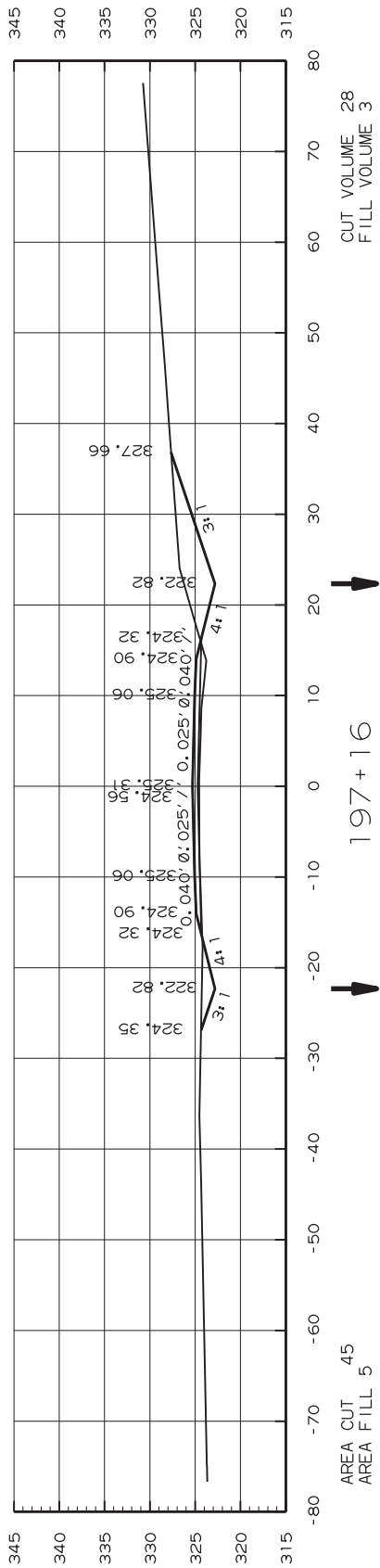




198+00

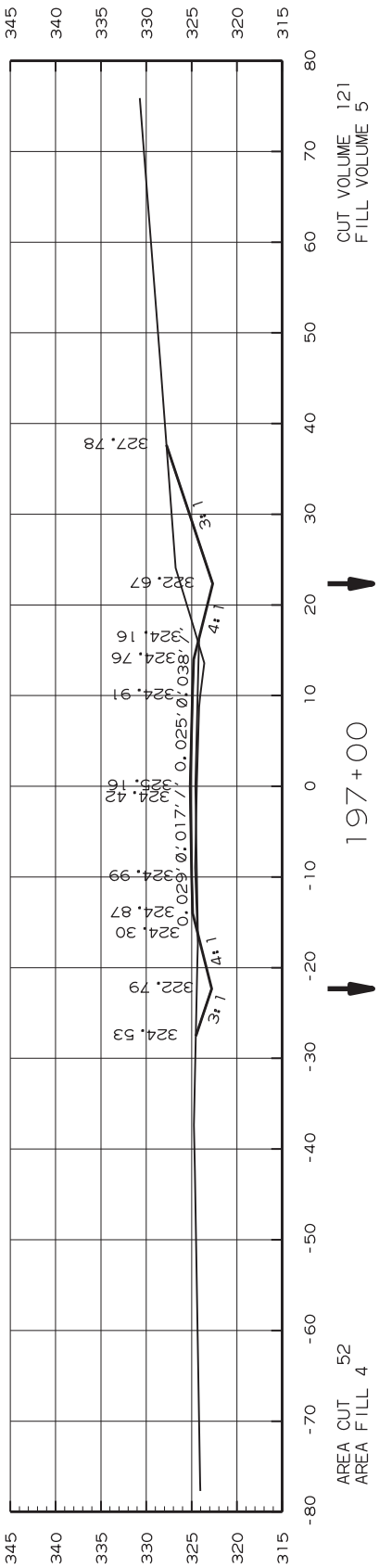


197+50

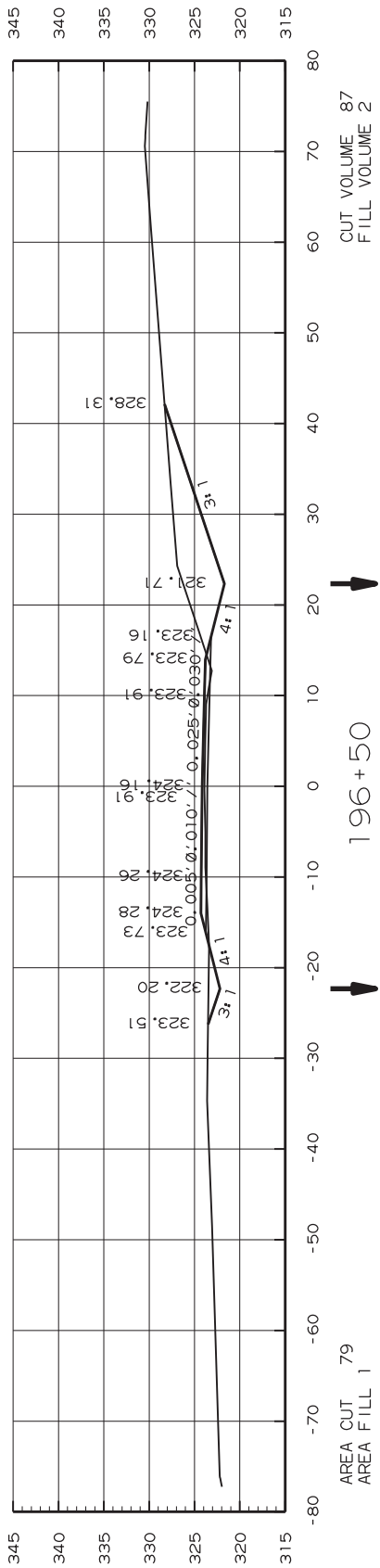


197+16

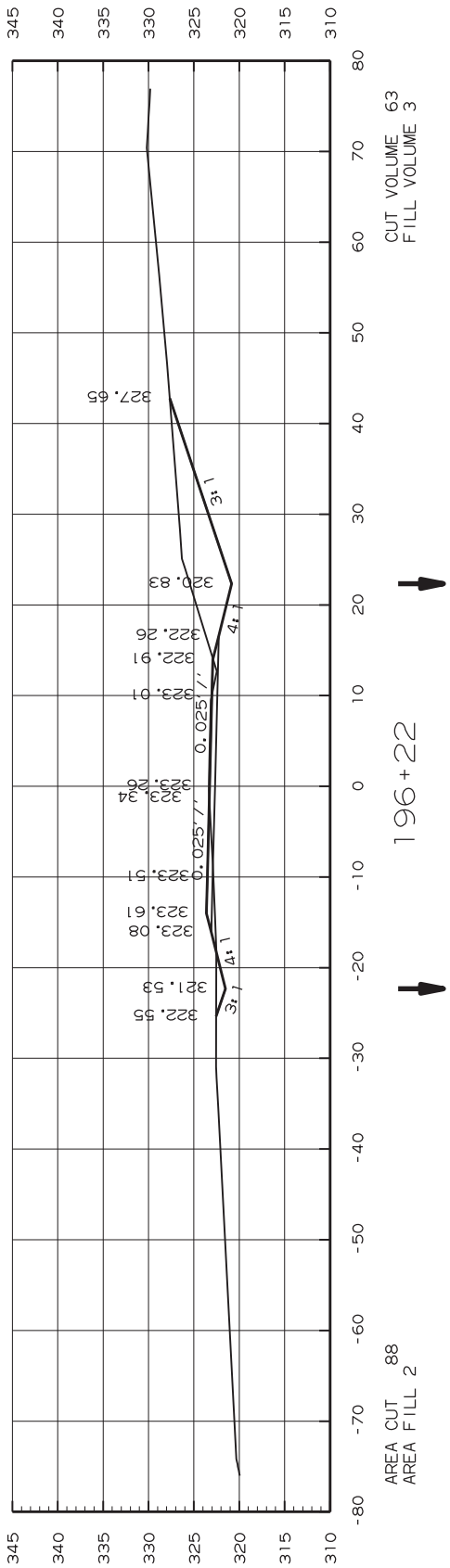
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197+00

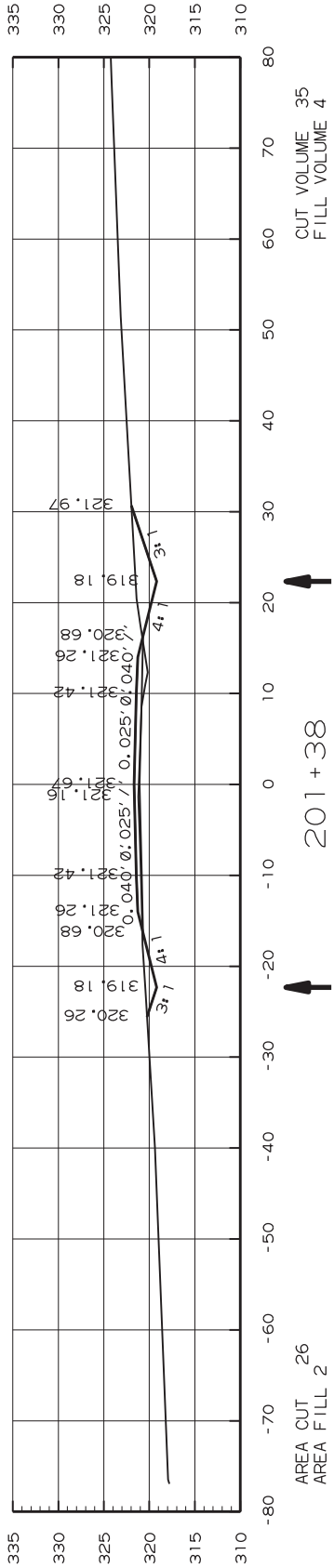
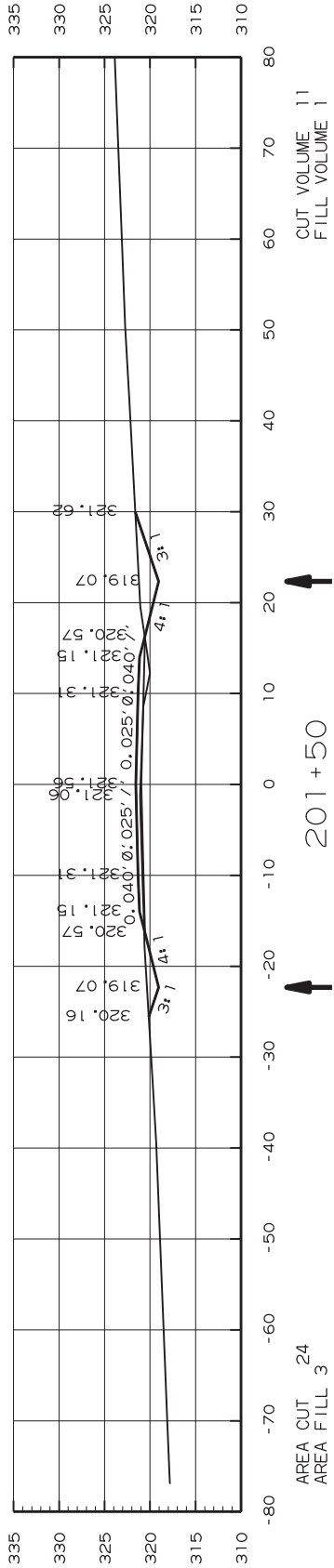
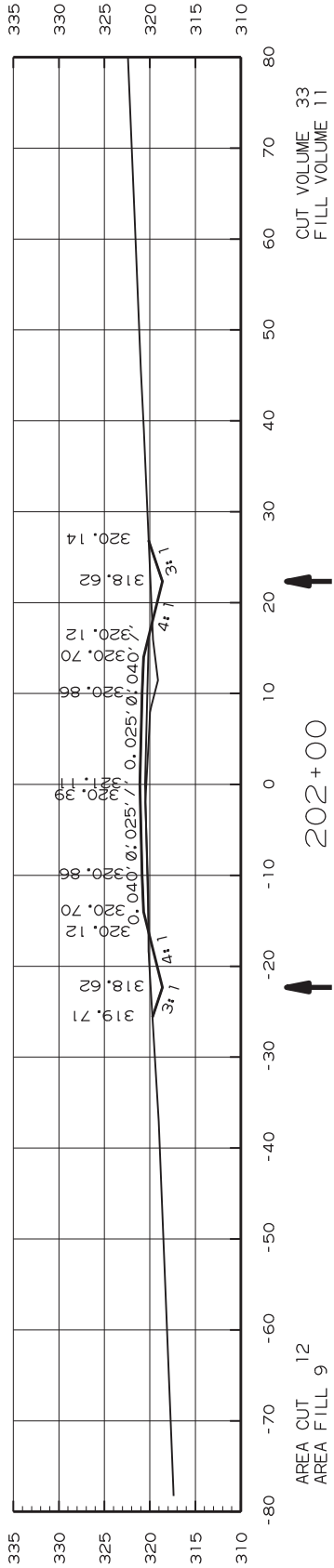
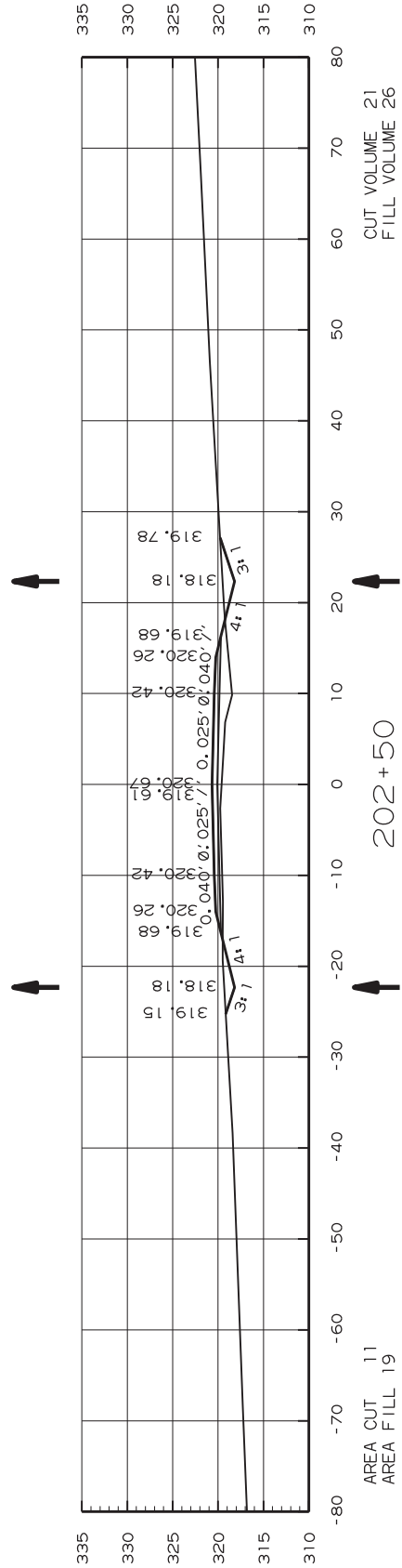


196+50

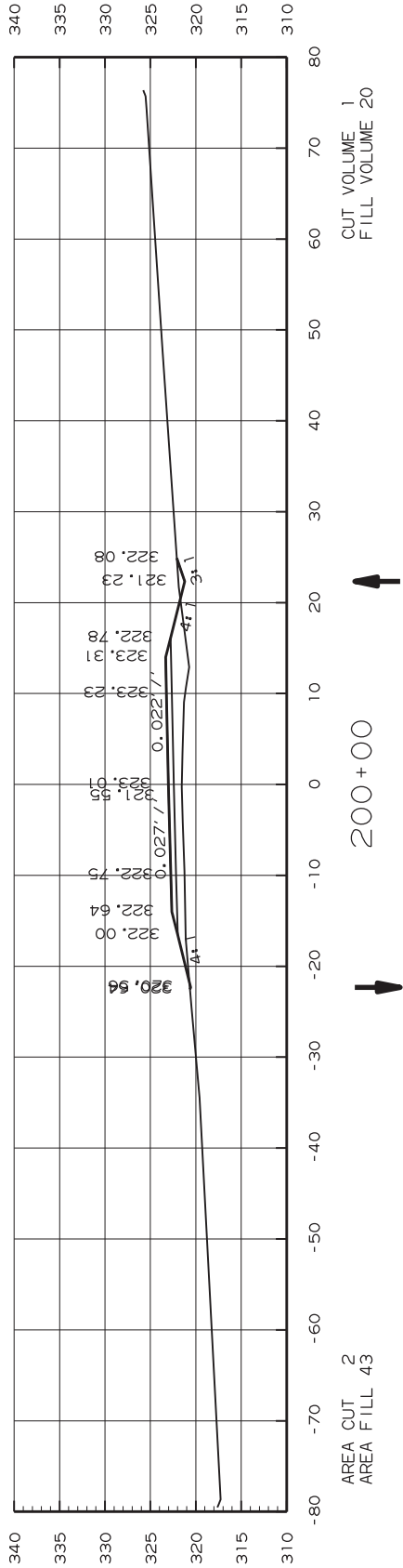
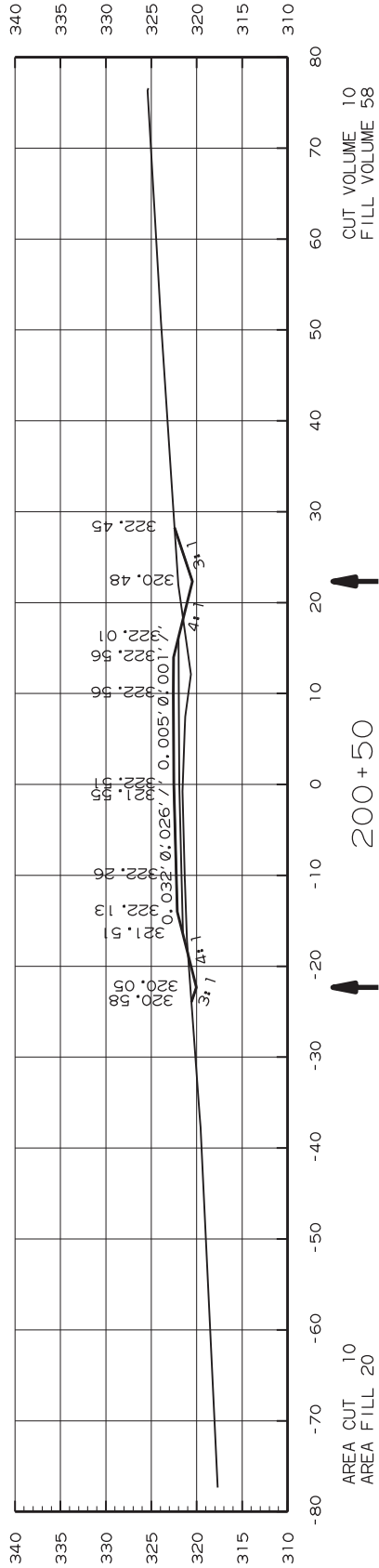
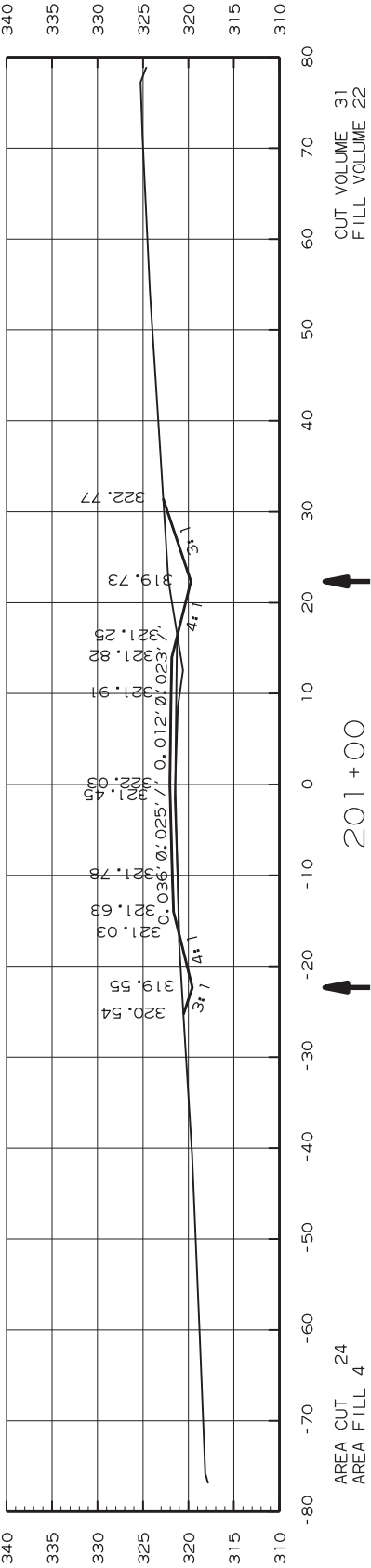


196+22

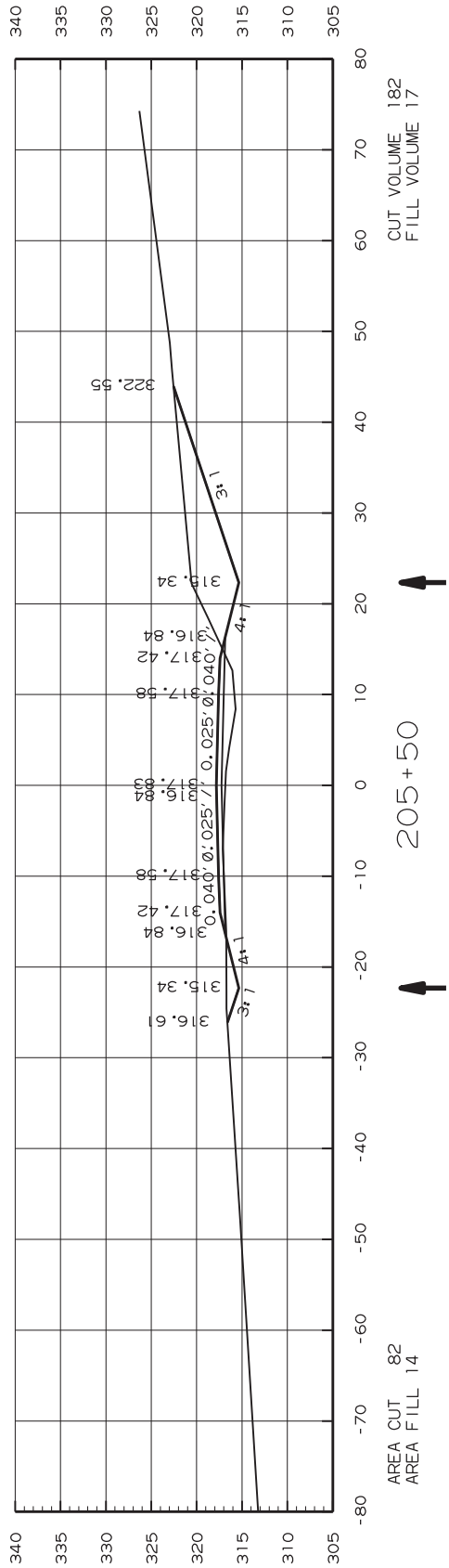
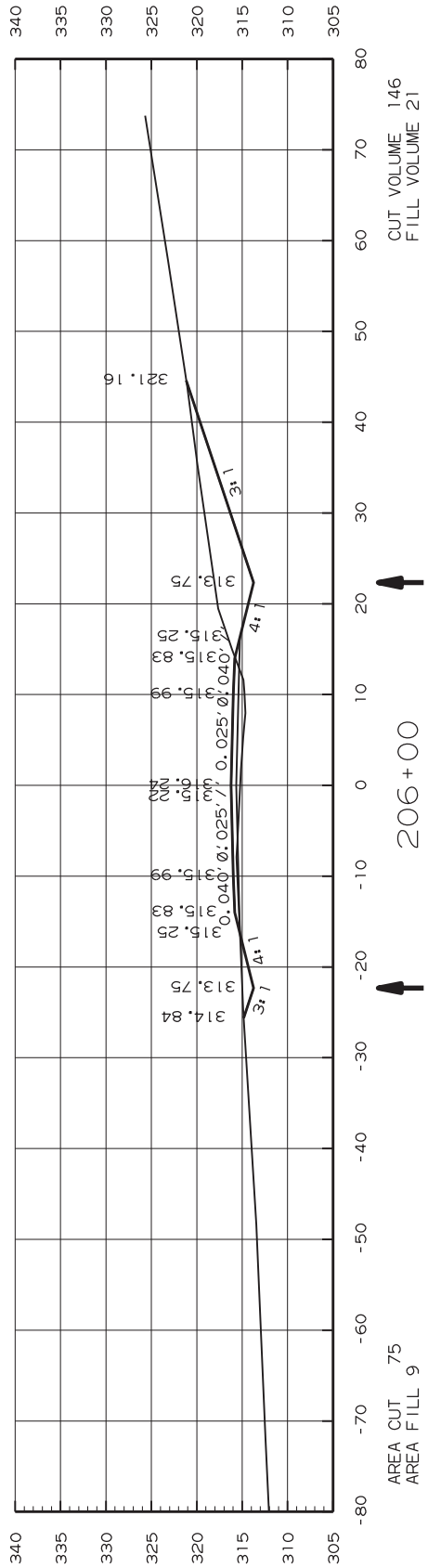
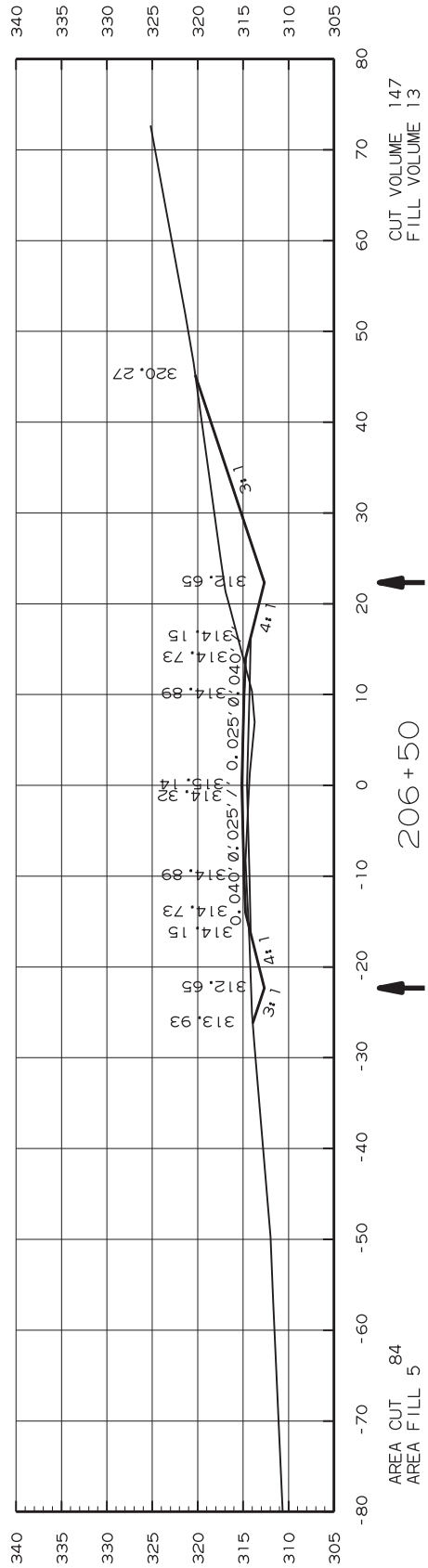
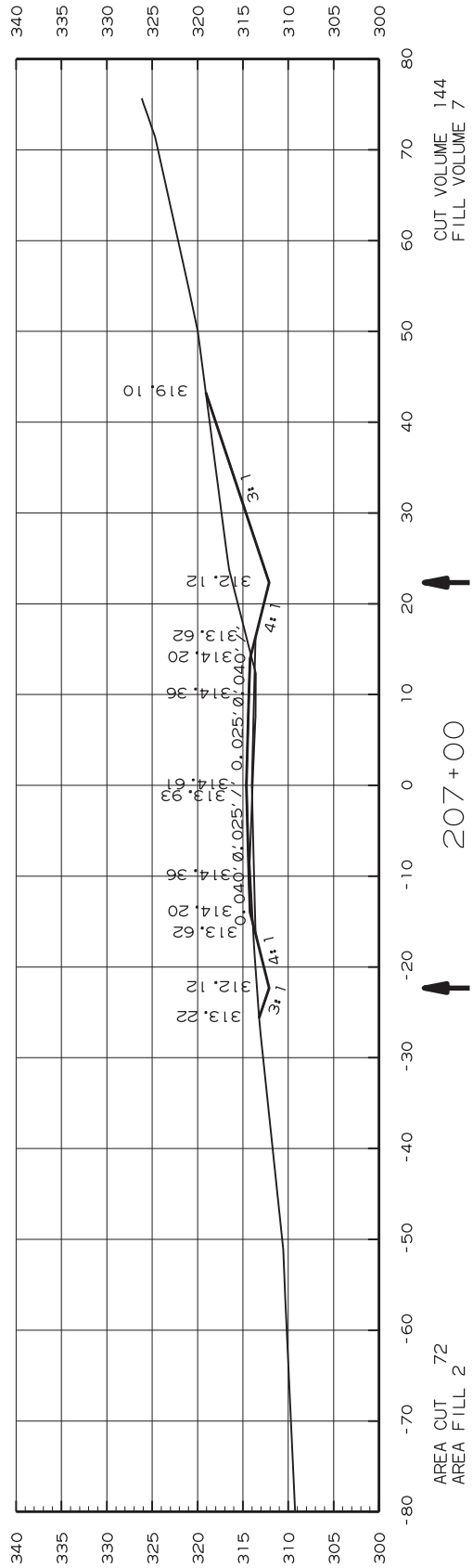
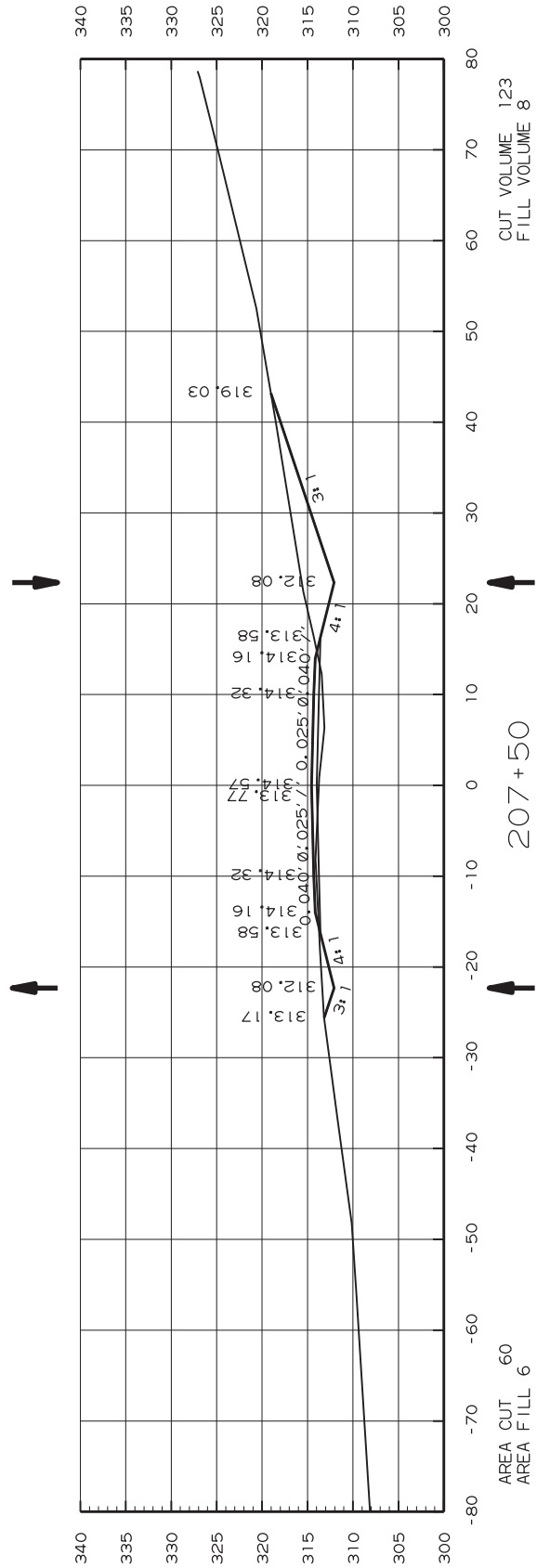


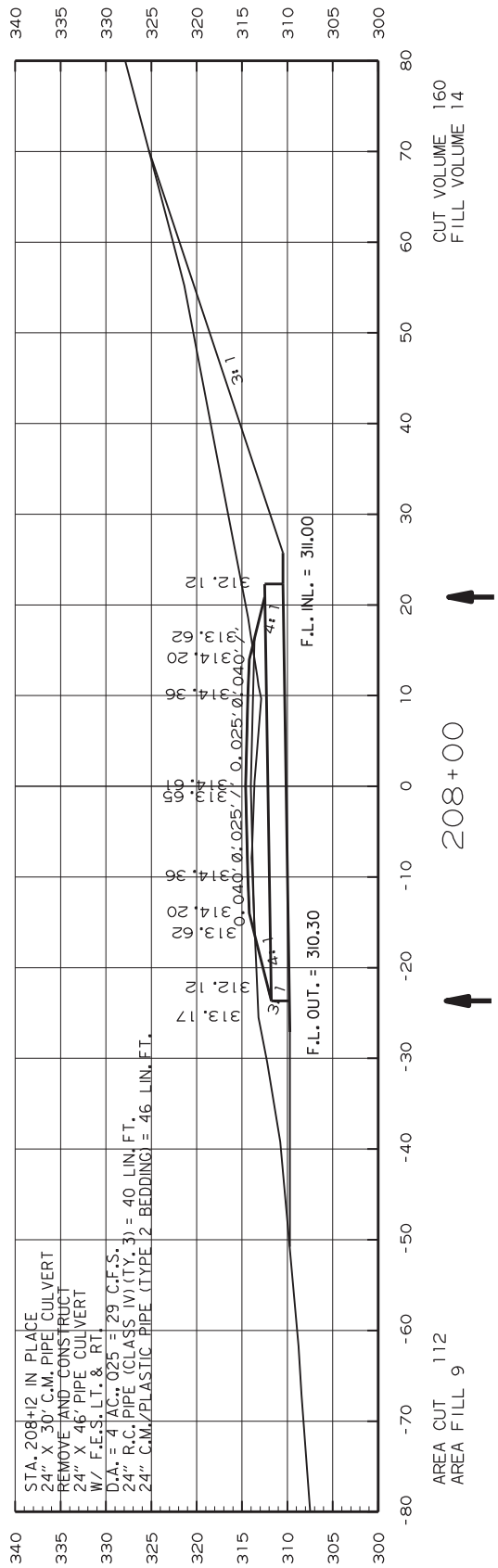
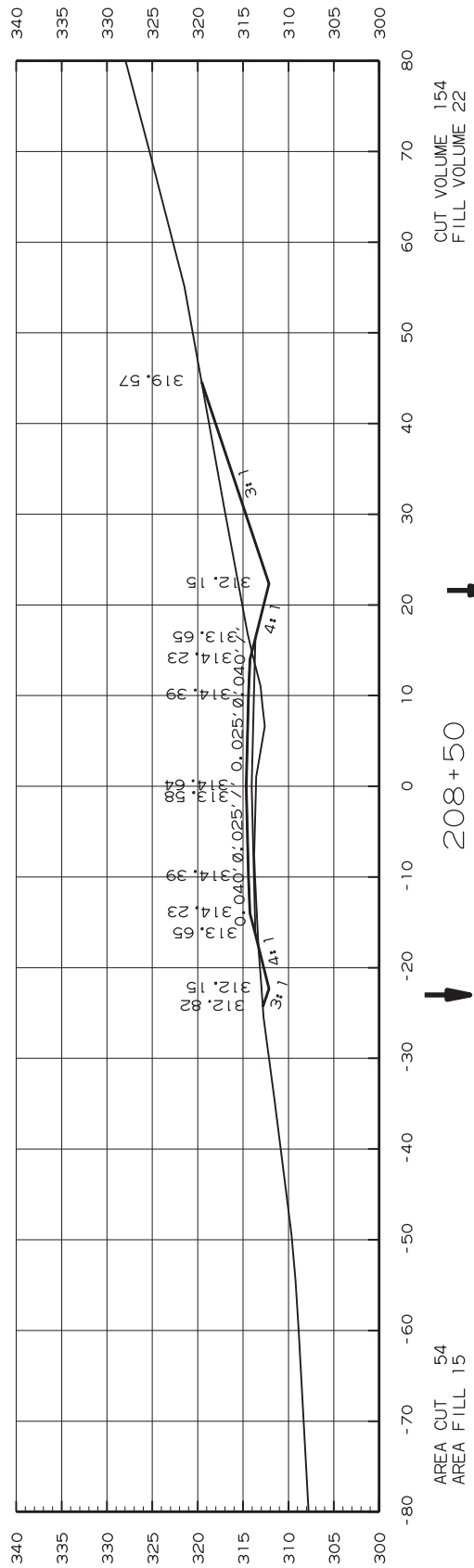
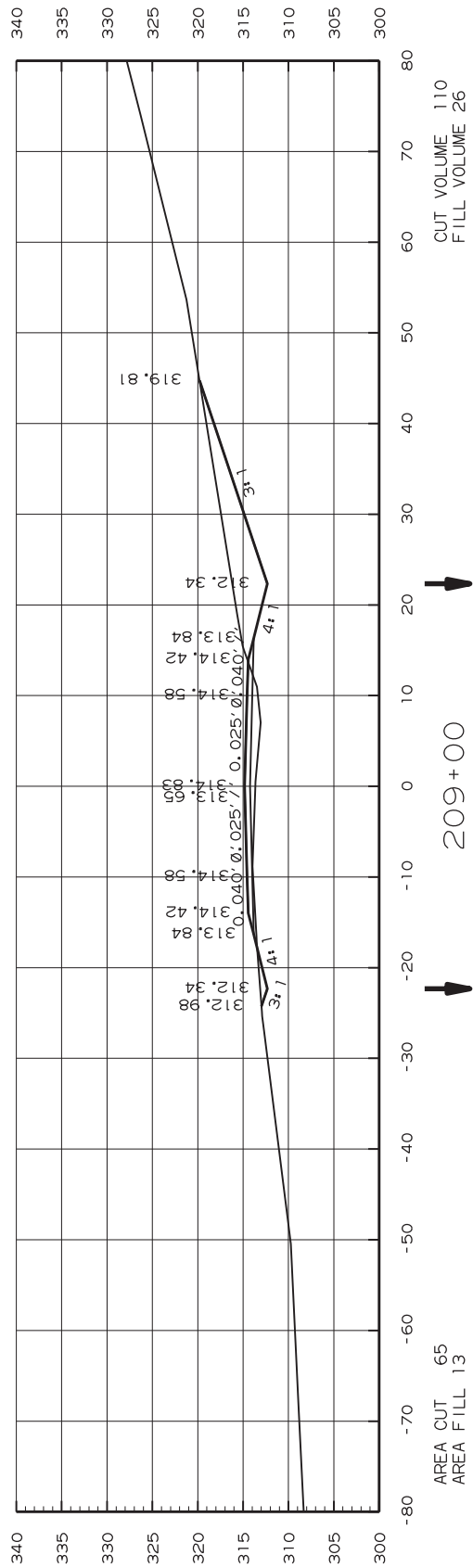
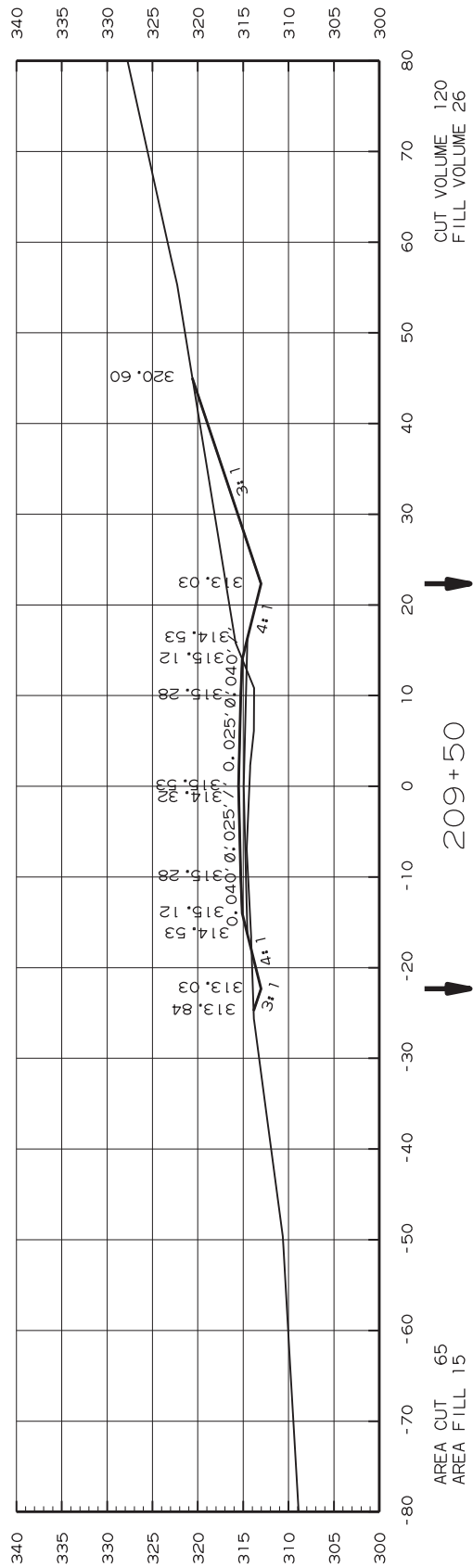
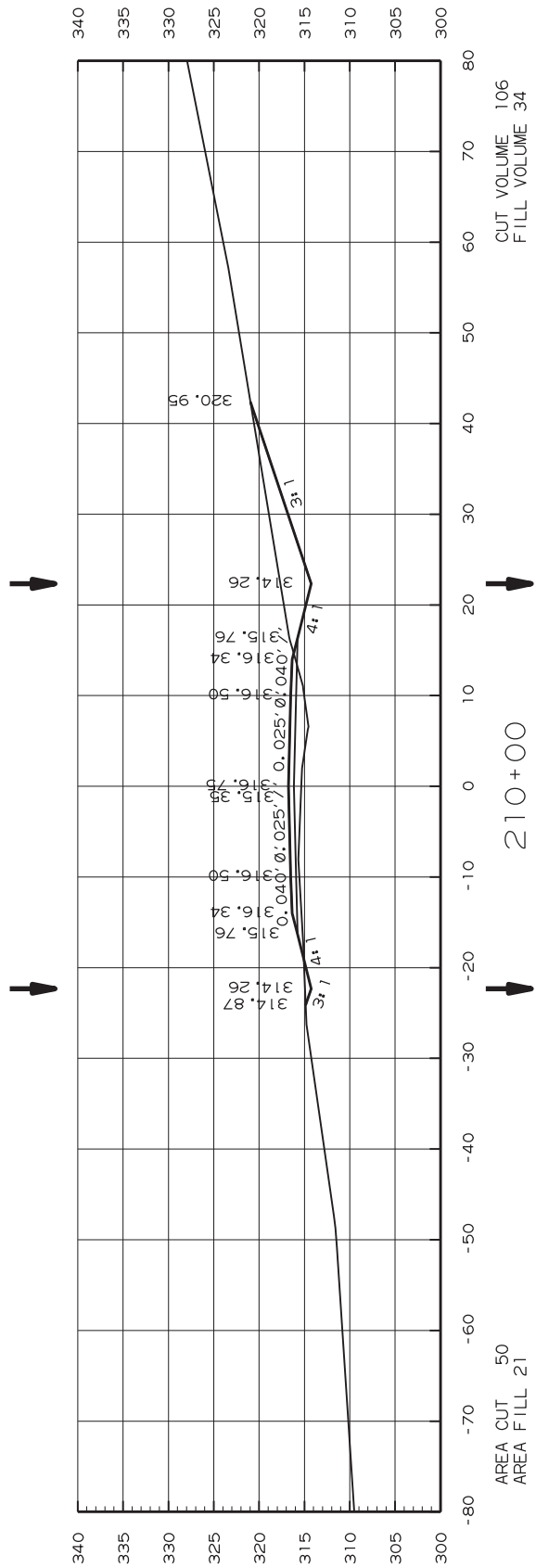


END SUPER STATION 201+37.43

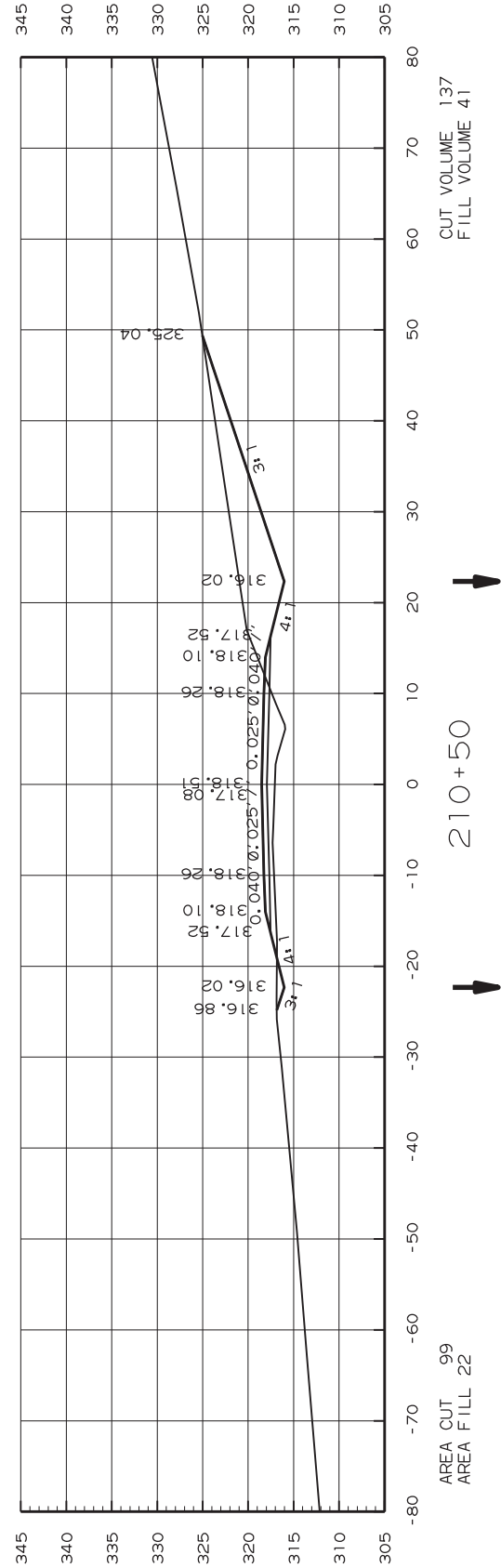
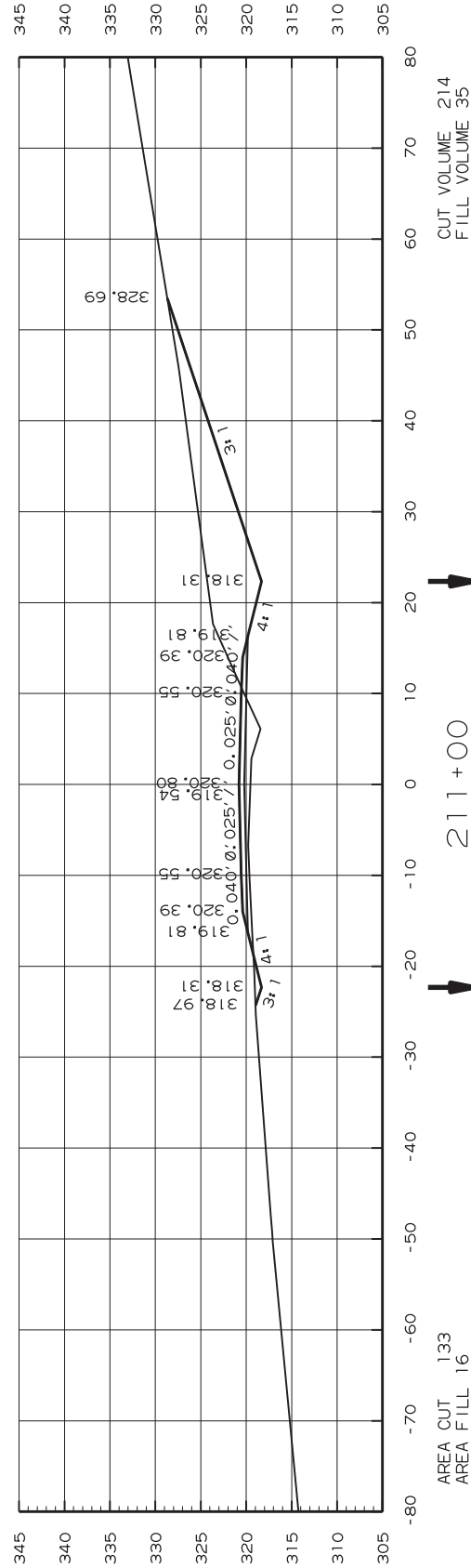
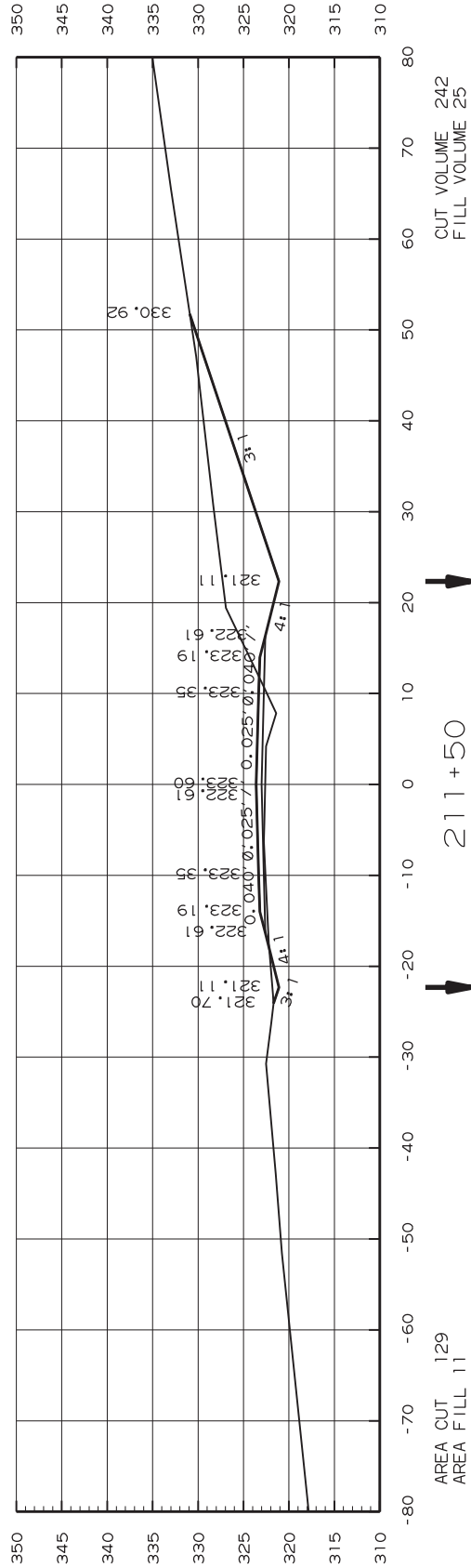
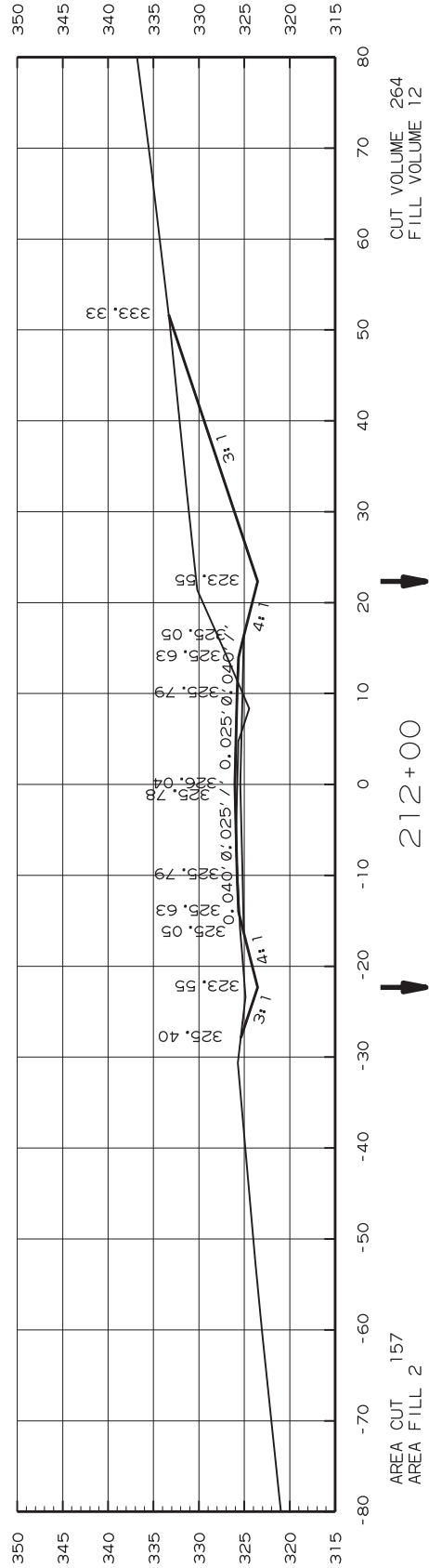
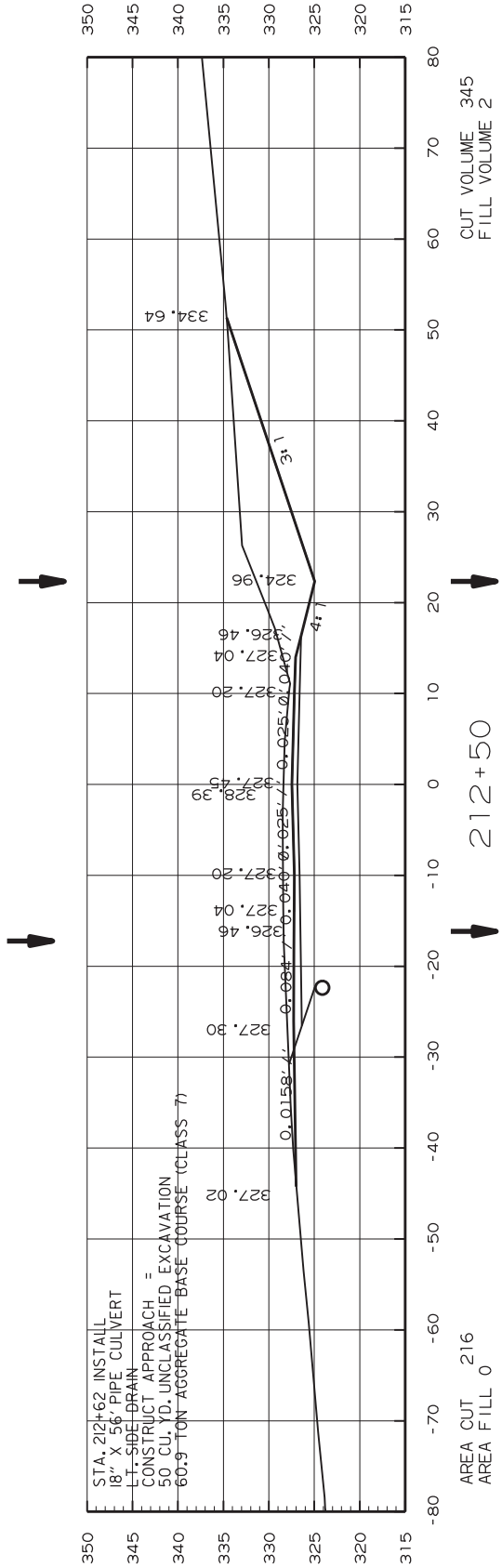




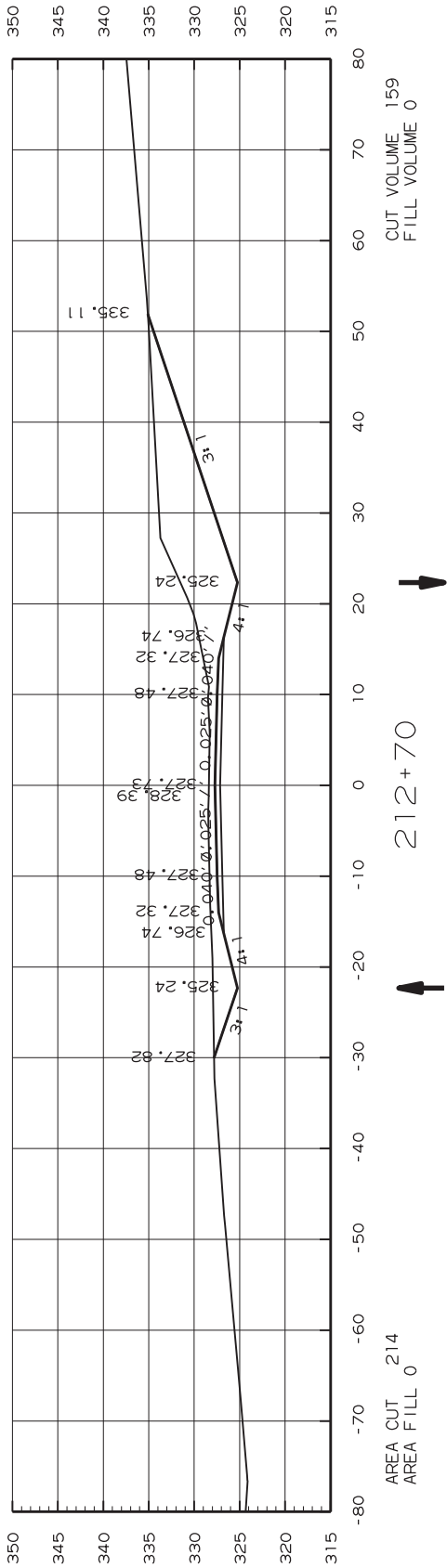
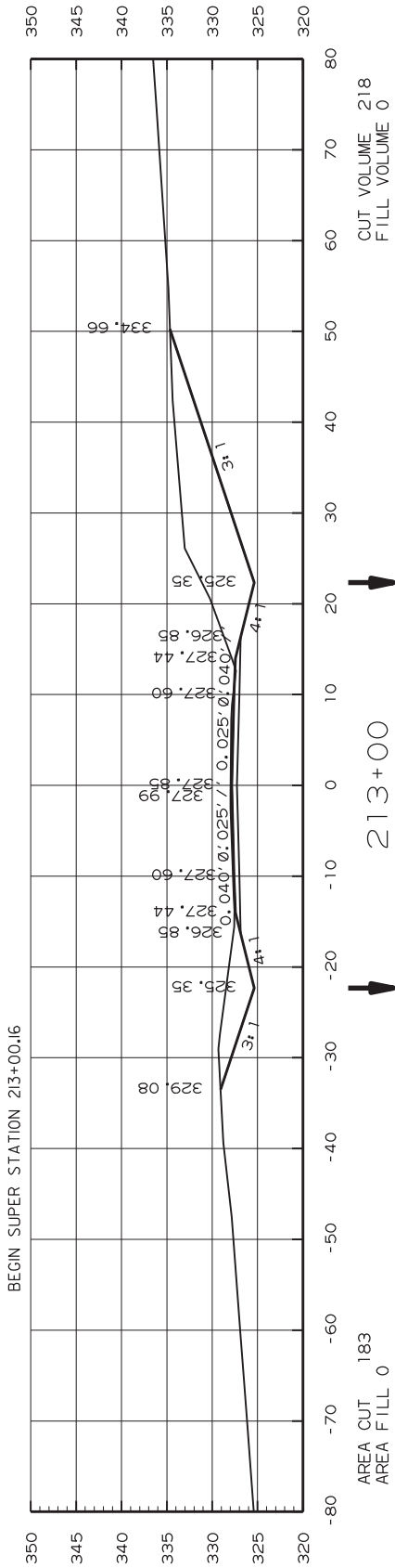
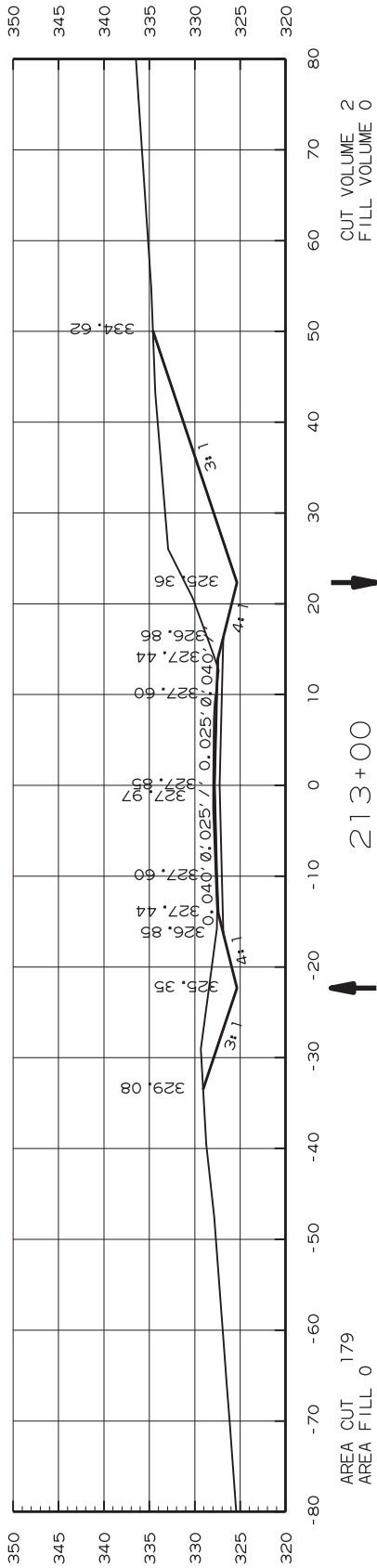
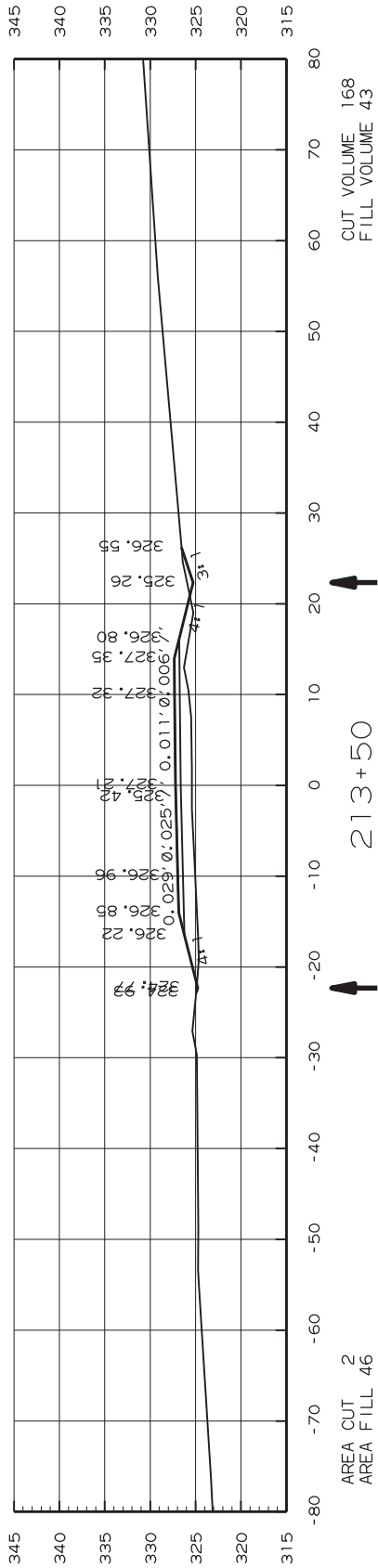
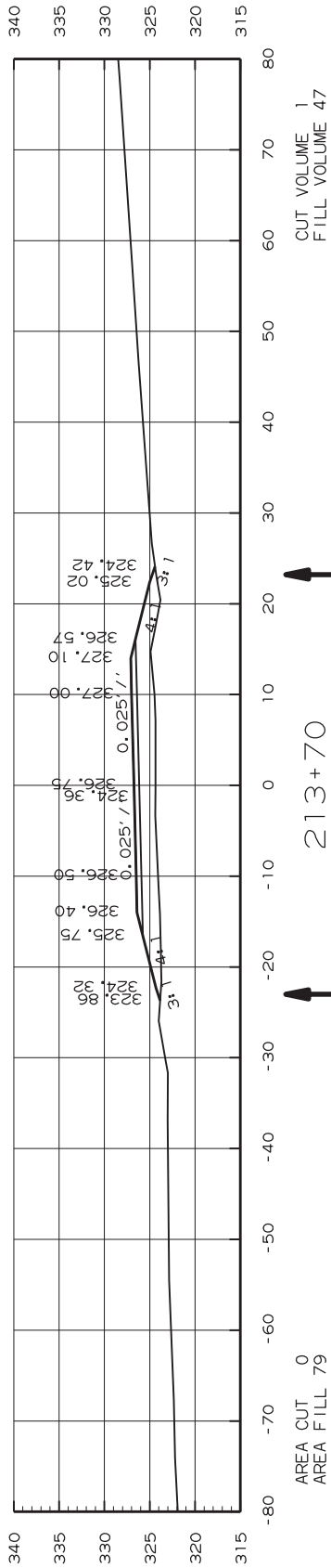
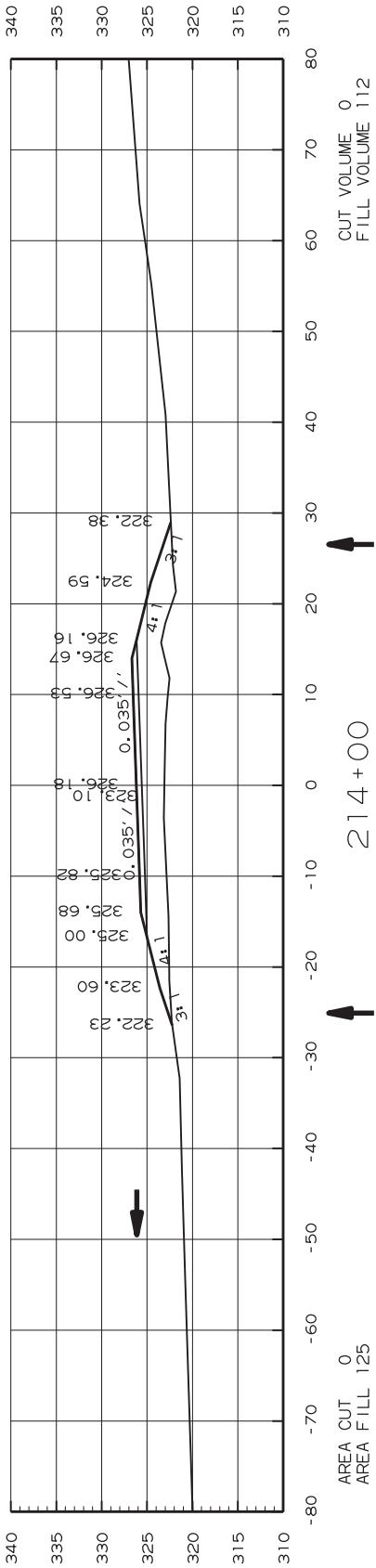


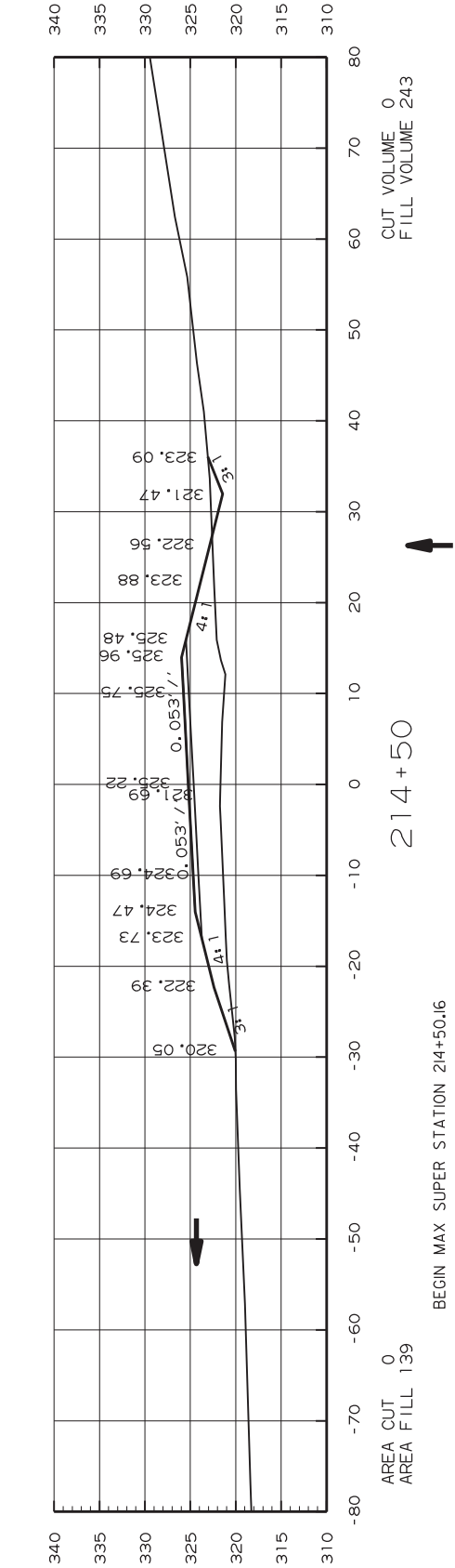
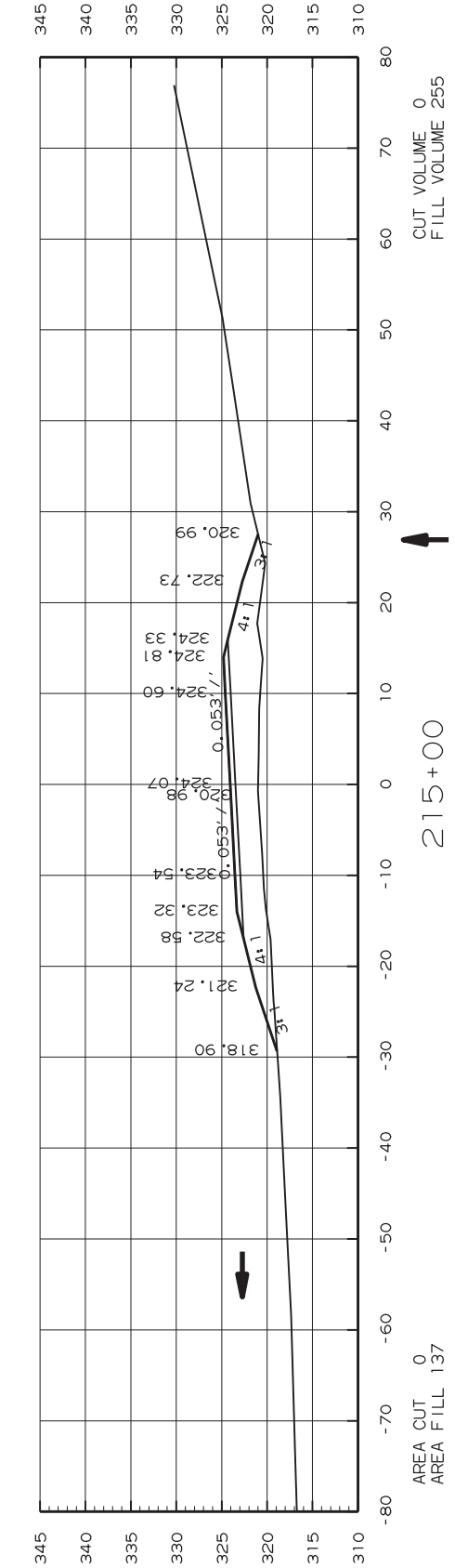
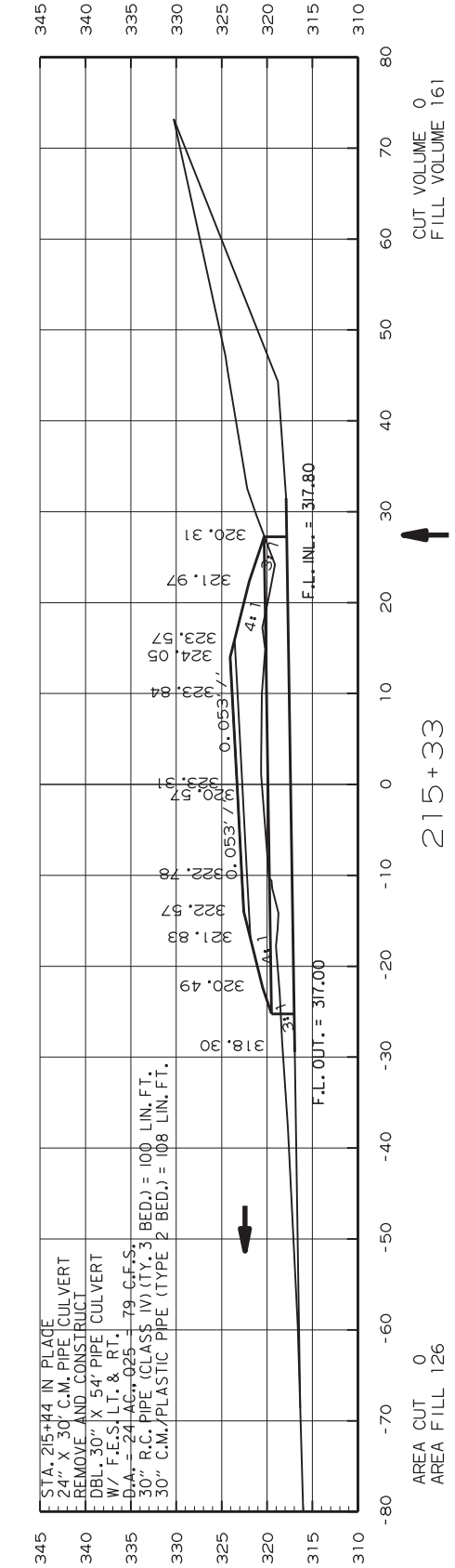
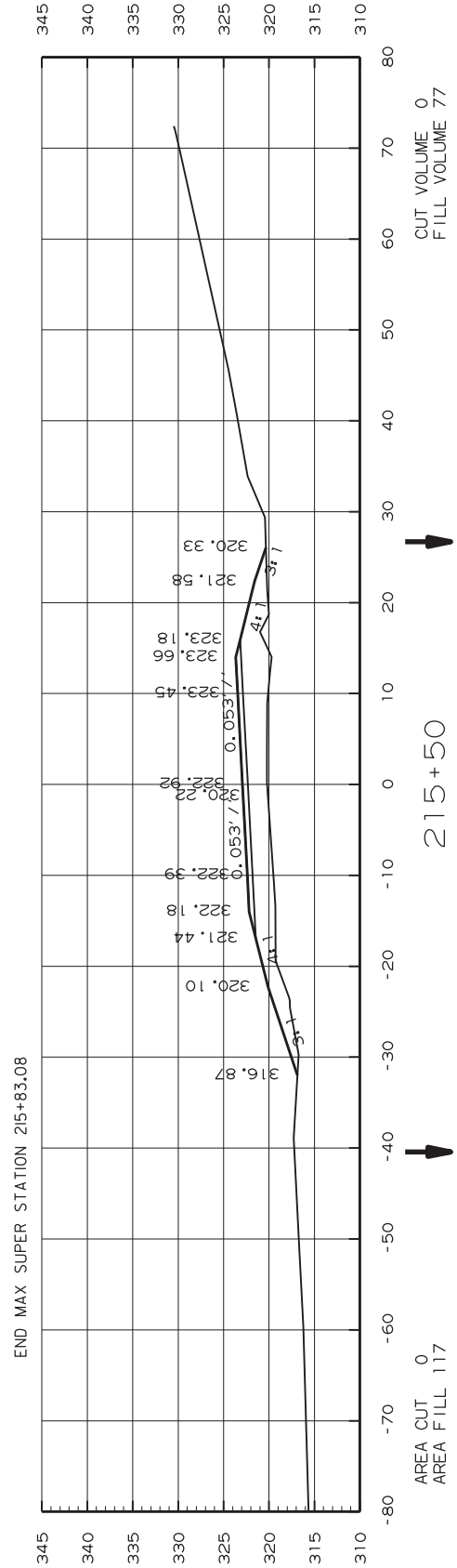
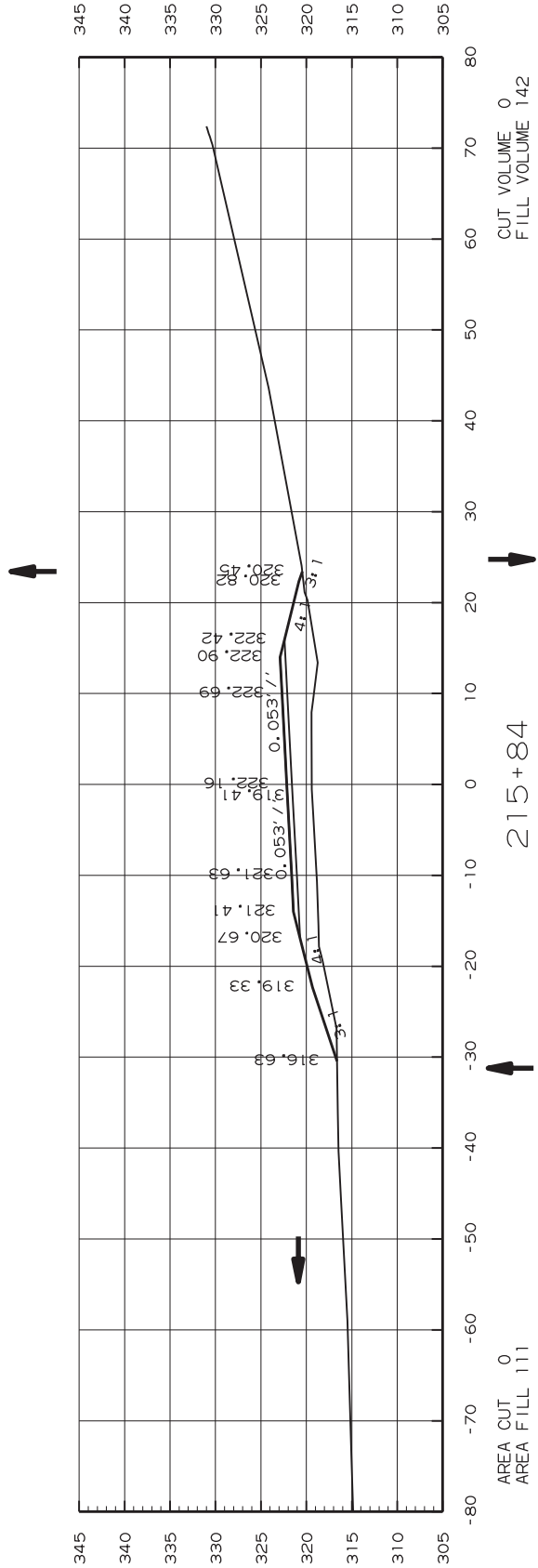


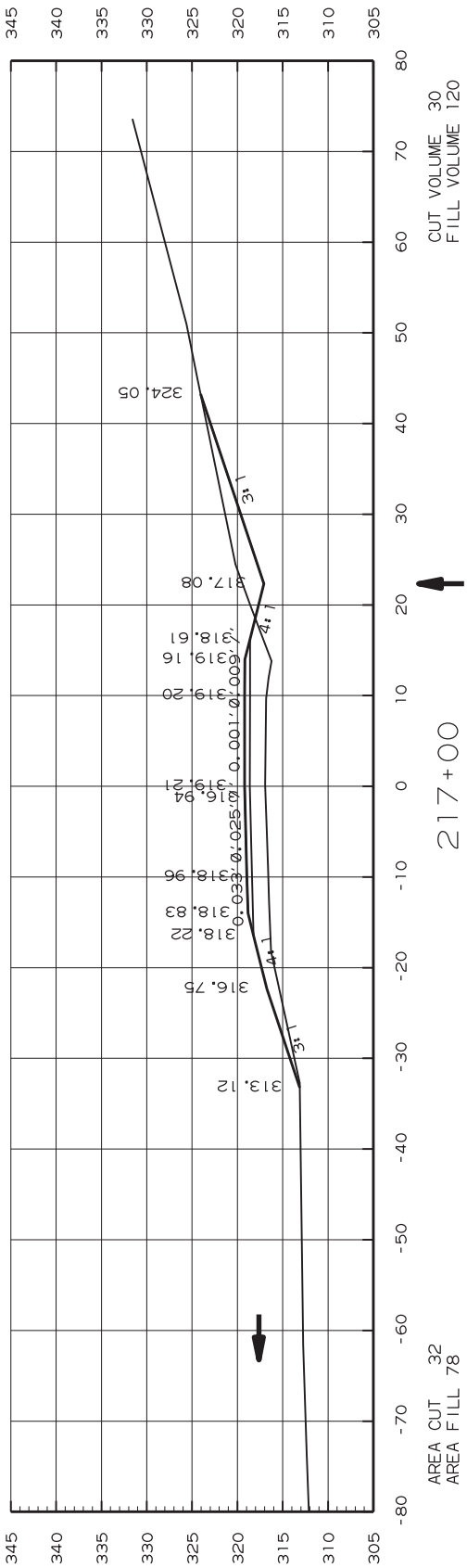
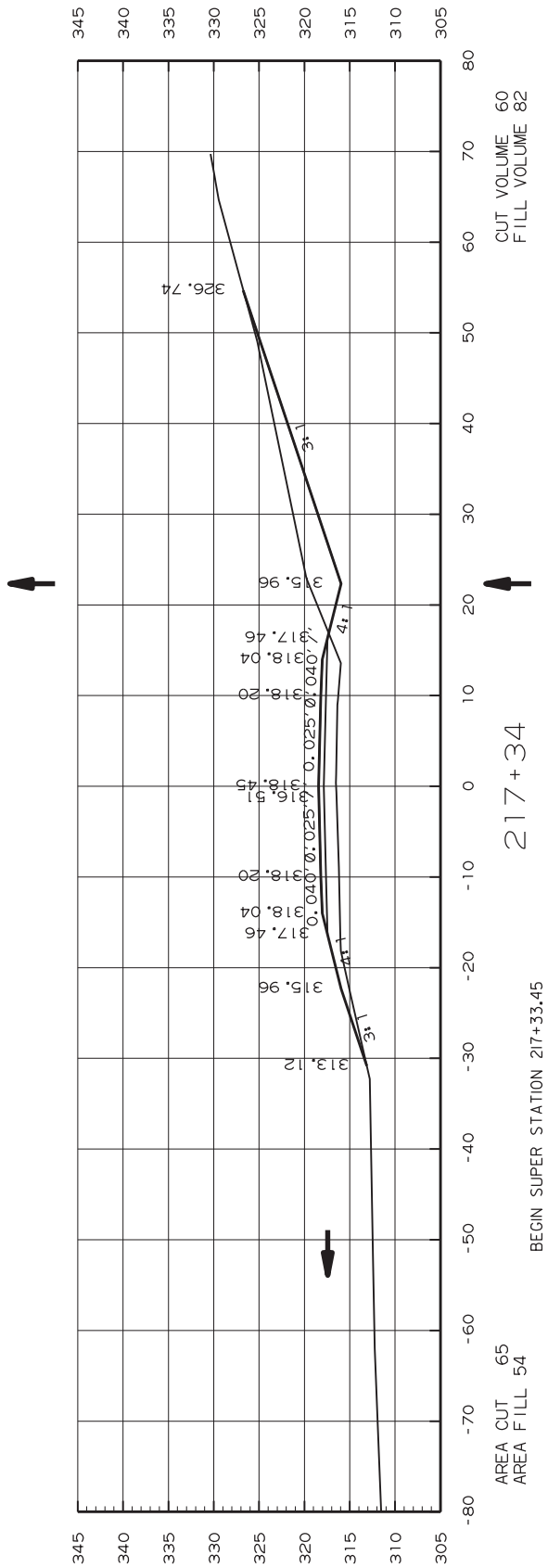
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|------------------|----------------|-----------------|----------------|-----------------------|--------|-----------------------|--------------|-----------------|
|                  |                |                 |                | 6                     | ARK.   |                       |              |                 |
|                  |                |                 |                | JOB NO.               | FA5309 |                       | 87           | 114             |
| 4 CROSS SECTIONS |                |                 |                |                       |        |                       |              |                 |

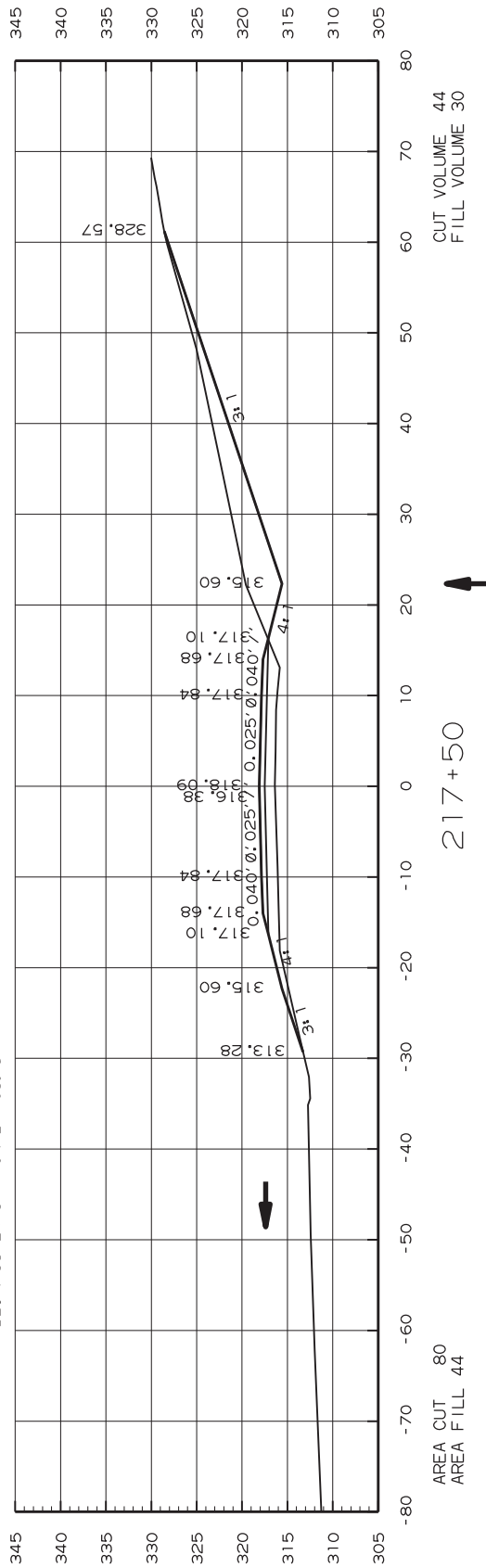
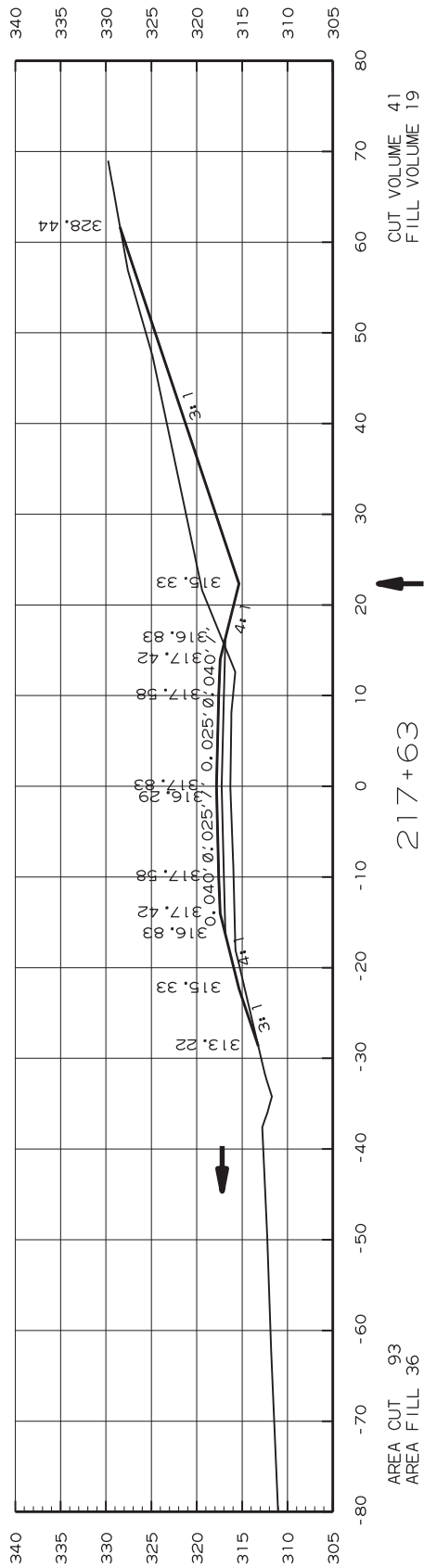
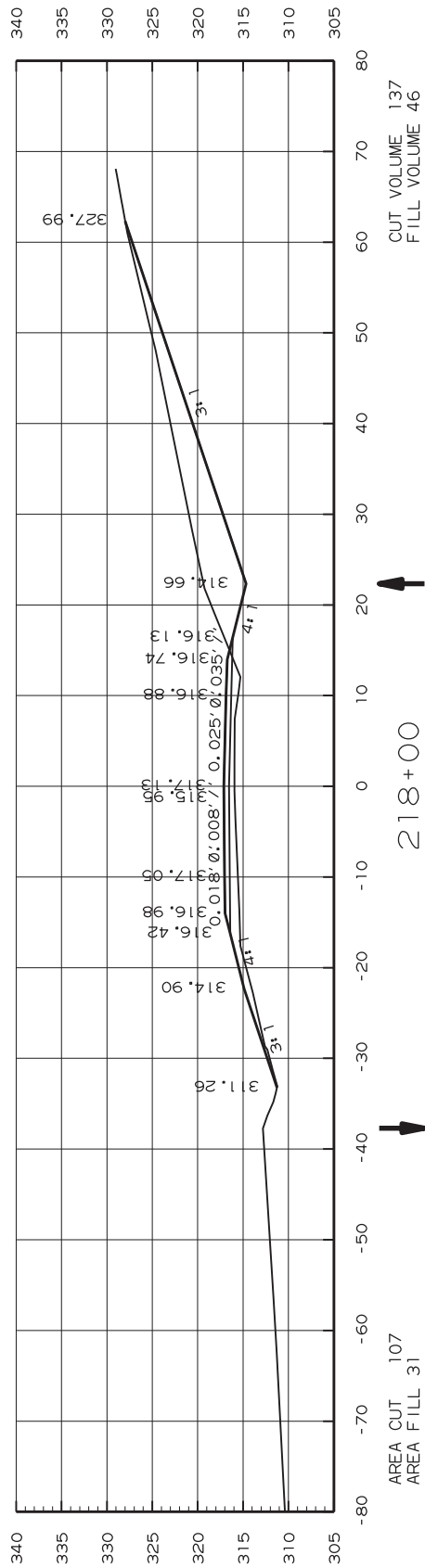
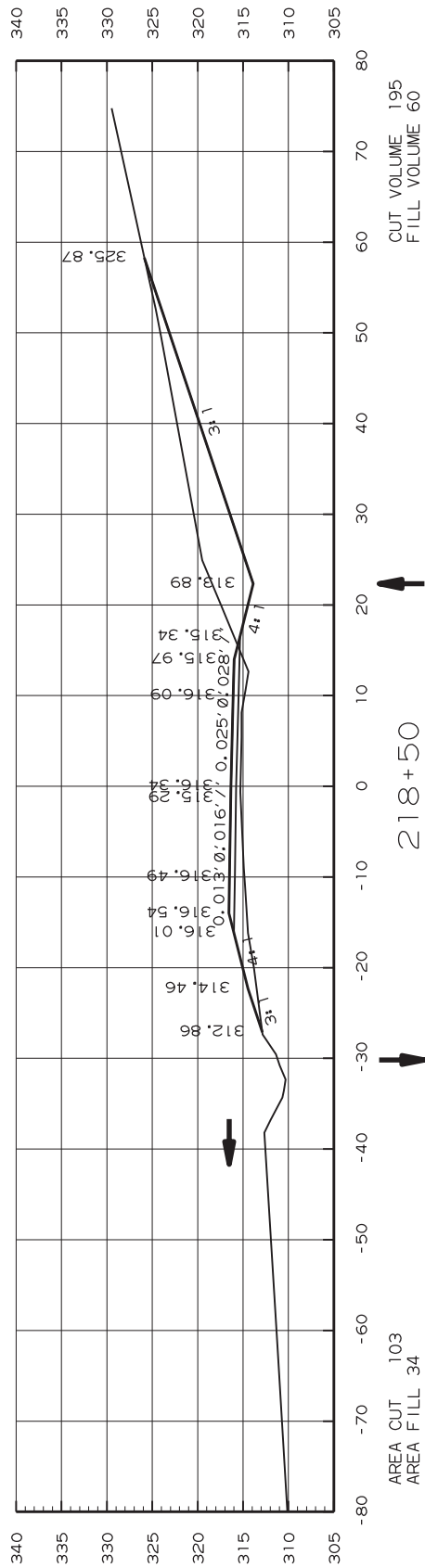
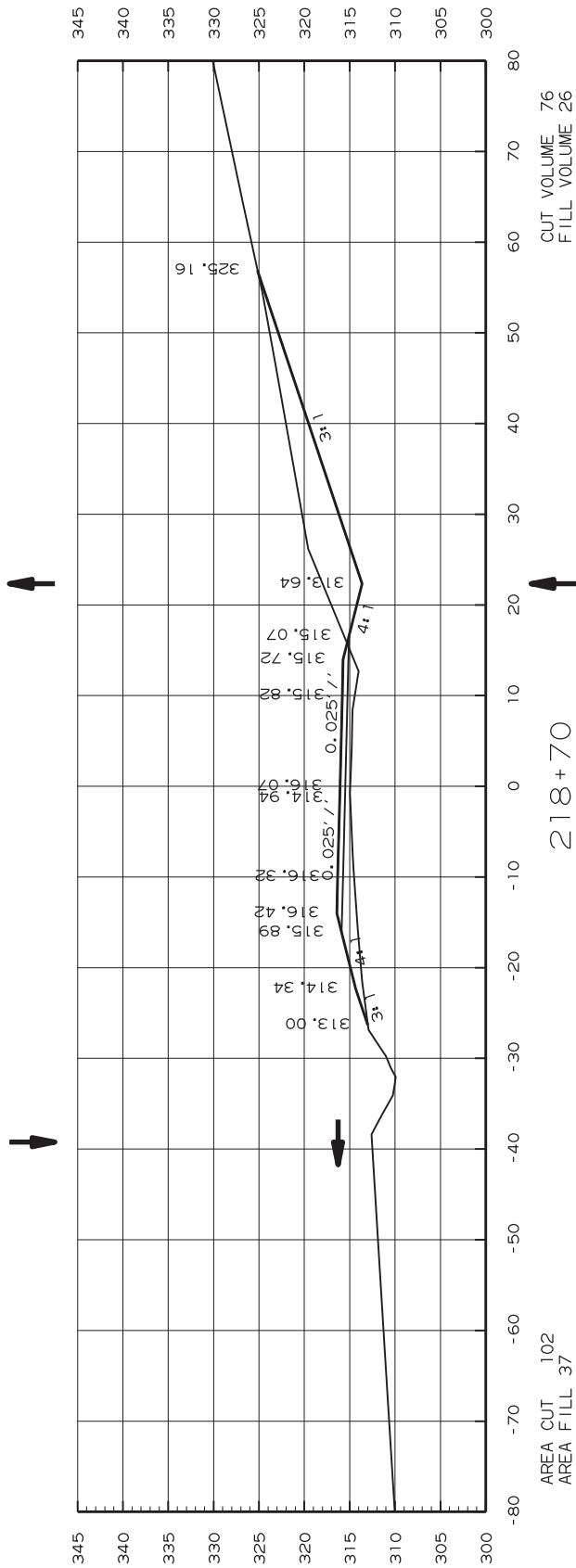


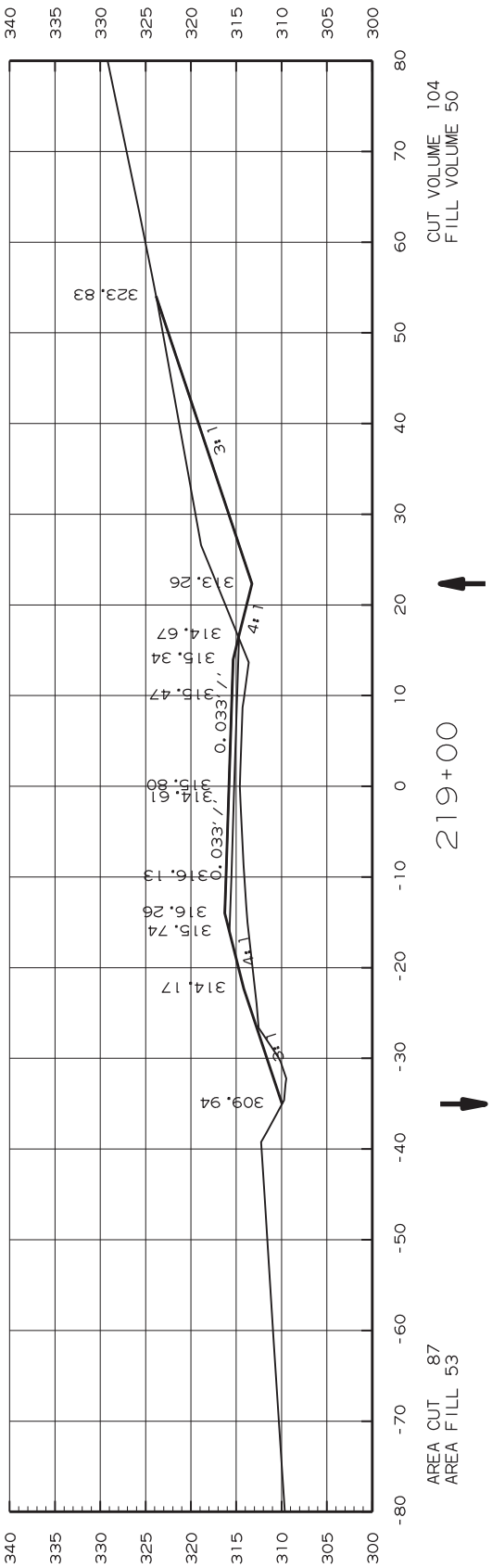
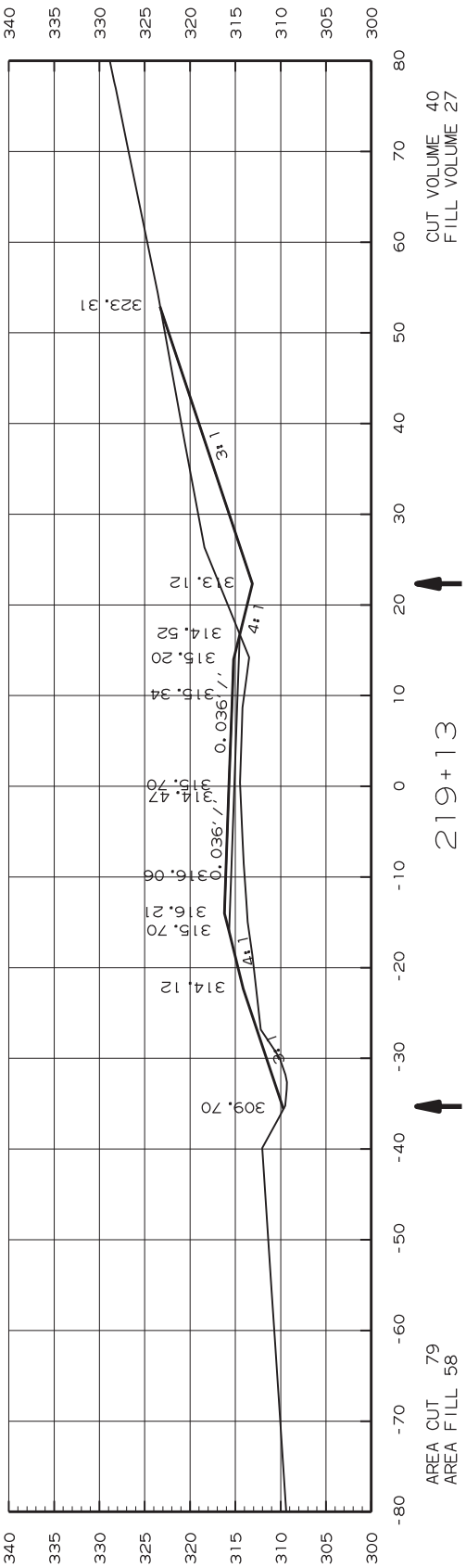
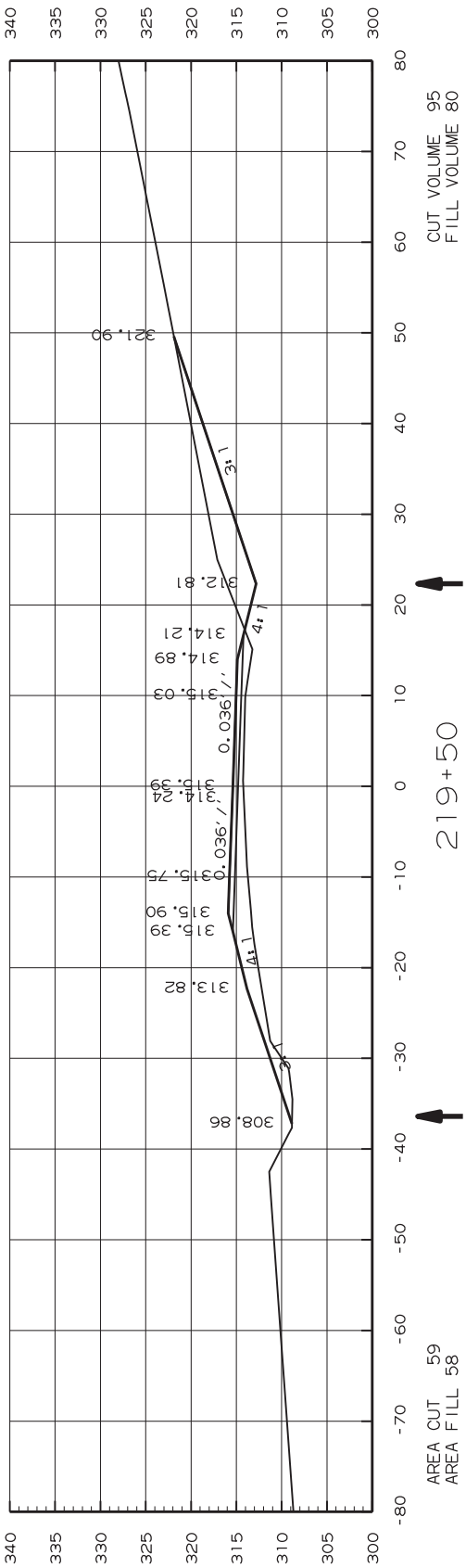
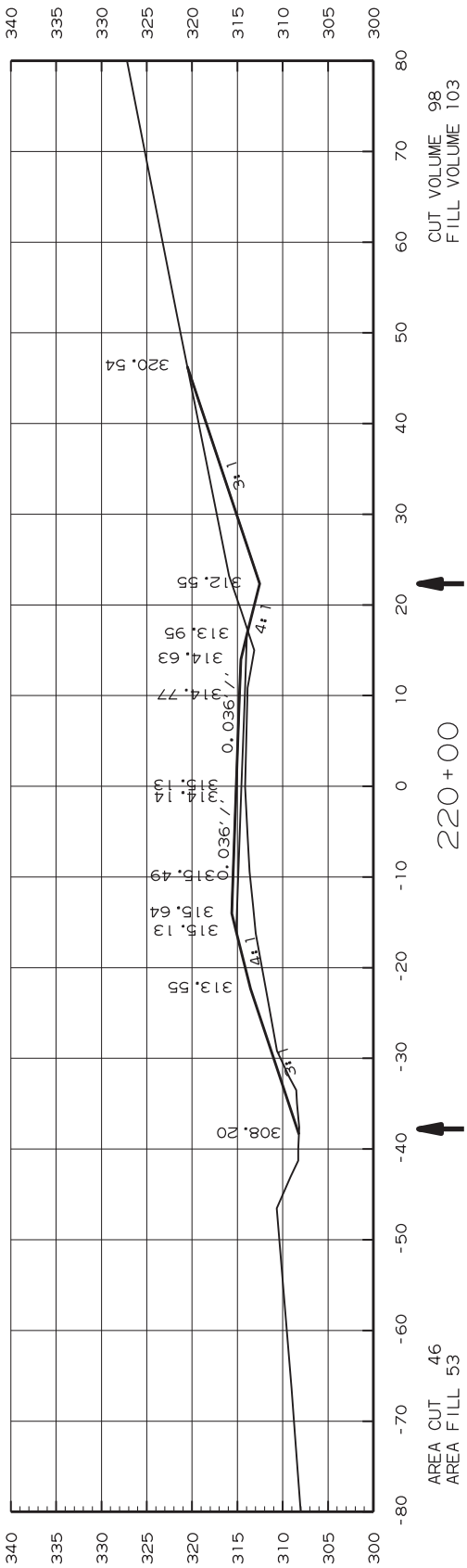
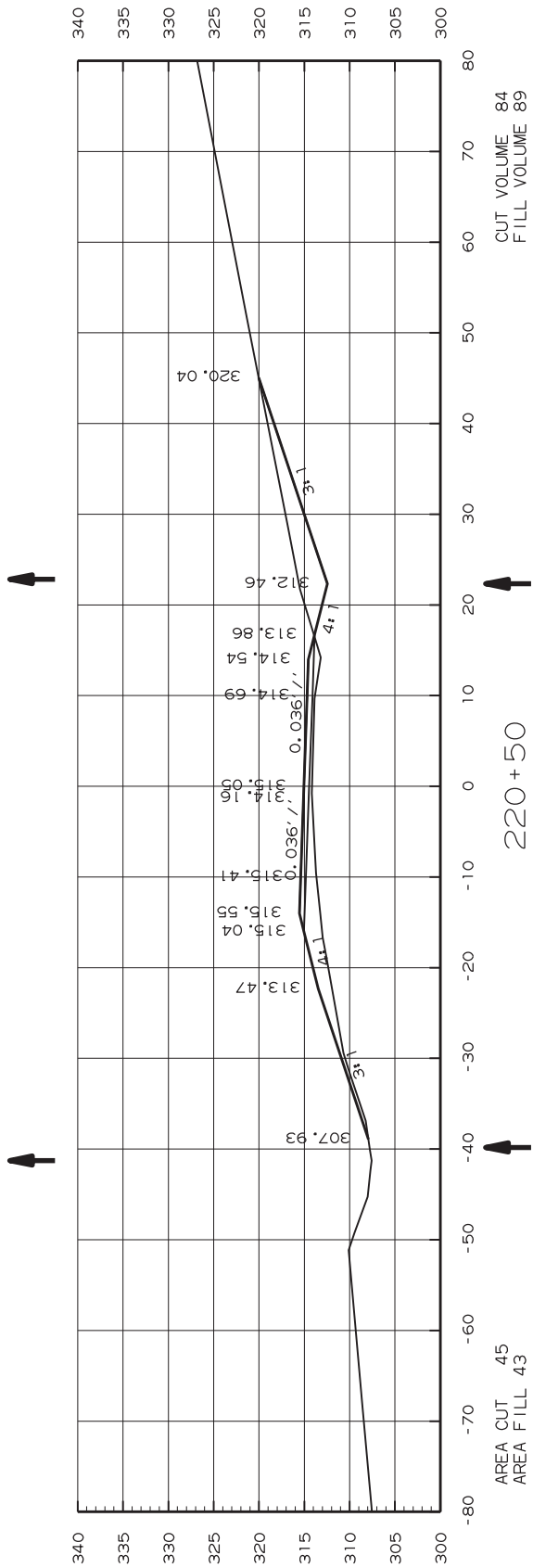
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|------------------|----------------|-----------------|----------------|-----------------------|--------|-----------------------|--------------|-----------------|
|                  |                |                 |                | 6                     | ARK.   |                       |              |                 |
|                  |                |                 |                | JOB NO.               | FA5309 |                       | 88           | 114             |
| 4 CROSS SECTIONS |                |                 |                |                       |        |                       |              |                 |

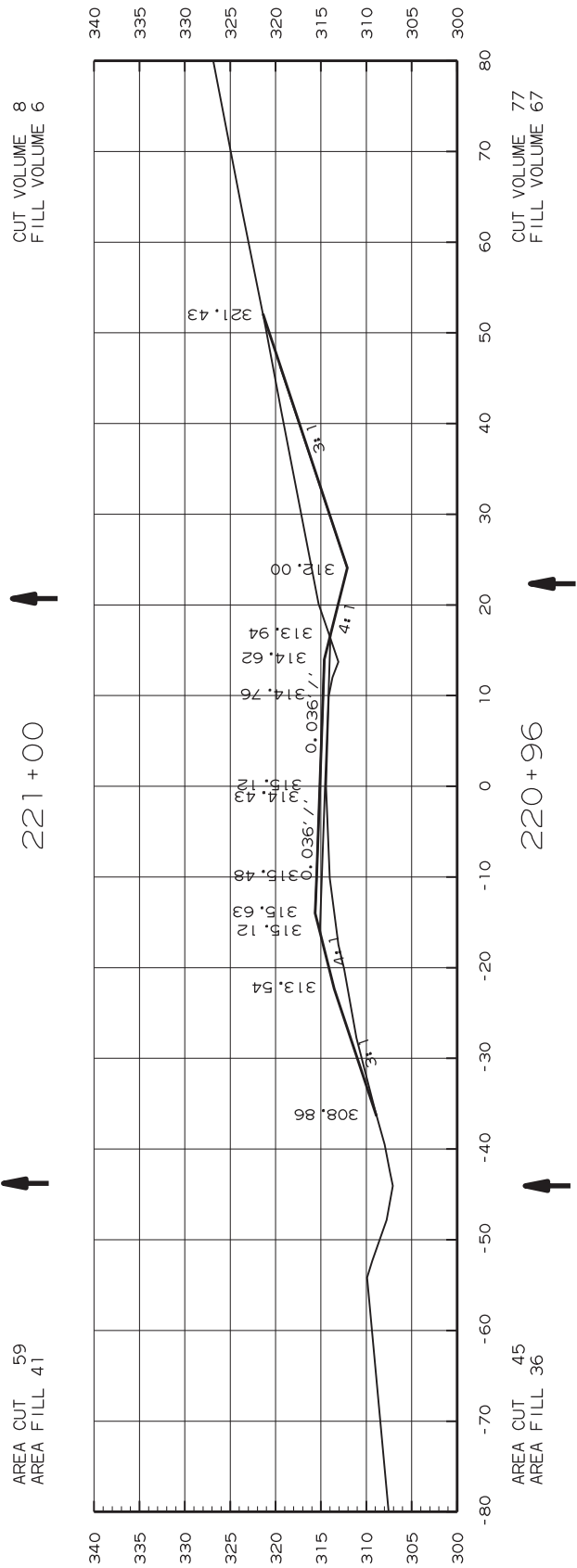
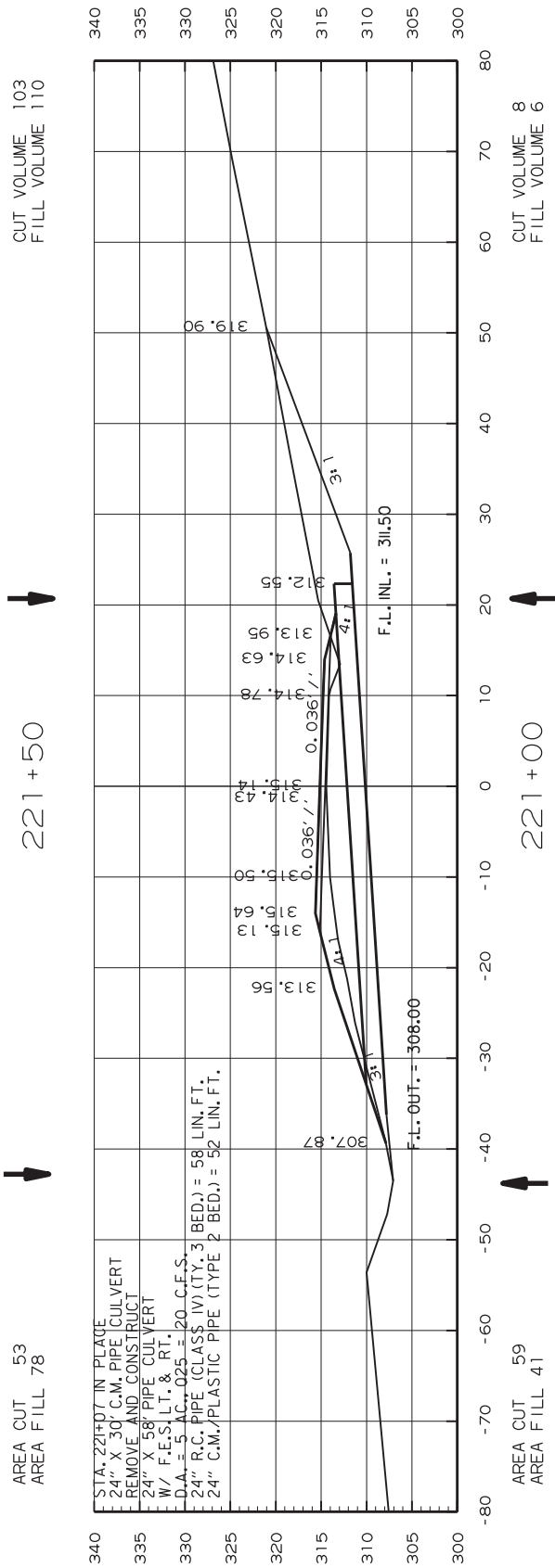
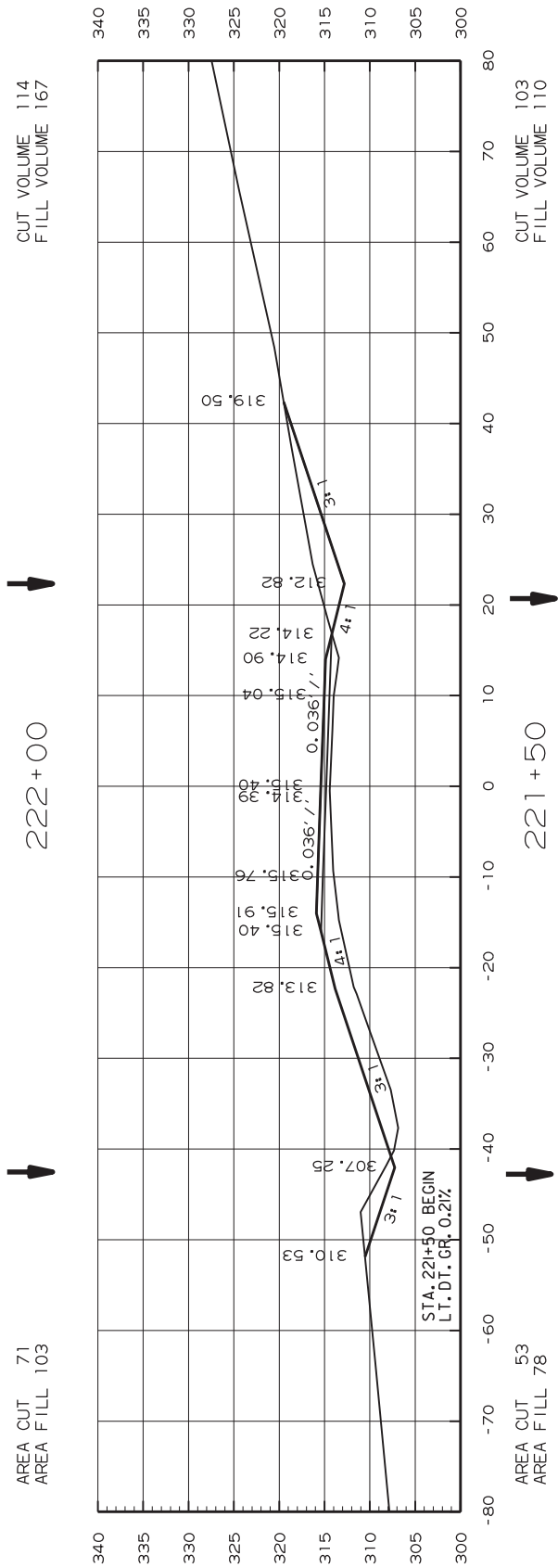
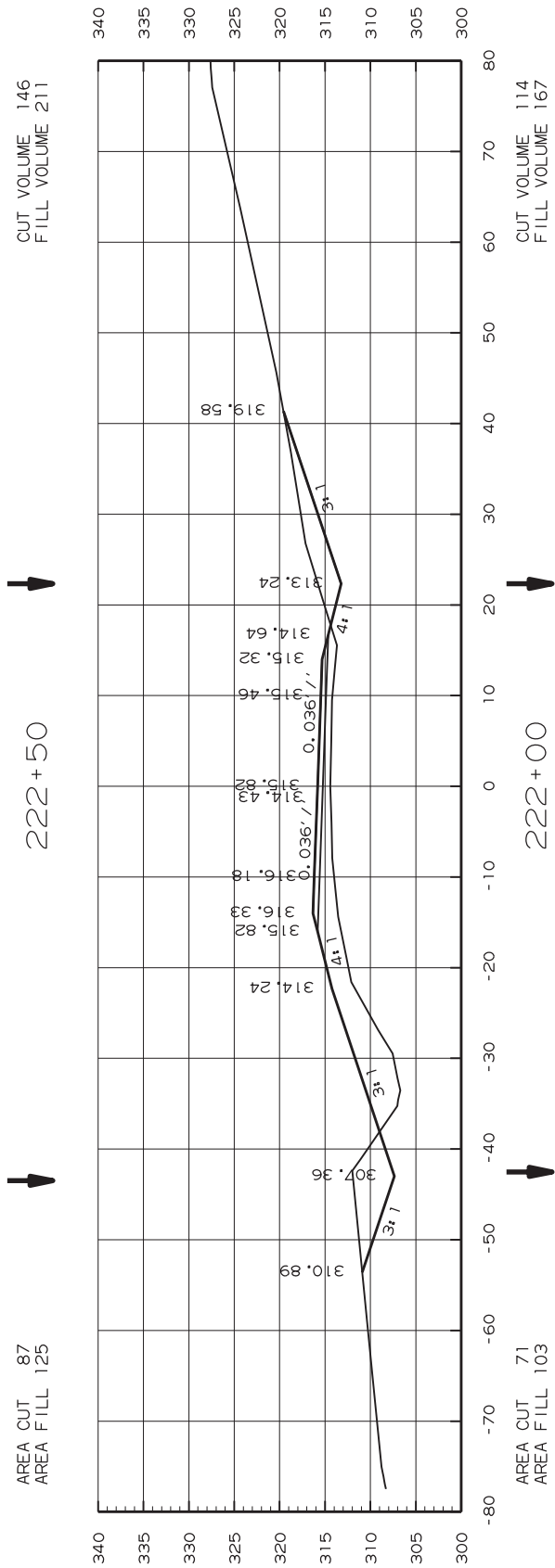
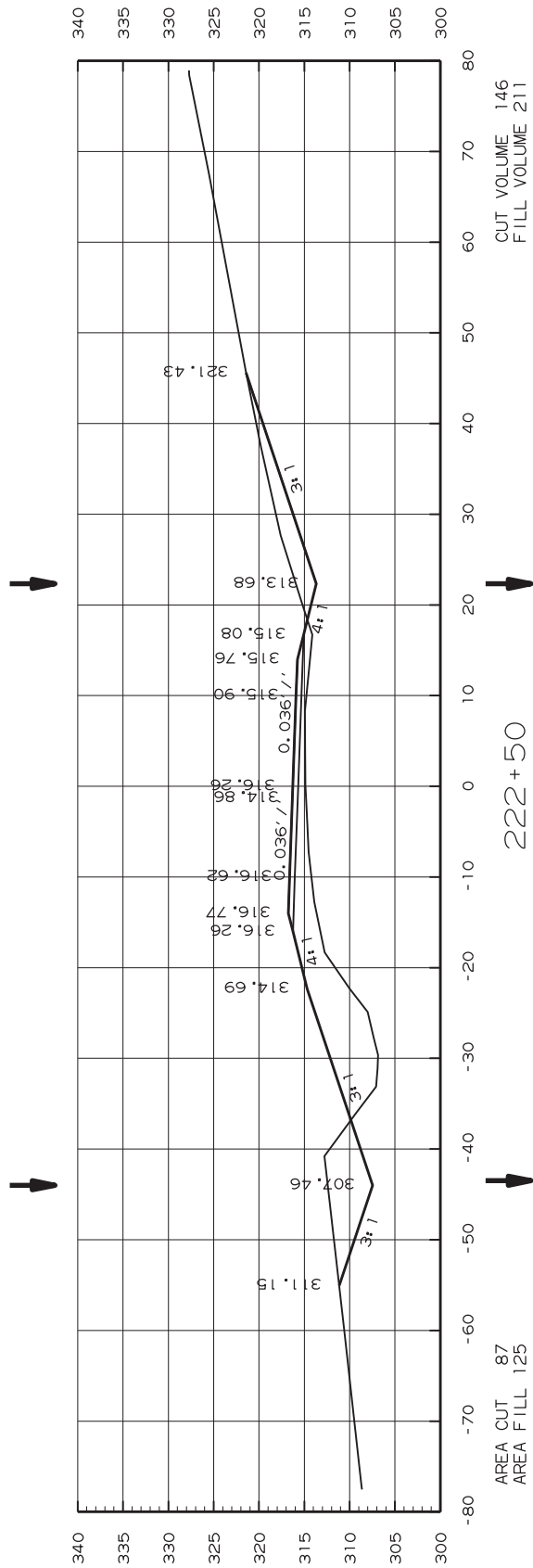


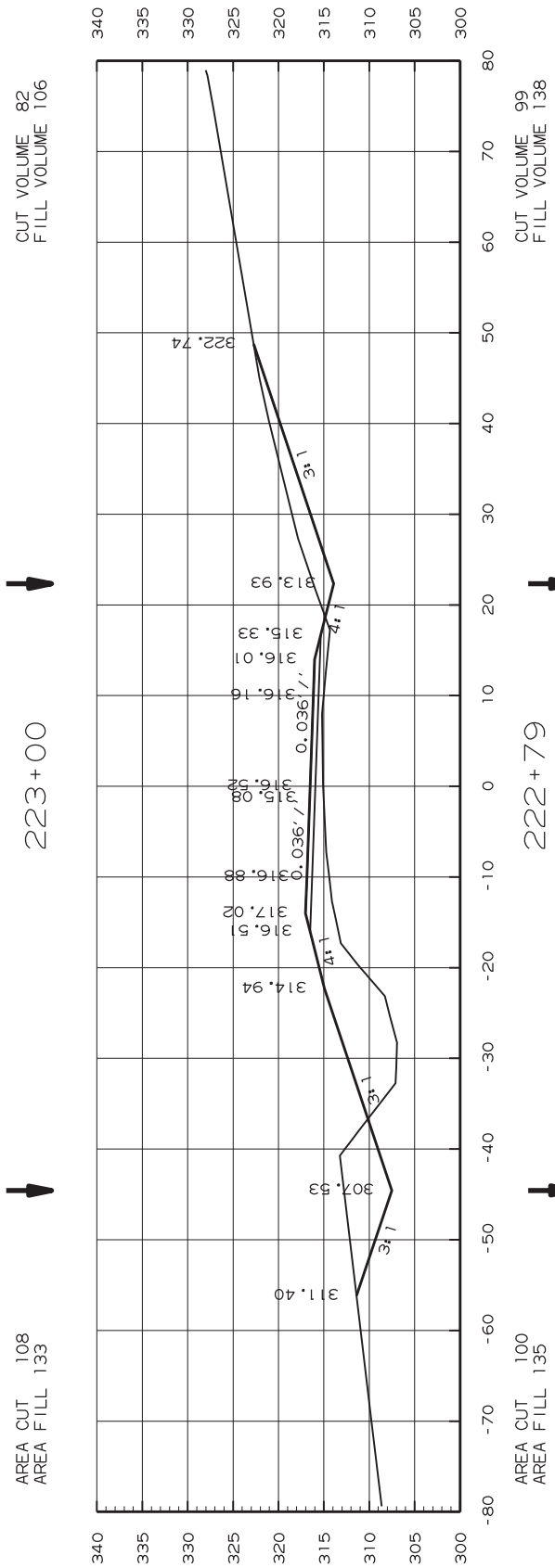
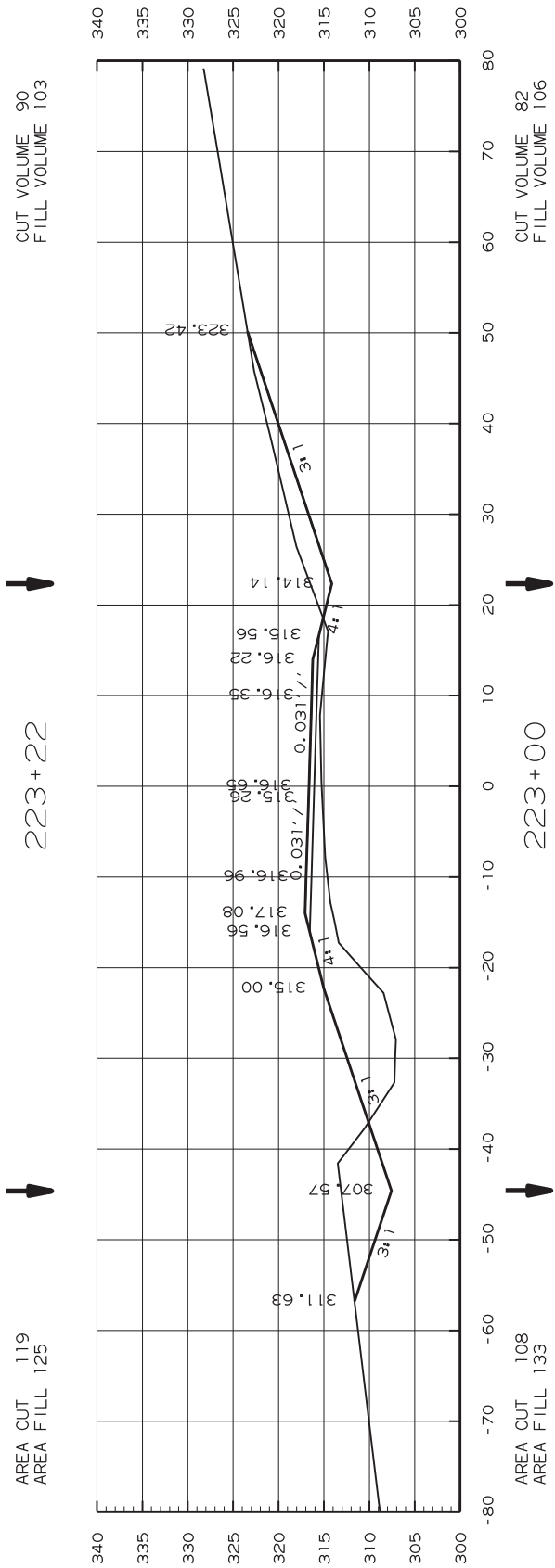
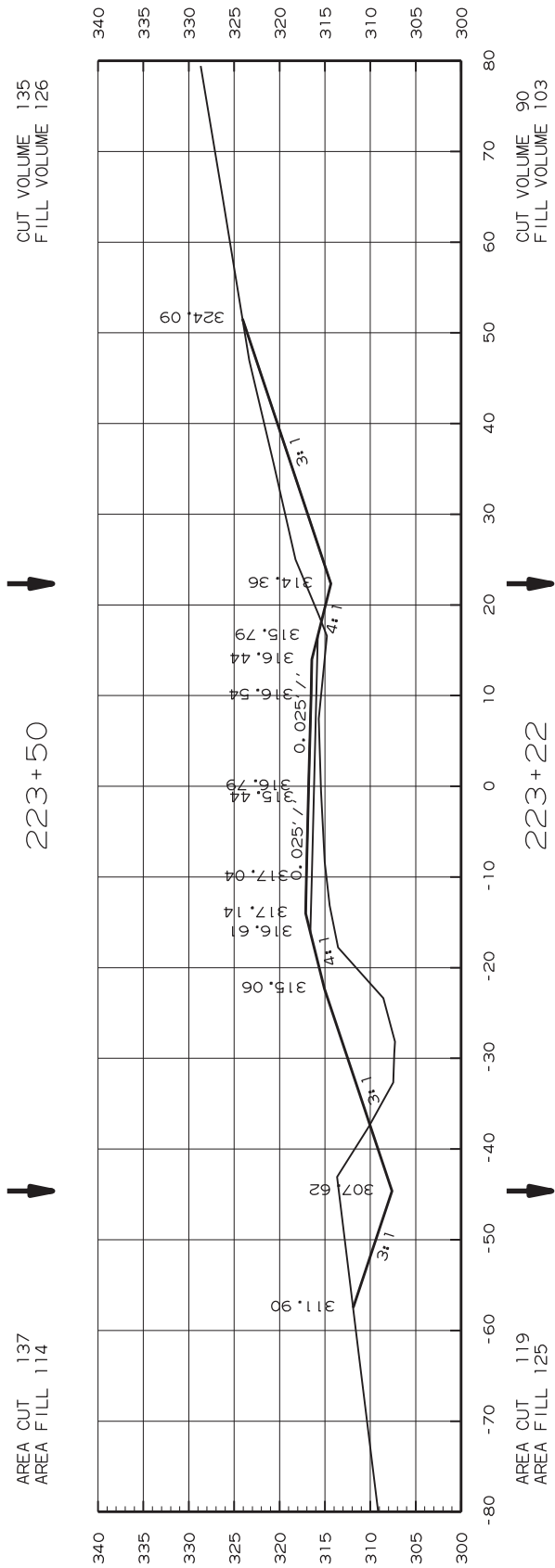
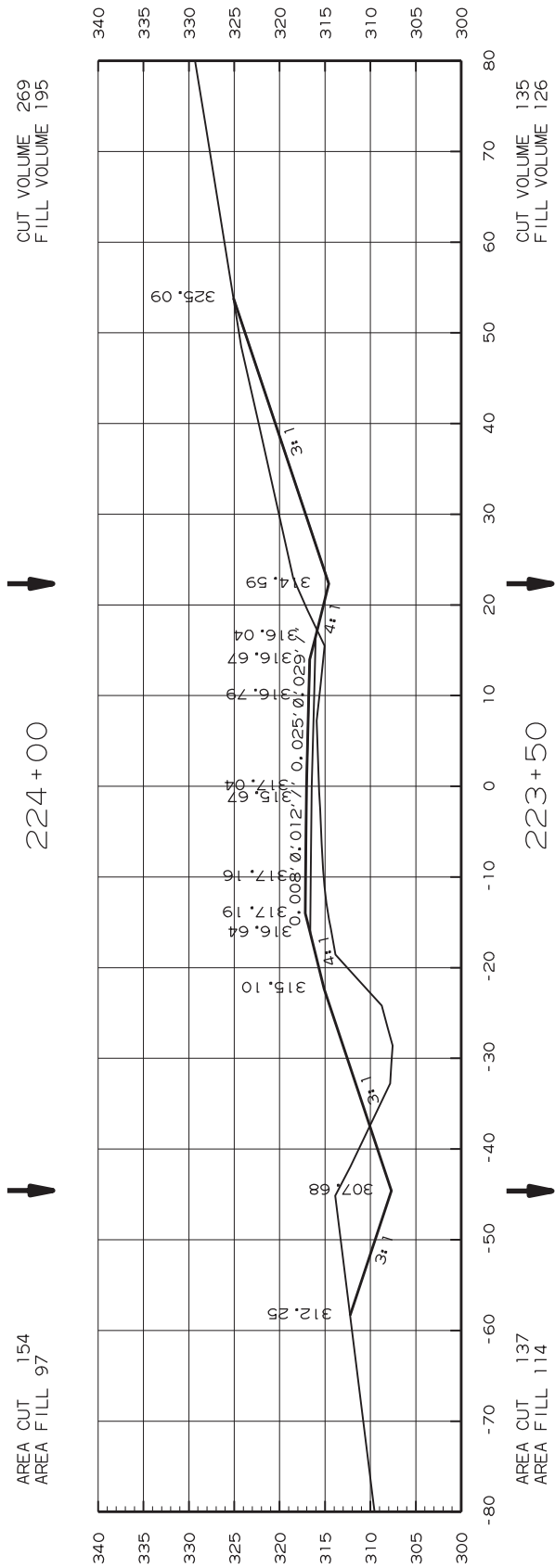
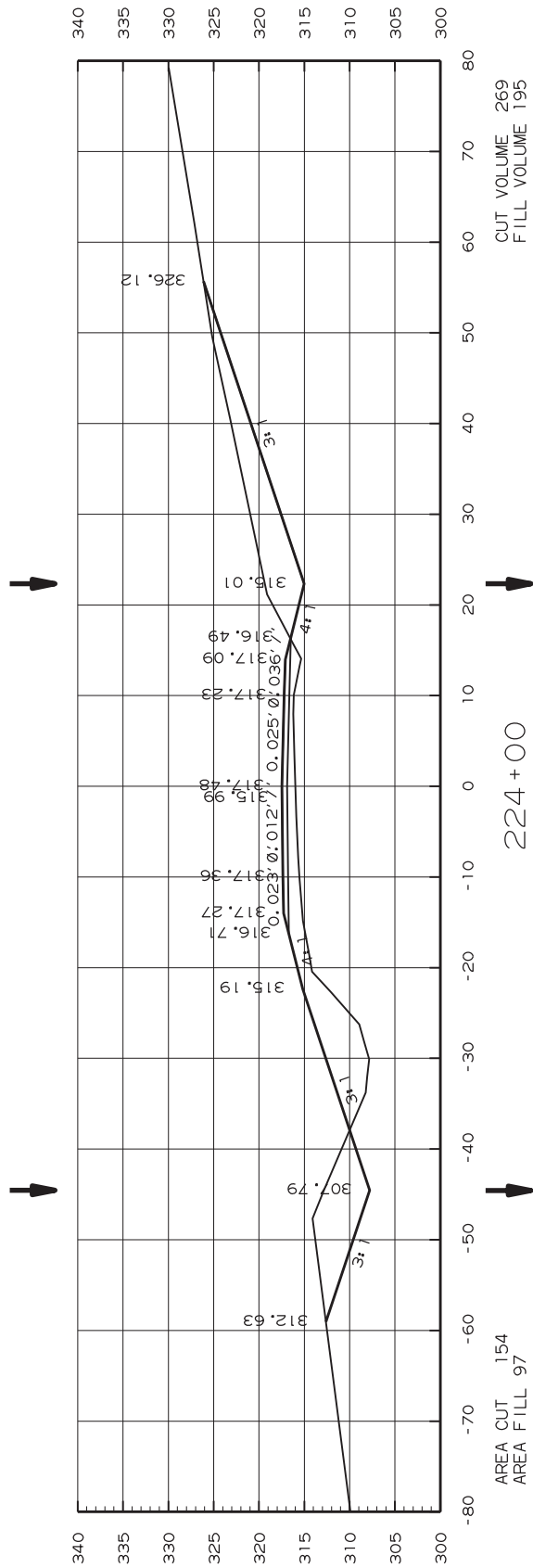












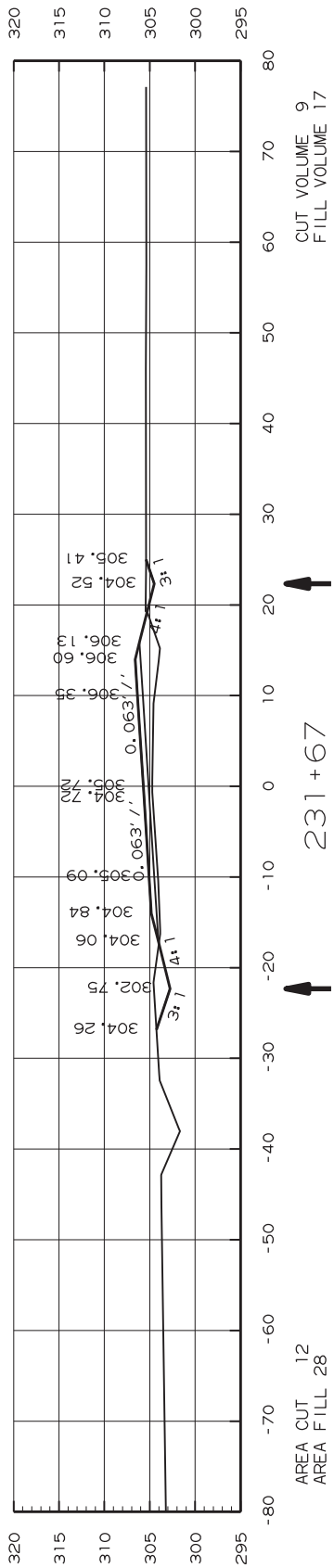
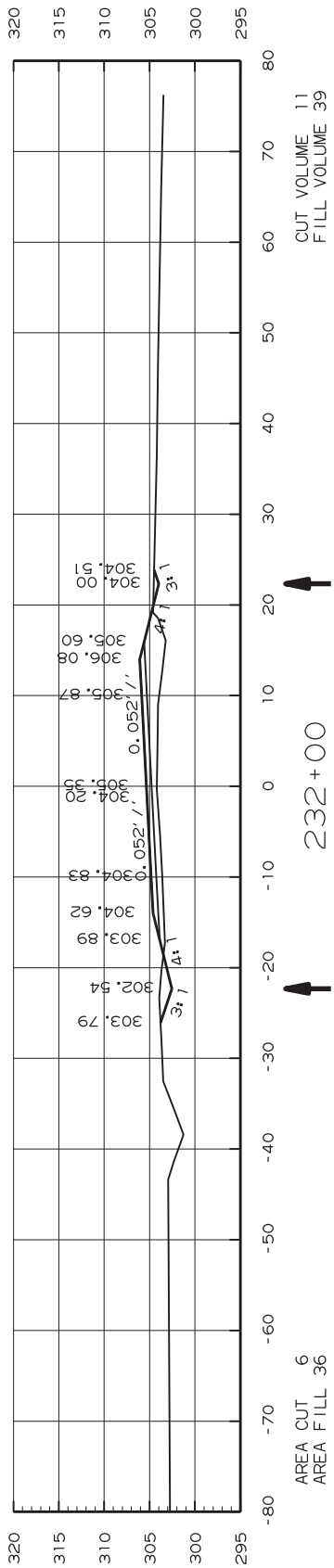
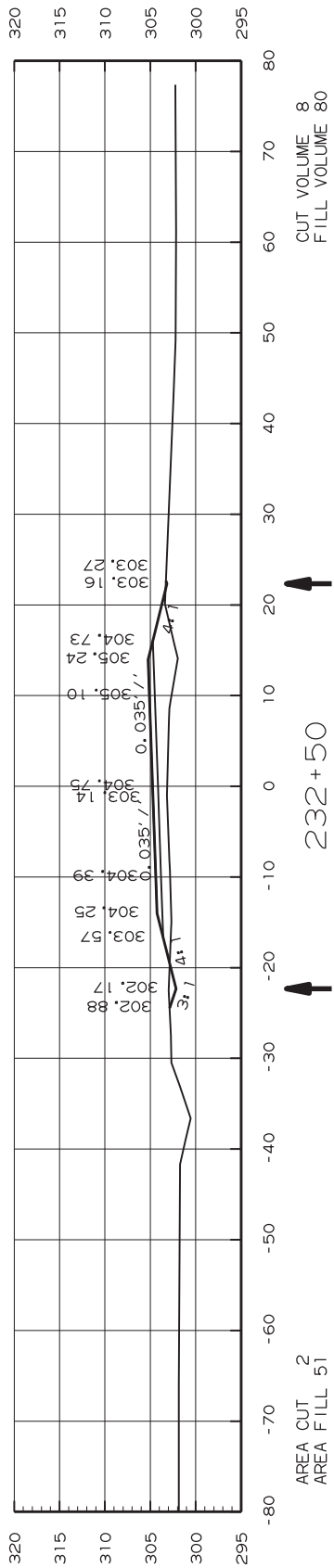
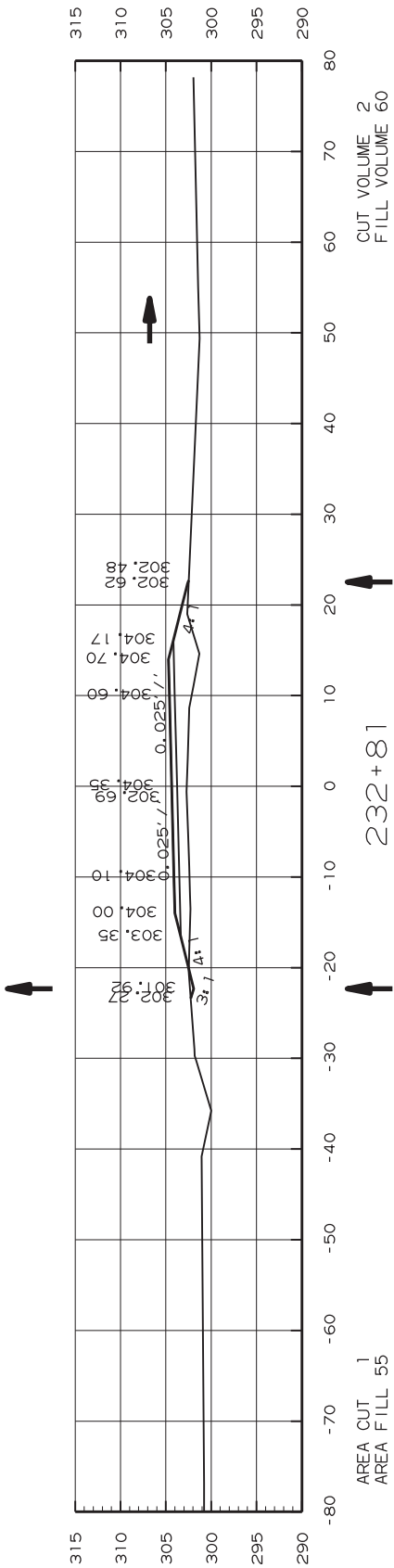
END MAX SUPER STATION 222+78.16

STA. 222+79 TO STA. 224+00

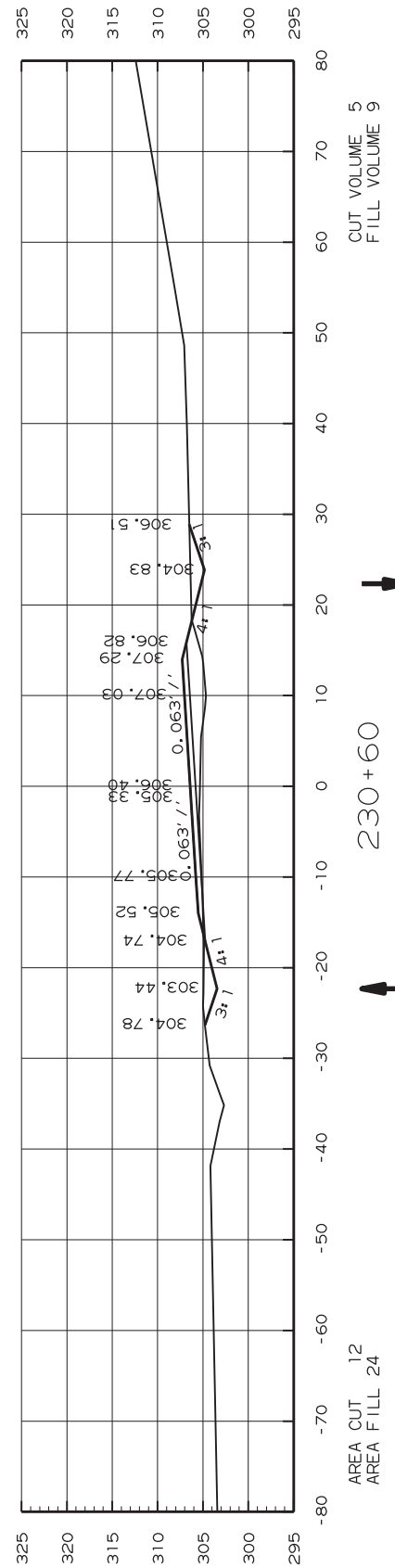
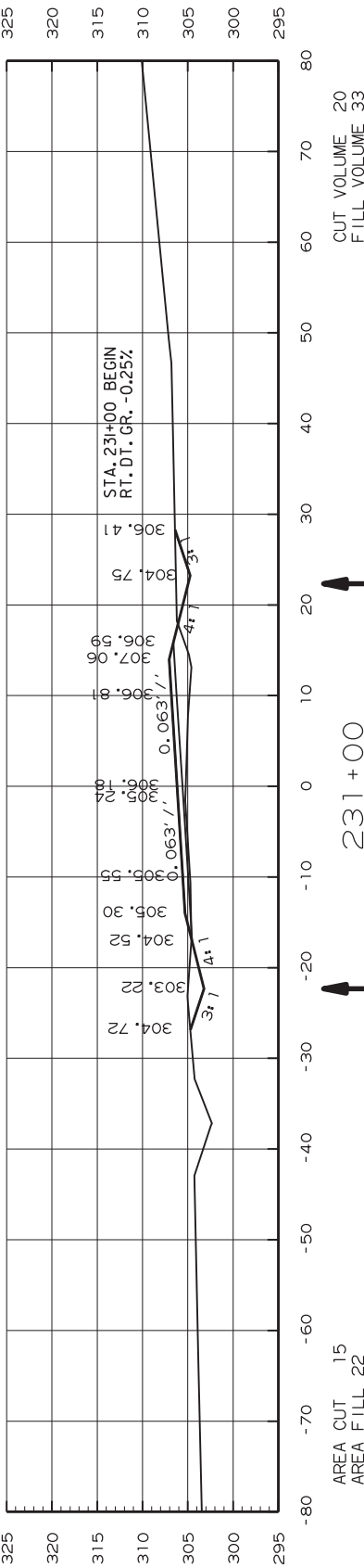
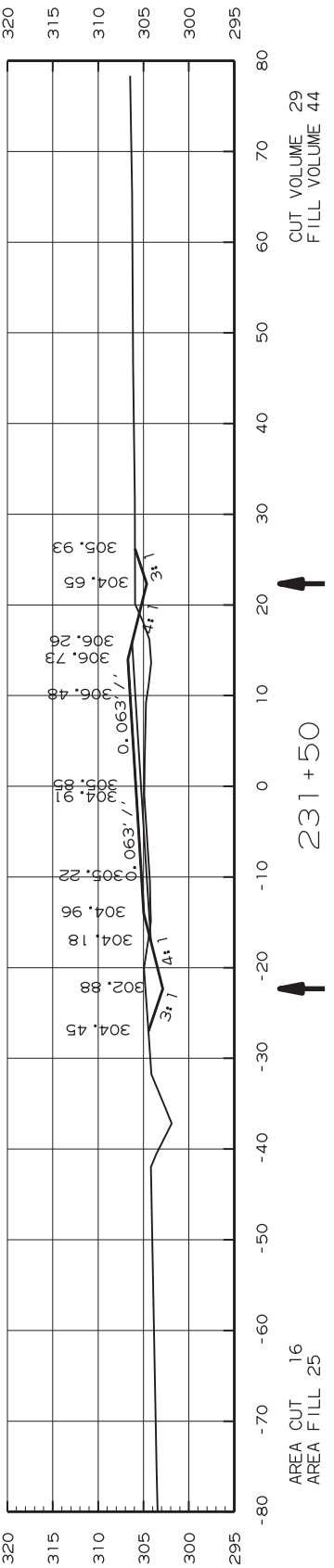




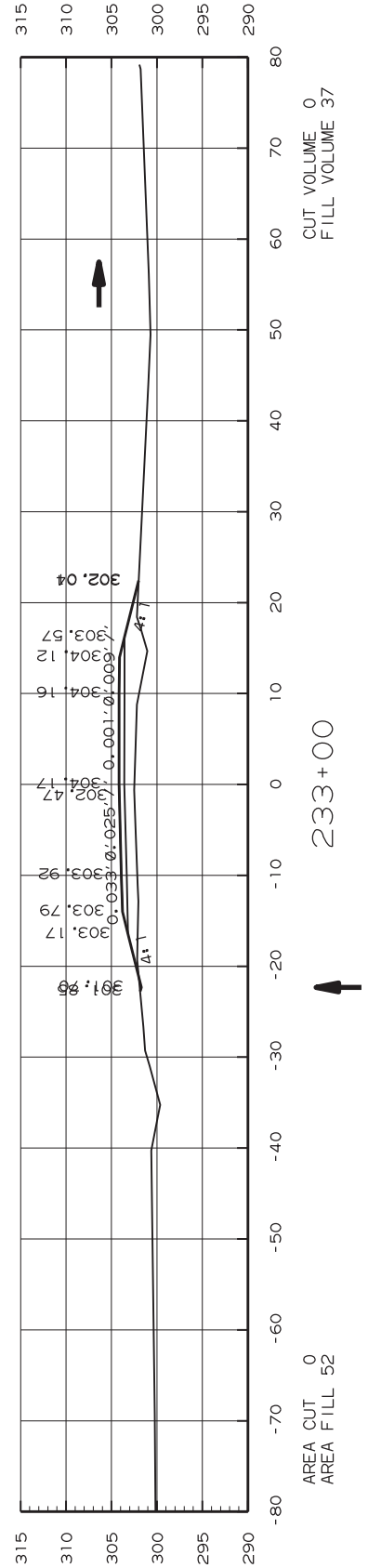
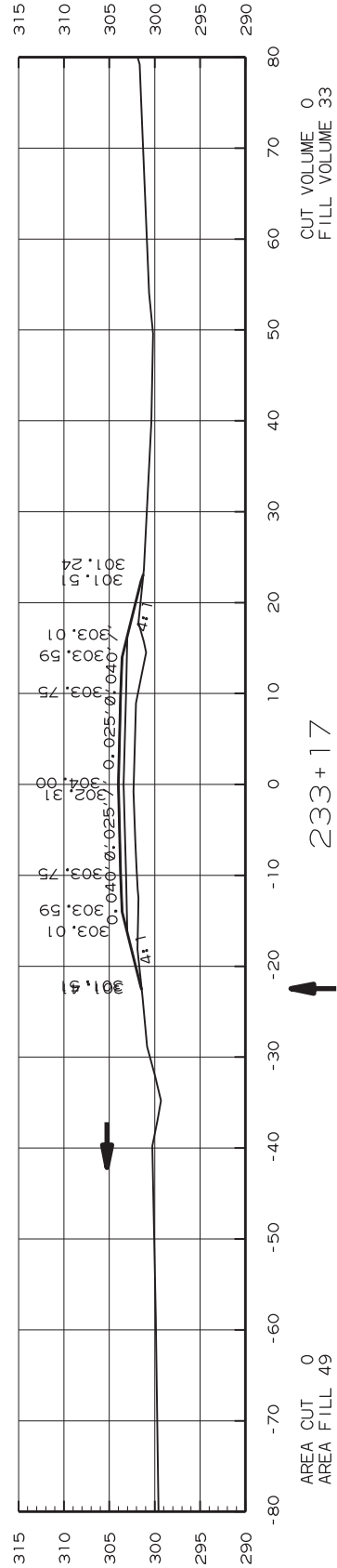
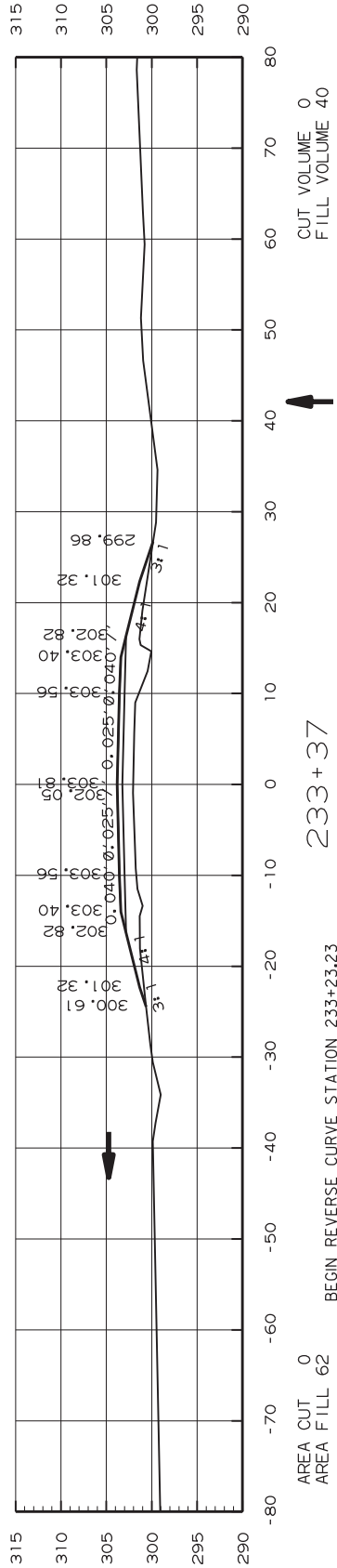
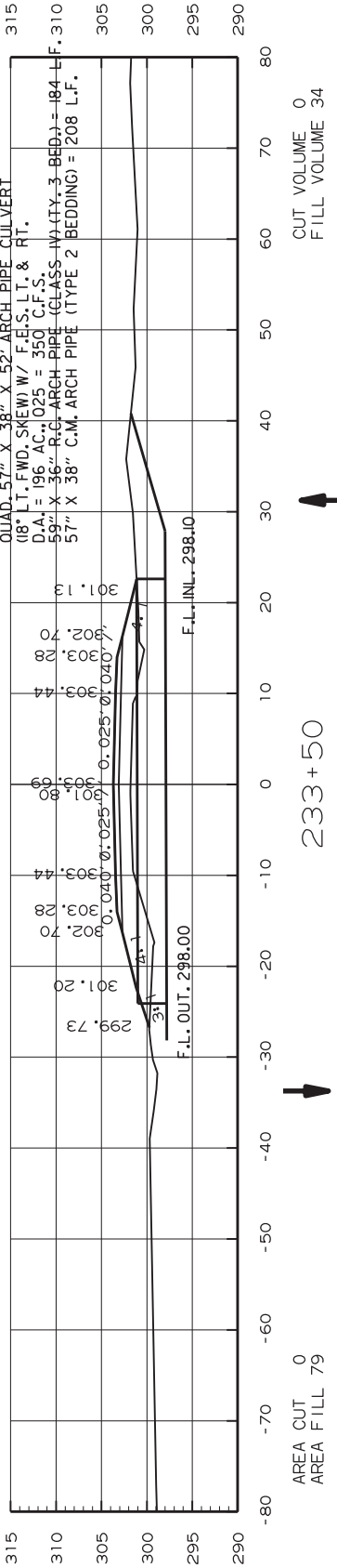
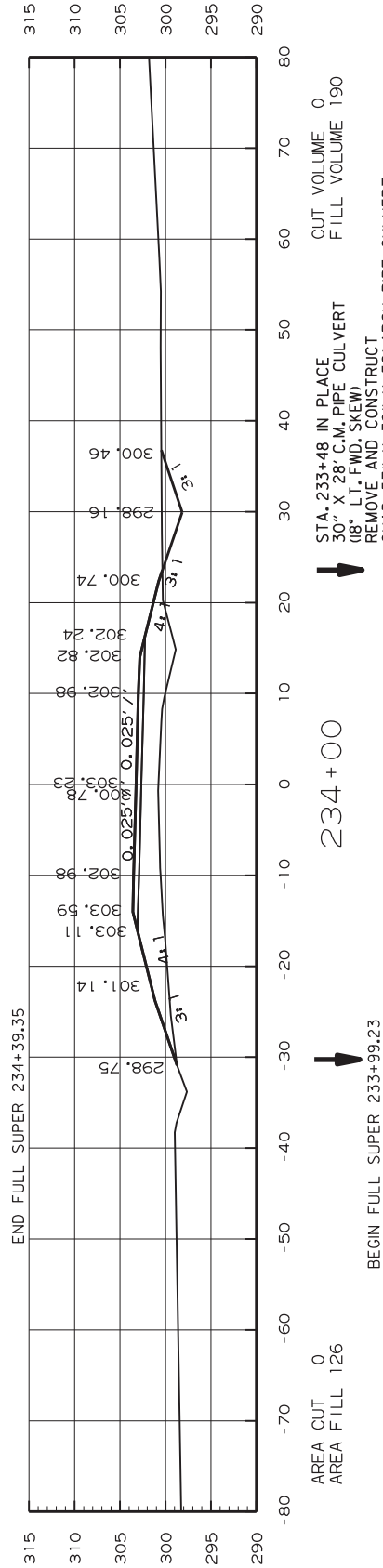
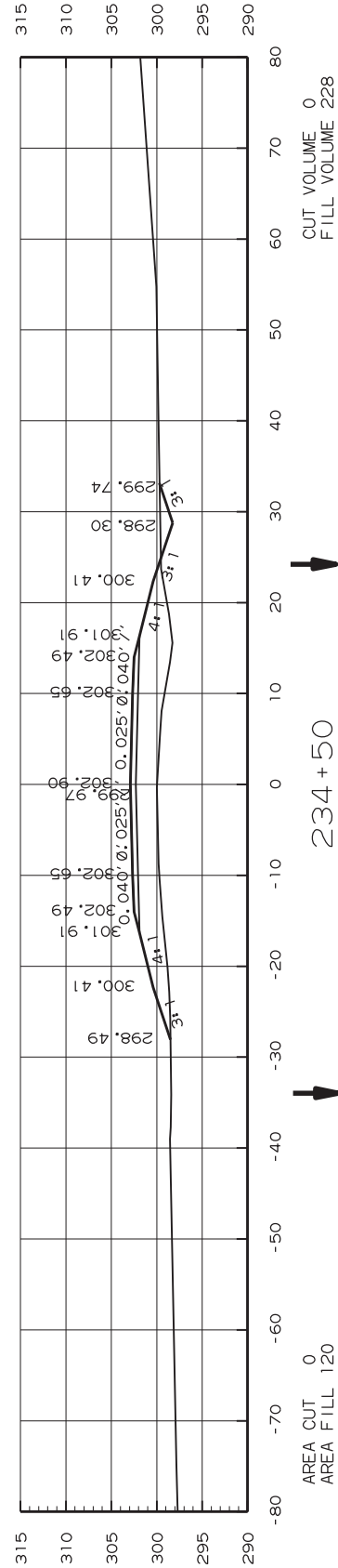
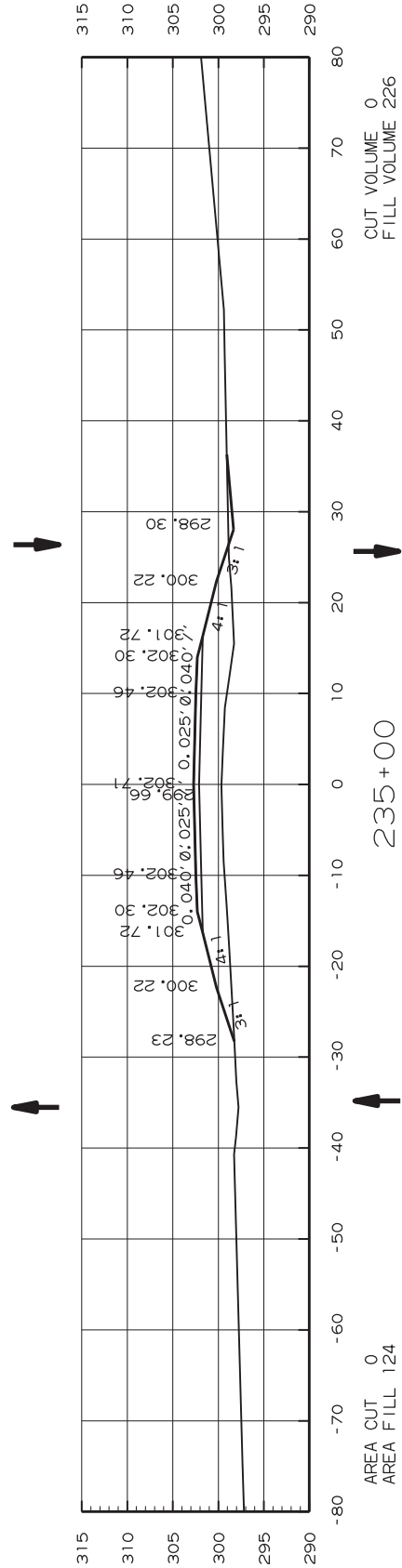




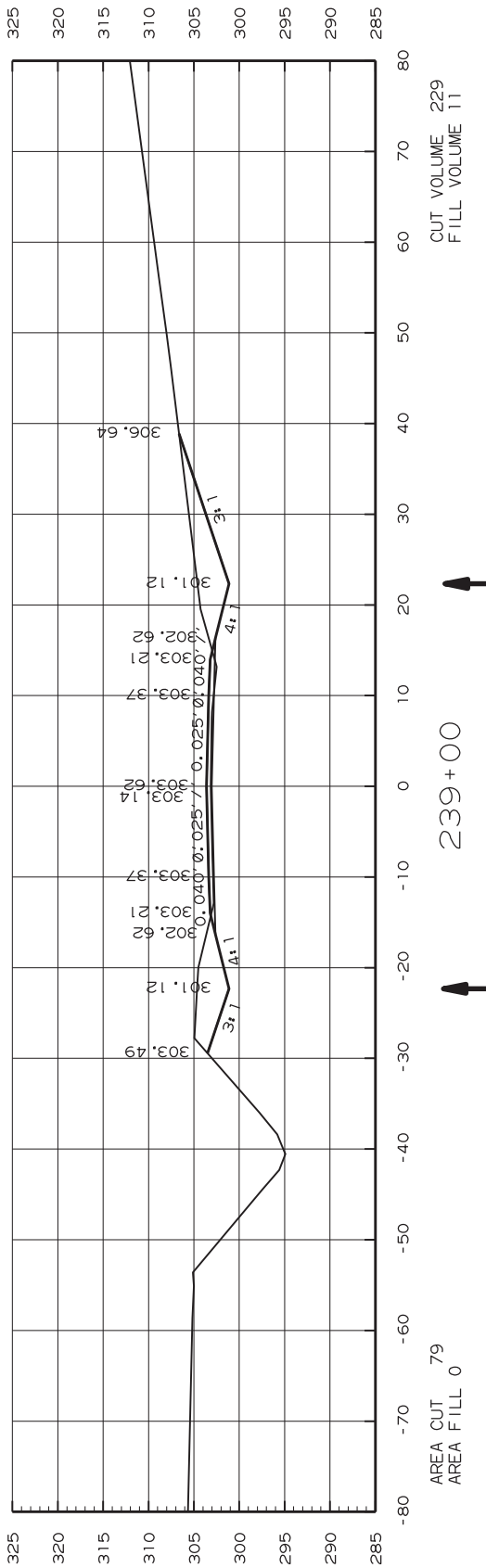
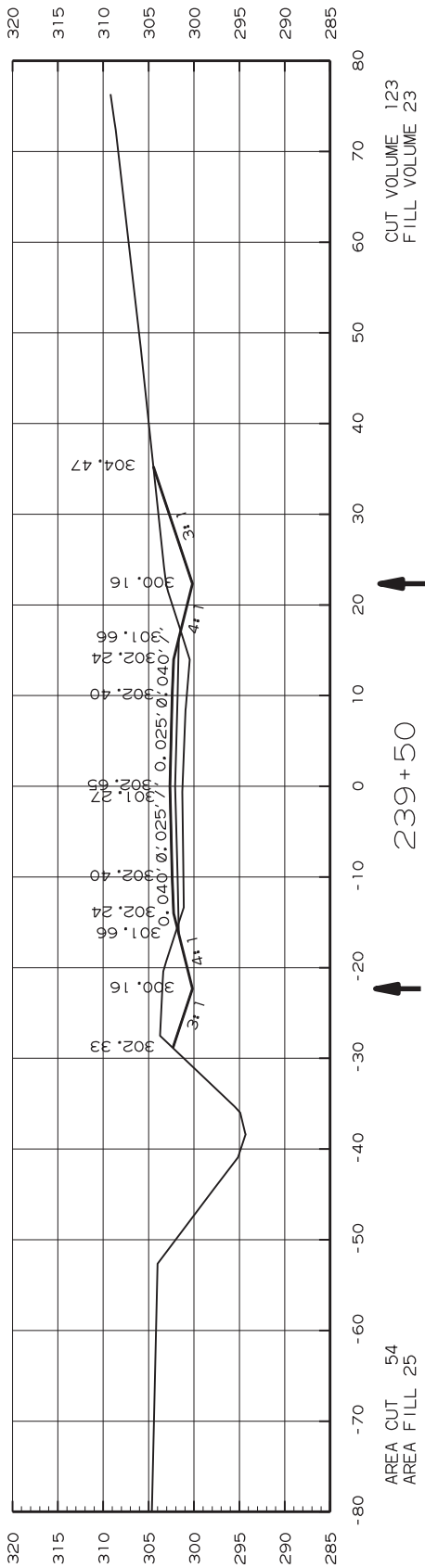
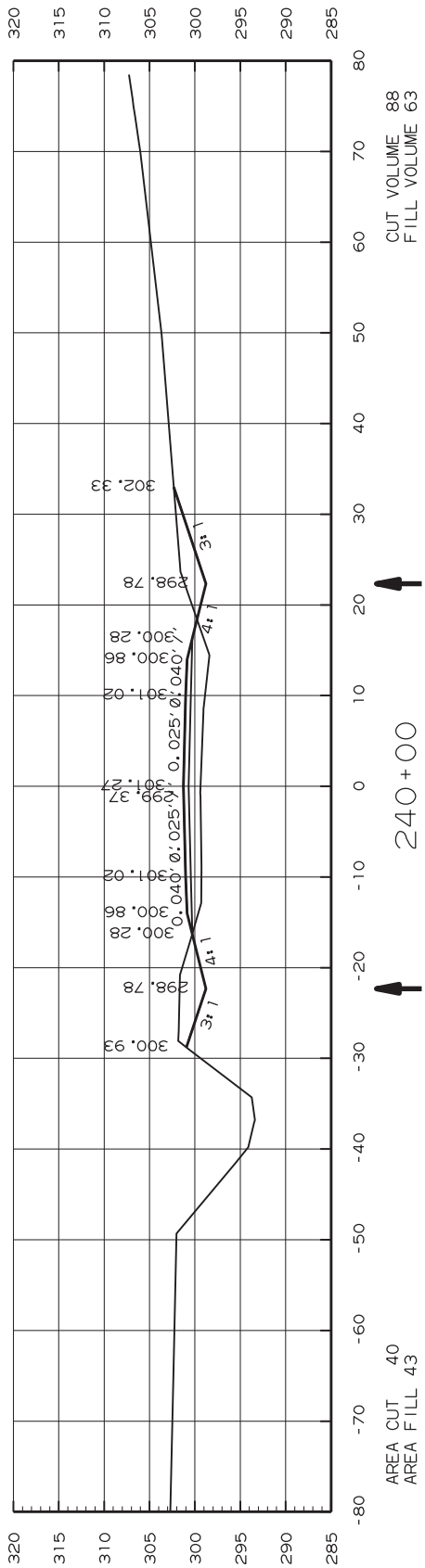
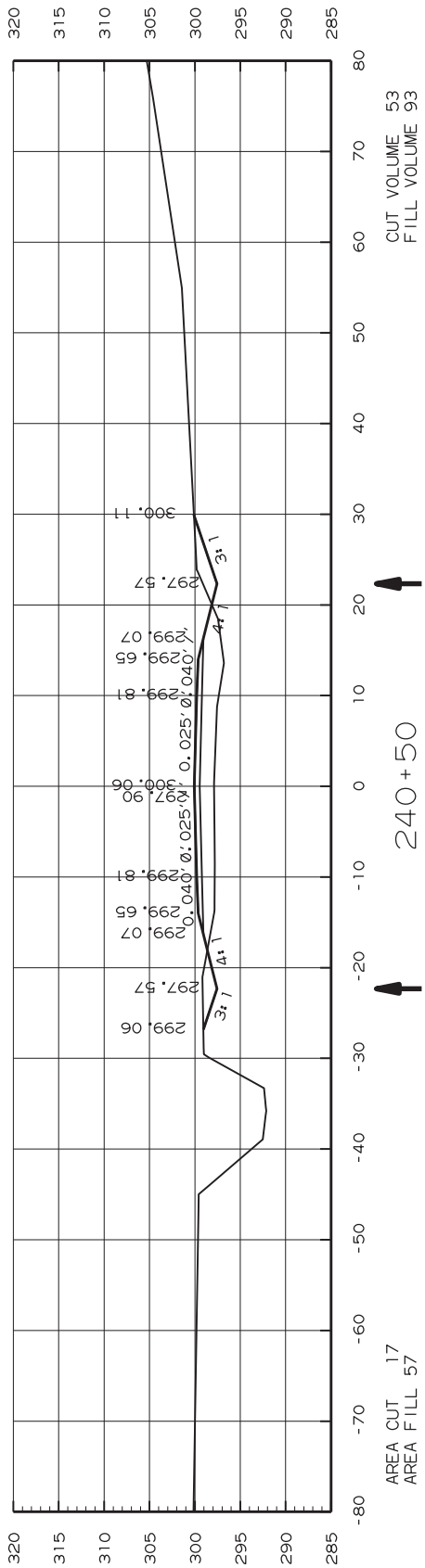
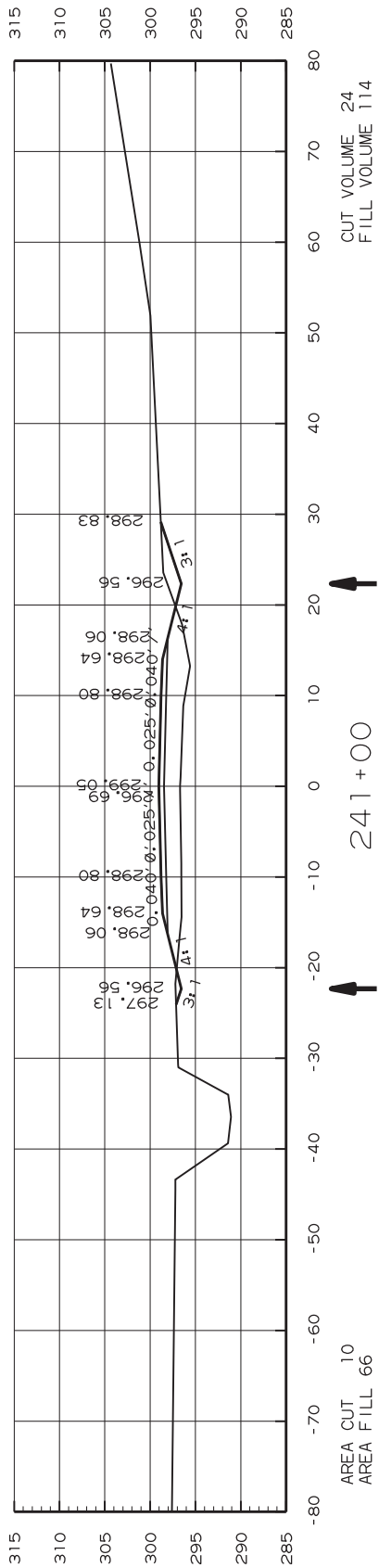
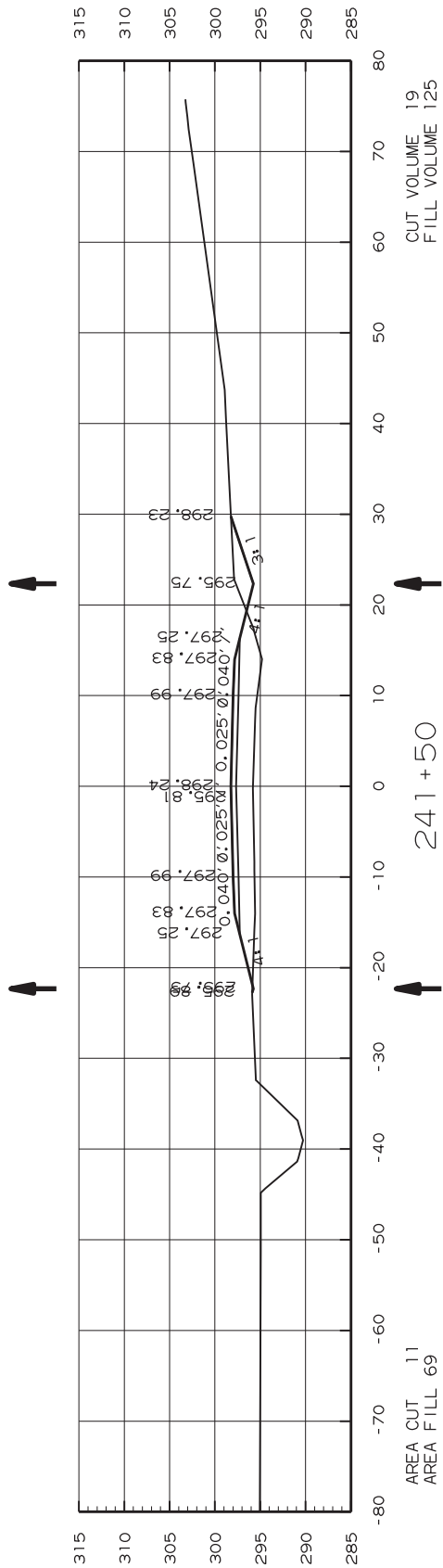
END MAX SUPER STATION 231+67.49

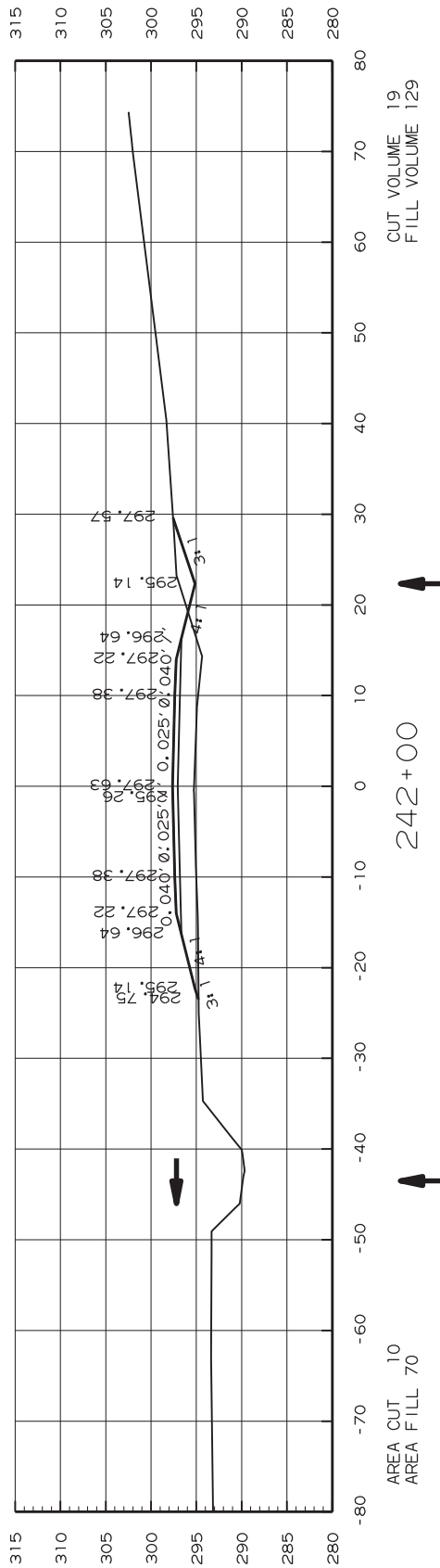
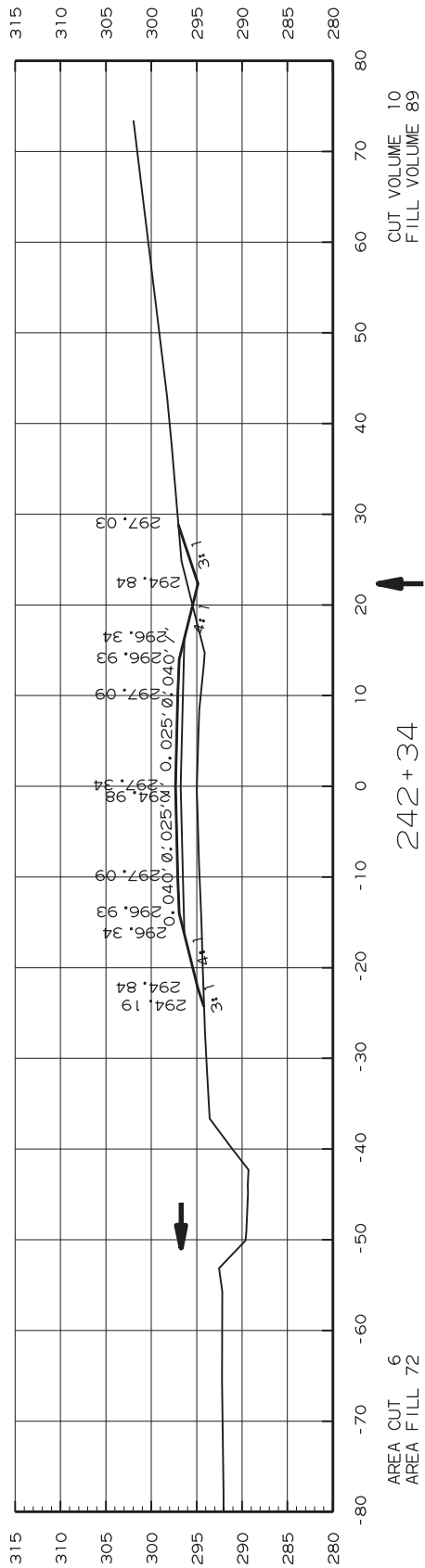
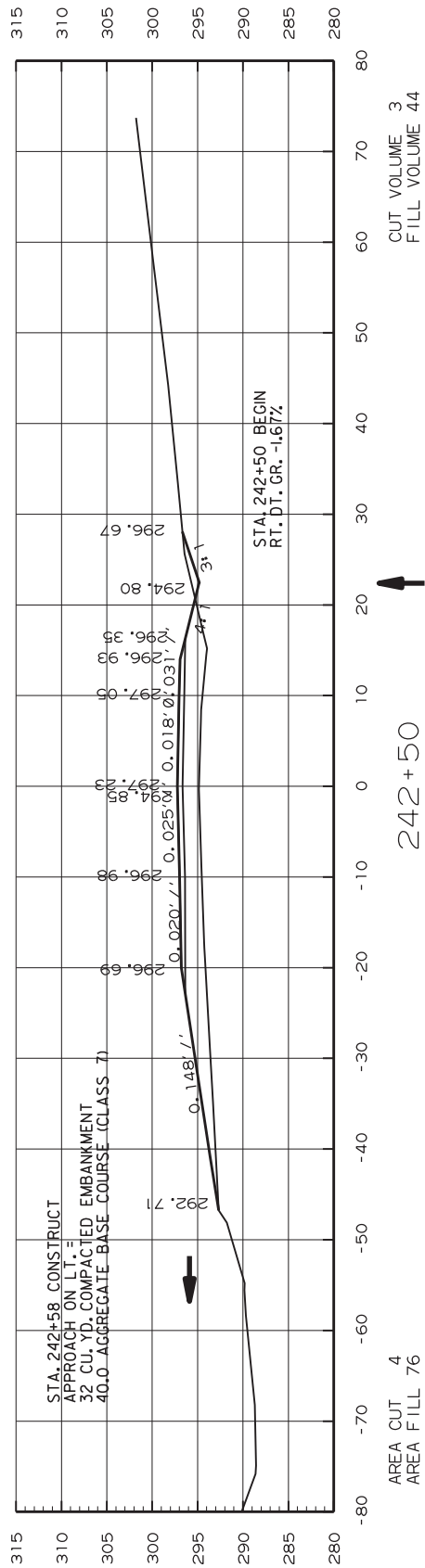
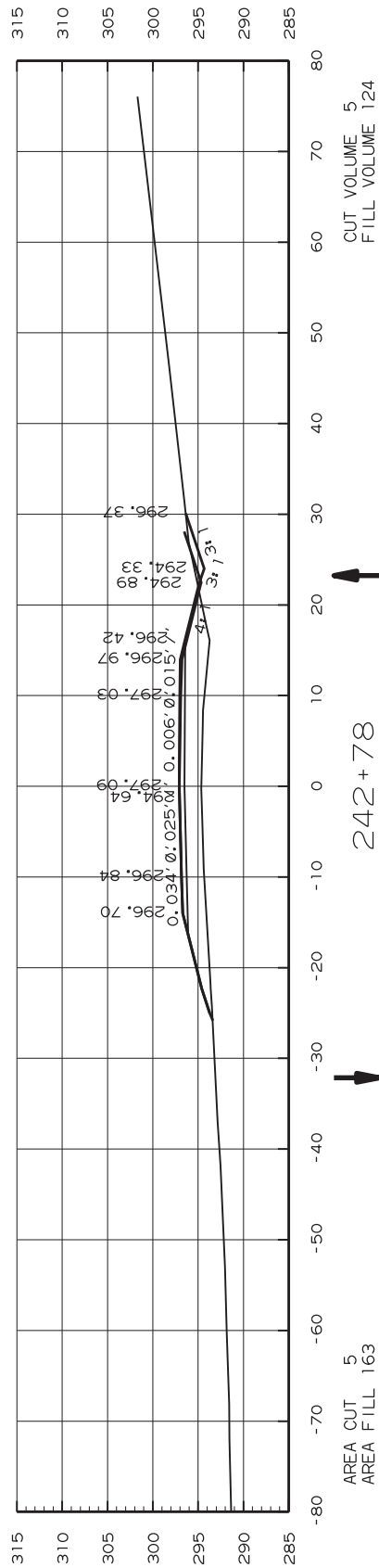
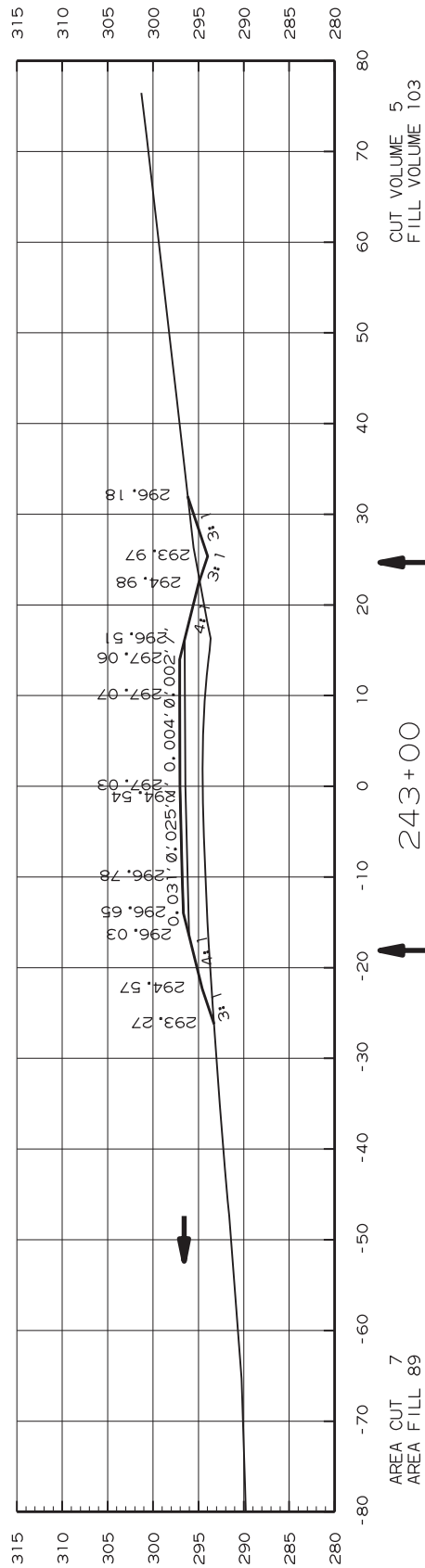
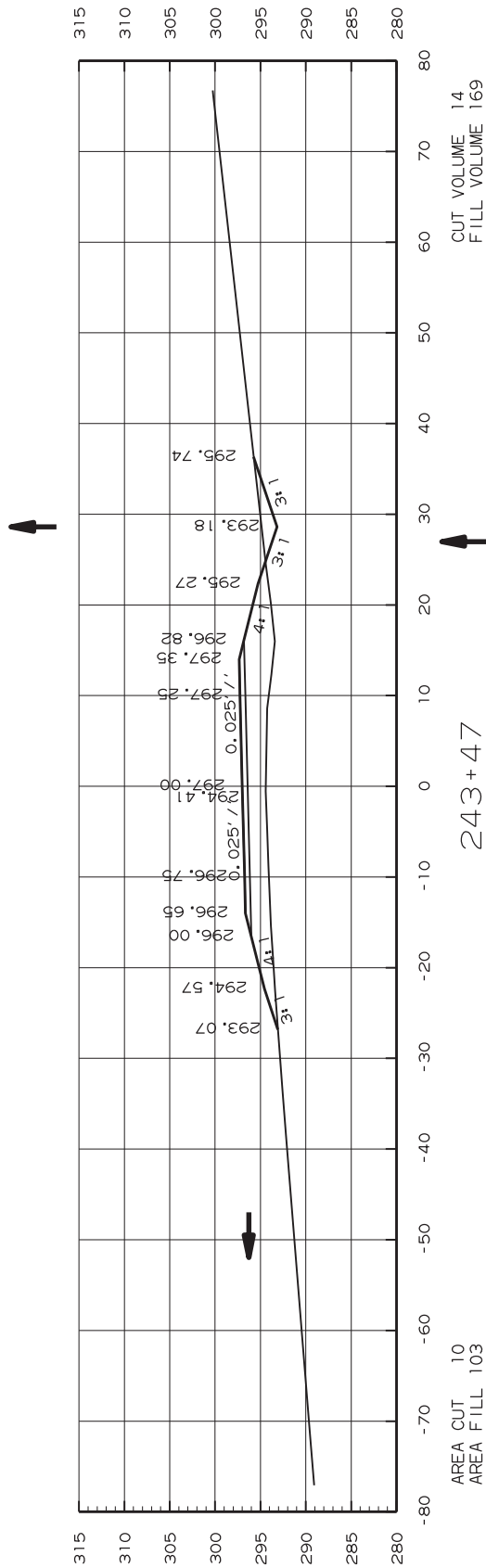


BEGIN MAX SUPER STATION 230+61.00

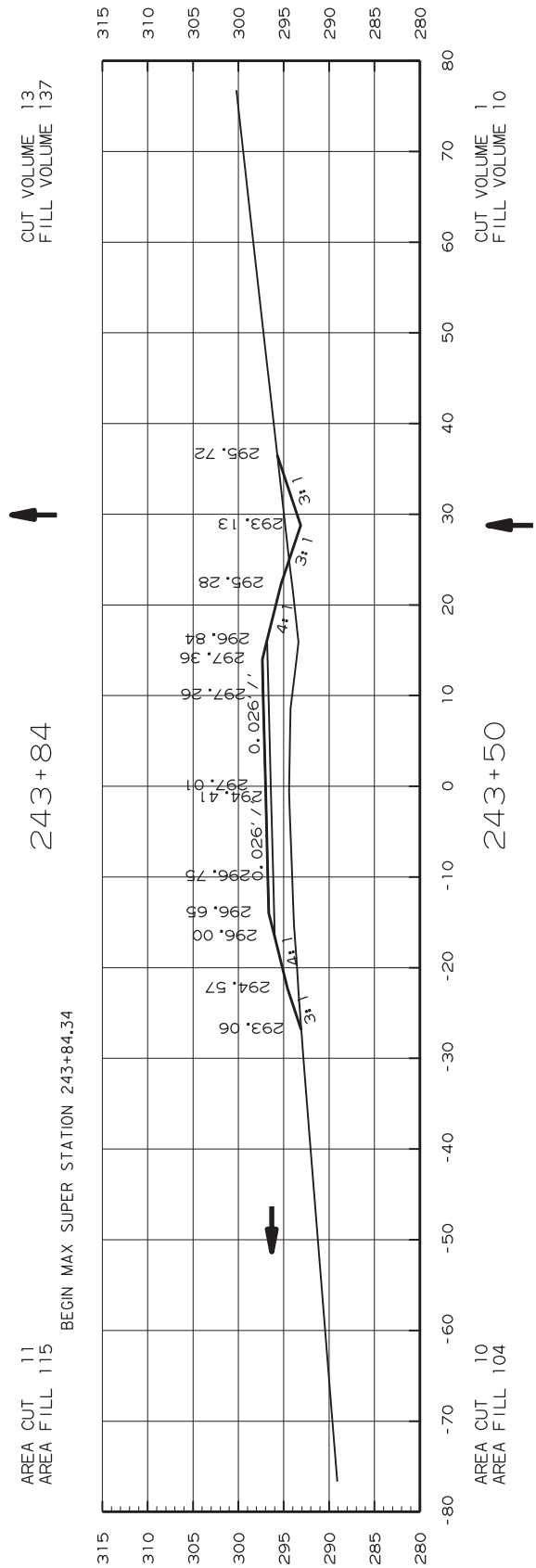
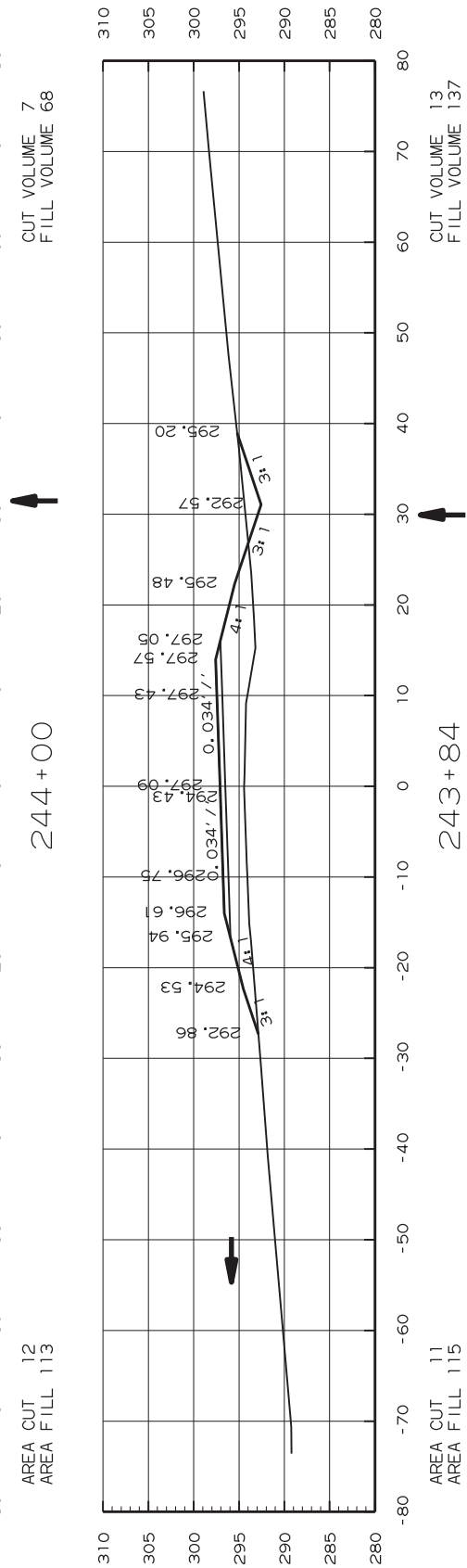
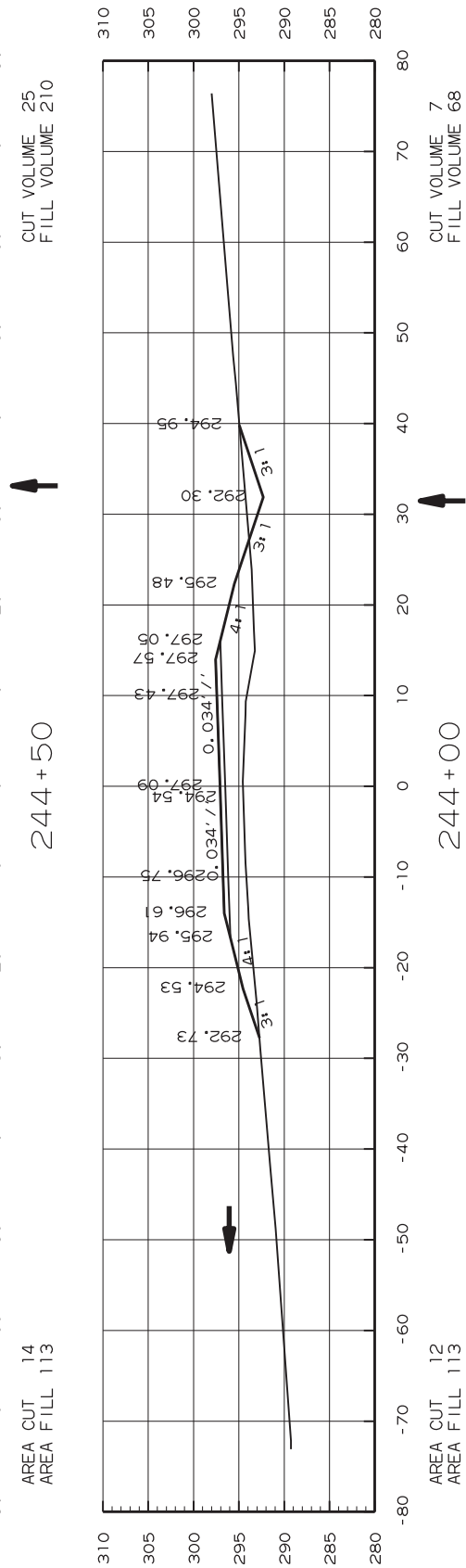
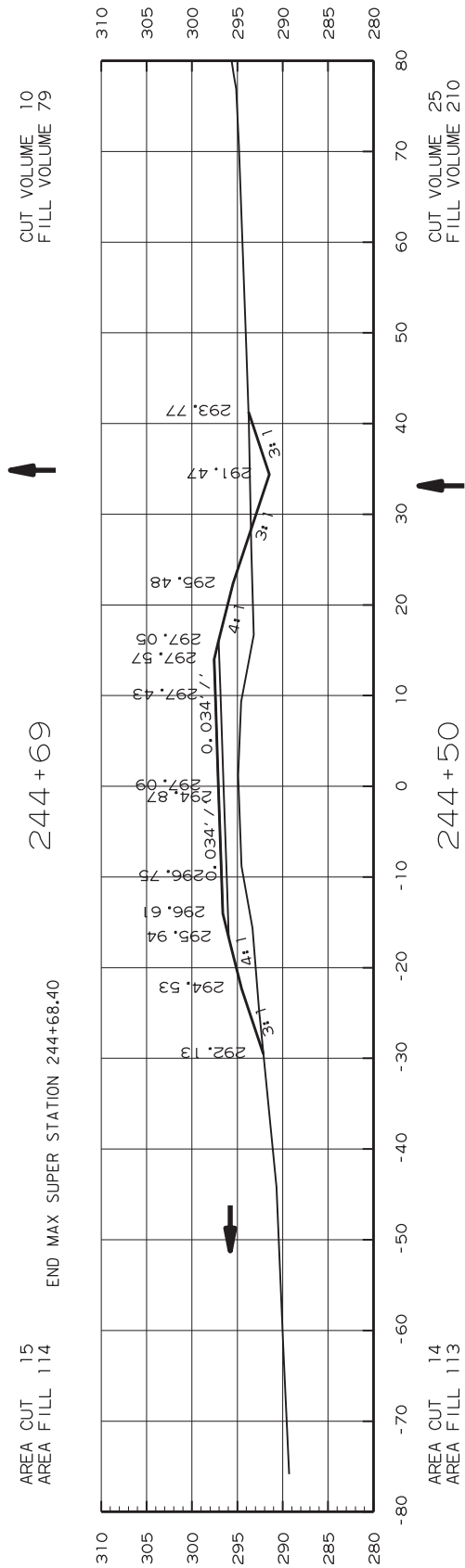
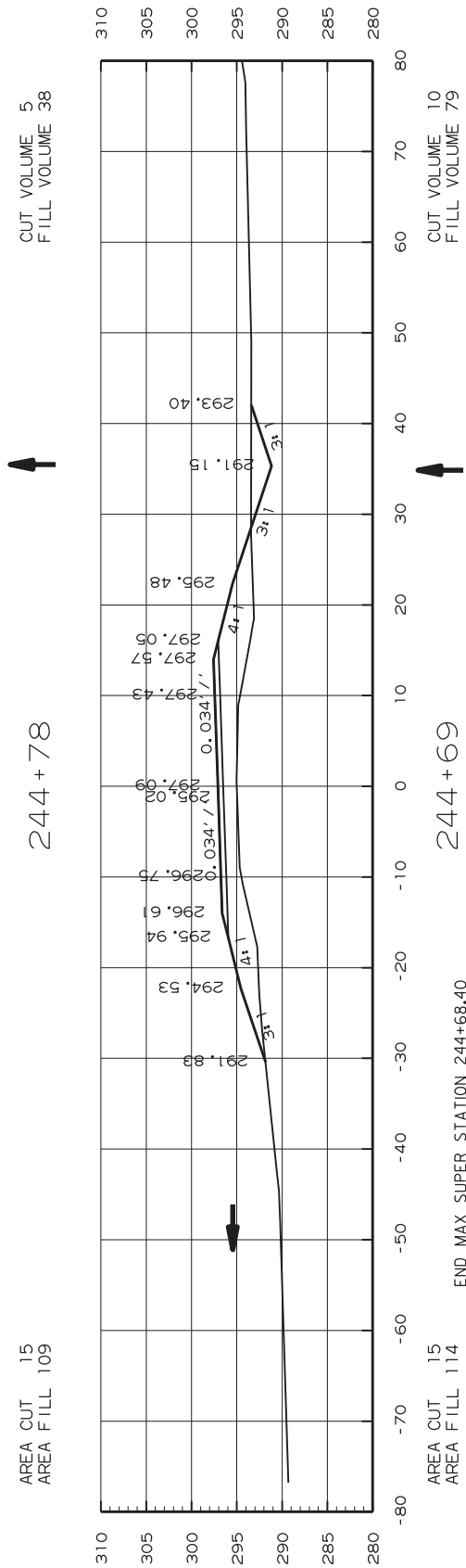
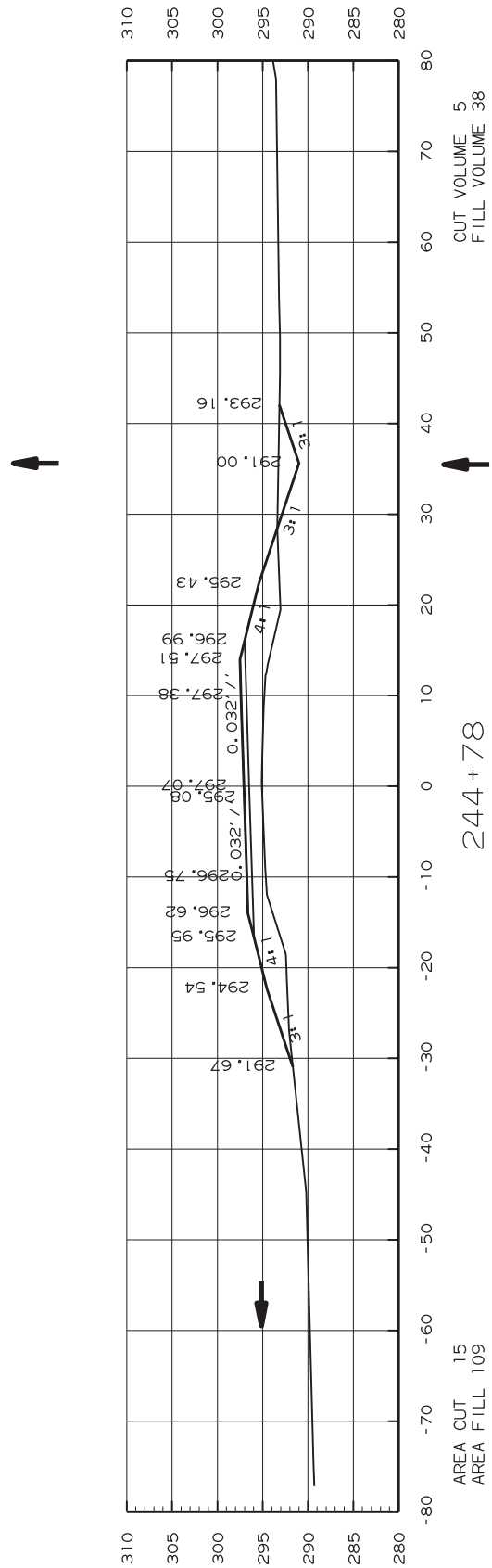




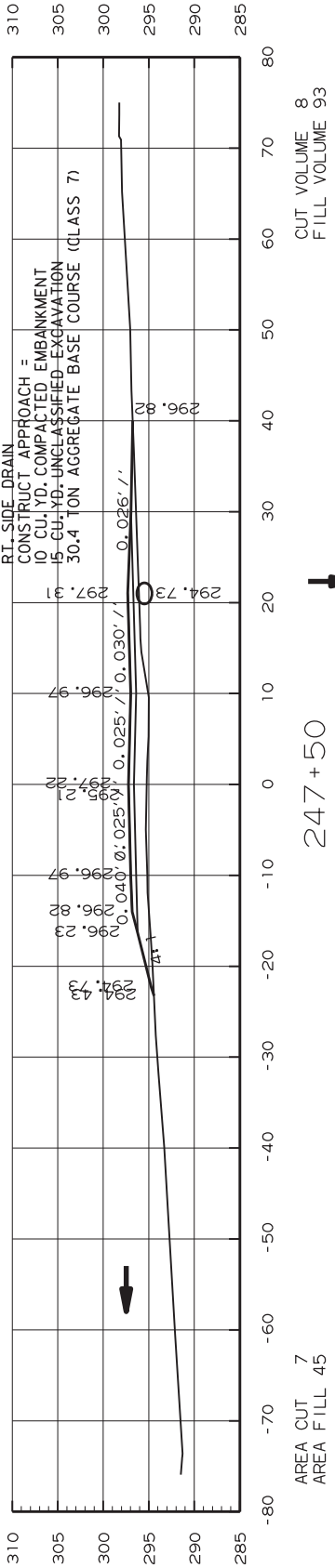
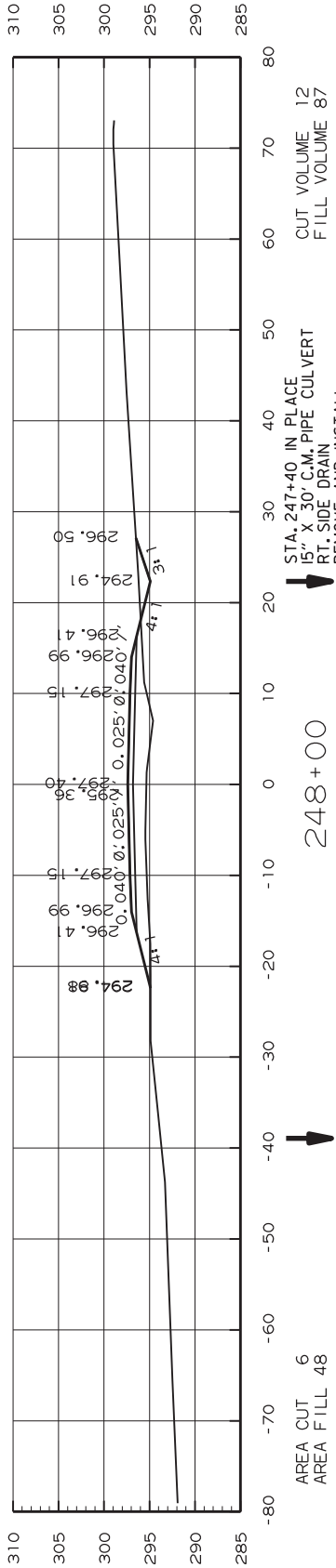
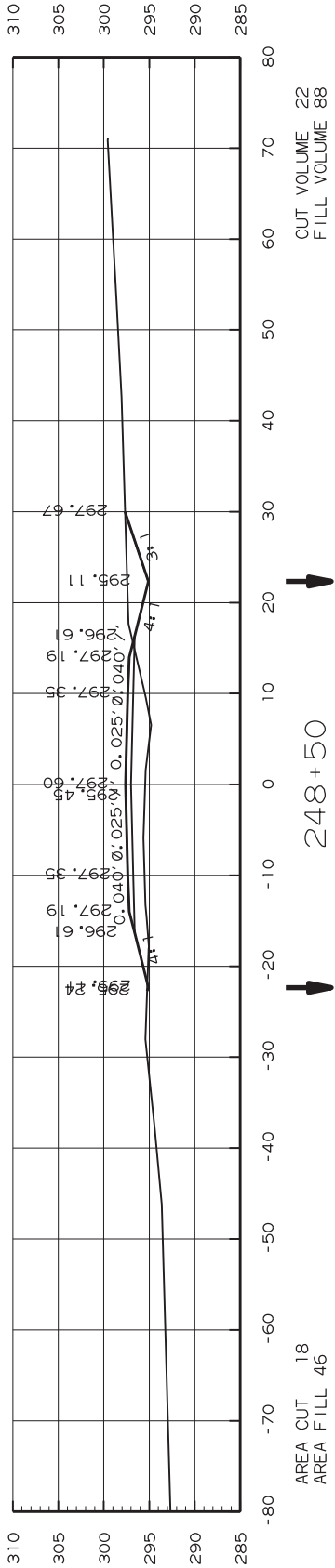
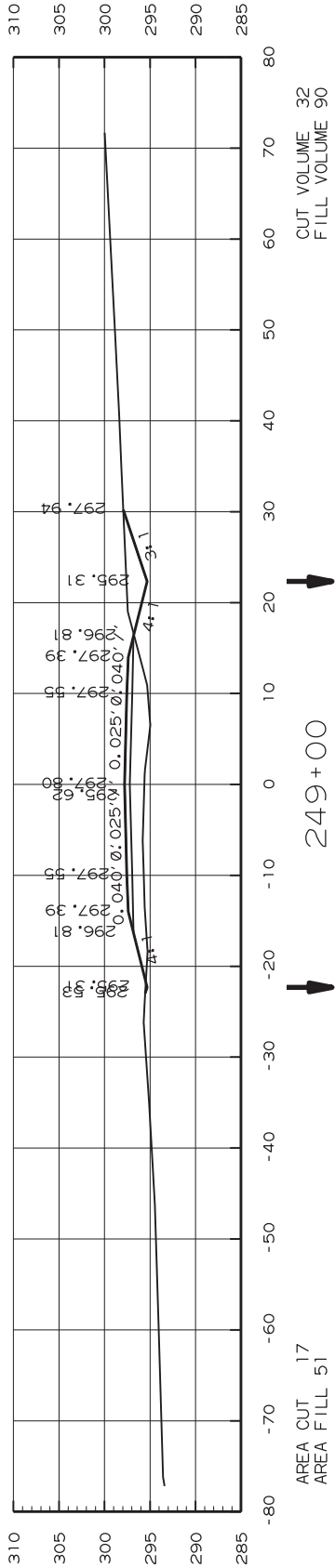
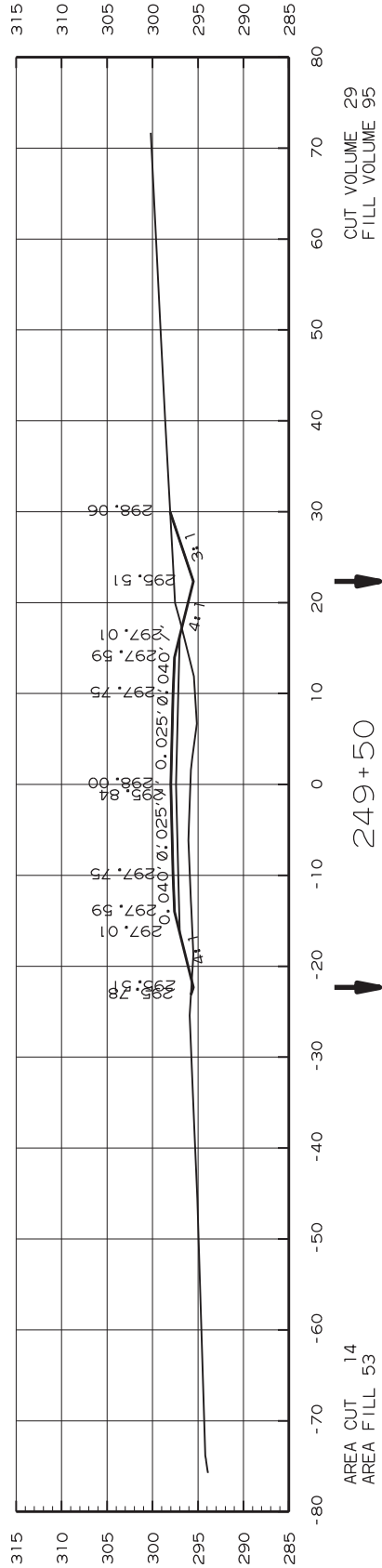
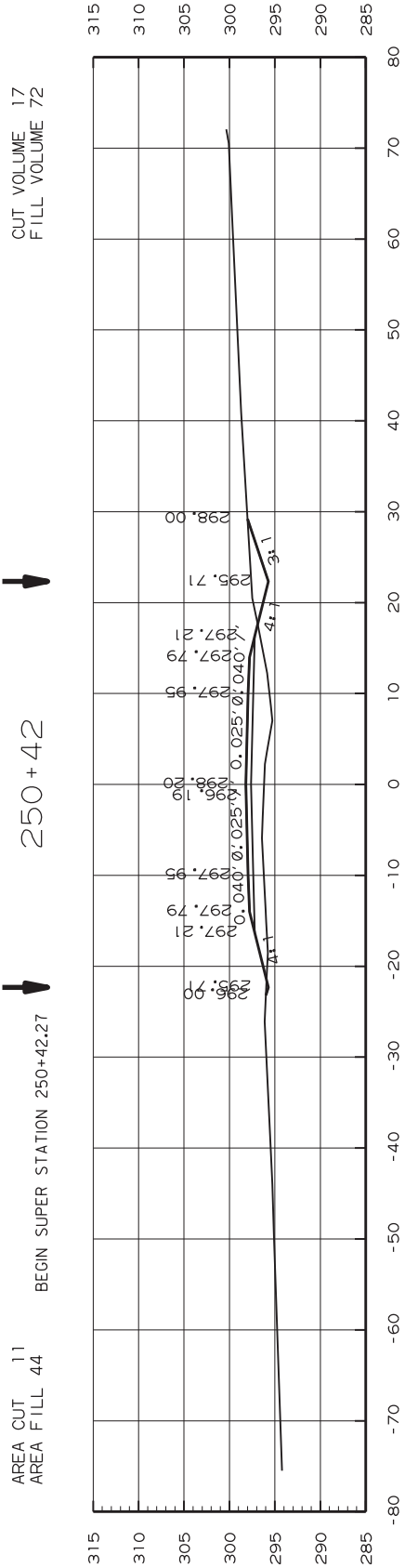
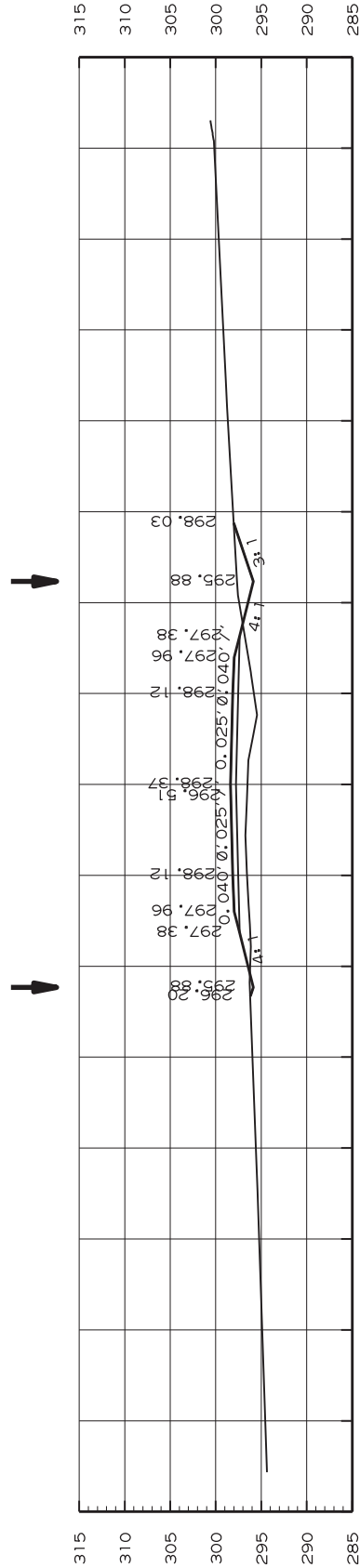




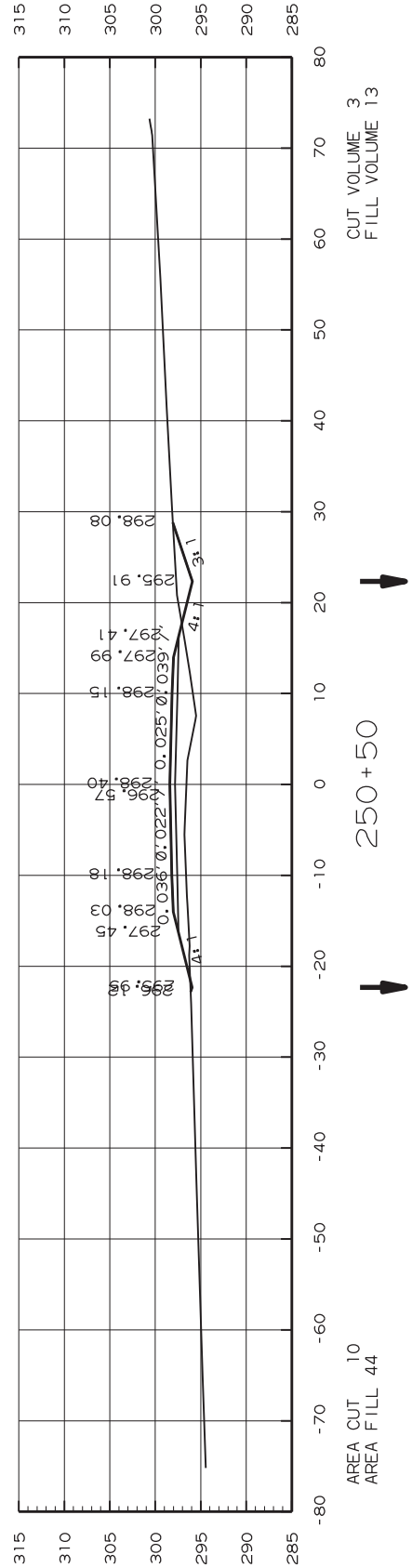
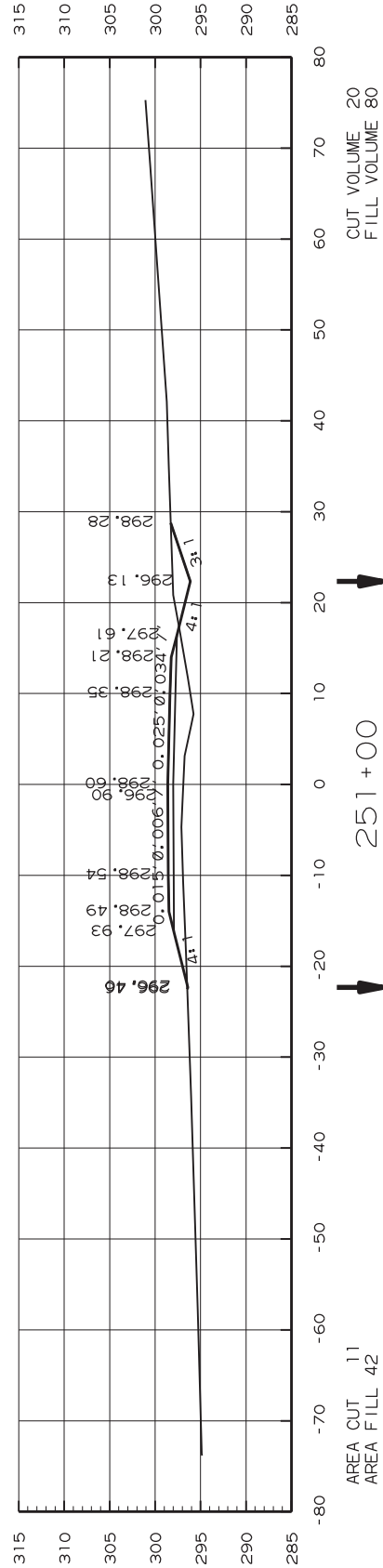
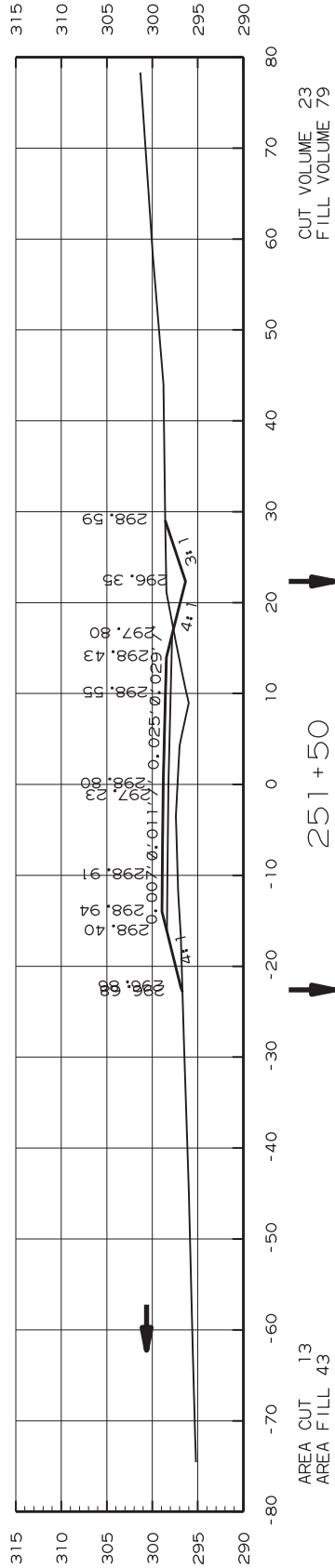
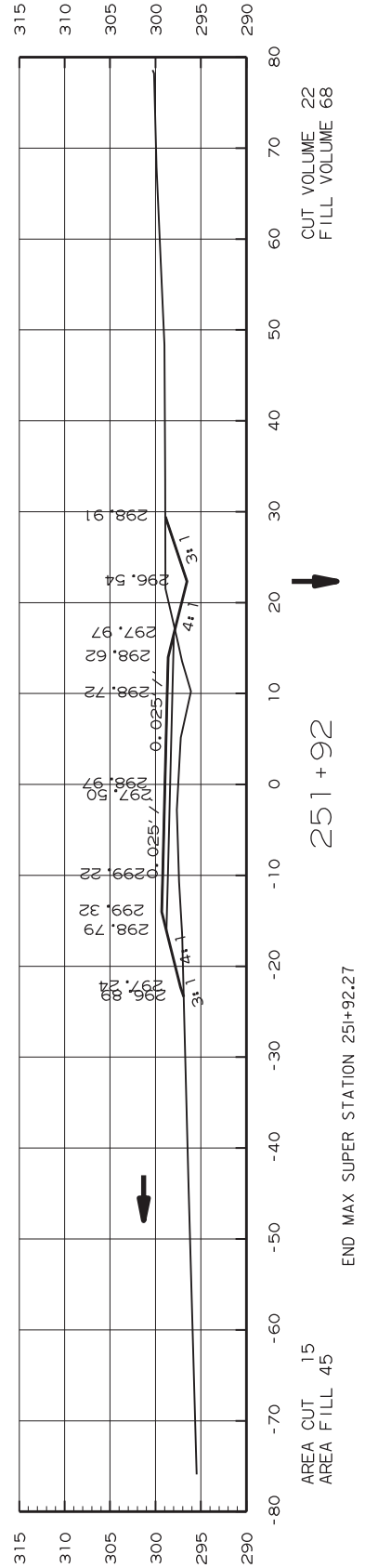
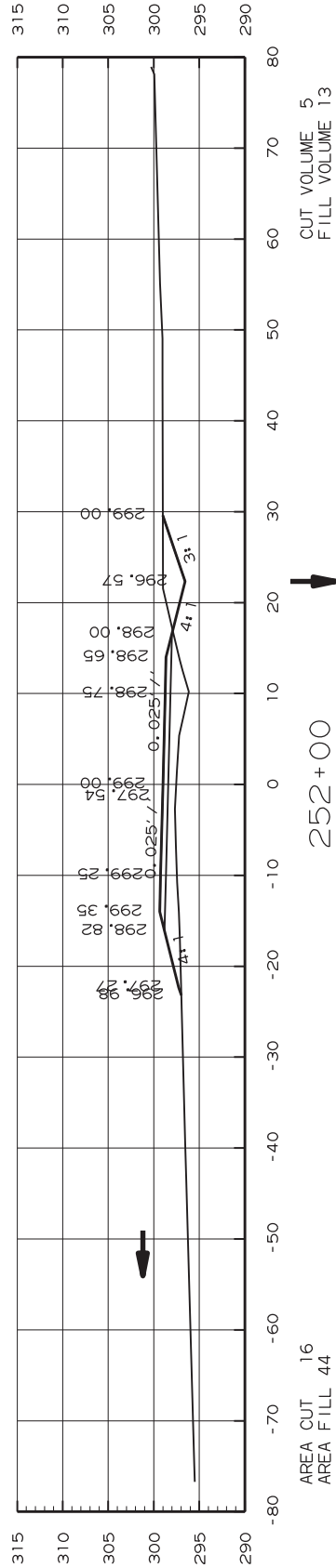
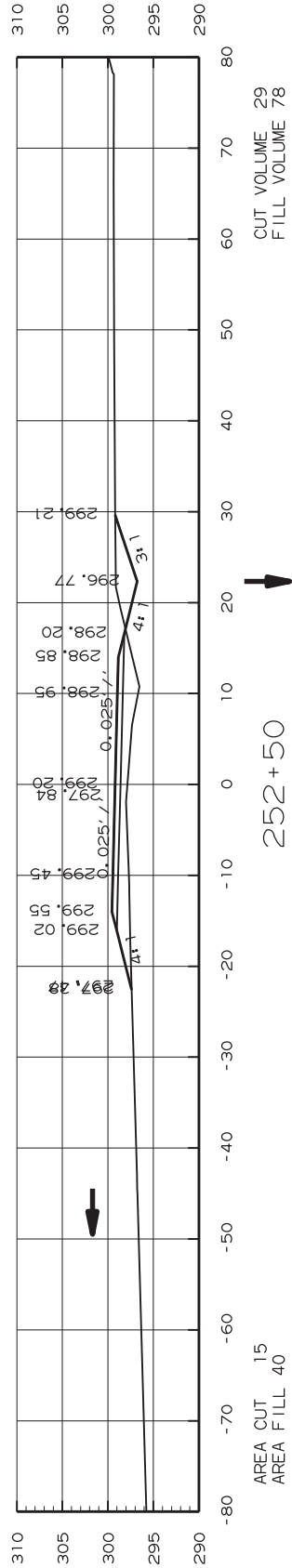
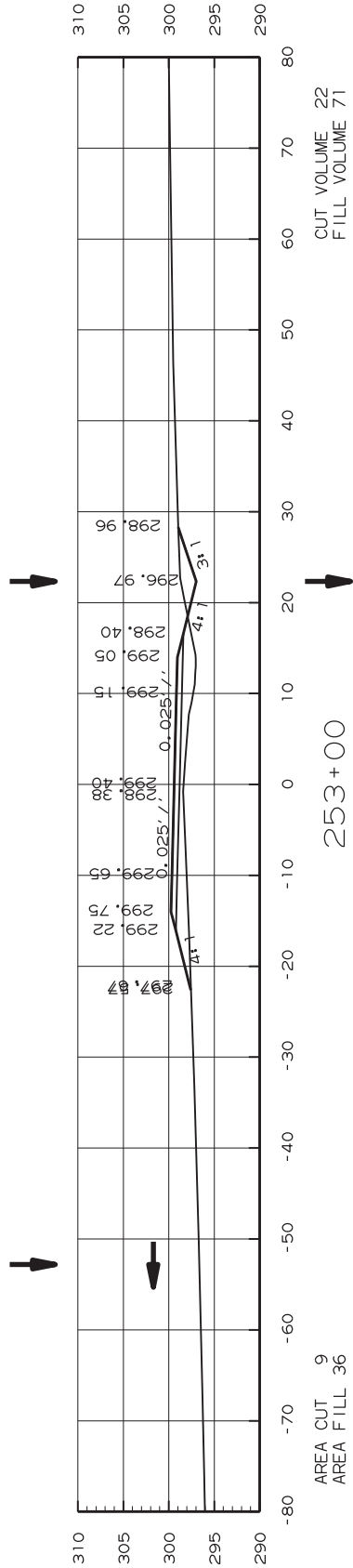
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|------------------|----------------|-----------------|----------------|-----------------------|--------|-----------------------|--------------|-----------------|
|                  |                |                 |                | 6                     | ARK.   |                       |              |                 |
|                  |                |                 |                | JOB NO.               | FA5309 |                       | 103          | 114             |
| 4 CROSS SECTIONS |                |                 |                |                       |        |                       |              |                 |

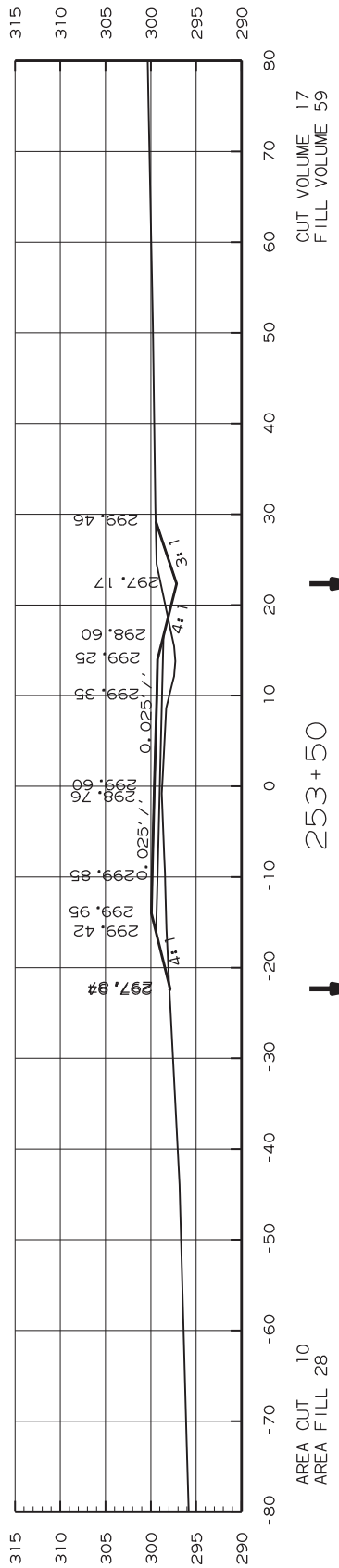
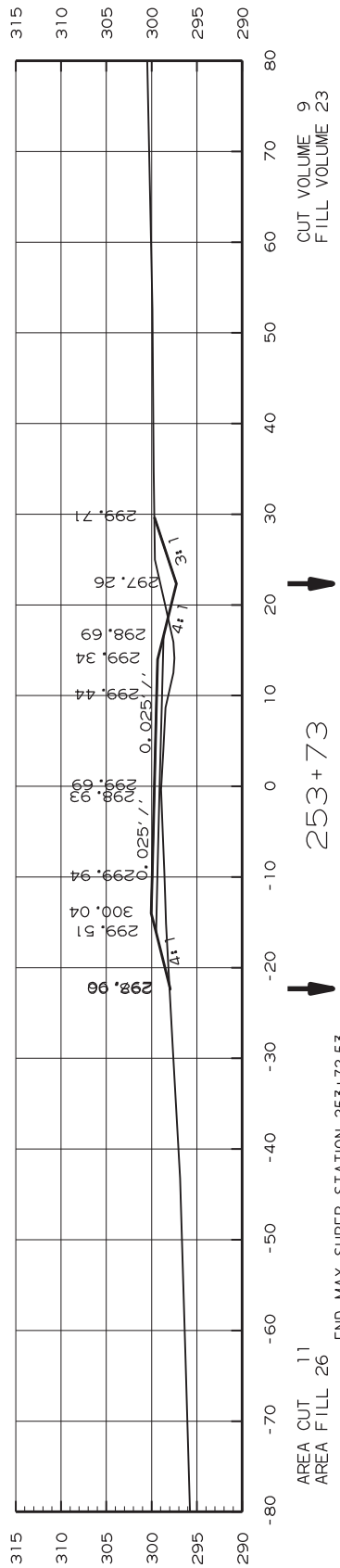
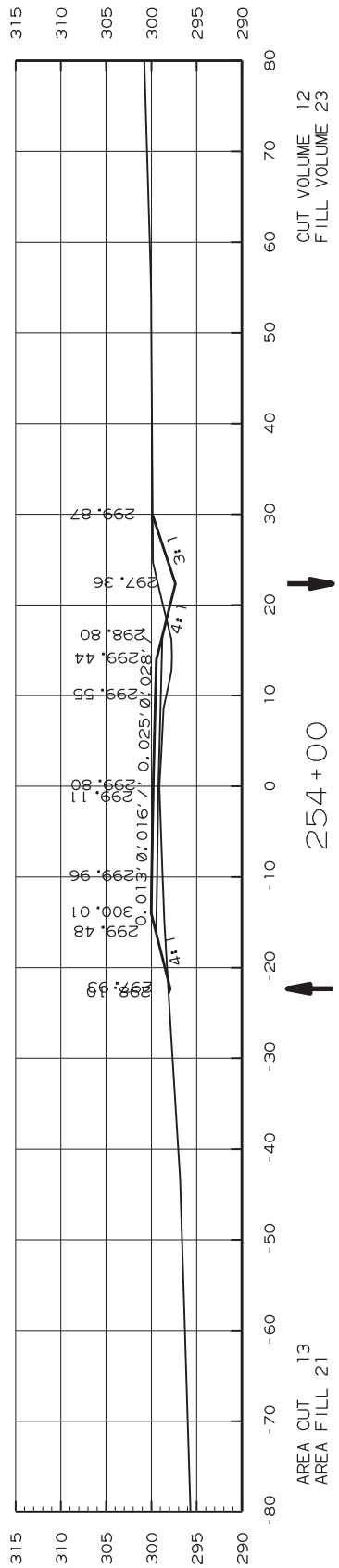
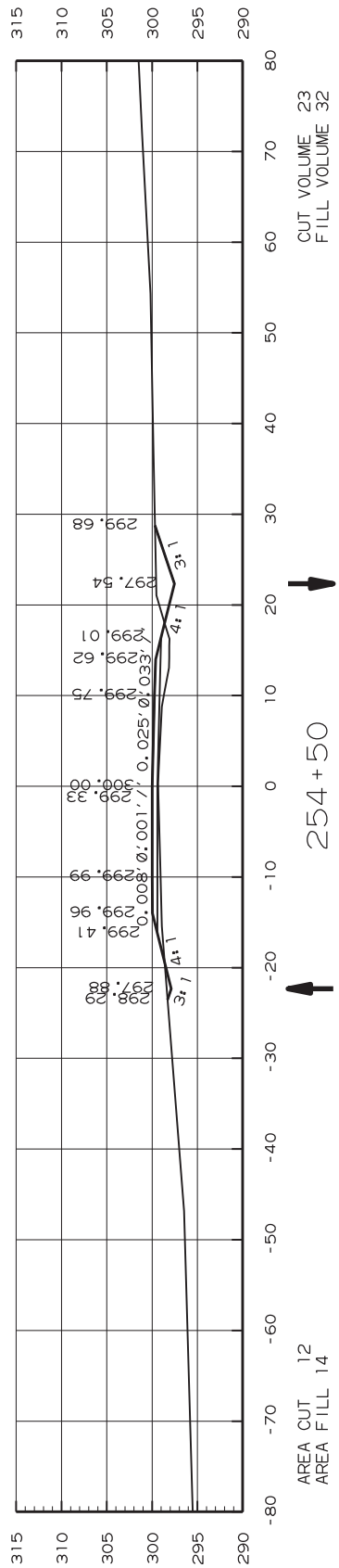
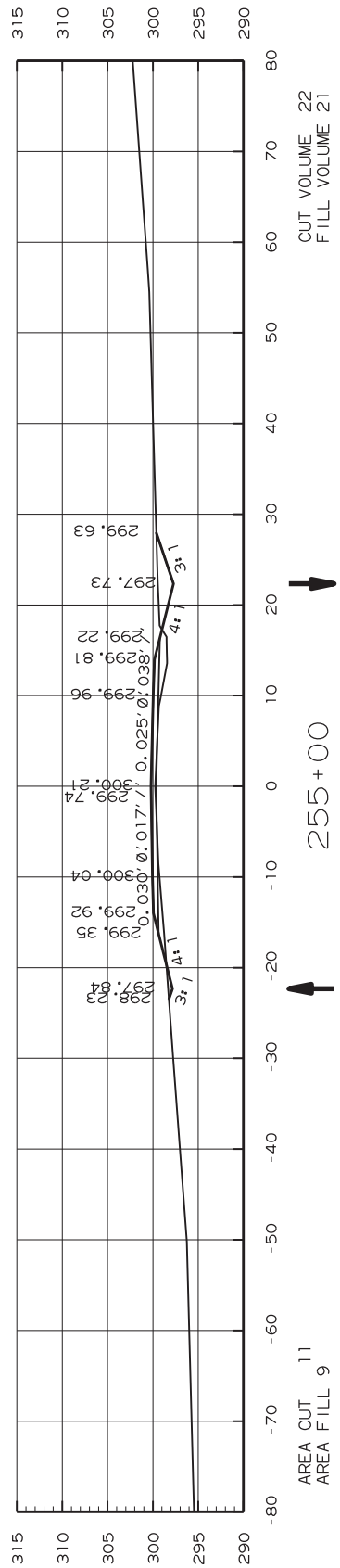
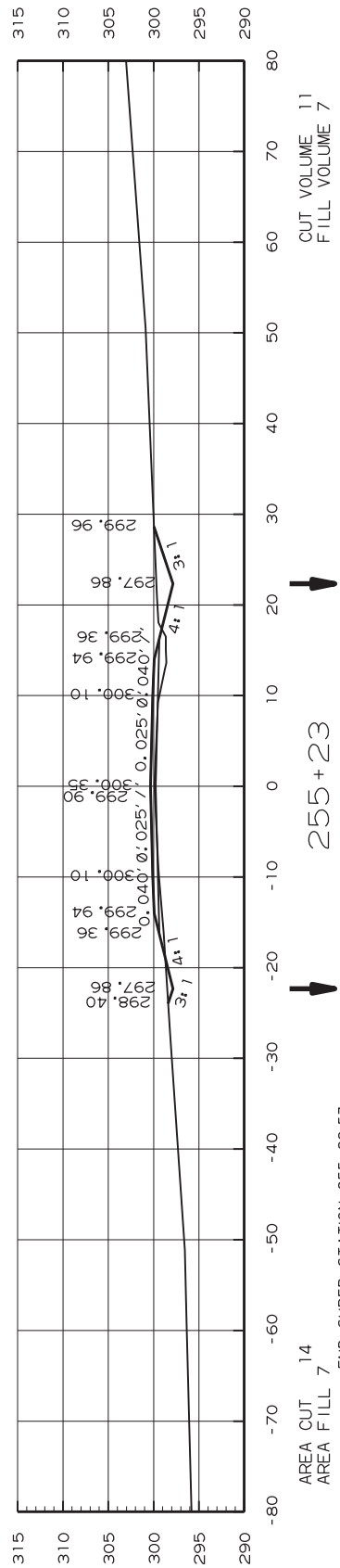
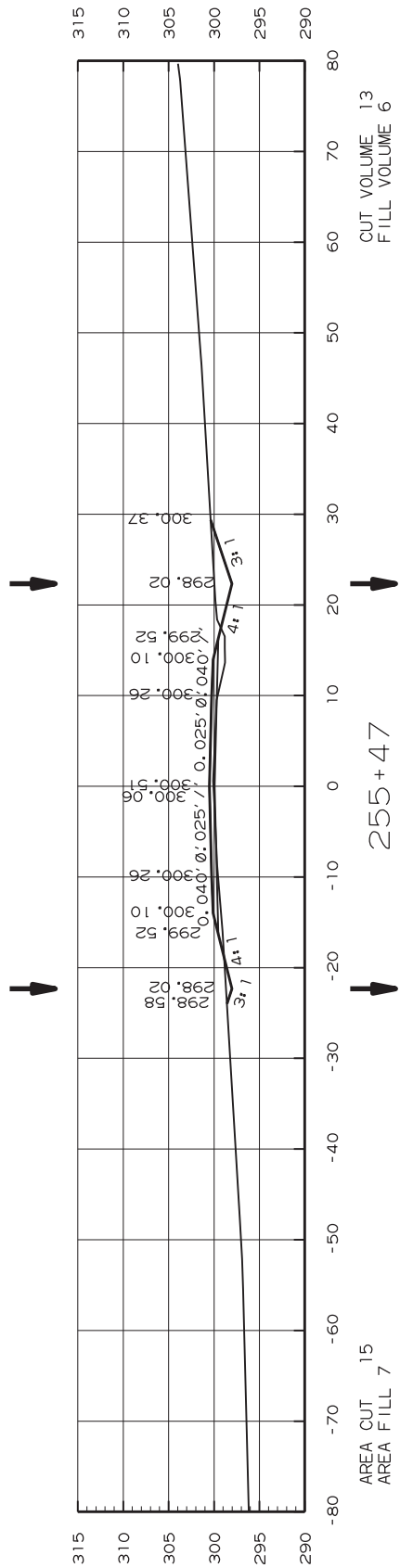




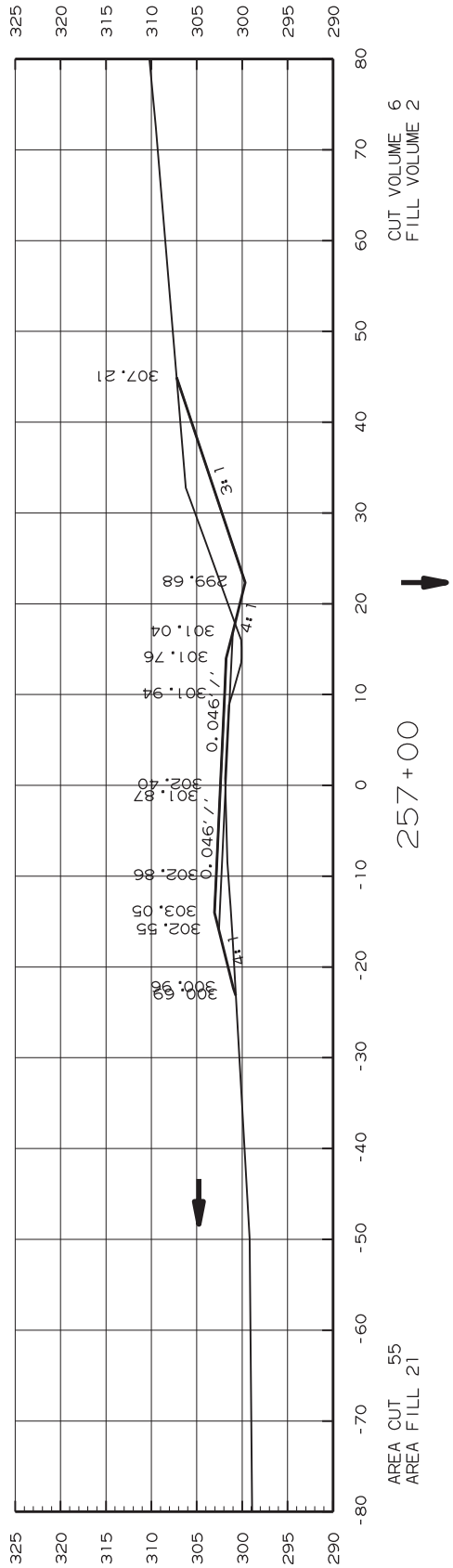
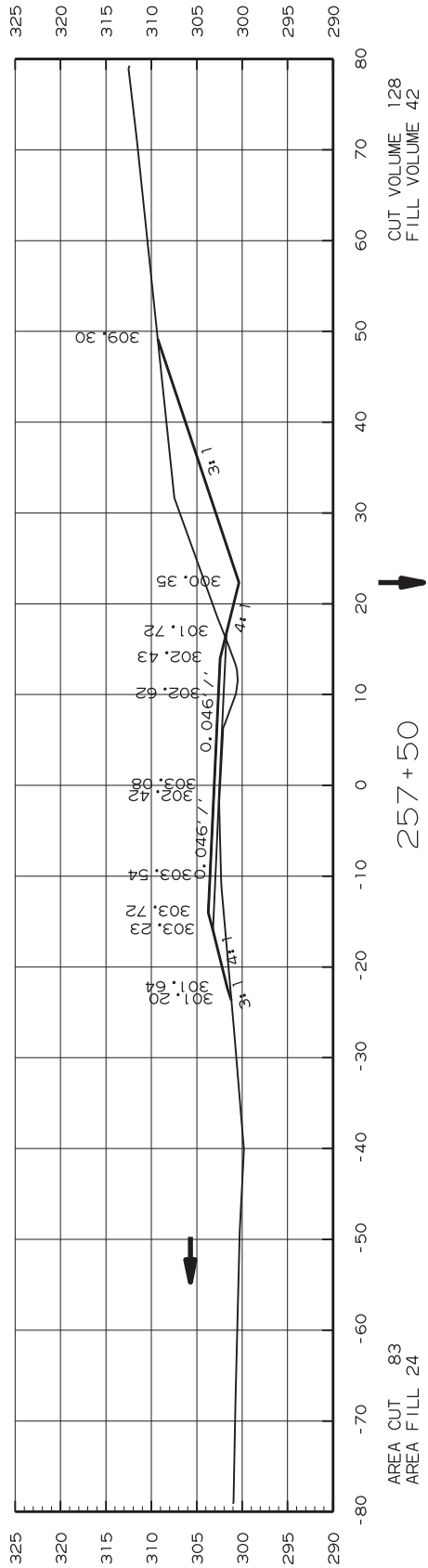
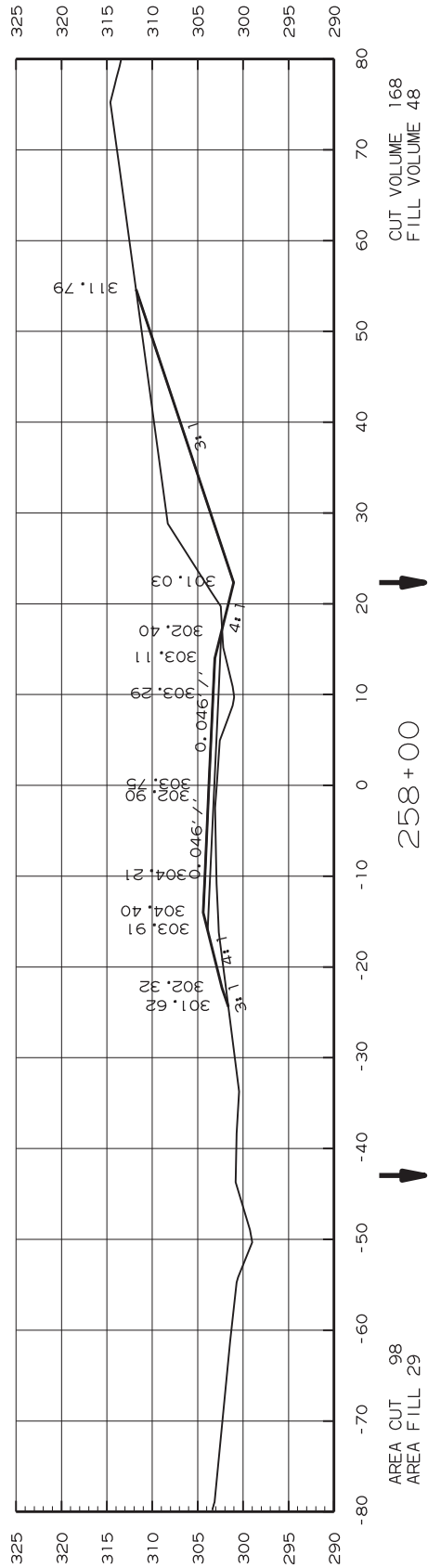
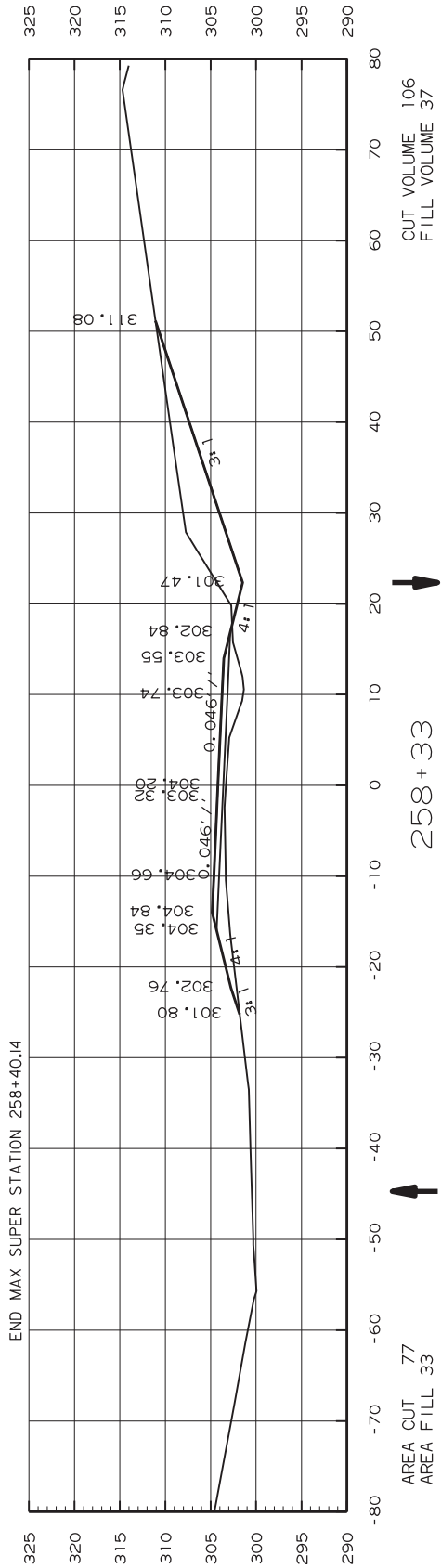
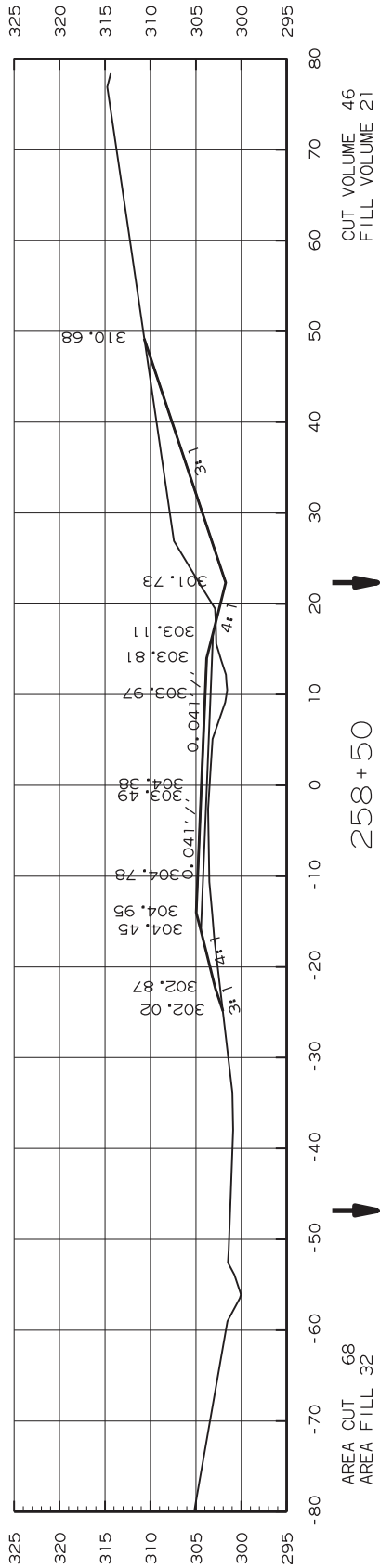
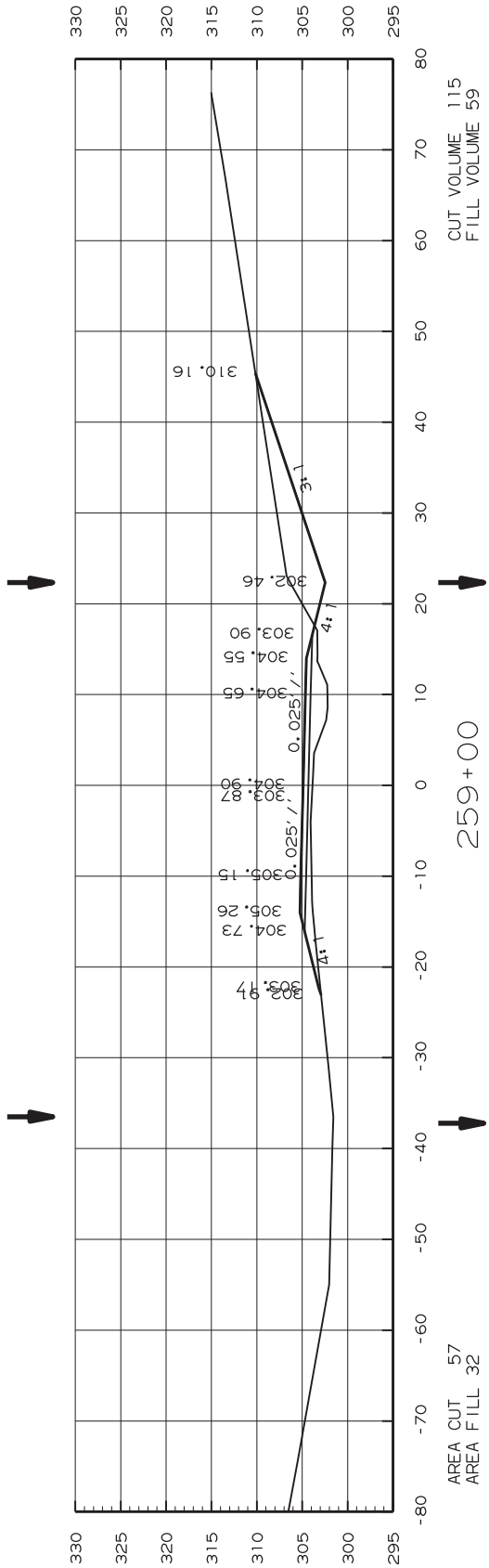


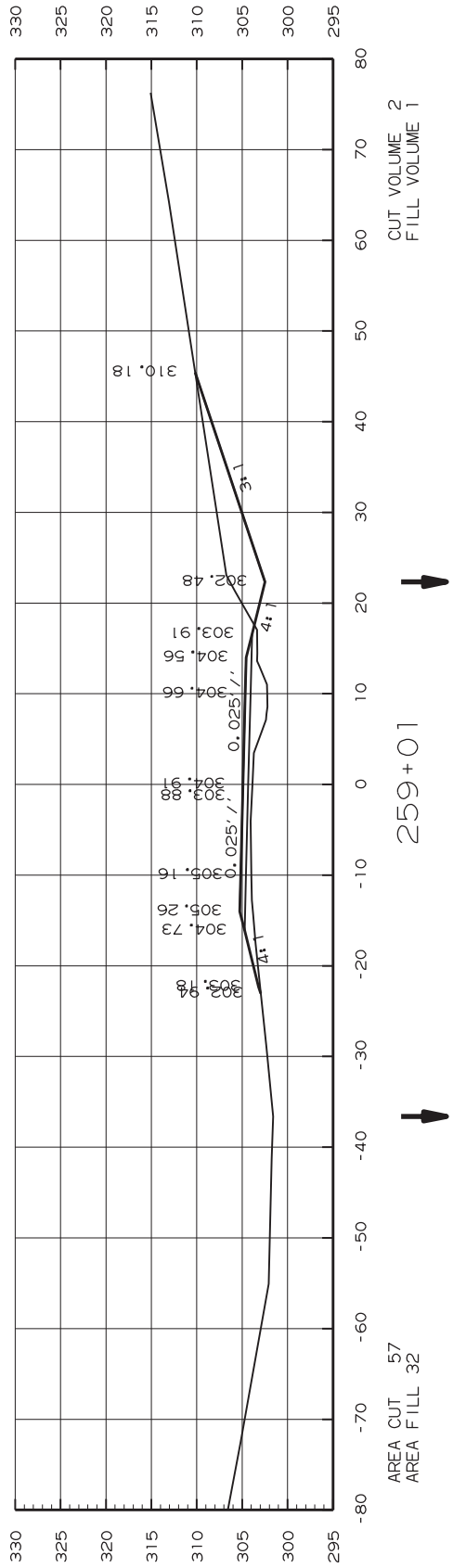
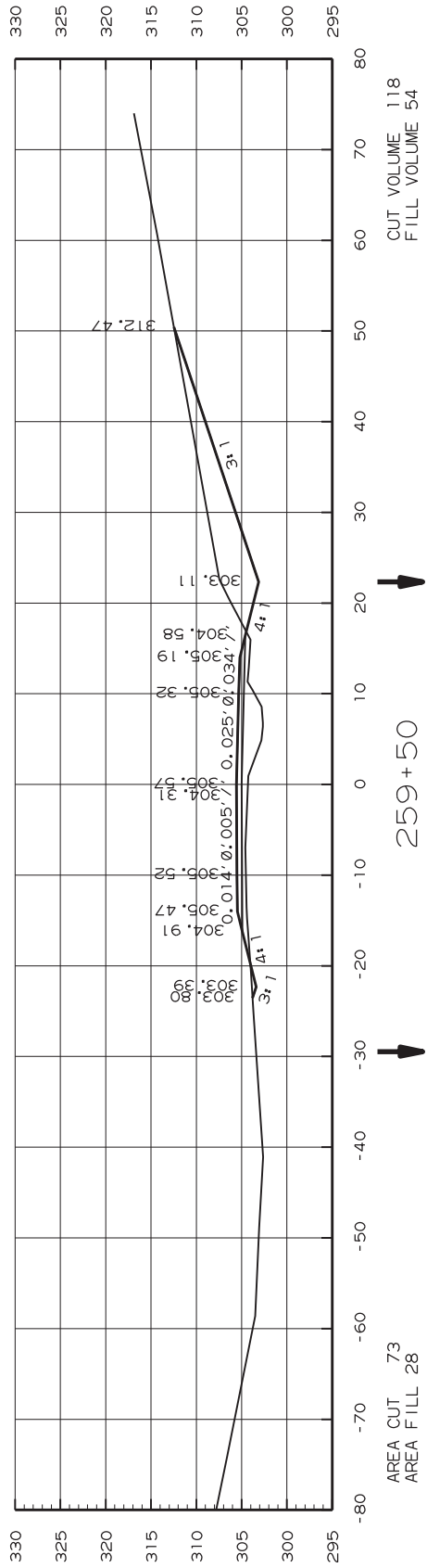
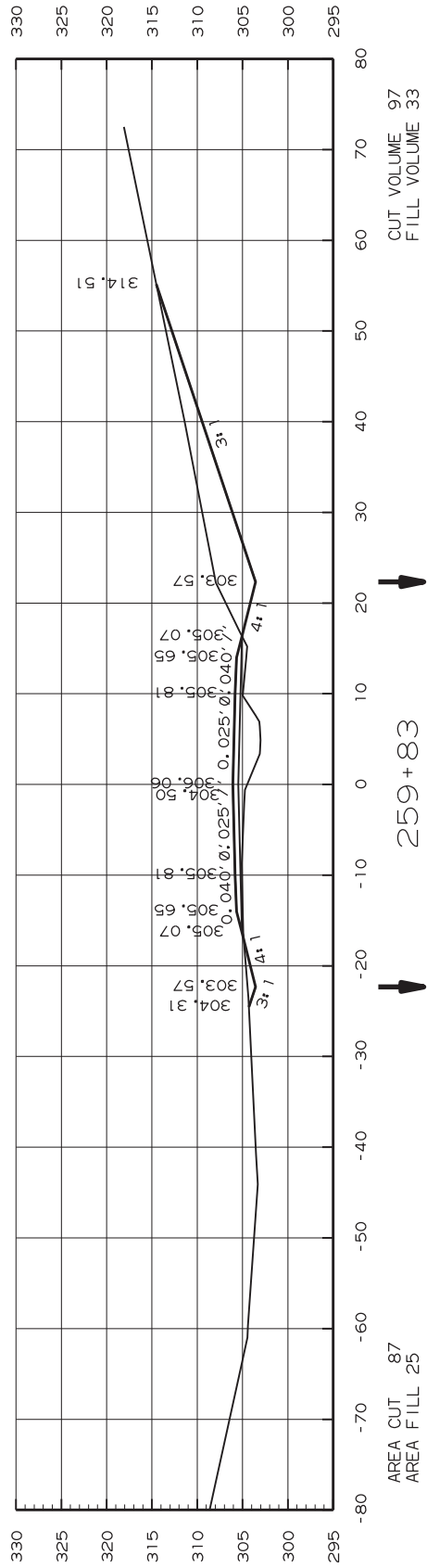
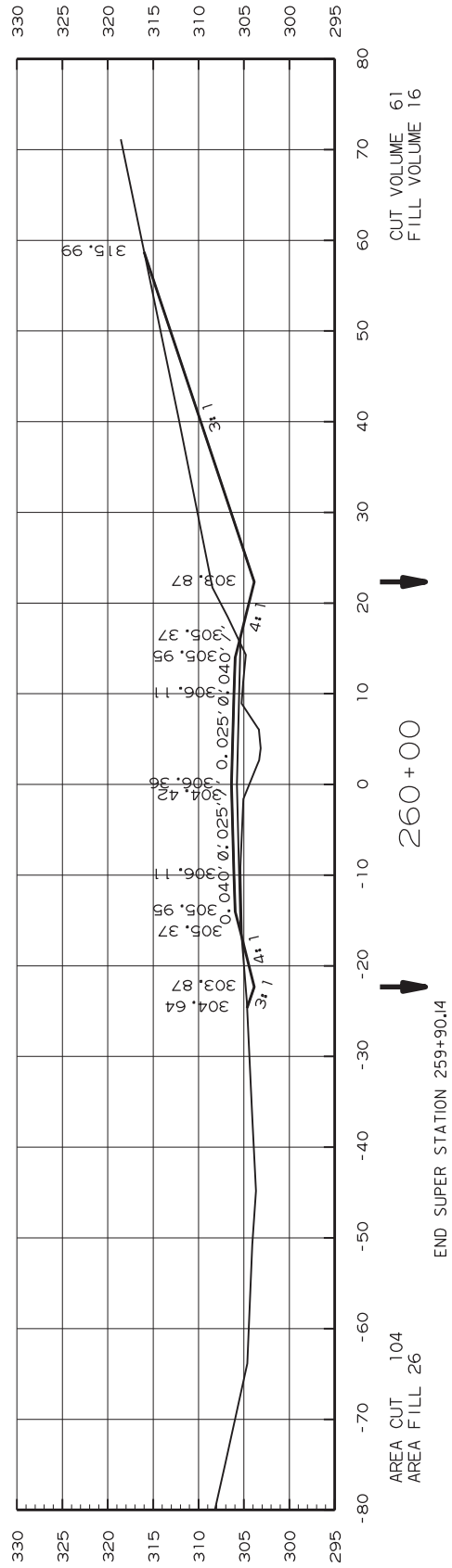
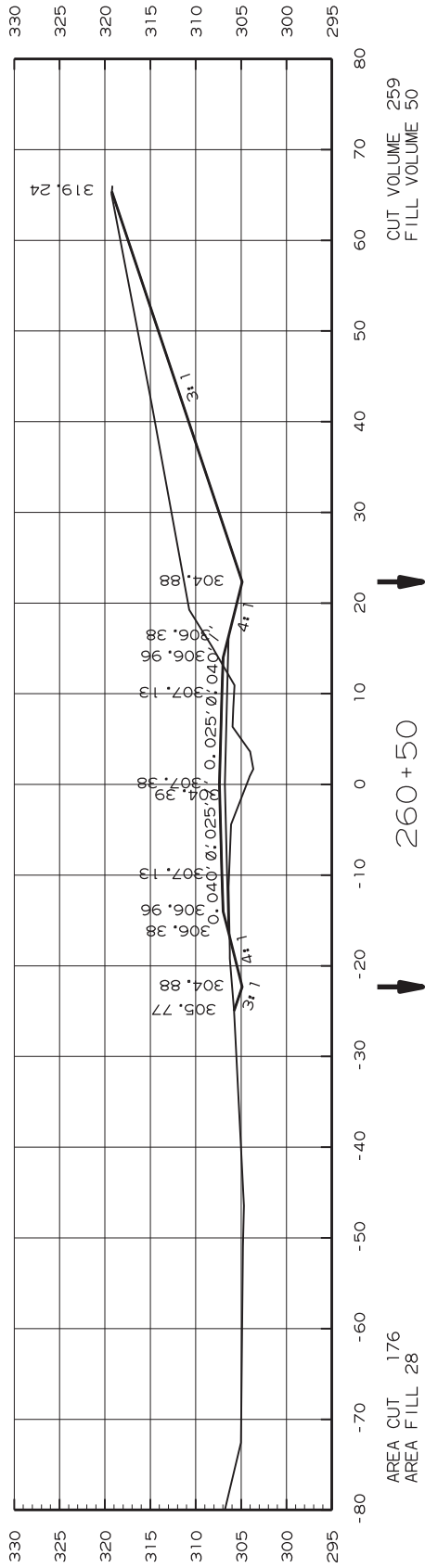
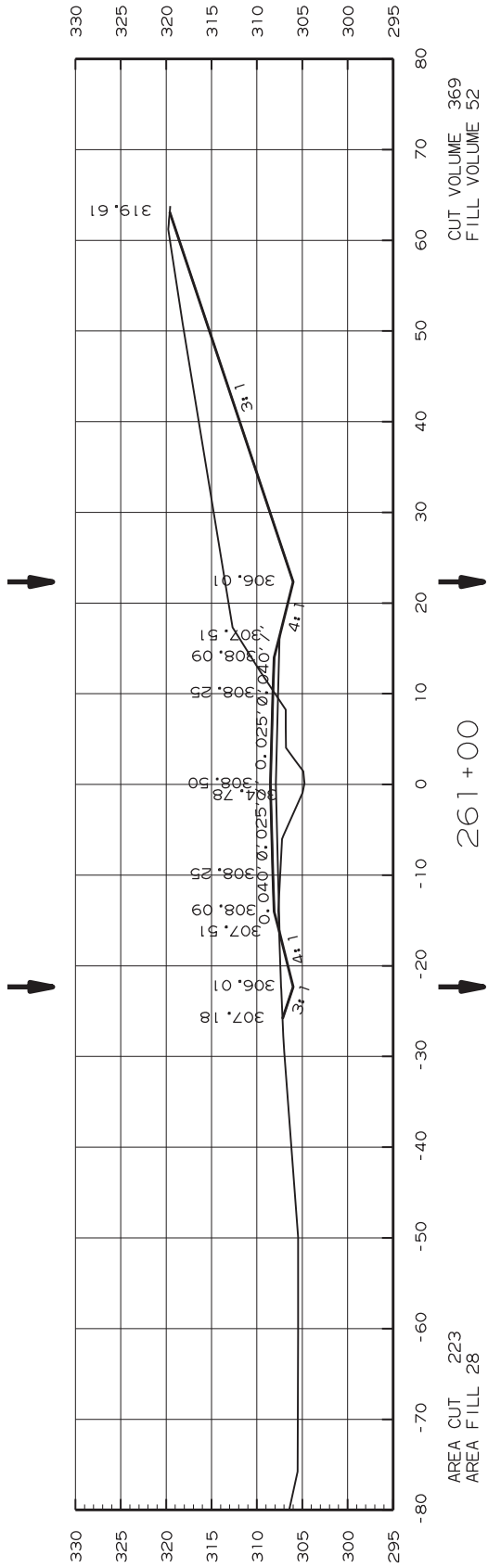
STA. 247+40 IN PLACE  
15" X 30" C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
28" X 20" X 28' ARCH PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH =  
10 CU. YD. COMPACTED EMBANKMENT  
15 CU. YD. UNCLASSIFIED EXCAVATION  
30.4 TON AGGREGATE BASE COURSE (CLASS 7)

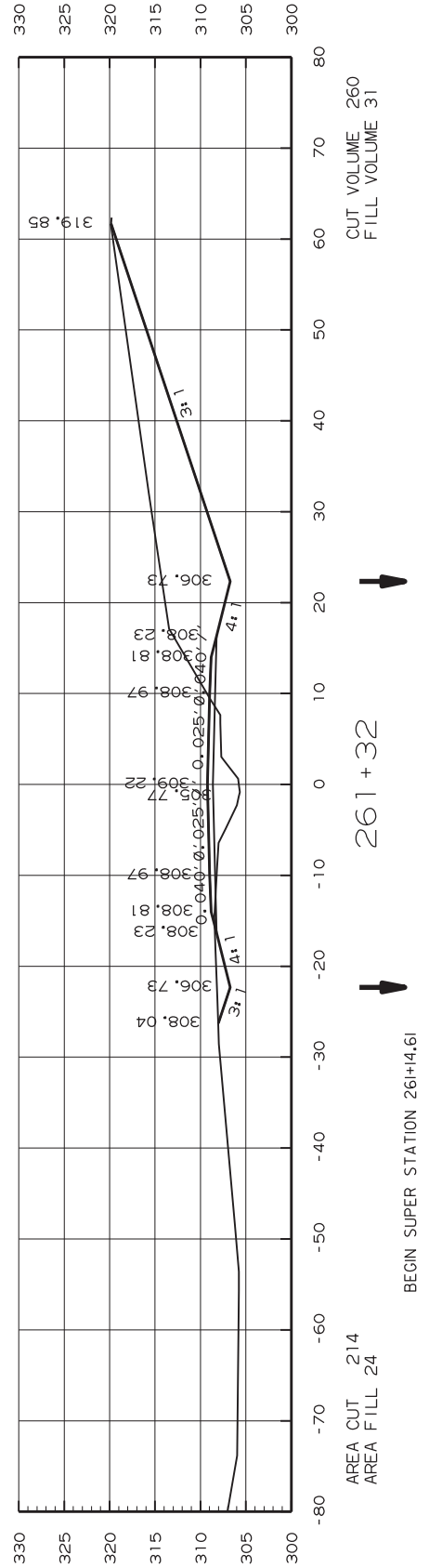
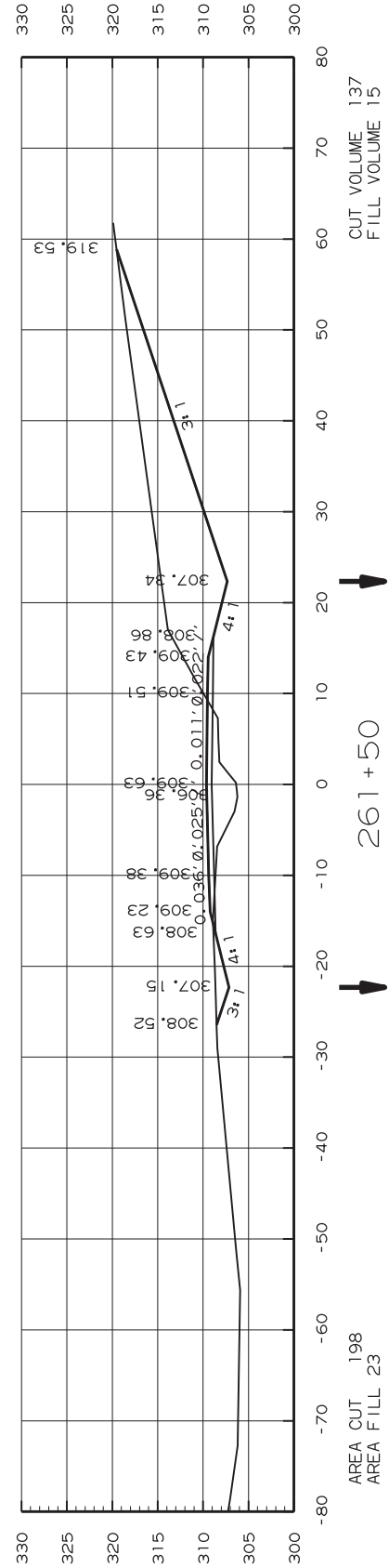
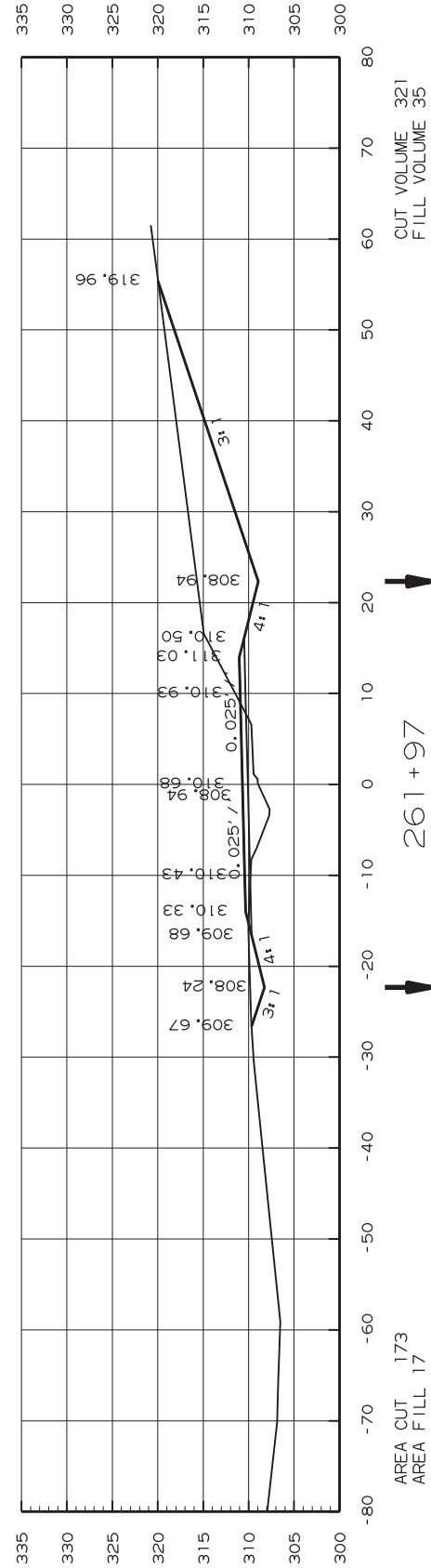
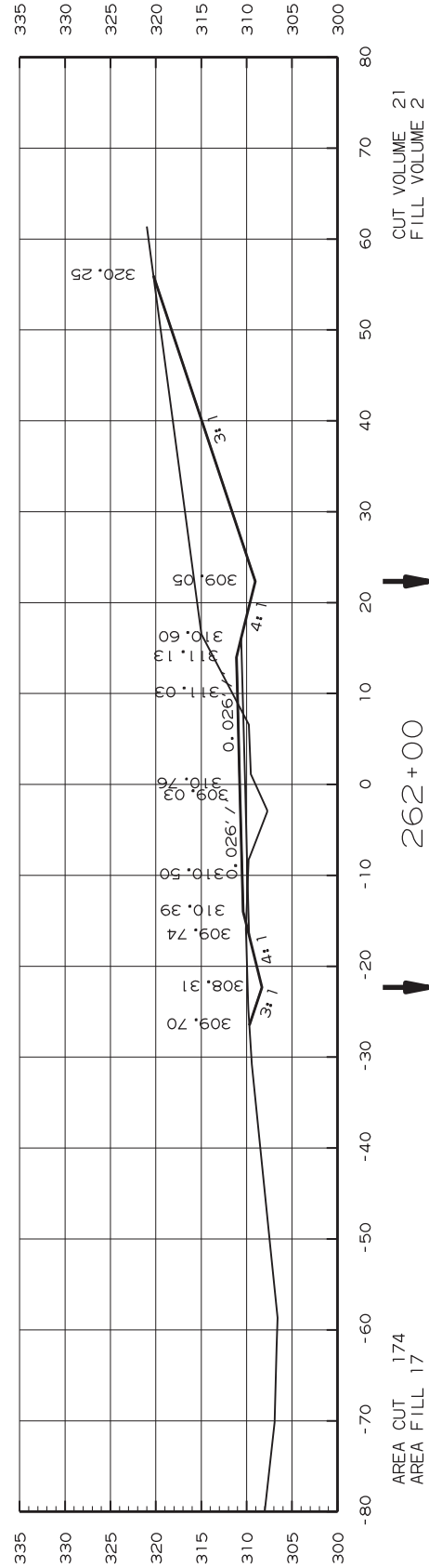
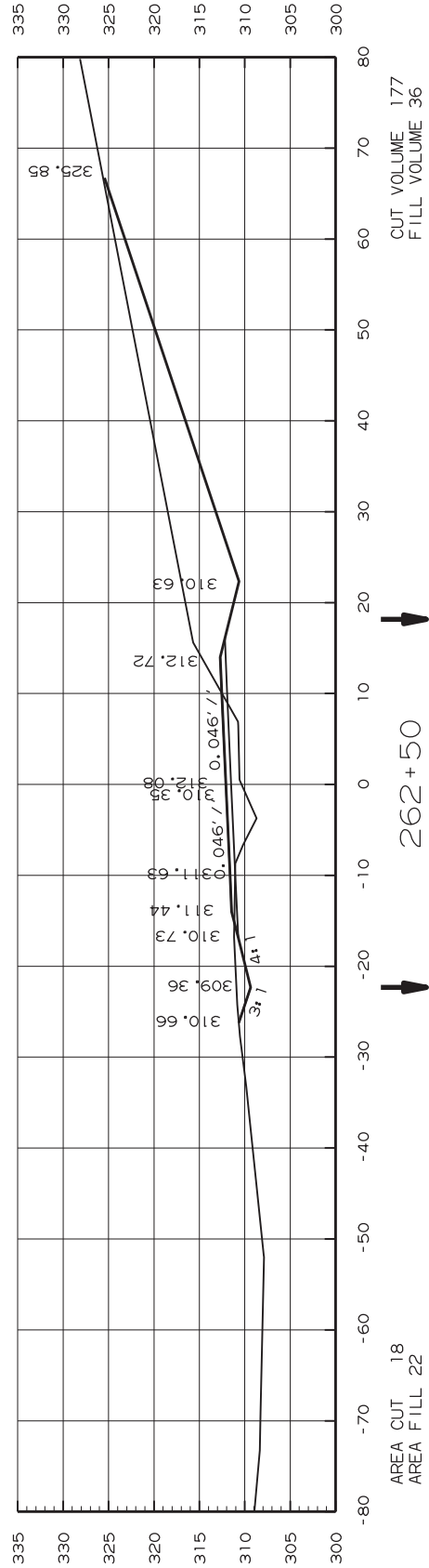
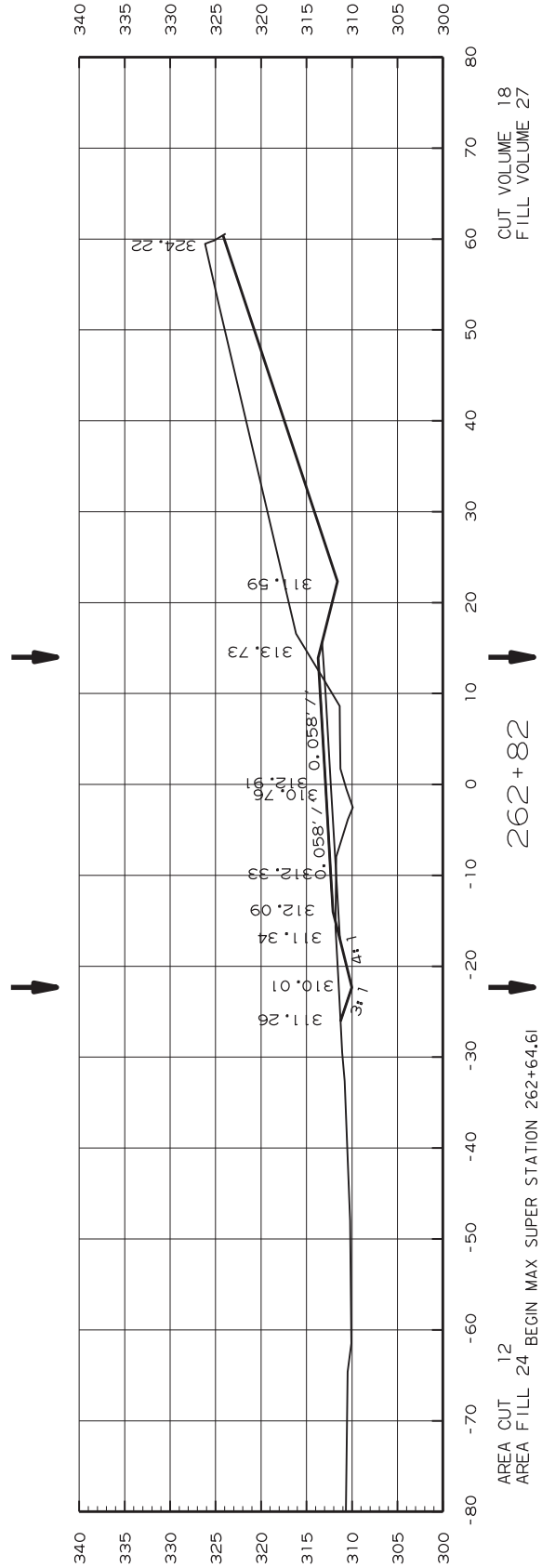


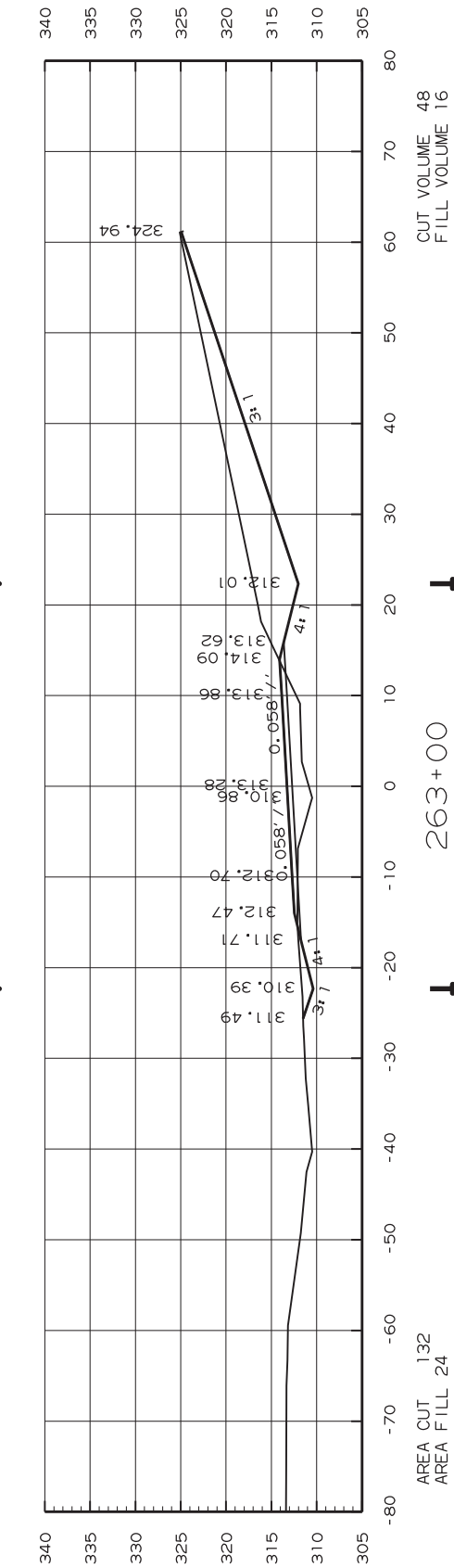
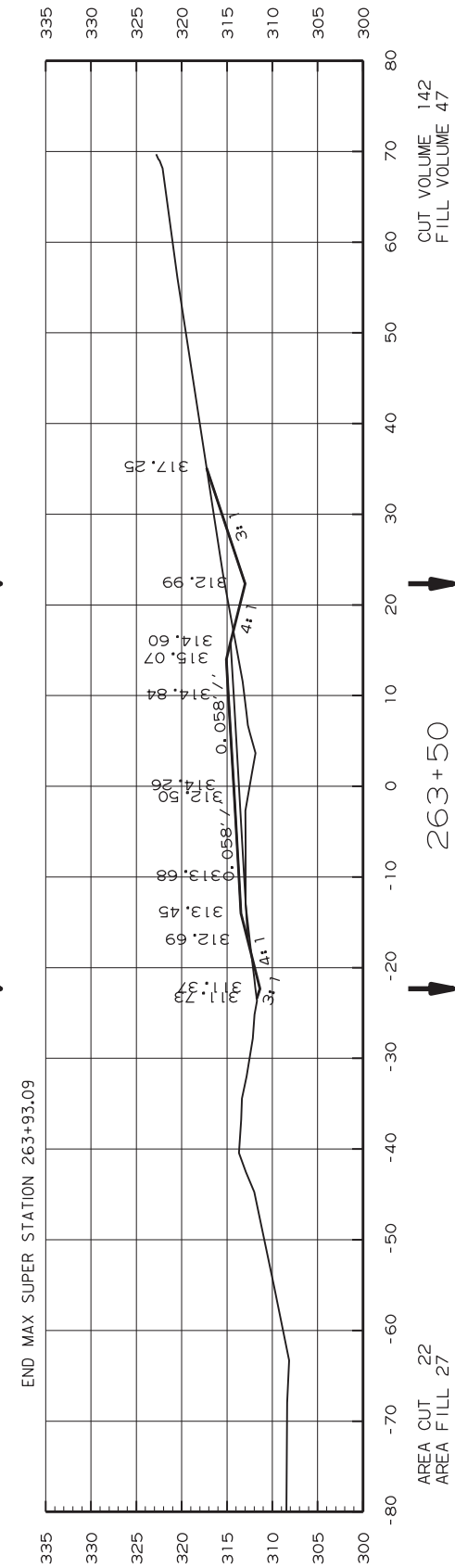
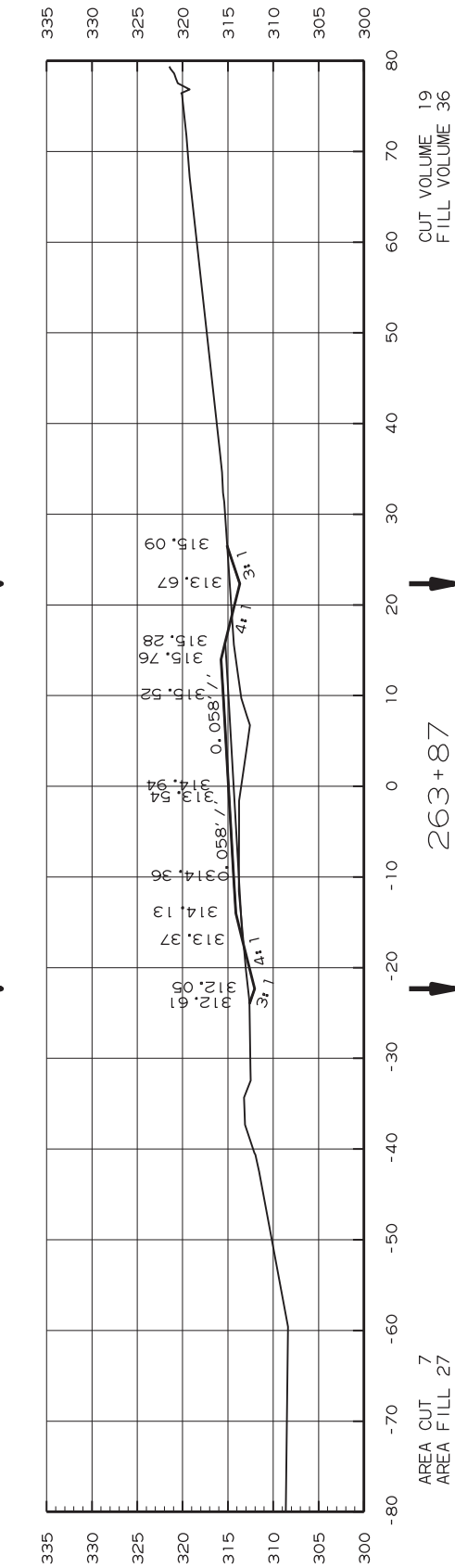
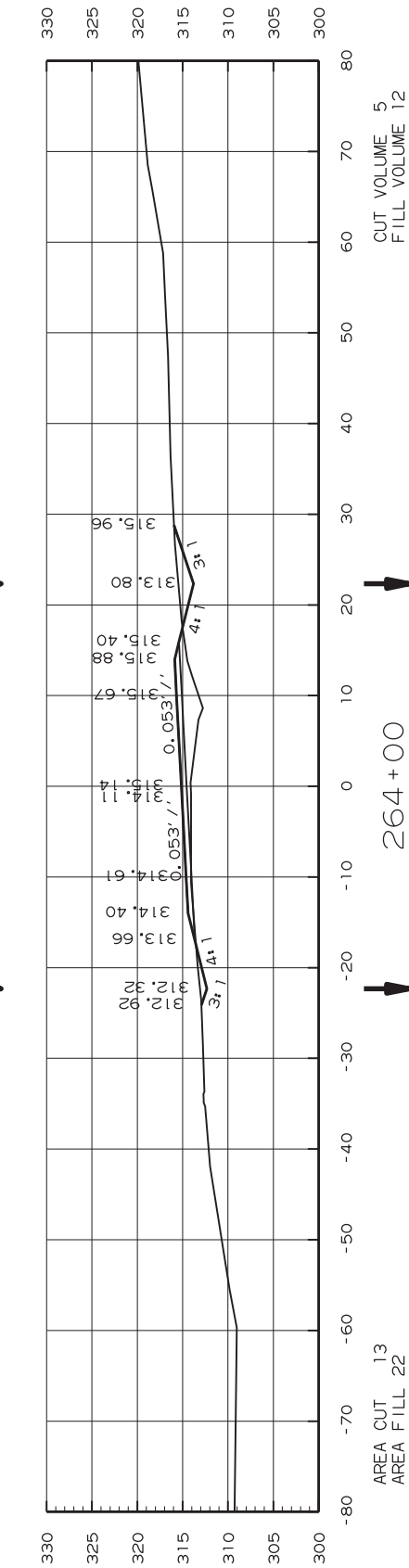
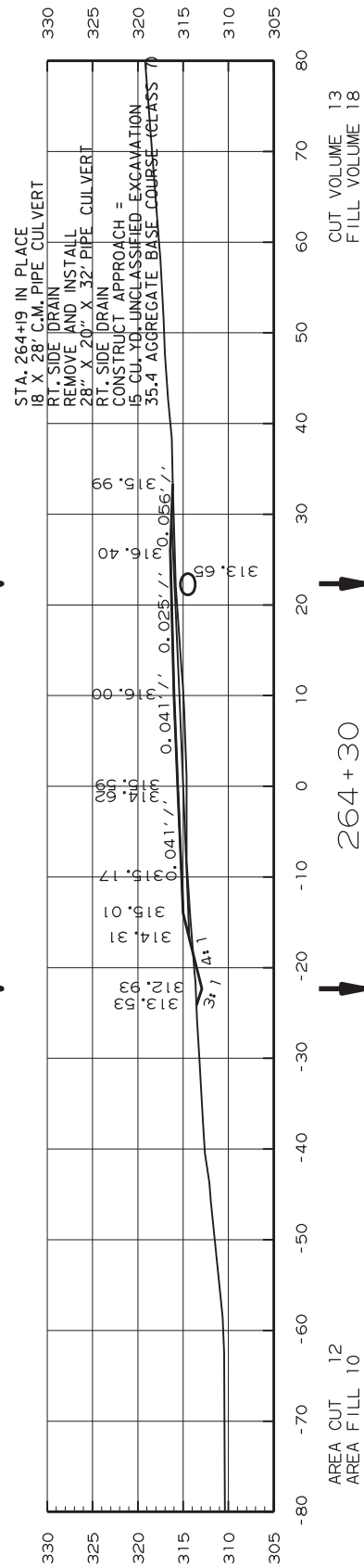
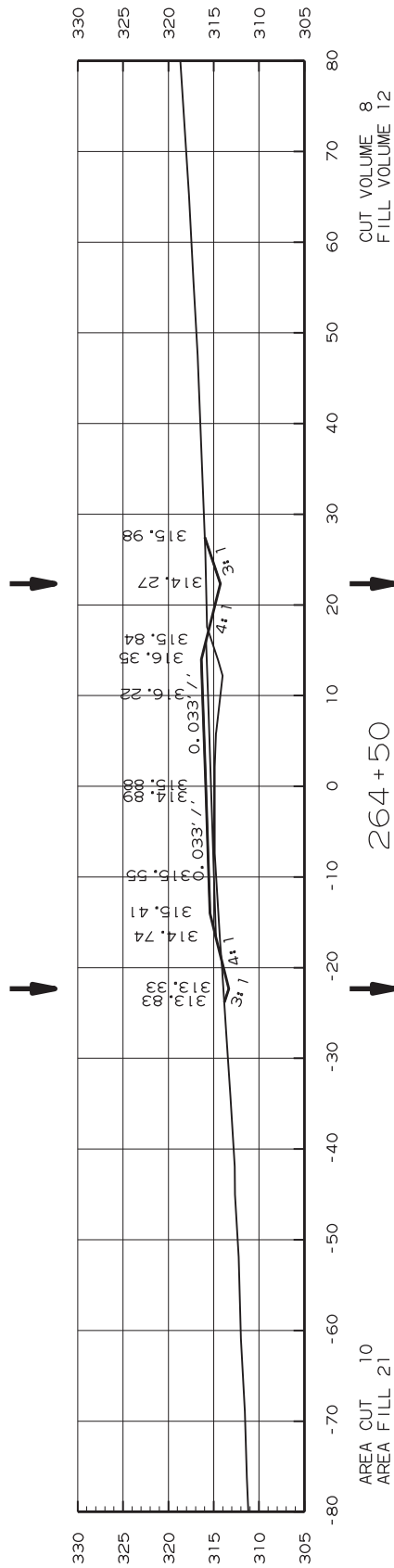






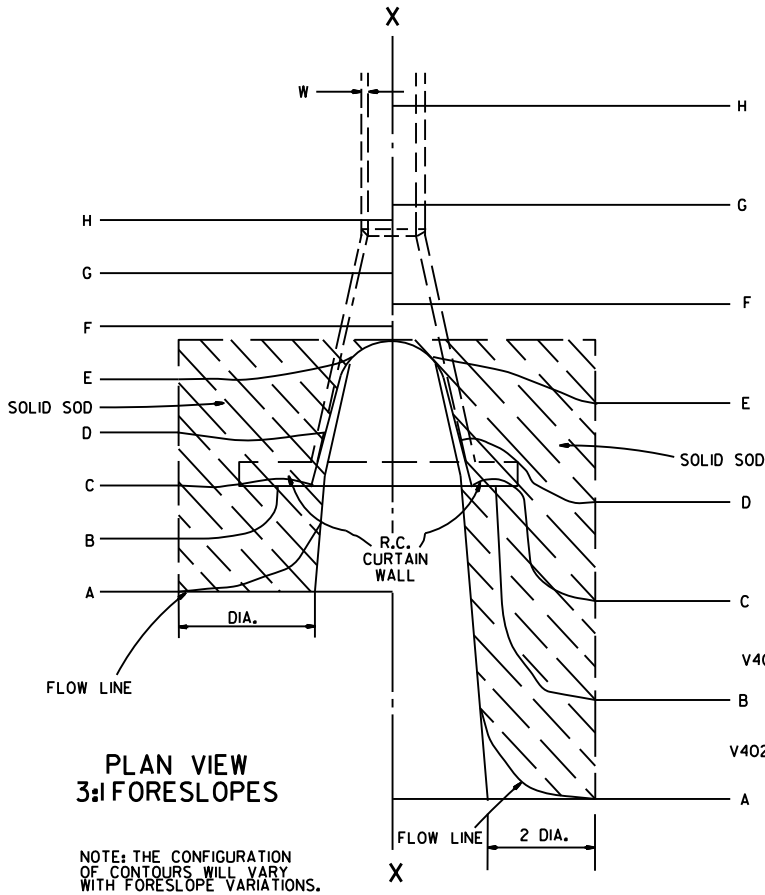
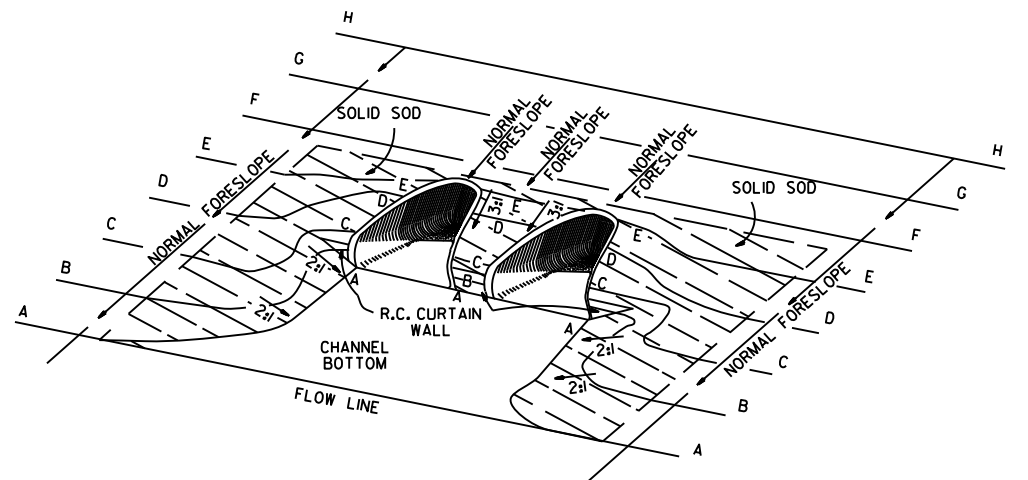
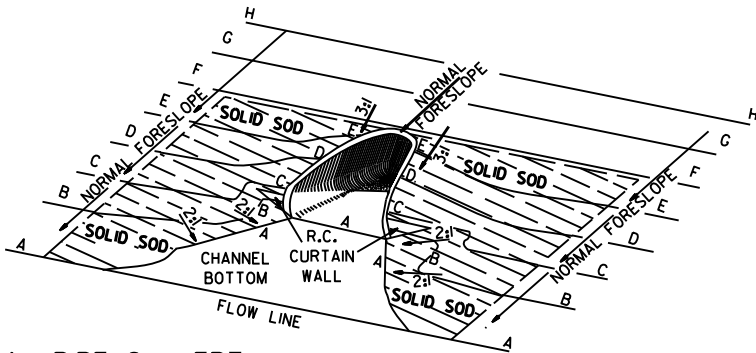
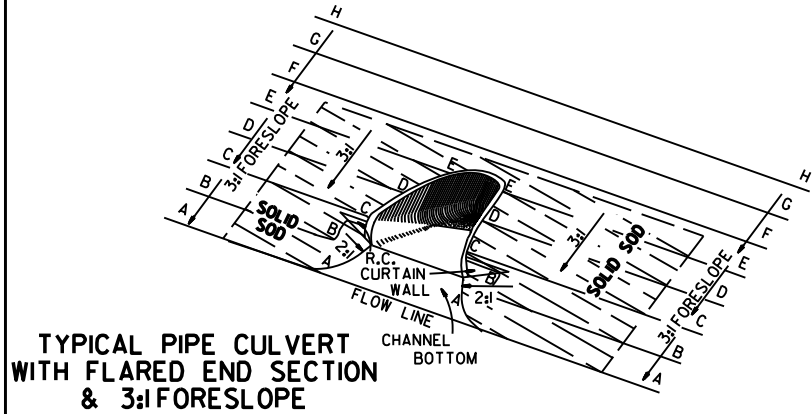






| DATE REVISED     | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|------------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                  |             |              |             | 6                  | ARK.  |                    |           |              |
|                  |             |              |             | JOB NO.            |       | FA5309             | 113       | 114          |
| 4 CROSS SECTIONS |             |              |             |                    |       |                    |           |              |

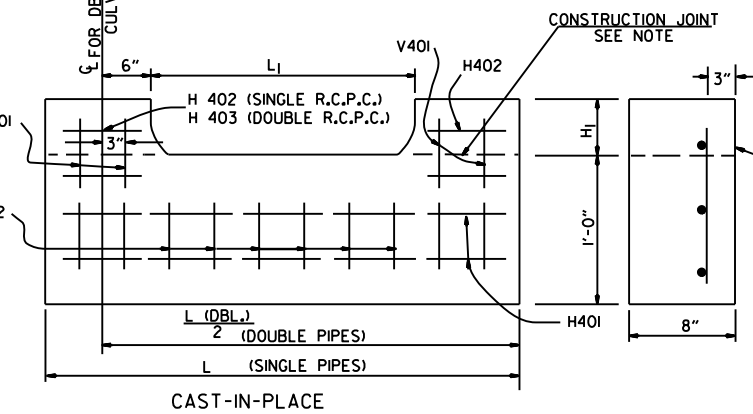




### R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

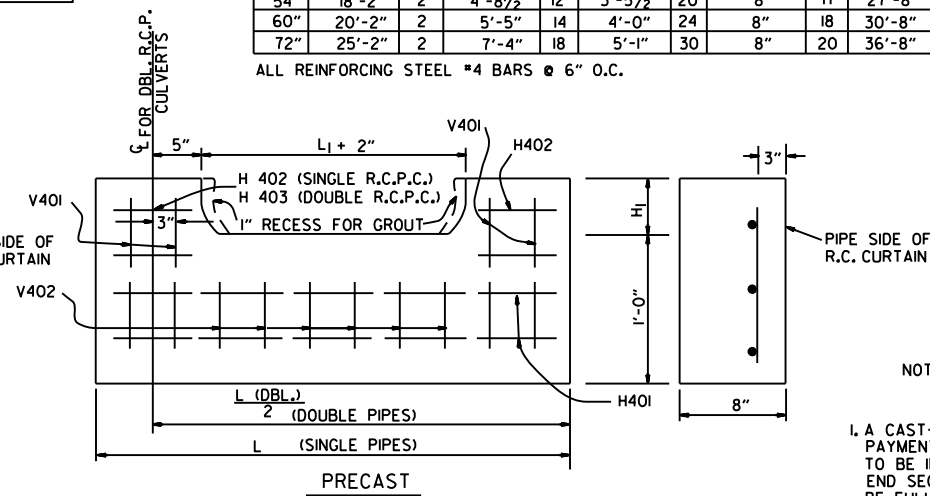
| PIPE DIA. | H <sub>1</sub> | L <sub>1</sub> | L      | L (DBL.)<br>2 | SINGLE R.C.P.C. |              | DOUBLE R.C.P.C. |              |
|-----------|----------------|----------------|--------|---------------|-----------------|--------------|-----------------|--------------|
|           |                |                |        |               | CONC.           | REINF. STEEL | CONC.           | REINF. STEEL |
|           |                |                |        |               | CU. YDS.        | LBS.         | CU. YDS.        | LBS.         |
| 18"       | 11 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.



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.

### R.C. CURTAIN WALL DETAILS



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

### REINFORCING STEEL SCHEDULE

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

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

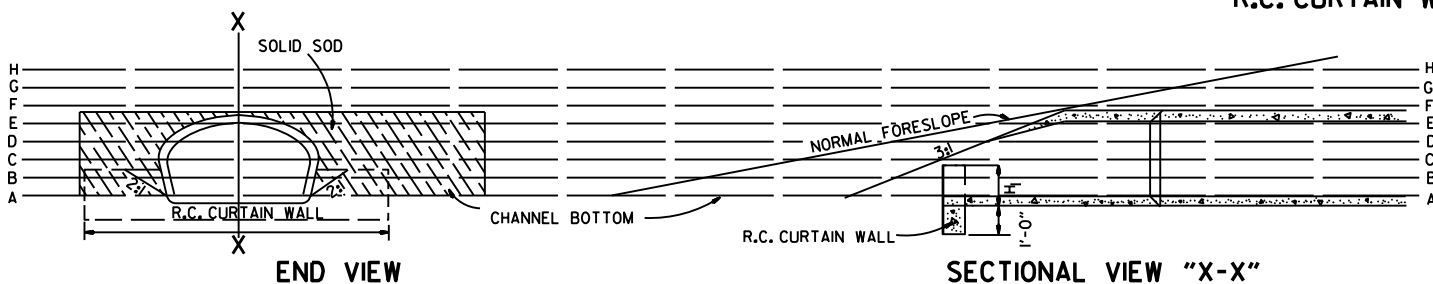
### SOLID SODDING

| PIPE DIA. | SINGLE R.C.P.C. |     |     | DOUBLE R.C.P.C. |     |     |
|-----------|-----------------|-----|-----|-----------------|-----|-----|
|           | 3:1             | 4:1 | 6:1 | 3:1             | 4:1 | 6:1 |
|           | 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.

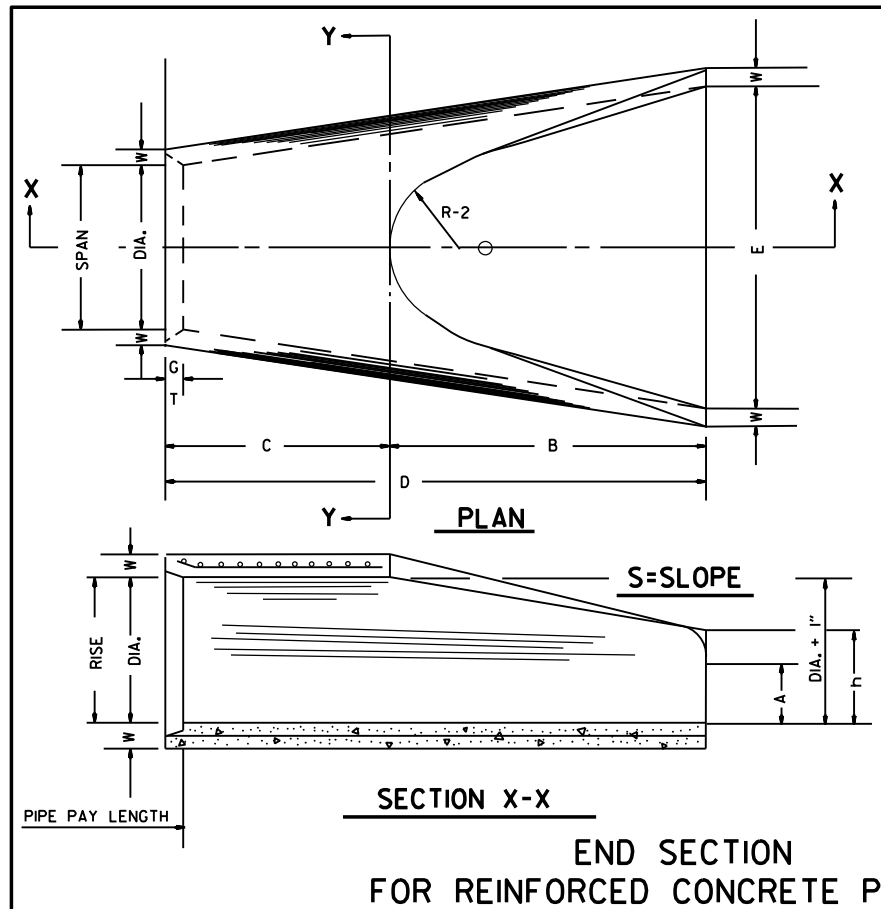
### GENERAL NOTES

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 W/10 MAY BE USED IN LIEU OF REINFORCING BARS.

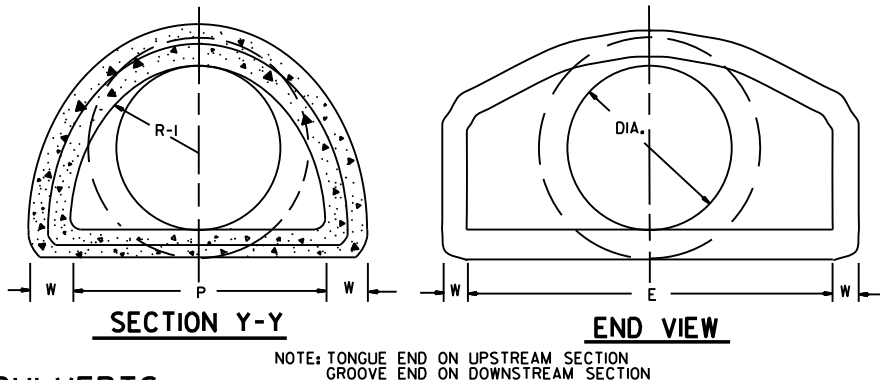


|          |                                                        |        |                                   |
|----------|--------------------------------------------------------|--------|-----------------------------------|
| 10-18-96 | ADDED NOTE TO SOLID SODDING                            |        | ARKANSAS STATE HIGHWAY COMMISSION |
| 10-12-95 | CORRECTED SPELLING                                     |        |                                   |
| 11-3-94  | ADDED GENERAL NOTE NO. 4                               |        |                                   |
| 8-15-91  | REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT. |        |                                   |
| 3-2-81   | ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES        |        |                                   |
| 5-15-80  | ADDED PRECAST WALL & GENERAL NOTES                     |        |                                   |
| 10-2-72  | REVISED AND REDRAWN                                    |        |                                   |
| DATE     | REVISION                                               | FILMED | STANDARD DRAWING FES-1            |

### FLARED END SECTION

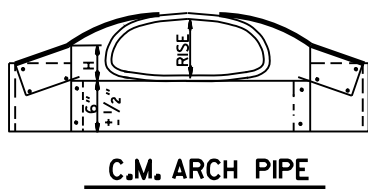
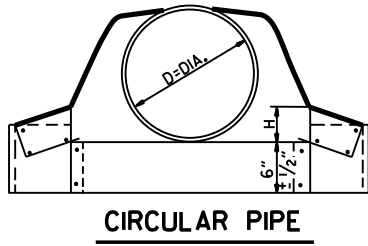
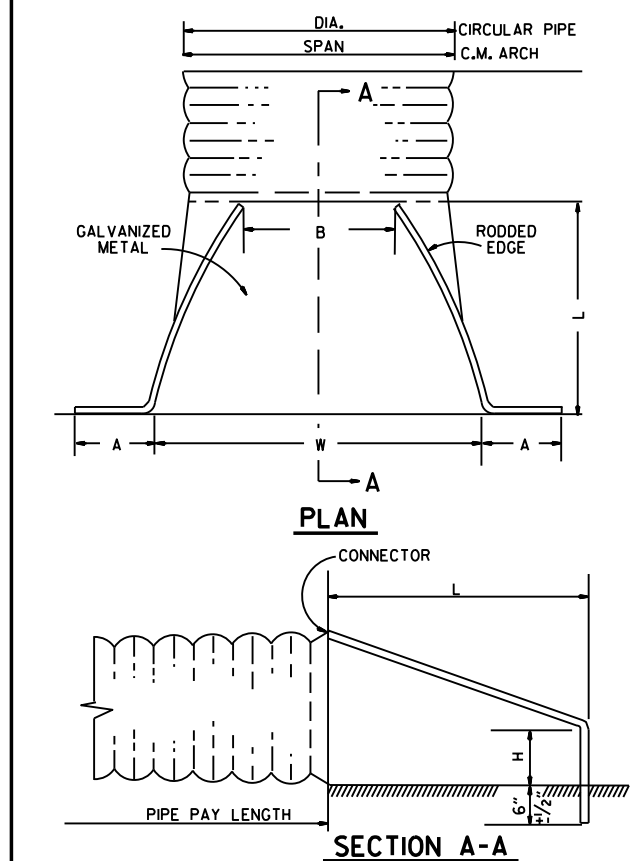
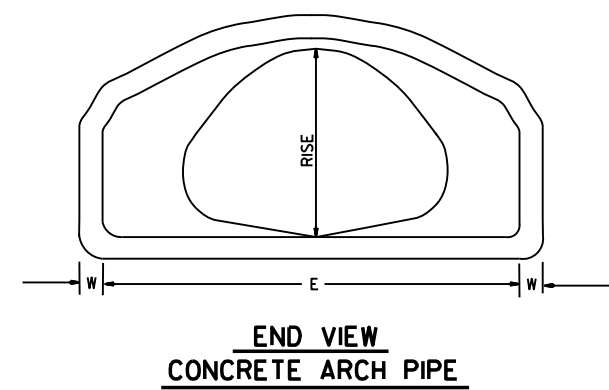


| TABLE OF DIMENSIONS |        |        |           |            |           |       |     |           |         |         |     |        |       |            |
|---------------------|--------|--------|-----------|------------|-----------|-------|-----|-----------|---------|---------|-----|--------|-------|------------|
| DIA.                | WALL   | A      | B         | C          | D         | E     | S   | DIA. + 1" | P       | R-1     | R-2 | G-T    | WT.   | h          |
| 18"                 | 2 1/2" | 9"     | 2'-3"     | 3'-10"     | 6'-1"     | 3'-0" | 3:1 | 19"       | 29"     | 15 1/2" | 12" | 2"     | 1000  | 1'-0 1/2"  |
| 24"                 | 3"     | 9 1/2" | 3'-7 1/2" | 2'-6"      | 6'-1 1/2" | 4'-0" | 3:1 | 25"       | 33 3/8" | 16 1/8" | 14" | 2 1/2" | 1600  | 1'-1 1/2"  |
| 30"                 | 3 1/2" | 1'-0"  | 4'-6"     | 1'-7 3/4"  | 6'-1 3/4" | 5'-0" | 3:1 | 31"       | 37"     | 18 1/2" | 15" | 3 1/4" | 1940  | 1'-4 5/8"  |
| 36"                 | 4"     | 1'-3"  | 5'-3"     | 2'-10 3/4" | 8'-1 3/4" | 6'-0" | 3:1 | 37"       | 47 1/8" | 24 1/8" | 20" | 3 1/2" | 4100  | 1'-8"      |
| 42"                 | 4 1/2" | 1'-9"  | 5'-3"     | 2'-11"     | 8'-2"     | 6'-6" | 3:1 | 43"       | 53 1/8" | 27 1/2" | 22" | 3 1/2" | 5380  | 2'-2 1/2"  |
| 48"                 | 5"     | 2'-0"  | 6'-0"     | 2'-2"      | 8'-2"     | 7'-0" | 3:1 | 49"       | 56 1/2" | 28 1/2" | 22" | 3 1/2" | 6550  | 2'-6"      |
| 54"                 | 5 1/2" | 2'-4"  | 6'-6"     | 1'-10"     | 8'-4"     | 7'-6" | 3:1 | 55"       | 65 1/2" | 33 1/8" | 24" | 4"     | 8750  | 2'-10 1/2" |
| 60"                 | 6"     | 2'-10" | 6'-6"     | 1'-10"     | 8'-4"     | 8'-0" | 3:1 | 61"       | 72 1/2" | 36 1/8" | 24" | 4"     | 9270  | 3'-5"      |
| 72"                 | 7"     | 3'-10" | 6'-6"     | 1'-10"     | 8'-4"     | 9'-0" | 3:1 | 73"       | 77 1/8" | 38 1/8" | 24" | 5"     | 13250 | 4'-6"      |



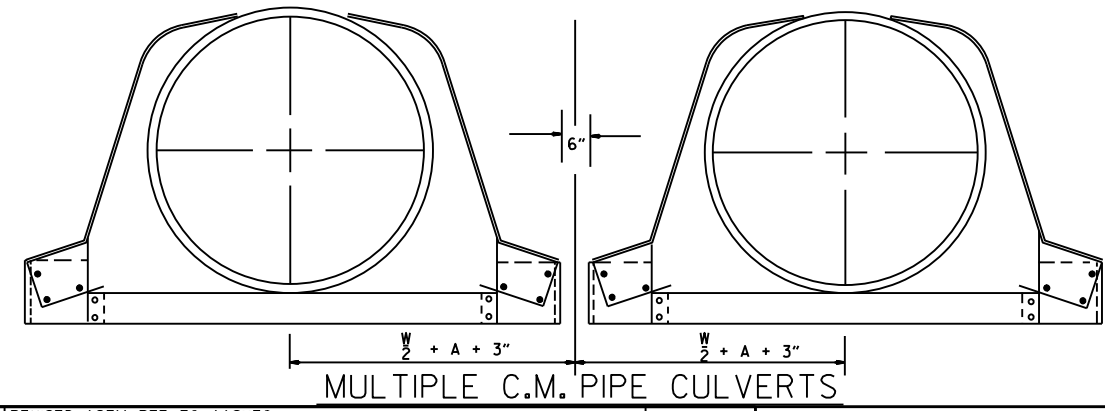
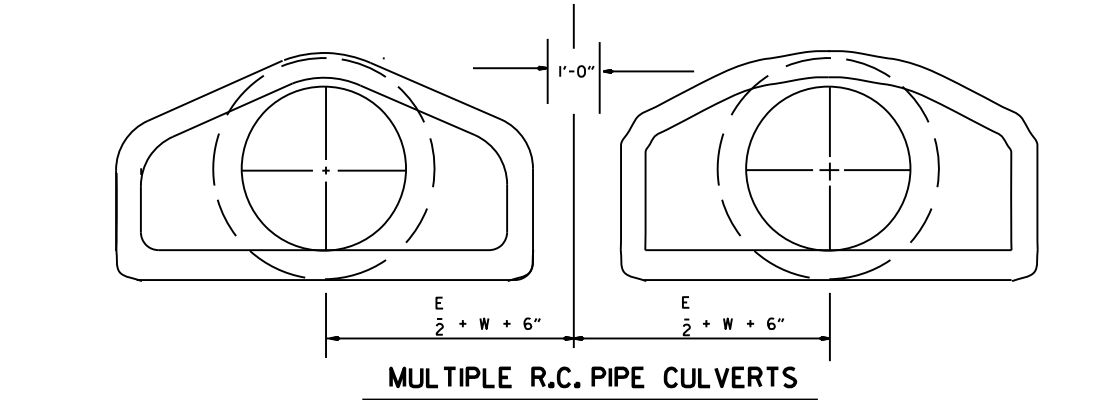
| ARCH PIPE      |                 |                |                 |                |        |         |       |            |           |        |         |     |        |         |
|----------------|-----------------|----------------|-----------------|----------------|--------|---------|-------|------------|-----------|--------|---------|-----|--------|---------|
| EQUIV.<br>DIA. | • SPAN          |                | • RISE          |                | W      | A       | B     | C          | D         | E      | P       | R2  | G-T    | S       |
|                | AASHTO<br>M 206 | AHD<br>NOMINAL | AASHTO<br>M 206 | AHD<br>NOMINAL |        |         |       |            |           |        |         |     |        |         |
| INCHES         |                 |                |                 |                |        |         |       |            |           |        |         |     |        |         |
| 15             | 18              | 18             | II              | II             | 2"     | 4"      | 2'-0" | 4'-0"      | 6'-0"     | 3'-0"  | 29"     | 12" | 1 1/2" | 2 1/2:1 |
| 18             | 22              | 22             | 13 1/2          | 14             | 2 1/2" | 5"      | 2'-0" | 4'-1"      | 6'-1"     | 3'-6"  | 32 1/8" | 13" | 2 1/2" | 2 1/2:1 |
| 21             | 26              | 26             | 15 1/2          | 16             | 2 3/4" | 7"      | 2'-3" | 3'-10"     | 6'-1"     | 4'-0"  | 34 1/8" | 14" | 2 1/2" | 2 1/2:1 |
| 24             | 28 1/2          | 29             | 18              | 18             | 3"     | 9"      | 2'-3" | 3'-10"     | 6'-1"     | 5'-0"  | 36 1/8" | 15" | 2 1/2" | 2 1/2:1 |
| 30             | 36 1/4          | 36             | 22 1/2          | 23             | 3 1/2" | 10"     | 3'-1" | 3'-0 1/2"  | 6'-1 1/2" | 6'-0"  | 47 1/8" | 20" | 3"     | 2 1/2:1 |
| 36             | 43 3/4          | 44             | 26 3/8          | 27             | 4"     | 10 1/2" | 4'-0" | 2'-1 1/2"  | 6'-1 1/2" | 6'-6"  | 54 1/8" | 22" | 3 1/2" | 2 1/2:1 |
| 42             | 51 1/8          | 51             | 31 5/8          | 31             | 4 1/2" | 11 1/2" | 4'-7" | 1'-10 1/4" | 6'-5 1/4" | 7'-2"  | 59 1/2" | 23" | 3 3/4" | 2 1/2:1 |
| 48             | 58 1/2          | 59             | 36              | 36             | 5"     | 1'-3"   | 5'-3" | 2'-10 3/4" | 8'-1 3/4" | 7'-10" | 70 7/8" | 24" | 4 1/4" | 2 1/2:1 |
| 54             | 65              | 65             | 40              | 40             | 5 1/2" | 1'-7"   | 5'-3" | 2'-11"     | 8'-2"     | 8'-6"  | 72 1/8" | 24" | 4 3/4" | 2 1/4:1 |
| 60             | 73              | 73             | 45              | 45             | 6"     | 1'-10"  | 5'-6" | 2'-8"      | 8'-2"     | 9'-0"  | 77 1/8" | 24" | 5"     | 2 1/4:1 |

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

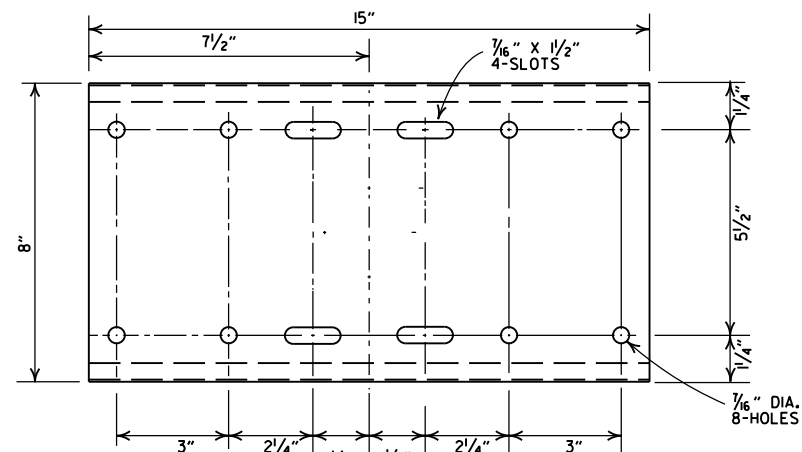


| CIRCULAR PIPE |       |           |            |           |               |           |         |  |
|---------------|-------|-----------|------------|-----------|---------------|-----------|---------|--|
| D.<br>DIA.    | GAUGE | A<br>1" ± | B.<br>MAX. | H<br>1" ± | L<br>1 1/2" ± | W<br>2" ± | S       |  |
| INCHES        |       |           |            |           |               |           |         |  |
| 12            | 16    | 6         | 6          | 6         | 21            | 24        | 2 1/2:1 |  |
| 15            | 16    | 7         | 8          | 6         | 26            | 30        | 2 1/2:1 |  |
| 18            | 16    | 8         | 10         | 6         | 31            | 36        | 2 1/2:1 |  |
| 21            | 16    | 9         | 12         | 6         | 36            | 42        | 2 1/2:1 |  |
| 24            | 16    | 10        | 13         | 6         | 41            | 48        | 2 1/2:1 |  |
| 30            | 14    | 12        | 16         | 8         | 51            | 60        | 2 1/2:1 |  |
| 36            | 14    | 14        | 19         | 9         | 60            | 72        | 2 1/2:1 |  |
| 42            | 12    | 16        | 22         | 11        | 69            | 84        | 2 1/2:1 |  |
| 48            | 12    | 18        | 27         | 12        | 78            | 90        | 2 1/2:1 |  |
| 54            | 12    | 18        | 30         | 12        | 84            | 102       | 2:1     |  |
| 60            | 12    | 18        | 33         | 12        | 87            | 114       | 1 3/4:1 |  |
| 66            | 12    | 18        | 36         | 12        | 87            | 120       | 1 1/2:1 |  |
| 72            | 12    | 18        | 39         | 12        | 87            | 126       | 1 1/3:1 |  |

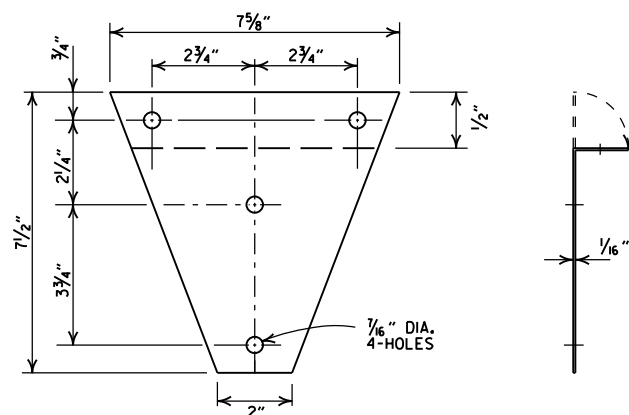
| C.M. ARCH PIPE |      |      |           |           |           |               |           |         |       |
|----------------|------|------|-----------|-----------|-----------|---------------|-----------|---------|-------|
| EQUIV.<br>DIA. | SPAN | RISE | A<br>1" ± | B<br>MAX. | H<br>1" ± | L<br>1 1/2" ± | W<br>2" ± | S       | GAUGE |
| INCHES         |      |      |           |           |           |               |           |         |       |
| 15"            | 17   | 13   | 7         | 9         | 6         | 19            | 30        | 2 1/2:1 | 16    |
| 18"            | 21   | 15   | 7         | 10        | 6         | 23            | 36        | 2 1/2:1 | 16    |
| 21"            | 24   | 18   | 8         | 12        | 6         | 28            | 42        | 2 1/2:1 | 16    |
| 24"            | 28   | 20   | 9         | 14        | 6         | 32            | 48        | 2 1/2:1 | 16    |
| 30"            | 35   | 24   | 10        | 16        | 6         | 39            | 60        | 2 1/2:1 | 14    |
| 36"            | 42   | 29   | 12        | 18        | 8         | 46            | 75        | 2 1/2:1 | 14    |
| 42"            | 49   | 33   | 13        | 21        | 9         | 53            | 85        | 2 1/2:1 | 12    |
| 48"            | 57   | 38   | 18        | 26        | 12        | 63            | 90        | 2 1/2:1 | 12    |
| 54"            | 64   | 43   | 18        | 30        | 12        | 70            | 102       | 2 1/4:1 | 12    |
| 60"            | 71   | 47   | 18        | 33        | 12        | 77            | 114       | 2 1/4:1 | 12    |



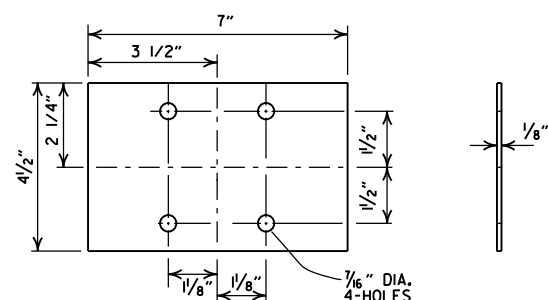
|          |                                                 |             |                                   |
|----------|-------------------------------------------------|-------------|-----------------------------------|
| 10-18-96 | REVISED ASTM REF. TO AASHTO                     |             | ARKANSAS STATE HIGHWAY COMMISSION |
| 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 |                                   |
| DATE     | REVISION                                        | FILMED      | STANDARD DRAWING FES-2            |



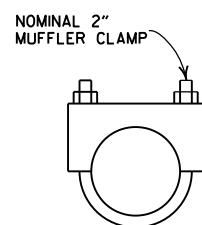
SHELF



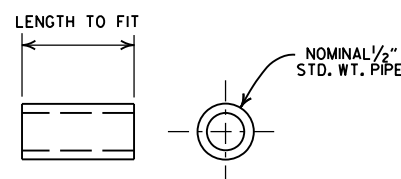
BRACKET



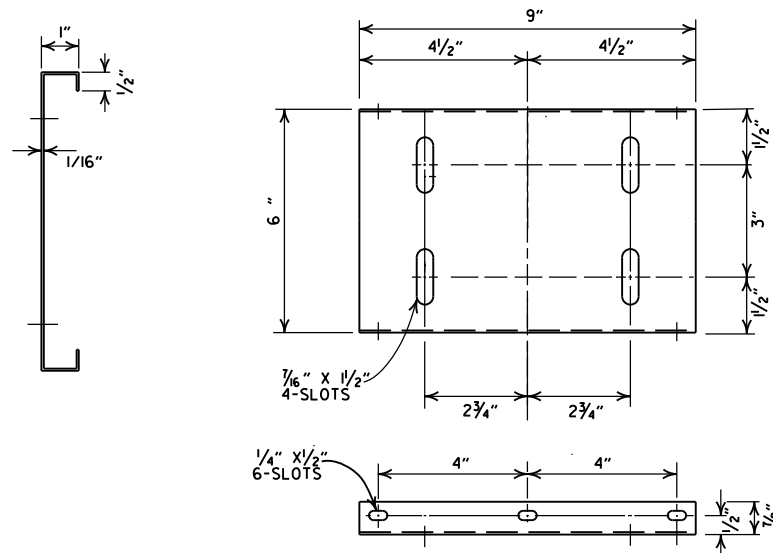
ANTI-TWIST PLATE



CLAMP



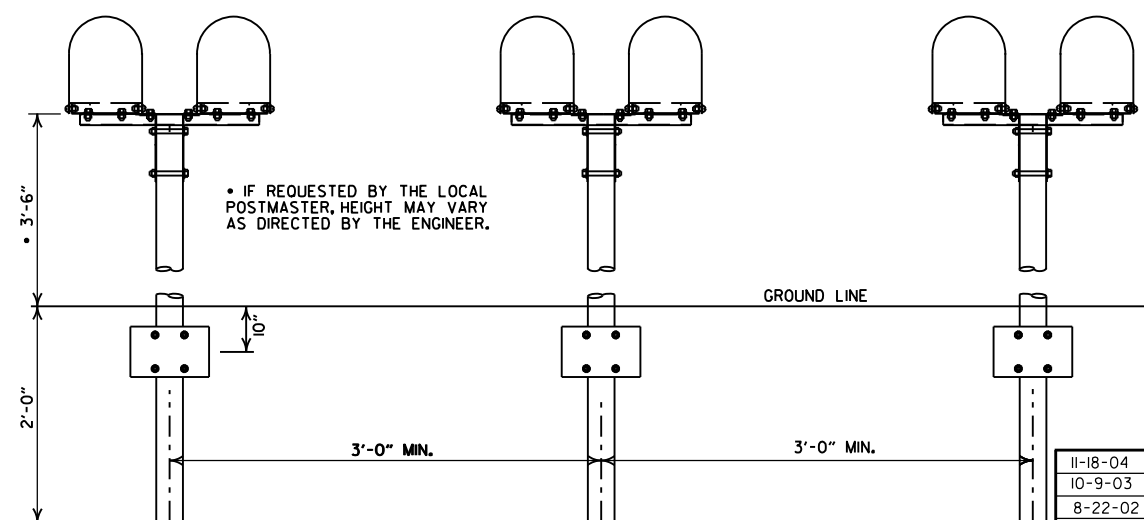
SPACER



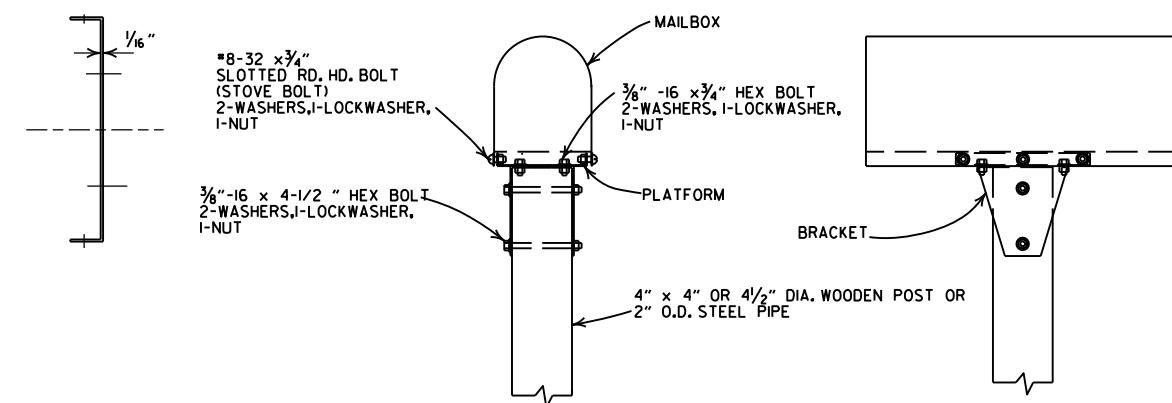
PLATFORM

# GENERAL NOTES

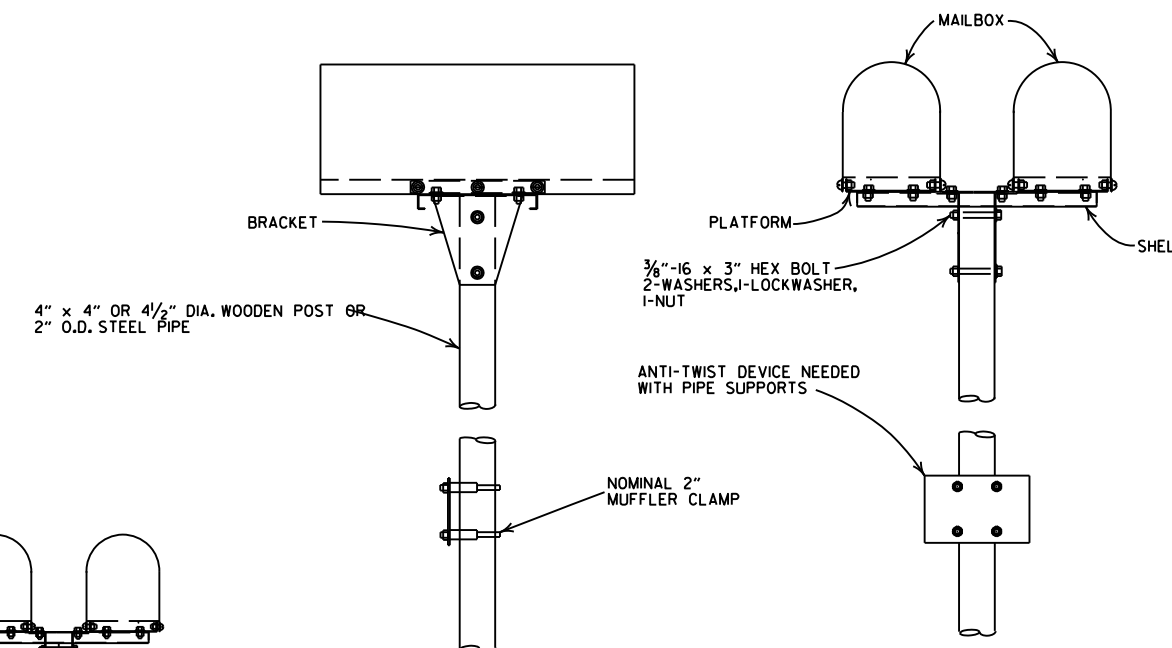
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 3/4" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 x 3/4" 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 ARDOT QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



SPACING FOR MULTIPLE POST INSTALLATION



SINGLE INSTALLATION



DOUBLE 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.<br>DIA. | SPAN            |                  | RISE            |                  |
|----------------|-----------------|------------------|-----------------|------------------|
|                | AASHTO<br>M 206 | ARDOT<br>NOMINAL | AASHTO<br>M 206 | ARDOT<br>NOMINAL |
| INCHES         | INCHES          |                  |                 |                  |
| 15             | 18              | 18               | 11              | 11               |
| 18             | 22              | 22               | 13½             | 14               |
| 21             | 26              | 26               | 15½             | 16               |
| 24             | 28½             | 29               | 18              | 18               |
| 30             | 36¼             | 36               | 22½             | 23               |
| 36             | 43¾             | 44               | 26¾             | 27               |
| 42             | 51½             | 51               | 31¾             | 31               |
| 48             | 58½             | 59               | 36              | 36               |
| 54             | 65              | 65               | 40              | 40               |
| 60             | 73              | 73               | 45              | 45               |
| 72             | 88              | 88               | 54              | 54               |
| 84             | 102             | 102              | 62              | 62               |
| 90             | 115             | 115              | 72              | 72               |
| 96             | 122             | 122              | 77½             | 77               |
| 108            | 138             | 138              | 87½             | 87               |
| 120            | 154             | 154              | 96¾             | 97               |
| 132            | 168¾            | 169              | 106½            | 107              |

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

REINFORCED CONCRETE  
HORIZONTAL ELLIPTICAL  
PIPE DIMENSIONS

| EQUIV.<br>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.

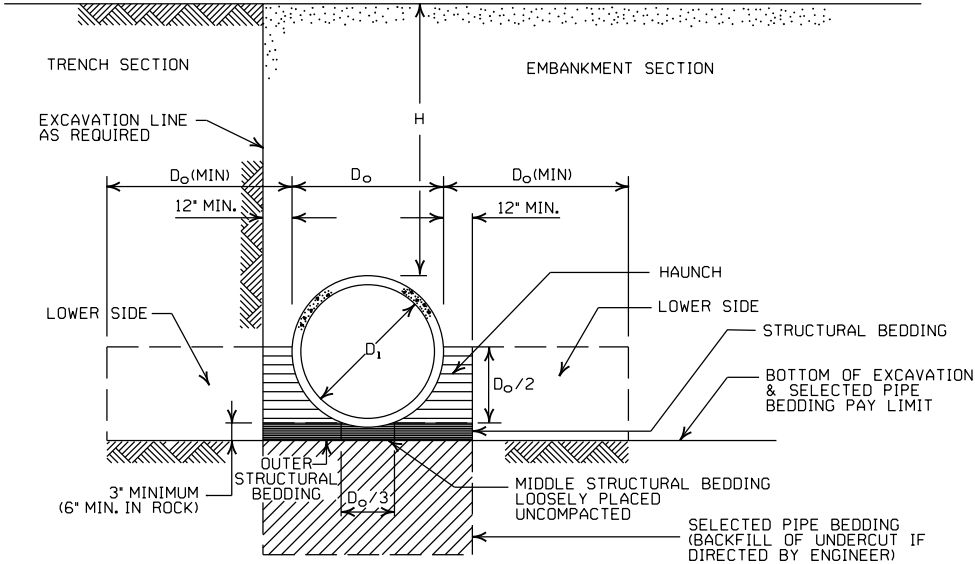
- LEGEND -

D<sub>i</sub> = NORMAL INSIDE DIAMETER OF PIPE  
D<sub>o</sub> = OUTSIDE DIAMETER OF PIPE  
H = FILL COVER HEIGHT OVER PIPE (FEET)  
MIN. = MINIMUM  
= UNDISTURBED SOIL

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

\* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO 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."

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.

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 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.

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.

|          |                                        |             |
|----------|----------------------------------------|-------------|
|          |                                        |             |
|          |                                        |             |
|          |                                        |             |
|          |                                        |             |
|          |                                        |             |
| 2-27-14  | REVISED GENERAL NOTE 1.                |             |
| 12-15-11 | REVISED FOR LRFD DESIGN SPECIFICATIONS |             |
| 5-18-00  | REVISED TYPE 3 BEDDING & ADDED NOTE    |             |
| 3-30-00  | REVISED INSTALLATIONS                  |             |
| 11-06-97 | ISSUED                                 |             |
| DATE     | REVISION                               | DATE FILMED |

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT  
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1



CORRUGATED STEEL PIPE (ROUND)

| PIPE<br>DIAMETER<br>(INCHES)                                                                        | ① MINIMUM<br>COVER TOP OF<br>PIPE TO TOP<br>OF GROUND<br>"H" (FEET) | MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET) |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------|-------|-------|-------|-------|
|                                                                                                     |                                                                     | METAL THICKNESS (INCHES)                      |       |       |       |       |
|                                                                                                     |                                                                     | 0.064                                         | 0.079 | 0.109 | 0.138 | 0.168 |
| 2 3/4 INCH BY 1/2 INCH CORRUGATION<br>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<br>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<br>DIAMETER<br>(INCHES) | ① MINIMUM<br>COVER TOP OF<br>PIPE TO TOP<br>OF GROUND<br>"H" (FEET) | MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)                      |       |       |       |       |
|------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------|-------|-------|-------|-------|
|                              |                                                                     | METAL THICKNESS IN INCHES                                          |       |       |       |       |
|                              |                                                                     | 0.060                                                              | 0.075 | 0.105 | 0.135 | 0.164 |
|                              |                                                                     | 2 3/4 INCH BY 1/2 INCH CORRUGATION<br>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.<br>DIA.<br>(INCHES) | PIPE<br>DIMENSION<br>SPAN X RISE<br>(INCHES) | MINIMUM<br>CORNER<br>RADIUS<br>(INCHES) | STEEL                                                                                       |                                     |                                   |                                         | ALUMINUM                                                                                                                                                        |                                   |  |
|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--|
|                            |                                              |                                         | MIN.<br>THICKNESS<br>REQUIRED<br>INCHES                                                     | ① MIN. HEIGHT OF<br>FILL, "H" (FT.) | MAX. HEIGHT OF<br>FILL, "H" (FT.) | MIN.<br>THICKNESS<br>REQUIRED<br>INCHES | ① MIN. HEIGHT OF<br>FILL, "H" (FT.)                                                                                                                             | MAX. HEIGHT OF<br>FILL, "H" (FT.) |  |
|                            |                                              |                                         |                                                                                             | INSTALLATION                        | INSTALLATION                      |                                         | INSTALLATION                                                                                                                                                    | INSTALLATION                      |  |
|                            |                                              |                                         |                                                                                             | TYPE 1                              | TYPE 1                            |                                         | TYPE 1                                                                                                                                                          | TYPE 1                            |  |
|                            |                                              |                                         | 2 3/4 INCH BY 1/2 INCH CORRUGATION<br>RIVETED, WELDED, OR HELICAL LOCK-SEAM                 |                                     |                                   |                                         | 2 3/4 INCH BY 1/2 INCH CORRUGATION<br>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                                        | 3 1/2                                   | 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<br>RIVETED, WELDED, OR HELICAL LOCK-SEAM |                                     |                                   |                                         | ① FOR MINIMUM COVER VALUES, "H" SHALL<br><br>② WHERE THE STANDARD 2 2/3"x 1/2" COR<br>WITH A 3" x 1" OR 5" x 1" CORRUGATION<br>OR GREATER THAN THE MAXIMUM FILL |                                   |  |
|                            |                                              |                                         | INSTALLATION                                                                                |                                     | INSTALLATION                      |                                         |                                                                                                                                                                 |                                   |  |
|                            |                                              |                                         | TYPE 2                                                                                      | TYPE 1                              | TYPE 2                            | TYPE 1                                  |                                                                                                                                                                 |                                   |  |
|                            |                                              |                                         | TYPE 2                                                                                      | TYPE 1                              | TYPE 2                            | TYPE 1                                  |                                                                                                                                                                 |                                   |  |
| 36                         | 40x31                                        | 5                                       | 0.079                                                                                       | 3                                   | 2                                 | 12                                      | 15                                                                                                                                                              |                                   |  |
| 42                         | 46x36                                        | 6                                       | 0.079                                                                                       | 3                                   | 2                                 | 13                                      | 15                                                                                                                                                              |                                   |  |
| 48                         | 53x41                                        | 7                                       | 0.079                                                                                       | 3                                   | 2                                 | 13                                      | 15                                                                                                                                                              |                                   |  |
| 54                         | 60x46                                        | 8                                       | 0.079                                                                                       | 3                                   | 2                                 | 13                                      | 15                                                                                                                                                              |                                   |  |
| 60                         | 66x51                                        | 9                                       | 0.079                                                                                       | 3                                   | 2                                 | 13                                      | 15                                                                                                                                                              |                                   |  |
| 66                         | 73x55                                        | 12                                      | 0.079                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |
| 72                         | 81x59                                        | 14                                      | 0.079                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |
| 78                         | 87x63                                        | 14                                      | 0.079                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |
| 84                         | 95x67                                        | 16                                      | 0.109                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |
| 90                         | 103x71                                       | 16                                      | 0.109                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |
| 96                         | 112x75                                       | 18                                      | 0.109                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |
| 102                        | 117x79                                       | 18                                      | 0.109                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |
| 108                        | 128x83                                       | 18                                      | 0.138                                                                                       | 3                                   | 2                                 | 15                                      | 15                                                                                                                                                              |                                   |  |

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<br>TYPE | MATERIAL REQUIREMENTS FOR<br>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)<br>OR TYPE 1 INSTALLATION MATERIAL ③ |

③ SM-3 WILL NOT BE ALLOWED.

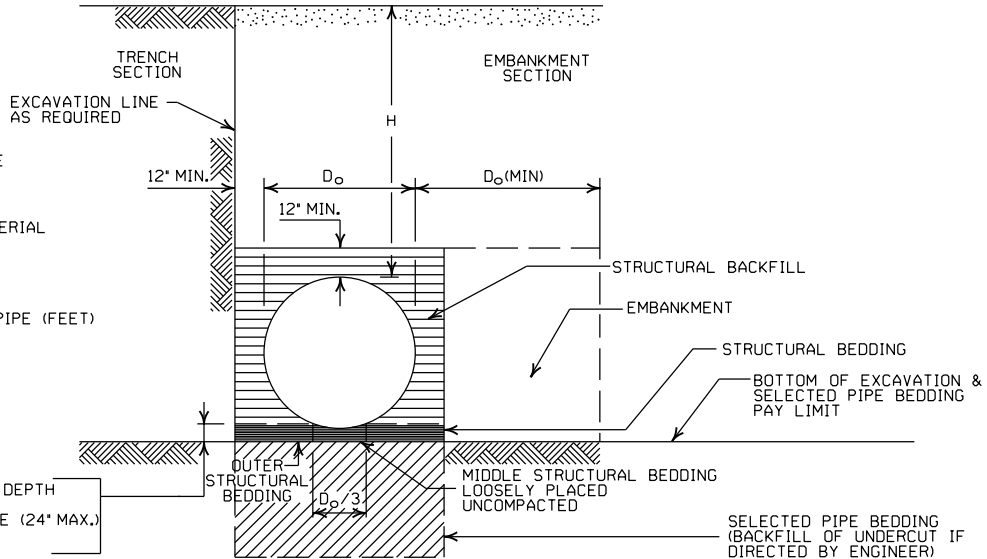
EQUIVALENT METAL THICKNESSES AND GAUGES

| METAL THICKNESS IN INCHES |          |          | GAUGE<br>NUMBER |
|---------------------------|----------|----------|-----------------|
| STEEL                     |          | ALUMINUM |                 |
| ZINC COATED               | UNCOATED |          |                 |
| 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<sub>o</sub> = OUTSIDE DIAMETER OF PIPE  
MAX. = MAXIMUM  
MIN. = MINIMUM  
===== = STRUCTURAL BACKFILL MATERIAL  
||||||| = UNDISTURBED SOIL  
EQUIV. DIA. = EQUIVALENT DIAMETER  
H = FILL COVER HEIGHT OVER PIPE (FEET)

IN SOIL-MIN. EQUALS TWICE CORRUGATION DEPTH  
IN ROCK-MIN. EQUALS GREATER OF:  
1/2" PER FOOT OF FILL OVER PIPE (24" MAX.)  
TWICE CORRUGATION DEPTH



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

|          |                               |             |
|----------|-------------------------------|-------------|
|          |                               |             |
|          |                               |             |
|          |                               |             |
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|          |                               |             |
|          |                               |             |
| 2-27-14  | REVISED GENERAL NOTE 1        |             |
| 12-15-11 | REVISED FOR LRFD DESIGN SPECS |             |
| 3-30-00  | REVISED INSTALLATIONS         |             |
| 11-06-97 | ISSUED                        |             |
| DATE     | REVISION                      | DATE FILMED |

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT  
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1



SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

| DEGREE<br>OF<br>CURVE | 30 MPH |         |           | 35 MPH |         |           | 40 MPH |         |           | 45 MPH |         |           | 50 MPH |         |           | 55 MPH |         |           | 60 MPH |         |           | 65 MPH |         |           | 70 MPH |         |           | 75 MPH |         |           |
|-----------------------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|--------|---------|-----------|
|                       | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           | e      | Ls (FT) |           |
|                       |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |        | MINIMUM | DESIRABLE |
| 0° 15'                | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           |
| 0° 30'                | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | RC     | 96      |           | RC     | 96      |           | RC     | 96      |           | RC     | 96      |           |
| 0° 45'                | NC     |         |           | NC     |         |           | NC     |         |           | NC     |         |           | RC     | 96      |           | RC     | 96      |           | 0.024  | 106     |           | 0.026  | 110     |           | 0.030  | 120     |           | 0.030  | 120     |           |
| 1° 00'                | NC     |         |           | NC     |         |           | NC     |         |           | RC     | 90      |           | 0.022  | 101     |           | 0.026  | 110     |           | 0.030  | 120     |           | 0.034  | 130     |           | 0.038  | 139     |           | 0.038  | 139     |           |
| 1° 15'                | NC     |         |           | NC     |         |           | RC     | 84      |           | 0.022  | 95      |           | 0.028  | 115     |           | 0.032  | 125     |           | 0.038  | 139     |           | 0.044  | 154     |           | 0.046  | 158     |           | 0.046  | 158     |           |
| 1° 30'                | NC     |         |           | RC     | 78      |           | 0.022  | 88      |           | 0.028  | 108     |           | 0.032  | 125     |           | 0.038  | 139     |           | 0.044  | 154     |           | 0.050  | 168     |           | 0.056  | 182     |           | 0.056  | 182     |           |
| 1° 45'                | RC     | 72      |           | RC     | 78      |           | 0.026  | 97      |           | 0.030  | 113     |           | 0.036  | 134     |           | 0.044  | 154     |           | 0.050  | 168     |           | 0.056  | 182     |           | 0.064  | 202     |           | 0.064  | 202     |           |
| 2° 00'                | RC     | 72      |           | 0.024  | 86      |           | 0.028  | 101     |           | 0.034  | 122     |           | 0.042  | 149     |           | 0.048  | 163     |           | 0.056  | 182     |           | 0.064  | 202     |           | 0.070  | 216     |           | 0.070  | 216     |           |
| 2° 15'                | RC     | 72      |           | 0.026  | 90      |           | 0.032  | 109     |           | 0.038  | 131     |           | 0.046  | 158     |           | 0.054  | 178     |           | 0.062  | 197     |           | 0.070  | 216     |           | 0.078  | 235     |           | 0.078  | 235     |           |
| 2° 30'                | 0.022  | 75      |           | 0.028  | 94      |           | 0.034  | 113     |           | 0.042  | 140     |           | 0.050  | 168     |           | 0.058  | 187     |           | 0.068  | 211     |           | 0.076  | 230     |           | 0.086  | 254     |           | 0.086  | 254     |           |
| 2° 45'                | 0.024  | 79      |           | 0.030  | 98      |           | 0.038  | 122     |           | 0.046  | 149     |           | 0.054  | 178     |           | 0.064  | 202     |           | 0.072  | 221     |           | 0.082  | 245     |           | 0.092  | 269     |           | 0.092  | 269     |           |
| 3° 00'                | 0.026  | 83      |           | 0.034  | 105     |           | 0.040  | 126     |           | 0.050  | 158     |           | 0.058  | 187     |           | 0.068  | 211     |           | 0.078  | 235     |           | 0.088  | 259     |           | 0.098  | 283     |           | 0.098  | 283     |           |
| 3° 15'                | 0.028  | 86      |           | 0.036  | 109     |           | 0.044  | 134     |           | 0.052  | 162     |           | 0.062  | 197     |           | 0.072  | 221     |           | 0.082  | 245     |           | 0.092  | 269     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 3° 30'                | 0.030  | 90      |           | 0.038  | 113     |           | 0.046  | 139     |           | 0.056  | 171     |           | 0.066  | 206     |           | 0.076  | 230     |           | 0.086  | 254     |           | 0.096  | 278     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 3° 45'                | 0.032  | 93      |           | 0.040  | 117     |           | 0.050  | 147     |           | 0.058  | 176     |           | 0.070  | 216     |           | 0.080  | 240     |           | 0.090  | 264     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 4° 00'                | 0.034  | 97      |           | 0.042  | 121     |           | 0.052  | 151     |           | 0.062  | 185     |           | 0.072  | 221     |           | 0.084  | 250     |           | 0.094  | 274     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 4° 15'                | 0.036  | 100     |           | 0.044  | 125     |           | 0.054  | 155     |           | 0.064  | 189     |           | 0.076  | 230     |           | 0.086  | 254     |           | 0.096  | 278     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 4° 30'                | 0.036  | 100     |           | 0.046  | 129     |           | 0.056  | 160     |           | 0.068  | 198     |           | 0.078  | 235     |           | 0.090  | 264     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 4° 45'                | 0.038  | 104     |           | 0.048  | 133     |           | 0.060  | 168     |           | 0.070  | 203     |           | 0.082  | 245     |           | 0.092  | 269     |           | 0.096  | 278     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 5° 00'                | 0.040  | 108     |           | 0.050  | 137     |           | 0.062  | 172     |           | 0.072  | 207     |           | 0.084  | 250     |           | 0.094  | 274     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 5° 30'                | 0.044  | 115     |           | 0.054  | 144     |           | 0.066  | 181     |           | 0.078  | 221     |           | 0.088  | 259     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 6° 00'                | 0.046  | 119     |           | 0.058  | 152     |           | 0.070  | 189     |           | 0.082  | 230     |           | 0.092  | 269     |           | 0.096  | 278     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 6° 30'                | 0.050  | 126     |           | 0.062  | 160     |           | 0.074  | 198     |           | 0.086  | 223     |           | 0.096  | 278     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 7° 00'                | 0.052  | 130     |           | 0.064  | 164     |           | 0.078  | 206     |           | 0.090  | 248     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 7° 30'                | 0.054  | 133     |           | 0.068  | 172     |           | 0.080  | 210     |           | 0.092  | 252     |           | 0.096  | 278     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 8° 00'                | 0.058  | 140     |           | 0.070  | 176     |           | 0.084  | 219     |           | 0.094  | 257     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 8° 30'                | 0.060  | 144     |           | 0.072  | 179     |           | 0.086  | 223     |           | 0.096  | 261     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 9° 00'                | 0.062  | 148     |           | 0.076  | 187     |           | 0.088  | 227     |           | 0.098  | 266     |           | 0.098  | 283     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           | 0.100  | 288     |           |
| 9° 30'                | 0.064  | 151     |           | 0.078  | 191     |           | 0.092  | 235     |           | 0.094  | 240     |           | 0.096  | 244     |           | 0.098  | 248     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           |
| 10° 00'               | 0.066  | 155     |           | 0.080  | 195     |           | 0.094  | 240     |           | 0.096  | 244     |           | 0.098  | 248     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           |
| 11° 00'               | 0.070  | 162     |           | 0.084  | 203     |           | 0.096  | 244     |           | 0.098  | 248     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           |
| 12° 00'               | 0.074  | 169     |           | 0.088  | 211     |           | 0.098  | 248     |           | 0.098  | 248     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           | 0.100  | 252     |           |
| 13° 00'               | 0.076  | 173     |           | 0.090  | 215     |           | 0.094  | 222     |           | 0.096  | 226     |           | 0.098  | 230     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 14° 00'               | 0.080  | 180     |           | 0.094  | 222     |           | 0.096  | 226     |           | 0.098  | 230     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 15° 00'               | 0.082  | 184     |           | 0.096  | 226     |           | 0.098  | 230     |           | 0.098  | 230     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 16° 00'               | 0.086  | 191     |           | 0.098  | 230     |           | 0.098  | 230     |           | 0.098  | 230     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 17° 00'               | 0.088  | 194     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 18° 00'               | 0.090  | 198     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 19° 00'               | 0.092  | 202     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 20° 00'               | 0.094  | 205     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 21° 00'               | 0.096  | 209     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 22° 00'               | 0.096  | 209     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 23° 00'               | 0.098  | 212     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 24° 00'               | 0.098  | 212     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |
| 25° 00'               | 0.100  | 216     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           | 0.100  | 234     |           |

ABBREVIATIONS

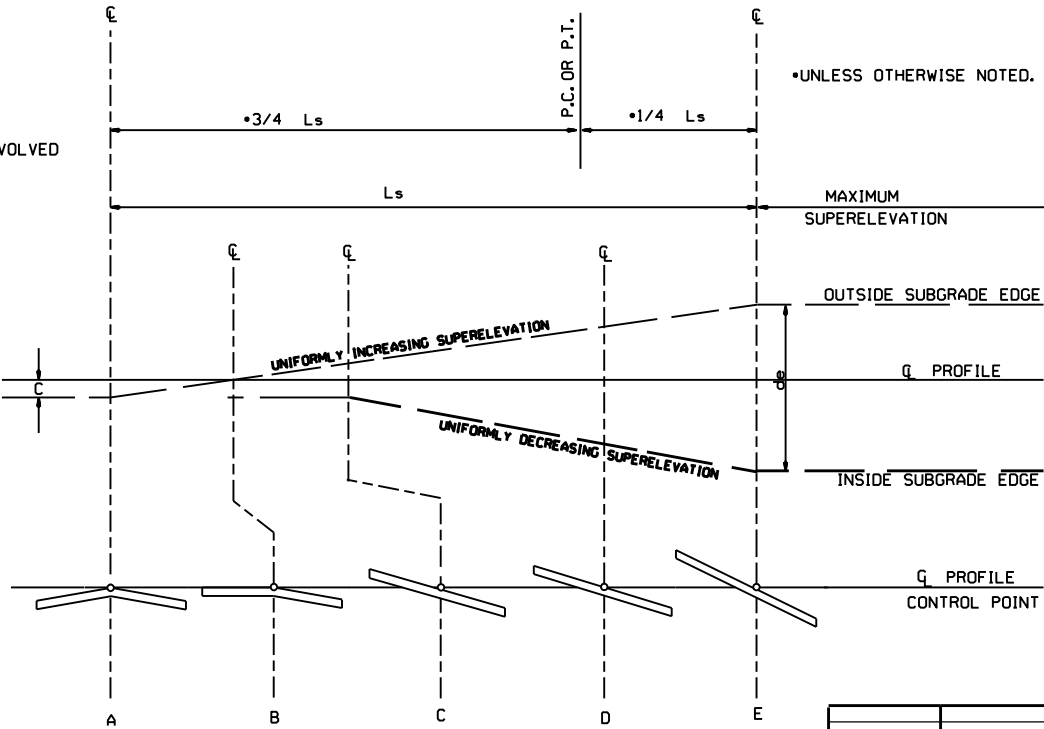
NC - NORMAL CROWN  
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE  
e - RATE OF SUPERELEVATION (FT. PER FT.)  
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)  
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)  
d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)  
C - NORMAL CROWN (FT.)

- GENERAL NOTES
- ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
  - SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
  - LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
  - PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

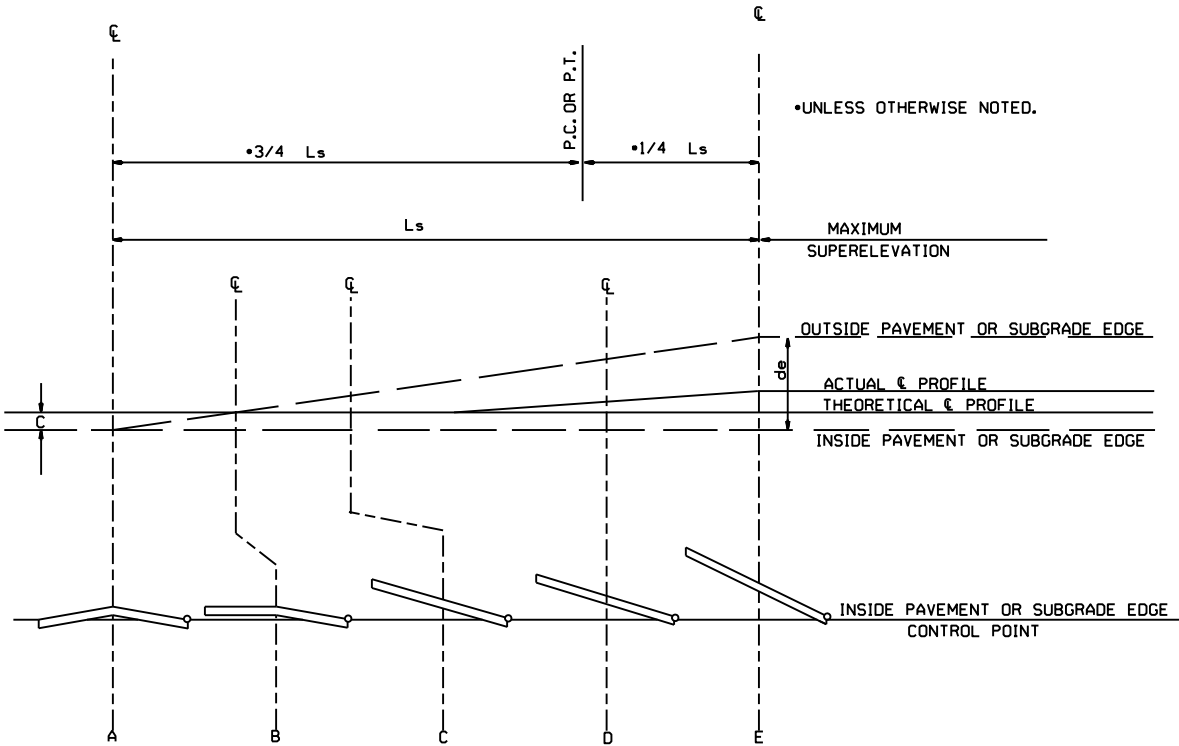
3 LANE UNDIVIDED - - - - +20%  
4 LANE UNDIVIDED - - - - +50%  
5 LANE UNDIVIDED - - - - +80%  
6 LANE UNDIVIDED - - - - +100%

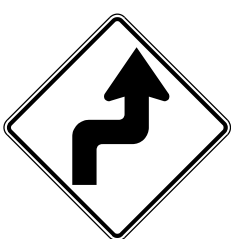
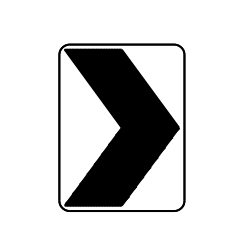
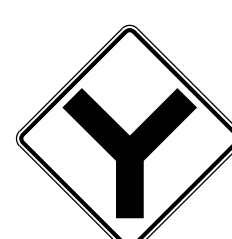
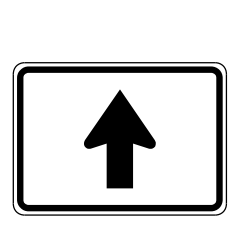
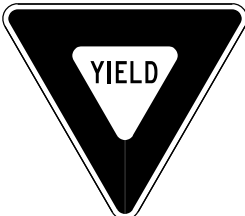
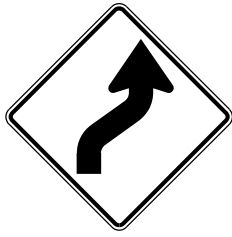
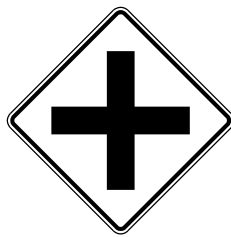
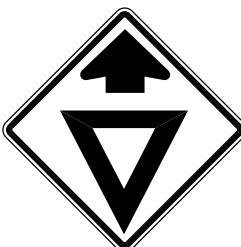
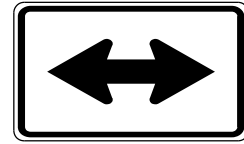
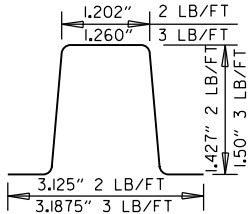
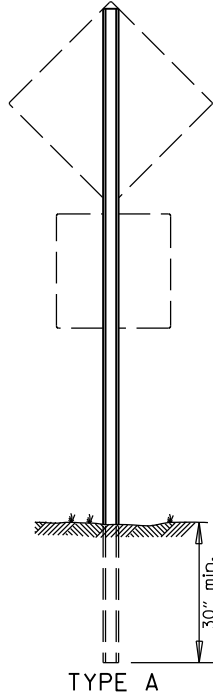
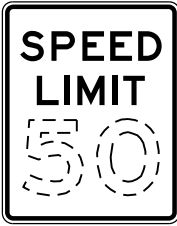
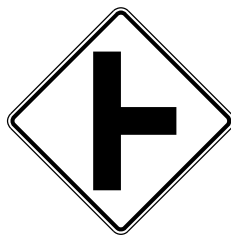
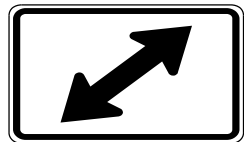
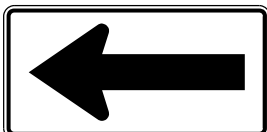
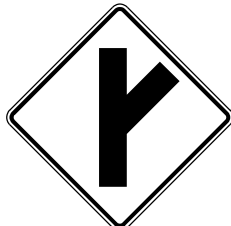
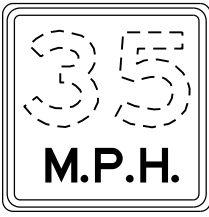
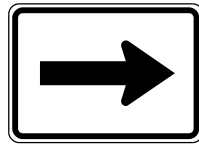
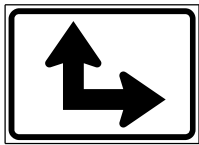
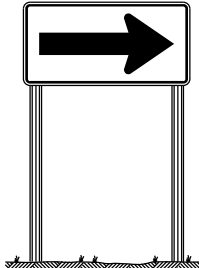
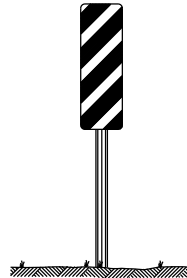
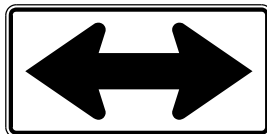
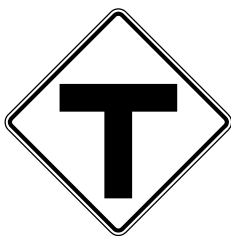
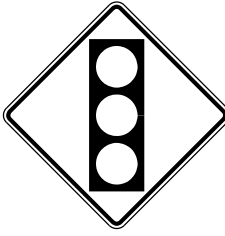
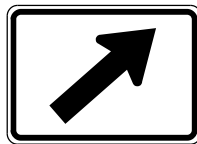
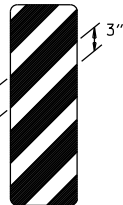
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.  
RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.

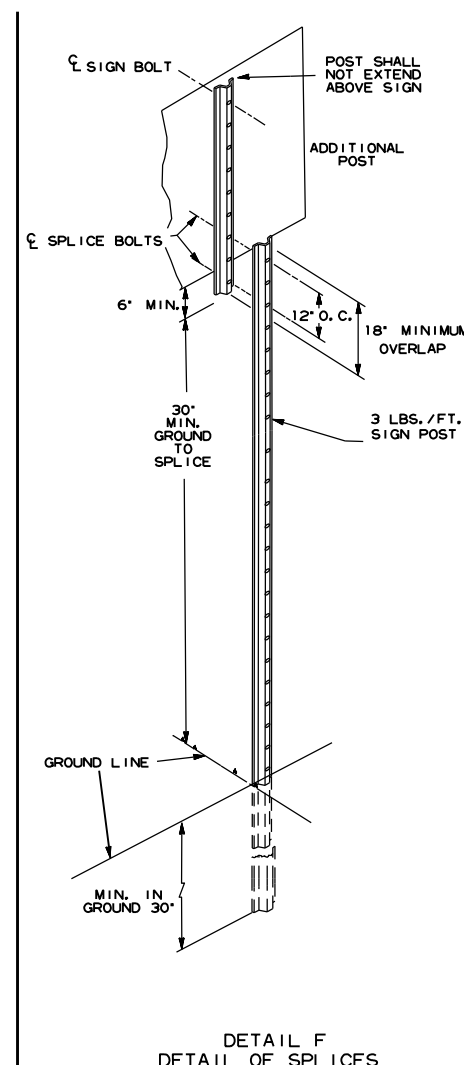
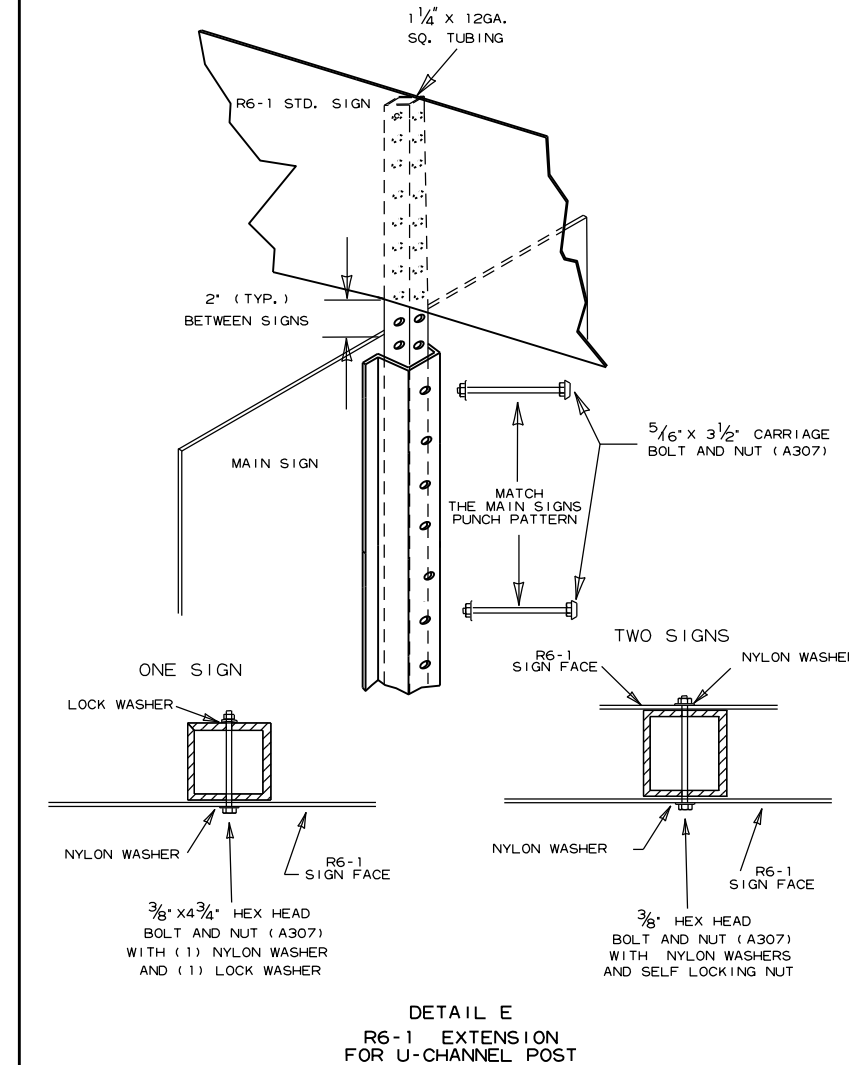
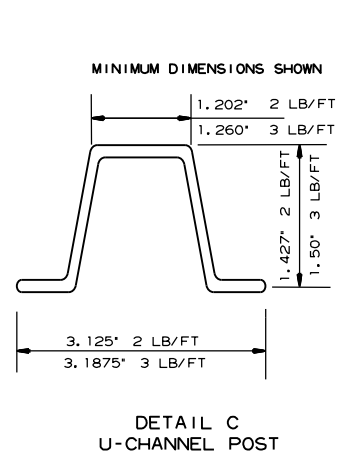
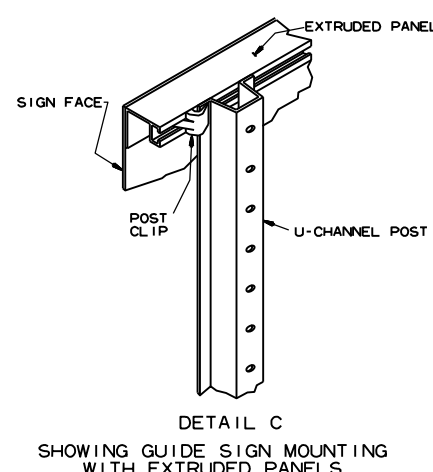
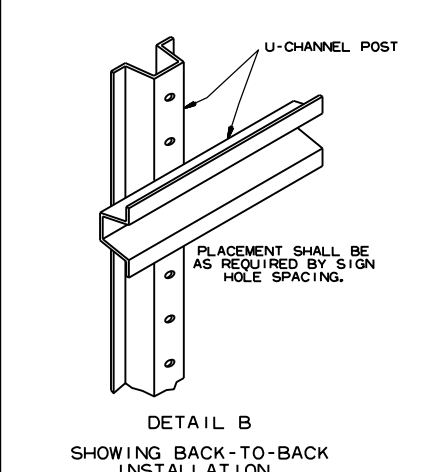
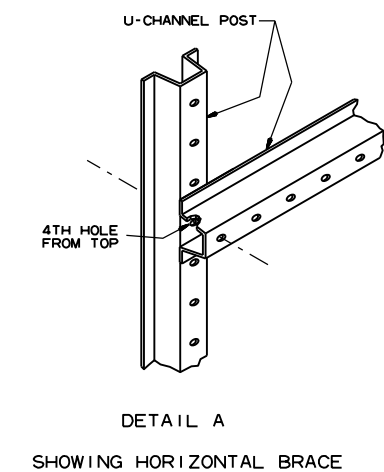
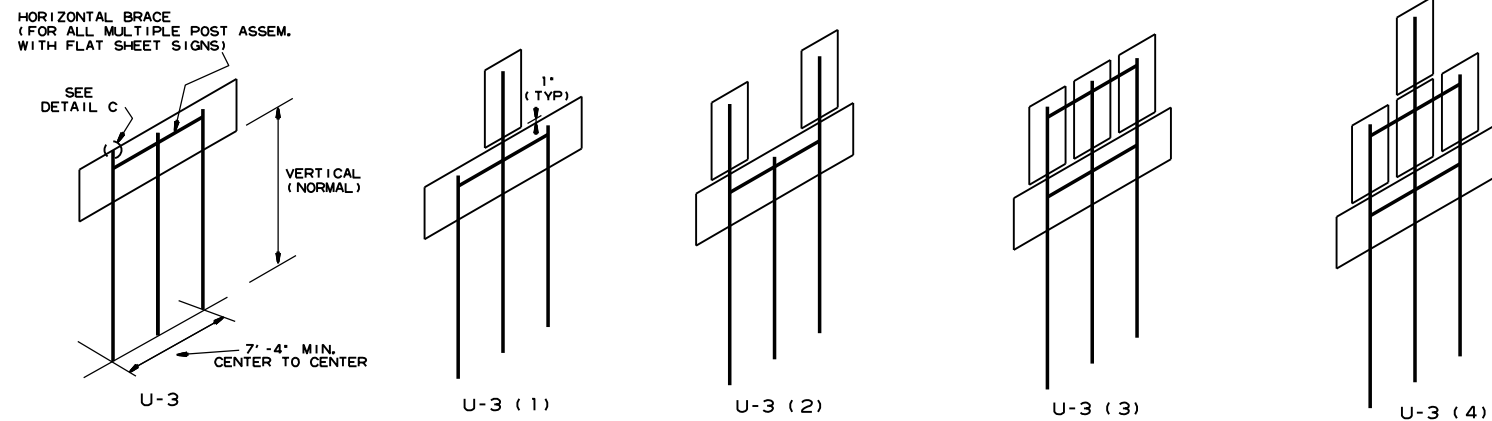
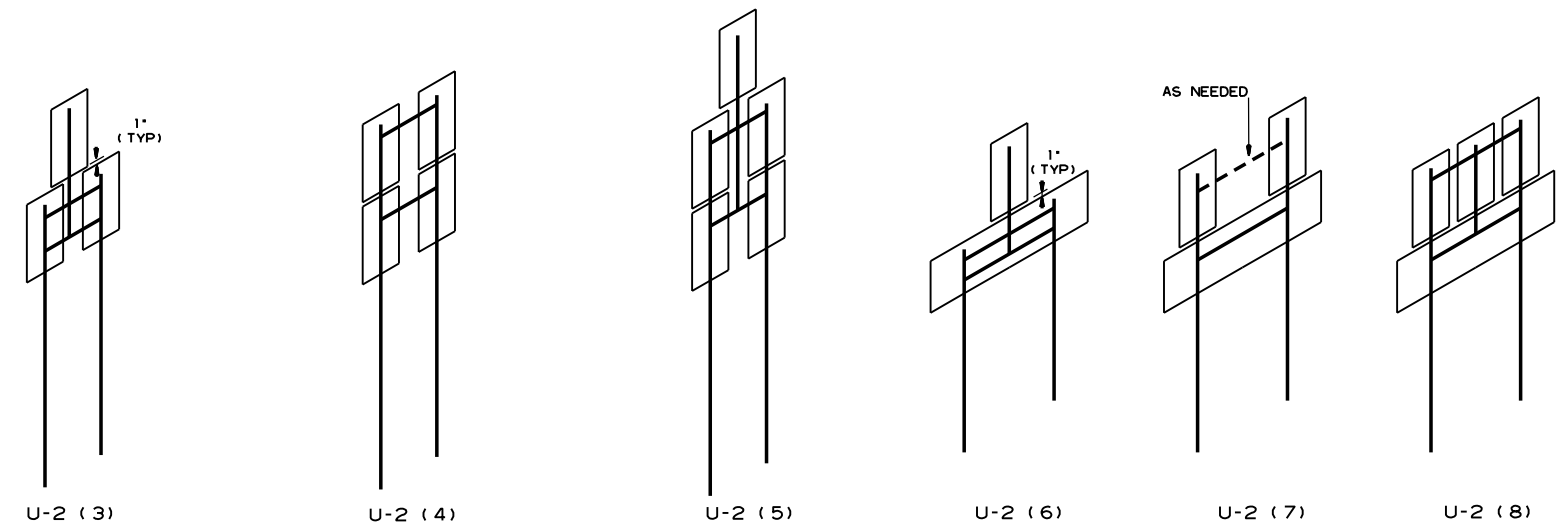
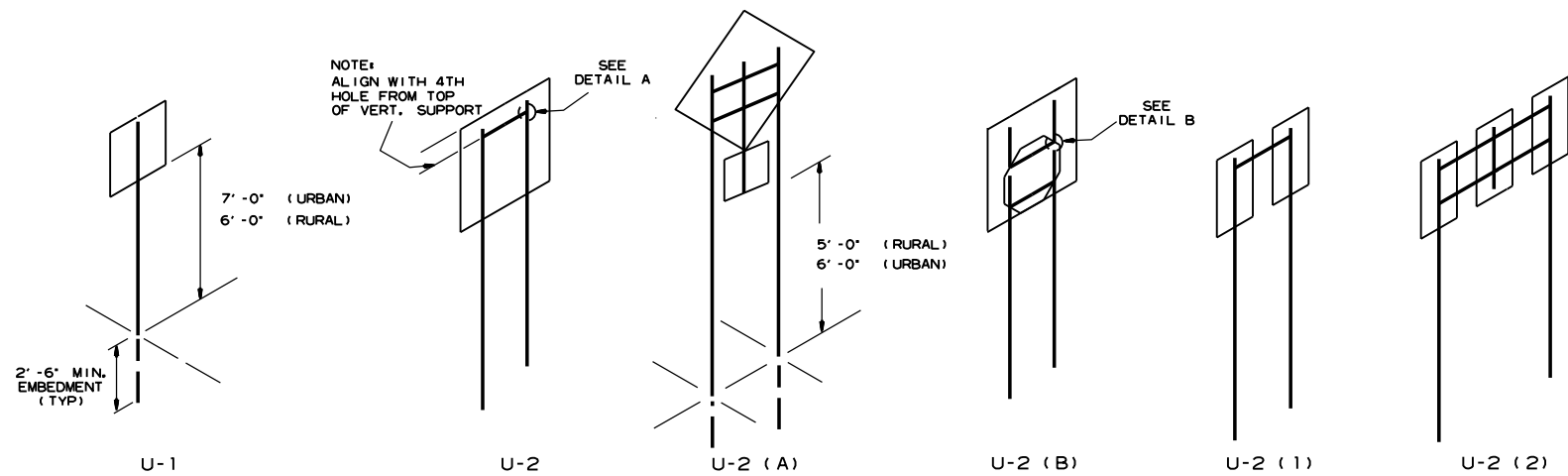
SUPERELEVATION FORMULA =  $\frac{Lde}{Ls}$



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE



|                                                                                                                                  |                                                                                                                                |                                                                                                                                  |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------|----------------------------------------------|--|---------|----------------------------------------|--|---------|--------------------------------------|--|--------|---------|-------------|---------|-------------|-------------|--------|----------|------------|--------|----------------------------------------------|------------|---------|----------------------------|-------------|----------|--------------------|--------------|---------|--------|-------------|------|----------|-------------|
|  <div>RI-1<br/>30"x30"</div>                     |  <div>W1-3<br/>30"x30"<br/>(LT. OR RT.)</div>  |  <div>W1-8<br/>18"x24"</div>                     |  <div>W2-5<br/>30"x30"</div>          |  <div>W3-1<br/>36"x36"</div>      |  <div>W5-1<br/>36"x36"</div>                                                                                                                                       |  <div>M6-3<br/>21"x15"</div>                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
|  <div>RI-2<br/>36"x36"x36"</div>                |  <div>W1-4<br/>30"x30"<br/>(LT. OR RT.)</div> |  <div>W2-1<br/>30"x30"</div>                    |  <div>SI-1<br/>36"x36"</div>         |  <div>W3-2<br/>36"x36"</div>     | <div>LASSEN<br/>16<br/>COUNTY<br/>County<br/>Route Marker<br/>MI-6<br/>24"x24"</div> <div>NOTE: REFLECTORIZED YELLOW<br/>LEGEND (COUNTY NAME, ROUTE<br/>LETTER &amp; NUMBER) &amp; BORDER<br/>ON A BLUE BACKGROUND.</div>                            |  <div>M6-4<br/>21"x15"</div>                                                                                                                              | <div>MINIMUM DIMENSIONS SHOWN<br/>SUPPORT SECTION</div>  <div>(U-CHANNEL)<br/>STANDARD SUPPORT<br/>ASSEMBLIES</div>  <div>TYPE A</div> <div>NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO<br/>PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR<br/>IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION<br/>OF 30" IN THE SOIL.</div>                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
|  <div>R2-1<br/>24"x30"</div>                    |  <div>W1-5<br/>30"x30"<br/>(LT. OR RT.)</div> |  <div>W2-2<br/>30"x30"</div>                    |  <div>W5-2<br/>36"x36"</div>         |  <div>W8-3<br/>36"x36"</div>     | <div>NOTE: REFLECTORIZED YELLOW<br/>LEGEND (COUNTY NAME, ROUTE<br/>LETTER &amp; NUMBER) &amp; BORDER<br/>ON A BLUE BACKGROUND.</div>  <div>RI-3P<br/>18"x6"</div> |  <div>M6-5<br/>21"x15"</div>                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
|  <div>W1-1<br/>30"x30"<br/>(LT. OR RT.)</div> |  <div>W1-6<br/>48"x24"</div>                |  <div>W2-3<br/>30"x30"<br/>(LT. OR RT.)</div> |  <div>W5-3<br/>36"x36"</div>       |  <div>W13-1P<br/>18"x18"</div> | <div>NOTE: ALL M6 SIGNS TO BE MADE<br/>WITH REFLECTORIZED YELLOW<br/>ARROW &amp; BORDER WITH BLUE<br/>BACKGROUND.</div>  <div>M6-1<br/>21"x15"</div>            |  <div>M6-6<br/>21"x15"</div>                                                                                                                            |  <div>TYPE B</div>  <div>TYPE C</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
|  <div>W1-2<br/>30"x30"<br/>(LT. OR RT.)</div> |  <div>W1-7<br/>48"x24"</div>                |  <div>W2-4<br/>30"x30"</div>                  |  <div>W10-1<br/>36" DIAMETER</div> |  <div>W3-3<br/>36"x36"</div>   |  <div>M6-2<br/>21"x15"</div>                                                                                                                                    | <div>SCHOOL<br/>S4-3P<br/>24"x8"</div> <div>WHEN<br/>CHILDREN<br/>ARE PRESENT<br/>S4-2P<br/>24"x10"</div>  <div>OM-3<br/>12"x36"<br/>(LT. OR RT.)</div> | <div>MINIMUM WEIGHT<br/>TYPE A &amp; B = 3 LBS./FT.<br/>TYPE C = 2 LBS./FT.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| STANDARD HIGHWAY SIGNS                                                                                                           |                                                                                                                                |                                                                                                                                  |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              | SUPPORT ASSEMBLIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
|                                                                                                                                  |                                                                                                                                |                                                                                                                                  |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              | ARKANSAS STATE HIGHWAY COMMISSION<br>STANDARD HIGHWAY SIGNS<br>AND SUPPORT ASSEMBLIES<br>STANDARD DRAWING SHS-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
|                                                                                                                                  |                                                                                                                                |                                                                                                                                  |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              | <table><tr><td>9-12-13</td><td>DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P</td><td></td></tr><tr><td>4-17-08</td><td>REVISED SIGN DESIGNATION - W3-1 &amp; W3-2</td><td></td></tr><tr><td>4-10-03</td><td>REVISED W5-2, W8-3, OM-3; ADDED W1-8</td><td></td></tr><tr><td>1-5-81</td><td>REDRAWN</td><td>960-1-15-81</td></tr><tr><td>9-15-78</td><td>ADDED W14-3</td><td>877-9-15-78</td></tr><tr><td>9-2-76</td><td>POST WT.</td><td>623-9-3-76</td></tr><tr><td>5-3-76</td><td>STEEL POST WT. FROM 2"-3"; ADDED S4-2 &amp; S4-3</td><td>504-5-3-76</td></tr><tr><td>8-12-74</td><td>REV. HT. TYPE "C" ASSEMBLY</td><td>500-8-21-74</td></tr><tr><td>12-21-72</td><td>ADDED M6-2,3,4,5,6</td><td>500-12-21-72</td></tr><tr><td>12-1-72</td><td>ISSUED</td><td>562-12-1-72</td></tr><tr><td>DATE</td><td>REVISION</td><td>DATE FILMED</td></tr></table> |  | 9-12-13 | DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P |  | 4-17-08 | REVISED SIGN DESIGNATION - W3-1 & W3-2 |  | 4-10-03 | REVISED W5-2, W8-3, OM-3; ADDED W1-8 |  | 1-5-81 | REDRAWN | 960-1-15-81 | 9-15-78 | ADDED W14-3 | 877-9-15-78 | 9-2-76 | POST WT. | 623-9-3-76 | 5-3-76 | STEEL POST WT. FROM 2"-3"; ADDED S4-2 & S4-3 | 504-5-3-76 | 8-12-74 | REV. HT. TYPE "C" ASSEMBLY | 500-8-21-74 | 12-21-72 | ADDED M6-2,3,4,5,6 | 500-12-21-72 | 12-1-72 | ISSUED | 562-12-1-72 | DATE | REVISION | DATE FILMED |
| 9-12-13                                                                                                                          | DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P                                                                                   |                                                                                                                                  |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 4-17-08                                                                                                                          | REVISED SIGN DESIGNATION - W3-1 & W3-2                                                                                         |                                                                                                                                  |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 4-10-03                                                                                                                          | REVISED W5-2, W8-3, OM-3; ADDED W1-8                                                                                           |                                                                                                                                  |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 1-5-81                                                                                                                           | REDRAWN                                                                                                                        | 960-1-15-81                                                                                                                      |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 9-15-78                                                                                                                          | ADDED W14-3                                                                                                                    | 877-9-15-78                                                                                                                      |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 9-2-76                                                                                                                           | POST WT.                                                                                                                       | 623-9-3-76                                                                                                                       |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 5-3-76                                                                                                                           | STEEL POST WT. FROM 2"-3"; ADDED S4-2 & S4-3                                                                                   | 504-5-3-76                                                                                                                       |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 8-12-74                                                                                                                          | REV. HT. TYPE "C" ASSEMBLY                                                                                                     | 500-8-21-74                                                                                                                      |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 12-21-72                                                                                                                         | ADDED M6-2,3,4,5,6                                                                                                             | 500-12-21-72                                                                                                                     |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| 12-1-72                                                                                                                          | ISSUED                                                                                                                         | 562-12-1-72                                                                                                                      |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |
| DATE                                                                                                                             | REVISION                                                                                                                       | DATE FILMED                                                                                                                      |                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |         |                                              |  |         |                                        |  |         |                                      |  |        |         |             |         |             |             |        |          |            |        |                                              |            |         |                            |             |          |                    |              |         |        |             |      |          |             |



NOTES:

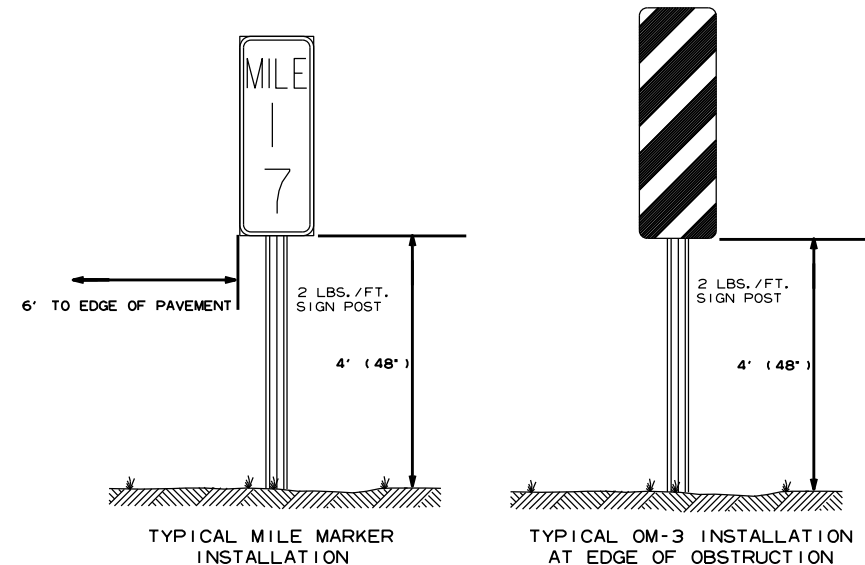
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL ( F ).

NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

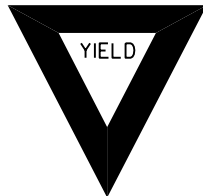
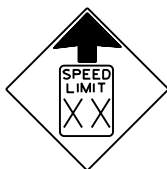
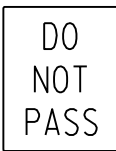
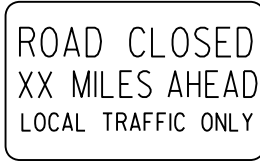
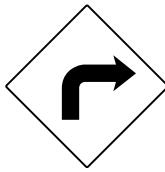
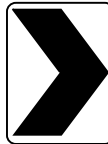
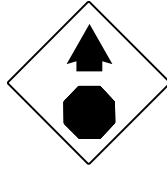
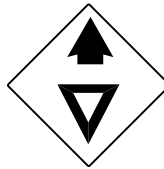
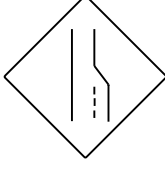
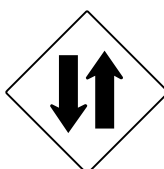
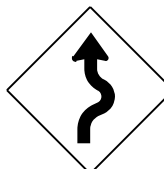
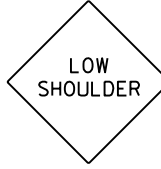
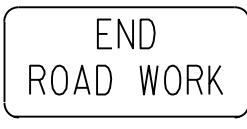
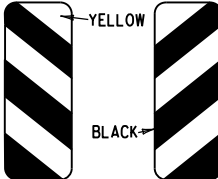
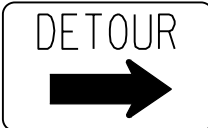
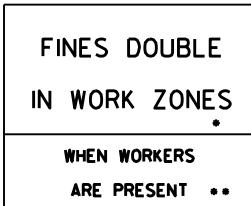
ALL SIGN POSTS SHALL BE PLUMB.

THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



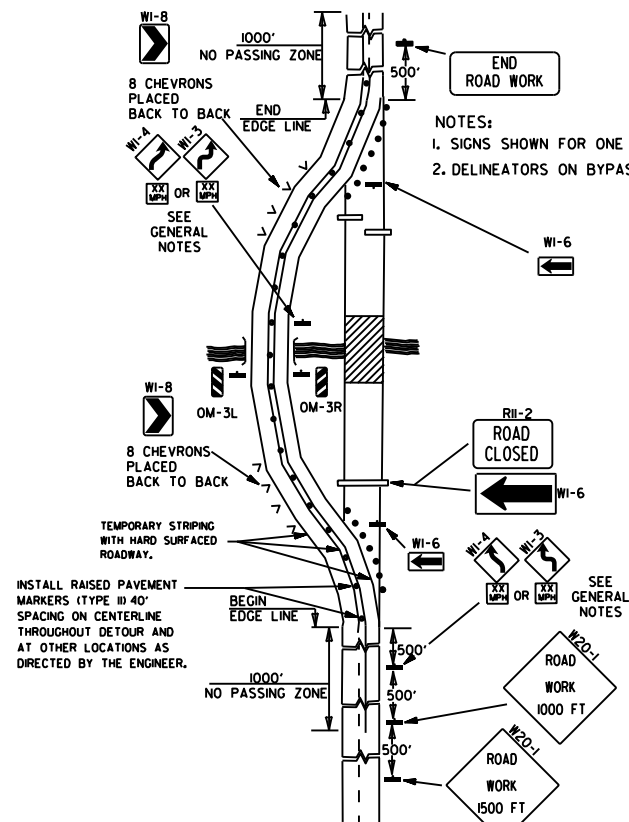
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|----------|--------------------------------------------------------------------------------------|--------|-----------------------------------|
| 7-25-19  | REVISED CARRIAGE BOLT WITH MATERIAL REQUIREMENT                                      |        | ARKANSAS STATE HIGHWAY COMMISSION |
| 2-27-14  | REVISED NOTES.                                                                       |        |                                   |
| 9-12-13  | REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS |        |                                   |
| 10-9-03  | REMOVED ROUND POST & REVISED SPACING                                                 |        |                                   |
| 10-12-95 | MOVED UPPER SPLICE                                                                   |        |                                   |
| 6-8-95   | REVISED SPLICE DETAIL                                                                | 6-8-95 |                                   |
| 2-2-95   | REDRAWN                                                                              | 2-2-95 |                                   |
| DATE     | REVISION                                                                             | FILMED |                                   |

# U-CHANNEL POST ASSEMBLIES STANDARD DRAWING SHS-2

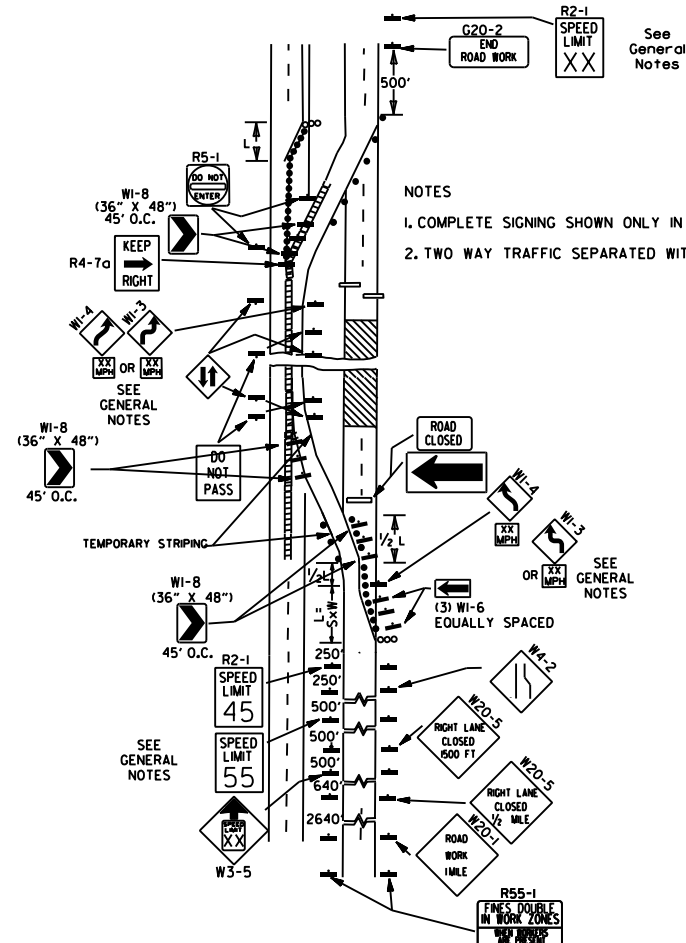
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| <div>RI-I</div> <div></div> <div>STANDARD 30"x30"<br/>EXPRESSWAY 36"x36"<br/>SPECIAL 48"x48"</div> | <div>RI-2</div> <div></div> <div>STD. 36"x36"x36"<br/>EXPWY. 48"x48"x48"<br/>FWY. 60"x60"x60"</div> | <div>R2-I</div> <div></div> <div>STD. 24"x30"<br/>EXPWY. 36"x48"<br/>FWY. 48"x60"</div>                   | <div>W3-5</div> <div></div> <div>STD. 36"x36"<br/>EXPWY. 48"x48"<br/>FWY. 48"x48"</div>                     | <div>W3-5a</div> <div></div> <div>STD. 36"x36"<br/>EXPWY. 48"x48"<br/>FWY. 48"x48"</div> | <div>R4-I</div> <div></div> <div>STD. 24"x30"<br/>EXPWY. 36"x48"<br/>FWY. 48"x60"</div>       | <div>R4-2</div> <div></div> <div>STD. 24"x30"<br/>EXPWY. 36"x48"<br/>FWY. 48"x60"</div> | <div>ADVANCE DISTANCES (XXXX)</div> <div>500 FT 1/2 MILE<br/>1000 FT 3/4 MILE<br/>1500 FT 1 MILE AHEAD</div> <div>GENERAL NOTES:<br/>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.<br/>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.<br/>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.<br/>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.<br/>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.<br/>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.<br/>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.<br/>8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.<br/>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.<br/>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.<br/><br/>• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 &amp; 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.</div> |
| <div>R5-I</div> <div></div> <div>STD. 30"x30"<br/>EXPWY. 36"x36"<br/>SPECIAL 48"x48"</div>         | <div>R1I-2</div> <div></div> <div>48"x30"</div>                                                     | <div>R1I-3A</div> <div></div> <div>60"x30"</div>                                                          | <div>R1I-4</div> <div></div> <div>60"x30"</div>                                                              | <div>W2I-5a</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                   | <div>WI-I</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                          | <div>WI-2</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <div>WI-3</div> <div></div> <div>STD. 48"x48"</div>                                                | <div>WI-4</div> <div></div> <div>STD. 48"x48"</div>                                                 | <div>WI-6</div> <div></div> <div>STD. 48"x24"<br/>SPECIAL 60"x30"</div>                                   | <div>WI-8</div> <div></div> <div>STD. 18"x24"<br/>SPECIAL 24"x30"<br/>EXPWY. 30"x36"<br/>FWY. 36"x48"</div> | <div>W3-I</div> <div></div> <div>STD. 36"x36"<br/>SPECIAL 48"x48"</div>                  | <div>W3-2</div> <div></div> <div>STD. 36"x36"<br/>SPECIAL 48"x48"</div>                       | <div>W4-2</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <div>W5-I</div> <div></div> <div>STD. 36"x36"<br/>SPECIAL 48"x48"</div>                          | <div>W6-3</div> <div></div> <div>EXPWY. 36"x36"<br/>SPECIAL 48"x48"</div>                         | <div>W8-7</div> <div></div> <div>EXPWY. 36"x36"<br/>FWY. 48"x48"</div>                                  | <div>W9-2</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                                      | <div>WI3-I</div> <div></div> <div>STD. 24"x24"</div>                                   | <div>W20-I</div> <div></div> <div>STD. 48"x48"</div>                                        | <div>W20-2</div> <div></div> <div>STD. 48"x48"</div>                                  | <div>W20-3</div> <div></div> <div>STD. 48"x48"</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <div>W20-4</div> <div></div> <div>STD. 48"x48"</div>                                             | <div>W20-5</div> <div></div> <div>STD. 48"x48"</div>                                              | <div>W20-7a</div> <div><div>18" 500 FEET 24" W16-2</div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div> | <div>W2I-2</div> <div></div> <div>STD. 30"x30"<br/>SPECIAL 36"x36"</div>                                  | <div>W2I-5</div> <div></div> <div>STD. 30"x30"<br/>SPECIAL 36"x36"</div>               | <div>W24-I</div> <div></div> <div>STD. 36"x36"</div>                                        | <div>WI-4b</div> <div></div> <div>STD. 48"x48"</div>                                  | <div>R56-I</div> <div></div> <div>STD. 18"x18"</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <div>W8-II</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                            | <div>W8-9</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                              | <div>G20-I</div> <div></div> <div>60"x24"</div>                                                         | <div>G20-2</div> <div></div> <div>48"x24"</div>                                                           | <div>OM-3L OM-3R</div> <div></div> <div>12"x36"</div>                                  | <div>M4-9</div> <div></div> <div>STD. 30"x24"<br/>SPECIAL 48"x36"<br/>SPECIAL 60"x48"</div> | <div>M4-10</div> <div></div> <div>48"x18"</div>                                       | <div>R55-I</div> <div></div> <div>36"x60"<br/>• USE 6" C LETTERS<br/>•• USE 4" D LETTERS</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|          |                                                                            |        |
|----------|----------------------------------------------------------------------------|--------|
| II-07-19 | REVISED FOR MASH                                                           |        |
| 4-13-17  | DELETED RSP-1 & ADDED W2I-5a                                               |        |
| 9-2-15   | REVISED REDUCED SPEED LIMIT AHEAD SIGNS<br>REVISED ROAD WORK NEXT XX MILES |        |
| 12-15-11 | REVISED W24-1                                                              |        |
| 11-17-10 | DELETED W8-9a & ADDED W8-9                                                 |        |
| 10-15-09 | ADDED REFERENCE TO MASH & ADDED SIGN W24-1                                 |        |
| 4-17-08  | REVISED SIGN DESIGNATIONS                                                  |        |
| 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                                                    |        |
| DATE     | REVISION                                                                   | FILMED |

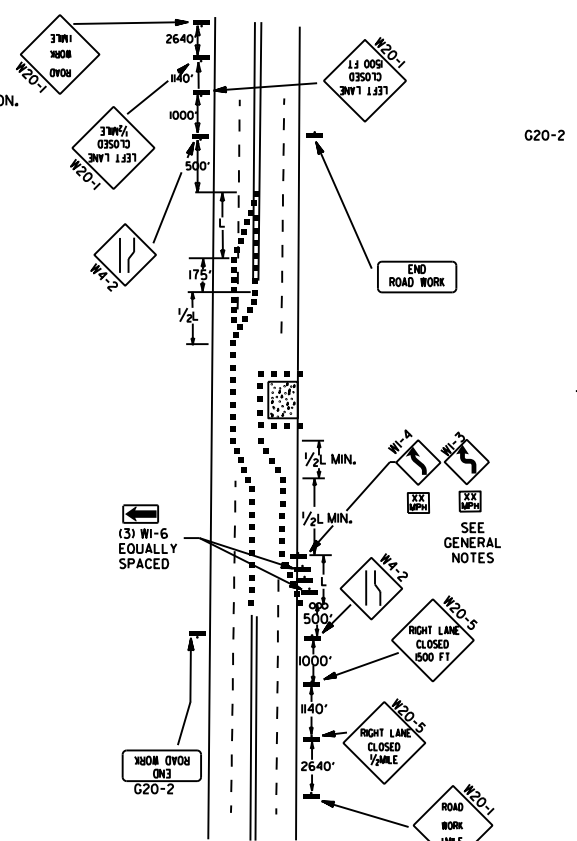
ARKANSAS STATE HIGHWAY COMMISSION  
STANDARD TRAFFIC CONTROLS  
FOR HIGHWAY CONSTRUCTION  
STANDARD DRAWING TC-1



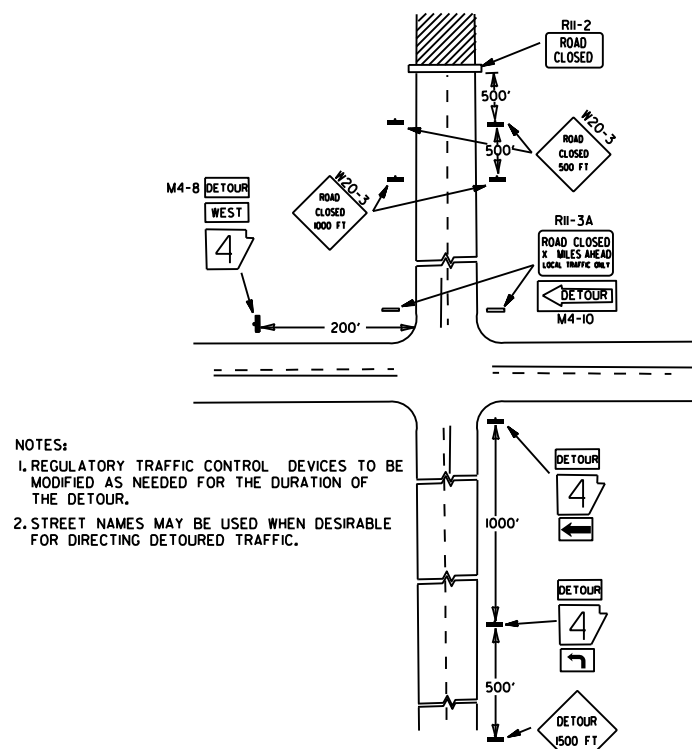
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



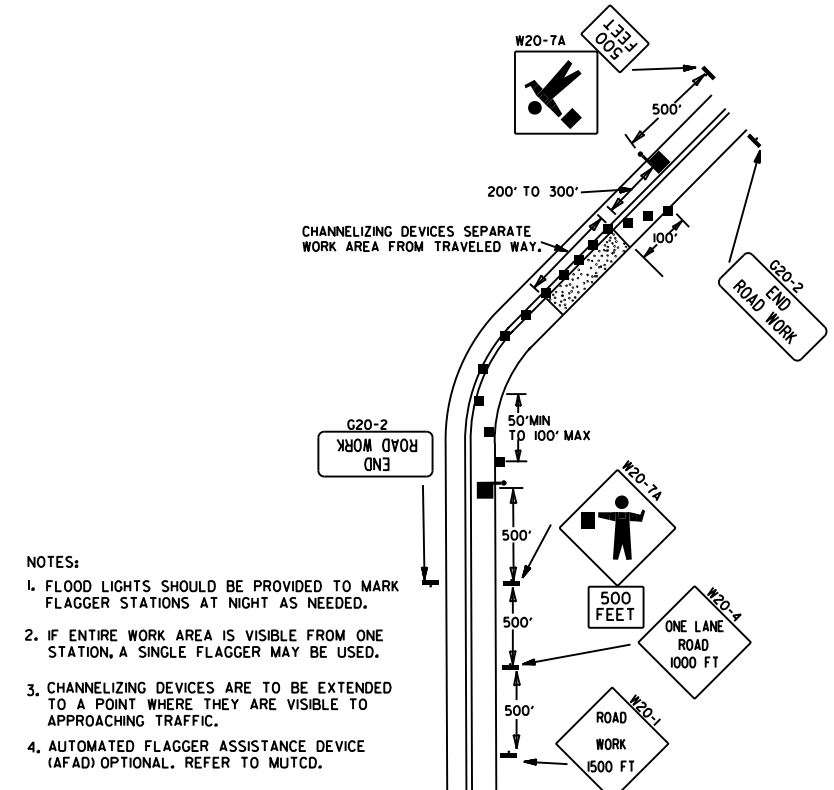
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



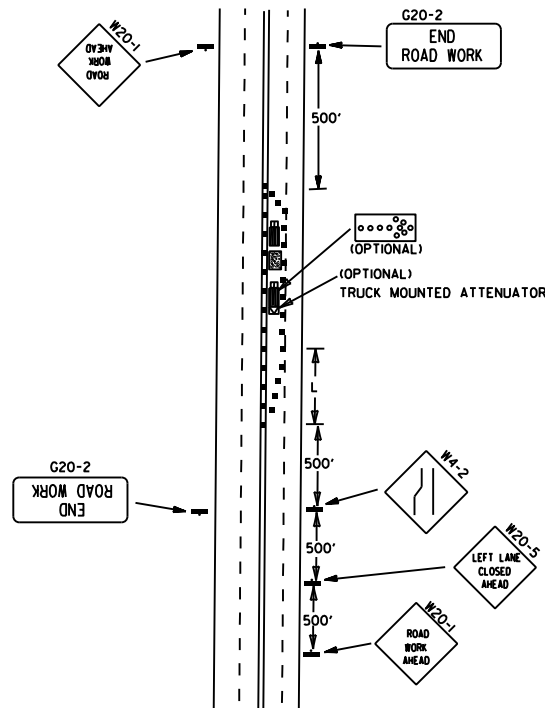
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



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

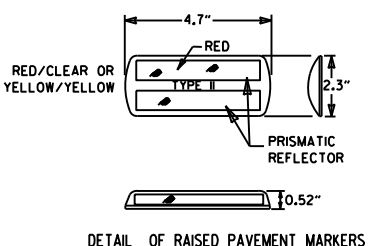


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



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

- KEY:
- FLAGGER
  - POSITIVE BARRIER
  - ARROW PANEL (IF REQUIRED)
  - TYPE III BARRICADE
  - CHANNELIZING DEVICE
  - TRAFFIC DRUM
  - RAISED PAVEMENT MARKER



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:

- THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
- WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-155 SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-145MPH SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
- WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-145 SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-145MPH SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
- THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
- WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
- PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
- 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
- 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 ARDOT QUALIFIED PRODUCTS LIST.
- ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

|          |                                                                              |        |
|----------|------------------------------------------------------------------------------|--------|
| 05-20-21 | REVISED NOTE 7                                                               |        |
| 11-07-19 | REVISED NOTE 1, ADDED NOTE 9                                                 |        |
| 9-2-15   | REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5 |        |
| 9-12-13  | REVISED DETAIL OF RAISED PAVEMENT MARKERS                                    |        |
| 3-11-10  | 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                                                      |        |
| DATE     | REVISION                                                                     | FILMED |

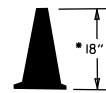
ARKANSAS STATE HIGHWAY COMMISSION  
STANDARD TRAFFIC CONTROLS  
FOR HIGHWAY CONSTRUCTION

(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY 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.

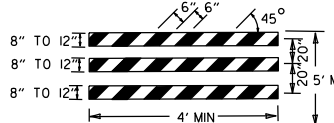
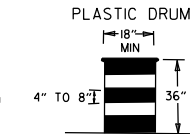
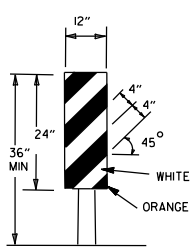
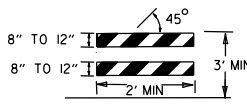
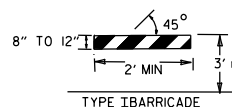
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

### CHANNELIZING DEVICES



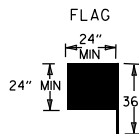
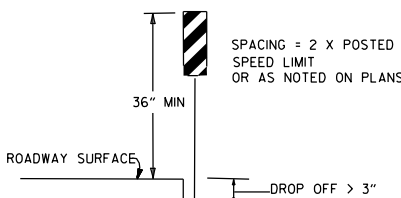
• WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

### CONES



NOTE:  
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.

### VERTICAL PANEL PLACEMENT



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

### KEY:

- ○ ○ ○ ARROW PANEL (IF REQUIRED)
- CHANNELIZING DEVICE
- TRAFFIC DRUM

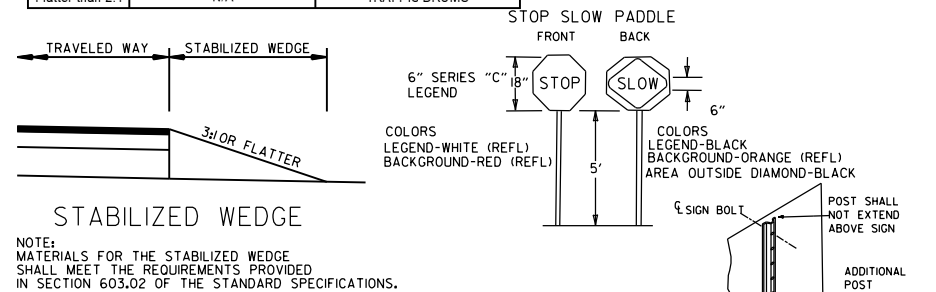
### GENERAL NOTES:

- A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
- WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
- WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-(65) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
- THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
- WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
- PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
- THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1/2 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
- FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
- TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
- ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

| TRAFFIC CONTROL DEVICES |                                           |                                                             |                                                                                |
|-------------------------|-------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------|
| NON-INTERSTATE          |                                           |                                                             |                                                                                |
| VERTICAL DIFFERENTIAL   | LOCATION                                  | TRAFFIC CONTROL                                             |                                                                                |
|                         |                                           | ≤ 45 MPH                                                    | > 45 MPH                                                                       |
| ≤ 1"                    | CENTERLINE                                | W8-11                                                       | W8-11                                                                          |
| > 1"                    | CENTERLINE                                | W8-11 AND CENTERLINE LANE STRIPING                          | W8-11 AND CENTERLINE LANE STRIPING                                             |
| ≤ 3"                    | CENTERLINE                                | STANDARD LANE CLOSURE <sup>(6)</sup>                        | STANDARD LANE CLOSURE <sup>(6)</sup>                                           |
| > 3"                    | CENTERLINE                                | STANDARD LANE CLOSURE <sup>(6)</sup>                        | STANDARD LANE CLOSURE <sup>(6)</sup>                                           |
| ≤ 3"                    | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-9 AND TRAFFIC DRUMS <sup>(1)</sup>                       | W8-9 AND TRAFFIC DRUMS <sup>(1)</sup>                                          |
| > 3"                    | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(1)</sup> | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(1)</sup>                    |
| > 6"                    | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(1)</sup> | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(2)</sup>                    |
| > 18"                   | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(1)</sup> | A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS <sup>(3)</sup> |
| > 24"                   | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | PRECAST CONCRETE BARRIER <sup>(4)</sup> & EDGE LINES        | PRECAST CONCRETE BARRIER <sup>(4)</sup> & EDGE LINES                           |

| INTERSTATE            |                                           |                                                             |
|-----------------------|-------------------------------------------|-------------------------------------------------------------|
| VERTICAL DIFFERENTIAL | LOCATION                                  | TRAFFIC CONTROL                                             |
| ≤ 3"                  | CENTERLINE                                | W8-11 AND LANE STRIPING                                     |
| ≤ 3"                  | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(2)</sup>  |
| > 3"                  | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(2)</sup> |
| > 6"                  | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | PRECAST CONCRETE BARRIER & EDGE LINES                       |

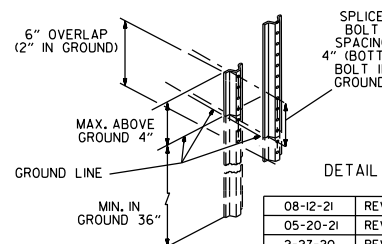
| INTERSTATE AND NON-INTERSTATE |        |                          |
|-------------------------------|--------|--------------------------|
| FORESLOPE                     | HEIGHT | TRAFFIC CONTROL          |
| 1:1                           | > 2 FT | PRECAST CONCRETE BARRIER |
| 2:1                           | ≤ 5 FT | TRAFFIC DRUMS            |
| 2:1                           | > 5 FT | PRECAST CONCRETE BARRIER |
| Flatter than 2:1              | N/A    | TRAFFIC DRUMS            |



### STABILIZED WEDGE

NOTE:  
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

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.

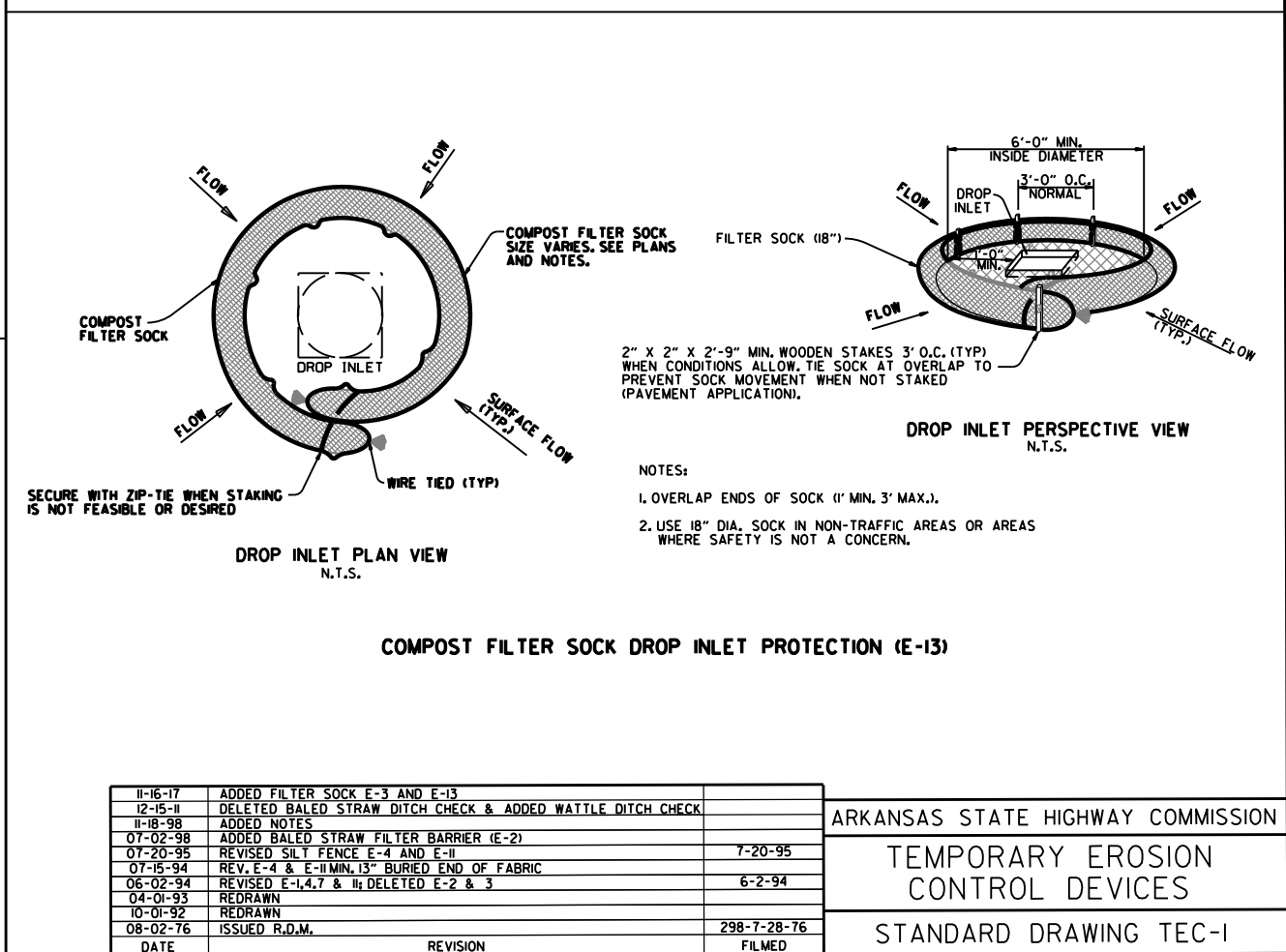
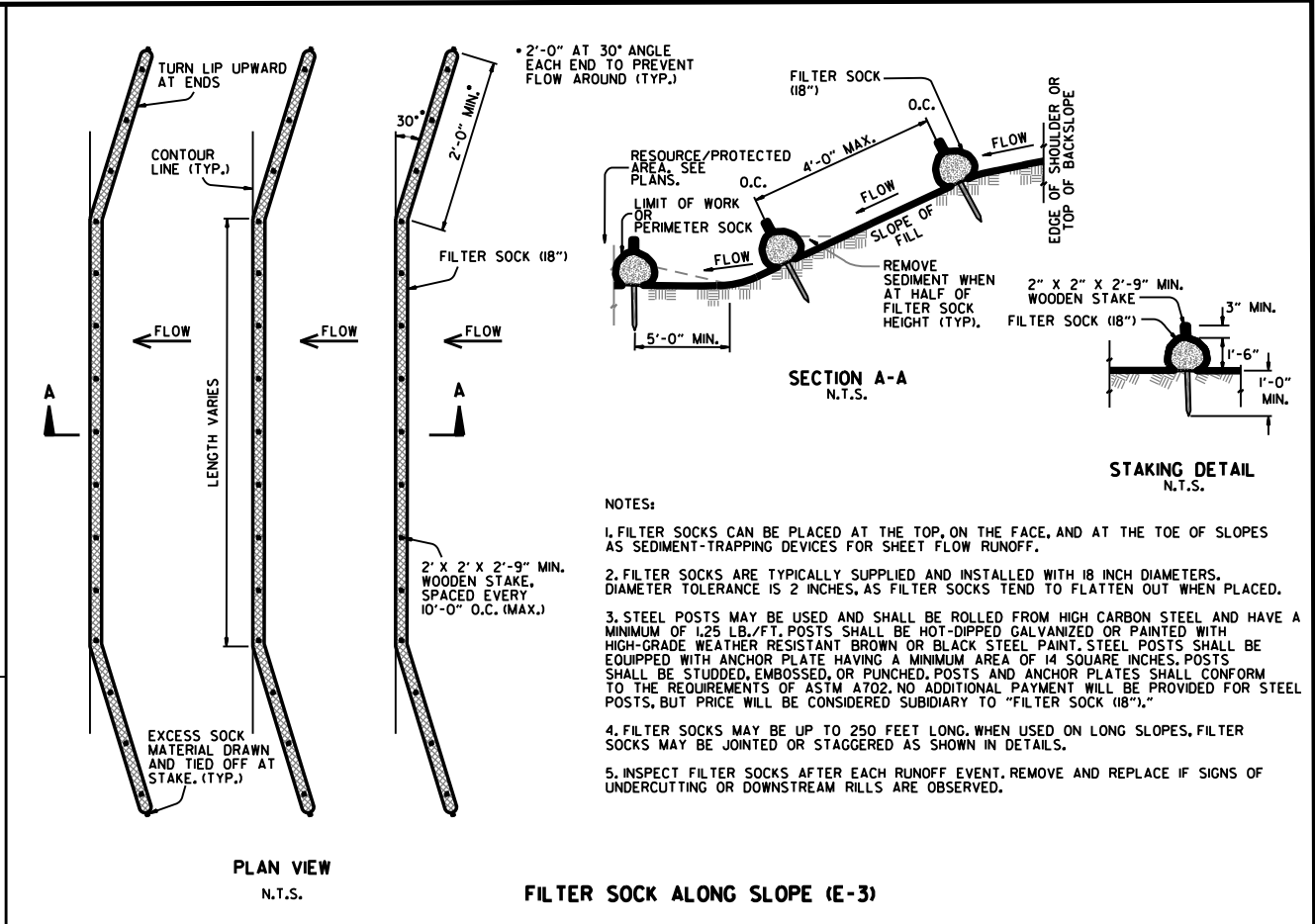
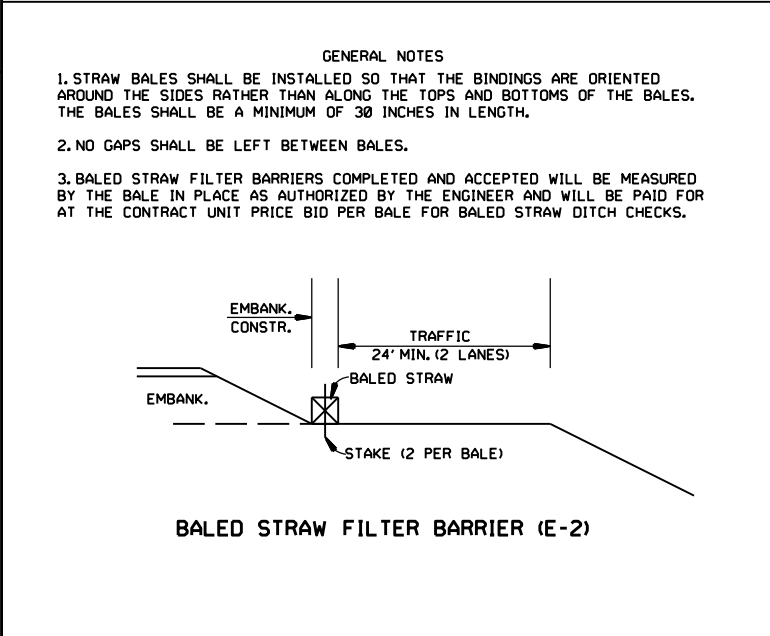
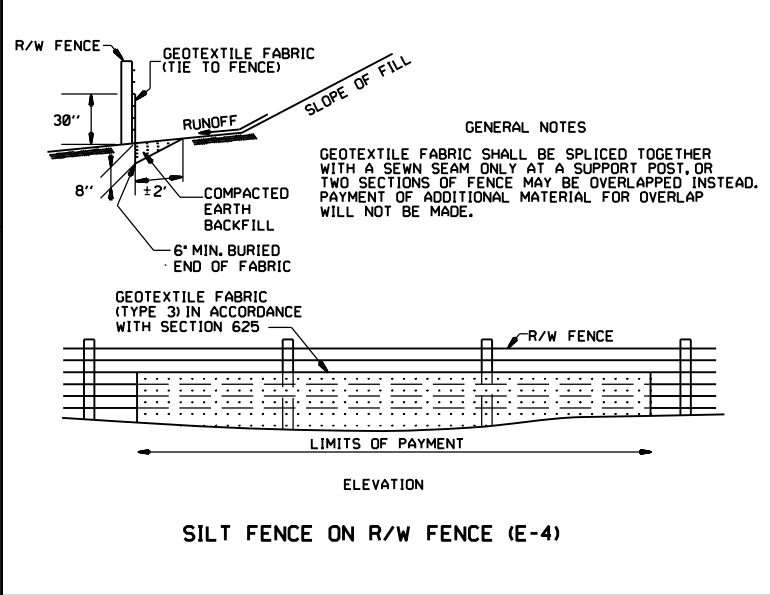
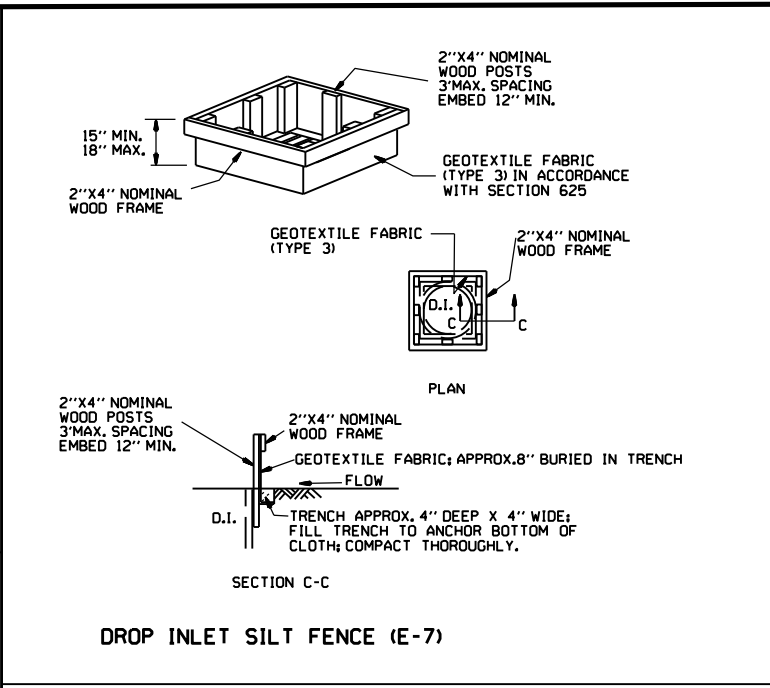
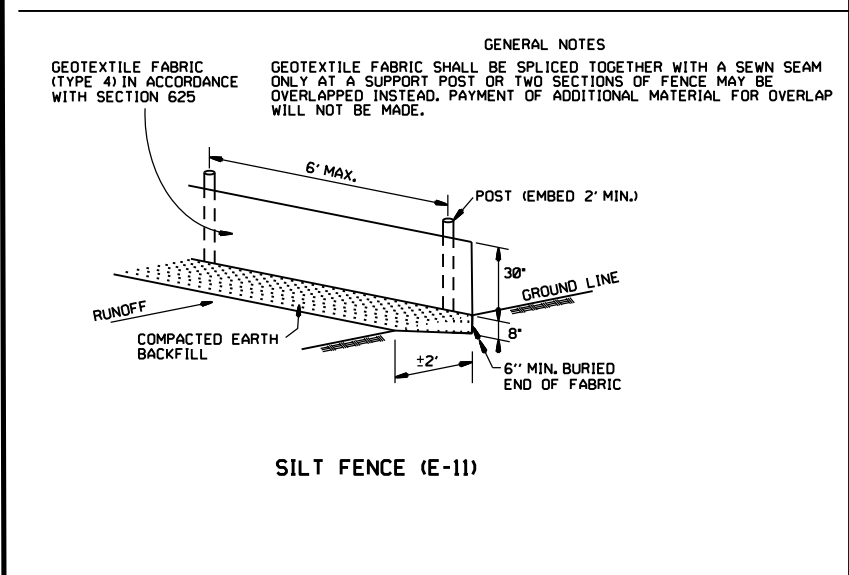
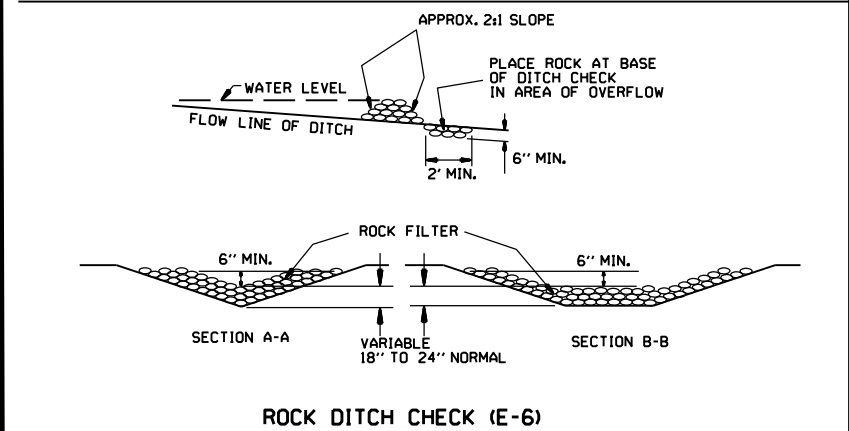
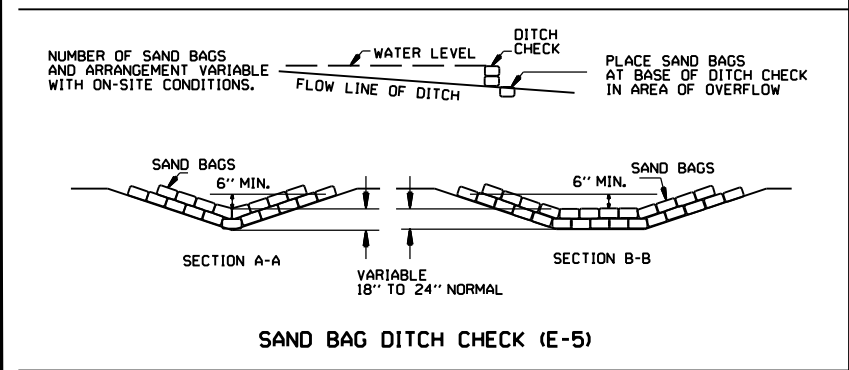
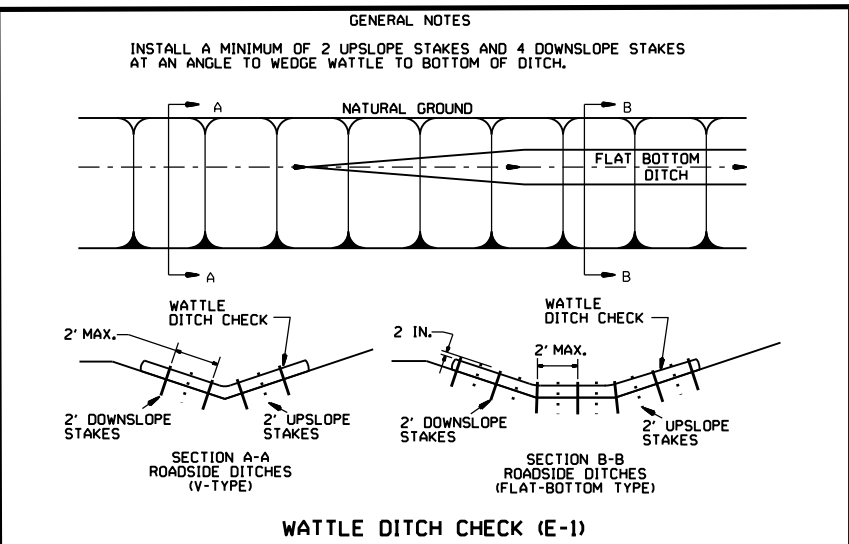


### DETAIL OF SPLICES

| DATE     | REVISION                                                   | FILED  |
|----------|------------------------------------------------------------|--------|
| 08-12-21 | REVISED TRAFFIC CONTROL DEVICES AND NOTES                  |        |
| 05-20-21 | REVISED NOTE 10                                            |        |
| 2-27-20  | REVISED TRAFFIC CONTROL DEVICES DETAILS                    |        |
| 11-07-19 | REVISED NOTE 9, ADDED NOTE 11                              |        |
| 7-25-19  | REVISED TRAFFIC CONTROL DEVICES DETAILS                    |        |
| 9-2-15   | REVISED NOTE 2 & REPLACED R2-5A WITH W3-5                  |        |
| 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 W6-18 & 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

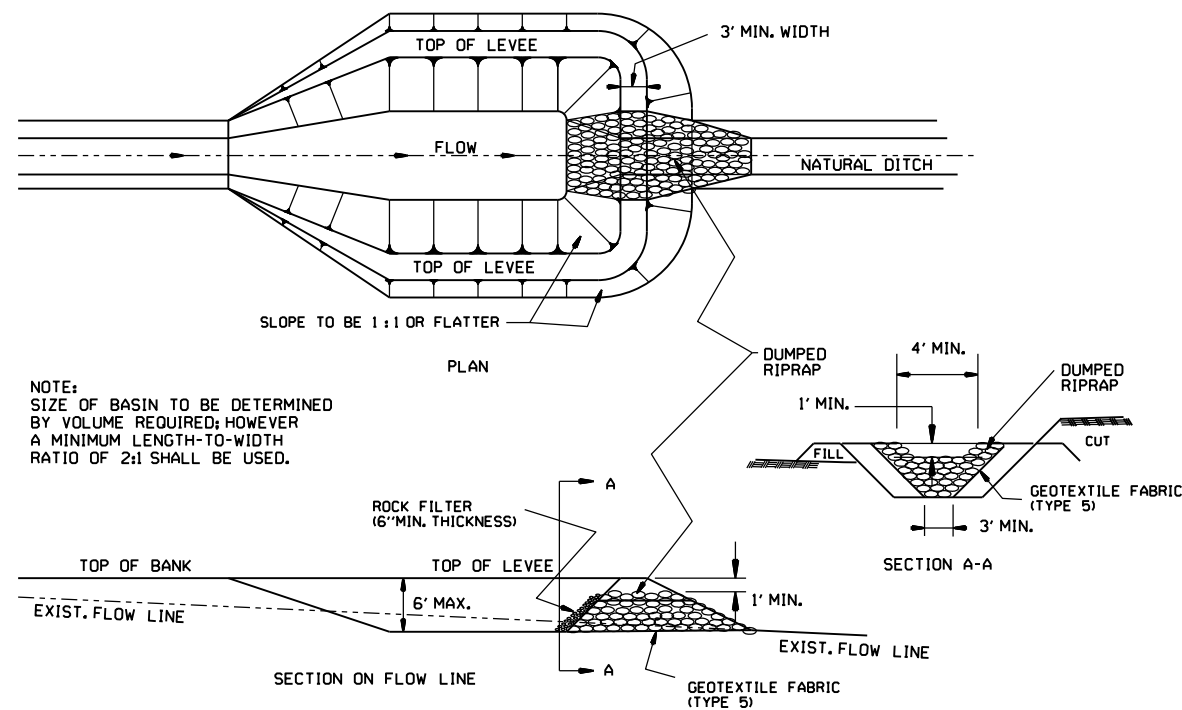


|          |                                                            |             |  |
|----------|------------------------------------------------------------|-------------|--|
| 11-16-17 | ADDED FILTER SOCK E-3 AND E-13                             |             |  |
| 12-15-11 | DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK |             |  |
| 11-18-98 | ADDED NOTES                                                |             |  |
| 07-02-98 | ADDED BALED STRAW FILTER BARRIER (E-2)                     |             |  |
| 07-20-95 | REVISED SILT FENCE E-4 AND E-11                            | 7-20-95     |  |
| 07-15-94 | REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC              |             |  |
| 06-02-94 | REVISED E-1, 4, 7 & 11; DELETED E-2 & 3                    | 6-2-94      |  |
| 04-01-93 | REDRAWN                                                    |             |  |
| 10-01-92 | REDRAWN                                                    |             |  |
| 08-02-76 | ISSUED R.D.M.                                              | 298-7-28-76 |  |
| DATE     | REVISION                                                   | FILMED      |  |

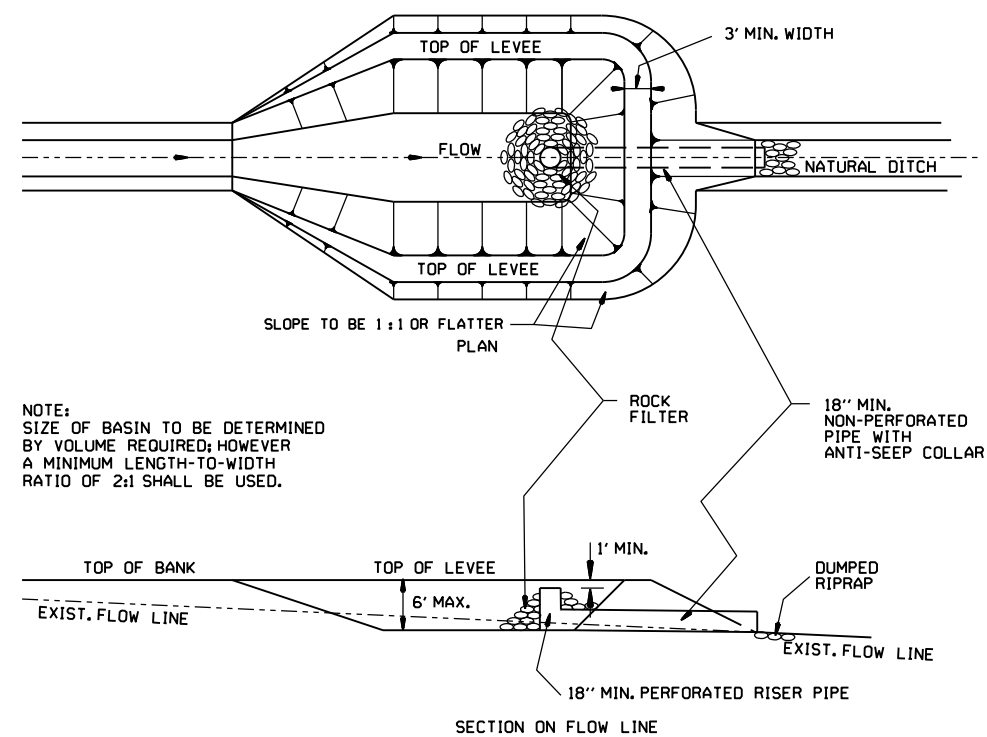
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

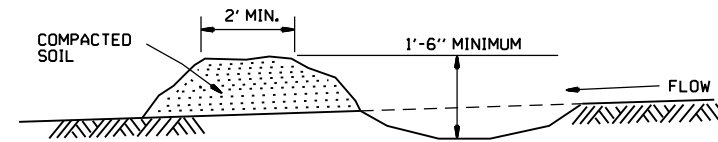
STANDARD DRAWING TEC-1



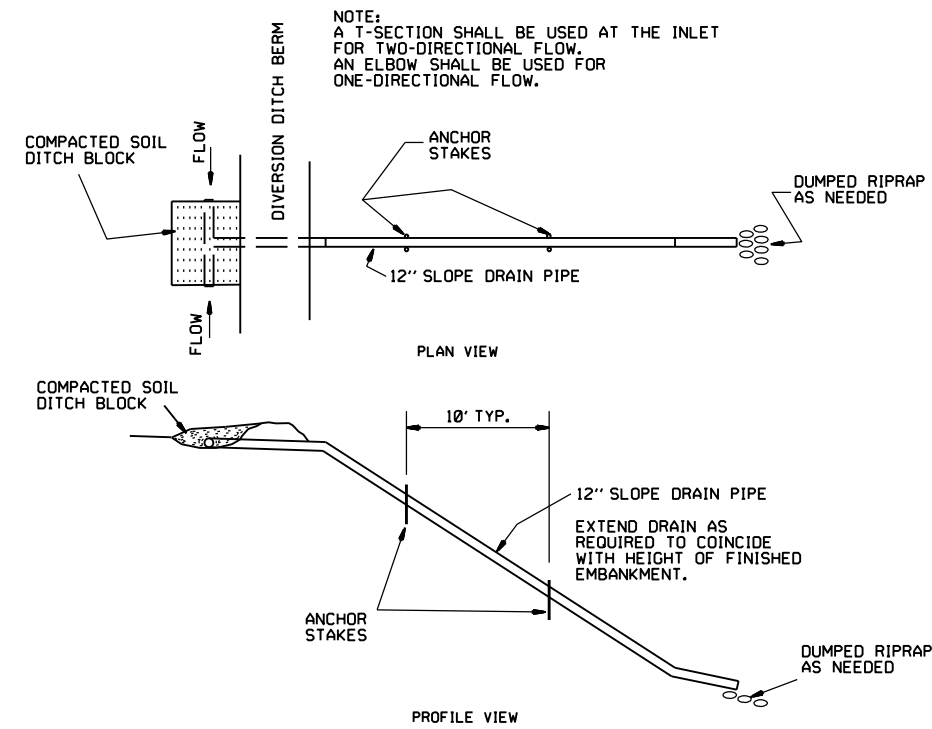
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



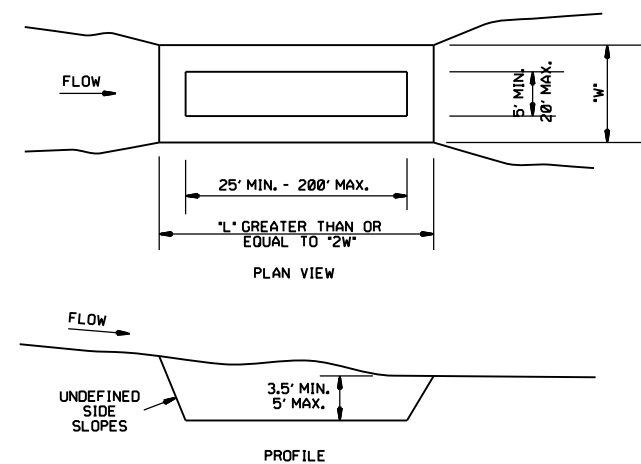
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

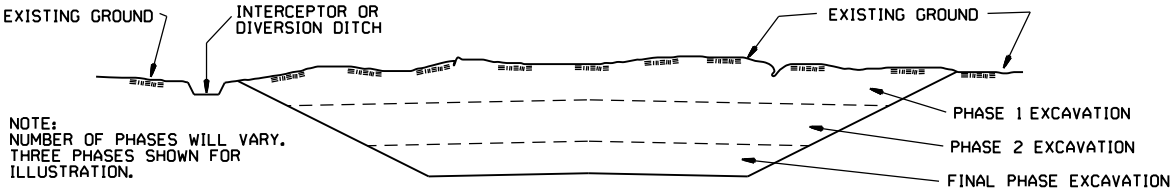
|        |                                               |        |                                   |
|--------|-----------------------------------------------|--------|-----------------------------------|
|        |                                               |        | ARKANSAS STATE HIGHWAY COMMISSION |
|        |                                               |        | TEMPORARY EROSION CONTROL DEVICES |
|        |                                               |        | STANDARD DRAWING TEC-2            |
| 6-2-94 | Revised E-8 & E-12; Added E-14 & Deleted E-13 |        |                                   |
| 4-1-93 | ISSUED                                        |        |                                   |
| DATE   | REVISION                                      | FILMED |                                   |

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

- 1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES ,DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
- 2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



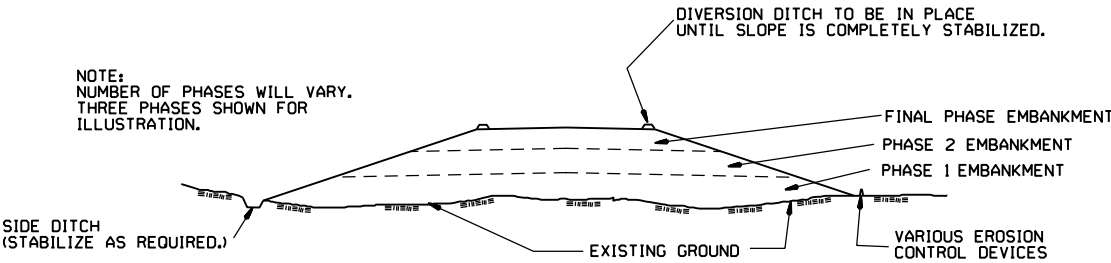
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

- 1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
- 2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
- 3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
- 4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



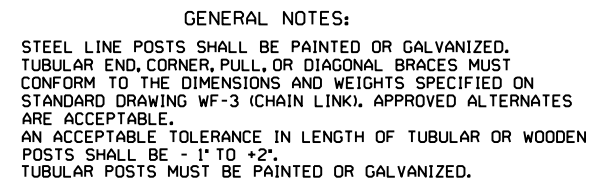
GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

- 1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
- 2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
- 3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
- 4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

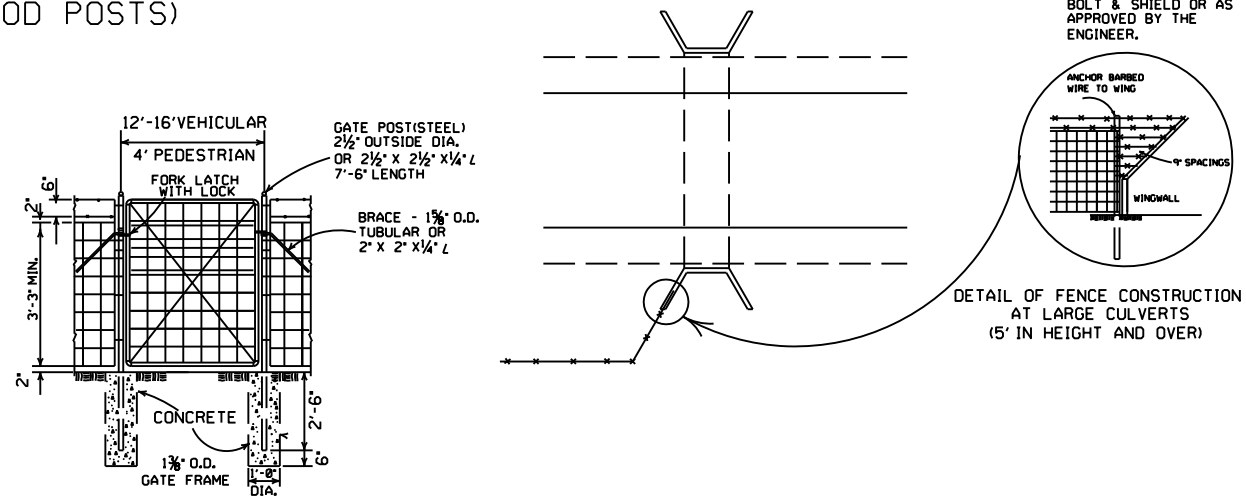
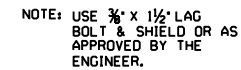
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|----------|--------------------|--------|-----------------------------------|
|          |                    |        | ARKANSAS STATE HIGHWAY COMMISSION |
|          |                    |        | TEMPORARY EROSION CONTROL DEVICES |
| 11-03-94 | CORRECTED SPELLING |        | STANDARD DRAWING TEC-3            |
| 6-2-94   | Drawn & Issued     | 6-2-94 |                                   |
| DATE     | REVISION           | FILMED |                                   |



THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS, WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD, WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

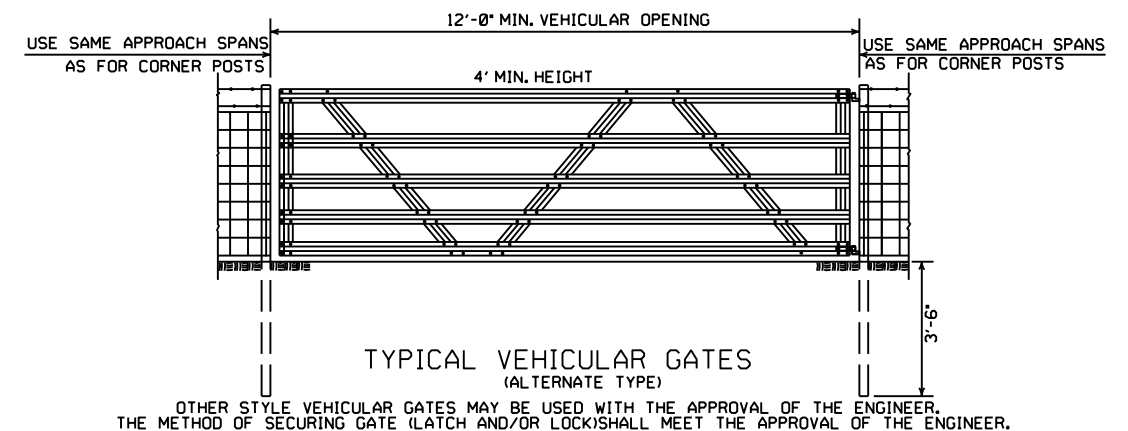
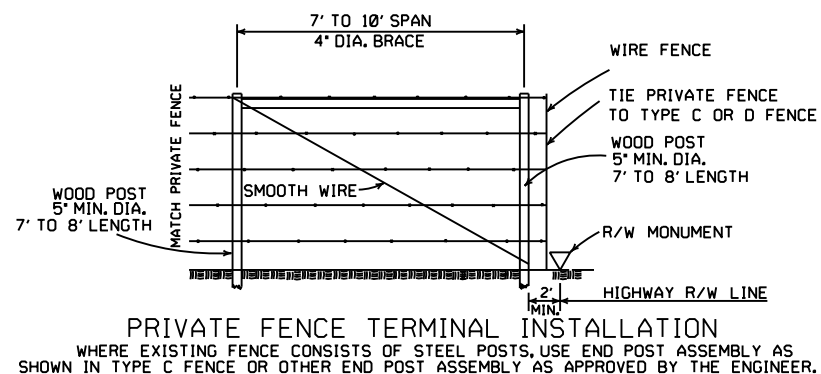
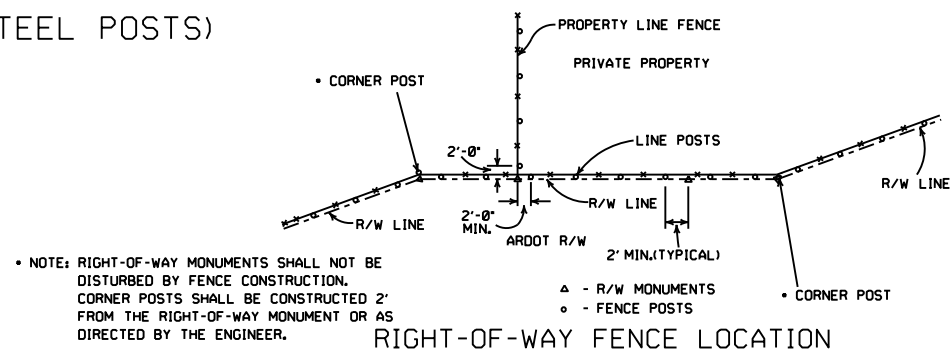


DETAIL OF FENCE CONSTRUCTION  
AT LARGE CULVERTS  
(5' IN HEIGHT AND OVER)

SPlice for BARBED WIRE BETWEEN PULL  
POST ASSEMBLY SHALL BE BY THE "EYE  
METHOD" AS DESCRIBED AS FOLLOWS:  
THE ENDS OF THE BARBED WIRE SHALL BE  
BENT TO FORM A LOOP. THE LOOPS SHALL  
BE CONNECTED. AFTER THE LOOPS ARE  
CONNECTED THE ENDS OF THE WIRE SHALL  
BE WRAPPED AROUND THE PROJECTING WIRES  
A MINIMUM OF 4 TIMES FOR EACH WIRE  
LOOP.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

STAPLE AT LEAST TOP,BOTTOM AND ALTERNATE  
WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.



|          |                                                  |              |
|----------|--------------------------------------------------|--------------|
| 8-22-02  | REVISED GENERAL NOTES                            |              |
| 10-18-96 | REVISED AASHTO                                   |              |
| 11-22-95 | REVISED R-O-W LOCATION DETAIL                    |              |
| 6-2-94   | REVISED BARN WIRE AND<br>ADDED CORNER POST NOTES | 6-2-94       |
| 8-5-93   | REVISED R/W INSTALLATION FENCE                   | 8-5-93       |
| 10-1-92  | ADDED STAPLE NOTE                                | 10-1-92      |
| 8-15-91  | ADDED TYPE D-2 FENCE                             | 8-15-91      |
| 11-30-89 | DELETED CLASS CONCRETE                           | 11-30-89     |
| 7-15-88  | ADDED SPLICE NOTE                                | 707-7-15-88  |
| 10-30-87 | GENERAL REVISIONS                                | 549-10-30-87 |
| 11-1-84  | MAX. POST SPACING MIN. WIRE GAUGE                | 507-11-1-84  |
| 1-4-83   | MIN. DIA. LINE POST                              | 648-1-4-83   |
| 3-2-81   | TOLERANCE FOR POST LENGTH                        | 722-3-2-81   |
| 12-1-72  | ADDED D-1 & FENCE INSTALLATION                   | 564-12-1-72  |
| 10-2-72  | REVISED AND REDRAWN                              | 540-10-2-72  |
| DATE     | REVISION                                         | FILED        |

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE  
TYPE C AND D

STANDARD DRAWING WF-4