

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GUE-146-03.94

SPENCER TOWNSHIP GUERNSEY COUNTY

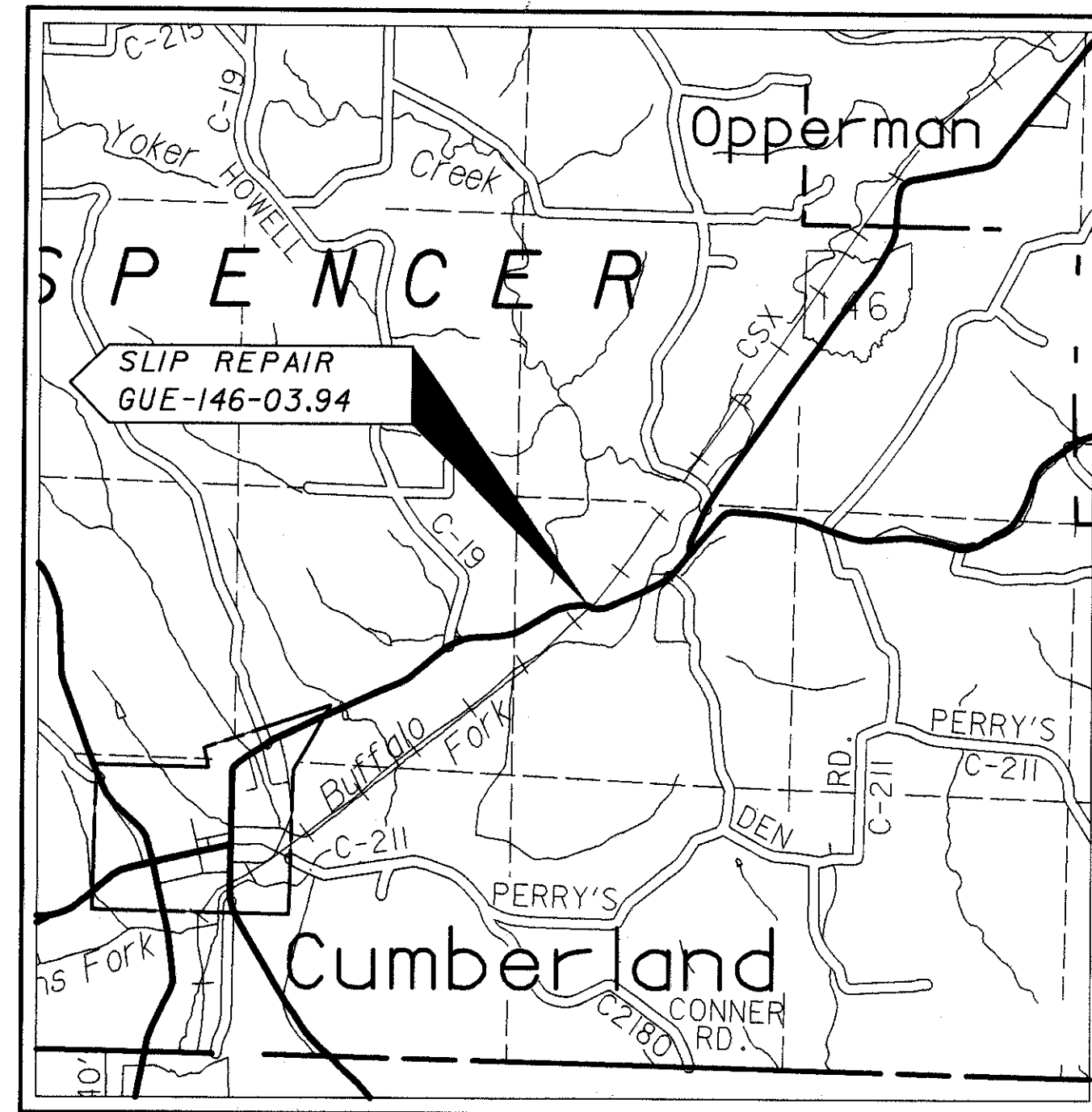
PROJECT DESCRIPTION

SLIP REPAIR TO S.R. 146

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

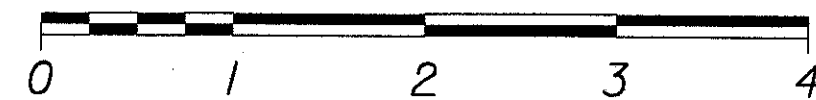
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 7.



LOCATION MAP

LATITUDE: ° ' " LONGITUDE: ° ' "

SCALE IN MILES



INTERSTATE & DIVIDED HIGHWAY:

UNDIVIDED STATE & FEDERAL ROUTES:

OTHER ROADS:

DESIGN DESIGNATION

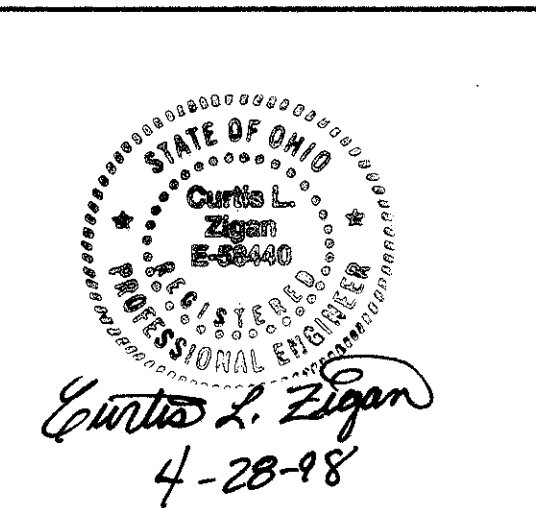
CURRENT ADT (1998).....950
 DESIGN YEAR ADT (2018).....1100
 DESIGN HOURLY VOLUME (2018).....110
 DIRECTIONAL DISTRIBUTION.....55%
 TRUCKS (24 HOUR B&C).....70
 DESIGN SPEED.....55 MPH
 LEGAL SPEED.....55 MPH
 DESIGN FUNCTIONAL CLASSIFICATION -
 MAJOR COLLECTOR (RURAL)

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES
 TWO WORKING DAYS
BEFORE YOU DIG
 CALL 1-800-362-2764 (TOLL FREE)
 OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS
 MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
OHIO DEPARTMENT
OF TRANSPORTATION



INDEX OF SHEETS:

TITLE SHEET.....1
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STANDARD CONSTRUCTION DRAWINGS

BP-3.1	2-21-92	MT-97.10	4-29-88				
BP-5.1	10-28-94	MT-101.60	7-01-92				
CB-3	5-1-79	F-2	5-1-76				
GR-1.1	5-6-91						
GR-1.2	10-30-92						
GR-1.3	2-21-92						
GR-2.1	5-6-91						
GR-3.1	5-6-91						
HW-4A	4-1-80						

APPROVED DATE 4/28/98 DISTRICT DEPUTY DIRECTOR

APPROVED DATE 5-7-97 DIRECTOR, DEPARTMENT OF TRANSPORTATION

GUE-146-3.94
985008
13PMS

PID# 18386
07/22/98
DIST. 05

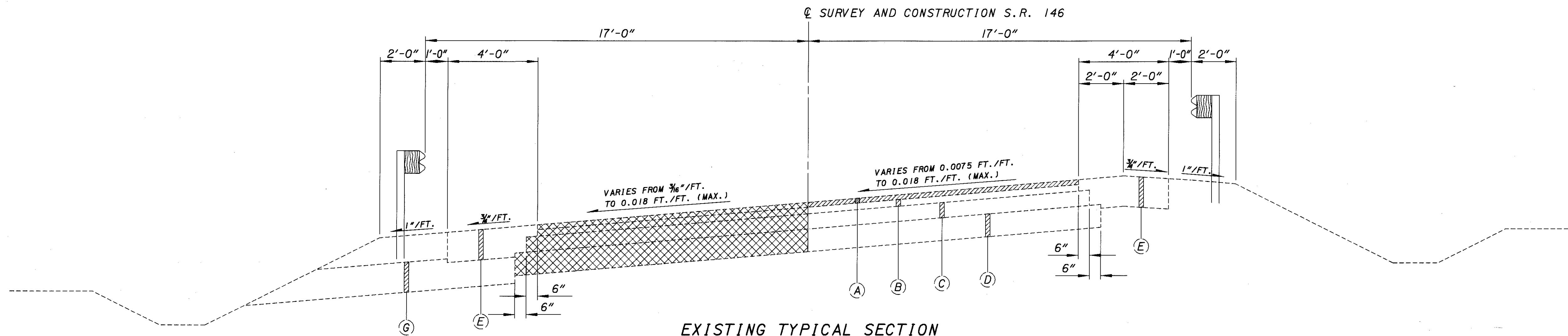
FEDERAL PROJECT NO.

PID NO. 18386

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

GUE-146-03.94



EXISTING TYPICAL SECTION

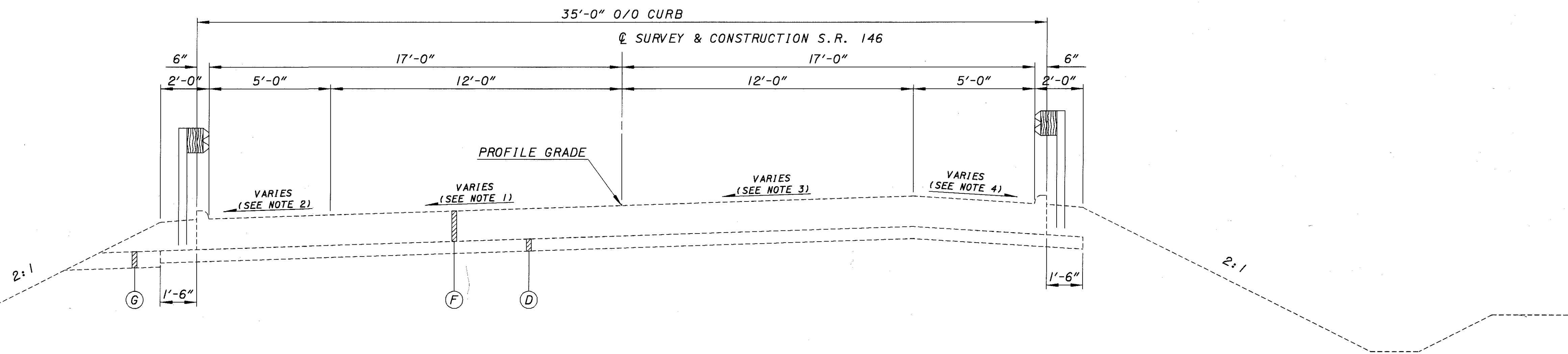
STATION 208+11.04 TO STATION 209+60 = 148.96 LIN.FT.

- ITEM 202 WEARING COURSE REMOVED (RIGHT SIDE ONLY) FROM STA. 208+11.04 TO STA. 209+60 = 148.96 LIN.FT.
- TO BE INCLUDED WITH ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION FROM STA. 208+11.04 TO STA. 209+50 = 138.96 LIN.FT.

- (A) ITEM 404 1 1/4" ASPHALT CONCRETE, AC-20
- (B) ITEM 402 1 3/4" ASPHALT CONCRETE, AC-20
- (C) ITEM 301 4" BITUMINOUS AGGREGATE BASE
- (D) ITEM 304 6" AGGREGATE BASE
- (E) ITEM 304 8" AGGREGATE BASE
- (F) ITEM 611 APPROACH SLAB (T=15")
- (G) ITEM 605 AGGREGATE DRAIN

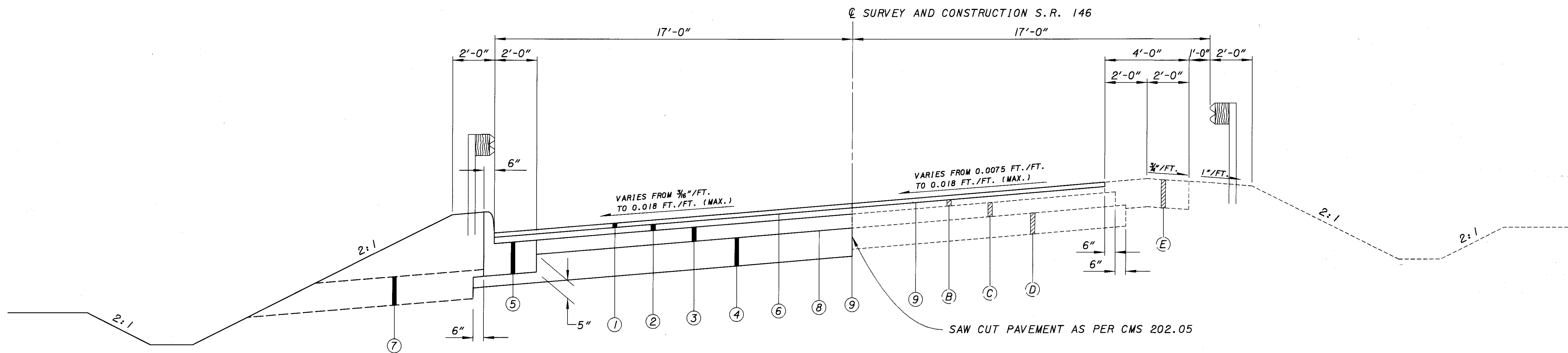
TYPICAL SECTION NOTES

- 1) VARIES LINEARLY FROM -0.0244 FT/FT TO -0.0325 FT/FT STATION 207+86.04 TO STATION 208+11.04
- 2) SAME SLOPE AS PAVEMENT
- 3) VARIES LINEARLY FROM 0.0244 FT/FT TO 0.0325 FT/FT STATION 207+86.04 TO STATION 208+11.04
- 4) TRANSITION BETWEEN THE APPROACH SHOULDER CROSS SLOPE AND THE BRIDGE DECK CROSS SLOPE WITHIN THE APPROACH SLAB LENGTH.



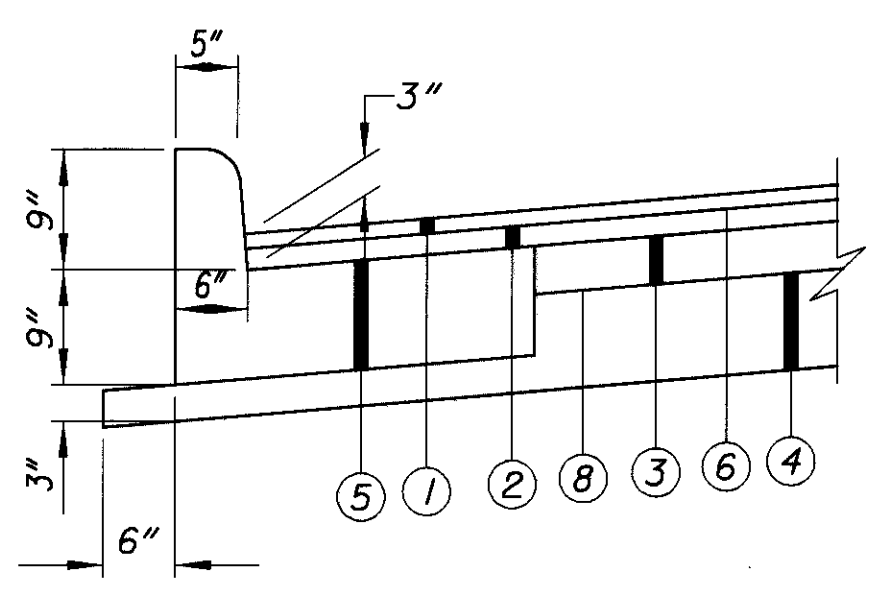
EXISTING APPROACH SLAB

STATION 207+86.04 TO STATION 208+11.04 = 25.00 LIN. FT.

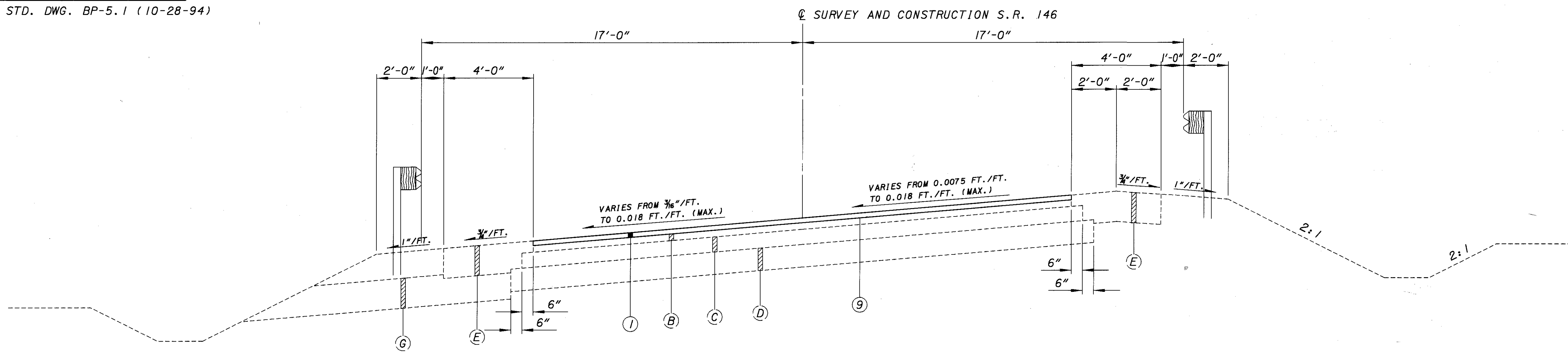


PROPOSED TYPICAL SECTION
STATION 208+11.04 TO STATION 209+50 - 138.96 LIN.FT.

- ① ITEM 448 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
- ② ITEM 448 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
- ③ ITEM 301 4" BITUMINOUS AGGREGATE BASE, PG64-22
- ④ ITEM 304 8" AGGREGATE BASE
- ⑤ ITEM 609 COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN
- ⑥ ITEM 407 TACK COAT FOR INTERMEDIATE COURSE
- ⑦ ITEM 605 AGGREGATE DRAIN
- ⑧ ITEM 408 BITUMINOUS PRIME COAT (0.4 GAL/S.Y.)
- ⑨ ITEM 407 TACK COAT
- (A) ITEM 404 1 1/4" ASPHALT CONCRETE, AC-20
- (B) ITEM 402 1 3/4" ASPHALT CONCRETE, AC-20
- (C) ITEM 301 4" BITUMINOUS AGGREGATE BASE
- (D) ITEM 304 6" AGGREGATE BASE
- (E) ITEM 304 8" AGGREGATE BASE
- (G) ITEM 605 AGGREGATE DRAIN



TYPE 2 AS PER PLAN
SEE STD. DWG. BP-5.1 (10-28-94)



PROPOSED TYPICAL SECTION
STATION 209+50 TO STATION 209+60 - 10 LIN.FT.

CONNECTIONS BETWEEN EXISTING AND PROPOSED GUARDRAIL
WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "BEAM RAIL SPLICE" AS SHOWN ON STANDARD DRAWING GR-1. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE GUARDRAIL RUNS.

CROSS SECTIONS TO BE RE-RUN

THE CROSS SECTIONS WILL BE RE-RUN BY STATE FORCES PRIOR TO CONSTRUCTION TO BE USED IN THE FINAL DETERMINATION OF EARTHWORK.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS SECTIONS ON THIS PLAN INDICATES SPECIFIC WIDTHS AND DEPTHS OF PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND ALL OTHER SLOPED FOUNDATION AREAS SHALL BE BENCHED AS SET IN 203.09.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER, FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL:

- 207 STRAW OR HALE BALES 20 EACH
- 207 TEMPORARY SLOPE DRAINS 50 LIN.FT.
- 207 FILTER FABRIC FENCE 225 LIN.FT.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

NOTIFICATION OF ROAD CLOSURE

IN ORDER FOR ODOT TO PROPERLY PERMIT OVERSIZE LOADS, PREPARE PROPER SIGNING WHEN REQUIRED AND FURTHER TO NOTIFY THE GENERAL MOTORING PUBLIC, THE CONTRACTOR SHALL NOTIFY (IN WRITING) THE DISTRICT 5 HIGHWAY ADMINISTRATOR WITH COPIES FOR THE DISTRICT 5 ROADWAY SERVICE MANAGER AND PROJECT ENGINEER NOT LESS THAN 21 DAYS BEFORE ACTIVATING SUCH CLOSURE OR LANE RESTRICTION.

SEND NOTIFICATION TO: CHRISTOPHER ENGLE
DISTRICT 5 HIGHWAY ADMINISTRATOR
P.O. BOX 306
JACKSONTOWN, OHIO 43030

PHONE: 323-4400 EXT. 5240

ITEM 407 TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ITEM 407 TACK COAT INTERMEDIATE COARSE

THE RATE OF APPLICATION OF THE 407 TACK COAT INTERMEDIATE COARSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.050 GALLONS PER SQUARE YARD OF TACK COAT INTERMEDIATE COARSE FOR ESTIMATING PURPOSES ONLY.

ITEM 604 CATCH BASIN NO.3, AS PER PLAN

THE REQUIREMENTS OF ITEM 604 SHALL GOVERN THE CONSTRUCTION OF THE CATCH BASIN, EXCEPT THAT THE CATCH BASIN SHALL BE PRECAST OR CAST IN PLACE WITH A GATE "V". BRICK OR CONCRETE BLOCK SHALL NOT BE PERMITTED.

ITEM 605 AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT FIFTH (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPER-ELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE

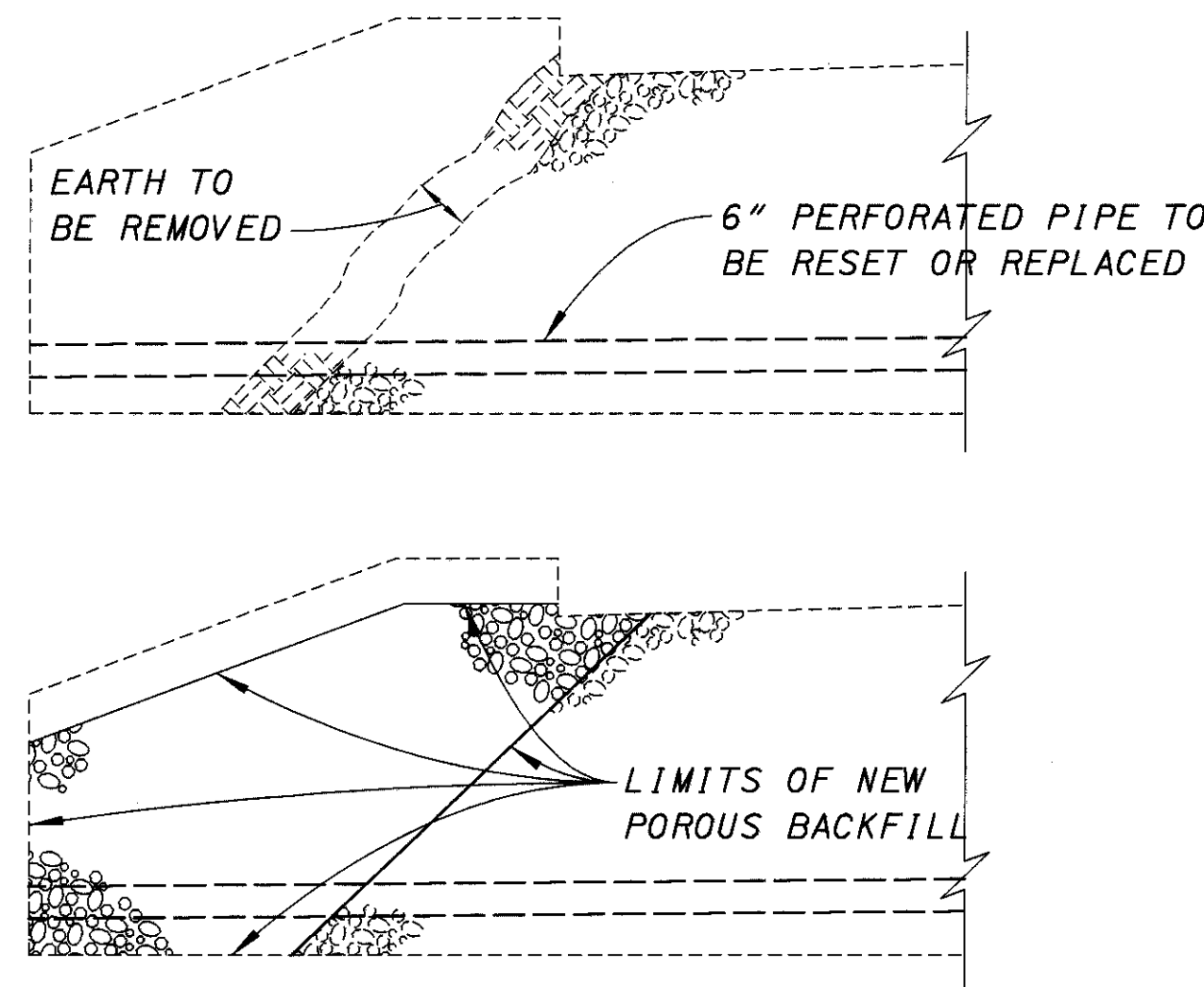
WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND THE CARE FOR PERMANENT SEEDED AREAS PER 659.09:

659, WATER 5.0 M GAL.

ITEM 518 POROUS BACKFILL, AS PER PLAN

AS DETAILED ON THIS SHEET, THE CONTRACTOR SHALL EXCAVATE THE AREA AS DIRECTED BY THE ENGINEER TO ENSURE ALL EARTH HAS BEEN SATISFACTORILY REMOVED. THE CONTRACTOR SHALL REMOVE EMBANKMENT AROUND 6 INCH PIPE AND RESET THE SLOPE OF THE PIPE TO ENSURE PROPER DRAINAGE. A QUANTITY OF 20' HAS BEEN INCLUDED IN THE PLANS FOR ANY DAMAGE TO THE PIPE. EXCAVATION SHALL BE INCLUDED FOR PAYMENT WITH ITEM 518 POROUS BACKFILL AS PER 518.09. AN ESTIMATED AMOUNT OF POROUS BACKFILL HAS BEEN INCLUDED IN THE PLANS AND FINAL QUANTITIES SHALL BE DETERMINED AT COMPLETION OF WORK.



ITEM SPECIAL - FILTER FABRIC TYPE B

THE DUMPED ROCKED FILL TYPE C SHALL BE COMPLETELY ENCAPSULATED WITH FABRIC TYPE B AND SHALL MEET THE REQUIREMENTS OF 712.09.

ITEM 601 DUMPED ROCK FILL TYPE C

EXCAVATION FOR THIS ITEM SHALL BE AS SPECIFIED IN 601.11.

PROTECTION OF ARCHAEOLOGICAL SITES ADJACENT TO THE RIGHT OF WAY

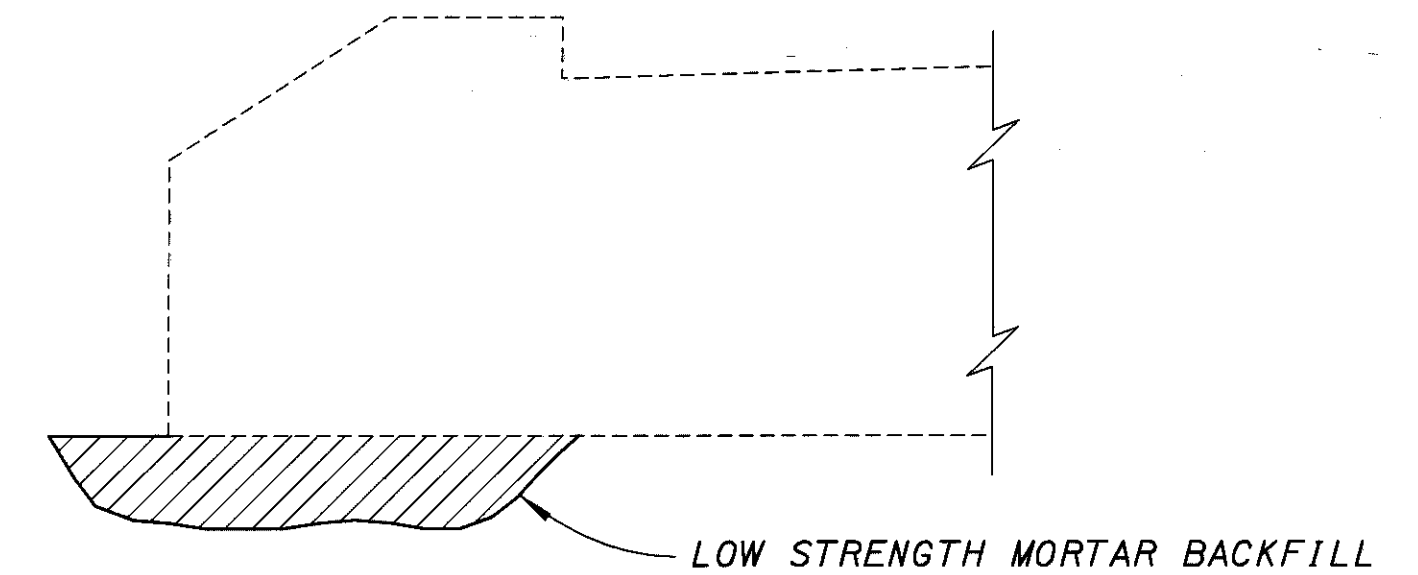
AS A RESULT OF A CULTURAL RESOURCE SURVEY FOUR ARCHAEOLOGICALLY SITES WERE IDENTIFIED IN THE VICINITY OF THE PROPOSED RIGHT OF WAY FOR THE PREVIOUS BRIDGE REPLACEMENT PROJECT. ONE OF THESE, SITE 336UI59, IS IN THE VICINITY OF, BUT OUTSIDE OF THE PROPOSED WORK LIMITS OF THE EMERGENCY SLIP REPAIR PROJECT. THIS SITE HAS BEEN DENOTED ON MAPPING THAT IS AVAILABLE FOR REVIEW AT THE DISTRICT 5 OFFICE (9600 JACKSONTOWN, OHIO). THIS SITE SHOULD BE PROTECTED FROM ALL ANCILLARY CONSTRUCTION ACTIVITIES (E.G., BORROW AREAS, PARKING OF EQUIPMENT, STORAGE OF MATERIALS, ETC.).

ITEM SPECIAL - FILTER FABRIC TYPE A

THE No.8 AGGREGATE SHALL BE COMPLETELY ENCAPSULATED WITH FILTER FABRIC TYPE A AND SHALL MEET THE REQUIREMENTS OF 712.09.

ITEM 613 LOW STRENGTH MORTAR BACKFILL

AN ESTIMATED AMOUNT OF 4 CU.YD. HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR AREAS THAT THE CONTRACTOR CANNOT ACHIEVE EMBANKMENT COMPACTION. PLACEMENT OF THE LOW STRENGTH MORTAR BACKFILL SHALL BE AS DETAILED ON THIS SHEET AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE WORK SHALL INCLUDE ALL LABOR, TOOLS, FORMING, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.



ITEM 613 LOW STRENGTH MORTAR TYPE 1, AS PER PLAN

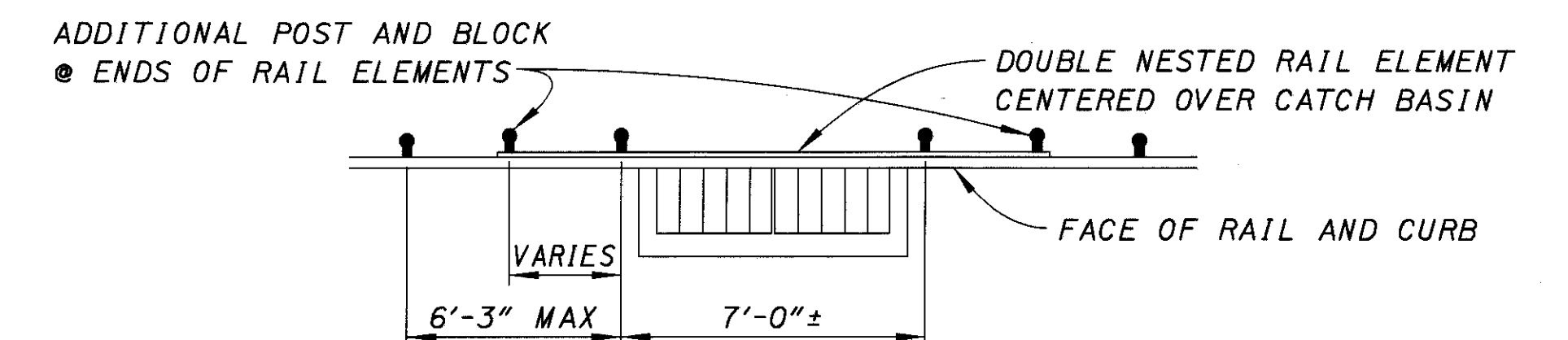
THIS WORK SHALL CONSIST OF CORE DRILLING 2 OR 3 4 INCH DIA. HOLES THROUGH THE APPROACH SLAB, FILL VOIDS WITH LOW SLUMP MORTAR, FILL APPROACH SLAB HOLES WITH A NON-SHRINK, NONMETALLIC GROUT. LOCATIONS SHALL BE AS DETERMINED BY THE ENGINEER. A NON-SHRINK NONMETALLIC GROUT SHALL BE USED TO FILL THE HOLES AND SHALL MEET THE REQUIREMENTS OF 705.20. 3 CU.YDS. OF LOW SLUMP MORTAR TYPE 1 HAS BEEN INCLUDED IN THE PLANS FOR BIDDING PURPOSES. FINAL QUANTITIES SHALL BE DETERMINED AT THE COMPLETION OF WORK.

REMOVAL MISC.: EXISTING SHEET PILING

THIS ITEM SHALL INCLUDE REMOVAL OF ALL EXISTING SHEET PILING, STORING IT ON THE PROJECT TO BE REMOVED BY STATE FORCES. PILING SHALL BE STORED IN A NEAT MANNER ON THE JOB SITE. THE CONTRACTOR SHALL NOTIFY THE COUNTY MANAGER IN WRITING ONE WEEK IN ADVANCE OF REMOVAL SO THAT APPROPRIATE ARRANGEMENTS CAN BE MADE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC. REMOVAL OF EXISTING SHEET PILING, LUMP SUM, WHICH SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

ITEM 202 GUARDRAIL REMOVED FOR REUSE, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING GUARDRAIL, STORING IT ON THE PROJECT AND RE-ERECTION OF GUARDRAIL, AND BRIDGE TERMINAL ASSEMBLY. THE CONTRACTOR SHALL REPLACE ANY POST, HARDWARE, BLOCKS, BACKUP PLATES, AND RAILING ELEMENTS THAT HAVE BEEN DAMAGED DURING REMOVAL OR MODIFIED DURING THE TEMPORARY WORK DONE BY THE STATE. THE CONTRACTOR WILL HAVE TO INCREASE THE GUARDRAIL POST SPACING AT THE CB-3 CATCH BASIN. THE RAIL ELEMENT THAT SPANS OVER THE CATCH BASIN SHALL BE DOUBLE NESTED, AS DETAILED BELOW. THE LENGTH OF GUARDRAIL TO BE REMOVED AND BE RE-ERECTED IS 150 FEET ON THE LEFT FROM STA. 208+06.61 TO STA. 209+56.61 PAYMENT FOR THE ABOVE SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 202 GUARDRAIL REMOVED FOR REUSE, AS PER PLAN AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS ITEM.



DESIGNATED LOCAL DETOUR ROUTE

IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE". THIS ROUTE HAS BEEN SHOWN ON SHEET 7/13. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN 1.0 MILE OF SPENCER TOWNSHIP ROAD 127 (IOWA RD.), 1.9 MILES OF GUERNSEY COUNTY ROAD 211, AND 0.2 MILES OF EAST MAIN STREET IN THE VILLAGE OF CUMBERLAND, IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO IT'S NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO IT'S USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL DETOUR ROUTE:

ITEM	QUANTITY	DESCRIPTION
SPECIAL	10 HOURS	GRADER RENTAL (SEE NOTE ON THIS SHEET)
614	2 CU.YDS.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
690	5 TONS	ROADWAY MISC.: AGGREGATE BASE USING NO. 57 STONE (SEE NOTE THIS SHEET)

DETOUR LIMITATION AND MAINTAINING TRAFFIC

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR A PERIOD NOT TO EXCEED 30 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON THE PLANS. LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH SECTION 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO THROUGH TRAFFIC BEYOND THE SPECIFIED LIMIT.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT CONSTRUCTION ENGINEER, TRAFFIC ENGINEER, AND COMMUNICATIONS OFFICER, IN WRITING, A MINIMUM OF TWENTY ONE (21) DAYS IN ADVANCE OF THE DATE THE DETOUR WILL BE NEEDED. THE STATE OF OHIO WILL INSTALL, MAINTAIN, AND SUBSEQUENTLY REMOVE THE DETOUR SIGNING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC MAINTENANCE AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 614, MAINTAINING TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE LOCAL DRIVEWAY AT ALL TIMES. THE USE OF BARRELS SHALL BE USED ADJACENT TO THE DRIVEWAY AND SHALL BE PLACED THE ENTIRE LENGTH OF THE FULL DEPTH REPLACEMENT (STA. 207+60 TO STA. 210+50) WITH TAPERED CLOSURES AT EACH END AS SHOWN ON SHEET 7/13.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48"x30" "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN STANDARD CONSTRUCTION DRAWING MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

- S.R. 146 JUST EAST OF T-19 INTERSECTION
- S.R. 146 JUST WEST OF T-127 INTERSECTION

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATIONS AS FOLLOWS:

- TYPE III BARRICADES STA. 207+00
- STA. 211+00

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS INCLUDING BARRELS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 202 REMOVAL MISC.: MAILBOX & POST REMOVED FOR REUSE

THIS ITEM SHALL CONSIST OF MOVING THE EXISTING MAILBOX AND SUPPORT AND PLACING IT IN A NEW LOCATION THAT CAN BE ACCESSED BY OWNER WHILE CONSTRUCTION IS BEING DONE. AFTER THE COMPLETION OF ALL WORK THE EXISTING MAILBOX AND SUPPORTS SHALL BE MOVED TO ITS ORIGINAL PLACE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: MAILBOX & POST REMOVED FOR REUSE, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS ITEM.

ITEM SPECIAL - GRADER RENTAL

IN ORDER TO MAINTAIN POSITIVE DRAINAGE FROM THE ROADWAY SURFACE, LINEAR GRADING OF THE EXISTING ROADWAY, SHOULDERS, AND DITCHES SHALL BE PERFORMED WITH THE USE OF A GRADER OF ADEQUATE SIZE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL THE ABOVE GRADING AND SHAPING WORK INCLUDES ALL TOOLS, LABOR AND EQUIPMENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK. THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID, ITEM SPECIAL - GRADER RENTAL, AND SHALL BE FOR THE ACTUAL NUMBER OF GRADER HOURS WORKED.

ITEM SPECIAL - MISC.: AGGREGATE BASE USING #57 STONE

TO MAINTAIN THE ROADWAY SURFACE IN A SATISFACTORY MANNER FREE FROM RUTS AND SOFT AREAS ALONG THE DESIGNATED LOCAL DETOUR ROUTE, A QUANTITY OF AGGREGATE BASE USING NO. 57 STONE HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS ITEM SHALL INCLUDE FURNISHING, HAULING AND DISPERSING AS WELL AS ALL TOOLS, LABOR AND EQUIPMENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AND SHALL BE PAID FOR AT THE UNIT PRICE BID ITEM SPECIAL-ROADWAY MISC.: AGGREGATE BASE USING NO. 57 STONE, AND SHALL BE THE ACTUAL NUMBER OF TONS USED.

PERMANENT PAVEMENT MARKINGS

THE CONTRACTOR SHALL NOTIFY (IN WRITING) THE ROADWAY SERVICES MANAGER WITH COPIES TO THE AREA ENGINEER AND TRAFFIC CONTROL SUPERINTENDENT 14 CALENDER DAYS PRIOR TO OPENING THE ROADWAY TO TWO WAY TRAFFIC. THIS WILL ALLOW SUFFICIENT TIME FOR THE TRAFFIC CONTROL SUPERINTENDENT TO SCHEDULE THE STRIPING OF THE PERMANENT EDGE LINES AND CENTER LINE. SEND NOTIFICATION TO:

VAL JACKSON
DISTRICT 5 ROADWAY SERVICES MANAGER
P.O. BOX 306
JACKSONTOWN, OHIO 43030
(614) 323-4400/323-5260

TROY RODENISER
DISTRICT 5 TRAFFIC CONTROL SUPERINTENDENT
P.O. BOX 306
JACKSONTOWN, OHIO 43030
(614) 323-4400/323-5285

TEMPORARY CENTER LINE

IF ODOT CREWS ARE NOT AVAILABLE TO PAINT THE PERMANENT PAVEMENT MARKINGS WITHIN 14 DAYS, THE CONTRACTOR MAY PLACE TEMPORARY CENTER LINE IN ORDER TO RE-OPEN THE ROADWAY. A QUANTITIY OF 0.04 MILES OF TEMPORARY CENTER LINE, CLASS II HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE PROJECTED ENGINEER.

REMOVAL MISC.: CATCH BASIN REMOVED FOR STORAGE

THIS ITEM SHALL CONSIST OF REMOVING ALL DRAINAGE PIPE AND CATCH BASINS THAT WERE USED IN THE TEMPORARY FIX OF THE SLIP AND STORED ON THE PROJECT FOR STATE FORCES TO PICK UP. THE CONTRACTOR SHALL NOTIFY THE COUNTY MANAGER IN WRITING ONE WEEK IN ADVANCE OF REMOVAL SO THAT APPROPRIATE ARRANGEMENTS CAN BE MADE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CATCH BASIN FOR STORAGE, AS PER PLAN, LUMP SUM, WHICH SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIAL AND INCIDENTS NECESSARY TO COMPLETE THIS ITEM.

ITEM 659 SEEDING AND MULCHING, AS PER PLAN

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS. ALL AREAS TO BE SEEDED SHALL BE AS PER 659 WITH THE ONLY EXCEPTION BEING THE SEED MIX SHALL BE AS FOLLOWS:

- 20% - CLIMAX TIMOTHY
- 20% - CROWN VETCH
- 20% - ANNUAL RYEGRASS
- 20% - ORCHARDGRASS
- 10% - WHITE CLOVER
- 10% - PERNNIAL RYNGRASS

THE THREE MIXES AS PER 659.09 SHALL NOT BE USED. THE PROJECT ENGINEER SHALL HAVE FINAL APPROVAL OF THE SEED MIX. AN ESTIMATED QUANTITY OF 900 SQUARE YARDS OF SEEDING HAS BEEN ADDED TO THE GERENAL SUMMARY FOR SEEDING THE PASTURE.

ITEM SPECIAL - STRUCTURE, MISC: COFFERDAMS, CRIBS AND SHEETING

THIS ITEM SHALL CONSIST OF DRIVING SHEETING, PULLING SHEETING AND PILE DRIVING EQUIPMENT MOBILIZATION FOR THE SHEETING. SOME SHEETING MAYBE LEFT IN PLACE AS DIRECTED BY THE ENGINEER. ALL SHEET PILING LEFT IN PLACE SHALL HAVE A 6" DIA. HOLE PLACED (EVERY 18 INCH VERTICALLY) STARTING AT THE BOTTOM OF THE PROPOSED FILL TO THE TOP OF THE SHEETING LEFT IN PLACE. HOLE SHALL BE ON ALTERNATING SHEET PILES AS DIRECTED BY THE ENGINEER TO ENSURE DRAINAGE OF THE SOIL. ALL PROVISIONS IN CMS FOR ITEM 503, COFFERDAMS, CRIBS AND SHEETING SHALL APPLY.

PAYMENT FOR THE ABOVE WORK SHALL BE AS PER ITEM SPECIAL STRUCTURE MISC.: COFFERDAMS, CRIBS AND SHEETING AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK. AN ESTIMATED AMOUNT OF 2194 SQ.FT. HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR BIDDING PURPOSES. FINAL QUANTITIES SHALL BE DETERMINED AT THE COMPLETION OF WORK.

ITEM SPECIAL - SLOPE INDICATORS

MATERIALS FOR SLOPE INDICATORS OBTAINED FROM THE SLOPE INDICATOR COMPANY OF 3450 MONTE VILLA PARKWAY, P.O. BOX 3015, BOTHELL, WASHINGTON, 98041-3015, PHONE 206-806-2200, SHALL BE FURNISHED BY THE CONTRACTOR FOR SLOPE INDICATORS, LOCATED AS SHOWN ON THE PLANS. STANDARD 2.75 INCH PLASTIC CASING SHALL BE PROVIDED. THE LENGTH OF THE CASING PROVIDED SHALL BE SUCH THAT IT EXTENDS TWO FEET ABOVE GROUND SURFACE.

THE CONTRACTOR SHALL FURNISH A PROTECTIVE CAP CONSISTING OF A 6 INCH DIAMETER THIN-WALLED STEEL PIPE WHICH EXTENDS A MINIMUM OF 3 FEET BELOW GROUND AND IS EQUIPPED WITH A HINGED TOP AND HASP.

INSTALLATION OF THE SLOPE INDICATORS WILL BE DONE BY STATE FORCES PRIOR TO THE START OF ANY GRADING OR CONSTRUCTION OPERATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE INSTRUMENTATION AND DAMAGE FROM EQUIPMENT DURING THE LIFE OF THE CONTRACT. PAYMENT FOR THIS ITEM SHALL BE PAID FOR AS A LUMP SUM "ITEM SPECIAL - SLOPE INDICATORS" AND INCLUDE FURNISHING SLOPE INDICATOR TUDING, COUPLINGS, END PLUGS, AND PROTECTIVE CAP.

SOIL BORINGS

SOIL BORINGS ARE TAKEN FROM AN EXISTING PLAN (GUE-146-03.66) AT THE BRIDGE. THE BORINGS DO NOT INCLUDE ANY PROPOSED FILL THAT WAS CONSTRUCTED DURING PROJECT 150(96).

ITEM 203 ROADWAY MISC.: EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION

PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL REMOVE ONE FOOT OF TOP SOIL AND STOCK PILE IT FROM THE AREA IN WHICH HE/SHE PLANS TO STORE THE EMBANKMENT. AFTER THE LIME-MODIFIED SOIL IS PLACED THE CONTRACTOR SHALL REMOVE ANY EXCESS EMBANKMENT FROM THE JOB SITE. THE CONTRACTOR SHALL THEN RESTORE THE GROUND AND TOP SOIL TO ITS ORIGINAL CONDICTION. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 203 ROADWAY MISC.:EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, LUMP SUM, WHICH SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

61460001.BVS (03/03/98) SCALE - 1 (2/3)

ITEM SPECIAL-- SETTLEMENT PLATFORMS

Description: This item consists of furnishing, constructing, and maintaining settlement platforms and obtaining settlement readings as required by the Plans or as directed by the Engineer. At the option and expense of the Contractor, additional settlement platforms may be installed at locations approved by the Engineer. A completed copy of the settlement readings shall be sent to the Bureau of Bridges, Central Office (Attn: Foundation Engineer).

Materials: Sound lumber such as 3/4" exterior grade plywood shall be used for the base. The pipe shall be 2-1/2" standard black pipe with threaded fittings as shown on the Plans. A steel plate, 36" x 36" x 1/8", may be substituted for the lumber for the platforms, at the Contractor's option.

Construction Methods: The 36" x 36" platform shall conform to the details shown on the Plans. The platform shall be set on a level surface. The pipe shall be firmly secured to the platform and shall be maintained in a plumb position during the placement of the embankment. The pipe shall be marked at intervals to facilitate measurement of the depth of fill. The Contractor shall stop work in any location where a settlement platform has been disturbed or damaged. Platforms or pipes damaged or displaced during construction shall be restored to their proper condition at the Contractor's expense.

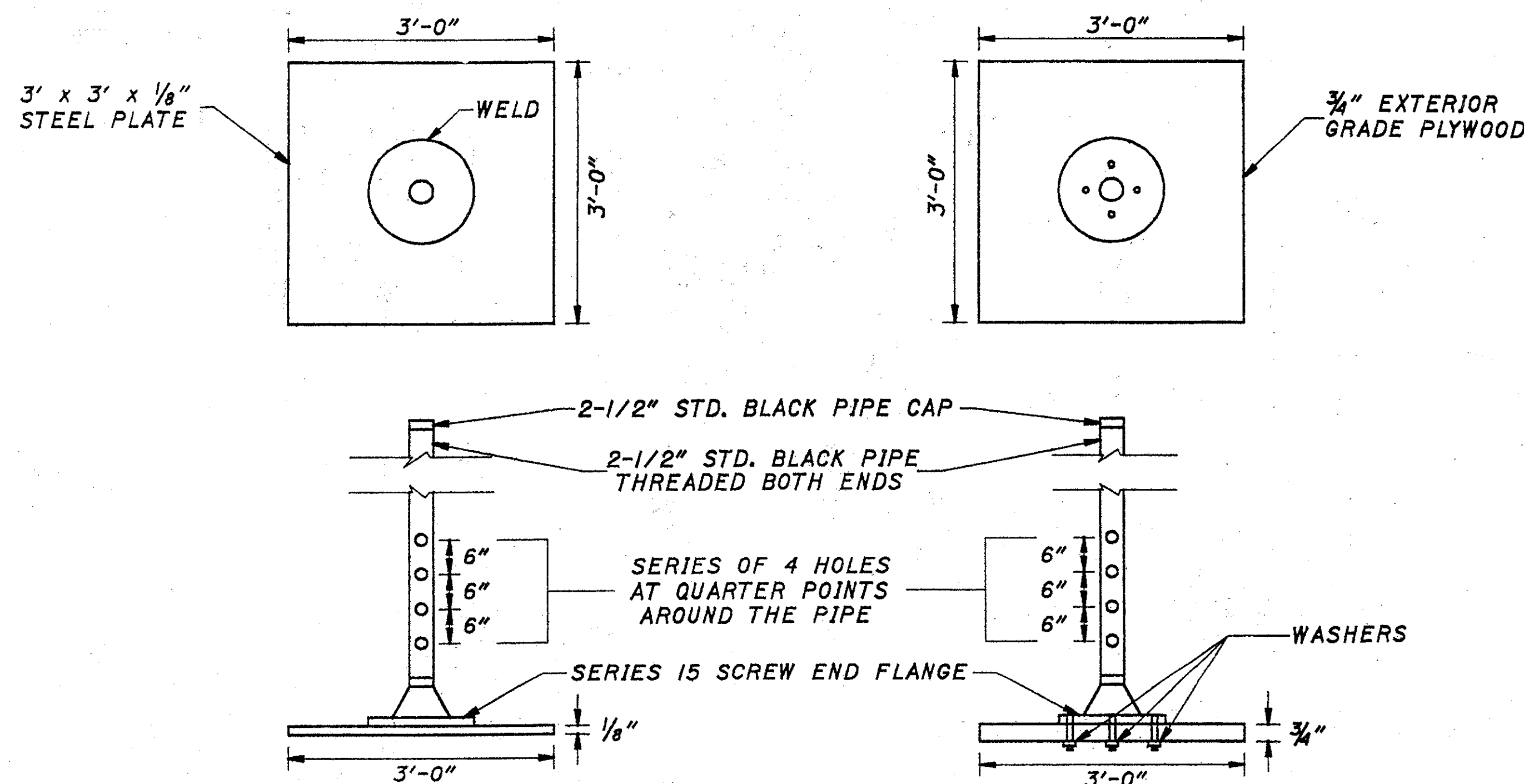
Prior to paving, the top of the settlement platform pipe shall be cut off 2 feet below the finished surface of the subgrade or finished ground surface, whichever is applicable.

Method of Measurement: The number of settlement platforms to be paid for shall be the actual number of settlement platforms completed, maintained, and accepted by the Engineer.

Basis of Payment: Payment shall be made at the contract unit price per each for "Item Special-- Settlement Platforms" which is compensation for constructing, maintaining, and monitoring the settlement platforms including furnishing all labor, equipment, materials, and incidentals necessary to complete this work. Payment shall not be made for settlement platforms which become useless due to damage caused by the Contractor's operations.

SETTLEMENT PLATFORM DETAIL

NOT TO SCALE



NOTES:

1. SETTLEMENT PLATES SHALL BE PLACED AT THE LOCATIONS INDICATED IN THE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER
2. CONTRACTOR HAS OPTION OF USING EITHER STEEL OR PLYWOOD PLATFORM BASE
3. CONTRACTOR SHALL FURNISH MATERIALS AND LABOR TO EXTEND PIPE UP THROUGH ENTIRE FILL
4. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT QVERTURNING

DATE: 1/25/93

ITEM 202 WEARING COURSE REMOVED

STA. 208+00 TO STA. 209+50
 $[(12.00')(144.48' \text{ AVE.})/9] = 192.64 \text{ YD}$
 STA. 209+50 TO STA. 209+60
 $[(29.00')(10.00')/9] = 32.22 \text{ YD}$
TOTAL = 224.86 YD (USE 225 YD)

ITEM 203 SUBGRADE COMPACTION

STA. 208+11.04 TO STA. 209+50
 $[(17.50')(130.75' \text{ AVE.})/9] = 254.24 \text{ YD}^2 \text{ (USE 255 YD}^2\text{)}$

ITEM 203 EMBANKMENT USING No. 8 AGGREGATE

$[(33+43)/2](20')(1.5')/27] = 42.22 \text{ YD}^3$
 $[(43+34)/2](50')(1.5')/27] = 106.94 \text{ YD}^3$
 $[(34+26)/2](25')(1.5')/27] = 41.67 \text{ YD}^3$
TOTAL = 190.83 YD³ (USE 191 YD³)

ITEM 252 FULL DEPTH PAVEMENT SAWING

STA. 208+11.04 TO STA. 209+50 = 138.96'

ITEM 301 BITUMINOUS AGGREGATE BASE

STA. 208+11.04 TO STA. 209+50
 $[(15.00')(130.75' \text{ AVE.})(0.333')/27] = 24.21 \text{ YD}^3 \text{ (USE 25 YD}^3\text{)}$

ITEM 304 AGGREGATE BASE

STA. 208+11.04 TO STA. 209+50
 $[(15.00')(130.75' \text{ AVE.})(0.667')/27] = 48.45 \text{ YD}^3$
 $[(3.00')(130.75' \text{ AVE.})(0.250')/27] = 3.63 \text{ YD}^3$
TOTAL = 52.08 YD³ (USE 53 YD³)

ITEM 407 TACK COAT

STA. 208+00 TO STA. 209+60
 $[(12.00')(154.48' \text{ AVE.})(0.075 \text{ GAL/YD}^2)/9] = 15.45 \text{ GAL}$
 STA. 208+30 TO STA. 209+50
 $[(1.15')(120.00')(0.075 \text{ GAL/YD}^2)/9] = 1.15 \text{ GAL}$
 STA. 208+30 (LT.)
 $[(1.15')(15.00')(0.075 \text{ GAL/YD}^2)/9] = 0.15 \text{ GAL}$
TOTAL = 16.75 GAL (USE 17 GAL)

ITEM 407 TACK COAT FOR INTERMEDIATE COURSE

STA. 208+11.04 TO STA. 209+50 (LT.)
 $[(17.00')(130.75' \text{ AVE.})(0.050 \text{ GAL/YD}^2)/9] = 12.35 \text{ GAL (USE 13 GAL)}$

ITEM 408 BITUMINOUS PRIME COAT

STA. 208+11.04 TO STA. 209+50
 $[(15.00')(130.75' \text{ AVE.})(0.4 \text{ GAL/YD}^2)/9] = 87.17 \text{ GAL (USE 88 GAL)}$

ITEM 448 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22

STA. 208+11.04 TO STA. 209+50
 $[(17.00')(130.75' \text{ AVE.})(0.1458')/27] = 12.00 \text{ YD}^3$

ITEM 448 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22

STA. 208+11.04 TO STA. 209+50 (LT.)
 $[(17.00')(130.75' \text{ AVE.})(0.1042')/27] = 8.58 \text{ YD}^3$
 STA. 208+00 TO STA. 209+50 (RT.)
 $[(12.00')(145.50' \text{ AVE.})(0.1042')/27] = 6.74 \text{ YD}^3$
 STA. 209+50 TO STA. 209+60
 $[(24.00')(10.00')(0.1042')/27] = 0.93 \text{ YD}^3$
TOTAL = 16.25 YD³ (USE 17 YD³)

ITEM 609 COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN

STA. 208+25 TO STA. 209+50 = 125 LIN.FT.

ITEM 659 COMMERCIAL FERTILIZER

$[(1006 \text{ YD}^2+900 \text{ YD}^2)(9 \text{ FT}^2/\text{YD}^2)(0.02 \text{ PD}/\text{FT}^2)(1 \text{ TON}/2000 \text{ PD})] = 0.172 \text{ TONS}$

ITEM 659 AGRICULTURAL LIMING

$[(1006 \text{ YD}^2+900 \text{ YD}^2)(9 \text{ FT}^2/\text{YD}^2)(46 \text{ PD}/1000 \text{ FT}^2)(1 \text{ TON}/2000 \text{ PD})] = 0.395 \text{ TONS}$

ITEM 205 LIME (5%)

$[(2129 \text{ YD}^3)(27)(120)(0.05)/2000] = 172.4 \text{ (USE 175 TONS)}$

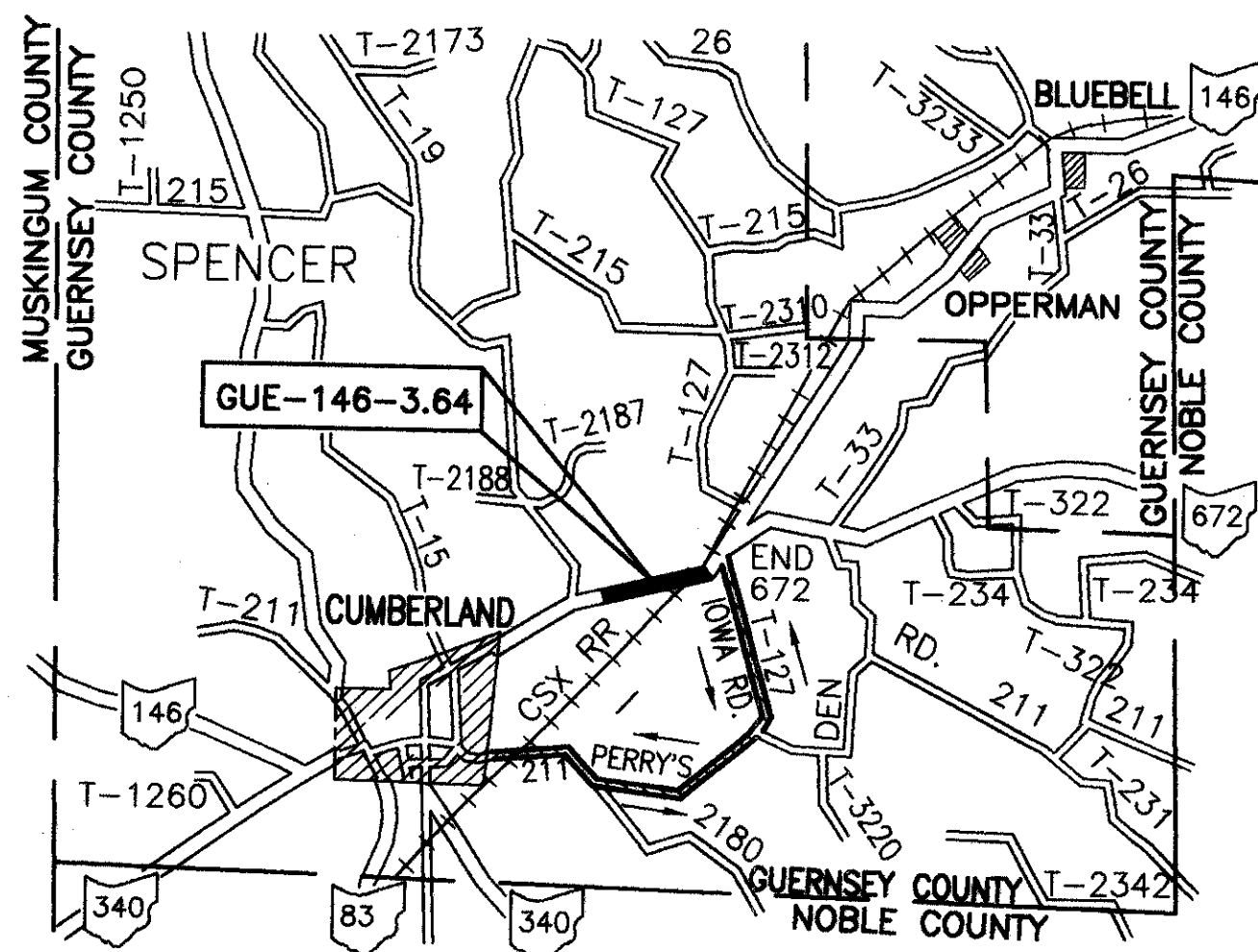
NOTE: ALL QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM 690 FILTER FABRIC, TYPE A

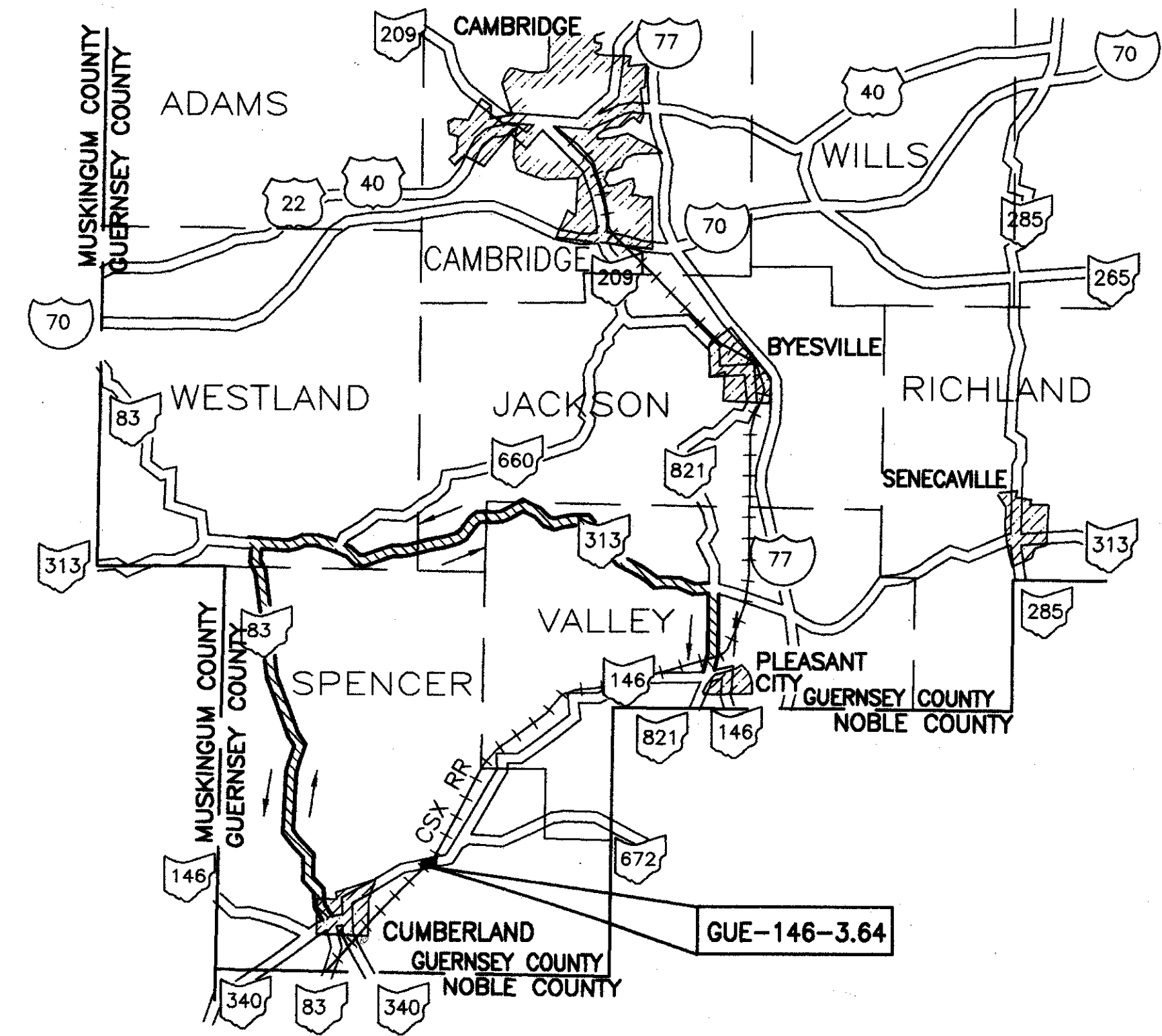
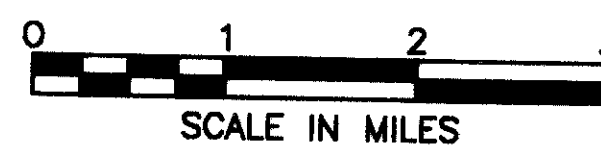
STA. 208+11.04 TO STA. 208+30
 $[(150+50)/2](18.96')/9] = 105.33 \text{ YD}^2$
 STA. 208+30 TO STA. 208+50
 $[(150+48)/2](20.00')/9] = 108.89 \text{ YD}^2$
 STA. 208+50 TO STA. 209+00
 $[(148+44)/2](50.00')/9] = 255.56 \text{ YD}^2$
 STA. 209+00 TO STA. 209+25
 $[(144+40)/2](25.00')/9] = 116.67 \text{ YD}^2$
TOTAL = 586.45 (USE 587 YD²)

ITEM 690 FILTER FABRIC, TYPE B

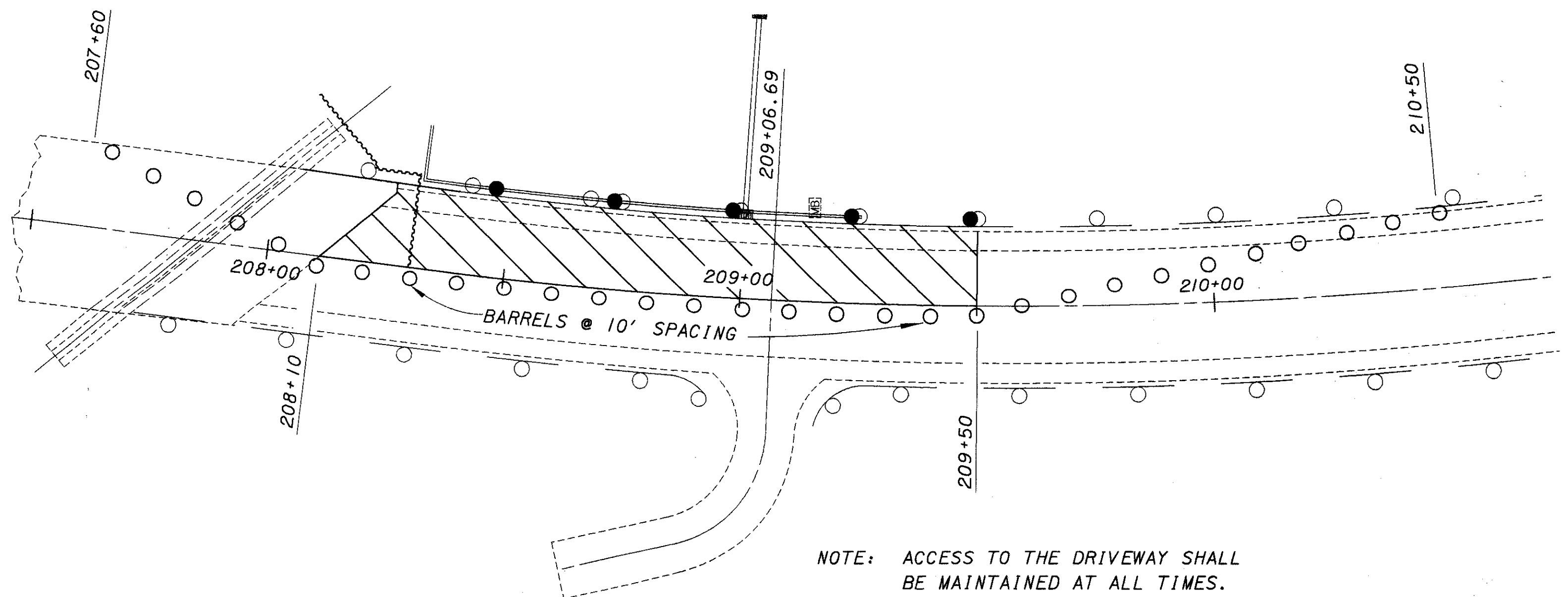
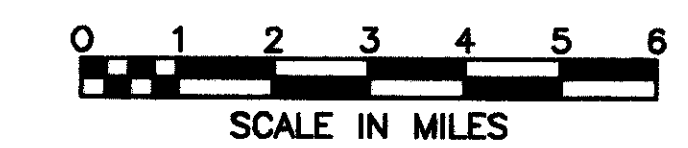
STA. 208+11.04 TO STA. 208+30
 $[(161+59)/2](18.96')/9] = 126.40 \text{ YD}^2$
 STA. 208+30 TO STA. 208+50
 $[(159+53)/2](20.00')/9] = 124.44 \text{ YD}^2$
 STA. 208+50 TO STA. 209+00
 $[(153+53)/2](50.00')/9] = 294.44 \text{ YD}^2$
TOTAL = 545.28 (USE 546 YD²)



DESIGNATED LOCAL DETOUR ROUTE



DESIGNATED STATE DETOUR ROUTE



NOTE: ACCESS TO THE DRIVEWAY SHALL BE MAINTAINED AT ALL TIMES.

G1460001.BMS (03/03/98) SCALE = 1 (3/3)

CALCULATED
TAG
CHECKED
CLZ

CALCULATIONS

GUE-146-03.94

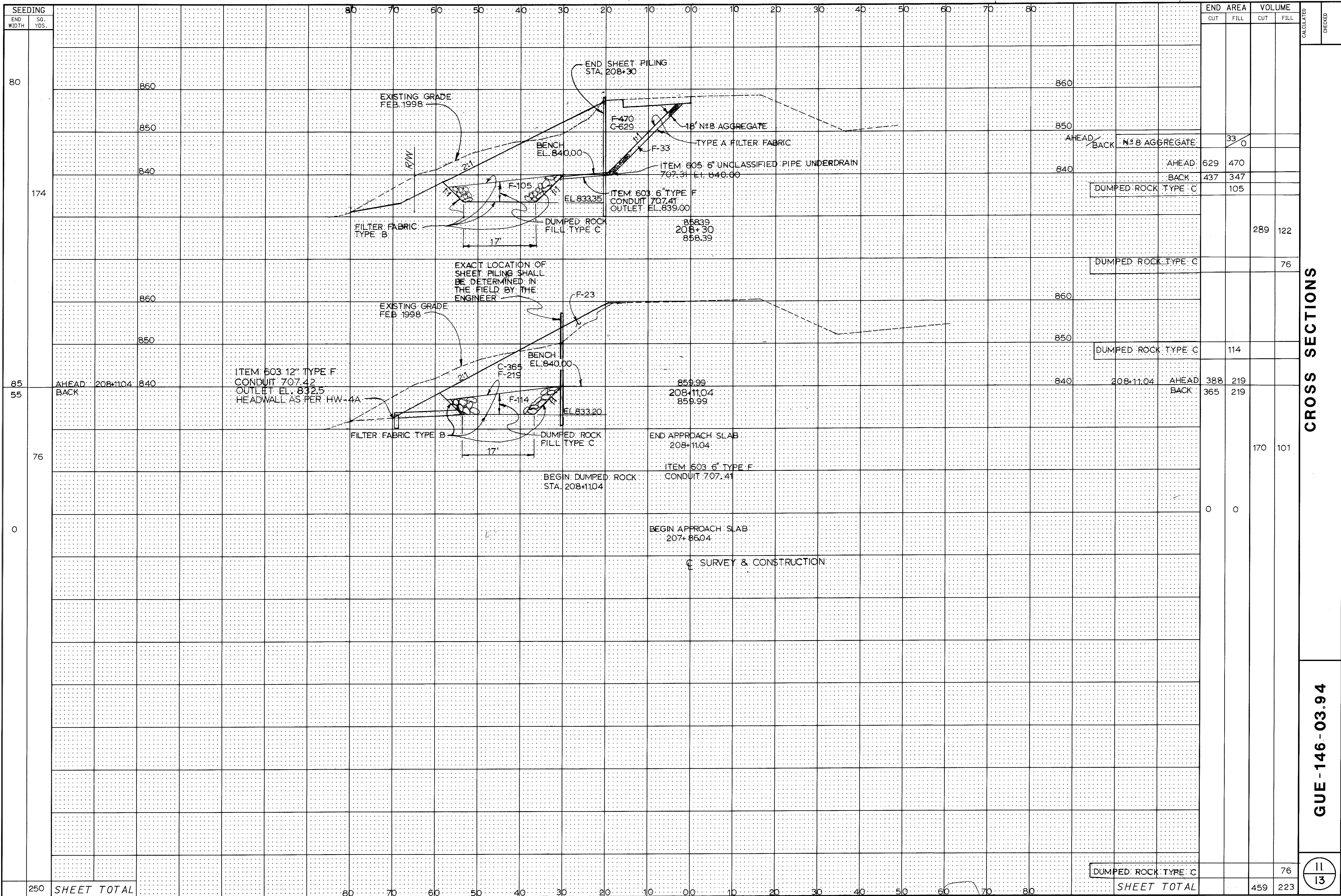
G 1460002.BNS (03-26-98) 1/2

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED TAG	CHECKED CLZ
4	5	7	9	11	12	13											
			225							202	23500	225	SQ YD	ROADWAY WEARING COURSE REMOVED			
				150						202	38201	150	LIN FT	GUARDRAIL REMOVED FOR REUSE, AS PER PLAN			
										202	98000	LUMP		REMOVAL MISC.: EXISTING SHEET PILING			
										202	98000	LUMP		REMOVAL MISC.: CATCH BASIN FOR STORAGE			
				1						202	98100	1	EACH	REMOVAL MISC.: MAILBOX & POST REMOVED FOR REUSE			
					459	1788	134			203	12000	2381	CU YD	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION			
			191							203	21002	191	CU YD	EMBANKMENT USING NO. 8 AGGREGATE			
			255							203	50000	255	SQ YD	SUBGRADE COMPACTION			
										203	98500	LUMP		ROADWAY MISC.: EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION			
					223	1421	110			205	10000	1754	CU YD	LIME-MODIFIED SOIL - DRY METHOD			
			175							205	10300	175	TON	LIME			
										205	10400	15	M GAL	WATER			
			139							252	01500	139	LIN FT	FULL DEPTH PAVEMENT SAWING			
														EROSION CONTROL			
				1						SPECIAL	20365000	1	EACH	SETTLEMENT PLATFORM			
				2						SPECIAL	20365500	2	EACH	SLOPE INDICATOR			
	20									207	70000	20	EACH	STRAW OR HAY BALES			
	225									207	30000	225	LIN FT	FILTER FABRIC FENCE			
	50									207	40000	50	LIN FT	TEMPORARY SLOPE DRAIN			
			2438							SPECIAL	53000600	2194	SQ FT	STRUCTURE, MISC.: COFFERDAMS, CRIBS AND SHEETING			
	4									613	41250	4	CU YD	LOW STRENGTH MORTAR BACKFILL (TYPE 1)			
	3									613	41251	3	CU YD	LOW STRENGTH MORTAR BACKFILL (TYPE 1) AS PER PLAN			
		900			250	756				659	10001	1906	SQ YD	SEEDING AND MULCHING, AS PER PLAN			
				0.172						659	20000	0.172	TON	COMMERCIAL FERTILIZER			
				0.395						659	30000	0.395	TON	AGRICULTURAL LIMING			
	5									659	35000	5	M GAL	WATER			
														DRAINAGE			
										518	21221	LUMP		POROUS BACKFILL, AS PER PLAN			
					76	287				601	27000	363	CU YD	DUMPED ROCK FILL, TYPE C			
				2						601	32200	2	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER			
										602	20000	0.42	CU YD	CONCRETE MASONRY			
				16						603	05200	16	LIN FT	12" CONDUIT, TYPE F 707.42			
				41						603	05200	41	LIN FT	12" CONDUIT, TYPE F 707.05			
										604	00401	1	EACH	CATCH BASIN, NO. 3, AS PER PLAN			
										605	13300	113	LIN FT	6" UNCLASSIFIED PIPE UNDERDRAIN 707.31			
										605	31100	70	LIN FT	AGGREGATE DRAIN			
				587						SPECIAL	69012000	587	SQ YD	FILTER FABRIC, TYPE A			
				546						SPECIAL	69012000	546	SQ YD	FILTER FABRIC, TYPE B			

GENERAL SUMMARY

GUE-146-03.94

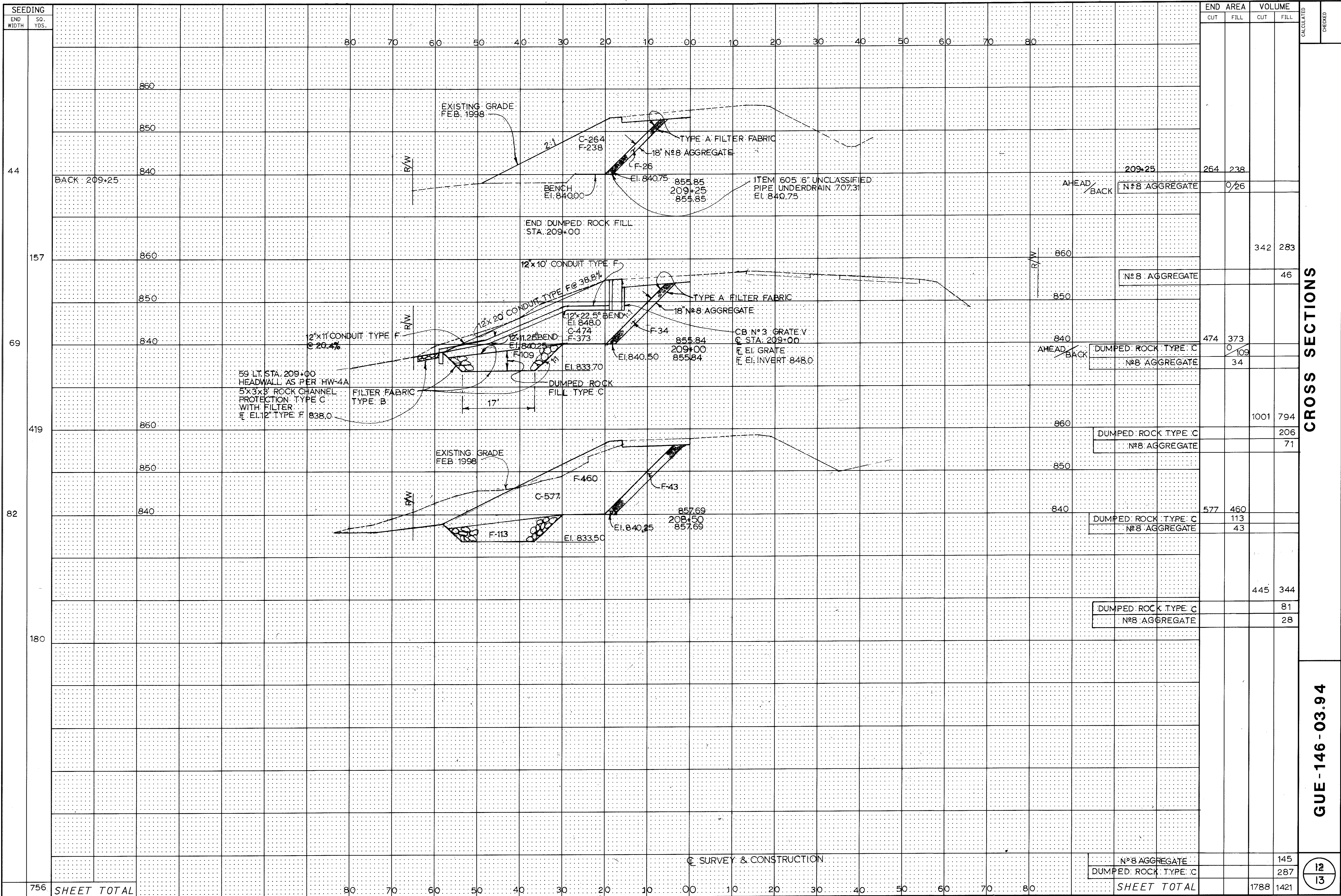
8
13



END	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
80						
174						
85						
55						
76						
0						
250						
SHEET TOTAL				459	223	

CROSS SECTIONS

GUE-146-03.94



SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL		
44	BACK 209+25	264	238	0	26		
157				342	283		
69		474	373	0	109		
419				1001	794		
82		577	460		113		
				445	344		
180					81		
					28		
756	SHEET TOTAL			1788	1421		

CROSS SECTIONS

GUE-146-03.94

12
13

© SURVEY & CONSTRUCTION

SEEDING
END WIDTH SO. YDS.

END AREA VOLUME
CUT FILL CUT FILL

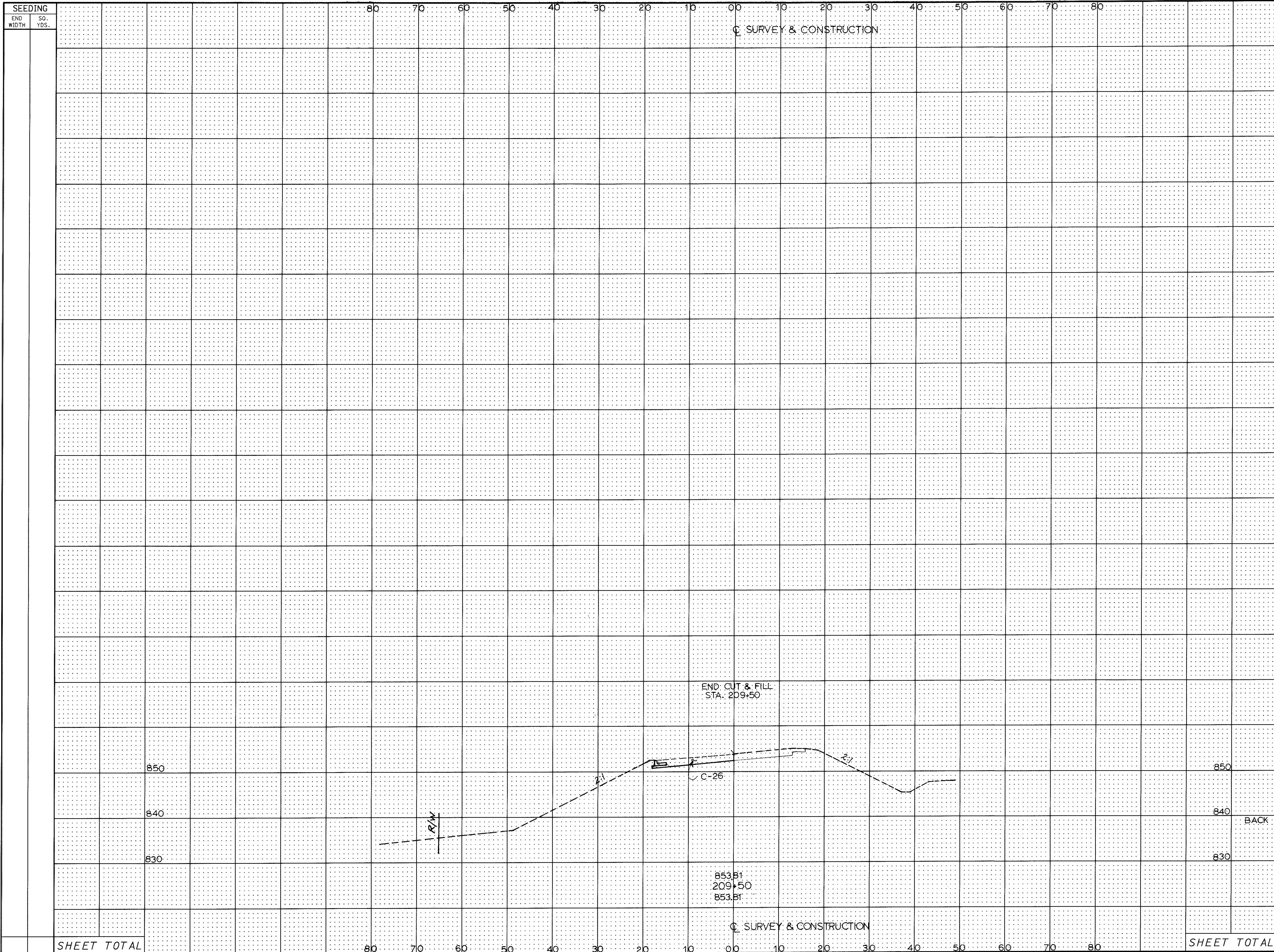
CALCULATED
CHECKED

C SURVEY & CONSTRUCTION

CROSS SECTIONS

GUE - 146 - 03.94

13
13



END CUT & FILL
STA. 209+50

BACK 26

853.81
209+50
853.81

C SURVEY & CONSTRUCTION

SHEET TOTAL

SHEET TOTAL

134 110

134 110



GEOLOGY OF THE SITE

THE STRUCTURE SITE IS LOCATED IN THE ROLLING UNGLACIATED PORTION OF THE ALLEGHENY PLATEAU REGION, IN A VALLEY AND OVER CSX RAILROAD, IN AN AREA WHERE VALLEY FILL AND RESIDUAL SOILS OVERLIE WEATHERED MUDSTONE AND MUDSTONE BEDROCK OF PENNSYLVANIAN AGE.

EXPLORATION

THE EXPLORATION CONSISTED OF TWO DRIVE SAMPLE-CORE BORINGS MADE BY MEANS OF A MECHANICALLY-POWERED HOLLOW STEM ROTARY AUGER MOUNTED ON A MOBILE PLATFORM, PERFORMED ON JUNE 10 AND 11, 1991.

INVESTIGATIONAL FINDINGS AND OBSERVATIONS

THE TEST BORINGS DISCLOSED THAT INTERVALS OF LOOSE TO VERY DENSE UNSTRATIFIED BASIC SILT AND CLAY MODIFIED WITH SAND, GRAVEL AND VARYING AMOUNTS OF EACH OTHER THAT INCREASE (ERRATIC AT TIMES) IN DENSITY WITH INCREASE IN DEPTH OVERLIE RELATIVELY FLAT-LYING BEDROCK SURFACE. TEST BORING NO. B-1 (MADE IN THE VICINITY OF THE REAR ABUTMENT) ENCOUNTERED BEDROCK SURFACE AT 30.5 FOOT DEPTH, ELEVATION 820.2 FEET AND CONTINUED TO ADVANCE TO A TOTAL DEPTH OF 41.5 FEET, ELEVATION 809.2 FEET WHERE THE BORING WAS TERMINATED AFTER PENETRATING 11.0 FEET BELOW BEDROCK SURFACE. TEST BORING B-2 (MADE IN THE GENERAL VICINITY OF THE FORWARD ABUTMENT) ENCOUNTERED BEDROCK SURFACE AT 31.0 FOOT DEPTH, ELEVATION 818.9 FEET AND CONTINUED TO ADVANCE TO A TOTAL DEPTH OF 45.3 FEET, ELEVATION 804.6 FEET WHERE THE BORING WAS TERMINATED AFTER PENETRATING 14.3 FEET BELOW BEDROCK SURFACE. ELASTIC CLAY WAS ENCOUNTERED IN BORING B-2 AT 17.5 FOOT DEPTH, ELEVATION 832.4 FEET.

FREE WATER WAS OBSERVED AND MEASURED IN TEST BORING B-1 AT 30.0 FOOT DEPTH, ELEVATION 820.7 FEET AND IN TEST BORING B-2 AT 25.0 FOOT DEPTH, ELEVATION 824.9 FEET.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.

Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
 X = Number of Blows for First 6 inches.
 Y = Number of Blows for Second 6 inches.
 Z = Number of Blows for Third 6 inches.

Drive Rod Penetration Resistance Sounding Log - Profile

Casing
 Resistance "R" < 10,000 lbs.

Resistance "R" > 10,000 lbs.

Z Indicates Final Measurement of Penetration, in Inches.

W Indicates Free Water Elevation.

V Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Mudstone or Claystone
- Mudstone or Claystone
- Weathered Shale
- Shale
- Weathered Siltstone
- Siltstone

- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone
- Boulders or Cobbles

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

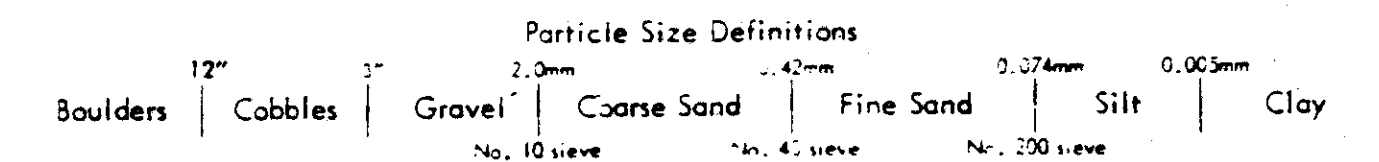
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140-pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 18 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in three 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



NOTE - ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE BUREAU OF TESTS AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF LOCATION AND DESIGN OR IN THE BRIDGE BUREAU AT 25 SOUTH FRONT STREET.

REVISED 10/14/92

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design criteria for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

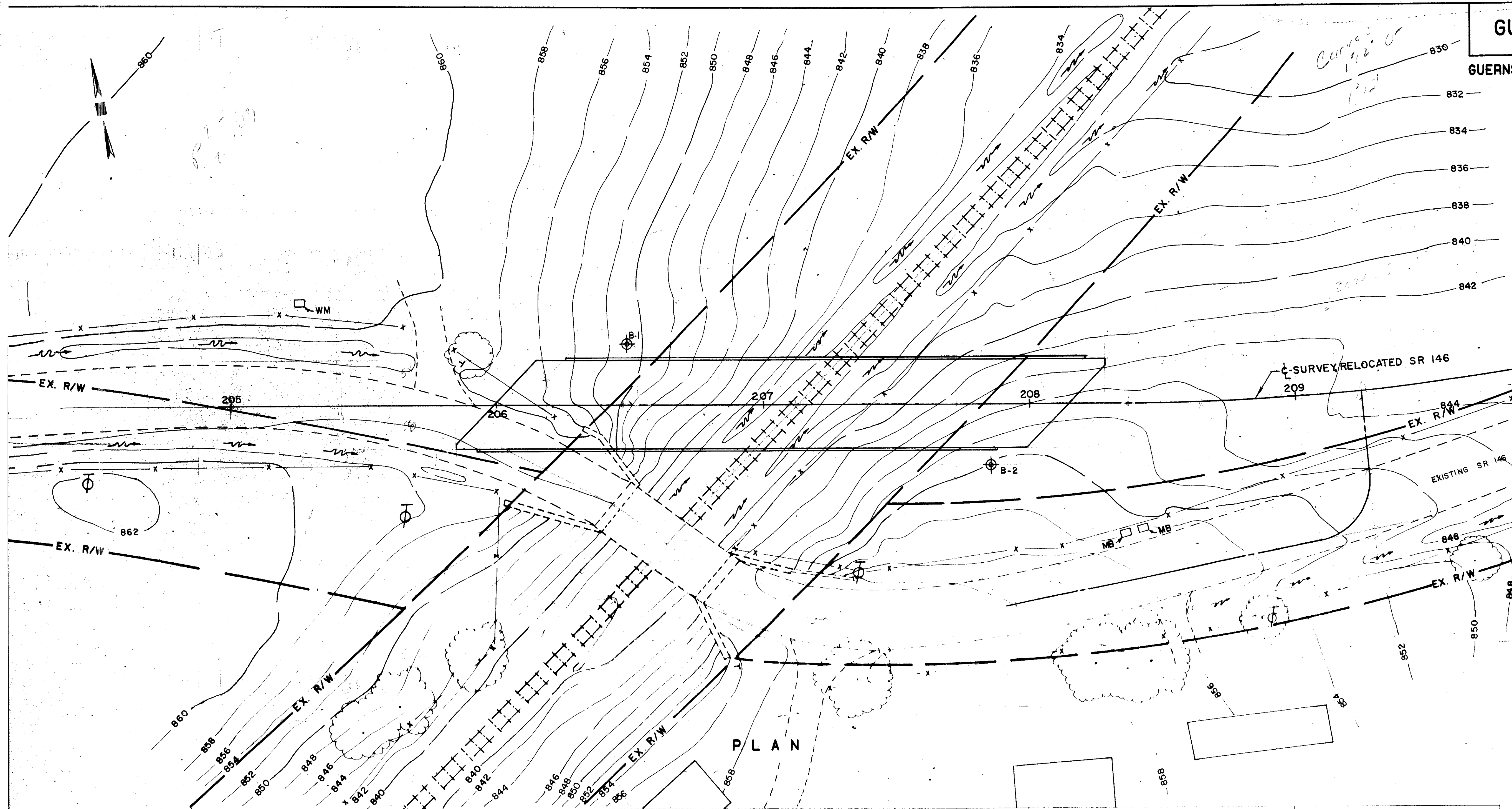
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - TESTING LABORATORY
1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. GUE-146-0391

OVER C.S.X. RAILROAD
SEC. GUE-146-3.66

CHECKED BY A.F.	REVIEWED BY M.R.S.	DATE 6/21/91
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EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.



BENCH MARK "A"

BENCH MARK "B"

DESIGN TRAFFIC

CURRENT A. D. T.	(1991) = 880
DESIGN YEAR A. D. T.	(2011) = 980
CURRENT A. D. T. T.	(1991) = 60
DESIGN YEAR A. D. T. T.	(2011) = 70

EXISTING STRUCTURE

TYPE	SINGLE SPAN STEEL BEAM ON STONE GRAVITY ABUTMENTS
SPAN	46'-0" F/F ABUTMENTS
ROADWAY	23'-4" F/F GUARDRAIL
SURFACE COURSE	ASPHALT CONCRETE
VERTICAL CLEARANCE	16'-11"
LOADING	S-15
ALIGNMENT	TANGENT
STRUCTURE FILE NO.	3003639
DATE BUILT	1938
CONDITION	POOR

PROPOSED STRUCTURE

TYPE	
SPAN	
ROADWAY	34' TOE / TOE PARAPETS
SKEW	
WEARING SURFACE	
CROWN	
ALIGNMENT	TANGENT
VERTICAL CLEARANCE	
LOADING	HS20-44 AND ALTERNATE MILITARY

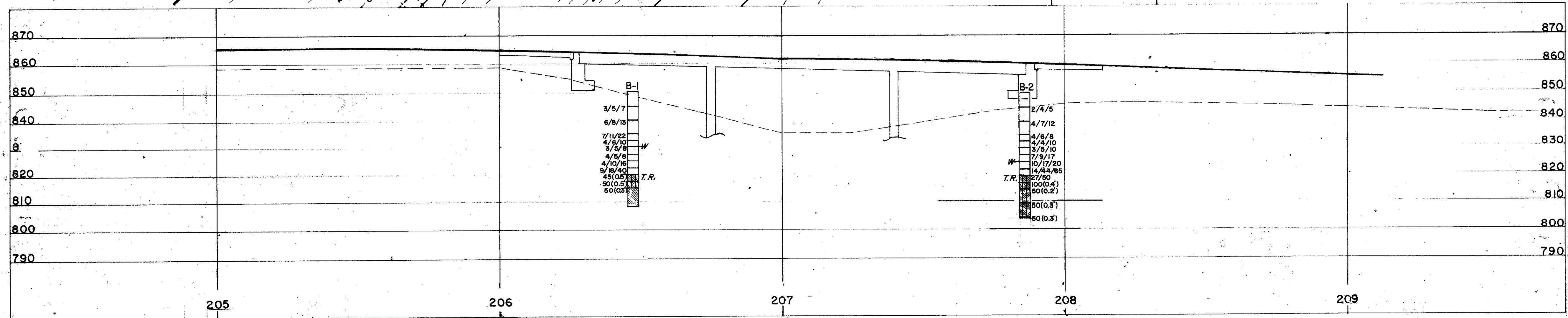
REVISED 10/14/92

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS-TESTING LABORATORY
1688 WEST BROAD STREET COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. GUE-146-0391
OVER CSX RAILROAD
SEC. GUE-146-3.66

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
J.B.H.	A.F.	M.R.S.	6/21/91



PROFILE ALONG C. S.R. 146

LOG OF BORING

Date Started 6/10/91 Sampler Type SS Dia. 1 3/8" Water Elev. 820.7'
 Date Completed 6/11/91 Casing Length _____ Dia. _____
 Boring No. B-1 Station & Offset 206+47, 23' LT. (REAR ABUT.) Surface Elev. 850.7'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics							SHTL Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.		W.C.		
850.7	0				SOD AND TOPSOIL												VISUAL
850.2	2	AUGERED															
845.7	4																
	6	3/5/7			BROWN CLAY	1	0	0	5	32	63	50	24	23			A-7-6
840.7	10	6/8/13			BROWN CLAY	2	0	0	3	33	64	50	25	26			A-7-6
835.7	16	7/11/22			BROWN SILTY CLAY	3	16	0	2	43	39	40	19	19			A-6B
833.2	18	4/6/10			BROWN CLAY	4	12	0	1	37	50	47	24	24			A-7-6
830.7	20	3/5/8			GRAY SANDY CLAY	5	11	1	10	37	41	33	15	19			A-6A
828.2	22	4/5/8			GRAY SILTY CLAY	6	0	1	10	44	45	38	19	22			A-6B
825.7	24	4/10/16			GRAY GRAVELLY SANDY SILT.	7	16	11	26	35	12	NP	NP	16			A-4A
823.2	26	9/18/40			GRAY GRAVELLY CLAY	8	21	6	7	41	25	38	15	16			A-6A
820.7	30	45(0.5)			REDDISH GRAY SILTY CLAY	9	0	2	3	51	44	39	17	13			A-6B
820.2	32																
818.2	34	50(0.5)			GRAY WEATHERED MUDSTONE	10	-	-	-	-	-	-	-	-			12 VISUAL
815.7	36	50(0.3)			GRAY WEATHERED MUDSTONE	11	-	-	-	-	-	-	-	-			8 VISUAL
815.4	38		4.3	0.4	MUDSTONE, REDDISH-BROWN AND GRAY, SOFT AND CRUMBLY WITH SCATTERED THICK CLAY SEAMS, BADLY BROKEN. CORE LOSS 10%.												
809.2	40		1.3	0.2	BOTTOM OF BORING												

LOG OF BORING

Date Started 6/10/91 Sampler Type SS Dia. 1 3/8" Water Elev. 824.9'
 Date Completed 6/11/91 Casing Length _____ Dia. _____
 Boring No. B-2 Station & Offset 207+85, 23' RT. (FORWARD ABUT.) Surface Elev. 849.9'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics							SHTL Class.				
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.		W.C.			
849.9	0				TOPSOIL													VISUAL
849.4	2	AUGERED																
844.9	4																	
	6	2/4/5			BROWN SILT AND CLAY	1	0	1	16	53	30	32	14	20				A-6A
839.9	10	4/7/12			BROWN SANDY CLAY	2	0	6	23	37	34	37	16	25				A-6B
834.9	16	4/6/8			BROWN CLAY	3	0	1	2	36	61	45	23	26				A-7-6
832.4	18	4/4/10			BROWN AND GRAY GRAVELLY ELASTIC CLAY	4	27	1	3	24	45	58	27	25				A-7-5
829.9	20	3/5/10			BROWN AND GRAY SANDY CLAY	5	0	6	33	27	34	33	15	16				A-6A
827.4	22	7/9/17			GRAY SANDY CLAY	6	0	22	15	32	21	34	14	19				A-6A
824.9	26	10/17/20			BROWN AND GRAY GRAVELLY SANDY CLAY	7	27	12	18	24	19	29	12	18				A-6A
822.4	28	14/44/65			GRAY SILTY CLAY	8	0	1	2	61	36	41	16	19				A-7-6
819.9	30	27/50			GRAY SILT AND CLAY	9	0	2	2	56	40	40	15	20				A-6A
818.8	32																	
817.9	34	100(0.4)			GRAY WEATHERED MUDSTONE	10	-	-	-	-	-	-	-	-				12 VISUAL
814.9	36	50(0.2)			GRAY WEATHERED MUDSTONE	11	-	-	-	-	-	-	-	-				5 VISUAL
814.7	38		4.8	0.0	GRAY WEATHERED MUDSTONE (DRILLER'S DESCRIPTION) NO CORE LOSS.													
809.9	40	50(0.3)			GRAY WEATHERED MUDSTONE	12	-	-	-	-	-	-	-	-				5 VISUAL
804.9	44	50(0.3)			GRAY WEATHERED MUDSTONE	13	-	-	-	-	-	-	-	-				4 VISUAL
804.6	46																	
	48				BOTTOM OF BORING													

REVISED 10/14/92

OHIO DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - TESTING LABORATORY
 1600 WEST BROAD STREET COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. **GUE-146-039I**
 OVER CSX RAILROAD
 SEC. **GUE-146-3.66**

BORING DATA

TYPED BY L.A.O.	CHECKED BY A.F.	REVIEWED BY M.R.S.	DATE 6/21/91
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