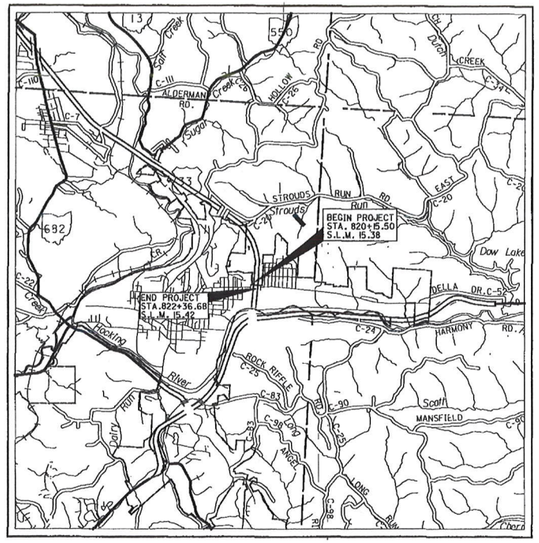
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ATH-33-15.36

ATHENS TWP.

ATHENS COUNTY



LOCATION MAP

LATITUDE: 39°20'15" LONGITUDE: 82°4'54"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2005)	21,300
DESIGN YEAR ADT (2021)	22,300
DESIGN HOURLY VOLUME (2021)	2,007
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	7.2%
DESIGN SPEED	60 MPH
LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION - PRINCIPAL ARTERIAL

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE

CALL 1-800-925-0988 (TOLL FREE)
OHIO OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION
SERVICE (OGPUPS)

NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:

OHIO DEPARTMENT
OF TRANSPORTATION
DISTRICT 10 - PRODUCTION

ENGINEERS SEAL:

STATE OF OHIO
JOHN D. COEN
E-56542
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: John Coen
DATE: 6-22-05

INDEX OF SHEETS:

PRODUCTION 339

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	DM-4.3	7/19/02		
BP-2.1	7/16/04	DM-4.4	7/19/02		
BP-2.2	7/16/04				
BP-2.4	7/16/04	MT-35.10	4/20/01		
BP-8.1	7/28/00	MT-95.40	7/16/04		
		MT-101.70	10/18/02		
GR-1.1	7/16/04	MT-105.10	10/18/02		
GR-2.1	1/16/04	MT-105.11	10/18/02		
GR-3.1	4/18/03				
GR-3.2	4/18/03	AS-1-81	7/19/02		
GR-6.1	4/18/03	PCB-91	7/19/02		
RM-4.2	4/18/03	SICD-1-96	7/19/02		
DM-1.1	1/21/05				
DM-1.4	1/21/05				
DM-4.1	7/19/02				

SUPPLEMENTAL SPECIFICATIONS

800	4/15/05	
832	4/17/04	
833	2/12/03	

SPECIAL PROVISIONS

PROJECT DESCRIPTION

REMOVAL OF THE EXISTING BACKWALL, APPROACH SLABS AND APPROACH PAVEMENT. MAKE THE EXISTING BRIDGE SEMI-INTEGRAL. PLACE NEW APPROACH SLABS AND APPROACH PAVEMENT ALONG WITH NEW GUARDRAIL. PATCHING EXISTING CONCRETE SURFACES AND SEALING CONCRETE SURFACES.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2005 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 PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

MAINTENANCE PROJECT

PROJECT EARTH DISTURBED AREA - N/A
ESTIMATED CONTRACTOR EDA - N/A
NOTICE OF INTENT - N/A

APPROVED Gary M. Callen
DATE 6-23-05 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor
DATE 7-26-05 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E051(154)
PID NO. 76264
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
ATH-33-15.36
1/43

ATH - USR 33-15.36
060006 PID - 76264
Dist 10 1/11/2006

23-JUN-2005 8:59AM jcoen

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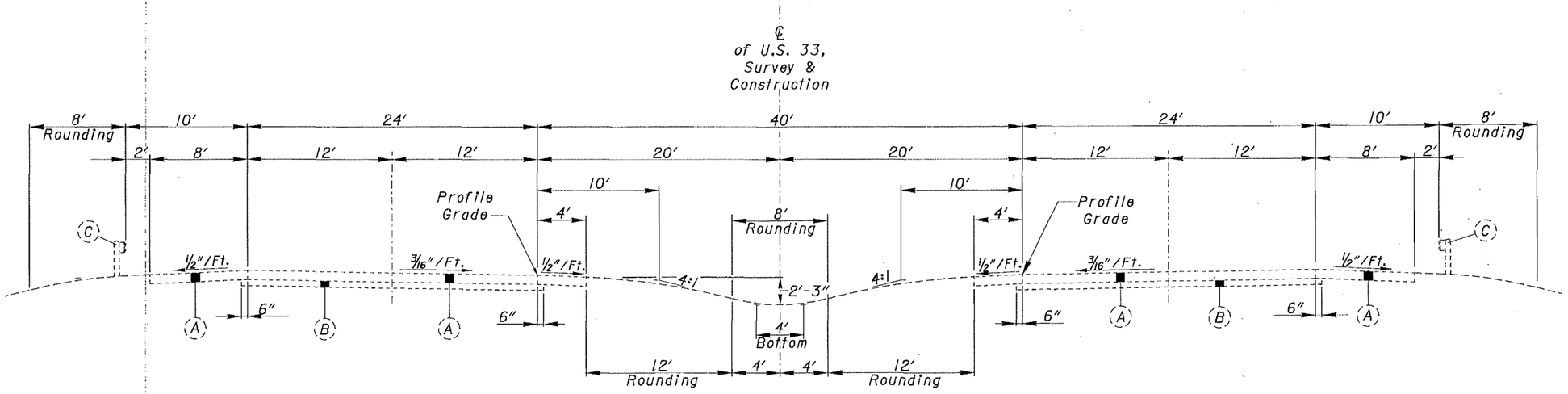
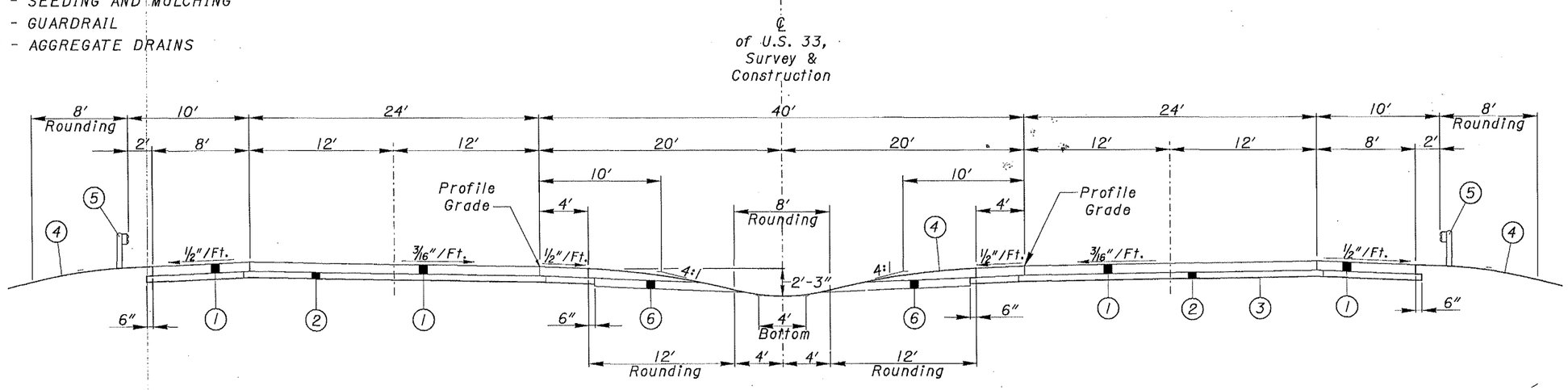


ADJOINING TYPICAL SECTION

LEGEND

(A) ITEM 452 - 9" PLAIN PORTLAND CEMENT CONCRETE, AS PER PLAN
(B) ITEM 301 - 6" BITUMINOUS AGGREGATE BASE
(C) ITEM 606 - GUARDRAIL

(1) ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT
(2) ITEM 304 - 6" AGGREGATE BASE
(3) ITEM 204 - SUBGRADE COMPACTION
(4) ITEM 659 - SEEDING AND MULCHING
(5) ITEM 606 - GUARDRAIL
(6) ITEM 605 - AGGREGATE DRAINS



TYPICAL SECTION

LIMITING STATIONS

Sta. 820+15.50 to Sta. 820+64.50 E.B.
Sta. 822+19.15 to Sta. 822+43.15 E.B.
Sta. 820+09.05 to Sta. 820+58.05 W.B.
Sta. 822+12.68 to Sta. 822+36.68 W.B.

NOTES:

1.) NO ROUNDING IS REQUIRED WHEN FORESLOPE IS 6:1 OR FLATTER.

CALCULATED CAK
CHECKED JDC

TYPICAL SECTIONS

ATH-33-15.36

ath33typ 8/25/04

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

Time Warner Communication
28 Station Street
Athens, Ohio 45701
Telephone: 740-594-3777
Steve Hewitt

Verizon Telephone
754 West Union Street
Athens, Ohio 45701
Telephone: 740-592-0544
Att.: Jeff Schoonover

Columbia Gas of Ohio, Inc.
843 Piatt Avenue
Chillicothe, Ohio 45601
Telephone: 740-772-9131
Tiffany Woodyard

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

WORK LIMITS

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

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK 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 FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ITEM 209 - LINEAR GRADING

THIS WORK SHALL CONSIST OF PREPARING A SUBGRADE FOR THE SHOULDER PAVING OF THE ROADWAY BY EXCAVATING THE EXISTING SHOULDER MATERIAL TO THE DEPTH SHOWN IN THE PLAN, OR AS DIRECTED BY THE ENGINEER, TO REMOVE ANY UNSTABLE MATERIAL AND BY SHAPING AND COMPACTING THE SUBGRADE.

PAYMENT FOR RESHAPING SHOULDERS AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE PER STATION FOR ITEM 209, LINEAR GRADING - 3.0 STATIONS

ITEM 626 - BARRIER REFLECTOR, TYPE A, AS PER PLAN

ALL REFLECTORS SHALL MEET OR EXCEED REQUIREMENTS UNDER 720.04 AND SHALL BE REFLEXITE MODEL No. 650 OR ITS APPROVED FUNCTIONAL EQUIVALENT. REFLECTORS ARE TO BE ATTACHED TO THE GUARDRAIL USING EXISTING POSTS BOLTS AT LOCATIONS DESIGNATED BY THE ENGINEER. NO ADHESIVE SHALL BE USED WHEN ATTACHING THE REFLECTORS TO THE GUARDRAIL, INFORMATION ON REFLEXITE MODEL No. 650 CAN BE OBTAINED FROM REFLEXITE CORP. P.O. BOX 1200, 315 SOUTH STREET, NEW BRITAIN, CT. 06050.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL GRADED AREAS.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH LEAN GROUT, ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED.

THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 659 - SEEDING MISC.; SEEDING AND MULCHING, CLASS 2

SEEDING AND MULCHING SHALL BE APPLIED TO ALL DISTURBED AREAS BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT, SLOPE EASEMENT OR CHANNEL EASEMENT.

THIS ITEM SHALL INCLUDE ALL WATER, COMMERCIAL FERTILIZER, AGRICULTURAL LIMING, LABOR, MATERIAL AND TOOLS NECESSARY TO COMPLETE WORK IN ACCORDANCE WITH ITEM 659 SPECIFICATIONS. NO TOP SOIL OR SOIL TESTING WILL BE REQUIRED.

THE FOLLOWING ESTIMATED QUANTITY IS FOR INFORMATION ONLY:

ITEM 659 SEEDING MISC.; SEEDING AND MULCHING, CLASS 2 - 700 Sq.Yds.

PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 659 - SEEDING MISC.; SEEDING AND MULCHING, CLASS 2.

ITEM 642 - EDGE LINE

THE NEW EDGE LINE SHALL MATCH THE EXISTING OFFSET EDGE LINE FOR THE ENTIRE LENGTH OF THE PROJECT.

PRIOR NOTICE

THREE-WEEKS PRIOR TO IMPLEMENTATION OF ANY MAINTENANCE OF TRAFFIC MEASURE, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF THE TYPE TO BE DONE, THE MAINLINE LANE CLOSURES, WIDTH OF RESTRICTIONS, AND ANY OTHER PERTINENT MAINTENANCE OF TRAFFIC INFORMATION.

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO ITEM 626 EXCEPT THAT THE SPACING SHALL BE 25 FEET.

CALCULATED CAK CHECKED JCB

GENERAL NOTES

ATH-33-15.36

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND THE COMPLETED PAVEMENT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS. ONE LANE OPERATIONS SHALL NOT BEGIN UNTIL MARCH 1, 2006.

LANE CLOSURE OPERATIONS SHALL BE AS PER STANDARD DRAWING MT 95.40.

THE WESTBOUND ON RAMP WILL BE CLOSED FOR PHASE 2. THE DETOUR WILL BE SIGNED BY STATE FORCES. THE CONTRACTOR SHALL NOTIFY THE STATE THREE WEEKS PRIOR TO WANTING THE RAMP CLOSED.

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 SHALL BE MADE AT THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC AND SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ALTERNATIVE METHODS

IF THE CONTRACTOR ELECTS, HE MAY SUBMIT AN ALTERNATE METHOD FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE PLAN INTENT IS FOLLOWED AND NO ADDED INCONVENIENCE TO THE PUBLIC RESULTS. NO ALTERNATIVE METHOD SHALL BE PLACED INTO EFFECT WITHOUT WRITTEN APPROVAL OF THE PROJECT ENGINEER.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

SEQUENCE OF CONSTRUCTION

PHASE 1:

1.) ERECT TEMPORARY SIGNS, TRAFFIC SIGNALS, AND COVER ANY EXISTING SIGNS.

2.) REMOVE CONFLICTING EXISTING PAVEMENT MARKINGS AND INSTALL TEMPORARY MARKINGS AND PORTABLE CONCRETE BARRIER.

3.) CONSTRUCT THE PROPOSED BRIDGE AND ROADWAY, AS SHOWN ON THE MOT PLANS.

PHASE 2:

1.) REMOVE CONFLICTING TEMPORARY AND EXISTING PAVEMENT MARKINGS, INSTALL TEMPORARY PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIER.

2.) CLOSE WESTBOUND ON RAMP AND SIGN DETOUR ROUTE.

3) CONSTRUCT THE PROPOSED BRIDGE AND ROADWAY, AS SHOWN ON THE MOT PALANS.

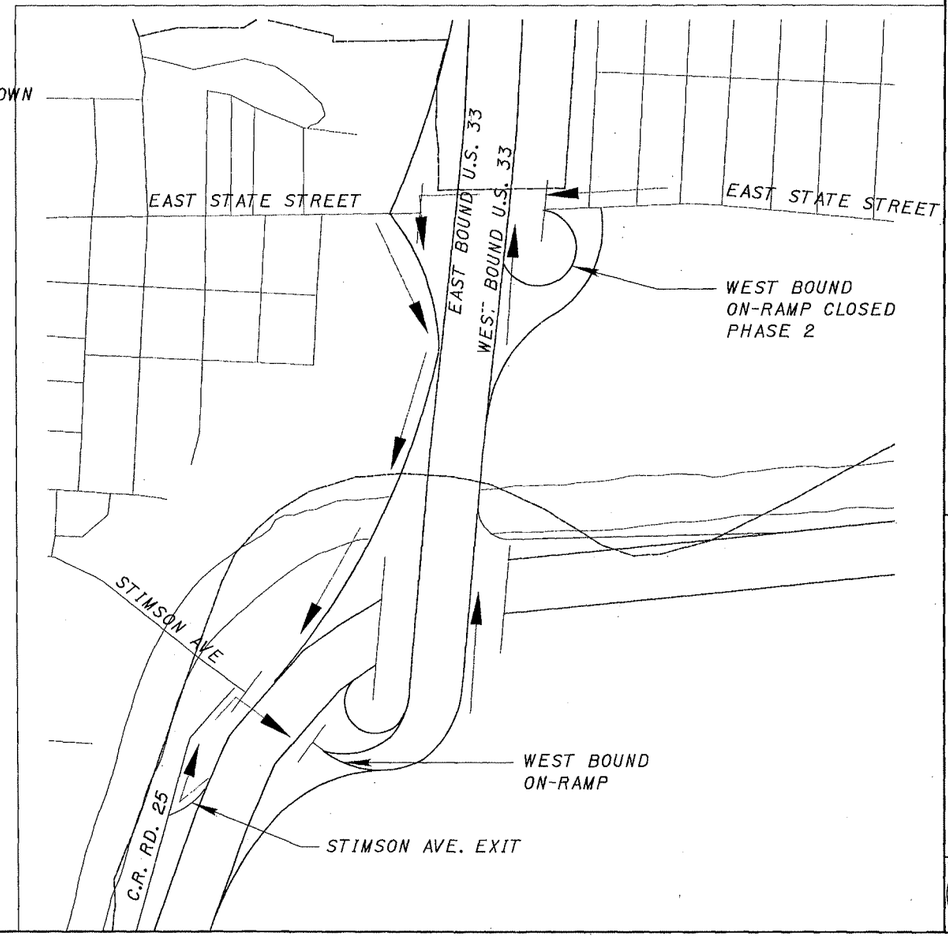
PHASE 3:

1.) REMOVE CONFLICTING TEMPORARY AND EXISTING PAVEMENT MARKINGS, INSTALL TEMPORARY PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIER.

2.) OPEN WESTBOUND ON RAMP AND SIGN DETOUR ROUTE.

3) CONSTRUCT THE PROPOSED BRIDGE AND ROADWAY, AS SHOWN ON THE MOT PALANS.

DETOUR MAP



CALCULATED CAK
CHECKED JCB

GENERAL NOTES

ATH-33-15.36

ITEM 606 - IMPACT ATTENUATOR, TYPE 1-98 (UNIDIRECTIONAL OR BIDIRECTIONAL)1

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING IMPACT ATTENUATORS:

1) THE C-A-T MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE C-A-T SYSTEM IS CONSIDERED TO BE 31'-3" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS245M	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR	4/10/97 Rev. 4	3/6/98
SS224M	C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98
SS226M	C-A-T TRANSITION TO VERTICAL WALL OR PIER PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98

2) THE BRAKEMASTER MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE BRAKEMASTER SYSTEM IS CONSIDERED TO BE 32'-8" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
92-00-01	BRAKEMASTER GENERAL ASSEMBLY (UNIDIRECTIONAL SYSTEM)	3/6/97 Rev. K	3/6/98
92-00-81	BRAKEMASTER (UNIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
92-00-02	BRAKEMASTER GENERAL ASSEMBLY (BIDIRECTIONAL SYSTEM)	3/10/97 Rev. K	3/6/98
92-00-82	BRAKEMASTER (BIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
9202024	ANCHOR ASSEMBLY, FOUNDATION TUBE, 6 1/2 FT., BRS	6/12/97 Rev. D	3/6/98

3) THE FLEAT-MT MANUFACTURED BY ROAD SYSTEMS, INC. (RSI), 3616 OLD HOWARD COUNTY AIRPORT ROAD, BIG SPRINGS, TX, 79720 (TELEPHONE 915-263-2435) AND AVAILABLE FROM RSI'S LIST OF APPROVED DISTRIBUTORS.

THE LENGTH OF THE FLEAT-MT SYSTEM IS CONSIDERED TO BE 37'-6" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS AND THE MANUFACTURERS INSTALLATION MANUAL.

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
MEDFLT-W-US	FLARED ENERGY ABSORBING TERMINAL - FLEAT-MT ASSEMBLY FOR WOOD BREAKAWAY POST SYSTEM	4/10/02 Rev. 5	1/6/03
MEDFLT-S-US	FLARED ENERGY ABSORBING TERMINAL - FLEAT-MT ASSEMBLY FOR STEEL BREAKAWAY POST SYSTEM	4/10/02 Rev. 6	1/6/03

THE FACE OF THE TYPE 1-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 36" X 12". PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1-98 (UNIDIRECTIONAL OR BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CALCULATED CAK CHECKED JCB

GENERAL NOTES

ATH-33-15.36

SHEET NUMBER													ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET No.
ITEM	3	8	15	17	19													
																	ROADWAY	
201													201	11000	LUMP		CLEARING AND GRUBBING	
202		585											202	23000	585	SQ. YD.	PAVEMENT REMOVED	
202					1175								202	30000	1175	SQ. FT.	WALK REMOVED	
202					132								202	32000	132	FT.	CURB REMOVED	
202					8								202	35100	8	FT.	PIPE REMOVED, 24" AND UNDER	
202			500										202	38100	500	FT.	GUARDRAIL REMOVED FOR STORAGE	
202			75										202	38400	75	FT.	GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN	
202					1								202	58000	1	EACH	MANHOLE REMOVED	
202					1								202	58100	1	EACH	CATCH BASIN REMOVED	
SPECIAL					132								SPECIAL	20270000	132	FT.	FILL AND PLUG EXISTING CONDUIT	
203													203	10000	200	CU. YD.	EXCAVATION	
204		1243											204	10000	1243	SQ. YD.	SUBGRADE COMPACTION	
209	3												209	60201	3	STA.	LINEAR GRADING, AS PER PLAN	
606			500										606	13000	500	FT.	GUARDRAIL, TYPE 5	
606			200										606	15500	200	FT.	GUARDRAIL, BARRIER DESIGN, TYPE 5	
606			4										606	35000	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
606			2										606	35100	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
606			2										606	60010	2	EACH	IMPACT ATTENUATOR, TYPE 1-98, BIDIRECTIONAL	
608					675								608	13000	675	SQ. FT.	CONCRETE, WALK, 6"	
609					132								609	26000	132	FT.	CURB, TYPE 6	
																	EROSION CONTROL	
601					7								601	20000	7	SQ. YD.	CRUSHED AGGREGATE SLOPE PROTECTION	
659	LUMP												659	98700	LUMP		SEEDING MISC.; SEEDING AND MULCHING, CLASS 2	
832													832	30000	2000	EACH	EROSION CONTROL	
																	DRAINAGE	
518				2325									518	62100	2325	FT.	STRUCTURAL DRAINAGE MISC.; HORIZONTAL DRILLED HOLES	
518				2325									518	62100	2325	FT.	STRUCTURAL DRAINAGE MISC.; HORIZONTAL DRAIN PIPE	
603					100								603	00200	100	FT.	4" CONDUIT, TYPE C	
603					132								603	05900	132	FT.	15" CONDUIT, TYPE B	
604					1								604	01600	1	EACH	CATCH BASIN, NO. 5	
604					1								604	04500	1	EACH	CATCH BASIN, NO. 2-2B	
604					1								604	30100	1	EACH	MANHOLE No. 1	
SPECIAL					135								SPECIAL	60460000	135	FT.	TRENCH DRAIN	
605													605	31100	78	FT.	AGGREGATE DRAINS	
																	PAVEMENT	
304		197											304	20000	197	CU. YD.	AGGREGATE BASE	
SPECIAL		188											SPECIAL	451E31000	188	FT.	PRESSURE RELIEF JOINT, TYPE B	
452		585											452	13000	585	SQ. YD.	9" NON-REINFORCED CONCRETE PAVEMENT	
526		574											526	25000	574	SQ. YD.	REINFORCED CONCRETE APPROACH SLAB (15")	
																	LIGHTING	
625		40											625	25400	40	FT.	CONDUIT, 2", 725.04	

CALCULATED JDC CHECKED

GENERAL SUMMARY

ATH-33-15.36

SHEET NUMBER													ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET No.
ITEM	4	8	14	15														
																	TRAFFIC CONTROL	
				30									626	00100	30	EACH	BARRIER REFLECTOR, TYPE A	
													642	00090	1	MILE	EDGE LINE	
													642	00190	0.5	MILE	LANE LINE	
																	STRUCTURES	
																	STRUCTURES OVER 20' SPAN, SEE SHEET 22 OF 43	
																	MAINTENANCE OF TRAFFIC	
			5										614	12350	5	EACH	WORK ZONE IMPACT ATTENUATOR	
			112										614	13300	112	EACH	BARRIER REFLECTOR, TYPE B	
			112										614	13350	112	EACH	OBJECT MARKER, ONE WAY	
			2.28										614	22100	2.28	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT	
			1990										622	40020	1990	FT.	PORTABLE CONCRETE BARRIER, 32"	
			640										622	40040	640	FT.	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	
													614	11000	LUMP		MAINTAINING TRAFFIC	
													623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
													624	10000	LUMP		MOBILIZATION	
													619	16010	8	MONTH	FIELD OFFICE, TYPE B	

CALCULATED JDC
CHECKED

GENERAL SUMMARY

ATH-33-15.36

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ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE B

EAST BOUND
Sta 820+15
36 FT.
Sta 822+43.15
36 FT

WEST BOUND
Sta 820+08.55
55 FT
Sta 822+36.68
60.4 FT

SUM: 36+36+60.4+55 = 187.4 FT

A TOTAL OF 188 FT TO BE CARRIED TO THE GENERAL SUMMARY.

ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT

EAST BOUND
Sta 820+15.50 To Sta 820+64.5
MAINLINE
49' x 24' / 9 = 130.7 SQ. YD.
LEFT SHOULDER
47.59' x 4' / 9 = 21.2 SQ. YD.
RIGHT SHOULDER
50.62' x 8' / 9 = 45 SQ. YD.
Sta 822+19.15 To Sta 822+43.15
MAINLINE
24' x 24' / 9 = 64 SQ. YD.
LEFT SHOULDER
25.3' x 4' / 9 = 11.2 SQ. YD.
RIGHT SHOULDER
22.39' x 8' / 9 = 19.9 SQ. YD.

WEST BOUND
Sta 820+09.05 tO Sta 820+58.05
MAINLINE
49' x 24' / 9 = 130.67 SQ. YD.
LEFT SHOULDER
45.3' x 8 / 9 = 40.3 SQ. YD.
RIGHT SHOULDER
50.4' x 4' / 9 = 22.4 SQ. YD.
Sta 822+12.68 To Sra 822+36.68
MAINLINE
24' x 24' / 9 = 64 SQ. YD.
LEFT SHOULDER
27.96' x 8' / 9 = 24.9 SQ. YD.
RIGHT SHOULDER
22.46' x 4' / 9 = 9.98 SQ. YD.

A TOTAL OF 585 SQ. YD. TO BE CARRIED TO THE GENERAL SUMMARY

ITEM 304 - 6" AGGREGATE BASE

(From 9" Non-Reinforced Concrete Pavement)
585 SQ. YD. x ((6"/12")/3) = 97.5 CY

SUB-TOTAL = 98 CY

EAST BOUND
RIGHT SHOULDER
((52' + 23') x (6"/12") x (6"/12"))/27 = 0.7 CY
LEFT SHOULDER
((48.4' + 26.6') x (6"/12") x (6"/12"))/27 = 0.7 CY

WEST BOUND
RIGHT SHOULDER
((51.6' + 23.4') x (6"/12") x (6"/12"))/27 = 0.7 CY
LEFT SHOULDER
((46' + 29.4) x (6"/12") x (6"/12"))/27 = 0.7 CY

SUB-TOTAL = 2.8 CY

(From Reinforced Concrete Approach Slabs, 15")
574 SQ. YD. x ((6"/12")/3) = 95.7 CY

SUB-TOTAL = 96 CY

A TOTAL OF 197 CY TO BE CARRIED TO THE GENERAL SUMMARY.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN

EAST BOUND
Sta 820+64.50 To Sta 820+89.50
RIGHT
(25' x 21.25') / 9 = 59.03 SQ. YD.
(14.5' X 1.75') / 9 = 2.82 SQ. YD.
LEFT
(19' X 25') / 9 = 52.78 SQ. YD.
Sta 821+94.15 To Sta 822+19.15
(42' x 25') / 9 = 116.67 SQ. YD.

WEST BOUND
Sta 820+58 To Sta 820+83
RIGHT
(19' x 25') / 9 = 52.78 SQ. YD.
LEFT
(25' x 39.5') / 9 = 109.8 SQ. YD.
(14.5' x 1.75') / 9 = 2.82 SQ. YD.
Sta 821+87.68 To Sta 822+12.68
(25' x 63.75') / 9 = 177.1 SQ. YD.

A TOTAL OF 574 SQ. YD. TO BE CARRIED TO THE GENERAL SUMMARY.

ITEM 204 - SUBGRADE COMPACTION

MAINLINE & SHOULDERS
(From 9" Non-Reinforcd Concrete Pavement)
585 SQ. YD.

EAST BOUND
RIGHT
(52' + 23') x 1.5' / 9 = 12.5 SQ. YD.
LEFT
(48.4' + 26.6') x 1.5' / 9 = 12.5 SQ. YD.

WEST BOUND
RIGHT
(51.6' + 23.4') x1.5' / 9 = 12.5 SQ. YD.
LEFT
(46' + 29.4') x 1.5' / 9 = 12.5 SQ. YD.

(From Reinforced Concrete Approach Slabs (T=15"), As Per Plan)
574 SQ. YD.

(From Beyond Reinforced Concrete Approach Slabs (T=15"), As Per Plan)
(25' x 8') x 1.5' / 9 = 33.3 SQ. YD.

A TOTAL OF 1243 SQ. YD. TO BE CARRIED TO THE GENERAL SUMMARY.

ITEM 625 - CONDUIT, 2"

A TOTAL OF 40 FOOT TO BE CARRIED TO THE GENERAL SUMMARY.
(FOR TYING INTO EXISTING ELECTRICAL CONDUITS IN PARAPETS)

ITEM 202 - PAVEMENT REMOVED

EAST BOUND
Sta 820+15.50 To Sta 820+64.5
MAINLINE
49' x 24' / 9 = 130.7 SQ. YD.
LEFT SHOULDER
47.59' x 4' / 9 = 21.2 SQ. YD.
RIGHT SHOULDER
50.62' x 8' / 9 = 45 SQ. YD.
Sta 822+19.15 To Sta 822+43.15
MAINLINE
24' x 24' / 9 = 64 SQ. YD.
LEFT SHOULDER
25.3' x 4' / 9 = 11.2 SQ. YD.
RIGHT SHOULDER
22.39' x 8' / 9 = 19.9 SQ. YD.

WEST BOUND
Sta 820+09.05 tO Sta 820+58.05
MAINLINE
49' x 24' / 9 = 130.67 SQ. YD.
LEFT SHOULDER
45.3' x 8 / 9 = 40.3 SQ. YD.
RIGHT SHOULDER
50.4' x 4' / 9 = 22.4 SQ. YD.
Sta 822+12.68 To Sra 822+36.68
MAINLINE
24' x 24' / 9 = 64 SQ. YD.
LEFT SHOULDER
27.96' x 8' / 9 = 24.9 SQ. YD.
RIGHT SHOULDER
22.46' x 4' / 9 = 9.98 SQ. YD.

A TOTAL OF 585 SQ. YD. TO BE CARRIED TO THE GENERAL SUMMARY

DESIGN AGENCY
Production Department
District 10
Marietta, Ohio

DESIGNED JDC
CHECKED XXX

CALCULATIONS

ATH-33-15.36

8
43

MAINTENANCE OF TRAFFIC
TRANSVERSE SECTIONS

ATH-33-15.36

CALCULATED	CHECKED
JCB	JDC

Phase 2

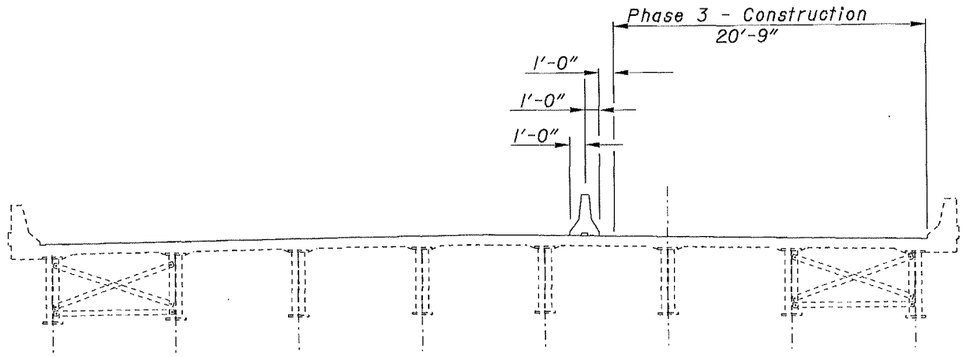
WESTBOUND

EASTBOUND

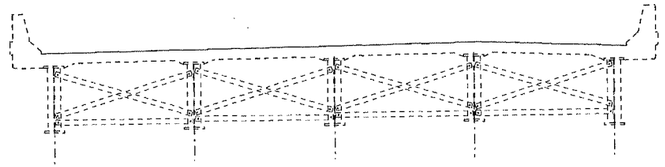
Phase 1

WESTBOUND

EASTBOUND

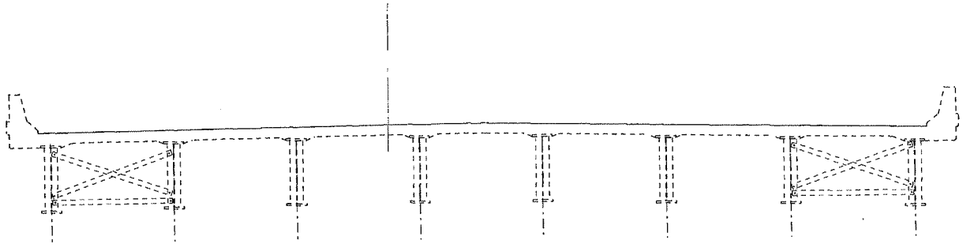


WESTBOUND

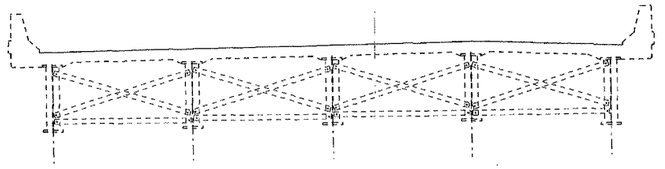


EASTBOUND

Phase 3



WESTBOUND



EASTBOUND

Existing Transverse Section

CALCULATED JCB
CHECKED JDC

MAINTENANCE OF TRAFFIC
TRANSVERSE SECTIONS

ATH-33-15.36

10
43

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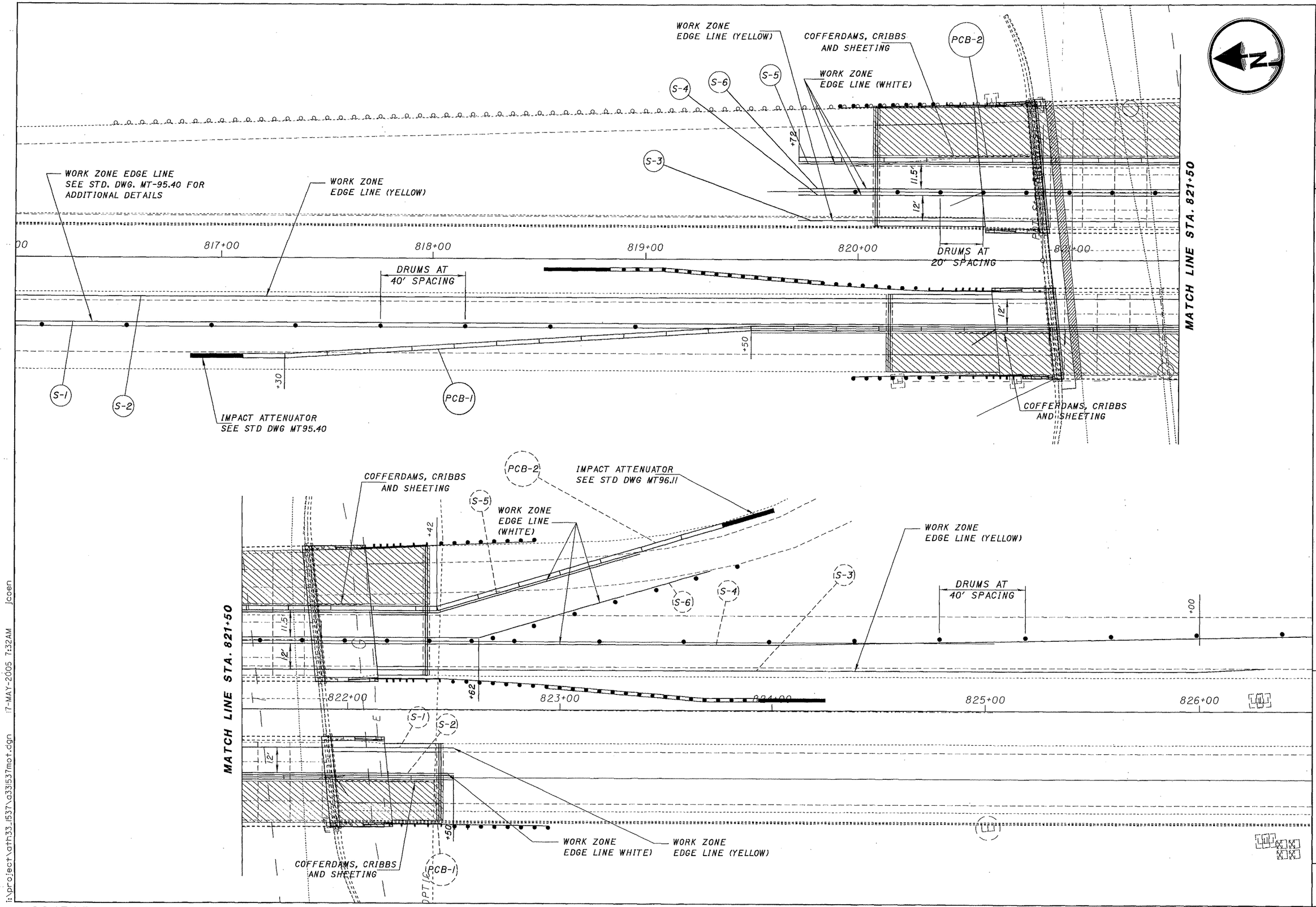

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JDC
CHECKED

MAINTENANCE OF TRAFFIC
PHASE 1

ATH-33-15.36

11
43

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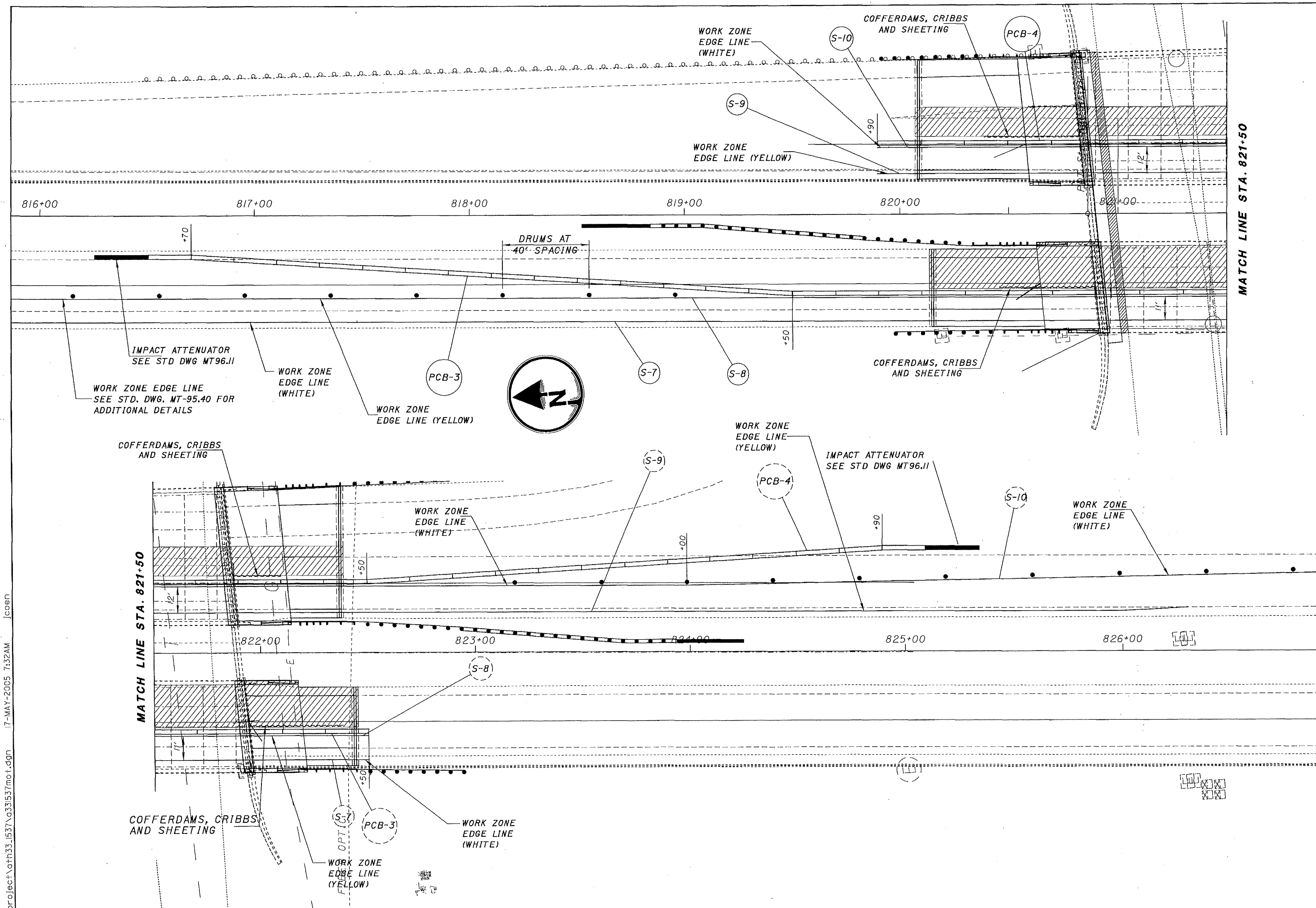
a331537mot 8/31/04


WORK ZONE
EDGE LINE
(WHITE)
COFFERDAMS, CRIBBS
AND SHEETING
PCB-4
S-10
S-9
WORK ZONE
EDGE LINE (YELLOW)
816+00
817+00
818+00
819+00
820+00
821+00
DRUMS AT
40' SPACING
IMPACT ATTENUATOR
SEE STD DWG MT96.11
WORK ZONE EDGE LINE
SEE STD. DWG. MT-95.40 FOR
ADDITIONAL DETAILS
WORK ZONE
EDGE LINE
(WHITE)
PCB-3
WORK ZONE
EDGE LINE (YELLOW)
S-7
S-8
COFFERDAMS, CRIBBS
AND SHEETING
MATCH LINE STA. 821+50
WORK ZONE
EDGE LINE
(YELLOW)
IMPACT ATTENUATOR
SEE STD DWG MT96.11
822+00
823+00
824+00
825+00
826+00
MATCH LINE STA. 821+50
COFFERDAMS, CRIBBS
AND SHEETING
WORK ZONE
EDGE LINE
(YELLOW)
WORK ZONE
EDGE LINE
(WHITE)

0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC
PHASE 2

ATH-33-15.36

12/43

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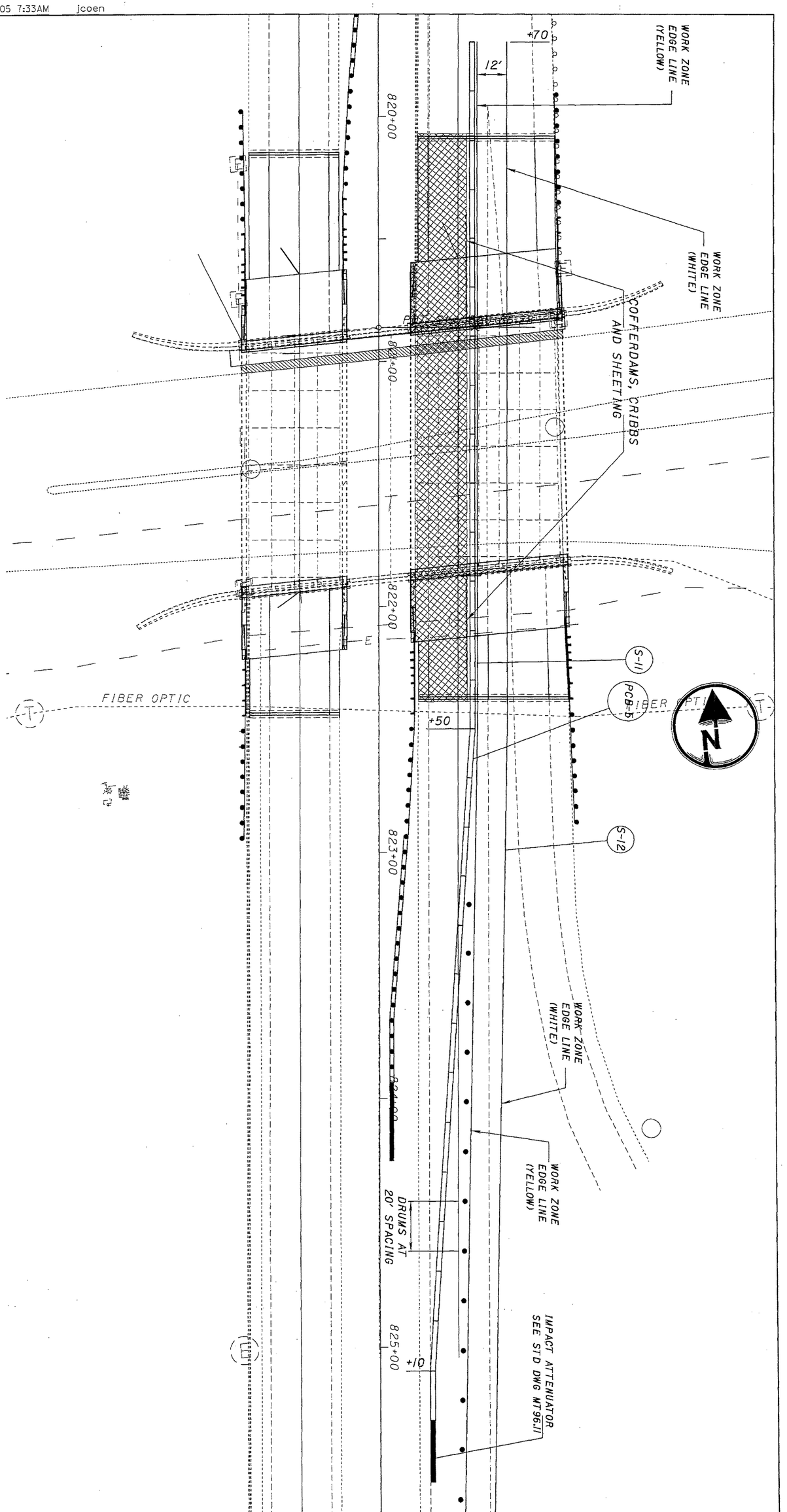
a331537mot 8/31/04



13/43	ATH-33-15.36	MAINTENANCE OF TRAFFIC PHASE 3	CALCULATED / CHECKED; 0 20 10 40 HORIZONTAL SCALE IN FEET

ESTIMATED QUANTITIES - PHASES 1 & 2

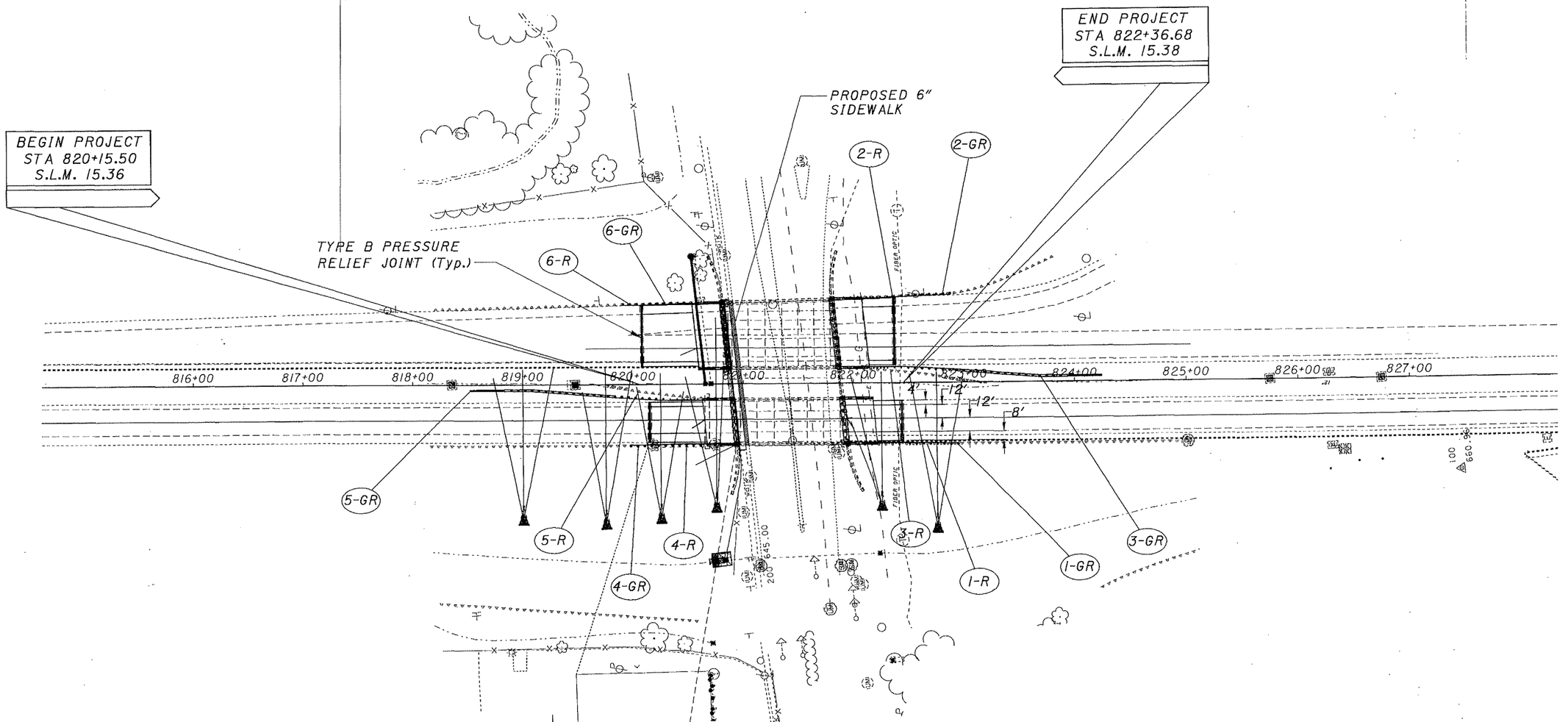
STA. TO STA.	SIDE	REF. NO.			614 Work Zone Edge Line, Class 1, 642 Paint	614 Object Markers ONE WAY (@25' spacing)	614 Barrier Reflector, Type B (@25' spacing)			622 Portable Concrete Barrier, 32" Bridge Mounted (Unanchored)	622 Portable Concrete Barrier, 32"	614 Work Zone Impact Attenuator	
					Mile	EACH	EACH			FOOT	FOOT	EACH	
804+35 TO 822+50		S-1	RT.		0.35								
814+73 TO 822+50		S-2	RT.		0.15								
819+72 TO 826+30		S-3	LT.		0.13								
819+72 TO 829+25		S-4	LT.		0.18								
819+72 TO 823+38		S-5	LT.		0.07								
819+72 TO 823+70		S-6	LT.		0.08								
810+40 TO 822+50		S-7	RT.		0.23								
803+60 TO 822+50		S-8	RT.		0.36								
819+90 TO 826+30		S-9	LT.		0.12								
819+90 TO 829+84		S-10	LT.		0.19								
819+70 TO 830+54		S-11	LT.		0.21								
819+70 TO 830+54		S-12	LT.		0.21								
817+10 TO 822+50		PCB-1	RT.			23	23			140	400	1	
819+72 TO 823+77		PCB-2	LT.			18	18			120	290	1	
816+50 TO 822+50		PCB-3	RT.			25	25			140	460	1	
819+90 TO 825+10		PCB-4	LT.			22	22			120	400	1	
819+70 TO 825+30		PCB-5	LT.			24	24			120	440	1	
TOTAL					2.28	112	112			640	1990	5	

QUANTITIES CARRIED TO THE GENERAL SUMMARY

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC

ATH-33-15.36



REF NO.	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED FOR STORAGE	202 GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN	606 GUARDRAIL, TYPE 5	606 GUARDRAIL, TYPE 5, BARRIER DESIGN	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECT.)	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2	626 BARRIER REFLECTOR, TYPE A
				FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH
1-R	822+02.05	822+94.29	RT.	75							
2-R	821+90.64	822+87.93	LT.	87.5							
3-R	821+96.45	823+20.22	LT.	87.5	37.5						
4-R	819+92.02	821+86.32	RT.	87.5							
5-R	819+60.28	820+82.00	RT.	87.5	37.5						
6-R	819+91.38	821+73.14	LT.	75							
1-GR	822+17.29	822+94.29	RT.			75				1	3
2-GR	822+04.33	822+87.93	LT.			87.5		1			3
3-GR	822+10.42	823+93.51	LT.			87.5	100	1	1		9
4-GR	819+92.02	820+81.15	RT.			87.5		1			3
5-GR	818+83.68	820+66.77	RT.			87.5	100	1	1		9
6-GR	819+91.38	820+68.36	LT.			75				1	3
TOTALS CARRIED TO GENERAL SUMMARY				500	75	500	200	4	2	2	30

NOTE:
SEE SHEET 19,20 FOR DRAINAGE DETAILS
SEE SHEET 20 FOR SIDEWALK/CURB DETAILS
SEE SHEET 16-18 FOR HORIZONTAL DRAIN DETAILS
SEE SHEET 21-43 FOR STRUCTURE DETAILS

N

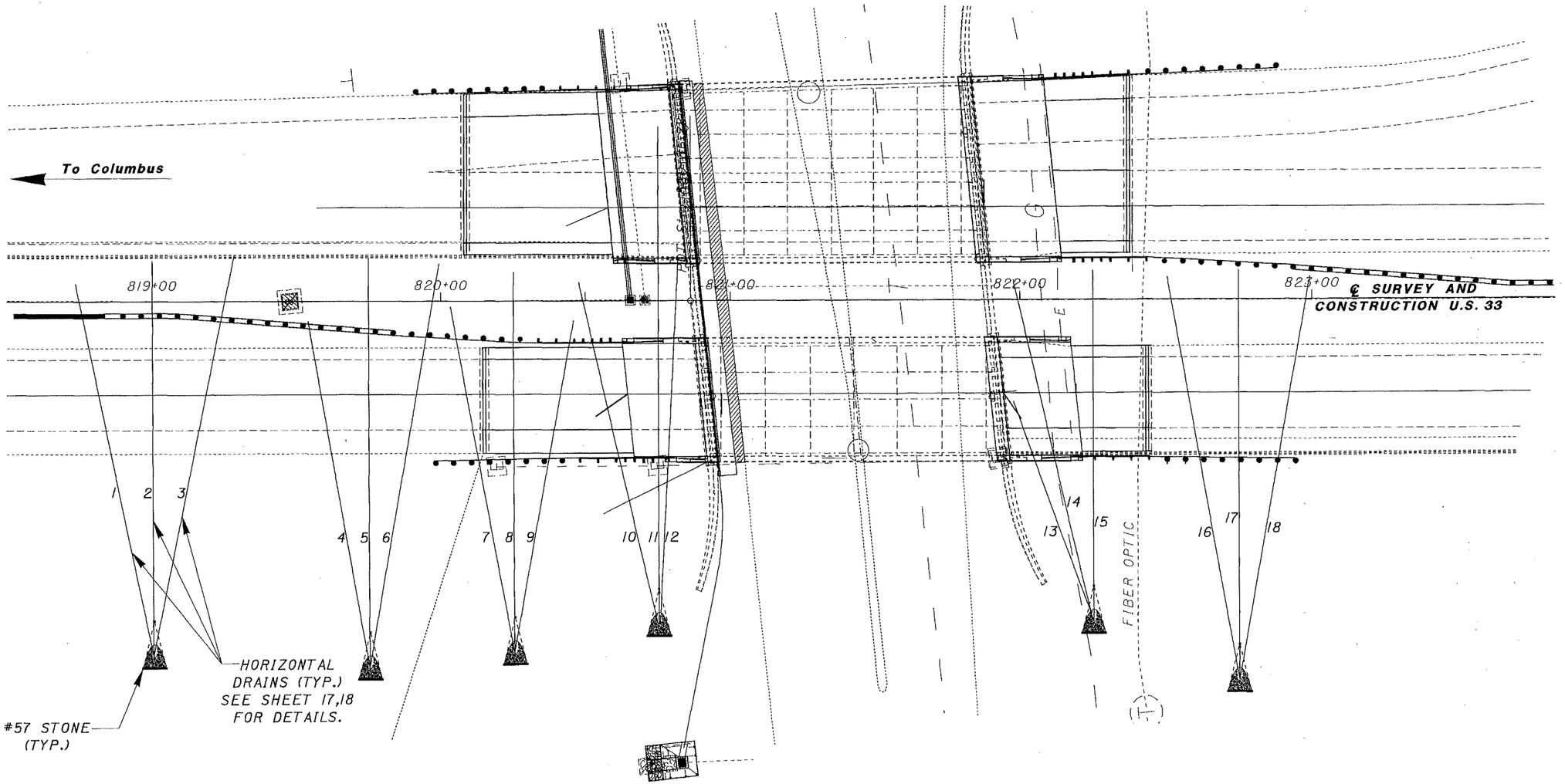
0 25 50 100 HORIZONTAL SCALE IN FEET

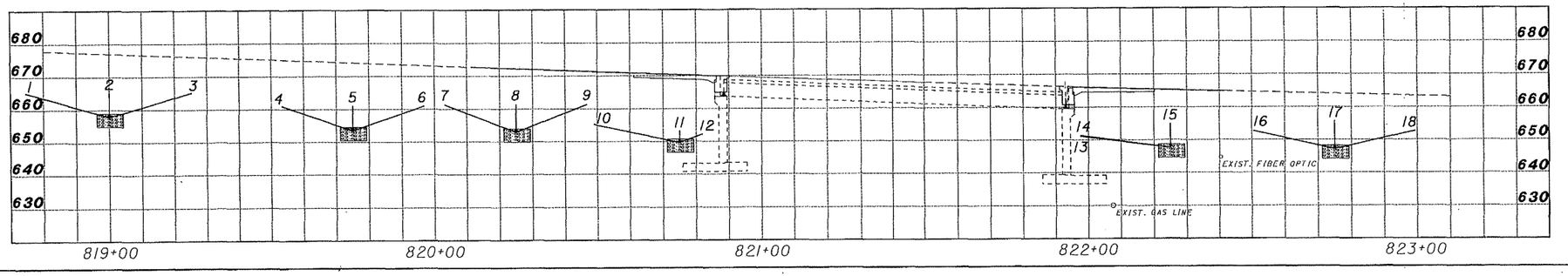
CALCULATED JDC/JCB CHECKED

PLAN VIEW

ATH-33-15.36

15
43





0 10 20 40
HORIZONTAL SCALE IN FEET

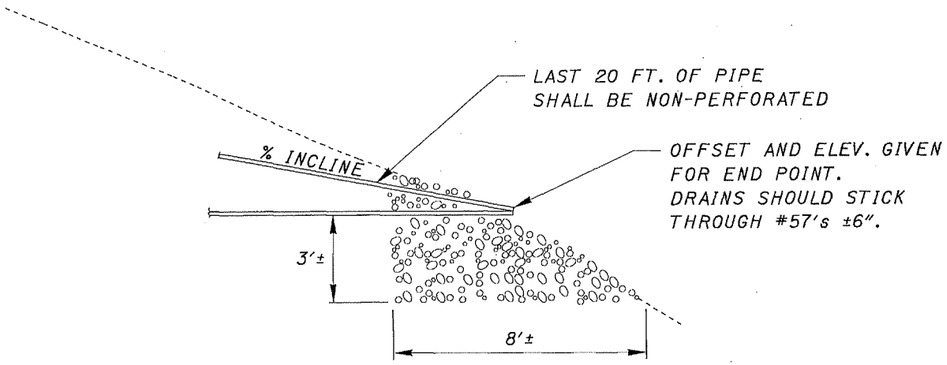
CALCULATED JCB
CHECKED

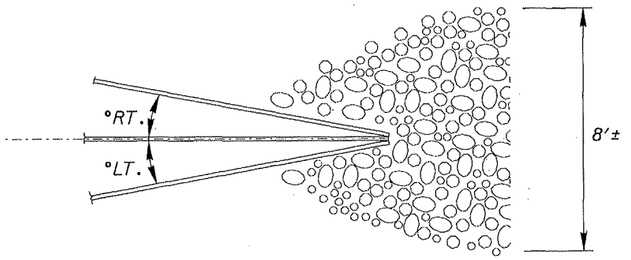
HORIZONTAL DRAIN LAYOUT

ATH-33-15.37

DRAIN NO.	STATION	OFFSET	ELEV.	°RT./LT.	% INCLINE	LENGTH
1	819+00	121 RT.	657+85	10° LT	6%	130
2	819+00	121 RT.	657+85	0°	6%	135
3	819+00	121 RT.	657+85	10° RT	6%	140
4	819+75	125 RT.	653.42	10° LT	6%	120
5	819+75	125 RT.	653.42	0°	6%	140
6	819+75	125 RT.	653.42	10° RT	6%	140
7	820+25	120 RT.	652.91	10° LT	7%	120
8	820+25	120 RT.	652.91	0°	7%	130
9	820+25	120 RT.	652.91	10° RT	7%	115
10	820+75	110 RT.	649.65	13° LT	5%	120
11	820+75	110 RT.	649.65	0°	2%	170
12	820+75	110 RT.	649.65	3° RT	2%	125
13	822+25	110 RT.	647.60	20°LT	5%	80
14	822+25	110 RT.	647.60	13°LT	3%	120
15	822+25	110 RT.	647.60	0°	6%	120
16	822+75	130 RT.	647.16	10°LT	4%	140
17	822+75	130 RT.	647.16	0°	6%	140
18	822+75	130 RT.	647.16	10°RT	4%	140
				TOTAL		2325

QUANTITY CARRIED TO GENERAL SUMMARY





OFFSETS AND ELEVATIONS ARE SET ASSUMING THAT A SMALL DISH SHAPED CUT IS MADE AS SHOWN ABOVE. THE °LT/RT ARE TAKEN NORMAL TO THE CENTERLINE. ALL OFFSETS ARE TAKEN FROM THE CENTERLINE OF U.S. 33.

CALCULATED JCB CHECKED

HORIZONTAL DRAIN DETAILS

ATH-33-15.36

ITEM - SPECIAL HORIZONTAL DRAINS:

DESCRIPTION - THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING HORIZONTAL DRAINS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.

MATERIALS - THE PIPE SHALL CONSIST OF NOMINAL 1½ INCH, SCHEDULE 80 PVC 2110 PLASTIC PIPE CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION: D 1785, AND SHALL BE NATIONAL SANITATION FOUNDATION APPROVED. BOTH PLAIN AND SLOTTED PIPE SHALL BE USED.

SLOTTED PIPE SHALL HAVE 2 ROWS OF SLOTS CUT CIRCUMFERENTIALLY IN THE PIPE ON 2 OF THE THIRD POINTS (120 DEGREES APART). THE AVERAGE CONFIGURATION SHALL BE 23 SLOTS, PLUS OR MINUS ONE SLOT, PER ROW, PER FOOT, USING 0.020 INCH WIDE SLOTS.

SLOTTED PIPE SHALL HAVE A MINIMUM OPENING OF 0.9 SQUARE INCH PER LINEAR FOOT, MEASURED ON THE INNER SURFACE OF THE PIPE.

FITTINGS FOR THE PVC PIPE SHALL BE SCHEDULE 80 TYPE II PVC SOLVENT WELD TYPE FITTINGS CONFORMING TO THE REQUIREMENTS IN ASTM DESIGNATION: D 2467. MACHINED MALE AND FEMALE ENDS MAY BE USED IN LIEU OF COUPLINGS.

UNSLOTTED PVC PLASTIC PIPE, APPROXIMATELY 20 FEET IN LENGTH, SHALL BE PROVIDED AT THE OUTLET OF THE DRAIN.

AGGREGATE AT THE OUTLET ENDS OF THE HORIZONTAL DRAINS SHALL BE NO. 57 SIZE. LARGER AGGREGATE MAY BE SUBSTITUTED FOR THE NO. 57's NEAR THE BOTTOM IF APPROVED BY THE ENGINEER.

INSTALLING HORIZONTAL DRAINS - THE DRAINS SHALL BE INSTALLED AS SHOWN ON THE PLANS. THE LOCATIONS OF HORIZONTAL DRAINS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND THE EXACT LOCATION AND SEQUENCE OF PLACING HORIZONTAL DRAINS SHALL BE AS DIRECTED BY THE ENGINEER.

THE HORIZONTAL HOLES SHALL BE DRILLED WITH ROTARY EQUIPMENT CAPABLE OF DRILLING 3 INCH TO 6 INCH DIAMETER HOLES UP TO 600 FEET IN LENGTH TO DESIGNATED LINES AND GRADES THROUGH SOIL AND ROCK FORMATIONS.

PLASTIC PIPE SHALL BE INSTALLED BY PUSHING IT INTO THE HOLE WITH SLOTS OR PERFORATIONS ON TOP OR, AT THE CONTRACTOR(S OPTION, SHALL BE INSTALLED BY INSERTING THE PIPE INSIDE THE DRILL ROD AND THEN RETRACTING THE DRILL ROD SO THAT THE DRILLED HOLE IS CASED FOR THE FULL DEPTH. THE ENTRANCE END OF THE PLASTIC PIPE SHALL BE TIGHTLY PLUGGED.

THE CASING OPERATION OF THE DRILLED HOLE WITH PLASTIC PIPE WILL BE DONE IN SUCH A MANNER THAT THE PLASTIC PIPE WILL BE CEMENTED TOGETHER WHERE NECESSARY TO FORM A CONTINUOUS TUBE AND WILL NOT BE TELESCOPED OR DAMAGED TO THE EXTENT THAT ITS DRAINAGE EFFICIENCY WILL BE IMPAIRED WHEN COMPLETED.

THE SPACE BETWEEN THE DRILLED HOLE AND THE PIPE SHALL BE TIGHTLY PLUGGED WITH SOIL FOR A LENGTH OF AT LEAST 3 FEET AT THE OUTLET END OR THE HOLE.

WATER USED FOR DRILLING AND WATER DEVELOPED DURING DRILLING OPERATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR IN SUCH A MANNER THAT NO DAMAGE WILL RESULT TO THE WORK.

AGGREGATE SHALL BE PLACED AT THE OUTLET ENDS OF THE DRAINS AS SHOWN ON THE PLANS.

IF AN UNUSUALLY HEAVY FLOW OF WATER IS ENCOUNTERED FROM A DRAIN, ANOTHER DRAIN MAY BE ORDERED BY THE ENGINEER, TO BE DRILLED UP TO 10 FEET LEFT OR RIGHT AND/OR AN ADDITIONAL 10% IN INCLINATION FROM THE FLOWING DRAIN. THE CONTRACTOR SHALL BE PREPARED TO INSTALL AN ADDITIONAL FOOTAGE OF HORIZONTAL DRAINS EQUAL TO 50% OF THE QUANTITY SHOWN ON THE PLAN, AT NO INCREASE IN THE CONTRACT UNIT PRICES FOR THE HORIZONTAL DRAIN ITEMS.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT - PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF LINEAL FEET OF DRILLED HOLES MADE AND THE ACTUAL NUMBER OF LINEAL FEET OF PIPE INSTALLED WHICH PRICE AND PAYMENT SHALL INCLUDE FULL COMPENSATION FOR DRILLING THE HOLES, PLACING THE PIPE, REMOVAL AND DISPOSAL OF SURPLUS AND DISCARDED MATERIAL, ALL RELATED COSTS FOR FURNISHING AND PLACING THE AGGREGATE AT THE DRAIN OUTLET, THE RESTORATION OF ANY DISTURBED AREAS AT THE HORIZONTAL DRAIN LOCATIONS. PAYMENT WILL ALSO INCLUDE ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS THERETO TO COMPLETE THIS ITEM.

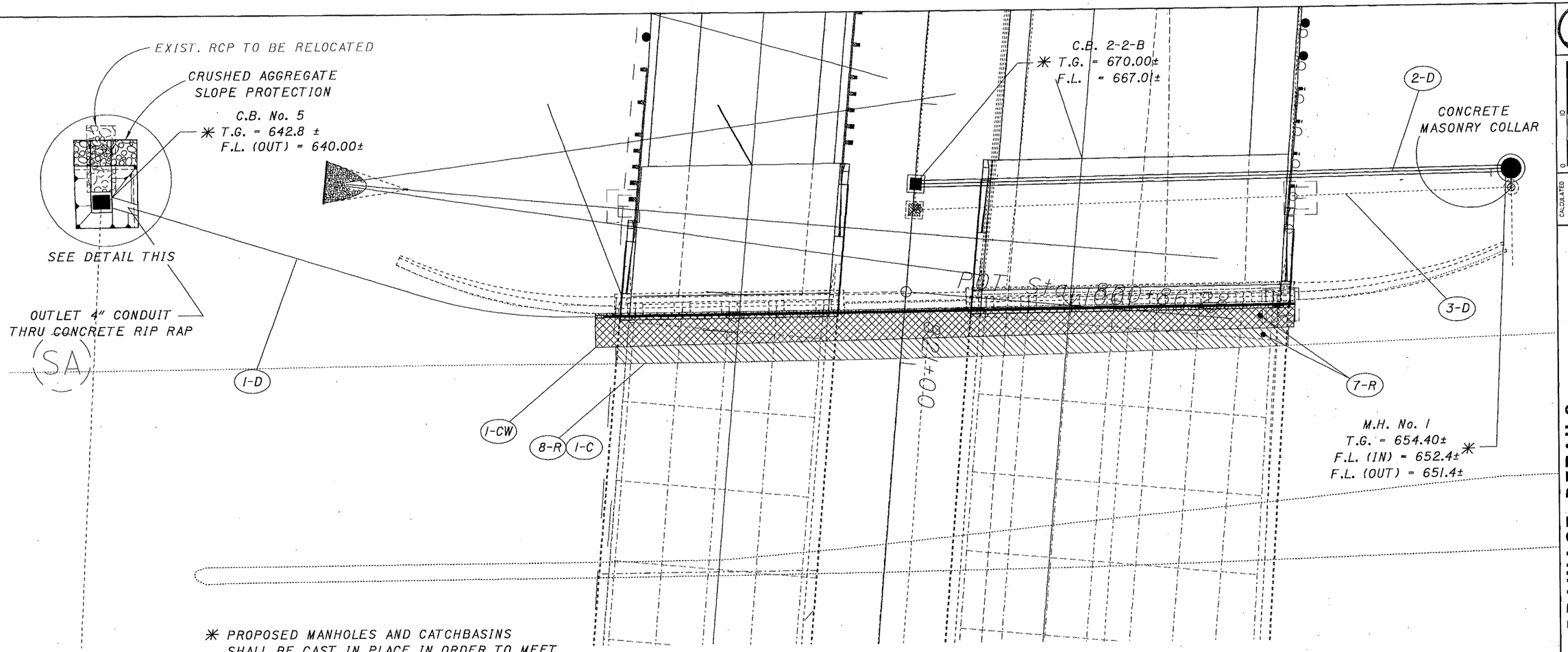
PAYMENTS WILL BE MADE AT THE CONTRACT PRICE BID UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	FOOT	HORIZONTAL DRILLED HOLES
SPECIAL	FOOT	HORIZONTAL DRAIN PIPE

CALCULATED JCB CHECKED

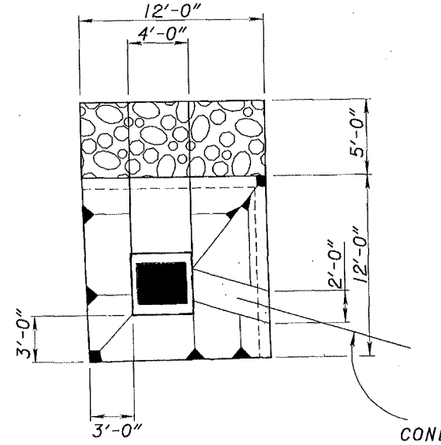
HORIZONTAL DRAIN DETAILS

ATH-33-15.36



✳ PROPOSED MANHOLES AND CATCHBASINS SHALL BE CAST IN PLACE IN ORDER TO MEET FIELD CONDITIONS

REF NO.	STATION FROM	STATION TO	SIDE	202 WALK REMOVED	202 CURB REMOVED	202 CATCH BASIN REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 MANHOLE REMOVED	601 CRUSHED AGGREGATE SLOPE PROTECTION	603 4" CONDUIT, TYPE C	603 15" COUDUIT, TYPE B	604 CATCH BASIN, ✳ No. 5	604 CATCH BASIN, ✳ No. 2-2-B	604 MANHOLE, ✳ No. 1	SPECIAL TRENCH DRAIN	608 CONCRETE WALK, 6"	609 CURB, TYPE 6	SPECIAL FILL AND PLUG EXISTING CONDUIT
				SQ. FT.	FT.	EACH	FT.	EACH	SQ. YD.	FT.	FT.	EACH	EACH	EACH	FT.	SQ. FT.	FT.	FT.
7-R				1175														
8-R					132													
1-CW																675		
1-C																	132	
1-D									7	100		1			135			
2-D											132		1	1				
3-D						1	8	1										132
TOTALS CARRIED TO GENERAL SUMMARY				1175	132	1	8	1	7	100	132	1	1	1	135	675	132	132



DRAINAGE DETAILS

ATH-33-15.36

19
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HORIZONTAL SCALE IN FEET
0 10 20

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ITEM SPECIAL - TRENCH DRAIN

THE CONTRACTOR HAS THE OPTION OF CASTING IN PLACE A TRENCH DRAIN OR PROVIDING AND INSTALLING A PRECAST POLYMER TRENCH DRAIN SYSTEM AT THE LOCATIONS SHOWN IN THE PLANS.

THE FRAME AND GRATE SHALL BE DUCTILE CAST IRON OR CAST GRAY IRON. THE FRAME AND GRATE SHALL BE A LOCK DOWN TYPE SUITABLE FOR HIGHWAY TRAFFIC. IF A CAST IN PLACE TRENCH IS USED, NEENAH R-4990-AX, TYPE A OR EAST JORDAN IRON WORKS 6951, TYPE M2 OR APPROVED EQUAL SHALL BE USED.

THE POLYMER TRENCH DRAIN SYSTEMS SHALL BE INSTALLED AS PER THE MANUFACTURER'S INSTRUCTIONS. A MINIMUM OF 4" OF CLASS C CONCRETE SHALL BE POURED AROUND THE DRAIN. CAST IN PLACE TRENCH DRAINS SHALL HAVE 4" MINIMUM THICKNESS WALLS AND A 6" MINIMUM THICKNESS BOTTOM. ALL CONCRETE SHALL BE CLASS C.

THE CONCRETE SURFACE SHALL BE FINISHED IN A WAY SIMILAR TO THE ADJOINING SIDEWALK.

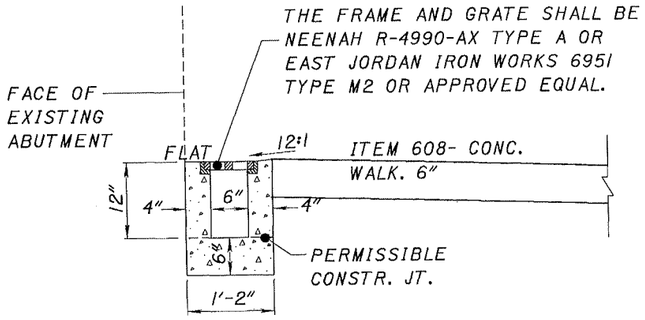
LISTED BELOW ARE THREE ACCEPTABLE TRENCH DRAIN SYSTEMS ALONG WITH THEIR MANUFACTURERS. OTHER SYSTEMS THAT MEET THE REQUIRMENTS LISTED ABOVE MAY ALSO BE USED. T

POLYDRAIN INTERCEPTOR
ABT, INC,
PO BOX 837
259 MURDOCK ROAD
TROUTMAN, NC 28166
1-800-438-6057
ABTDRAINS.COM

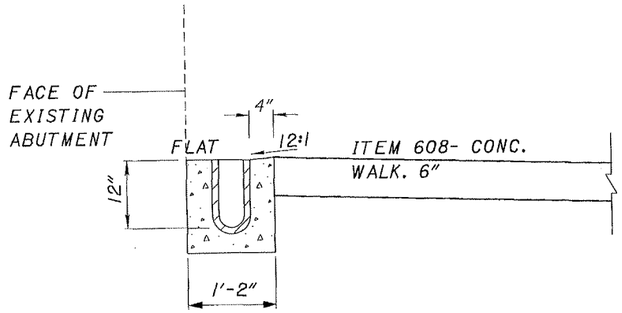
900 SERIES PRESLOPED HIGHWAY DRAIN
STRONGWELL
400 COMMONWEALTH ROAD
PO BOX 580
BRISTOL, VA 24203
1-540-645-8000
STRONGWELL.COM

SIOOK CHANNEL
ACO POLYMER PRODUCTS, INC
1-800-543-4764, ACOUSA.COM

PAYMENT WILL BE MADE FOR THE ACTUAL NUMBER OF LINEAR FEET OF TRENCH DRAIN CONSTRUCTED AND SHALL INCLUDE ALL EXCAVATION, CONCRETE, SEALANTS, INSTALLATION HARDWARE, END CAPS, PIPE OUTLETS, FRAMES AND GRATES.

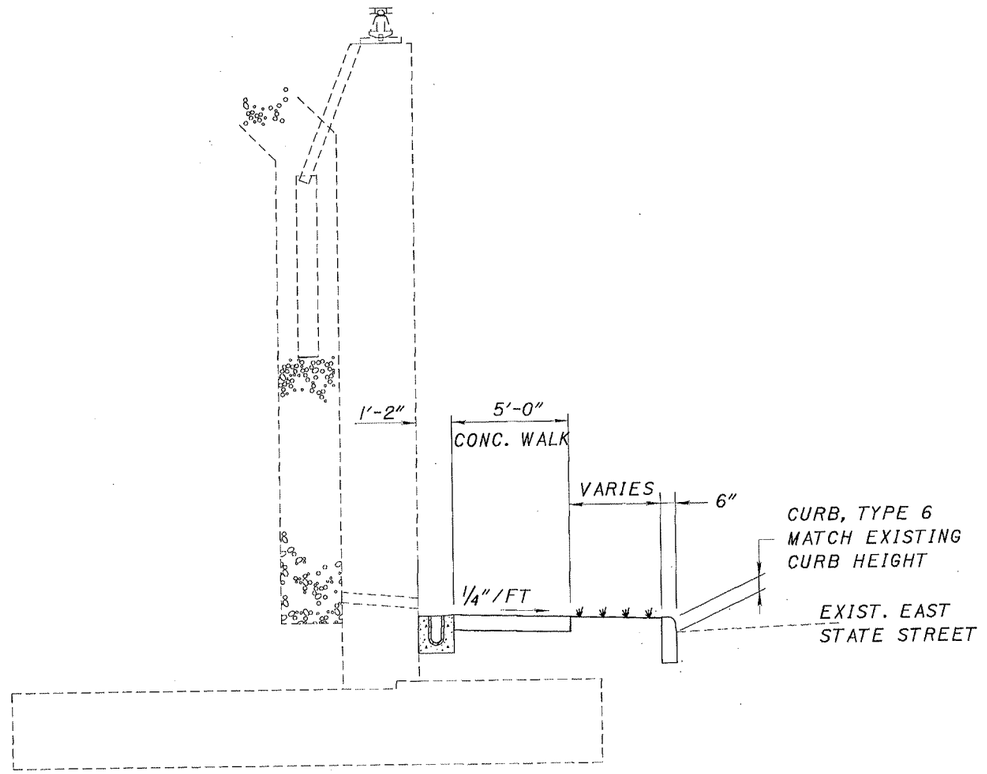


CAST IN PLACE DETAIL



TRENCH DRAIN WITH 4" CONCRETE ENCASEMENT, GRATE NOT SHOWN

GUTTER DETAIL
POLYMER TRENCH SHOWN



PLAN VIEW

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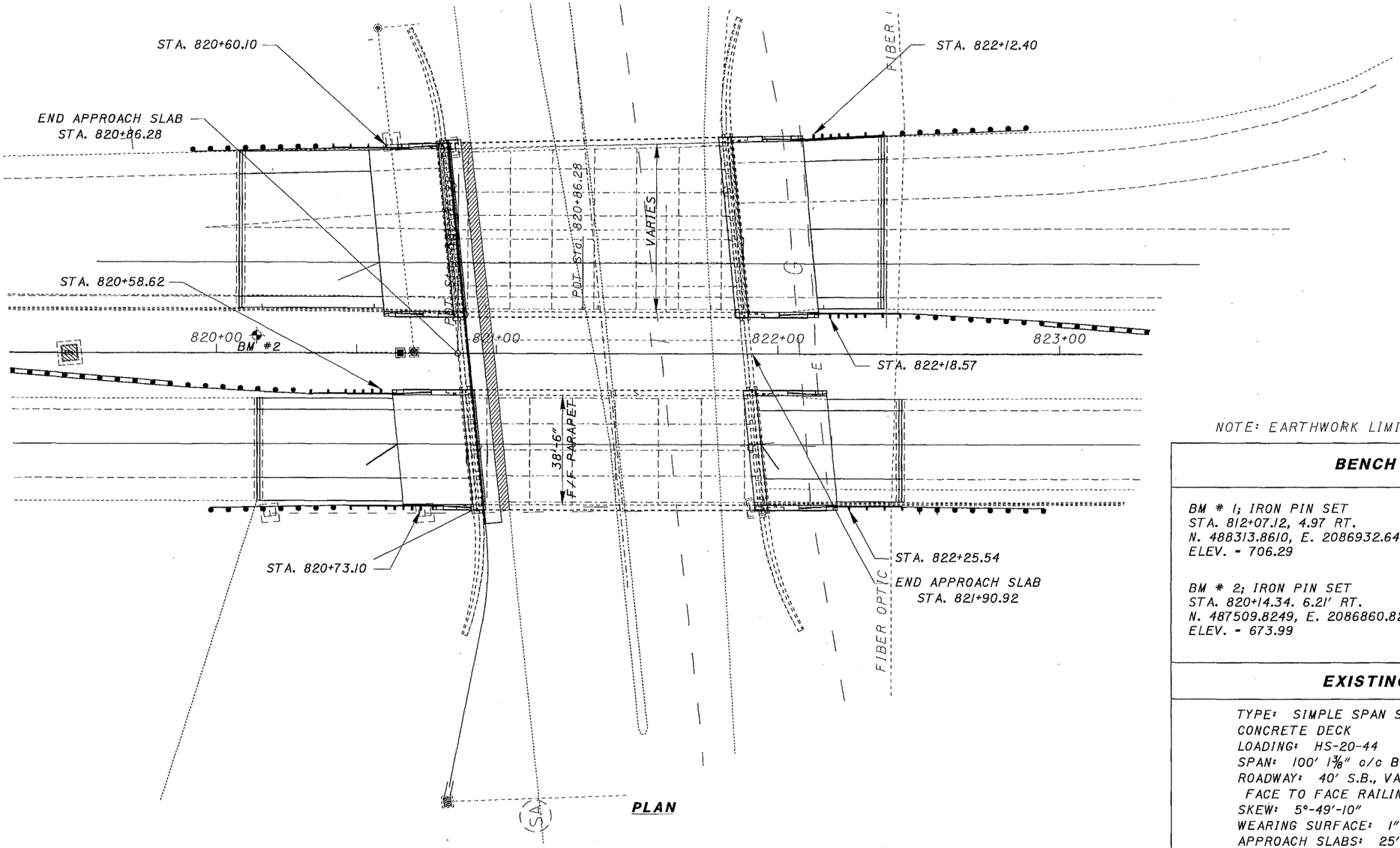

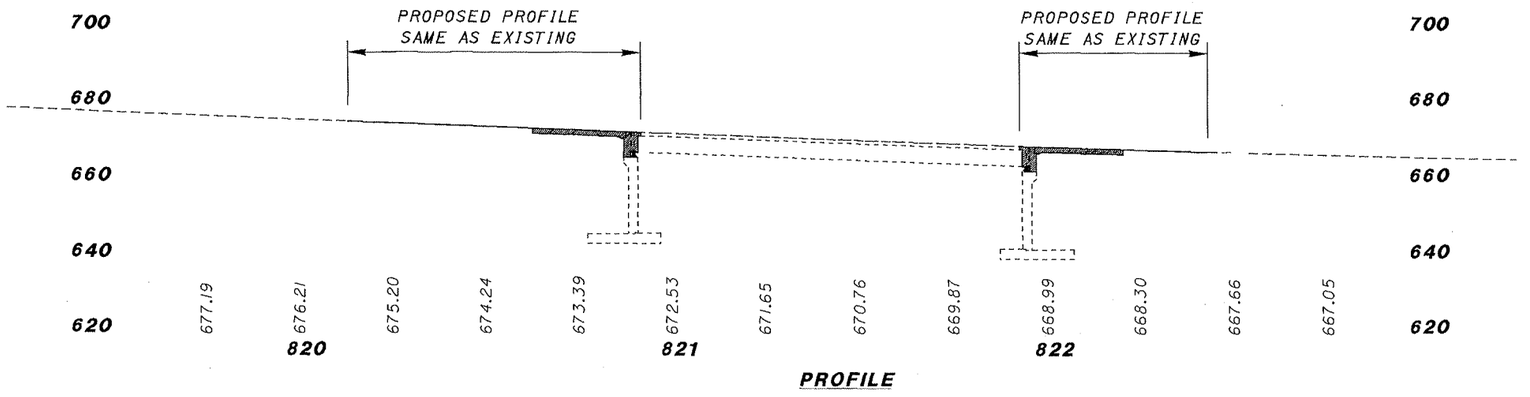

NOTE: EARTHWORK LIMITS SHOWN ARE APPROXIMATE

BENCH MARK DATA

BM # 1; IRON PIN SET
STA. 812+07.12, 4.97 RT.
N. 488313.8610, E. 2086932.6450
ELEV. = 706.29

BM # 2; IRON PIN SET
STA. 820+14.34. 6.21' RT.
N. 487509.8249, E. 2086860.8249
ELEV. = 673.99

BM # 3; IRON PIN SET
STA. 829+17.71. 4.58' RT.
N. 486608.3340, E. 2086777.2530
ELEV. = 663.46

EXISTING STRUCTURE

TYPE: SIMPLE SPAN STEEL GIRDER WITH REINFORCED CONCRETE DECK
LOADING: HS-20-44
SPAN: 100' 1⅜" c/c BEARING
ROADWAY: 40' S.B., VARIABLE N.B. 59'-8" AVG. FACE TO FACE RAILING
SKEW: 5°-49'-10"
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25' LONG AS-1-67
ALIGNMENT: TANGENT
LATITUDE: LONGITUDE:

PROPOSED STRUCTURE

TYPE: SIMPLE SPAN STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SEMI-INTEGRAL ABUTMENTS
LOADING: HS-20-44
SPAN: 100' 1⅜" c/c BEARING
ROADWAY: 40' S.B., VARIABLE N.B. 59'-8" AVG. FACE TO FACE RAILING
SKEW: 5°-49'-10"
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25' LONG AS-1-81
ALIGNMENT: TANGENT
LATITUDE: LONGITUDE:

DESIGN AGENCY
Ohio Department of Transportation
District 10
Marietta, Ohio

REVIEWED	DATE	STRUCTURE FILE NUMBER
		0505838 LT. 0505846 RT.

DRAWN	REVISED
jcb	

DESIGNED	CHECKED
jcb	jdc

STA. 820+86.28
STA. 821+90.92

SITE PLAN
Bridge No. ATH-33-1537
Over East State Street

ATH-33-15.36

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EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE ODOT DISTRICT OFFICE IN MARIETTA, OHIO.

PATCHING CONCRETE STRUCTURES, AS PER PLAN

ALL EXPOSED REINFORCING STEEL WITHIN PATCH AREA SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04. CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE ABRASIVE BLASTING SHALL BE INCLUDED IN ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN.

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1 1/4" X 3/32" X 1/4" (LENGTH X SHANK DIAMETER X HEAD DIAMETER) #10 GALVANIZED SCREWS THROUGH A 1" OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES CENTER TO CENTER ACROSS THE TOP HALF OF THE NEOPRENE STRIP ON THE SIDE OF THE OF NEOPRENE STRIP AS THE SINGLE VERTICAL ROW OF FASTENERS.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE No. NN-0003", BY E.I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SFN 0505838 ABUT.	SFN 0505838 PIERS	SFN 0505838 SUPER-STRU.	SFN 0505838 GNRL	SFN 0505846 ABUT.	SFN 0505846 PIERS	SFN 0505846 SUPER-STRU.	SFN 0505846 GNRL
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP				LUMP
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN				LUMP				LUMP
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP				LUMP
509	10000	24570	LBS.	EPOXY COATED REINFORCING STEEL	11540		2488	11,028	8054		2488	13,542
510	10000	210	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	94		28	122	60		28	88
511	34400	55.3	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE			30.4				24.9	
511	46200	139.4	CU. YD.	CLASS C CONCRETE	82.8				56.6			
512	10100	1630	SQ. YD.	SEALING OF CONCRETE SURFACES, EPOXY-URETHANE	581		290	871	469		290	759
516	14021	300	FT.	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	150				150			
516	45305	26	EACH	REFURBISH BEARING DEVICE, AS PER PLAN				16				10
516	46900	2	EACH	BEARING DEVICE MISC, ; ELATORMERIC BEARING PAD (1" X 15" X 43")								2
516	46900	1	EACH	BEARING DEVICE MISC, ; ELATORMERIC BEARING PAD (1" X 15" X 64")				1				
516	46900	1	EACH	BEARING DEVICE MISC, ; ELATORMERIC BEARING PAD (1" X 15" X 61'-4")				1				
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LUMP				LUMP
518	21200	90	CU. YD.	POROUS BACKFILL WITH FILTER FABRIC				53				37
518	40000	220	FT.	6" PERFORATED CORRUGATED PLASTIC PIPE				134				86
518	40010	350	FT.	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS				150				200
519	11101	47	SQ. FT.	PATCHING CONCRETE STRUCTURE, AS PER PLAN	21				26			

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094" ± 0.01
BREAKING STRENGTH, GRAB WXF, LBS, MIN.	D751	700 x 700
ADHESIVE 1" STRIP, 2" MINIMUM, LBS MIN.	D751	9
BURST STRENGTH (MULLEN) PSI, MIN.	D751	1400
HEAT AGING 70 HOURS T 212°F, 180 BEND WITHOUT CRACKING	D2136	No. CRACKING OF COATING
LOW TEMPERATURE BRITTLENESS 1 HOUR AT - 40°F, BEND AROUND 1/4" MANDREL	D2136	No. CRACKING OF COATING

PAYMENT FOR LABOR, MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 516 - SEMI-INTEGRAL EXPANSION JOINT SEAL, AS PER PLAN.

ITEM 516, BEARING DEVICE MISC,; ELASTOMERIC BEARING PAD

THIS ITEM SHALL CONSIST OF PROVIDING AND INSTALLING AN ELASTOMERIC BEARING PAD (PLAIN) WITH THE FOLLOWING DIMENSIONS:

L = 43' X W = 15" X T = 1"	2 EACH
L = 64' X W = 15" X T = 1"	1 EACH
L = 61'-4" X W = 15" T = 1"	1 EACH

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516- ELASTOMERIC BEARING PAD, MISC. AMD SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

SEALING OF CONCRETE SURFACES (EPOXY)

ALL EXPOSED CONCRETE SURFACES ARE TO BE SEALED, EXCEPT FOR THE APPROACH SLAB SEAT AND AREAS SHOWN NOT TO BE SEALED. ALL SEALING SHALL EXTEND 1'-0" BELOW THE EXISTING GROUND LINE.
SEE SHEETS 21 AND 23 FOR ADDITIONAL DETAILS.

DESIGN AGENCY: District 10, Production Department, Marietta, Ohio
DATE:
REVIEWED:
STRUCTURE FILE NUMBER: 0505838/0505846
DRAWN: CAK
REVISED:
DESIGNED: JDC
CHECKED:

STRUCTURE NOTES & QUANTITIES
Bridge No. ATH-33-1537
Over East State Street

ATH-33-15.36

2/23

22/43

PROPOSED WORK

THE PROPOSED WORK CONSIST OF REMOVING THE EXISTING BACKWALLS AND MAKING THE ABUTMENTS SEMI-INTEGRAL. APPROACH SLABS WILL BE REPLACED AND NEW PRESSURE RELIEF JOINTS INSTALLED. ABUTMENTS WILL ALSO BE PATCHED AND SEALED. HORIZONTAL DRAINS WILL BE INSTALLED ALONG WITH OTHER MISCELLANEOUS ITEMS.

REFERENCE SHALL BE MADE TO STANDARD DRAWING(S):

REFERENCE SHALL BE MADE TO THE STANDARD DRAWING(S):

AS-1-81	DATED 7-19-02
PCB-91	DATED 7-19-02
SBR-1-99	DATED 7-19-02
SICD-1-96	DATED 7-19-02

AND TO SUPPLEMENTAL SPECIFICATIONS:

846	DATED 10-15-04
864	DATED 7-11-00
954	DATED 07-19-02

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997 - 2000 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS20-44, AND THE ALTERNATE MILITARY LOADING

DESIGN DATA:

CLASS S CONCRETE - COMPRESSIVE STRENGTH, 4500 PSI (SUPERSTRUCTURE)

CLASS C CONCRETE - COMPRESSIVE STRENGTH, 4000 PSI (ABUTMENTS)

REINFORCING STEEL - ASTM A615, A616 OR A617, GRADE 60 MINIMUM YIELD STRENGTH, 60,000 PSI, (EPOXY COATED)

UTILITY LINES:

ALL EXPENSES OF RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY (IES). THE CONTRACTOR AND UTILITY (IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR, HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND SIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL HAVE ROUGH SURFACES. PRIOR TO CONCRETE PLACEMENT, ALL CONCRETE BONDING SURFACES SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. CARE SHALL BE TAKEN TO PROTECT EPOXY COATING ON EXPOSED REINFORCEMENT DURING CLEANING. BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN

TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE DESIGN OF THE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER AND CONFORM WITH 501.05 FOR APPROVAL. FIVE COPIES OF THE DRAWINGS SHALL BE SUBMITTED TO THE DIRECTORAND CONCURRENTLY, ONE COPY TO THE OFFICE OF STRUCTURAL ENGINEERING. CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE DIRECTOR. PORTIONS OF THE TEMPORARY SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

MECHANICAL CONNECTORS

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES, LENGTHS FOR BARS WITH MECHANICAL CONNECTORS ARE DIMENSIONED TO THE CONSTRUCTION JOINT. CONNECTORS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR CONNECTORS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWIZE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. CONNECTORS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509 - EPOXY COATED REINFORCING STEEL.

SEALING WITH HMWM RESIN

AFTER DECK SLAB CONCRETE HAS BEEN DRY-AIR CURED FOR NOT LESS THAN 7 DAYS, AND IMMEDIATELY AFTER A MINIMUM 48 HOUR PERIOD WITHOUT PRECIPITATION, VERTICAL CONSTRUCTION JOINTS IN THE DECK SLAB, HORIZONTAL JOINTS AT AND ADJACENT TO THE ROADWAY SURFACE (AT THE BASE OF SIDEWALKS, CURBS, BARRIERS, ETC.), AND CRACKS IN THE ROADWAY SURFACE THAT ARE VISIBLE TO THE UNAIDED EYE, SHALL BE SEALED WITH A HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) RESIN AS DESCRIBED IN SS 846 AND SS 954. SEALANT SHALL BE APPLIED BY BRUSH, SPRAY OR OTHER SUITABLE APPLICATOR ALONG THE SURFACE OF JOINTS AND CRACKS. IF NECESSARY, MULTIPLE APPLICATIONS SHALL BE MADE UNTIL COMPLETE PENETRATION HAS BEEN ACHIEVED. AFTER SEALANT HAS BEEN CURED, IT SHALL BE SANDED AS SPECIFIED TO ROUGHEN THE SEALANT SURFACE AND RESTORE ITS SUITABILITY FOR VEHICULAR TRAFFIC. FOR OVERCOATING WITH A CONCRETE SURFACE SEALANT OR AS PREPARATION FOR A CONCRETE OVERLAY, TREATED SURFACES SHALL BE ROUGHENED BY ABRASIVE BLASTING AND OTHERWISE CLEANED AS SPECIFIED FOR THE SUBSEQUENT APPLICATION. SEALING CONSTRUCTION JOINTS AND CRACKS AS DESCRIBED ABOVE SHALL BE INCLUDED WITH THE DECK SLAB CONCRETE FOR PAYMENT.

DESIGN AGENCY: District 10 Production Department Marietta, Ohio

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
JDC	JDC			0505838/0505846
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STRUCTURE NOTES & QUANTITIES
Bridge No. ATH-33-1537
Over East State Street

ATH-33-15.36

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