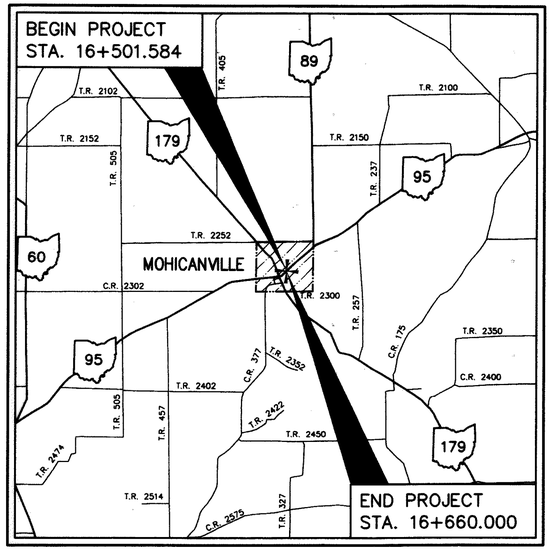
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ASD-95-16.502

VILLAGE OF MOHICANVILLE
ASHLAND COUNTY



LOCATION MAP

LATITUDE: 40° 43' 42" LONGITUDE: 82° 11' 24"

SCALE IN KILOMETERS

0 2 4 6

N

PORTION TO BE IMPROVED _____

STATE ROUTES _____

OTHER ROUTES _____ C.R. 000 T.R. 000

DESIGN DESIGNATION

CURRENT ADT (2004)	1105
DESIGN YEAR ADT (2024)	1550
DESIGN HOURLY VOLUME (2024)	155
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B & C)	7%
DESIGN SPEED	90 km/h
LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION –
RURAL MAJOR COLLECTOR

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
LANE WIDTH	1/27/99	15–16
HORIZONTAL ALIGNMENT	1/27/99	15–16
VERTICAL ALIGNMENT	1/27/99	15–16
STOPPING SIGHT DISTANCE	1/27/99	15–16
SUPERELEVATION	1/27/99	5

UNDERGROUND UTILITIES
2 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
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE – WOOSTER, OHIO 44691
TELEPHONE : (330) 345-6556

INDEX OF SHEETS:

PROJET EDA	= 1.35 ACRES
CONTRACTOR EDA	= 0.25 ACRES
NOI EDA	= 4.9 ACRES

FOR STRUCTURE

STATE OF OHIO DEAN W. STUTZMAN E-41283 REGISTERED PROFESSIONAL ENGINEER

01/10/02

DEAN W. STUTZMAN DATE

FOR ENTIRE PLAN EXCEPT STRUCTURE

STATE OF OHIO A. FREDERICK SELING JR. E-48722 REGISTERED PROFESSIONAL ENGINEER

1/10/02

A. FREDERICK SELING JR. DATE

SPECIAL PROVISIONS

WATERWAY PERMIT NWP#3 & #13 DATE: 11-7-03

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
						832	02-12-03
BP-3.1	07-28-00	MH-1.2	07-19-02	AS-1-81	07-19-02	833	02-12-03
BP-4.1	07-28-00			CPA-5-94	07-19-02	898	07-18-03
RM-1.1	04-18-03	MT-97.10	04-19-02	CPP-2-94	07-19-02		
CB-1.1	07-19-02	MT-101.60	10-18-02			846	04-19-02
CB-1.2	07-19-02	MT-105.10	10-18-02	DS-1-92	07-18-03	864	07-11-00
		MT-105.11	10-18-02	TST-1-99	07-19-02		
DM-1.1	07-18-03					908	04-18-03
DM-3.1	07-19-02	TC-41.20	01-19-01			954	01-17-03
DM-4.3	07-19-02						
DM-4.4	07-19-02	TC-52.10	04-20-01				
		TC-52.20	04-20-01				
GR-1.1	04-18-03						
GR-2.1	04-18-03	TC-65.10	10-19-01				
		TC-65.12	10-19-01				

PROJECT DESCRIPTION

IMPROVEMENT OF 0.158 km OF STATE ROUTE 95 BY REPLACEMENT OF AN EXISTING 14170 mm CONCRETE BOX BEAM STRUCTURE OVER MOHICAN RUN WITH A THREE SPAN CONTINUOUS CONCRETE SLAB, INCLUDING UPGRADING OF GUARDRAIL, DRAINAGE, AND PAVEMENT MARKING.

2002 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.

MAINTENANCE OF TRAFFIC ENDORSEMENT

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 THE PLANS.

APPROVED Thomas M O'Leary ACB
DATE 12/11/03 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor
DATE 1-16-04 DIRECTOR, DEPARTMENT OF TRANSPORTATION

metric units

FEDERAL PROJECT NO. E040(169)

PID NO. 12010

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

ASD-95-16.502

1/49

ASD - SR 95-16.502
040209 PID - 12010
Dist 3 3/24/2004

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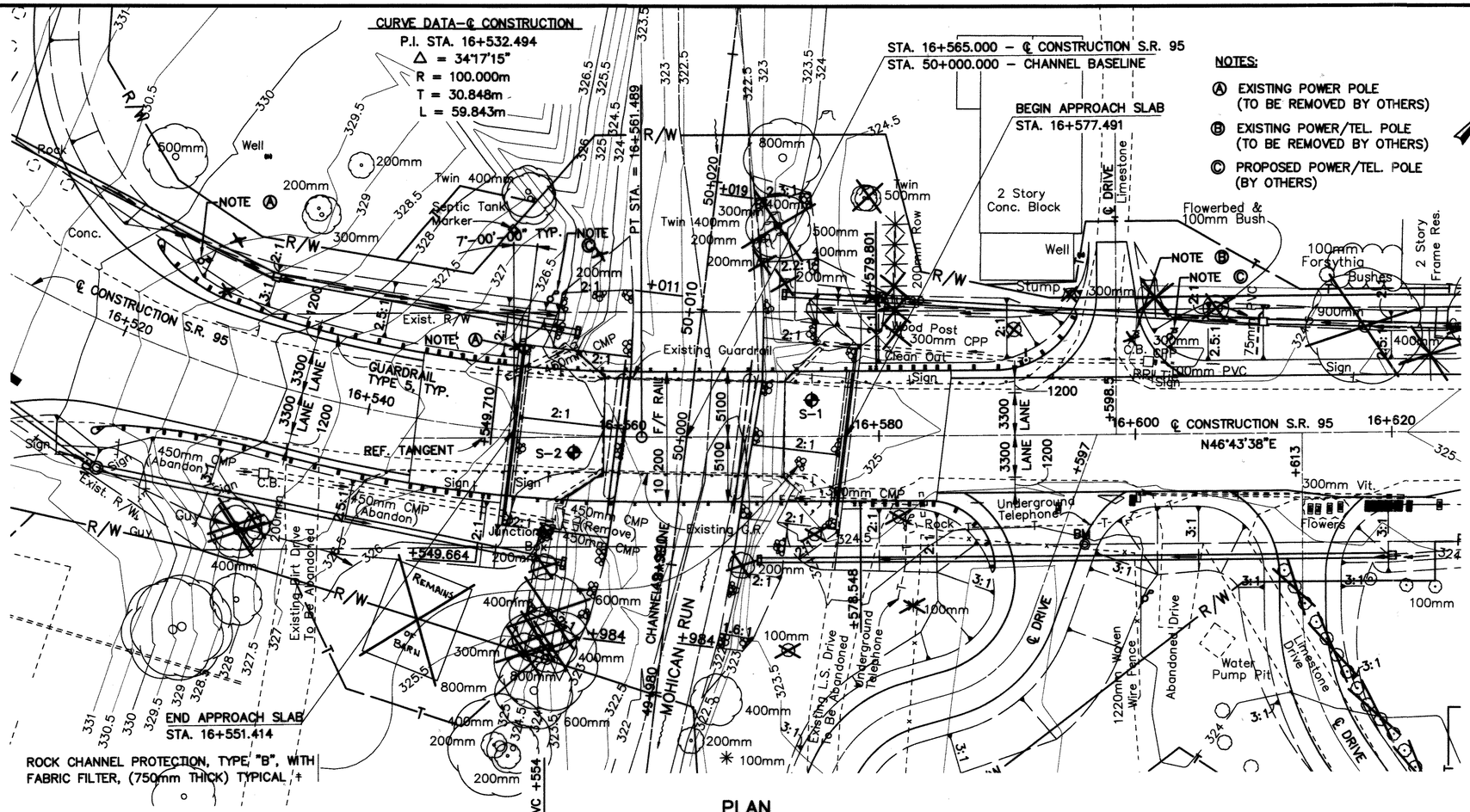

metric units

FOUNDATION INVESTIGATION LEGEND

⊕ INDICATES SOIL BORING LOCATION

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

STATIONING AND ELEVATIONS ARE IN METERS. ALL OTHER DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

‡ INCLUDED WITH ROADWAY QUANTITIES FOR PAYMENT.

TRAFFIC DATA

CURRENT ADT	(2004) = 1105
DESIGN YEAR ADT	(2024) = 1550
DESIGN YEAR ADTT	(2024) = 109

BENCH MARKS

ODOT TRAVERSE CAP STA. 16+513.54, 15.04m RIGHT, ELEV. 330.894

TOP OF ODOT RIGHT–OF–WAY MONUMENT AT STA. 16+596.03, 8.54m RIGHT.
ELEV. 323.793

HYDRAULIC DATA

DRAINAGE AREA: 8.95 km²

F(yr.)	Q(m³/s)	V(m/s)	HW ELEV.
10*	22.7	2.00	323.67
100	42.5	2.50	324.08

LOWPOINT OF PROPOSED STRUCTURE CLEARS ESTIMATED 10 YR. HIGH WATER ELEVATION BY 2.56m

* DESIGN YEAR FREQUENCY

EXISTING STRUCTURE

TYPE: SINGLE SPAN PRESTRESSED CONCRETE BOX BEAMS ON CONCRETE WALL TYPE ABUTMENTS
SPAN: 14 170± C/C BEARINGS
ROADWAY: 7320± F/F GUARDRAIL
ORIGINAL DESIGN LOADING: S 20–60
SKEW: 0°00'00"±
ALIGNMENT: TANGENT
WEARING SURFACE: ASPHALT
APPROACH SLAB: NONE
DATE BUILT: 1900 (MAJOR RECONSTRUCTION 1968)
STRUCTURE FILE NUMBER: 0303909

PROPOSED STRUCTURE

TYPE: THREE SPAN CONTINUOUS CONCRETE SLAB ON CAPPED PILE PIERS AND ABUTMENTS
SPANS: 7920–9900–7920 C/C BEARINGS ALONG REFERENCE TANGENT
ROADWAY: 10 200 F/F RAILING
DESIGN LOADING: MS22.5 & ALTERNATE MILITARY LOADING
SKEW: 7° 00' 00" LEFT FORWARD TO REFERENCE TANGENT
ALIGNMENT: CURVE LEFT (R = 100.000m), TANGENT
SUPERELEVATION: 0.040
WEARING SURFACE: 25mm MONOLITHIC CONCRETE
APPROACH SLABS: AS–1–81 (7600 LONG)
LOCATION: LATITUDE N40°43'42", LONGITUDE W82°11'24"

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

REVIEWED	DATE
DWS	10/16/01
DRAWN	STRUCTURE FILE NUMBER
DLD	0303976
DESIGNED	REVISED
RLE	
CHECKED	
DBC	

ASHLAND COUNTY
STA. 16+551.414
STA. 16+577.491

SITE PLAN
BRIDGE NO. ASD–95–16551
OVER MOHICAN RUN

ASD–95–16.502

1/10

31/49

Topo Revisions Dated 07/02
M:\SITE\AUTOCAD\ACAD-2000\ASD95sp.dwg - SITE PLAN - Sep 29, 2002

CURVE DATA
℄ CONSTRUCTION S.R. 95
P.I. STA. 16+532.494
Δ = 34°17'15"
R = 100.000m
T = 30.848m
L = 59.843m

7600 APPR. SLAB
BRIDGE LIMITS = 26 077
25 821 c/c ABUTMENT PILES
7600 APPR. SLAB
MEASURED ALONG ℄ CONSTRUCTION
151
7960+
9900
7960+
151
MEASURED ALONG REFERENCE TANGENT
1726
636
13 RAILING POST SPACES @ 1905 = 24 765
679
1683
+549.710
+561.489
7°00'00" TYP.
+579.801
SHOULDER LINE
EDGE OF PAVEMENT
℄ CONSTRUCTION S.R. 95
16+540
℄ REAR ABUT. PILES
STA. 16+551.564
℄ REAR PIER
STA. 16+559.482
496
20
P.T. STA. = 16+561.489
℄ FORWARD PIER
STA. 16+569.380
℄ FWD. ABUT. PILES
STA. 16+577.340
REFERENCE TANGENT
16+560
16+580
EDGE OF PAVEMENT
END APPR. SLAB
STA. 16+551.414
W.P.*
STA. 16+551.553
OFFSET=496 RT.
W.P.*
STA. 16+559.480
OFFSET=20 RT.
10 200 o/o DECK & F/F GUARDRAIL
5100
5100
MOHICAN RUN
BEGIN APPR. SLAB
STA. 16+577.491
4500 PAVEMENT
3300 LANE
4500 PAVEMENT
3300 LANE
SHOULDER LINE
SHOULDER LINE
+549.664
+578.548
1732
630
13 RAILING POST SPACES @ 1905 = 24 765
1683
679

* – WORK POINT IS INTERSECTION OF ℄ PILES WITH REFERENCE TANGENT

GENERAL PLAN

P.T. STA. = 16+561.489

STATION / ELEVATION

+551.529 / 328.011
+555.876 / 327.702
+560.033 / 327.422
+565.056 / 327.106
+570.006 / 326.818
+573.966 / 326.605
+578.118 / 326.398

LEFT EDGE OF SLAB
FACE OF ABUTMENT
FACE OF ABUTMENT
16+540
BRIDGE LIMIT
BRIDGE LIMIT
REFERENCE TANGENT
16+560
16+580
℄ CONSTRUCTION S.R. 95
5100
10 200 o/o DECK
SLAB CROWN
RIGHT EDGE OF SLAB
+551.345 / 328.360
+551.310 / 328.308
+555.338 / 328.076
+555.234 / 328.029
+559.155 / 327.816
+558.985 / 327.773
+564.025 / 327.505
+563.804 / 327.464
+568.975 / 327.212
+568.754 / 327.171
+572.935 / 326.995
+572.714 / 326.953
+577.086 / 326.784
+576.865 / 326.741
3300
5100
1800
1/2 PT.
℄ REAR PIER
1/2 PT.
℄ FORWARD. PIER
1/2 PT.

THE ELEVATIONS SHOWN ARE FINISHED ELEVATIONS. PROPER ALLOWANCE SHALL BE MADE FOR SLAB AND FALSEWORK DEFLECTIONS. SEE SUPERSTRUCTURE NOTES, SHEET 9 /10 .

TOP OF SLAB ELEVATIONS

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
metric units

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

DESIGNED BDH
DRAWN DLD
CHECKED RLE
REVIEWED DWS
DATE 10/16/01
REVISED
STRUCTURE FILE NUMBER 0303976

GENERAL PLAN
BRIDGE NO. ASD-95-16551
OVER MOHICAN RUN

ASD-95-16.502

2/10

32/49

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metric units

STRUCTURE GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81	DATED	07-19-02
DM-1.1	DATED	07-18-03
DS-1-92	DATED	07-18-03
CPA-5-94	DATED	07-19-02
CPP-2-94	DATED	07-19-02
TST-1-99	DATED	07-19-02

AND TO SUPPLEMENTAL SPECIFICATIONS:

846	DATED	04-19-02
864	DATED	07-11-00
898	DATED	07-18-03
954	DATED	01-17-03

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: MS-22.5 AND ALTERNATE MILITARY LOADING.
FUTURE WEARING SURFACE (FWS) OF 2.87 kPa.

DESIGN DATA:

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 31.0 MPa (SUPERSTRUCTURE)

CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 28.0 MPa (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615M, A616M, OR A617M, GRADE 420, MINIMUM YIELD STRENGTH 420 MPa. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82M OR A615M. ALL REINFORCING SHALL BE EPOXY COATED.

DECK PROTECTION METHOD - EPOXY COATED REINFORCING STEEL, 65mm CONCRETE COVER, STEEL DRIP STRIP AND SEALING OF CONCRETE SURFACES.

WEARING SURFACE - MONOLITHIC WEARING SURFACE ASSUMED FOR DESIGN PURPOSES TO BE 25mm THICK.

UTILITY LINES: THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO PROTECT EXISTING UTILITY LINES IN THE VICINITY OF THE STRUCTURE WHILE PERFORMING ANY WORK. THE CONTRACTOR AND UTILITY COMPANY(IES) ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM. ALL EXPENSE INVOLVED IN RELOCATING ANY AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES).

REFER TO ROADWAY GENERAL NOTES FOR FURTHER INFORMATION.

ASBESTOS NOTIFICATION: AN ASBESTOS SURVEY OF THE EXISTING BRIDGE SCHEDULED FOR DEMOLITION ON THIS PROJECT WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER AT THE PRECONSTRUC- TION MEETING. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO THE OEPA DISTRICT OFFICE AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF THE DEMOLITION OF THE BRIDGE. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. THE CONTRACTOR SHALL NOT COMMENCE DEMOLI- TION OF THE STRUCTURE UNTIL THE ABOVE REQUIREMENTS ARE MET.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE:
- THE CONTRACTOR'S NAME AND ADDRESS
- THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL
- A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHODS TO BE USED

A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 3 OFFICE, 906 N. CLARK STREET, ASHLAND, OHIO 44805.

BASIS OF PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATE- RIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE BID ITEM 202 - STRUCTURE REMOVED.

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

SUITABLE WASTE MASONRY MAY BE USED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN: UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 GRANULAR MATERIAL PLACED IN 150 mm LIFTS. FOR EXCAVATION LIMITS SEE DETAILS ON SHEET 5 OF 10.

ESTIMATED QUANTITES

CALC. BY RLE DATE: 9/2001 CHKD. BY DLD DATE: 9/2001

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTS.	PIERS	SUPER.	GEN'L	SEE SHEET
202	11002	LUMP		STRUCTURE REMOVED, OVER 6 METER SPAN				LUMP	3 OF 10
202	23500	106	SQ METER	WEARING COURSE REMOVED				106	
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP				3 OF 10
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00500	112	METER	300 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	112				
507	00550	112	METER	300 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	112				
507	00700	132	METER	400 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		132			
507	00750	132	METER	400 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		132			
509	10000	18265	KILOGRAM	EPOXY COATED REINFORCING STEEL	2742	1377	14146		
517	70000	58.978	METER	RAILING (TWIN STEEL TUBE)			58.978		
518	21231	LUMP		POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	LUMP				
SPECIAL	518M22300	61	METER	STEEL DRIP STRIP			61		
518	40000	30	METER	150 MM PERFORATED CORRUGATED PLASTIC PIPE	30				
518	40011	10	METER	150 MM NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	10				3 OF 10
523	20000	2	EACH	DYNAMIC LOAD TESTING		2			
526	25000	155	SQ. METER	REINFORCED CONCRETE APPROACH SLABS (T=375MM)					
864	10100	82	SQ METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	35	3	44		
898	11100	124	CU METER	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE			124		
898	20000	53	CU METER	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE	42	11			

PILE DESIGN LOADS (ULTIMATE BEARING VALUE): THE ULTIMATE BEARING VALUE IS 602 kN PER PILE FOR THE 300mm CAST-IN-PLACE REINFORCED CONCRETE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 838 kN PER PILE FOR THE 400mm CAST-IN-PLACE REINFORCED CONCRETE PIER PILES. THE PIER PILES INCLUDE AN ADDITIONAL 13 kN PER PILE OF ULTIMATE BEARING VALUE DUE TO THE POSSIBILITY OF LOSING FRICTIONAL RESISTANCE DUE TO SCOUR.

ABUTMENT PILES:
14 PILES 8 METER LONG, ESTIMATED LENGTH
14 PILES OF ORDER LENGTH 8 METER LONG

PIER PILES:
12 PILES 11 METER LONG, ESTIMATED LENGTH
12 PILES OF ORDER LENGTH 11 METER LONG

DRIP GROOVES: THE DRIP GROOVES AS DETAILED ON STANDARD DRAWING CS-1-93 SHALL NOT BE CONSTRUCTED.

ITEM SPECIAL - STEEL DRIP STRIP: SEE STANDARD DRAWING DS-1-92 FOR NOTES AND DETAILS.

ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE COLOR OF THE SEALING MATERIAL SHALL BE THE "NEUTRAL" COLOR MEETING FEDERAL COLOR STANDARD NO.27778.

ITEM 518 - 150 mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPE- CIALS, AS PER PLAN: ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET OF THE DRAINAGE PIPES. THE STEEL BOLTS OR RODS FOR THE ANIMAL GUARD SHALL BE GAL- VANIZED PER CMS 710.06. SEE STANDARD DRAWING DM-1.1M FOR ADDITIONAL DETAILS AND NOTES. THE ANIMAL GUARDS ARE INCIDENTAL TO ITEM 518 - 150 mm NON- PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.

SURVEY DISC ON STRUCTURE: THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENTS. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF THE DECK AND GUARDRAIL. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

ABBREVIATIONS: WHEREVER THE FOLLOWING ABBREVIATIONS ARE USED IN THE PLANS, THEY ARE TO BE CONSTRUED THE SAME AS THE RESPECTIVE EXPRESSION REPRESENTED.

APPR.	-	APPROACH	INCL.	-	INCLUDING
A.P.P.	-	AS PER PLAN	kN	-	KILONEWTONS
BOT.	-	BOTTOM	kPa	-	KILOPASCALS
BRG.	-	BEARING	MIN.	-	MINIMUM
C	-	CELSIUS	MPa	-	MEGAPASCALS
C.P.P.	-	CORRUGATED PLASTIC PIPE	NO.	-	NUMBER
C.J.	-	CONSTRUCTION JOINT	O/O	-	OUT TO OUT
C/C	-	CENTER TO CENTER	PL.	-	PLATE
DIA.	-	DIAMETER	P.E.J.F.	-	PREFORMED EXPANSION JOINT FILLER
DWG.	-	DRAWING			
EL.	-	ELEVATION	R.A.	-	REAR ABUTMENT
EXP.	-	EXPANSION	R.F.	-	REAR FACE
E.F.	-	EACH FACE	SPA.	-	SPACES
FIX	-	FIXED	STD.	-	STANDARD
FWS	-	FUTURE WEARING SURFACE	THK.	-	THICKNESS
F.A.	-	FORWARD ABUTMENT	TYP.	-	TYPICAL
F.F.	-	FRONT FACE	W/	-	WITH
F/F	-	FACE TO FACE	W/O	-	WITHOUT

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

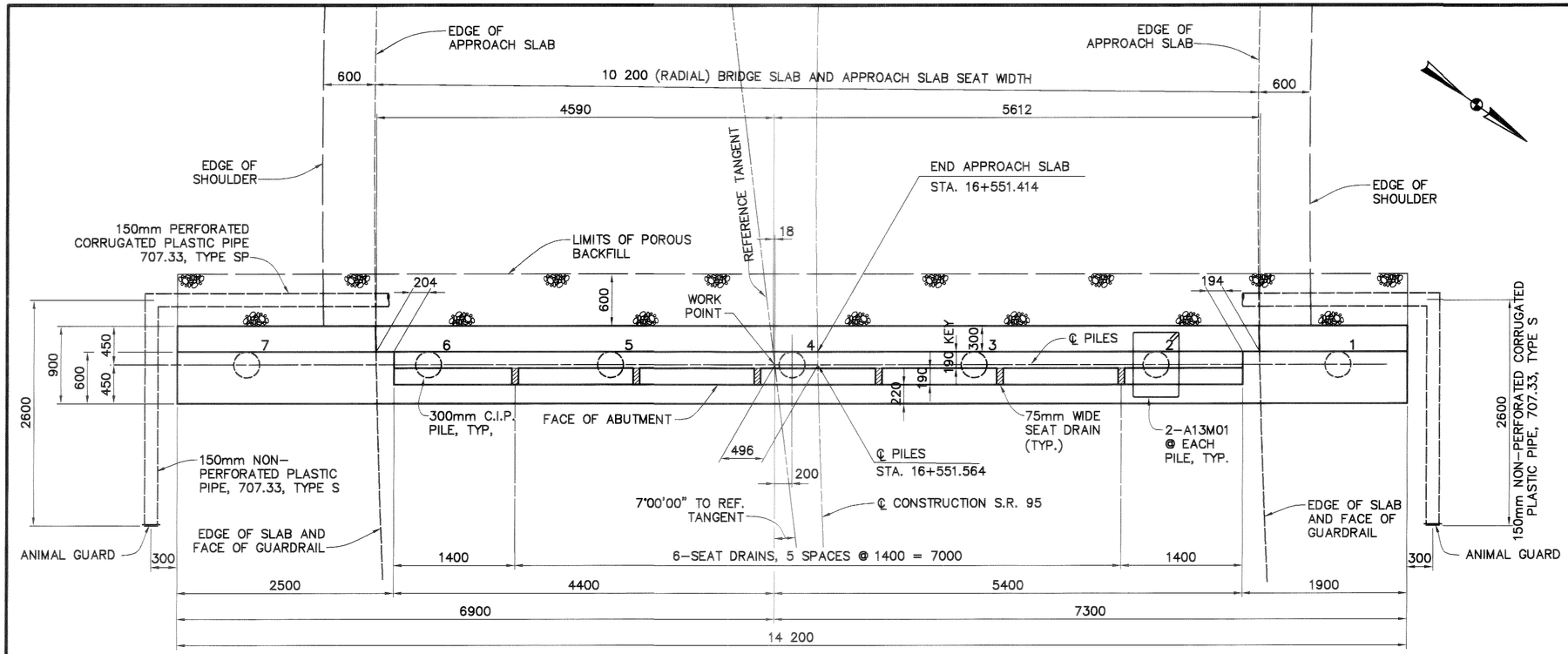
DESIGNED	DRAWN	REVIEWED	DATE
BDH	RLE	DWS	10/16/01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLD		0303976	

ESTIMATED QUANTITIES AND GENERAL NOTES
BRIDGE NO. ASD-95-16551
OVER MOHICAN RUN

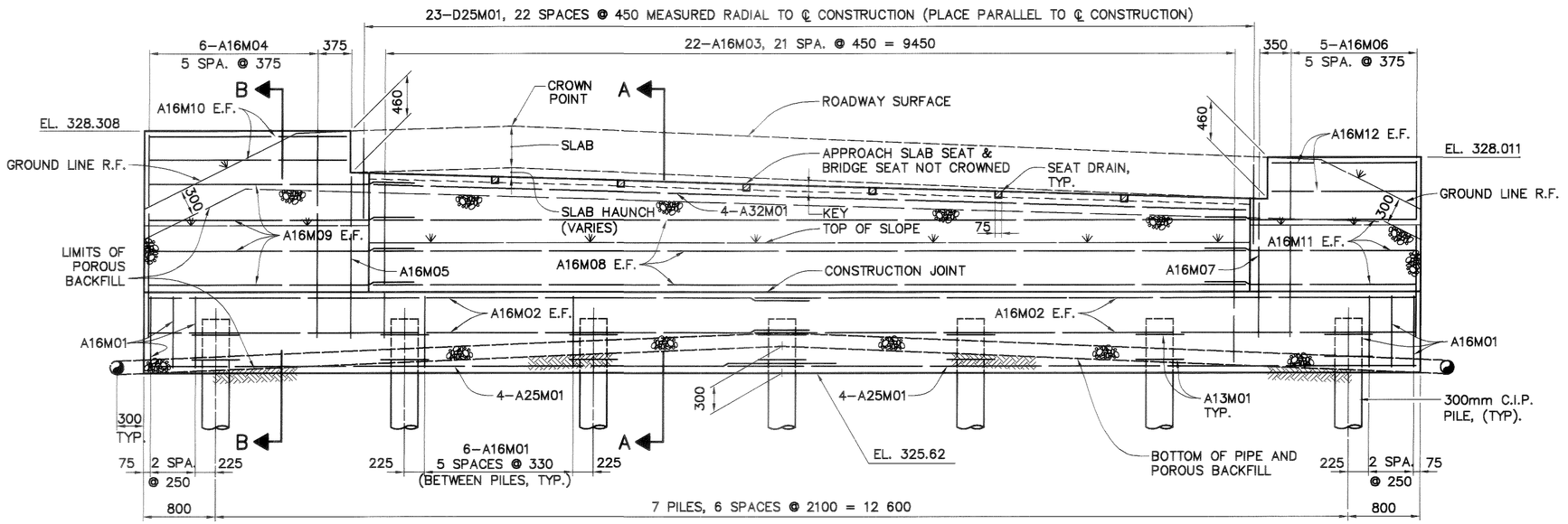
ASD-95-16.502

3 / 10

33
49



PLAN



ELEVATION

PILE LEGEND

N – INDICATES 300mm CAST–IN–PLACE REINFORCED CONCRETE PILE

N – INDICATES PILE NUMBER

ABUTMENT NOTES

POROUS BACKFILL WITH FILTER FABRIC 0.6 METER THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 0.3 METER BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.

REINFORCING STEEL SPLICE LENGTHS: SHALL BE 600mm FOR NO. 16M BARS AND 1200mm FOR NO. 25M BARS.

REINFORCING STEEL LISTS: SEE SHEET 10 / 10 .

ABUTMENT SECTIONS & CONDUIT TERMINATION DETAIL: SEE SHEET 6 / 10 .

STRUCTURE GENERAL NOTES: SEE SHEET 3 / 10 .

metric units

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

REVIEWED DWS
DATE 10/16/01
STRUCTURE FILE NUMBER 0303976
DRAWN DLD
REVISED
DESIGNED RLE
CHECKED BDH

REAR ABUTMENT DETAILS
BRIDGE NO. ASD–95–16551
OVER MOHICAN RUN

ASD–95–16.502

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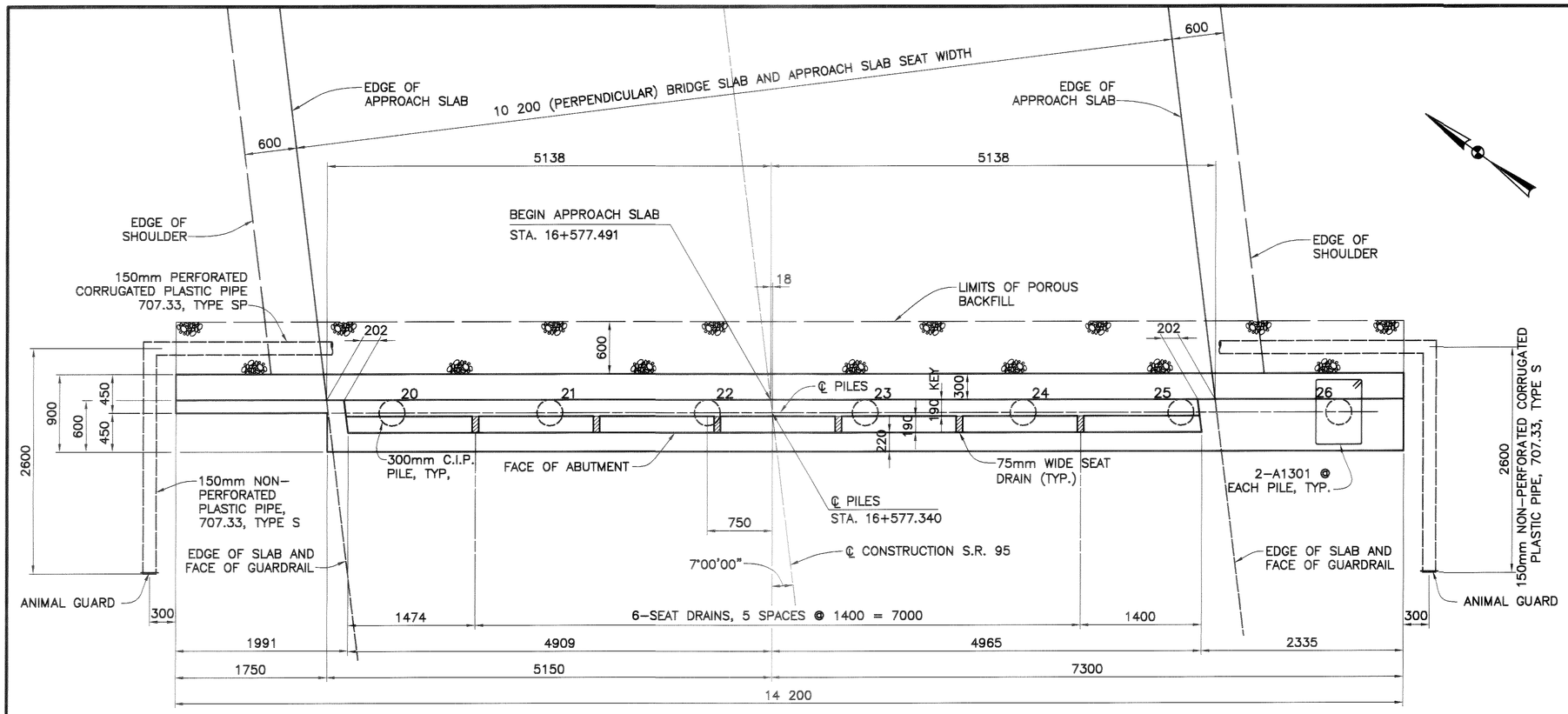
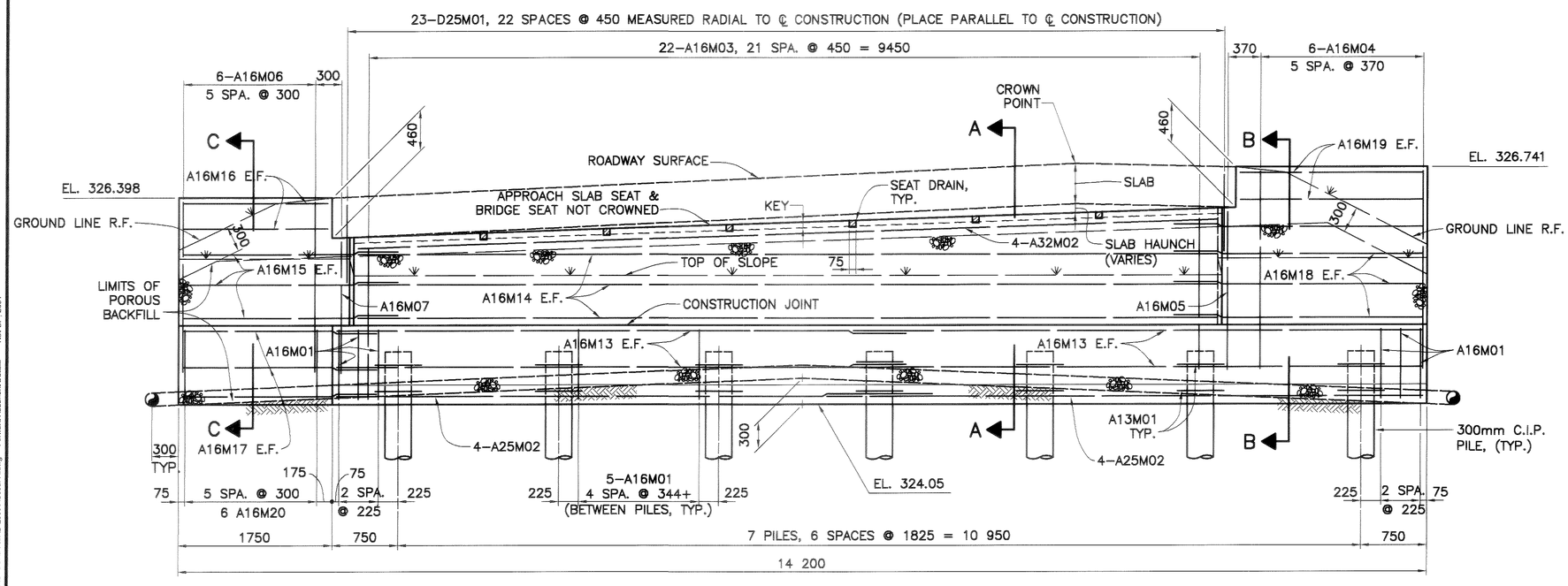
M:\97081\AUTOCAD\ACAD-2000\ASB95RA.dwg - Rear Abutment Details - Nov 27, 2001



PLAN

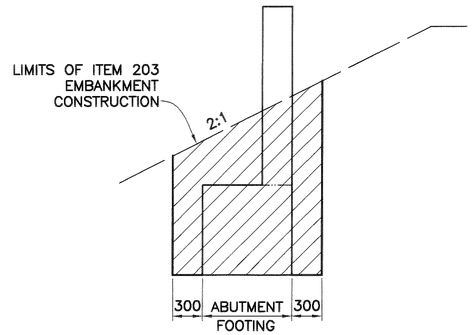


ELEVATION

PILE LEGEND

N – INDICATES 300mm CAST–IN–PLACE REINFORCED CONCRETE PILE

N – INDICATES PILE NUMBER



ABUTMENT SECTION

NOTE: HATCHING INDICATES LIMITS OF ITEM 503 UNCLASSIFIED EXCAVATION. EXCAVATION SHALL EXTEND 300mm PAST ENDS OF ABUTMENTS.

LIMITS OF UNCLASSIFIED EXCAVATION

ABUTMENT NOTES: SEE SHEET 4 / 10 .

FORWARD ABUTMENT DETAILS

BRIDGE NO. ASD–95–16551
OVER MOHICAN RUN

ASD–95–16.502

5 / 10

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metric units

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

REVIEWED DWS
DATE 10/16/01
STRUCTURE FILE NUMBER 0303976

DRAWN DLD
REVISED

DESIGNED RLE
CHECKED BDH

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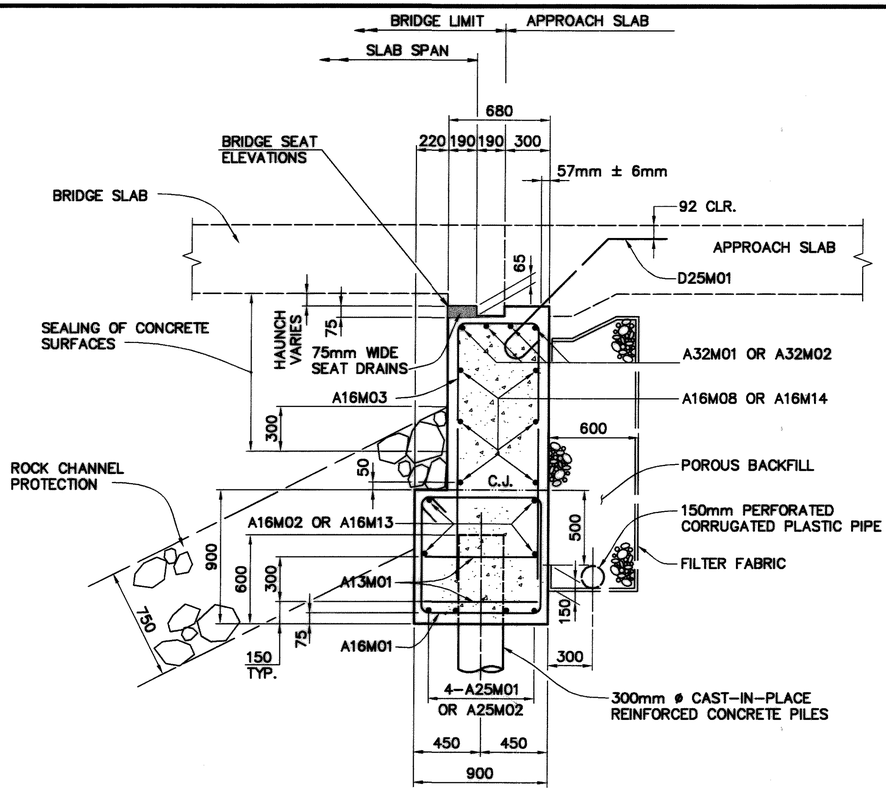
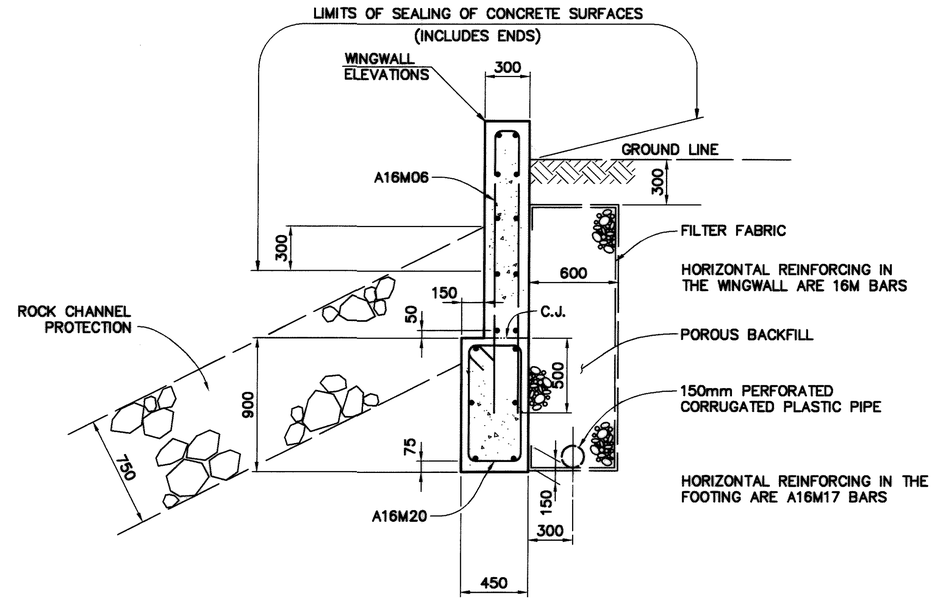
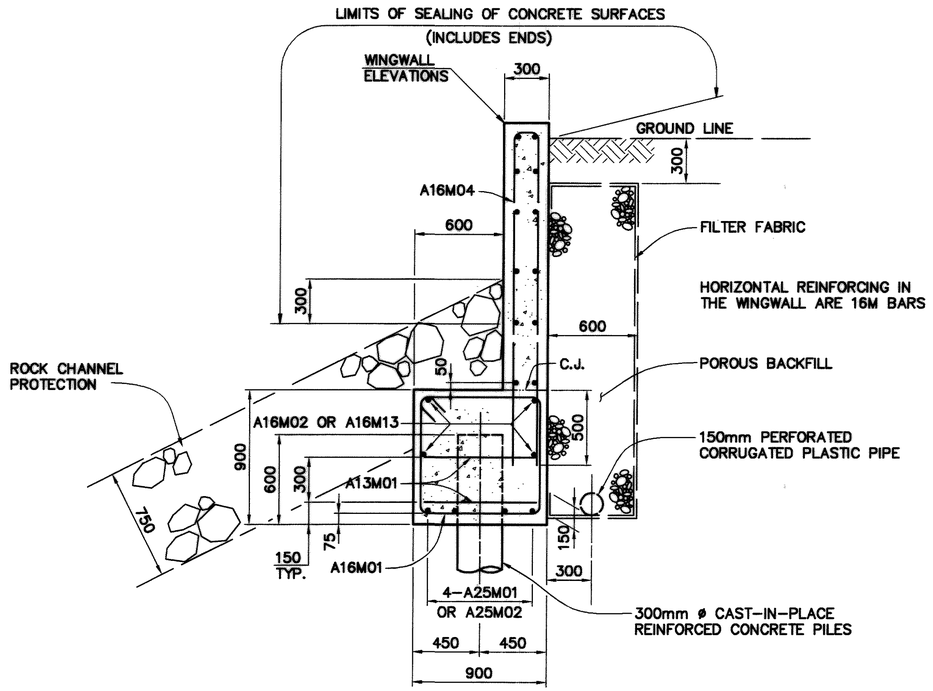


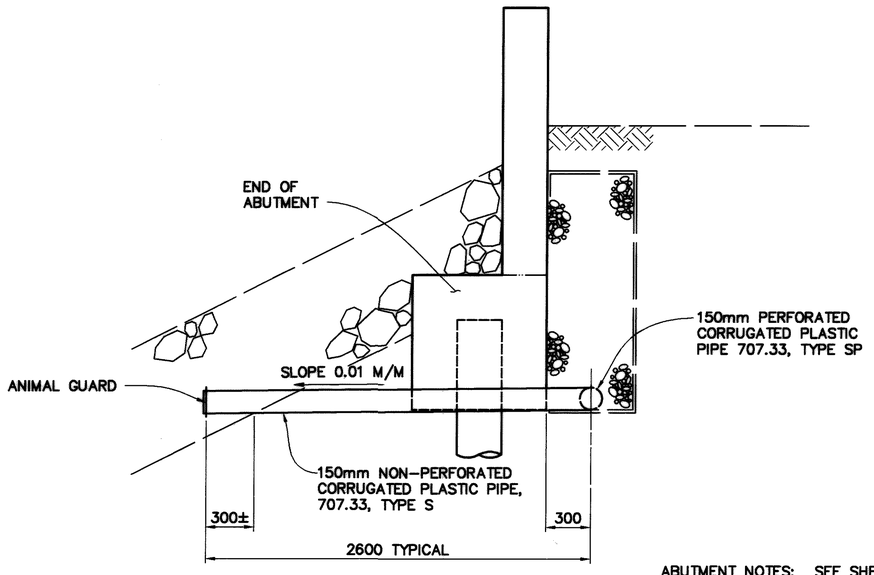
SECTION A–A



SECTION C–C



SECTION B–B



CONDUIT TERMINATION DETAIL

ABUTMENT NOTES: SEE SHEET 4 / 10 .

metric units

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

DESIGNED	DRAWN	REVIEWED	DATE
RLE	DLD	DWS	10/16/01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BDH		0303976	

ABUTMENT SECTIONS

BRIDGE NO. ASD-95-16551
OVER MOHICAN RUN

ASD-95-16.502

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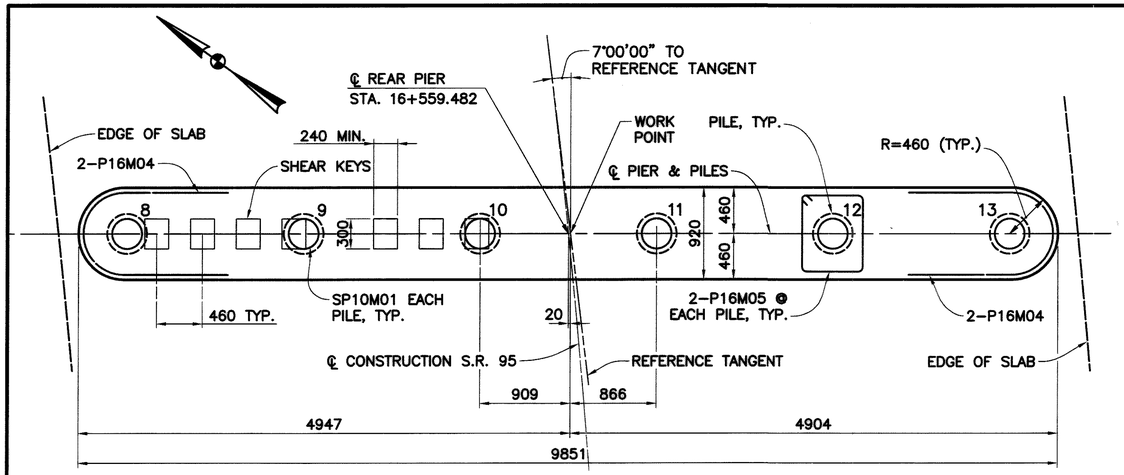
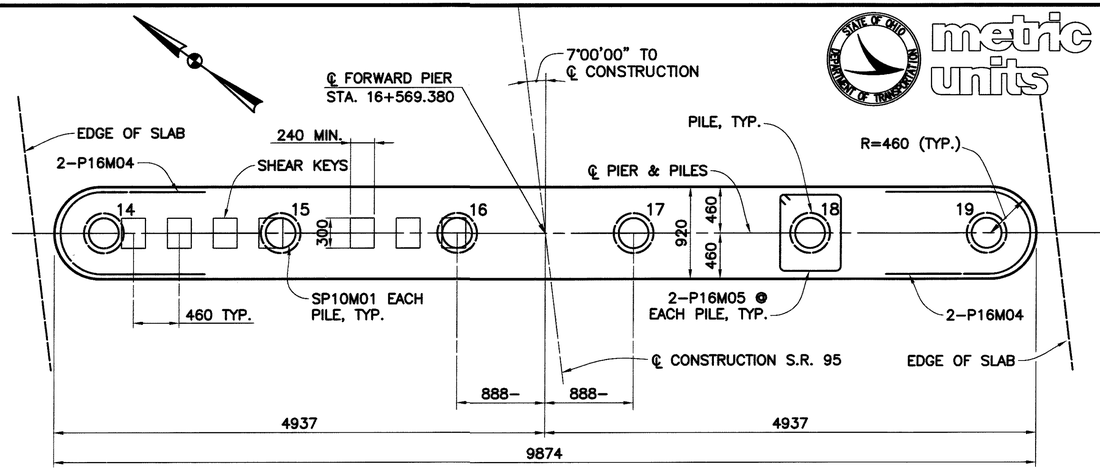
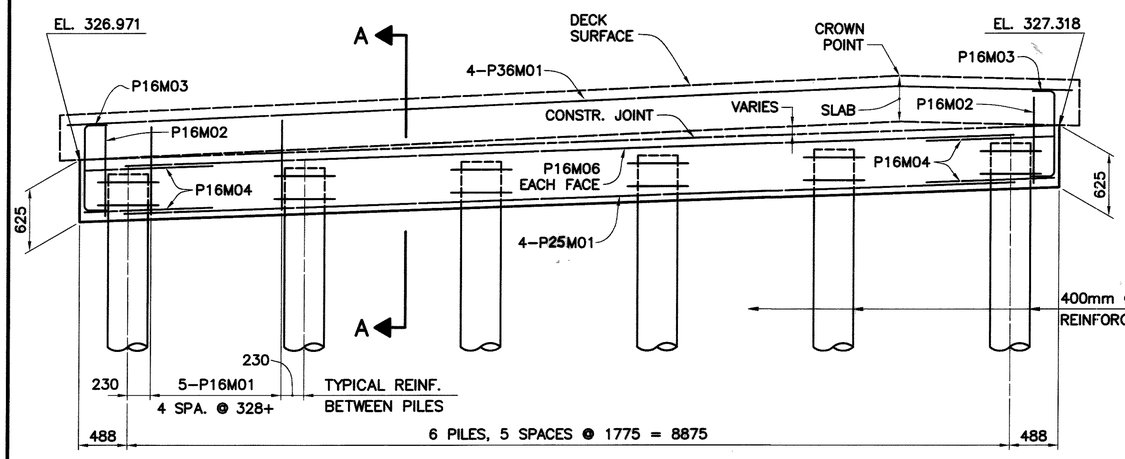


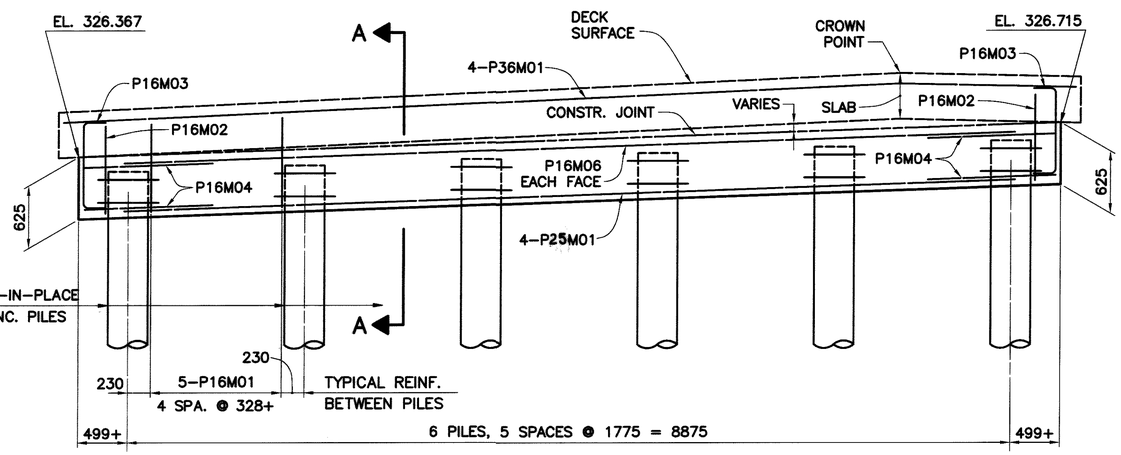
PLAN – REAR PIER



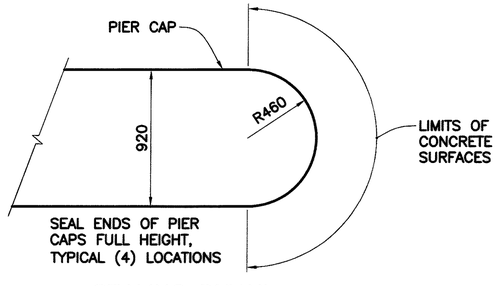
PLAN – FORWARD PIER



ELEVATION – REAR PIER

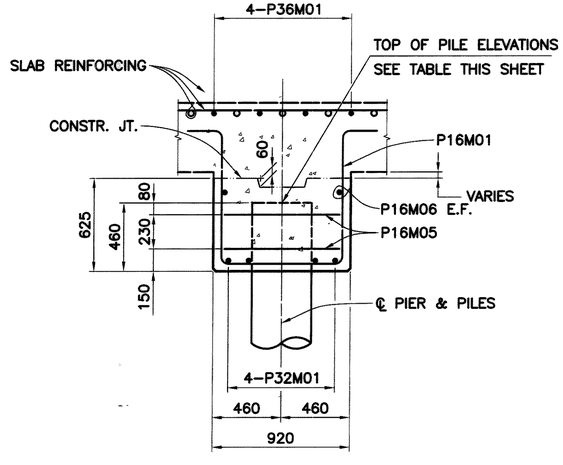


ELEVATION – FORWARD PIER



SEALING DETAIL

TOP OF PILE ELEVATIONS	
NO.	ELEVATION
8	326.823
9	326.886
10	326.948
11	327.011
12	327.073
13	327.136
14	326.220
15	326.283
16	326.345
17	326.408
18	326.470
19	326.533



SECTION A–A

PILE LEGEND

N – INDICATES 400mm CAST–IN–PLACE REINFORCED CONCRETE PILE

N – INDICATES PILE NUMBER

PIER NOTES

STRUCTURE GENERAL NOTES: SEE SHEET 3 / 10 .

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

DESIGNED	DRAWN	REVIEWED	DATE
RLE	DLD	DWS	10/16/01

CHECKED BDH

REVISED

STRUCTURE FILE NUMBER 0303976

PIERS
BRIDGE NO. ASD–95–16551
OVER MOHICAN RUN

ASD–95–16.502

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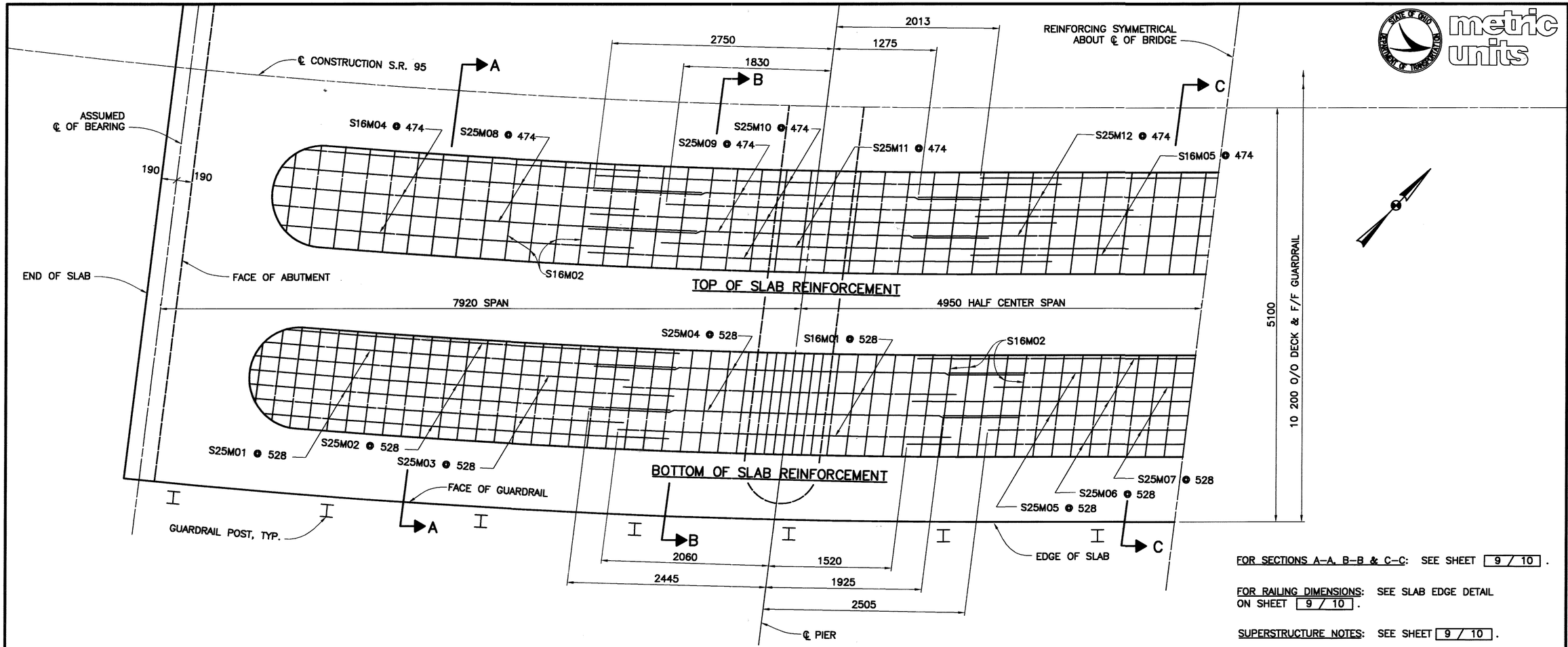
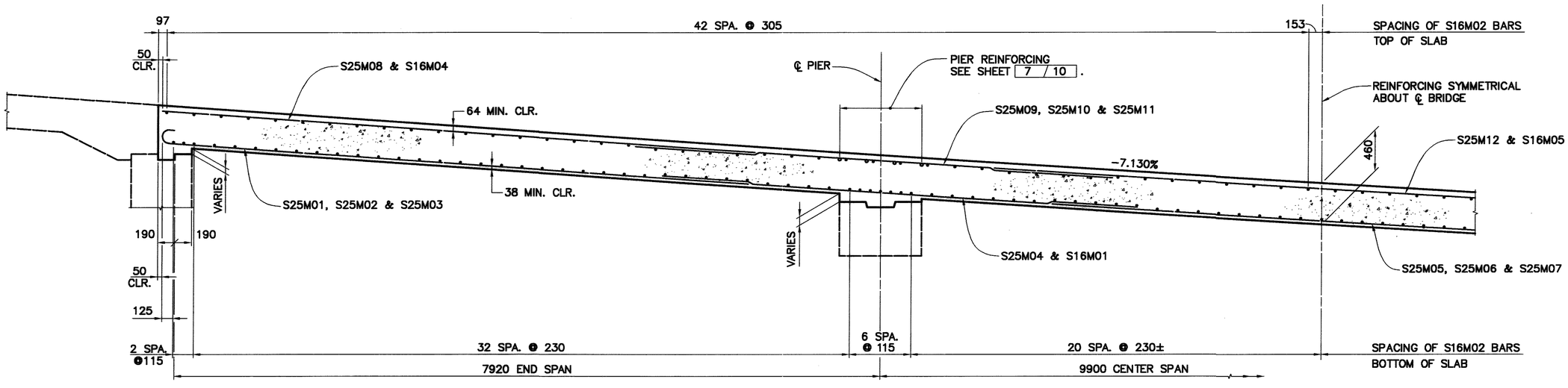
M:\97091\AUTOCAD\ACAD-2000\ASB95PI.dwg - PIER DETAILS - Aug 14, 2002



PARTIAL PLAN



LONGITUDINAL SECTION

metric units

FOR SECTIONS A–A, B–B & C–C: SEE SHEET 9 / 10 .

FOR RAILING DIMENSIONS: SEE SLAB EDGE DETAIL ON SHEET 9 / 10 .

SUPERSTRUCTURE NOTES: SEE SHEET 9 / 10 .

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

REVIEWED DWS 10/16/01
STRUCTURE FILE NUMBER 0303976
DRAWN DLD
REVISED
DESIGNED BDH
CHECKED RLE

SUPERSTRUCTURE – 1
BRIDGE NO. ASD-95-16551
OVER MOHICAN RUN

ASD-95-16.502

8 / 10

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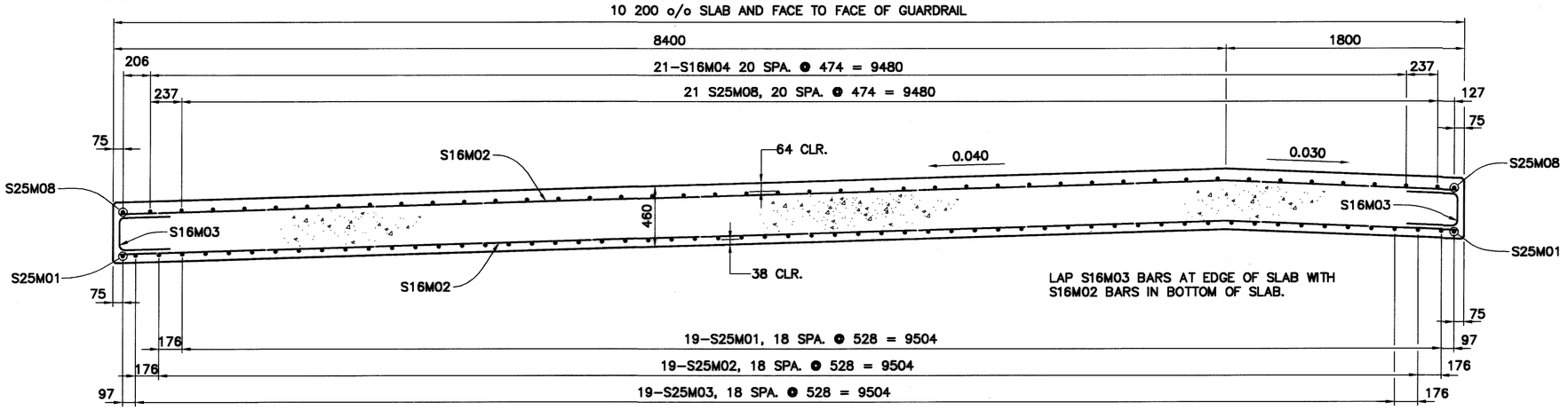
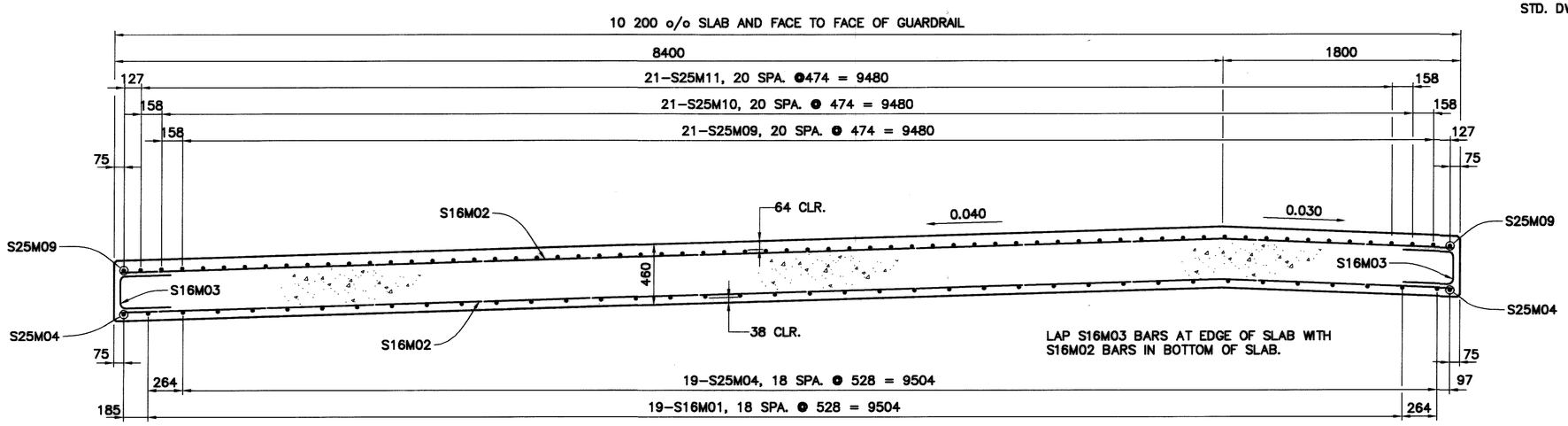
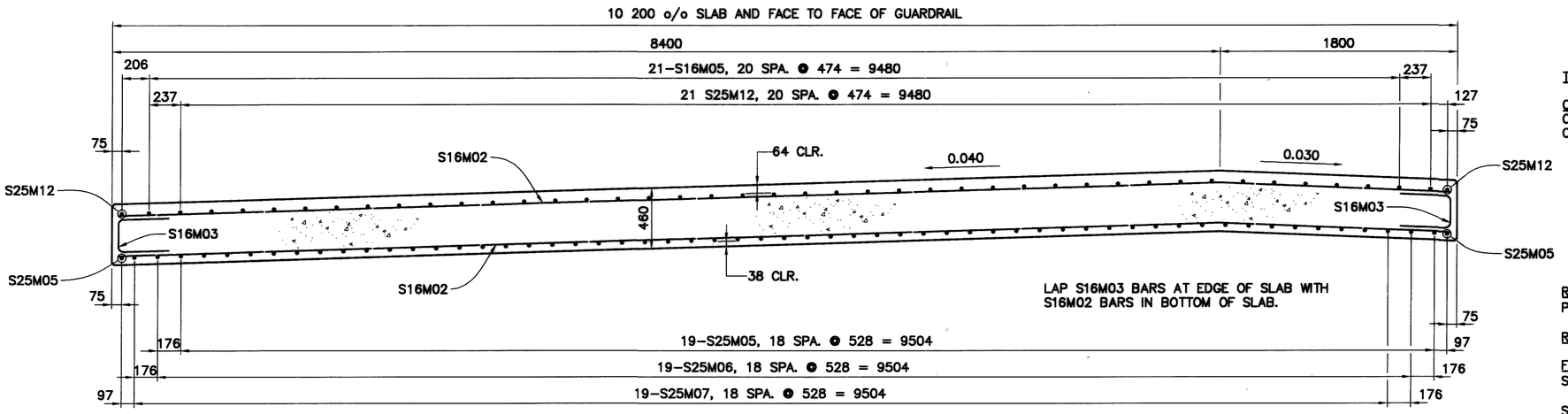
M:\97061\AUTOCAD\ACAD-2000\AS095SD1.DWG - SLAB REINFORCING ~ Feb 12, 2002



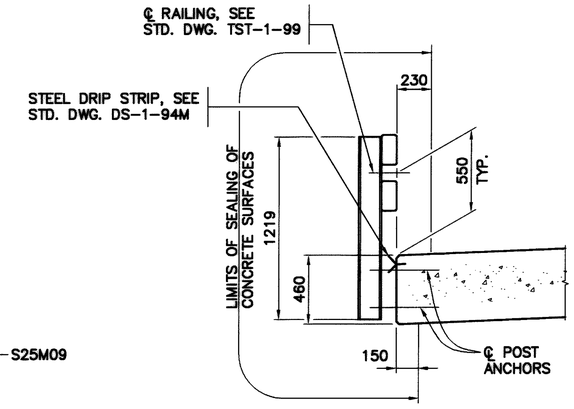
SECTION A-A (END SPANS)



SECTION B-B (AT PIERS)



SECTION C-C (CENTER SPAN)



SLAB EDGE DETAIL

SUPERSTRUCTURE NOTES

TOP OF SLAB ELEVATIONS: SEE SHEET 2 / 10 .

CAMBER: THE SLAB FORMS SHALL BE CAMBERED IN ORDER TO COMPENSATE FOR SLAB AND FALSEWORK DEFLECTIONS. REQUIRED CAMBER IS AS FOLLOWS:

CAMBER IN MILLIMETERS = $D_S + D_F$ WHERE:

D_S = DEFLECTION OF SLAB WHEN SELF SUPPORTING = 6mm @ MIDPOINT OF SPANS.

D_F = DEFLECTION OF FALSEWORK DUE TO WEIGHT OF FRESHLY PLACED CONCRETE (TO BE DETERMINED BY CONTRACTOR)

RAILING: SEE STANDARD DRAWING TST-1-99 AND GENERAL PLAN ON SHEET 2 / 10 FOR SPACING.

REINFORCING STEEL LISTS: SEE SHEET 10 / 10 .

FOR LOCATIONS OF SECTIONS A-A, B-B & C-C: SEE SHEET 8 / 10 .

STRUCTURE GENERAL NOTES: SEE SHEET 3 / 10 .

metric units

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

DATE 10/16/01
REVIEWED DWS
STRUCTURE FILE NUMBER 0303976
DRAWN DLD
REVISED
DESIGNED BDH
CHECKED RLE

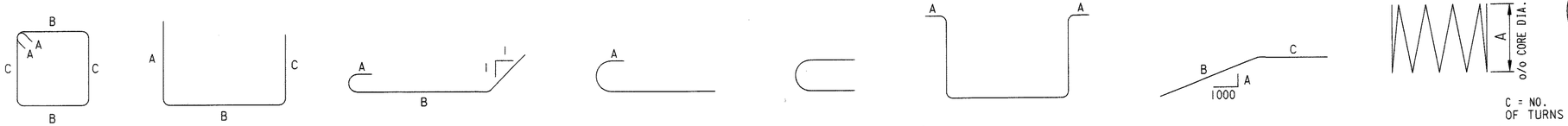
SUPERSTRUCTURE - 2
BRIDGE NO. ASD-95-16551
OVER MOHICAN RUN

ASD-95-16.502

9/10

39/49

M:\97061\AUTOCAD\ACAD-2000\AS095SD2.dwg - Transverse Sections ~ Nov 27, 2001



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

BENDING DIAGRAMS

ABUTMENT REINFORCING STEEL SCHEDULE

MARK	NUMBER REAR	NUMBER FWD.	NUMBER TOTAL	LENGTH	TYPE	A	B	C	D	INCREMENT	WEIGHT (kg)
A13M01	14	14	28	2703	1	STD	530	750			75.23
A16M01	42	36	78	3307	1	STD	800	775			400.33
A16M02	8		8	7350	STR						91.26
A16M03	22	22	44	3908	2	1705	580	1705			266.87
A16M04	6	6	12	4598	2	2240	200	2240			85.63
A16M05	1	1	2	3678	2	1780	200	1780			11.42
A16M06	5	6	11	3968	2	1925	200	1925			67.74
A16M07	1	1	2	3088	2	1485	200	1485			9.59
A16M08	6		6	9700	STR						90.33
A16M09	8		8	2950	STR						36.63
A16M10	4		4	2190	STR						13.60
A16M11	6		6	2350	STR						21.88
A16M12	4		4	1605	STR						9.96
A16M13		8	8	6475	STR						80.39
A16M14		6	6	9775	STR						91.02
A16M15		6	6	2440	STR						22.72
A16M16		4	4	1640	STR						10.18
A16M17		6	6	2200	STR						20.49
A16M18		6	6	2835	STR						26.40
A16M19		4	4	2080	STR						12.91
A16M20		6	6	2407	1	STD	350	775			22.41
A25M01	8		8	7650	STR						243.15
A25M02		8	8	6775	STR						215.34
A32M01	4		4	9700	STR						248.48
A32M02		4	4	9780	STR						250.52
D25M01	23	23	46	1737	3	STD	1025	305			317.45
										TOTAL	2741.93

PIER REINFORCING STEEL SCHEDULE

MARK	NUMBER REAR	NUMBER FWD.	NUMBER TOTAL	LENGTH	TYPE	A	B	C	D	INCREMENT	WEIGHT (kg)
P16M01	25	25	50	2878	6	STD	810	860			223.33
P16M02	2	2	4	2768	6	STD	700	860			17.18
P16M03	2	2	4	1218	2	220	860	220			7.56
P16M04	4	4	8	3264	5	1040	1184	770			40.53
P16M05	12	12	24	2917	1	STD	770	610			108.65
P16M06	2	2	4	8960	STR						55.62
* P19M01	48	48	96	11 000	STR						2360.16
P25M01	4	4	8	8960	STR						284.78
P36M01	4	4	8	10 100	7	70	8350	1750			638.89
* SP10M01	6	6	12	11 000	SPIRAL	300	300	40			244.89
										TOTAL	1376.57

BARS INCLUDED WITH ITEM 507 400mm CAST-IN-PLACE REINFORCED CONCRETE PILES FOR PAYMENT

SUPERSTRUCTURE REINFORCING STEEL SCHEDULE

MARK	NO.	LENGTH	TYPE	A	B	C	D	INCREMENT	WEIGHT (kg)
S16M01	38	4125	STR						243.28
S16M02	207	10 100	STR						3244.77
S16M03	242	992	2	380	308	380			372.58
S16M04	42	5900	STR						38.46
S16M05	21	5875	STR						191.48
S25M01	42	6550	STR						1092.97
S25M02	38	6575	STR						992.65
S25M03	38	6000	4	STD	5645				905.84
S25M04	42	5325	STR						888.56
S25M05	21	6050	STR						504.77
S25M06	19	5875	STR						443.49
S25M07	19	5875	STR						443.49
S25M08	46	6650	STR						1215.34
S25M09	46	5350	STR						977.76
S25M10	42	5750	STR						959.48
S25M11	42	5750	STR						959.48
S25M12	23	7350	STR						671.64
								TOTAL	14 146.04

ALL REINFORCING STEEL SHALL BE EPOXY COATED. SEE STRUCTURE GENERAL NOTES ON SHEET 3 / 10 FOR ADDITIONAL MATERIAL REQUIREMENTS.

BAR DIMENSIONS SHOWN ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS UNLESS OTHERWISE INDICATED.

BAR BENDS: BEND BARS CAREFULLY TO THE DIMENSIONS LISTED IN THE ABOVE SCHEDULES AND/OR STANDARD BENDS TABLE (CMS 509.5). "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

SPIRAL REINFORCING STEEL: THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE OUT TO OUT OF COILS, INCLUDING THE FINISHING TURNS TOP AND BOTTOM, AND IS BASED ON THE MINIMUM DEPTH BELOW GRADE PER STANDARD DRAWING CPP-2-94.

THE "NUMBER OF TURNS SHOWN IS THE ("LENGTH" MINUS 3 BAR DIAMETERS) DIVIDED BY THE PITCH, ALL IN MILLIMETERS, PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

TWO STEEL CHANNELS, TEE OR ANGLE SPACERS WEIGHING APPROXIMATELY 1.01 KILOGRAMS PER LINEAL METER SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL.

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
700 WINKLER DRIVE
WOOSTER, OHIO 44691

DESIGNED RLE
DRAWN DLD
CHECKED BDH
REVIEWED DWS
DATE 09/14/01
REVISED
STRUCTURE FILE NUMBER 0303976

REINFORCING STEEL LISTS
BRIDGE NO. ASD-95-16552
OVER MOHICAN RUN

ASD-95-16.502

10/10

40
49

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