

MICROFILMED
FEB 25 1986

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

MICROFILMED
AUG 19 1988

FHWA REGION	STATE	PROJECT
5	OHIO	F-49(17)

STARK COUNTY
STA-30-31.16

1
10

STA-30-31.16

EAST LINCOLN WAY, VILLAGE OF MINERVA

STARK COUNTY, OHIO

REHABILITATION OF STARK COUNTY BRIDGE NO. PA-36-1

OVER BIG SANDY CREEK

—1981 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.

CONVENTIONAL SIGNS

- COUNTY LINE -----
- CENTER LINE -----
- EXISTING RIGHT-OF-WAY ----- R_{W}
- PROPERTY LINE ----- P
- FENCE LINE ----- x-x
- TREES OR SHRUBS (EXISTING) -----
- TREES OR SHRUBS (TO BE REMOVED) -----
- POWER POLES -----
- TELEPHONE POLES -----
- GAS LINES ----- G-G
- WATER LINES ----- W-W
- STORM SEWER -----
- FIRE HYDRANT -----
- GAS VALVES -----
- WATER VALVES -----
- SIGNS -----
- CATCH BASINS ----- C.B. M.H.
- SANITARY SEWER ----- S-S

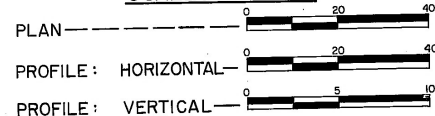
INDEX OF SHEETS

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DESIGN DESIGNATION

CURRENT ADT = 8254 V.P.D. (1978)
DESIGN ADT = 11500 V.P.D. (1998)
DHV = 1,725
D = 50 %
T = 7 %
V = 30 M.P.H.

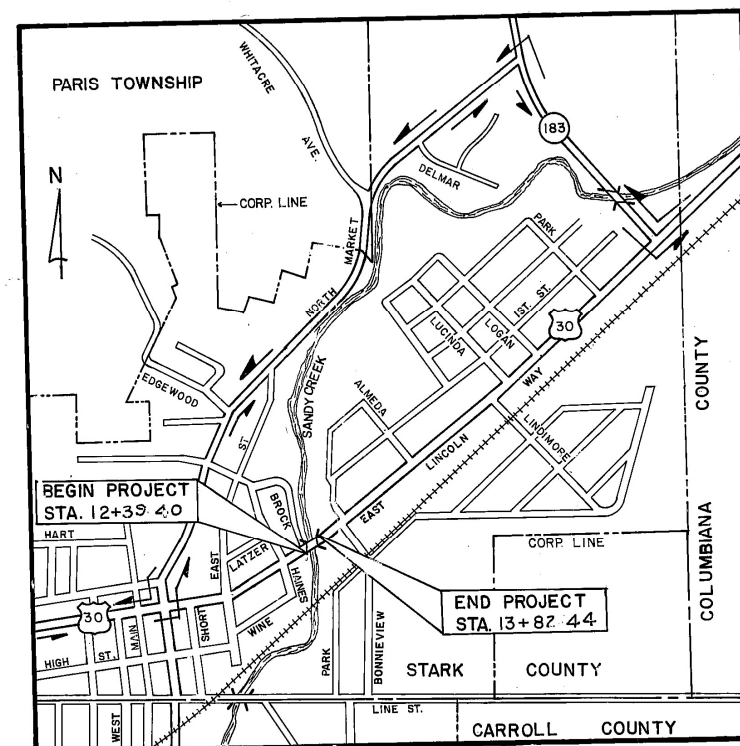
SCALES IN FEET



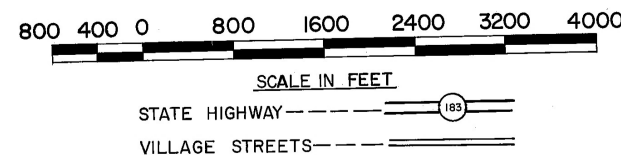
DETOUR ROUTE -----

STRUCTURE LOCATION

LATITUDE ----- 40°-43'-50"
LONGITUDE ----- 81°-05'-45"
MINERVA, OHIO QUADRANGLE



LOCATION MAP



LINE DATA

BEGIN WORK ----- STA. 12+13.00
END WORK ----- STA. 14+07.00
NET LENGTH WORK ----- 194.00LF (.036 MILE)
BEGIN PROJECT ----- STA. 12+39.40
END PROJECT ----- STA. 13+82.44
NET PROJECT LENGTH ----- 143.04LF (.027 MILE)

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

- APPROVED Joseph A. Shurtz
DATE Feb 8, 1980 STARK COUNTY ENGINEER
- APPROVED William M. Feldman
DATE 3/3/80 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION
- APPROVED Robert B. Phylus
DATE 3/20/80 ENGINEER, BUREAU OF BRIDGES AND STRUCTURES
- APPROVED Howard E. Notman
DATE 4-21-80 CHIEF ENGINEER, PLANNING AND DESIGN
- APPROVED David L. Wei
DATE 4-21-80 DIRECTOR, DEPARTMENT OF TRANSPORTATION

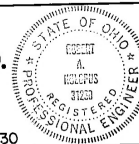
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR _____ DATE _____

Rev. 10-9-81

PROJECT	STA.-30-31.16
FILE NO.	DATE OF LETTING
	CONTRACT NO.

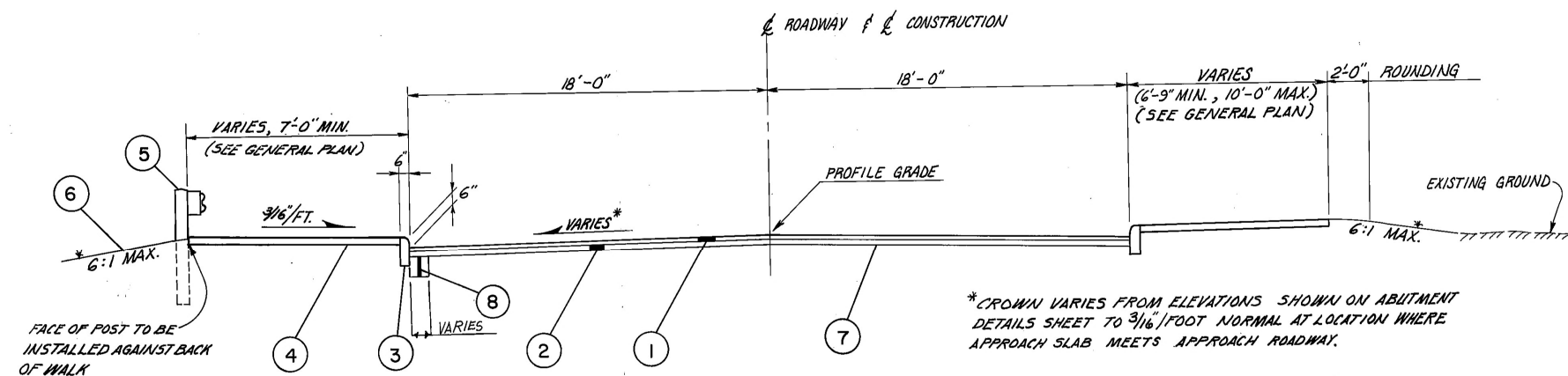
PLANS PREPARED BY
HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO
BY: Robert A. Kolopus REGISTERED ENGINEER NO. 31230



STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECS.	
MC-3	6-1-73	BR-2-67	10-15-71	AS-1-72	6-30-72
BP-5	7-16-81	GR-1	12-6-76	PSBD-1-71	9-1-71
BP-12	7-7-81	GR-2B	12-6-76		852
F-1	5-1-76	GR-3	12-6-76		6-8-79
		BP-7	12-6-76		

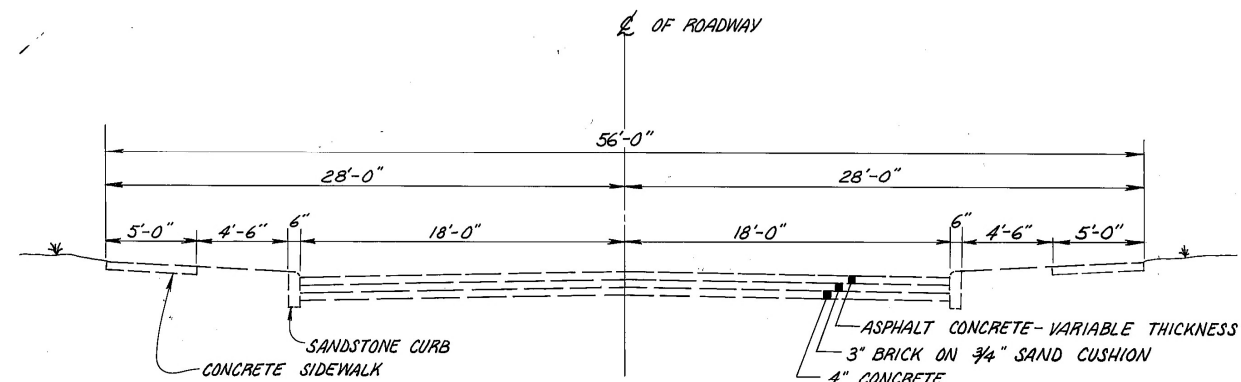
LEGEND

- ① 4.04-1/2 Max. ASPHALT CONCRETE, AC-20
- ② 403- 0" MIN. ASPHALT CONCRETE, AC-20
- ③ 609- CURB, TYPE 6
- ④ 608- 4 INCH CONCRETE WALK
- ⑤ 606- GUARDRAIL, TYPE 5
- ⑥ 659- SEEDING AND MULCHING
- ⑦ 407- TACK COAT: APPLIED AT THE RATE OF 0.10 GAL. PER SQ. YD. AND WITH COVER AGGREGATE 103.06
- ⑧ 301- 8" MIN., 12" MAX. BITUMINOUS AGGREGATE BASE: AC-20; RT-11 OR RT-12

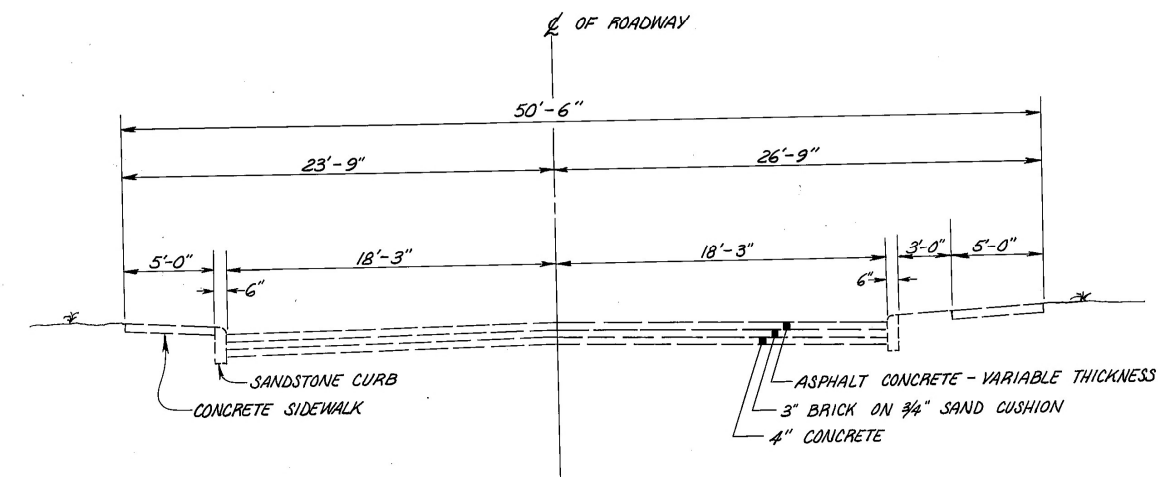


TYPICAL SECTION

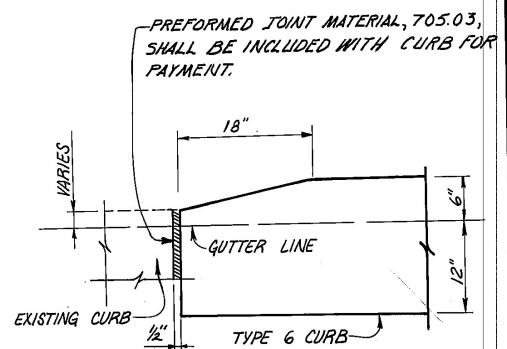
APPROACH ROADWAY
 TYPE 404
 STA. 12+23.50 TO STA. 12+39.40
 STA. 13+82.44 TO STA. 14+00.00



EXISTING TYPICAL SECTION
 EAST APPROACH ROADWAY



EXISTING TYPICAL SECTION
 WEST APPROACH ROADWAY



CURB TAPER DETAIL

GENERAL				SUMMARY					
ITEM	TOTAL	UNIT	DESCRIPTION	Sheet No.	ITEM	TOTAL	UNIT	DESCRIPTION	Sheet No.
ROADWAY									
202	50	LIN. FT.	FENCE REMOVED FOR REUSE, AS PER PLAN		301	8	CU. YD.	BITUMINOUS AGGREGATE BASE: AC-20; RT-11 OR RT-12	3
202	95	LIN. FT.	CURB REMOVED, AS PER PLAN	4	403	5	CU. YD.	ASPHALT CONCRETE, AC-20	3
202	770	SQ. FT.	WALK REMOVED	4	404	8	CU. YD.	ASPHALT CONCRETE, AC-20	3
202	145	SQ. YD.	PAVEMENT REMOVED	3	407	30	GAL.	TACK COAT	3
607	50	LIN. FT.	FENCE REBUILT, TYPE CL		407	1.0	TONS	COVER AGGREGATE	3
606	4	EACH	ANCHOR ASSEMBLY, STANDARD TYPE T		609	95	LIN. FT.	CURB, Standard Type 6	4
606	8750	LIN. FT.	GUARDRAIL, TYPE 5, AS PER PLAN		611	123	SQ. YD.	REINFORCED CONCRETE APPROACH SLABS (T=12), MODIFIED AS PER PLAN	4
606	4	EACH	BRIDGE TERMINAL ASSEMBLY, STANDARD TYPE A	4	TRAFFIC CONTROL				
608	800	SQ. FT.	4" CONCRETE WALK, AS PER PLAN	4	632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	3
608	2	EACH	CURB RAMP, Std. Type 1	4	EROSION CONTROL				
653	9	CU. YD.	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	3	624	Lump		MOBILIZATION, AS PER PLAN	3
659	116	SQ. YD.	SEEDING AND MULCHING	3	614	LUMP		MAINTAINING TRAFFIC	3
659	1.0	M. GAL.	WATER	3	SANITARY				
604	1	EACH	SANITARY MANHOLE ADJUSTED TO GRADE	4	623	LUMP		CONSTRUCTION LAYOUT STAKES	3

CALC. BY RAK DATE 3-6-79
CHK'D. BY MFH DATE 3-12-79

FHWA REGION	STATE	PROJECT
5	OHIO	

3
10STARK COUNTY
STA-30-31.16CALCULATIONSITEM 202 - CURB REMOVED

N.W. CORNER: NONE N.E. CORNER: 32 L.F.
S.W. CORNER: 16 L.F. S.E. CORNER: 47 L.F.
TOTAL = 95 LIN. FT.

ITEM 202 - WALK REMOVED

N.W. CORNER: $(5.0 \text{ FT.})^2/4 + (1.3 \text{ FT.})(5.0 \text{ FT.}) = 26 \text{ S.F.}$
S.W. CORNER: $(5 \text{ FT.})(10 \text{ FT.}) + (9.5 \text{ FT.})(27.95 \text{ FT.}) = 316 \text{ S.F.}$
N.E. CORNER: $(5 \text{ FT.})(25 \text{ FT.}) + (10.65 \text{ FT.})(4.8 \text{ FT.}) + (.5)(10.4 \text{ FT.})(5 \text{ FT.}) = 202 \text{ S.F.}$
S.E. CORNER: $(5 \text{ FT.})(23.25 \text{ FT.}) + (11.6 \text{ FT.})(9.45 \text{ FT.}) = 226 \text{ S.F.}$
TOTAL = 770 SQ. FT.

ITEM 202 - PAVEMENT REMOVED

EAST: $(15 \text{ FT.})(36 \text{ FT.}) = 540 \text{ S.F.}$
WEST: $(15 \text{ FT.})(36 \text{ FT.}) = 540 \text{ S.F.}$
N.W. CURB: MEASURED 186 S.F.
ALONG CURBS: $(6 \text{ IN.})(16 \text{ FT.} + 1 \text{ FT.} + 18 \text{ FT.} + 35 \text{ FT.}) = 35 \text{ S.F.}$
TOTAL = 1455 SQ. YD.

ITEM 608 - 4" CONCRETE WALK

N.W. CORNER: $(.0087266)(14.5 \text{ FT.})^2(56.514722) - (.5)(12.09 \text{ FT.})(8.0 \text{ FT.}) - (.5)(3.81 \text{ FT.} + 2.66 \text{ FT.})(6.5 \text{ FT.}) = 76 \text{ S.F.}$
S.W. CORNER: $(6.5 \text{ FT.})(5.0 \text{ FT.}) + (8.0 \text{ FT.})(31.64 \text{ FT.}) - [(.0087266)(99.0833 \text{ FT.})^2(9.982) - (.5)(17.18 \text{ FT.})(97.5833 \text{ FT.})] - (.5)(1.15 \text{ FT.})(6.5 \text{ FT.}) - (.5)(3.0 \text{ FT.})(6.0 \text{ FT.}) = 256 \text{ S.F.}$
N.E. CORNER: $(29.8 \text{ FT.})(9.5 \text{ FT.}) + (6.5 \text{ FT.})(5.0 \text{ FT.}) - [(.0087266)(99.0833 \text{ FT.})^2(14.134721) - (.5)(24.20 \text{ FT.})(96.0833 \text{ FT.})] - (.5)(1.15 \text{ FT.})(6.5 \text{ FT.}) - (.5)(9.0 \text{ FT.})(4.5 \text{ FT.}) = 244 \text{ S.F.}$
S.E. CORNER: $(17.5 \text{ FT.})(9.5 \text{ FT.}) + [(.0087266)(19.5 \text{ FT.})^2(59.148055) - (.5)(10.0 \text{ FT.})(16.74 \text{ FT.})] - [(.0087266)(99.0833 \text{ FT.})^2(14.134721) - (.5)(24.20 \text{ FT.})(96.0833 \text{ FT.})] - (.5)(6.5 \text{ FT.})(.5)(1.68 \text{ FT.}) = 224 \text{ S.F.}$
TOTAL = 800 SQ. FT.

ITEM 659 - TOPSOIL FURNISHED AND PLACED

$[(1.625)(34 \text{ FT.} + 36 \text{ FT.} + 18 \text{ FT.} + 36 \text{ FT.}) + (.5)(10 \text{ FT.})(26 \text{ FT.})(.25 \text{ FT.}) + 2(3 \text{ FT.})(7 \text{ FT.})(.25 \text{ FT.})]/27 = 9 \text{ CU. YD.}$

ITEM 659 - SEEDING AND MULCHING

N.E. CORNER: $(34 \text{ FT.})(7 \text{ FT.}) + 24 \text{ S.F.} = 262 \text{ S.F.}$
S.E. CORNER: $(36 \text{ FT.})(7 \text{ FT.}) + 21 \text{ S.F.} = 273 \text{ S.F.}$
S.W. CORNER: $(36 \text{ FT.})(7 \text{ FT.}) = 252 \text{ S.F.}$
N.W. CORNER: $(18 \text{ FT.})(7 \text{ FT.}) + (.5)(10 \text{ FT.})(26 \text{ FT.}) = 256 \text{ S.F.}$
TOTAL = 116 SQ. YD.

ITEM 403 - ASPHALT CONCRETE, AC-20

$(36 \text{ FT.})(15 \text{ FT.})(1.25 \text{ IN.})/27 = 5 \text{ CU. YD.}$

ITEM 404 - ASPHALT CONCRETE, AC-20

APPROACH SLABS: $(2)(36 \text{ FT.})(15 \text{ FT.})(1.25 \text{ IN.}) = 112.5 \text{ C.F.}$
EAST SIDE: $(18.5 \text{ FT.})(18 \text{ FT.})(.0625 \text{ FT.}) + (20.5 \text{ FT.})(18 \text{ FT.})(.0625 \text{ FT.}) + (14 \text{ FT.})(18 \text{ FT.})(.5)(.0625 \text{ FT.}) = 51.8 \text{ C.F.}$
WEST SIDE: $(14.5 \text{ FT.})(18 \text{ FT.})(.0625 \text{ FT.}) + (18 \text{ FT.})^2(.0625 \text{ FT.}) + (43 \text{ FT.})(5 \text{ FT.})(.5)(.0625 \text{ FT.}) + (15 \text{ FT.})(12 \text{ FT.})(.5)(.0625 \text{ FT.}) = 48.9 \text{ C.F.}$
TOTAL = 8 CU. YD.

ITEM 407 - TACK COAT

$(36 \text{ FT.})(15 \text{ FT.})(2) + (18.5 \text{ FT.})(18 \text{ FT.}) + (20.5 \text{ FT.})(18 \text{ FT.}) + (14 \text{ FT.})(18 \text{ FT.})(.5) + (14.5 \text{ FT.})(18 \text{ FT.}) + (18 \text{ FT.})^2 + (43 \text{ FT.})(5 \text{ FT.})(.5) + (15 \text{ FT.})(12 \text{ FT.})(.5) = 2690.5 \text{ S.F.}$
TOTAL = $(2690.5 \text{ S.F.})(0.10 \text{ GAL./SQ.YD.}) = 30 \text{ GAL.}$

ITEM 609 - CURB, STANDARD TYPE 6

N.E. CORNER: $(\text{STA. } 14 + 02 - \text{STA. } 13 + 70.61) - 15 \text{ FT.} = 16.4 \text{ FT.}$
S.E. CORNER: $(\text{STA. } 13 + 80 - \text{STA. } 13 + 79.27) + (.5)(3.14)(20 \text{ FT.}) - 3.0 \text{ FT.} = 29.2 \text{ FT.}$
S.W. CORNER: $(\text{STA. } 12 + 51.23 - \text{STA. } 12 + 18) - 15 \text{ FT.} = 18.2 \text{ FT.}$
N.W. CORNER: $(\text{STA. } 12 + 57.57 - \text{STA. } 12 + 55.0) + (.5)(3.14)(15 \text{ FT.}) + 4.82 \text{ FT.} = 31.0 \text{ FT.}$
TOTAL = 95 LIN. FT.

ITEM 611 - REINFORCED CONCRETE APPROACH SLAB

EAST: $(37.0 \text{ FT.})(15.0 \text{ FT.}) = 555 \text{ S.F.}$
WEST: $(36.5 \text{ FT.})(15.0 \text{ FT.}) = 547.5 \text{ S.F.}$
TOTAL = 123 SQ. YD.

ITEM 407 - COVER AGGREGATE

$(2690.5 \text{ S.F.})(7.0 \text{ LBS./SQ.YD.}) = 1.0 \text{ TONS}$

NOTESMOBILIZATION, AS PER PLAN

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE WHICH SHALL BE IN ACCORDANCE WITH 619.01 OR 619.02. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 624 MOBILIZATION, AS PER PLAN.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

UTILITY OWNERS

OHIO POWER COMPANY
305 CLEVELAND AVENUE, S.W.
CANTON, OHIO 44702
TELEPHONE: 216-456-8173

MINERVA WATER & SEWER DEPT.
401 E. LINCOLN WAY
MINERVA, OHIO 44657
TELEPHONE: 216-868-5844

COLUMBIA GAS OF OHIO, INC.
99 NORTH FRONT STREET
COLUMBUS, OHIO 43215
TELEPHONE: 614-460-2400

GENERAL TELEPHONE COMPANY
100 EXECUTIVE DRIVE
MARION, OHIO 43302

UTILITY ADJUSTMENT AND RELOCATION

ANY OR ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS. THE CONTRACTOR SHALL NOTIFY ALL SUCH OWNERS HAVING WIRE, CABLE, POLES, PIPES, CONDUIT, MANHOLES, METER BOXES, VALVE BOXES AND OTHER SIMILAR TYPE STRUCTURES WHICH MAY BE AFFECTED AND ARE NOT SHOWN ON THESE PLANS, AT LEAST 48 HOURS BEFORE COMMENCING HIS WORK.

ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. ESTIMATED QUANTITIES OF MATERIALS SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

GUARDRAIL TYPE 5, AS PER PLAN

GUARDRAIL SHOWN ON THE PLANS SHALL HAVE 100 FOOT RADIUS.

CONCRETE WALK AS PER PLAN

THE UNIT PRICE BID FOR ITEM 608 CONCRETE WALK SHALL INCLUDE INSTALLATION AND COMPACTION OF FILL MATERIAL AS REQUIRED TO BRING THE SUBGRADE TO THE ELEVATION NEEDED FOR INSTALLATION OF THE CONCRETE.

BITUMINOUS AGGREGATE BASE - ITEM 301

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY, FOR USE AS DIRECTED BY THE ENGINEER, FOR REPLACING PAVEMENT DAMAGED BY CURB AND APPROACH SLAB REMOVAL. ITEM 301 - BITUMINOUS AGGREGATE BASE 8.0 CU. YDS.

TOPSOIL AS PER PLAN

THE UNIT PRICE BID FOR TOPSOIL FURNISHED AND PLACED SHALL INCLUDE INSTALLATION AND COMPACTION OF FILL MATERIAL AS REQUIRED TO BRING THE SUBGRADE TO THE ELEVATION NEEDED FOR INSTALLATION OF 3 INCHES OF TOPSOIL.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS WITHIN 6 FEET OF NEW CONCRETE WALK AND NEW ABUTMENT BACKWALLS, AND OTHER AREAS DISTURBED BY CONSTRUCTION.

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 659.09: ITEM 659 - WATER 1.0 M GAL.

APPROACH SLAB

STANDARD DRAWING AS-1-72 SHALL BE MODIFIED AS FOLLOWS:

- 1.) CONCRETE OVER REINFORCING IN THE TOP OF THE SLAB SHALL BE 3 INCHES CLEAR.
- 2.) SUBSTITUTE A801 REINFORCING STEEL BAR AS SHOWN ON SHEET 7/7 FOR STANDARD D801 OR D802 BAR.
- 3.) JACKING HOLES SHALL BE OMITTED.
- 4.) ANY ADJUSTMENT OF THE SUBGRADE REQUIRING THE INSTALLATION OR REMOVAL OF MATERIAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ITEM 310 AND SHALL BE INCLUDED WITH APPROACH SLABS FOR PAYMENT.
- 5.) APPROACH SLABS SHALL CONTAIN INTEGRAL CURBS EXCEPT THE NORTH SIDE OF THE WEST APPROACH SLAB, WHICH SHALL BE STANDARD TYPE 6 CONCRETE CURB.

PAVEMENT REMOVED

REMOVAL OF PAVEMENT NECESSARY FOR INSTALLATION OF TYPE 6 CURB AND NEW APPROACH SLAB SHALL BE INCLUDED IN THIS ITEM. IT SHALL ALSO INCLUDE PORTIONS OF BROCK AVENUE IN BACK OF THE CURB AT THE NORTHWEST CORNER OF THE BRIDGE AND EAST OF THE PROPOSED PAVEMENT.

FIRE SIGNAL LIGHT

THE CONTRACTOR SHALL CAREFULLY DISCONNECT AND REMOVE THE OVERHEAD FIRE SIGNAL LIGHT AT THE WEST END OF THE BRIDGE. ALL MATERIALS SHALL BE SALVAGED AND STORED IN THE VILLAGE STREET GARAGE. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PAYMENT OF THIS WORK:

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION 1 EACH

CURB REMOVED AS PER PLAN

EXCAVATION REQUIRED BETWEEN EXISTING CURB AND PROPOSED CURB AT ENTRANCE DRIVE TO FIRE STATION SHALL BE INCLUDED IN ITEM 202 - CURB REMOVED, FOR PAYMENT.

FENCE REMOVED

THE CHAIN LINK FENCE AT THE SOUTHWEST CORNER OF THE BRIDGE SHALL BE REMOVED AS NEEDED TO CONSTRUCT THE ABUTMENT BACKWALL. CONTRACTOR SHALL REPLACE FENCE AS DIRECTED BY THE ENGINEER AFTER APPROACH GUARD RAIL IS INSTALLED. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO GENERAL SUMMARY: ITEM 202 FENCE REMOVED FOR REUSE AS PER PLAN 50 LIN. FT. ITEM 607 FENCE REBUILT, CL 50 LIN. FT.

MAINTENANCE OF TRAFFIC

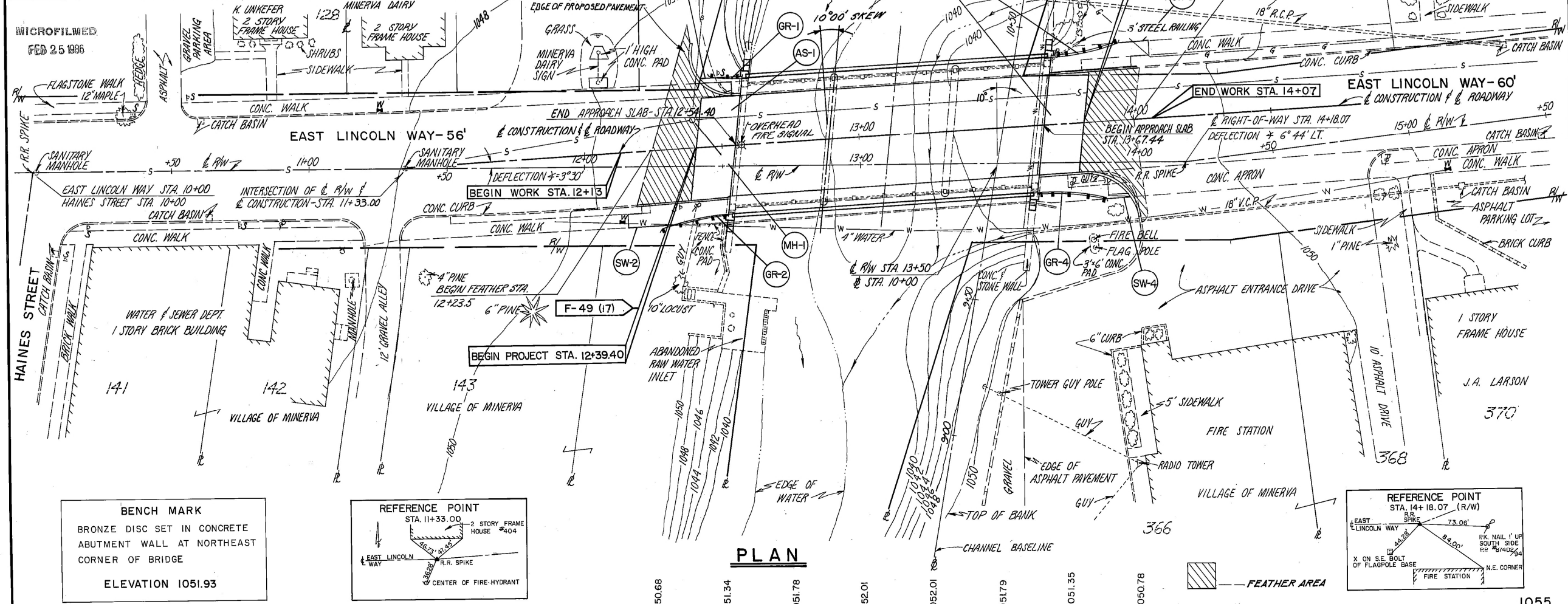
EAST LINCOLN WAY SHALL BE CLOSED TO ALL TRAFFIC WITHIN THE WORK LIMITS. CONTINUOUS ACCESS SHALL BE PROVIDED TO THE VILLAGE FIRE STATION FROM THE EAST. IN ADDITION TO THE REQUIREMENTS OF STANDARD SPECIFICATION 614, THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL TRAFFIC CONTROL SIGNS AND DEVICES NECESSARY TO IDENTIFY THE DETOUR ROUTE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

PERMANENT PAVEMENT MARKINGS

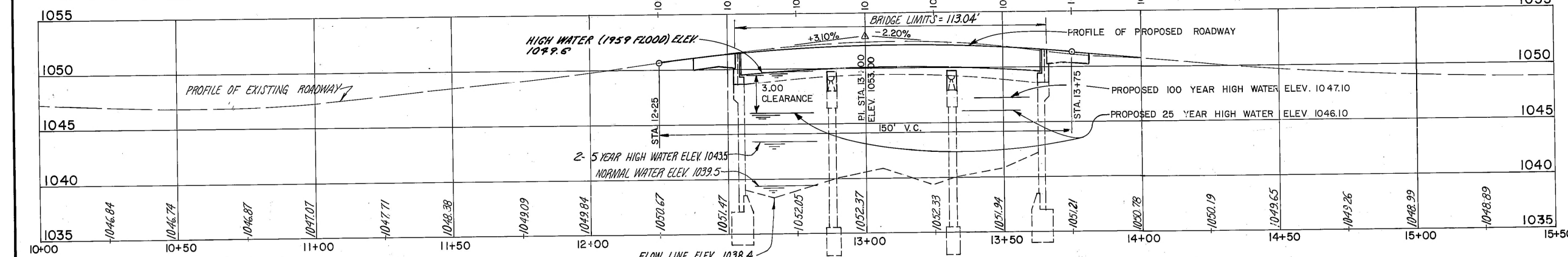
PERMANENT PAVEMENT MARKINGS WILL BE PLACED BY STARK COUNTY ENGINEERING.

REF. NO.	STATION FROM	STATION TO	SIDE	606	606	202	202	609	608	604	606	611	608
				L.F. EACH	L.F. EACH	S.F.	S.F.	L.F. EACH	S.F. EACH	L.F. EACH	S.F. EACH	S.F. EACH	S.F. EACH
GR-1	12+47.41	12+59.88	LT.	12.5	1								
GR-2	12+26.37	12+51.13	RT.	12.5	1								
GR-3	13+70.71	13+95.45	LT.	12.5	1								
GR-4	13+61.96	13+86.70	RT.	12.5	1								
SW-1	12+43.08	12+58.76	LT.			26	31.0	76					
SW-2	12+13	12+51.14	RT.			16	316	18.2	256				
SW-3	13+70.70	14+07	LT.			32	202	16.3	244				
SW-4	13+63.08	13+96.74	RT.			47	226	29.2	224				
MH-1	12+40		W.L.T.								61.5		
AS-1	12+39.40	12+54.40	L.F.R.								61.5		
AS-2	13+67.44	13+82.44	L.F.R.								61.5		
TOTALS				37.5	4	95	770	95	800	1	4	123	2

SEE SHEET 3170 FOR ADDITIONAL APPROACH ROADWAY DETAILS.



PLAN



ELEVATION

DESIGN INFORMATION

1978 ADT = 8,254 V.P.D.
1998 ADT = 11,500 V.P.D.
1998 ADT.T. = 805 V.P.D.
DESIGN SPEED = 30 M.P.H.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL I-BEAM WITH CONCRETE DECK ON REINFORCED CONCRETE ABUTMENTS AND PIERS
SPAN: 33'-44'-33" % BEARINGS
ROADWAY: 36'-0" 1/4 CURBS
SKEW: 10° L.F.
LOADING: H-15
DATE BUILT: 1934
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: AS-33 (14' LONG)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
DRAINAGE AREA: 61.2 SQ. MI.
WATERWAY AREA: 798 SQ. FT.
CONDITION: FAIR, CONCRETE DECK IN POOR CONDITION DUE TO EXCESSIVE CRACKING AND CORROSION OF REINFORCING STEEL CAUSED BY ROAD SALT

PROPOSED STRUCTURE

TYPE: NON-COMPOSITE PRESTRESSED CONCRETE BOX BEAMS ON EXISTING MODIFIED REINFORCED CONCRETE ABUTMENTS AND PIERS.
SPAN: 33'-44'-33"
ROADWAY: 36'-0" 1/4 CURBS
SIDEWALKS: 6'-4" BOTH SIDES
LOADING: HS 20-44 AND THE ALTERNATE MILITARY LOADING
SKEW: 10° L.F.
WEARING SURFACE: ASPHALT CONCRETE - 2 1/2" MINIMUM
APPROACH SLABS: AS-1-72, 15' LONG
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
DESIGN FREQUENCY: Q₂₅ Q₁₀₀
DISCHARGE = 4700 C.F.S. 6070 C.F.S.
VELOCITY = 7.8 F.P.S. 8.5 F.P.S.
HIGH WATER = 1046.10 1047.10

DESCRIPTION	DATE	BY
REVISIONS		

SITE PLAN
STA-30-31.16 OVER BIG SANDY CREEK
STARK COUNTY BRIDGE NO. PA-36-1
EAST LINCOLN WAY, VILLAGE OF MINERVA
PARIS TOWNSHIP, STARK COUNTY, OHIO

Rev. 10-9-81

FHWA REGION	STATE	PROJECT
5	OHIO	

STARK COUNTY
STA-30-31.16

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-72	DATED	6-30-72
BR-2-67	REVISED	10-15-71
PSBD-1-71	DATED	9-1-71
852	DATED	6-8-79

DESIGN SPECIFICATION
THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, 1973, INCLUDING 1974, 1975 and 1976 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA:
DESIGN LOADING - HS20-44 AND THE ALTERNATE MILITARY LOADING
CONCRETE CLASS S - UNIT STRESS 1200 P.S.I. FOR SUPERSTRUCTURE
CONCRETE CLASS C - UNIT STRESS 1333 P.S.I. FOR SUBSTRUCTURE
REINFORCING STEEL - ASTM A615, A616 OR A617 - UNIT STRESS 20,000 P.S.I.

CONCRETE FOR PRESTRESSED CONCRETE BEAMS - UNIT STRESS 2200 P.S.I. COMPRESSION
444 P.S.I. TENSION

PRESTRESSING STRAND ASTM A416 -
 $F'_s = 270,000$ P.S.I.
INITIAL STRESS = $0.70 F'_s$

DECK PROTECTION METHOD - MEMBRANE WATERPROOFING AND ASPHALT CONCRETE OVERLAY

PROPOSED WORK
REHABILITATION OF THIS BRIDGE SHALL INCLUDE REMOVAL OF THE EXISTING CONCRETE DECK AND STEEL BEAM SUPERSTRUCTURE INCLUDING ALL BEARING DEVICES. PRIOR TO CONSTRUCTION OF A NEW PRESTRESSED CONCRETE BEAM SUPERSTRUCTURE, THE EXISTING ABUTMENTS AND PIERS SHALL BE MODIFIED AS SHOWN ON THE PLANS.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE
WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING SUPERSTRUCTURE AND PORTIONS OF THE ABUTMENTS SHALL BE REMOVED. THE APPROACH PEDESTRIAN HANDRAIL AT THE NORTHEAST AND SOUTHEAST CORNERS OF THE BRIDGE SHALL ALSO BE REMOVED AS PART OF THIS ITEM.

UTILITY LINES
ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNER. THE CONTRACTOR AND OWNER ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

PRESTRESSED CONCRETE BOX BEAMS
PAYMENT FOR ITEM 515, PRESTRESSED CONCRETE BRIDGE MEMBERS, SHALL INCLUDE MORTARING THE SHEAR KEYS, TIE ROD RECESSED AND DRILLING FOR ANCHOR BAR HOLES.

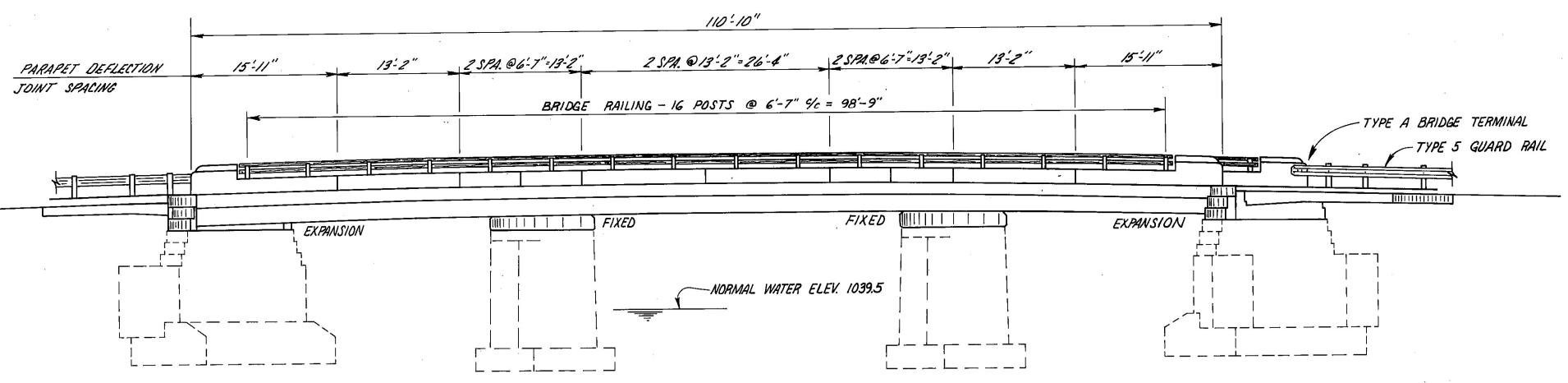
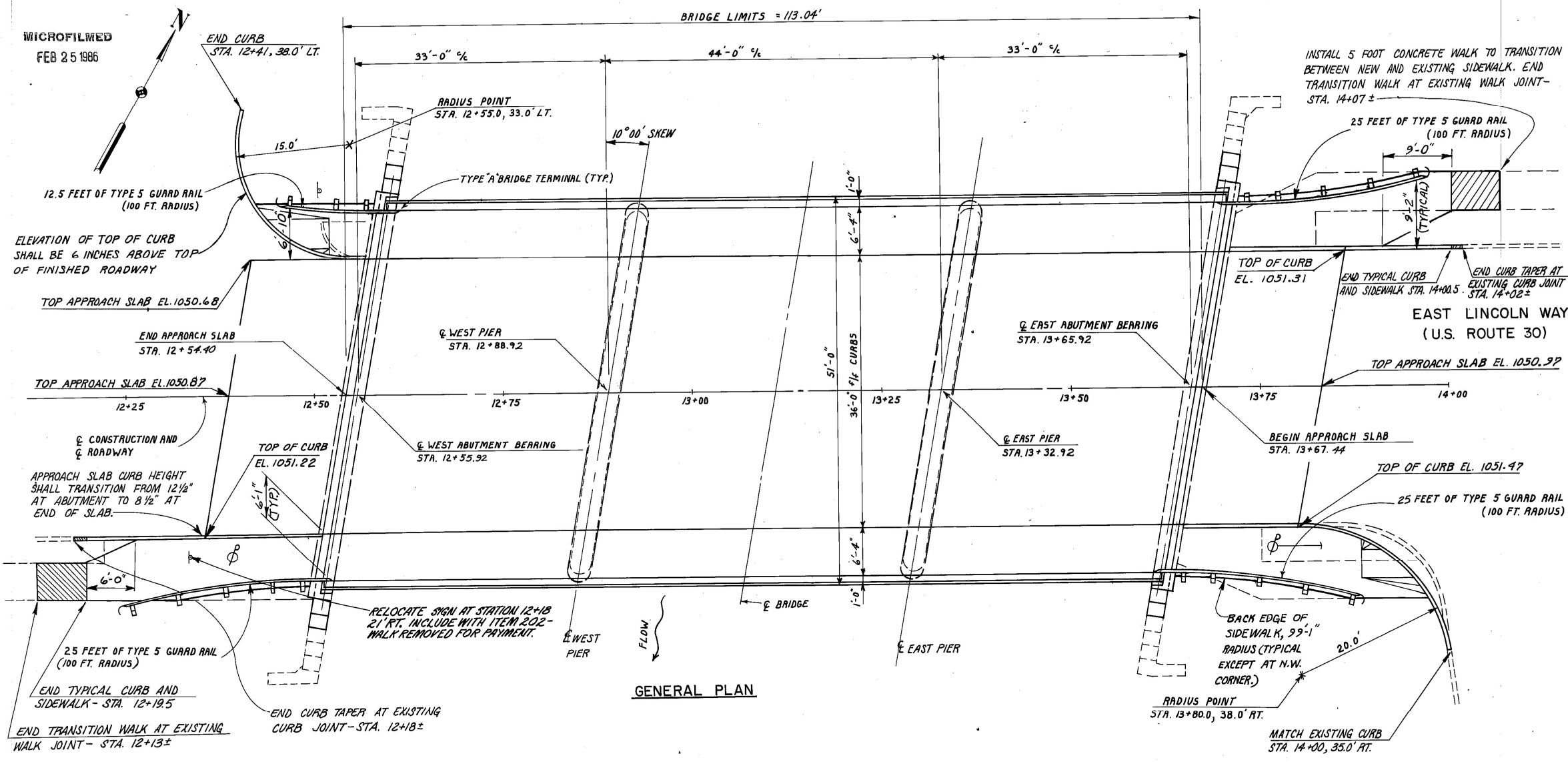
CALCULATED CAMBER AT TIME OF PAVING, INCLUDING ALLOWANCE FOR CAMBER GROWTH DUE TO CREEP, IS 5/16 INCH FOR THE END SPANS AND 7/8 INCH FOR THE CENTER SPAN.
CALCULATED DEFLECTION DUE TO WEIGHT OF SURFACE COURSE IS 1/16 INCH FOR THE END SPANS AND 3/16 INCH FOR THE CENTER SPAN.
CAMBER OF 5/8 INCHES AT CENTER OF END SPANS AND 1 INCH AT CENTER OF CENTER SPANS IS REQUIRED FOR CREST OF VERTICAL CURVE.
3/8 INCH EXTRA CAMBER IS REQUIRED FOR THE END SPANS AND 5/16 INCH EXTRA CAMBER IS REQUIRED FOR THE CENTER SPAN. THIS SHALL BE PROVIDED BY THICKENING THE 403 LEVELING COURSE FROM 1 1/4 INCHES AT ENDS OF SPANS TO 1 5/8 INCHES AT CENTER OF ALL SPANS.

ASPHALT CONCRETE SURFACE COURSE SHALL CONSIST OF A VARIABLE THICKNESS OF 403 AND A 1 1/4 INCH THICKNESS OF 404. THE 403 SHALL BE PLACED IN TWO OPERATIONS. THE FIRST COURSE SHALL BE OF 1 1/4 INCH UNIFORM THICKNESS. THE SECOND COURSE SHALL BE FEATHERED TO PLACE THE SURFACE PARALLEL TO AND 1 1/4 INCH BELOW FINAL PAVEMENT SURFACE ELEVATION.

ATTACHMENT OF GUARDRAIL TO CONCRETE PARAPETS
CONCRETE INSERT ANCHOR ASSEMBLIES PER STANDARD CONSTRUCTION DRAWINGS GR-3 AND GR-1 SHALL BE PLACED DURING PARAPET CONSTRUCTION. THE ANCHORAGE SYSTEM SHOWN IN STANDARD DRAWING BR-2-67 SHALL NOT BE USED.

SHIMS
THE 5" x 1/8" x 18" PREFORMED BEARING PADS ARE PROVIDED TO ACCOMMODATE ANY UNEVENNESS BETWEEN BOTTOM OF PRESTRESSED BEAMS AND BRIDGE SEAT.

GENERAL NOTES CONTINUED ON SHEET 10



DESCRIPTION	DATE	BY
REVISIONS		
		2/7
GENERAL PLAN & ELEVATION, NOTES		
STA - 30 - 31.16 OVER BIG SANDY CREEK		
STARK COUNTY BRIDGE NO. PA-36-1		
EAST LINCOLN WAY, VILLAGE OF MINERVA		
PARIS TOWNSHIP, STARK COUNTY, OHIO		
DATE: JAN. 1979		
DESIGNED	DRAWN	CHECKED
RAK	JRH	MJH
REVIEWED		
		DRAWING NO.

Rev. 10-9-81

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERS & SURVEYING
CANTON & AKRON, OHIO

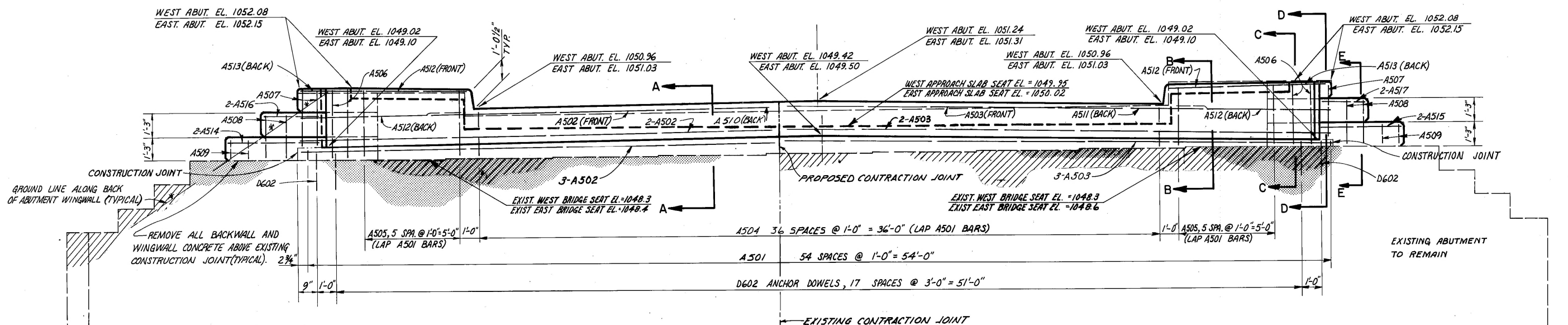
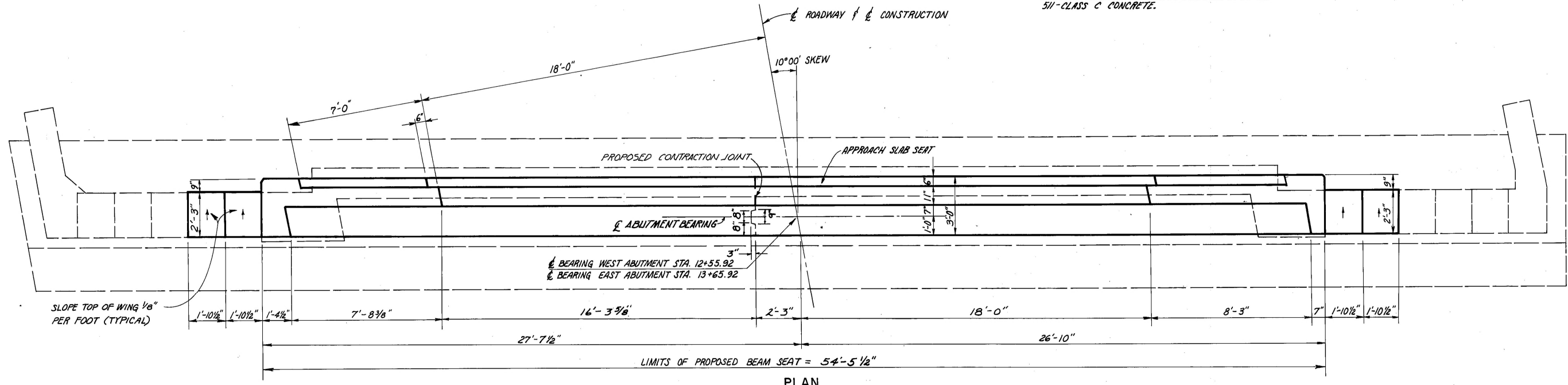
MICROFILMED
FEB 25 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

6
10

STARK COUNTY
STA-30-31.16

PREPARATION OF EXISTING BRIDGE SEATS: PRIOR TO THE PLACEMENT OF NEW CONCRETE, THE EXISTING BRIDGE SEATS SHALL BE CLEANED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF CONSTRUCTION AND MATERIAL SPECIFICATION 510.4. PAYMENT FOR THIS WORK ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 511-CLASS C CONCRETE.



APPROXIMATE LIMITS OF CONCRETE DETERIORATION AT EAST ABUTMENT

APPROXIMATE LIMITS OF CONCRETE DETERIORATION AT WEST ABUTMENT

CONSTRUCTION AND CONTRACTION JOINTS: ALL JOINTS SHALL BE WATERPROOFED ON THE SIDE ADJACENT TO THE FILL USING A 36-INCH STRIP OF TYPE B WATERPROOFING ACCORDING TO ITEM 512. WATERPROOFING AT ENDS OF WINGWALLS SHALL NOT EXTEND BEYOND GROUND LINE.

EXCAVATION FOR RECONSTRUCTION: ALL EXCAVATION REQUIRED FOR REMOVAL OF BACKWALL AND WINGWALL CONCRETE ABOVE THE CONSTRUCTION JOINT ALONG THE EXISTING BEAM SEAT, SHALL BE INCLUDED WITH ITEM 202. PORTIONS OF STRUCTURES REMOVED FOR PAYMENT. PLACING AND COMPACTING NEW EMBANKMENT MATERIAL BEHIND THE ABUTMENT BACKWALL, OUTSIDE THE LIMITS OF THE POROUS BACKFILL, SHALL ALSO BE INCLUDED WITH THIS ITEM FOR PAYMENT.

SECTIONS: ALL SECTION VIEWS SHOWN ON SHEET 417

BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

Rev. 10-9-81

DESCRIPTION	DATE	BY
REVISIONS		
ABUTMENT DETAILS		3 / 7
STA-30-316 OVER BIG SANDY CREEK STARK COUNTY BRIDGE NO. PA-36-1 EAST LINCOLN WAY, VILLAGE OF MINERVA PARIS TOWNSHIP, STARK COUNTY, OHIO		
DATE: JAN 1979		
HAMMONTREE & ASSOCIATES, LTD.		
DESIGNED RAK	DRAWN JRH	CHECKED MJH
CONSULTING ENGINEERING & SURVEYING CANTON & AKRON, OHIO		

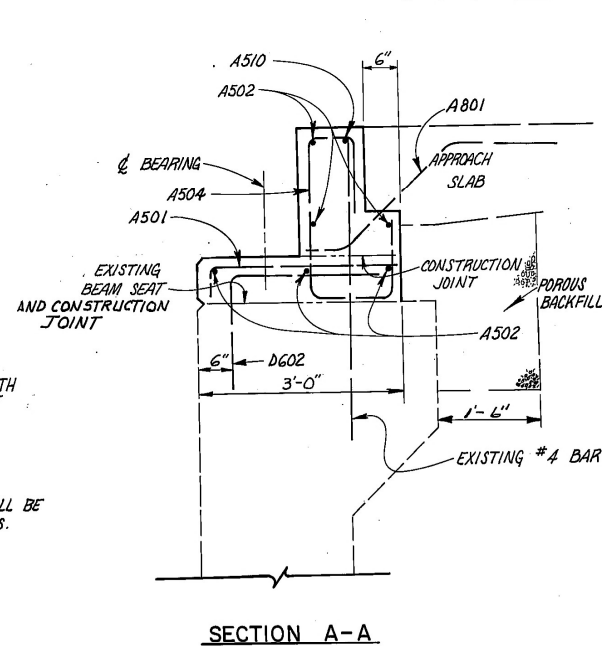
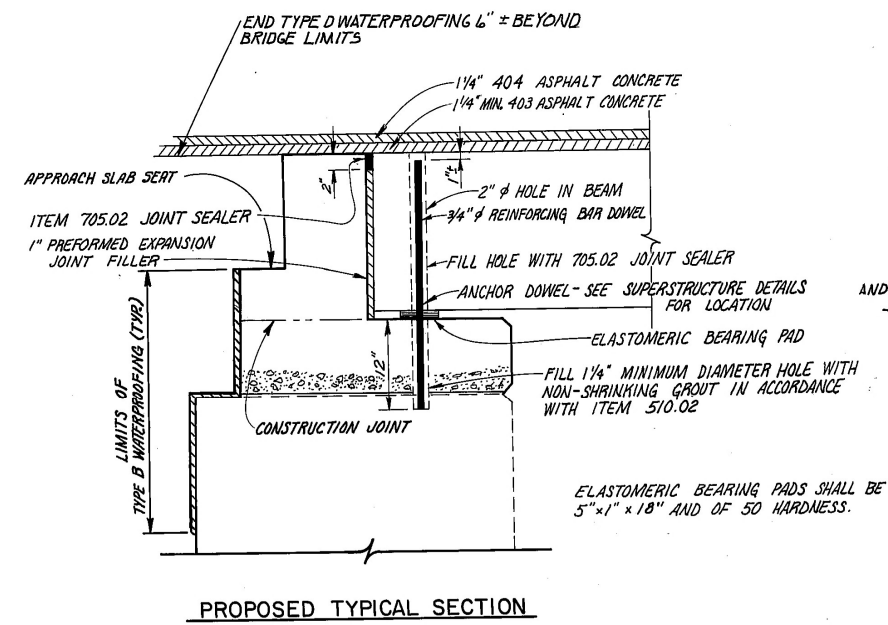
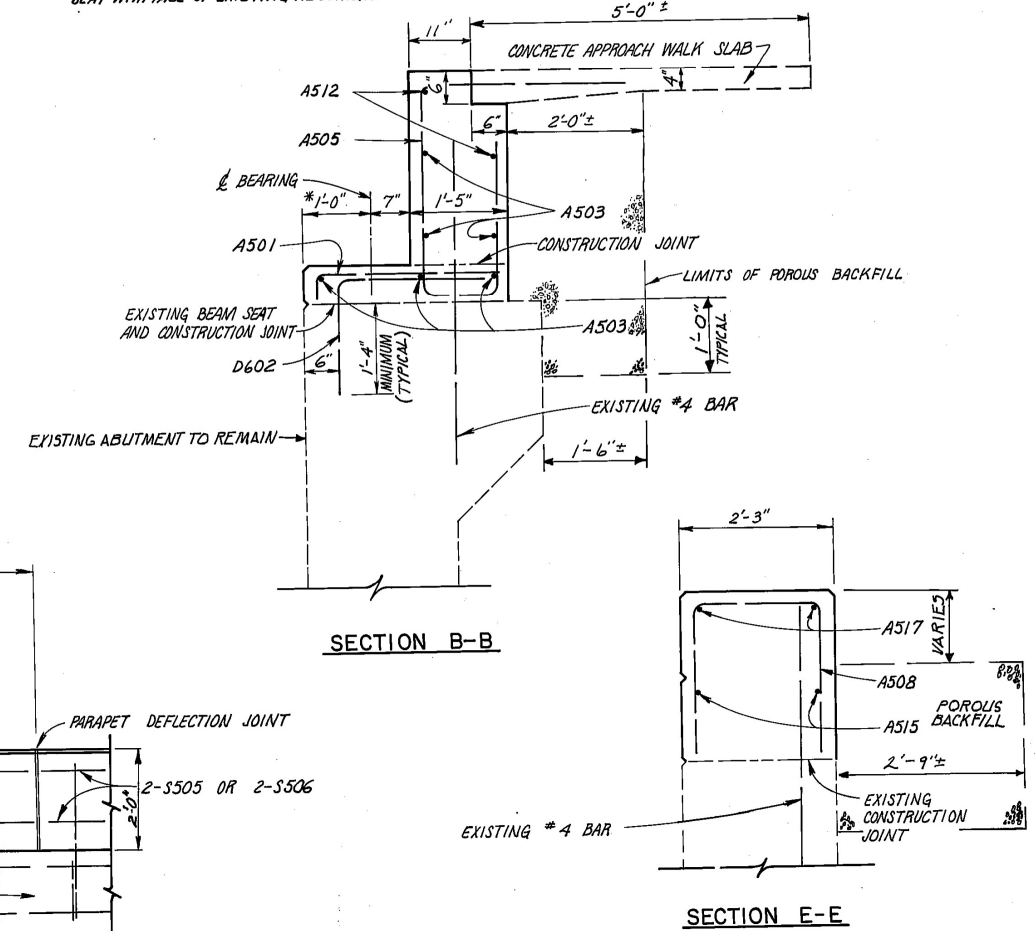
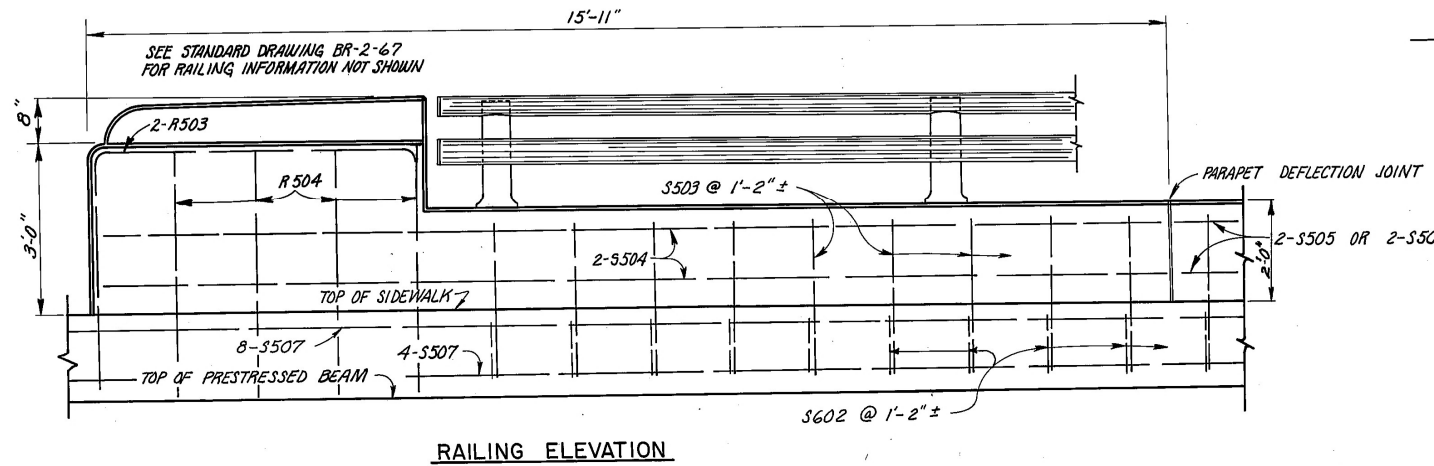
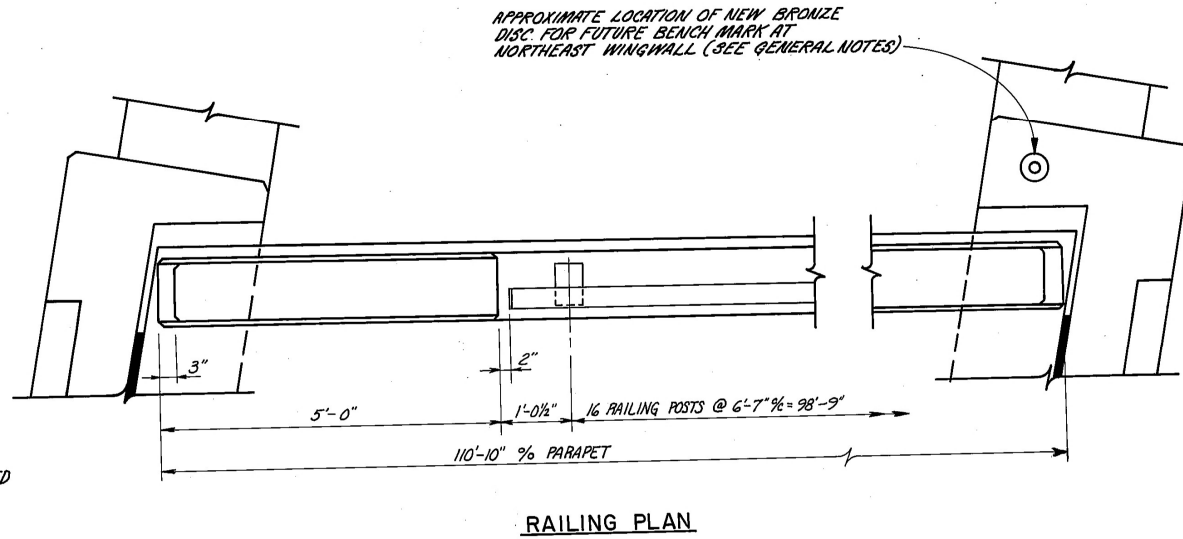
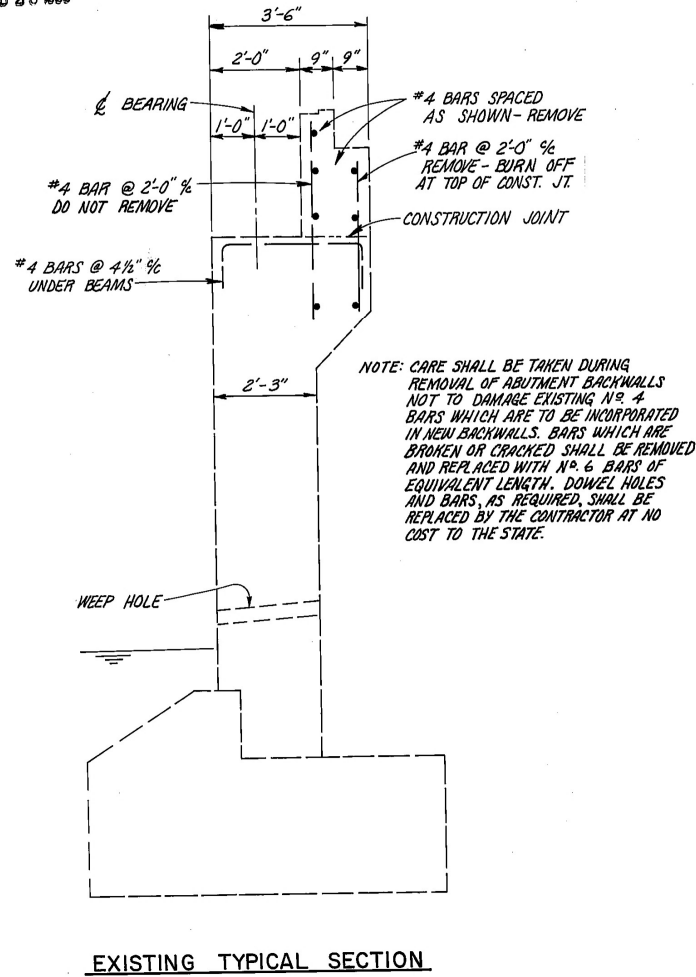
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FHWA REGION	STATE	PROJECT
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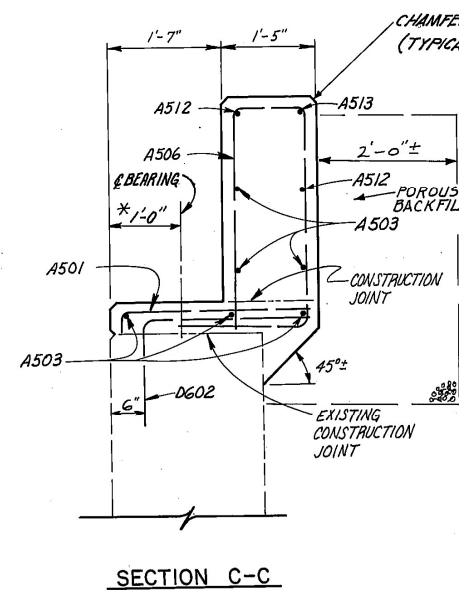
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STARK COUNTY
STA-30-31.16

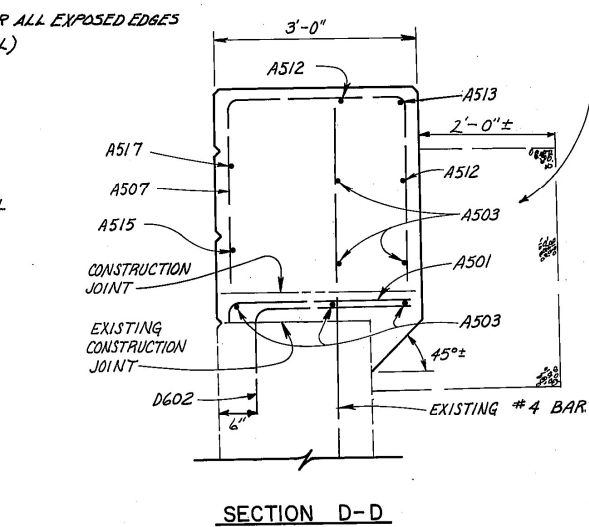
* THIS DIMENSION MAY VARY SLIGHTLY TO MATCH THE FACE OF PROPOSED BEAM SEAT WITH FACE OF EXISTING ABUTMENT.



NOTE: SUBSTITUTE A801 BARS FOR D801 OR D802 BARS AS SHOWN ON DRAWING AS-1-72

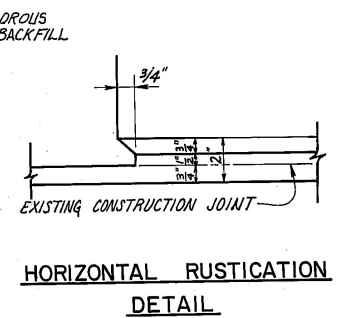


ABUTMENT BACKWALLS SHALL NOT BE CONSTRUCTED ABOVE THE LEVEL OF THE BEAM SEAT UNTIL PRESTRESSED BEAMS ARE PLACED.



POROUS BACKFILL, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND Laterally TO THE SURFACE OF THE ABUTMENT GROUND LINE.

SECTIONS: SEE SHEET 317 FOR LOCATION OF SECTION VIEWS.

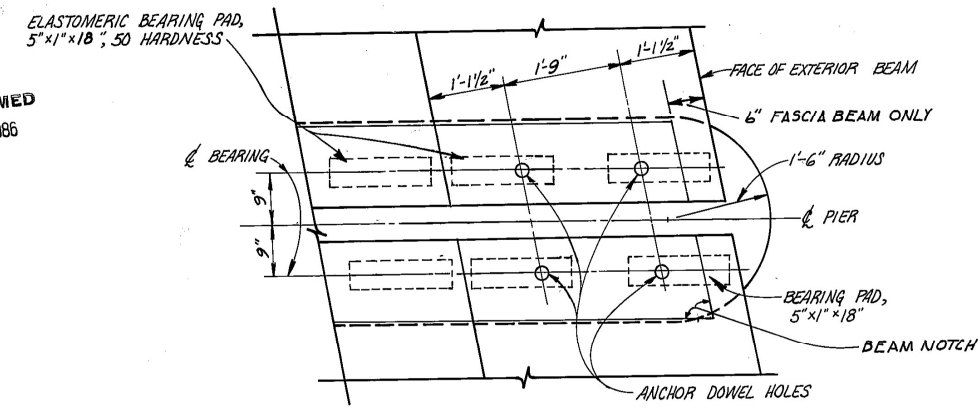


DESCRIPTION	DATE	BY
REVISIONS		
ABUTMENT DETAILS		4/7
STA-30-31.16 OVER BIG SANDY CREEK		
STARK COUNTY BRIDGE NO. PA-36-1		
EAST LINCOLN WAY, VILLAGE OF MINERVA		
PARIS TOWNSHIP, STARK COUNTY, OHIO		
DATE: JAN. 1979		
HAMMONTREE & ASSOCIATES, LTD.		
DESIGNED	DRAWN	CHECKED
RAM	JPH	MLH
CONSULTING ENGINEERING & SURVEYING	REVIEWED	DRAWING NO.
CANTON & AKRON, OHIO		

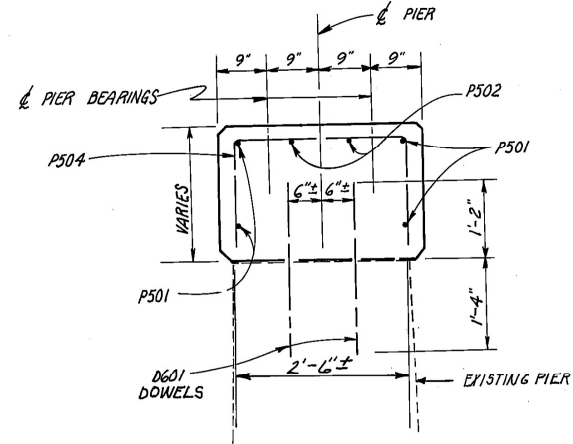
Rev. 10-9-81

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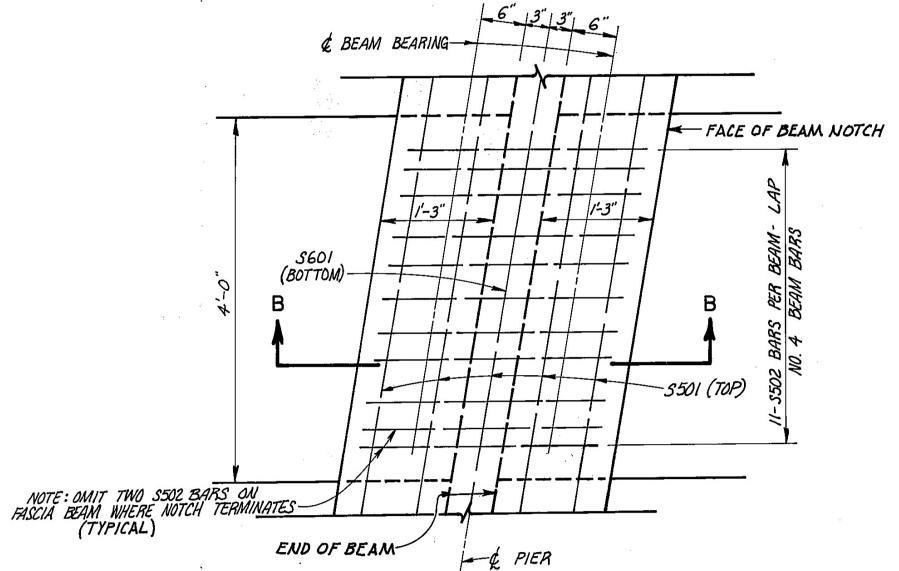
PREPARATION OF EXISTING BRIDGE SEATS:
(SEE NOTE, SHEET 3/7)



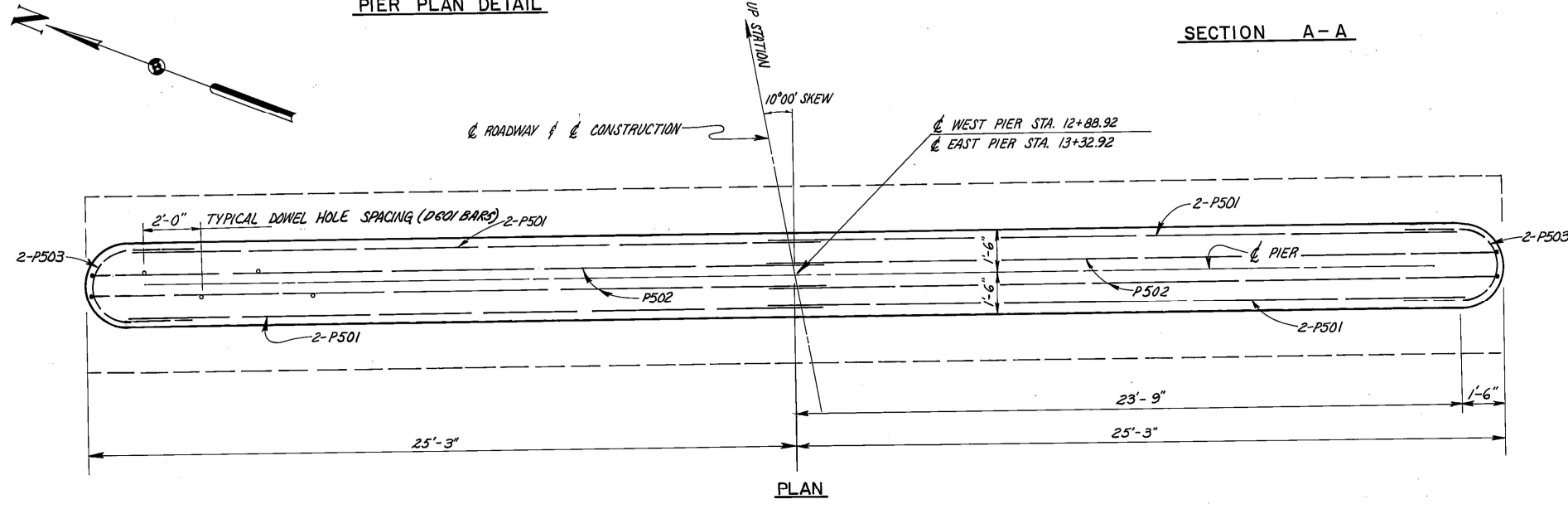
PIER PLAN DETAIL



SECTION A-A

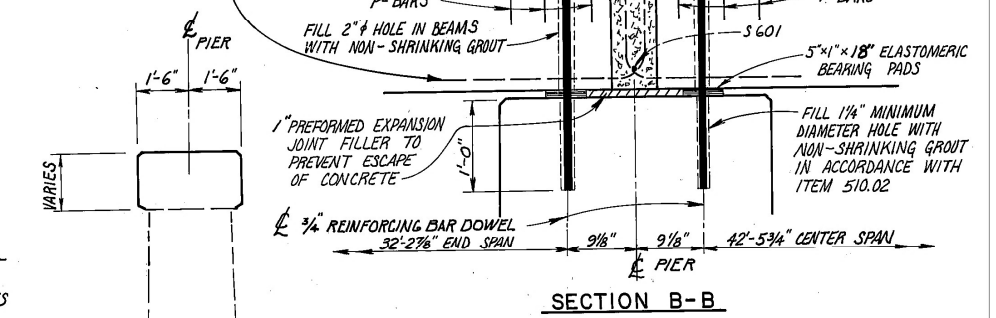


BEAM NOTCH PLAN



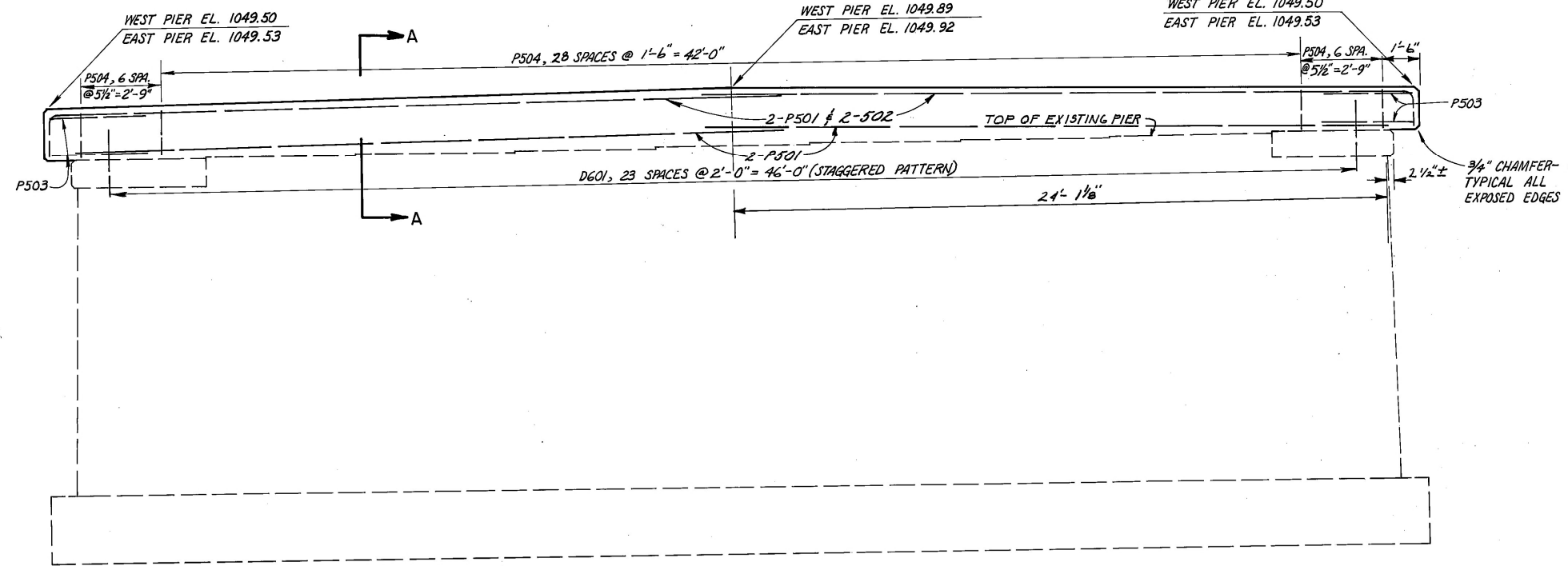
PLAN

COLD BEND ALTERNATE PRESTRESSED BEAM STRANDS AS SHOWN TO AVOID INTERFERENCE WITH EACH OTHER



SECTION B-B

BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.



ELEVATION

PROPOSED TYPICAL SECTION

DESCRIPTION	DATE	BY
REVISIONS		
PIER DETAILS	5/7	
STA-30-31.16 OVER BIG SANDY CREEK STARK COUNTY BRIDGE NO. PA-36-1 EAST LINCOLN WAY, VILLAGE OF MINERVA PARIS TOWNSHIP, STARK COUNTY, OHIO DATE: JAN. 1979		
HAMMONTREE & ASSOCIATES, LTD. CONSULTING ENGINEERING & SURVEYING CANTON & AKRON, OHIO	DESIGNED MJH	DRAWN JRH
	CHECKED RAK	

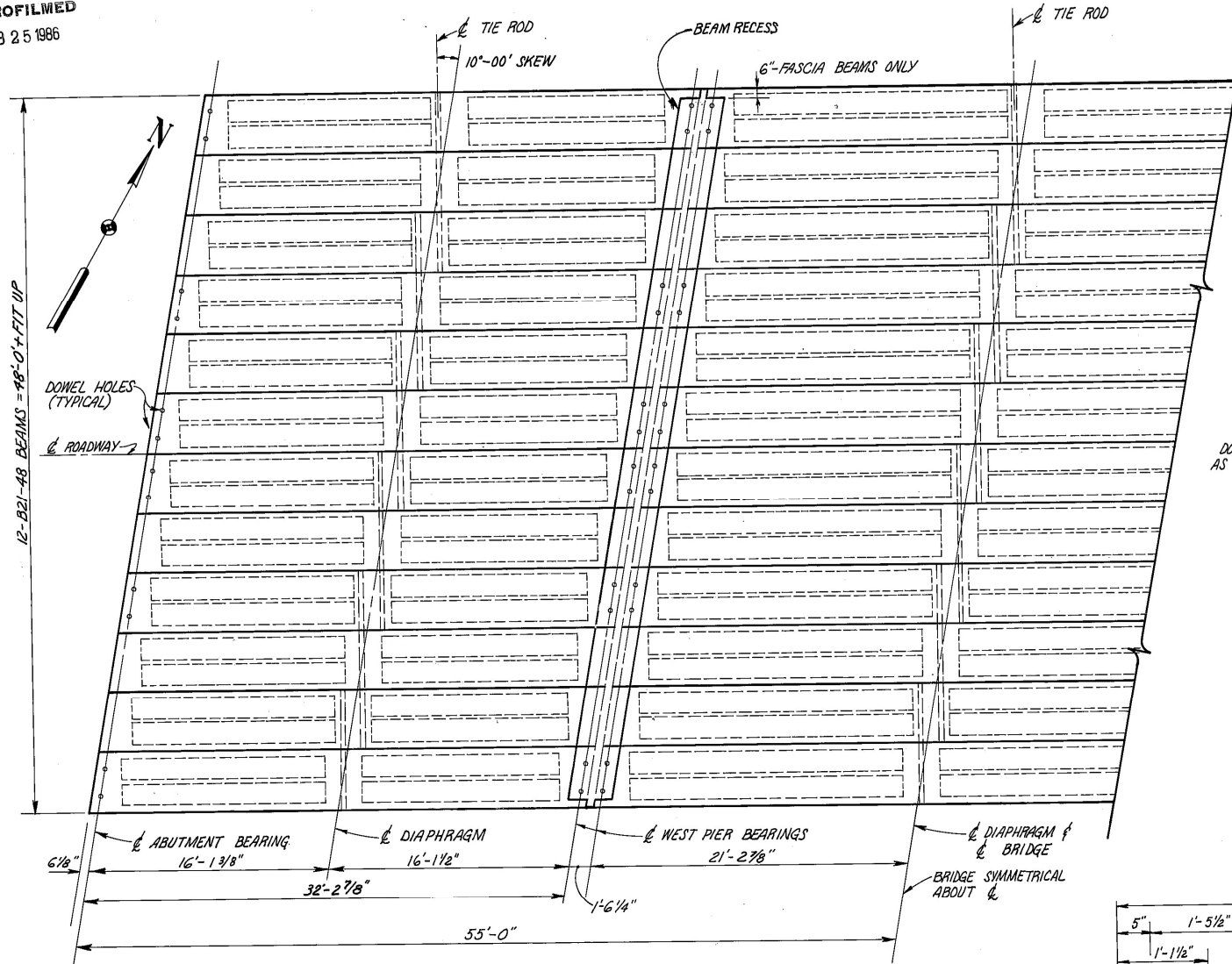
Rev. 10-9-81

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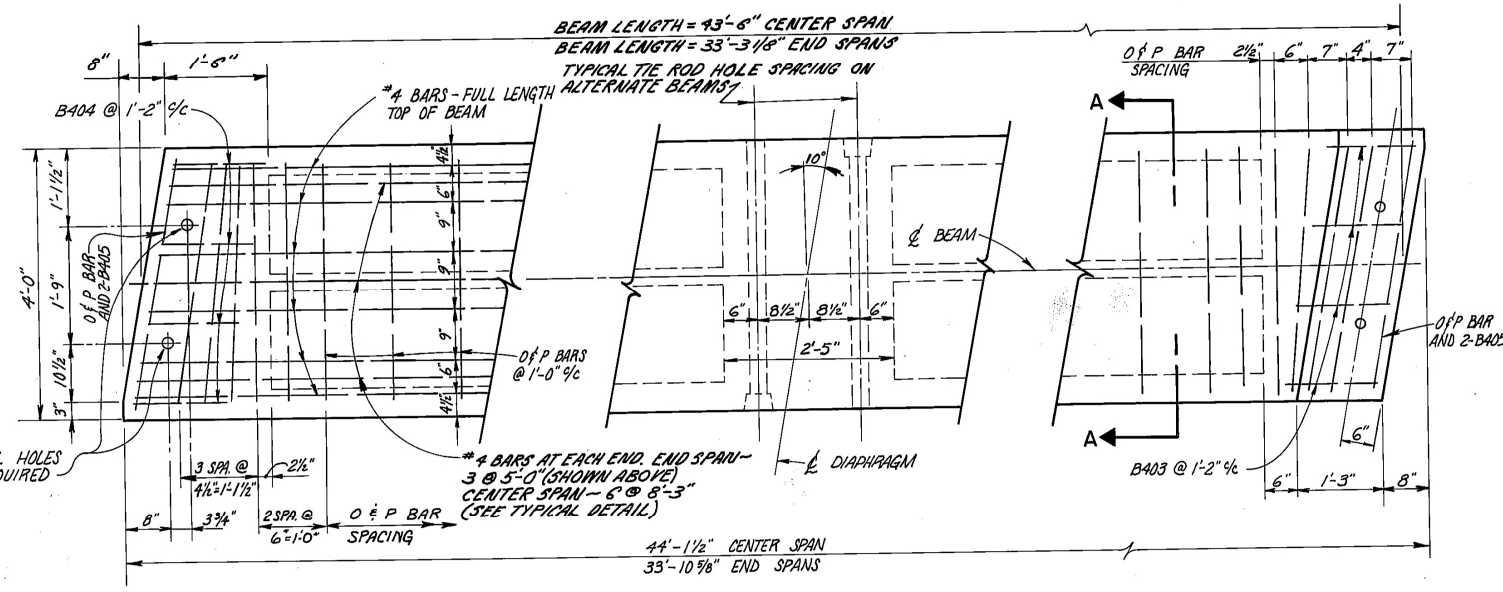
FHWA REGION	STATE	PROJECT
5	OHIO	

STARK COUNTY
STA - 30-31.16

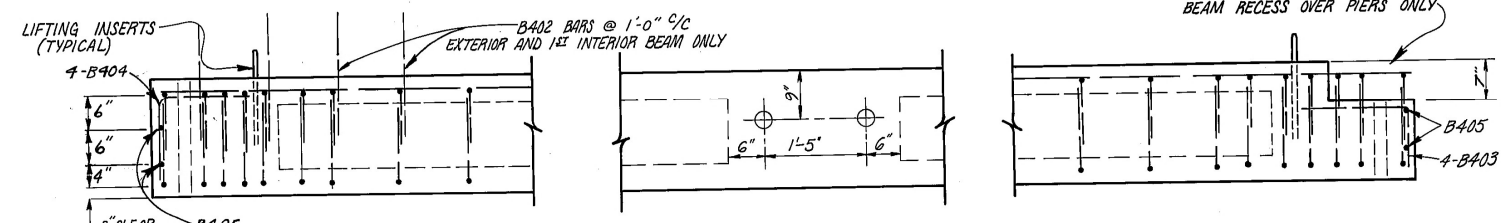
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PRESTRESSED BEAM PLAN



BEAM PLAN



BEAM ELEVATION

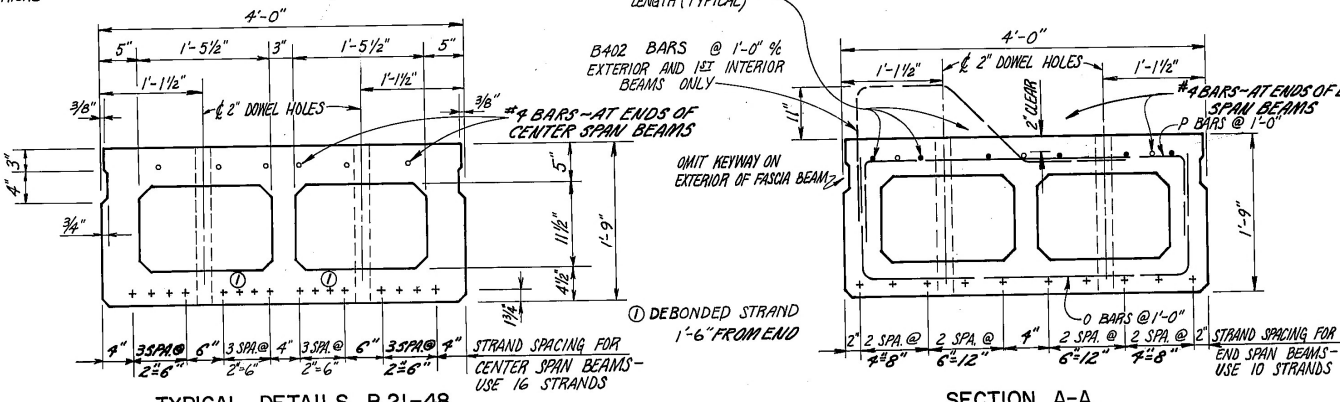
BEAM RECESS OVER PIERS ONLY

THE SPACING OF COMPOSITE B402 BARS SHALL BE ADJUSTED BY THE MANUFACTURER TO CLEAR TIE ROD HOLES BY 2 INCHES.

CONCRETE STRESSES:
MINIMUM CONCRETE STRENGTH AT 28 DAYS IS $f'_c = 5500$ P.S.I.
MINIMUM CONCRETE STRENGTH AT TIME OF INITIAL PRESTRESS $f'_{ci} = 4000$ P.S.I.

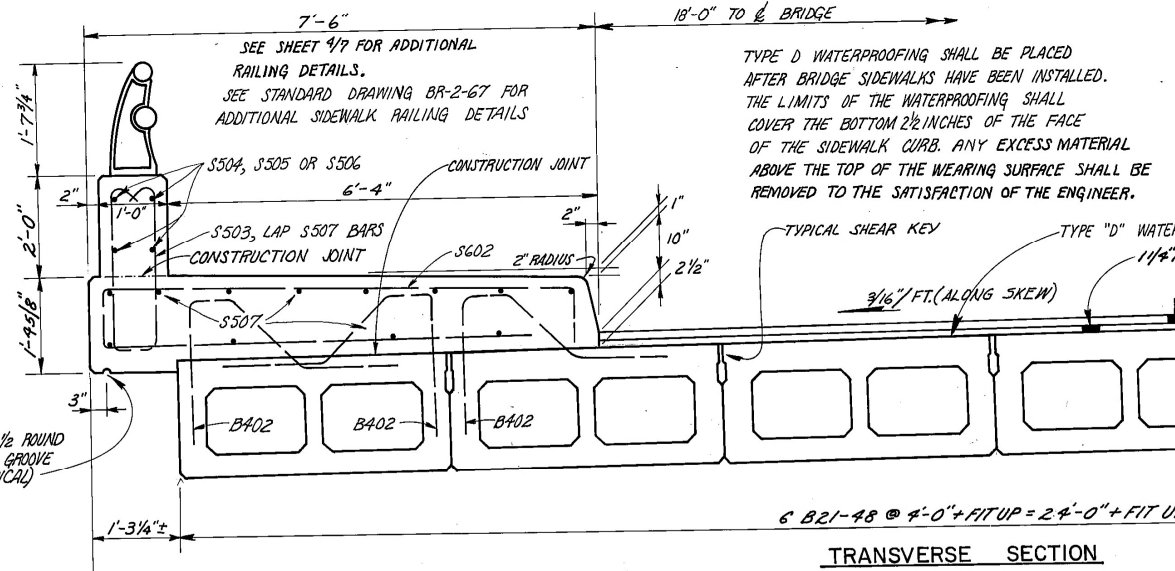
ANCHOR DOWELS: THE DRILLING OF ANCHOR DOWEL HOLES, PROVIDING AND INSTALLING THE 3/4 INCH DIAMETER DOWEL BARS, AND FILLING THE DOWEL HOLE WITH JOINT SEALER OR NON-SHRINKING GROUT SHALL BE INCLUDED WITH ITEM 515 FOR PAYMENT.

FABRICATOR'S SHOP DRAWINGS SHALL SHOW COMPLETE DETAILS OF ALL BEAM REINFORCING, AND SHOP DRAWINGS SHALL BE APPROVED BY THE STARK COUNTY ENGINEER PRIOR TO MANUFACTURING BEAMS.
* THE ABOVE IS IN ADDITION TO THE REQUIREMENTS OF 501.05, C.M.S.



TYPICAL DETAILS B 21-48 (NON-COMPOSITE BOX BEAM)

SECTION A-A



TRANSVERSE SECTION

REFERENCE SHALL BE MADE TO STANDARD DRAWING PSBD-1-71 FOR ADDITIONAL DETAILS OF:
BEAM LIFTING INSERTS
ANCHOR DOWELS
TRANSVERSE TIE RODS
BEAM TOLERANCES
BEAM REINFORCING BARS
MORTARING SHEAR KEYS

* Revised 12-16-81

DESCRIPTION	DATE	BY
REVISIONS		
SUPERSTRUCTURE DETAILS	6/7	
STA - 30-31.16 OVER BIG SANDY CREEK STARK COUNTY BRIDGE NO. PA-36-1 EAST LINCOLN WAY, VILLAGE OF MINERVA PARIS TOWNSHIP, STARK COUNTY, OHIO		
DATE: JAN. 1979		
HMMONTREE & ASSOCIATES, LTD. CONSULTING ENGINEERING & SURVEYING CANTON & AKRON, OHIO		

Rev. 10-9-81

REINFORCING STEEL LIST

BENDING DIAGRAMS		MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E
PIERS											
		D601	48	2'-6"	180	S					
		P501	16	24'-6"	409	S					
		P502	8	26'-10"	224	12	1'-2"	25'-10"			
		P503	8	7'-11"	66	2	2'-0"	3'-11"	2'-0"	2'-6"	1'-3"
		P504	82	4'-9"	406	5	2'-8"	1'-2"	1'-2"		
NON-STANDARD BEAM BARS											
		B402	630	5'-6"	*	13	3'-0"	2'-2"	0'-8"	1'-1 1/2"	1'-2 1/2"
		B403	192	2'-0"	*	12	0'-9"	1'-4"			
		B404	96	2'-7"	*	12	1'-4"	1'-4"			
		B405	144	3'-8"	*	5					
SUPERSTRUCTURE											
		S401	16	8'-9"	94	4	0'-6 1/2"	1'-4"	5'-6"	1'-4"	0'-6 1/2"
		S501	20	24'-11"	520	S					
		S502	256	2'-8"	712	S					
		S503	172	7'-1"	1271	7	0'-8"	2'-11"			
		S504	16	15'-7"	260	S					
		S505	32	12'-10"	428	S					
		S506	32	6'-3"	209	S					
		S507	96	28'-10"	2889	S					
		S601	4	24'-11"	150	S					
		S602	192	14'-5"	4158	4	6'-3"	0'-10"	7'-0"	0'-10"	0'-0"
		R503	8	8'-9"	**	5	4'-8"	3'-8"	0'-8"		
		R504	16	8'-7"	**	7	0'-8"	3'-8"			
ABUTMENTS											
		D602	40	3'-9"	225	12	1'-7"	2'-4"			
		A501	110	3'-0"	344	12	0'-6"	2'-8"			
		A502	12	25'-0"	313	S					
		A503	12	28'-9"	360	S					
		A504	74	5'-8"	437	4	1'-9"	0'-7"	2'-3"	1'-1"	1'-0"
		A505	24	9'-8"	242	4	2'-8"	1'-1"	3'-4"	3'-0"	0'-0"
		A506	8	9'-4"	78	4	3'-4"	1'-1"	3'-4"	2'-0"	0'-0"
		A507	6	7'-11"	50	5	2'-8"	2'-9"	2'-9"		
		A508	8	6'-0"	50	5	1'-11"	2'-2"	2'-2"		
		A509	8	3'-6"	29	5	1'-11"	0'-11"	0'-11"		
		A510	2	17'-10"	39	9					
		A511	2	21'-10"	46	5					
		A512	8	8'-2"	68	5					
		A513	4	1'-10"	8	5					
		A514	4	4'-8"	19	3					
		A515	4	4'-0"	17	5					
		A516	4	2'-10"	12	5					
		A517	4	2'-2"	9	5					
		A801	50	4'-0"	534	9	0'-6"	2'-0"	1'-6"		
		TOTAL 14,852									
		* INCLUDED WITH BEAMS FOR PAYMENT (ITEM 515)									
		** INCLUDED WITH RAILING FOR PAYMENT (ITEM 517)									

REINFORCING STEEL SAMPLES: REFER TO CMS SECTIONS 106.03, 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.
202	LUMP	SUM	PORTIONS OF STRUCTURE REMOVED				LUMP
403	18	CU. YD.	ASPHALT CONCRETE (AC-20)			18	
404	16	CU. YD.	ASPHALT CONCRETE (AC-20)			16	
509	14,852	LB.	REINFORCING STEEL	2878	1285	10689	
510	88	EACH	DOWEL HOLES	40	48		
511	81	CU. YD.	CLASS 5 CONCRETE, SUPERSTRUCTURE			81	
511	24	CU. YD.	CLASS C CONCRETE, ABUTMENTS	24			
511	20	CU. YD.	CLASS C CONCRETE, PIERS		20		
512	42	SQ. YD.	TYPE B WATERPROOFING	42			
512	462	SQ. YD.	TYPE D WATERPROOFING			462	
515	24	EACH	PRESTRESSED CONCRETE BRIDGE MEMBERS, 33'-3 1/8" LONG (B21-48)			24	
515	12	EACH	PRESTRESSED CONCRETE BRIDGE MEMBERS, 43'-6" LONG (B21-48)			12	
516	298	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER			298	
516	144	EACH	5'x1'x18" ELASTOMERIC BEARING PADS			144	
516	72	EACH	5'x18'x18" PREFORMED BEARING PADS, T11.21			72	
516	103	LIN. FT.	JOINT SEALER			103	
517	221.67	LIN. FT.	RAILING (CONCRETE PARAPET WITH DOUBLE PIPE)			221.67	
518	21	CU. YD.	POROUS BACKFILL	21			
519	85	SQ. FT.	PATCHING CONCRETE STRUCTURES	85			
852	248	SQ. YD.	SURFACE PREPARATION (SEE PROPOSAL NOTE)	7		241	
852	15	GAL.	PENETRATING EPOXY COMPOUND (SEE PROPOSAL NOTE)	1		14	
852	LUMP	SUM	TEST SECTIONS (SEE PROPOSAL NOTE)				LUMP

GENERAL NOTES

(CONTINUED FROM SHEET 5/10)

BEAM SPANS
PRIOR TO CASTING THE PRESTRESSED CONCRETE BEAMS THE CONTRACTOR SHALL VERIFY THE SPAN DIMENSIONS SHOWN ON SHEET 6/7 BY OBTAINING ACCURATE FIELD MEASUREMENTS.

PORTIONS OF STRUCTURE REMOVED
THE CONTRACTOR SHALL EXERCISE CARE IN REMOVAL OF EXISTING CONCRETE DECK AND PORTIONS OF ABUTMENTS TO AVOID DEBRIS FROM FALLING INTO STREAM. ALL DEBRIS WHICH ACCIDENTLY FALLS INTO THE CHANNEL OR SURROUNDING AREA SHALL BE REMOVED AS SOON AS PRACTICAL TO THE SATISFACTION OF THE ENGINEER.

PENETRATING EPOXY SEALING TREATMENT
TO PROTECT THE NEW BRIDGE CONCRETE FROM DETERIORATION BY ROAD SALTS, THE FOLLOWING EXPOSED CONCRETE SURFACES SHALL BE TREATED WITH PENETRATING EPOXY COMPOUND ACCORDING TO SUPPLEMENTAL SPECIFICATION 852. SURFACES TO BE TREATED SHALL INCLUDE THE FACE OF CURB, TOP OF SIDEWALK, INSIDE FACE OF PARAPET, TOP OF PARAPET AND CURB AND SIDEWALK PORTION OF ABUTMENT BACKWALL.

PATCHING CONCRETE STRUCTURES
UPON REMOVAL OF THE SUPERSTRUCTURE AND THE ABUTMENT BACKWALL AND WINGWALLS, ALL EXPOSED SURFACES SHALL BE THOROUGHLY CHECKED FOR SPALLING AND DETERIORATED CONCRETE. THIS CONDITION IS ESPECIALLY PREVALENT IN THE VICINITY OF THE BEAM SEAT AT THE ENDS OF ABUTMENTS. ALL DETERIORATED AREAS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER IN ACCORDANCE WITH ITEM 519, PATCHING CONCRETE STRUCTURES.

* Where practicable PATCHING CONCRETE shall be placed monolithically with the beam seat Class C Concrete.

BENCH MARK
THE STARK COUNTY ENGINEER SHALL PROVIDE THE CONTRACTOR WITH A STANDARD COUNTY BRONZE DISC WHICH SHALL BE SET IN THE RECONSTRUCTED CONCRETE WINGWALL AT THE NORTHEAST CORNER OF THE BRIDGE. THE COUNTY ENGINEER SHALL BE RESPONSIBLE FOR TRANSFERRING THE ELEVATION AND STAMPING THE DISC. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN ITEM 511 - CLASS C CONCRETE, ABUTMENTS.

* Revised 12-16-81

DESCRIPTION	DATE	BY
REINFORCING STEEL & EST. QUANTITIES		
STA-30-31.16 OVER BIG SANDY CREEK		
STARK COUNTY BRIDGE NO. PA-36-1		
EAST LINCOLN WAY, VILLAGE OF MINERVA		
PARIS TOWNSHIP, STARK COUNTY, OHIO		
DATE: JAN. 1979		
HAMMONTREE & ASSOCIATES, LTD.	DESIGNED	DRAWN
CONSULTING ENGINEERING & SURVEYING	RAK	MJM
CANTON - AKRON, OHIO	CHECKED	MJM
	REVIEWED	DRAWING NO.