STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CUY-480-~~6.48~~ 6.78
CUYAHOGA COUNTY
CITY OF CLEVELAND
CITY OF FAIRVIEW PARK

ISSUE I & I-480-4(42)-161

Project designation CUY-480-6.78 appearing throughout this plan shall be considered to read CUY-480-6.48

FHWA	STATE	PROJECT	
5	OHIO	I-480-4(42)-161	

1/3/7

CUYAHOGA COUNTY
CUY-480-~~[illegible]~~ 6.78

MICROFILMED DEC 6 1982

MICROFILMED JUN 5 1984

MICROFILMED JUN 2 0 1984

CONVENTIONAL SIGNS

Center Line		Existing Sewer	
Existing R/W		Proposed Sewer	
Proposed R/W		Existing Manhole	M.H.
Limited Access Line	LA	Proposed Manhole	
Temporary R/W	T	Existing Catch Basin	C.B.
Work Agreement Line		Proposed Catch Basin	
Property Line	PL	Manhole Abandoned	
Original Lot Line	O.L. 78 / O.L. 79	Catch Basin Abandoned	
Water Line	W	Existing Guard Rail	
Water Valve		Proposed Guard Rail	
Water Hydrant		Fence	
Gas Line	G	Existing Retaining Wall	
Gas Valve		Railroad	
Telephone Underground	T	Existing Trees Removed	
Electric Underground	E	Existing Trees	
Power Pole			
Light Pole			
Telephone Pole			

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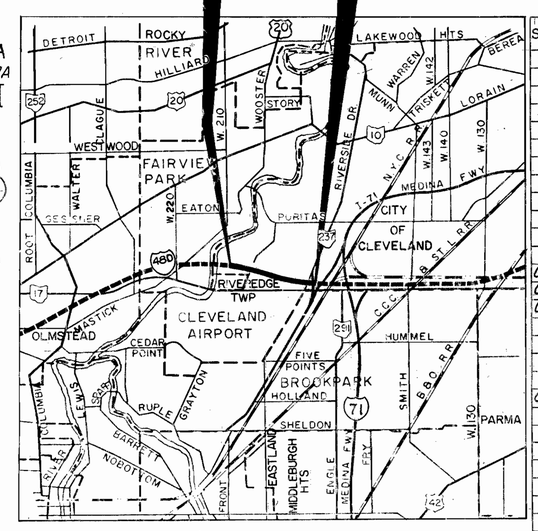
Note

All references to FHWA Region 2 appearing in these plans shall be considered to read FHWA Region 5.

Sheets 93, 212, 233, 241, 259 Deleted
Sheets 270, 306B & 306F Revised 3-2-79 WTF
Sheet 274 revised 10-24-79 EBL
Sheets 306I & 306J added 4-11-80 WTF
Sheet 269 revised 5-16-79 DWI

BEGIN PROJECT
STA. 457+92.50
S.L.M. 6.78

END PROJECT
STA. 447+98.81
S.L.M. 8.00



LINE DATA

BEGIN PROJECT — STA. 441+71.50
STA. EQUATION — STA. 495+01.76 (BACK) = STA. 420+30.02 (FWD.)
END PROJECT — STA. 447+98.81
TOTAL LENGTH OF PROJECT = 8099.05 L.F. OR 1.533 MILES

ADDITIONAL WORK

I-480	441+34 TO 441+71.50	37.50 L.F.
	STA 447+98.81 to STA. 461+00.00	1,301.19 L.F.
Add for Glare Screen	433+50 to 433+75	25.00 L.F.
RELOCATED GRAYTON RD.	STA. 10+36.50 To STA. 41+94.87 (BK)	3,158.37 L.F.
	= STA. 35+38.50 (FWD.) To STA. 39+06.00	367.50 L.F.
BROOKPARK RD.	STA. 28+61.00 To STA. 44+31.54	1,570.54 L.F.
RELOCATED ROCKY RIVER DR.	STA. 0+16.50 To STA. 12+96.52	1,280.02 L.F.
	TOTAL ADDITIONAL WORK =	7740.12 L.F.
	TOTAL LENGTH OF WORK =	15,839.17 L.F. OR 2.999 MILES

FILE NUMBER	CUYAHOGA COUNTY CUY-480-6.78
	DATE OF LETTING
	CONTRACT NUMBER

00388

SUPPLEMENTAL SPECIFICATIONS	
NUMBER	DATE
808	1-1-71
837	12-7-72
5625 & 5713	1-11-74
847	4-3-76
953	6-27-77
836	3-12-75
838	1-13-77
845 & 850	6-27-77
839	11-25-70
~~848~~	11-2-77
842	8-29-74
843	10-23-75
844	11-8-74
954	6-3-78
846	4-25-77
1001	1-3-77
950 & 951	4-25-77

LOCATION MAP

SCALE OF MILES (0 1 2 3)

Portion To Be Improved
State Routes — 5
U.S. Routes — 6
Interstate Routes — 90
City Streets
To Be Improved Under Separate Contract

SCALE

PLAN	0 50	1" = 50'
PROFILE: HORIZ.	0 50	1" = 50'
VERT.	0 10-20	1" = 10' / 20'
CROSS SECTIONS	0 10	1" = 10'
PAVEMENT DETAILS	0 20	1" = 20'

STANDARD DRAWINGS	
NUMBER	DATE
TC-7.65	10-1-74
TC-12.30	10-1-74
TC-18.24	10-1-74
TC-21.10	10-1-74
TC-21.40	8-19-77
TC-21.31	10-1-74
TC-22.10	10-1-74
TC-31.21	8-27-76
TC-32.10	8-27-76
TC-32.11	8-27-76
TC-41.10	8-19-77
TC-41.20	4-1-77
TC-41.50	4-1-77
TC-42.10	8-19-77
TC-42.20	4-1-77
TC-51.10	6-2-75
TC-51.11	6-2-75
TC-52.10	4-1-77
TC-52.20	4-1-77
TC-61.10	8-19-77
TC-71.10	12-1-75
TC-72.20	8-29-77
TC-81.10	4-18-77
TC-18.26	10-1-74
TC-82.10	9-5-75
TC-83.10	9-5-75
TC-83.20	9-5-75
TC-85.20	9-5-75

STANDARD DRAWINGS		STANDARD DRAWINGS	
NUMBER	DATE	NUMBER	DATE
BP-1	6-1-65	HL-5	9-6-73
BP-2	12-6-76	HL-6	3-22-77
BP-3	12-6-76	HL-7	1-21-76
BP-4	12-6-76	HL-8	1-21-76
BP-5	8-11-75	HL-9	3-22-77
BP-6	6-1-65	HL-10	1-21-76
BP-7	12-6-76	HL-11	4-6-73
BP-9	12-6-76	HL-12	4-6-73
BP-10	1-3-75	HL-15	1-21-76
BR-1-67	10-15-71	HL-16	4-6-73
		SD-1-69	6-12-69
CB-2.2-4 & B	6-1-65	RB-1-55	2-2-59
CB-2.3 & 2.4	6-1-65		
CB-2.5 & 2.6	6-1-65	HL-22	11-9-77
CB-3	1-1-76		
CB-3A	1-1-76		
CB-5	9-1-69	HN-3	6-1-65
CB-6	6-1-65	HW-4	1-1-70
CB-45RA	6-6-68		
F-1	5-1-76		
		L-1	6-1-73
F-3	5-1-76		
F-5	5-1-76	MC-1	6-13-69
F-6	5-1-76	MC-3	6-1-73
GR-1	12-6-76	MC-4	7-26-76
GR-2B	12-6-76	MC-5	6-12-75
GR-3	12-6-76	MC-6	6-1-65
GR-4	12-6-76	MC-7	10-15-76
GR-5	1-1-71	MC-9	11-1-77
GR-6	1-1-71		
GR-4A	7-26-76		
HL-1	9-6-73	MH-1	6-12-75
HL-2	7-27-73	MH-3	6-12-75
HL-3	7-27-73	MH-5	6-12-75
HL-4	1-21-76	AS-1-72	6-30-72

"LIMITED ACCESS"

This improvement is especially designed for thru traffic and has been declared a Limited Access Highway or Freeway by action of the Director of Transportation, in accordance with the provisions of Sec. 5511.02 of The Revised Code of Ohio.

1977 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.

The Right of Way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway to traffic and that provisions for maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved _____ Director of Public Service, City of Cleveland
Date 8/8/77

Approved _____ District Deputy Director of Transportation
Date 12-13-77

Approved _____ Engineer, Bureau of Bridges and Structural Design
Date 9-26-78
WTF 9-26-78

Approved _____ Chief Engineer, Planning and Design
Date 11-17-78

Approved _____ Director, Department of Transportation
Date 11-17-78

DESIGN DESIGNATION	
1977 A.D.T. =	77,900
1997 A.D.T. =	95,000
D.H.V.	6,365
D. (directional distribution)	67%
T. (percent B&C trucks)	4%
V. (design speed)	60 M.P.H.

PLANS PREPARED BY
ALDEN E. STILSON & ASSOCIATES
CONSULTING ENGINEERS
75 PUBLIC SQUARE
CLEVELAND, OHIO
FOR
STATE OF OHIO

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

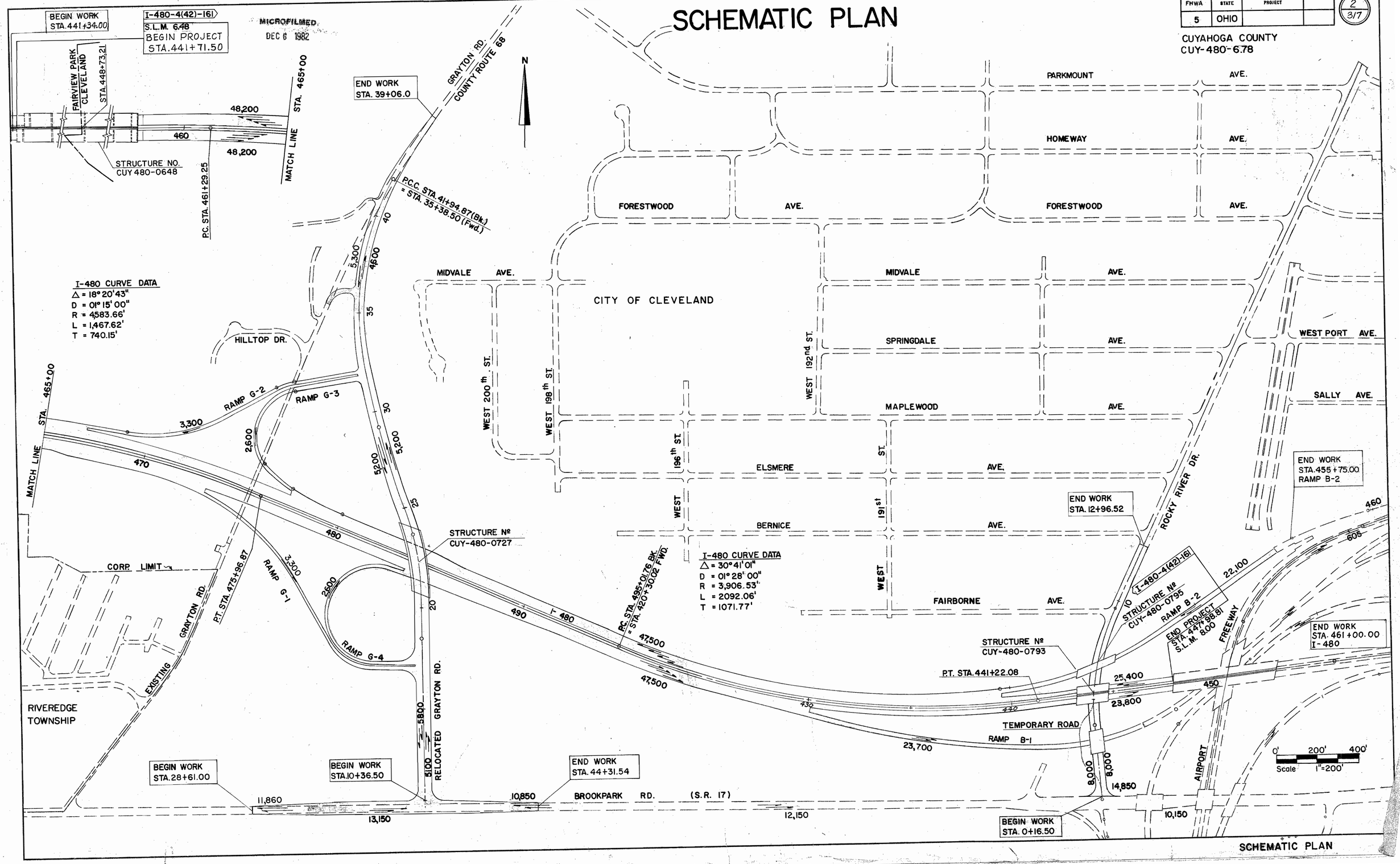
DIVISION ADMINISTRATOR — DATE:

SCHEMATIC PLAN

FHWA	STATE	PROJECT	
5	OHIO		

2/317

CUYAHOGA COUNTY
CUY-480-6.78

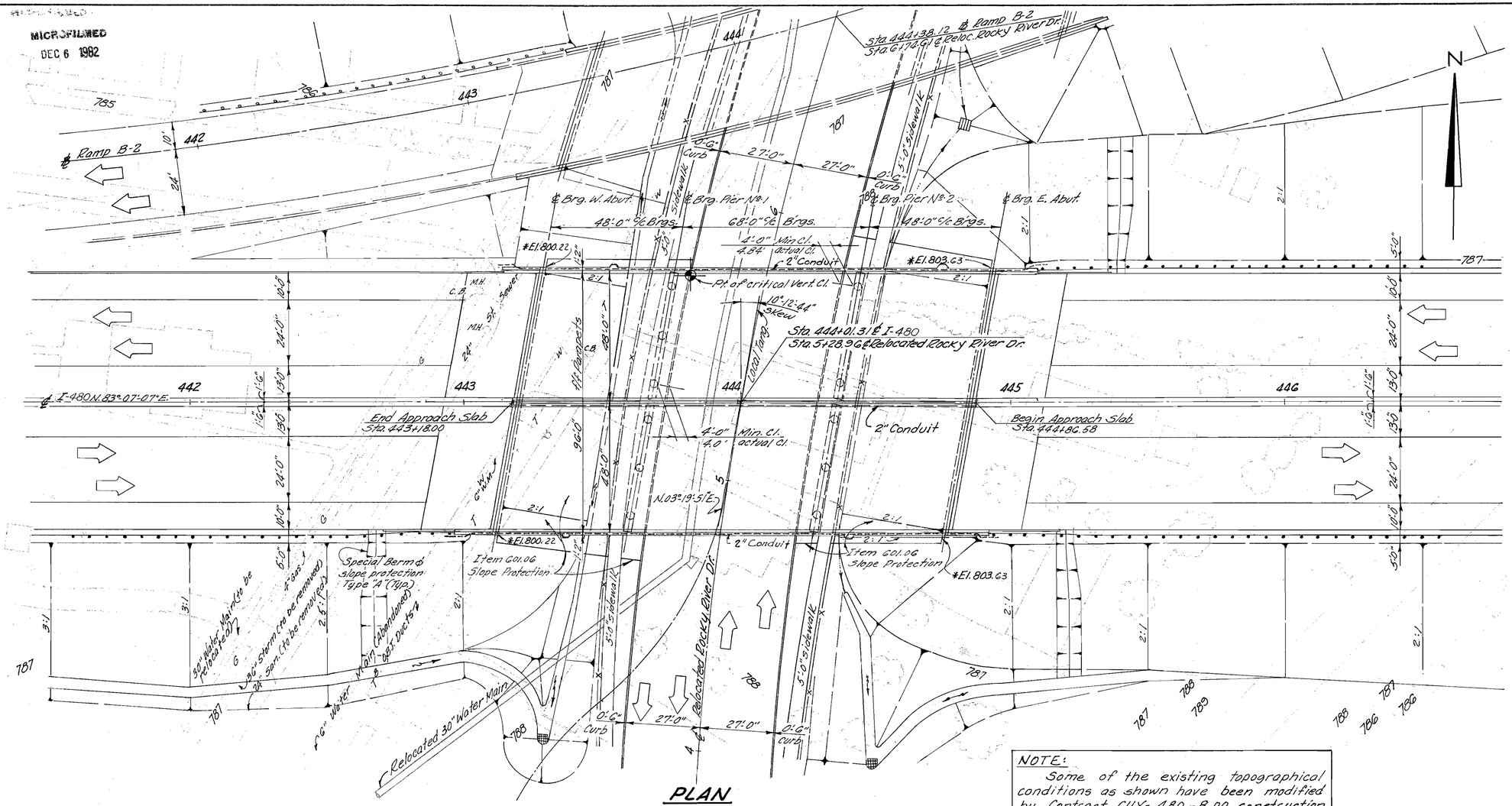


SCHEMATIC PLAN

MICROFILMED
DEC 6 1982

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

CUYAHOGA COUNTY
CUY-480-6.78



PLAN

CURVE DATA

℄ RAMP B-2	℄ RELOC. ROCKY RIVER DR.
P.I. = Sta. 443+73.54	P.I. = Sta. 6+70.68
Δ = 28°-52'-24"	Δ = 29°-58'-20"
D = 3°-30'-00"	D = 5°-00'-00"
R = 1637.02'	R = 1145.92'
Lc = 724.95'	Lc = 599.44'
T = 423.54'	T = 306.75'

NOTE: For drainage details see shts. 30 & 56

For details of relocated 30" water main see sheet No. 203 & 210.

* Elevations marked with an asterisk are top of slope at face of abutment.

Earthwork limits as shown are schematic, actual slopes shall conform to plan cross sections.

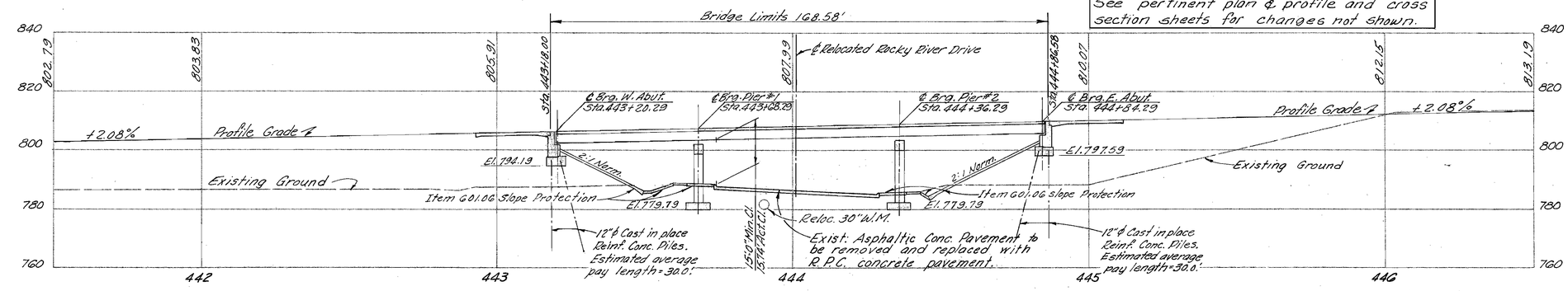
PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and reinforced concrete substructure
SPANS: 48'-0", 68'-0", 48'-0" ℄ Brgs.
ROADWAY: 36'-0" f/f Parapets of BR-1-67 railing, with 3'-0" barrier median.
LOADING: C.F-2000 (1957) Adequate for the Alternate Military Loading
WEARING SURFACE: 2½" Asphalt Concrete
SKEW: 10°-12'-44" Lt. Forward
ALIGNMENT: Tangent
APPROACH SLABS: AS-1-72 (25' long) Mod.

NOTE:
Some of the existing topographical conditions as shown have been modified by Contract CUY-480-8.00 construction. See pertinent plan & profile and cross section sheets for changes not shown.

TRAFFIC ESTIMATE

Design Year - 1987
Total A.D.T. - 48,695



PROFILE ALONG ℄ I-480

NOTE: The reasons for excess vertical clearance shown are:
1. The I-480 grade line is controlled by the structure over the N.Y.C. R.R. Mainline and the S.R. 237-3 level structure.
2. The Rocky River Drive grade is controlled by the proximity of Ramps B-1 & B-2.

1 / 11

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.

SITE PLAN

BRIDGE No. CUY-480-0793
I-480 OVER RELOCATED ROCKY RIVER DRIVE
CUYAHOGA COUNTY STA. 443+18.00 STA. 444+86.58

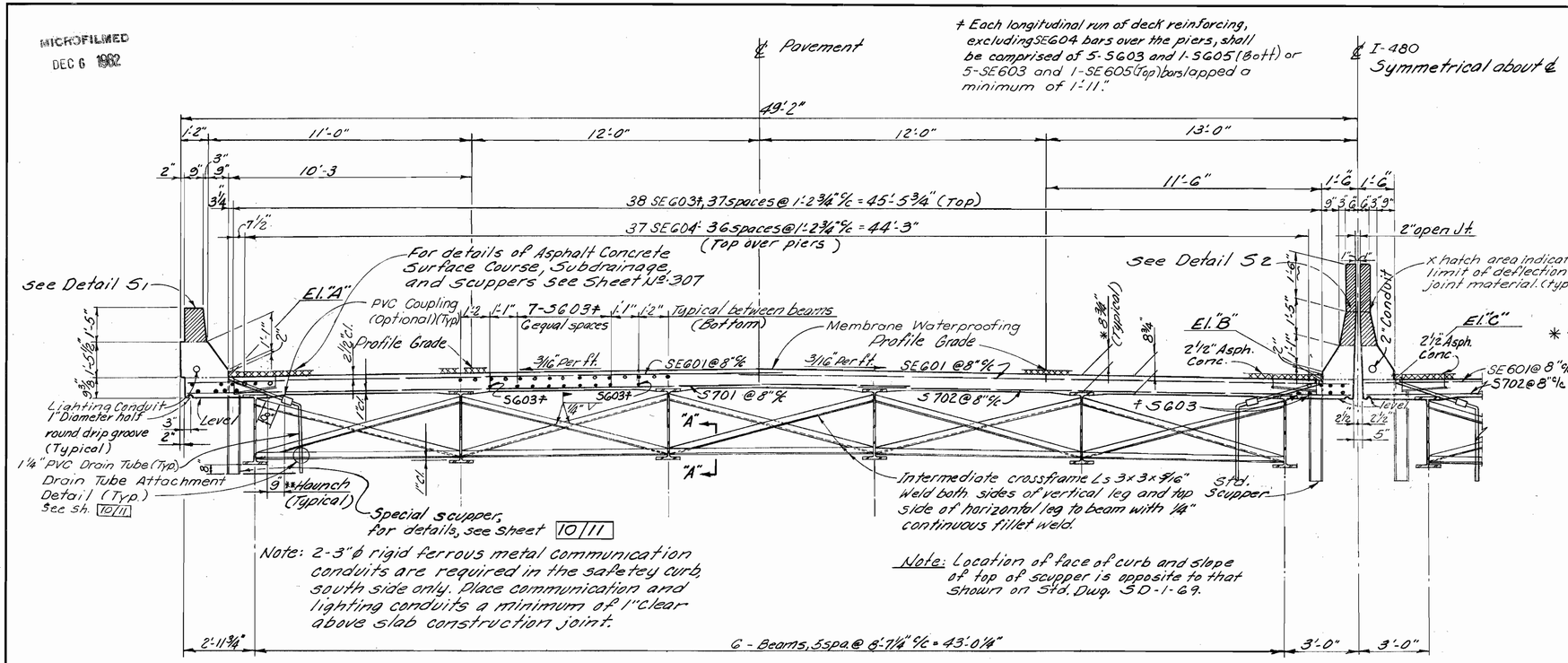
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.H.S.	R.T.		G.W.M.	G.W.M.	8/5/66	

MICROFILMED
DEC 6 1982

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

284
317

CUYAHOGA COUNTY
CUY-480-6.78



Note: 2-3" ϕ rigid ferrous metal communication conduits are required in the safetey curb, south side only. Place communication and lighting conduits a minimum of 1" clear above slab construction joint.

Note: Location of face of curb and slope of top of scupper is opposite to that shown on Std. Dwg. SD-1-69.

HALF TRANSVERSE SECTION

NOTES

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or the conformation required to place it parallel to the finished grade.

** A typical haunch width of 9" shall be used for computing quantities of concrete. However the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

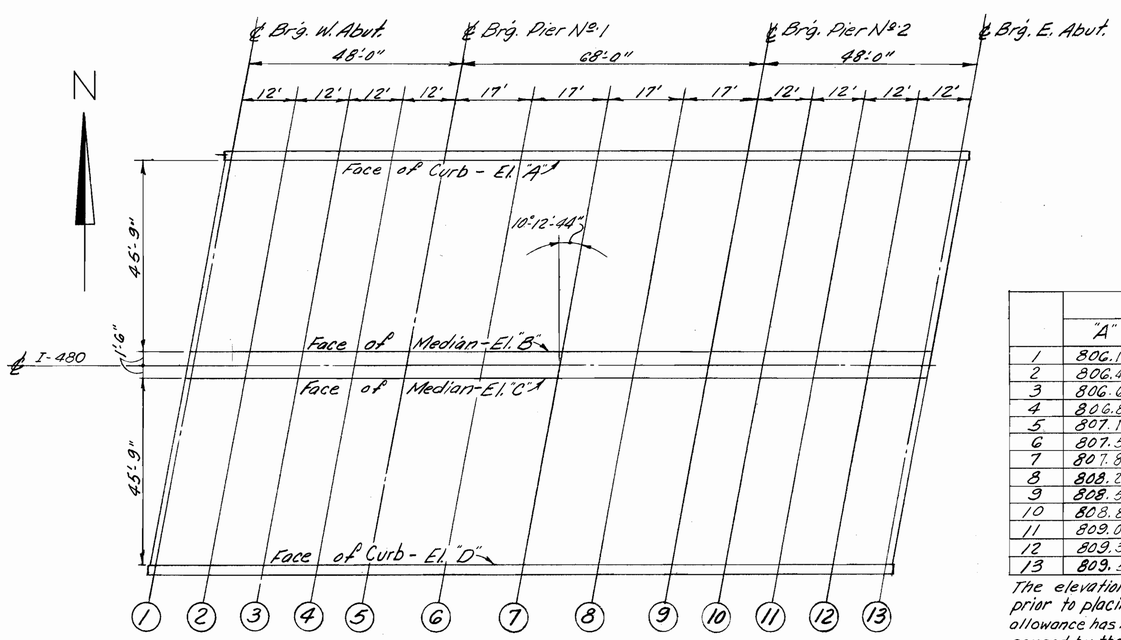
For location of 1" ϕ deck drainage hole in Special and Standard Scuppers, see sheet 10/11.

For additional deck drainage details see sheet 307.

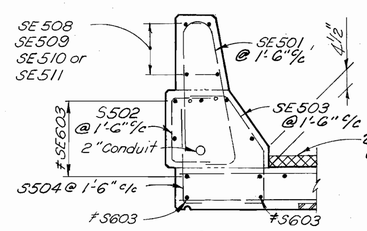
Longitudinal reinforcing steel shall be field cut as necessary to avoid interference with scuppers.

Transverse reinforcing steel shall be placed parallel to the ℄ of bearings and spaced 8"°/c along ℄ of I-480.

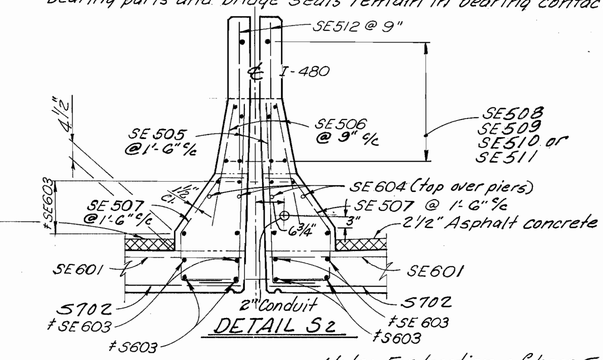
Steel Erection: During the erection of end dams and cross frames care shall be taken to insure that stringers, bearing parts and bridge seats remain in bearing contact.



DECK ELEVATIONS



DETAIL S1



DETAIL S2

Note: For location of bars S508 thru S511 see Sht. 3/11

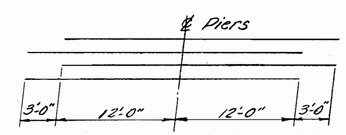
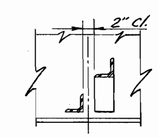


DIAGRAM SHOWING STAGGER OF SE604 BARS OVER PIERS

	ELEVATION			
	"A"	"B"	"C"	"D"
1	806.14	805.96	805.94	805.79
2	806.40	806.22	806.19	806.05
3	806.65	806.47	806.44	806.30
4	806.89	806.71	806.69	806.54
5	807.14	806.96	806.93	807.79
6	807.51	807.33	807.31	807.16
7	807.88	807.69	807.67	807.53
8	808.22	808.04	808.01	807.87
9	808.56	808.37	808.35	808.20
10	808.81	808.62	808.60	808.46
11	809.06	808.88	808.86	808.71
12	809.31	809.13	809.11	808.96
13	809.56	809.37	809.35	809.20

The elevation shown is that which is required prior to placing of the concrete deck. Proper allowance has been made for the dead load deflections caused by the weight of concrete.



SECTION "A-A"

8/11

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.

SUPERSTRUCTURE DETAILS

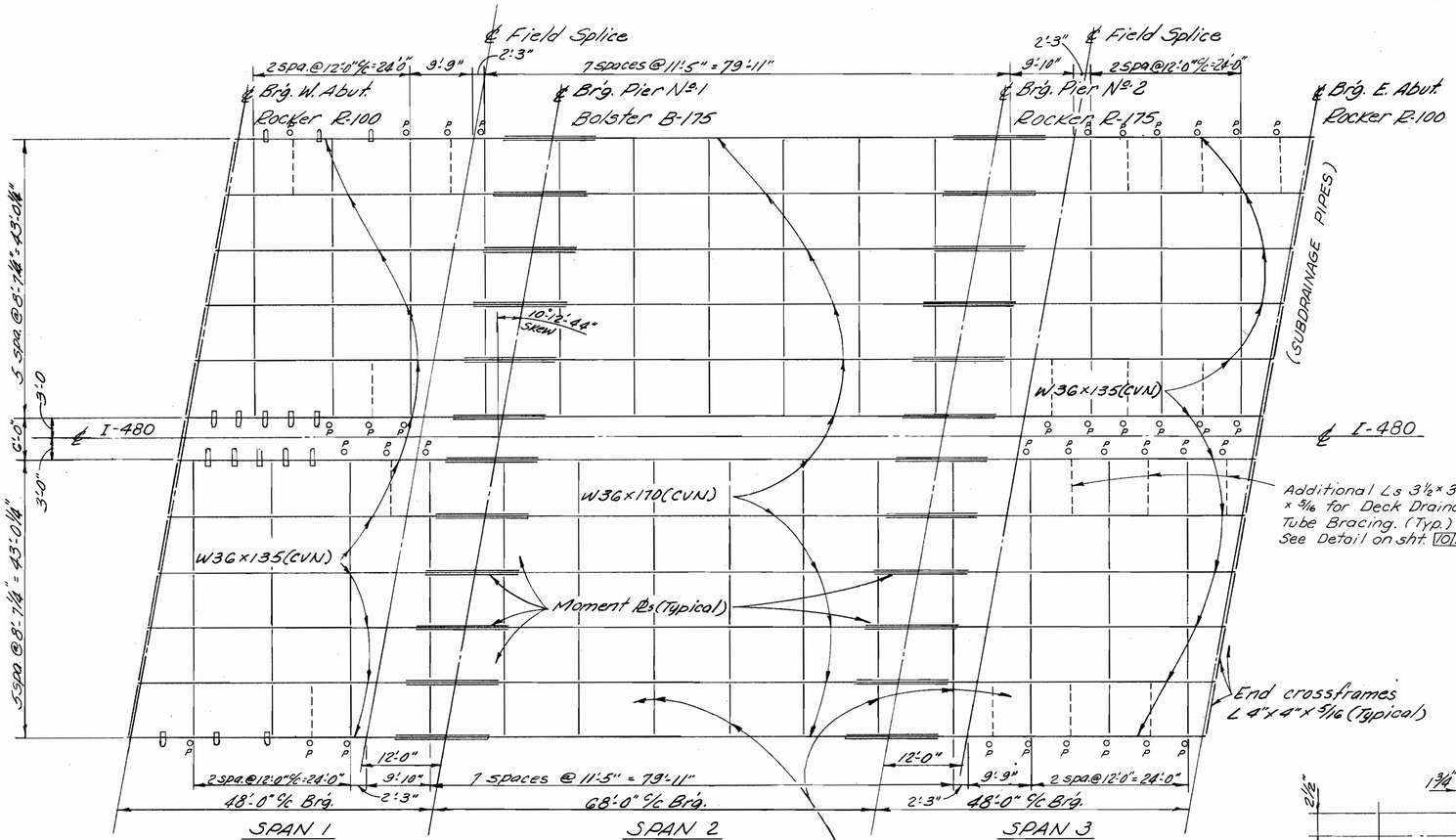
BRIDGE No. CUY-480-0793
I-480 OVER RELOCATED ROCKY RIVER DRIVE
CUYAHOGA COUNTY STA. 443+18.00 STA. 444+86.58

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.H.S.	R.T.		G.W.M.	G.W.M.	8/5/66	

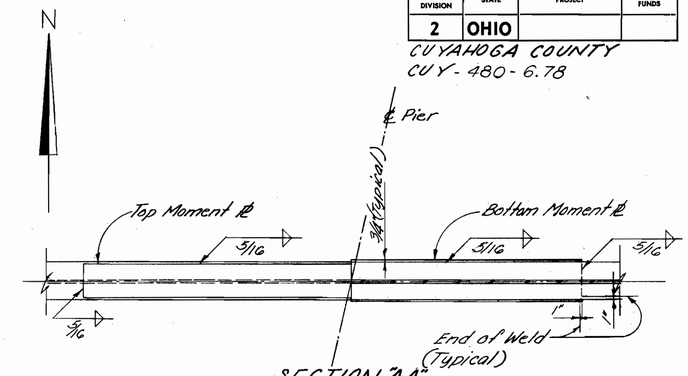
MICROFILMED
DEC 6 1982

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

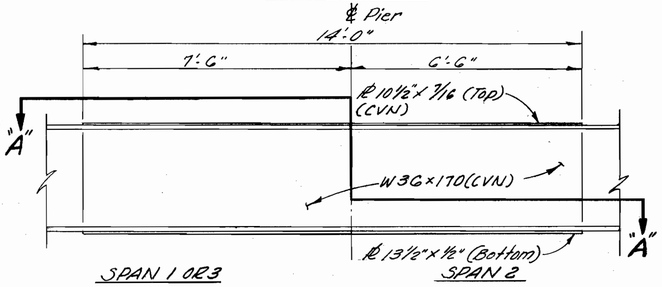
CUYAHOGA COUNTY
CUY-480-6.78



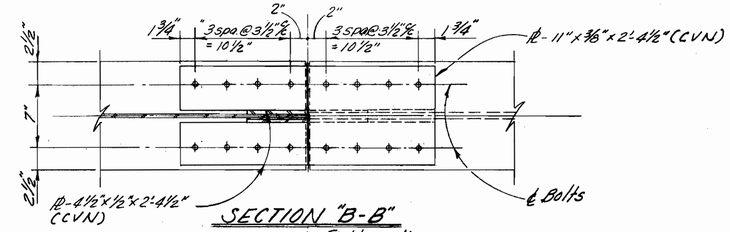
FRAMING PLAN



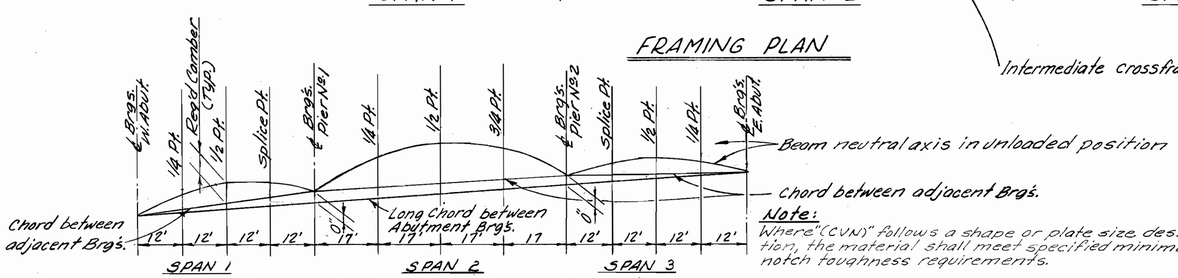
SECTION "A-A"



MOMENT PLATE DETAIL



SECTION "B-B"



CAMBER AND BLOCKING DIAGRAM

Note:
Where "(CVN)" follows a shape or plate size designation, the material shall meet specified minimum notch toughness requirements.

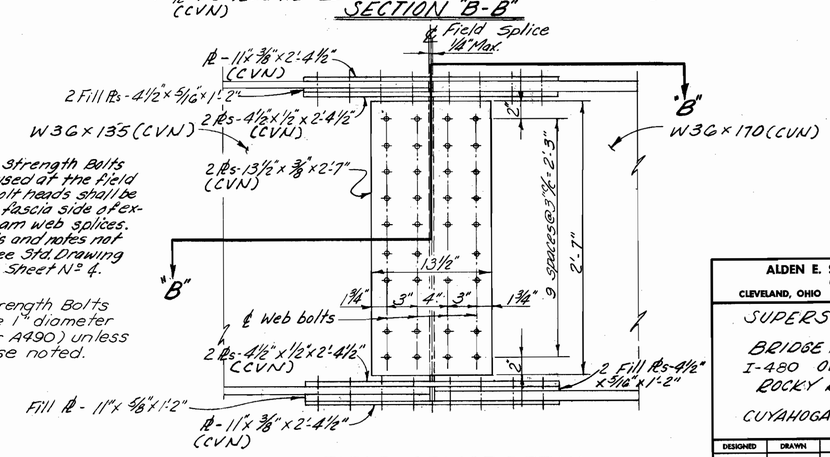
SUBDRAINAGE PIPE locations are indicated ⁸. Additional location restrictions shall be as shown on sheet 307 except pipes need not clear Crossframes by 6" but shall be located beside the outstanding leg of the horizontal L 3 1/2 × 3 1/2 × 5/16 of the crossframe.

DEFLECTION & CAMBER

LOCATION	SPAN 1 OR 3			SPAN 2		
	1/4 Point	1/2 Point	Splice Point	1/4 Point	1/2 Point	Splice Point
Deflection due to weight of steel.	0"	0"	0"	1/16"	1/16"	1/16"
Deflection due to remaining dead load.	1/8"	1/8"	1/16"	3/16"	3/8"	3/16"
Required camber shop	1/8"	1/8"	1/16"	1/4"	1/16"	1/4"

NOTE:
1" ϕ High Strength Bolts shall be used at the field splices. Bolt heads shall be placed on fascia side of exterior beam web splices. For details and notes not shown see Std. Drawing SD-1-69 Sheet No. 4.

High Strength Bolts shall be 1" diameter A325 (or A490) unless otherwise noted.



FIELD SPLICE DETAIL

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.

SUPERSTRUCTURE DETAILS

BRIDGE No. CUY-480-0793
I-480 OVER RELOCATED ROCKY RIVER DRIVE
CUYAHOGA COUNTY STA. 443+18.00 STA. 444+86.58

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.H.S.	R.T.		R.J.P.	G.W.M.	8/5/66	