E1-7

MICROFILMED
MAR 27 1984

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
CUY-71-9.60
CUYAHOGA COUNTY
CITY OF CLEVELAND
CITY OF BROOK PARK

I-71-5 (13) 242

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	I-71-5(13) 242	

1/163

CUYAHOGA COUNTY
CUY—71-9.60
PART I
For part 2, See plans for CUY-71-9.60 PART 2
For Part 3, See plans for CUY-71-10.16

CONVENTIONAL SIGNS

SECTION LINE
CENTER LINE OF ROAD
PROPERTY LINE — R —
LIMITED ACCESS & RIGHT OF WAY — LA-R/W —
LIMITED ACCESS ONLY — LA —
RIGHT OF WAY ONLY — RW —
CORPORATION LINE
SLOPE EASEMENT — SL —
GUARD RAIL
POWER POLE
TELEPHONE POLE
FIRE HYDRANT
FENCE LINE — x — x — x — x —

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Sheet No. 144 revised 10-7-65
Sheet No. 100 revised 10-12-65 C.E.H.
Sheet No. 111 revised 12-6-65
Sheet No. 111 & 149 revised 1-20-66
Sheets 104, 118, 130, 143 & 63 Revised As-Built 3-4-70 G.E.J.

LINE DATA

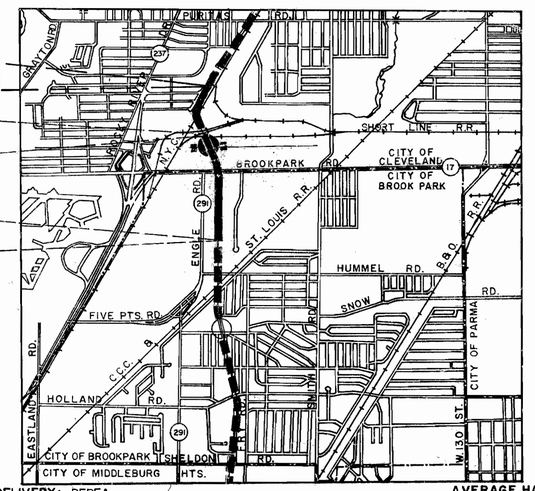
PART 1
Begin Project Sta. 994+00
End Project Sta 1023+50
Net Length of Project 2,950.00 L.F. or 0.558 Mi.

Add for Approaches:
Sta. 931+50 to Sta. 994+00 6,250.00 L.F.
I.R.80 Sta. 472+80 to Sta. 480+72 792.00 L.F.
Net Length of Work 9,992.00 L.F. or 1.892 Mi.

PART 2
Begin Project Sta. 611+08.04
Suspend Project Sta. 613+20
Resume Project Sta. 623+00
End Project Sta. 633+00
Net Length of Project 1,211.96 L.F. or 0.229 Mi.

Additional Work:
Retention Basin Sta. 0-50 to Sta. 52+12.38 5,262.38 L.F.
Harwell Rd. Sta. 10+00 to Sta. 16+94.19 694.19 L.F.
Net Length of Work 7,168.53 L.F. or 1.357 Mi.

PARTS 1 & 2
Total Length of Project 4,161.96 L.F. or 0.788 Mi.
Total Length of Work 17,160.53 L.F. or 3.250 Mi.



POINT OF DELIVERY: BEREA
AVERAGE HAUL: 2.00 MI.

LOCATION MAP

SCALE IN FEET
1000 0 1000 5000 10000

PORTION TO BE IMPROVED
FEDERAL ROUTES
STATE ROUTES
OTHER ROADS
INTERCHANGE

SCALES:
PLAN — 1" = 50'
PROFILE HORIZONTAL — 1" = 50'
PROFILE VERTICAL — 1" = 5'
CROSS SECTIONS — 1" = 10'
DETAILS — 1" = 20'

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 OF HIGHWAYS IN ACCORDANCE WITH PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

1963 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, 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 TO TRAFFIC OF THE HIGHWAYS, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED Louis L. Drasler
DATE 1/25/65 DIRECTOR OF PUBLIC SERVICE, CITY OF CLEVELAND

APPROVED Charles M. Yurick
DATE 1-22-65 DIVISION DEPUTY DIRECTOR

APPROVED C. H. Albrecht
DATE 2-11-65 ENGINEER OF BRIDGES

APPROVED R. N. Richter
DATE 2-19-65 ENGINEER OF LOCATION AND DESIGN

APPROVED R. E. Shultz
DATE 2-19-65 DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED T. H. Broad
DATE 2-2-65 DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED F. W. Williams
DATE 2-3-65 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED
DATE FIRST ASSISTANT DIRECTOR

APPROVED P. E. Mashek
DATE 3/3/65 DIRECTOR OF HIGHWAYS

PLANS PREPARED BY
PACE ASSOCIATES OF OHIO
CONSULTING ENGINEERS Charles F. May #27167
CLEVELAND, OHIO

SUPPLEMENTAL SPECIFICATIONS		STANDARD CONSTRUCTION DRAWINGS											
		DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
I-124	R. 3-20-61	FACI-1	2-25-64	HW-E	2-1-63	I-15 Nº 2-A	8-17-60	T.J.	8-12-60				
L-120	R 1-2-62	FA CI-2	2-25-64	I-1	11-15-60	I-8 M H Nº 1-A	2-1-63	AS-1-64	7-5-62				
M-107.18	R 4-3-61	B-T-70-71	11-15-60	I-8 C.B Nº 4	2-1-63			AR-1-57	4-2-62				
I-129	R 4-5-61	B-T-71-R	3-2-55	I-8 C.B Nº 5	2-1-63	I-21-23	3-10-64	FSB-1-62	1-15-63				
M-106.11	1-26-61	DR-1	1-3-55	I-8-I Nº 2-A	2-1-63	RI-1	9-1-64	SD-1-63 sht's 2,3,14	11-12-63				
I-125	R 6-26-61	F-1	2-1-63	I-8 M.H. Nº 1	2-1-63	L-1	4-1-50						
S-307	R 10-1-64	F-3	2-1-63	I-8 M H Nº 2	2-1-63	L-3	4-1-50						
T-335	10-28-63	G-707	4-1-64	I-12	2-1-63	L-3-A	4-1-50						
I-127	R 1-15-62	MW Nº 1	8-1-63	I-15 Nº 1	11-15-60	L.J. Nº 1	7-1-56						
S-101	7-12-62	I-15 No. C	2-1-63	I-8 C.B. 2-2-A & B	2-1-63								
CE-101.04	5-22-56												

00304-R

FILE NO.	CUYAHOGA COUNTY CUY-71-9.60
	DATE OF LETTING _____ 196__
	CONTRACT NO. _____

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

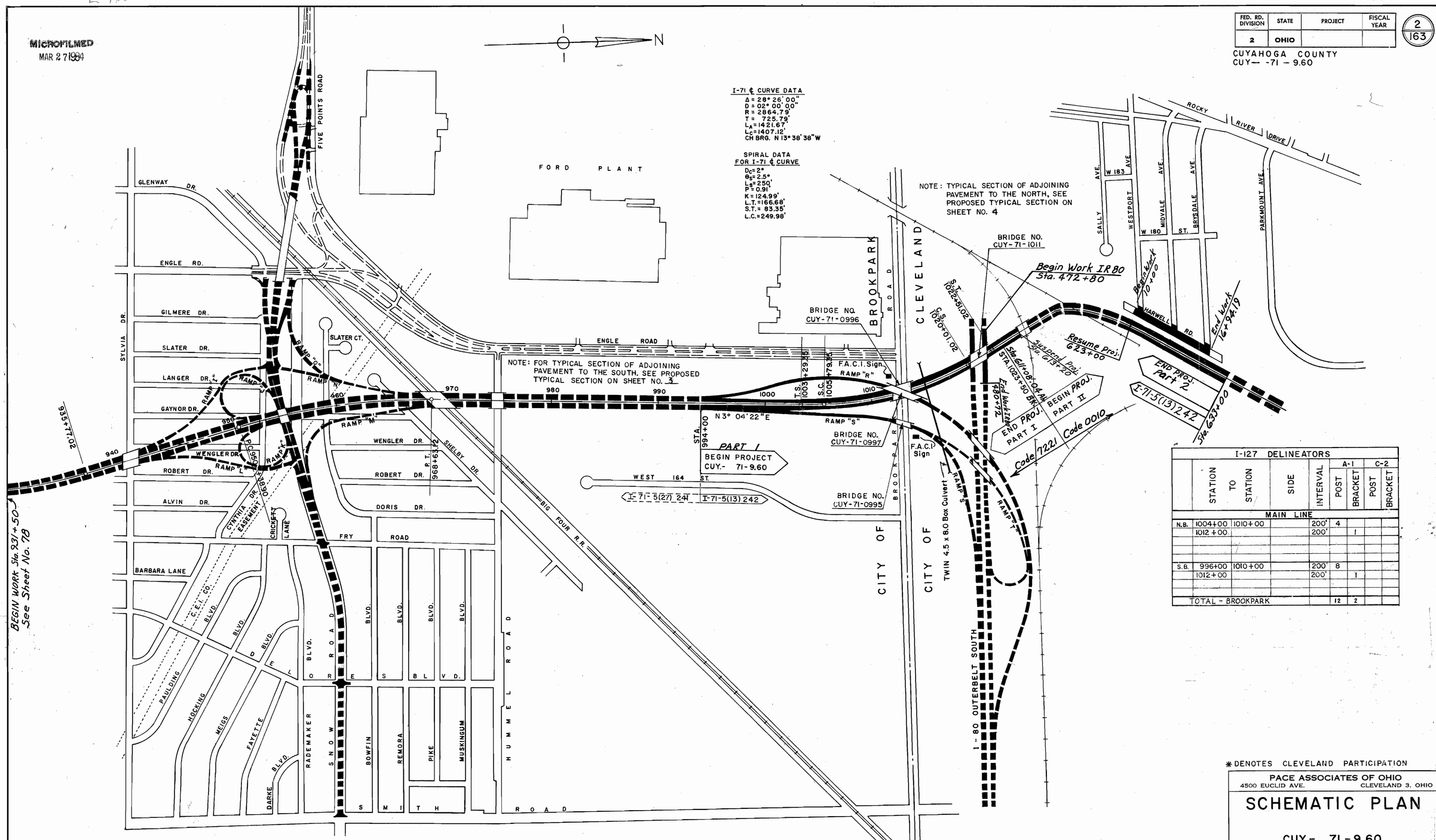
DIVISION ENGINEER DATE

MICROFILMED
MAR 27 1984

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

2
163

CUYAHOGA COUNTY
CUY— -71 — 9.60



I-71 ℄ CURVE DATA
Δ = 28° 26' 00"
D = 02° 00' 00"
R = 2864.79'
T = 725.79'
L_A = 1421.67'
L_C = 1407.12'
CH BRG. N 13° 38' 38" W

SPIRAL DATA FOR I-71 ℄ CURVE
D_C = 2°
θ_s = 2.5°
L_s = 250'
P = 0.91'
K = 124.99'
L.T. = 166.68'
S.T. = 83.35'
L.C. = 249.98'

NOTE: FOR TYPICAL SECTION OF ADJOINING PAVEMENT TO THE SOUTH. SEE PROPOSED TYPICAL SECTION ON SHEET NO. 3

NOTE: TYPICAL SECTION OF ADJOINING PAVEMENT TO THE NORTH, SEE PROPOSED TYPICAL SECTION ON SHEET NO. 4

I-127 DELINEATORS

	STATION	TO STATION	SIDE	INTERVAL	A-1 POST	A-1 BRACKET	C-2 POST	C-2 BRACKET
MAIN LINE								
N.B.	1004+00	1010+00		200'	4			
	1012+00			200'		1		
S.B.	996+00	1010+00		200'	8			
	1012+00			200'		1		
TOTAL - BROOKPARK					12	2		

* DENOTES CLEVELAND PARTICIPATION

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3, OHIO

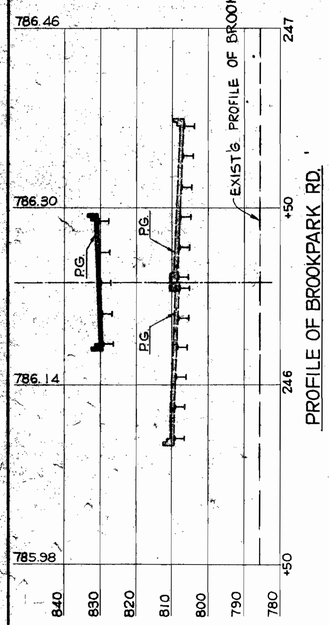
SCHEMATIC PLAN

CUY- 71-9.60
SCALE: 1" = 400'
400 200 0 400 800 1000

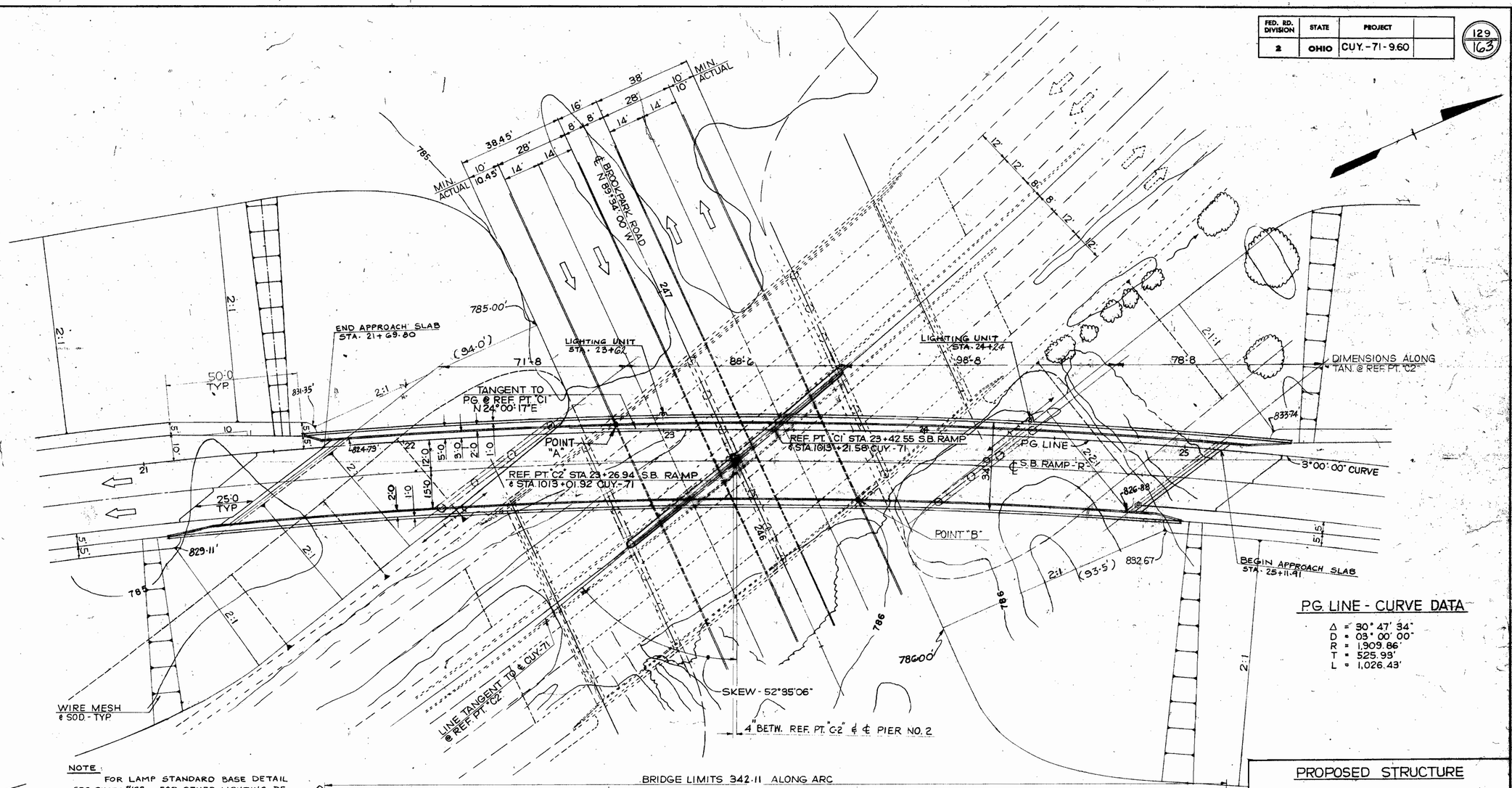
DESIGNED	DRAWN	CHECKED	DATE

MICROFILMED
MAR 4 1965

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	CUY.-71-9.60	



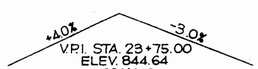
PROFILE OF BROOKPARK RD.



NOTE:
FOR LAMP STANDARD BASE DETAIL SEE SHEET #128. FOR OTHER LIGHTING DETAILS & CONDUIT LOCATIONS ON BRIDGE SEE LIGHTING PLANS.

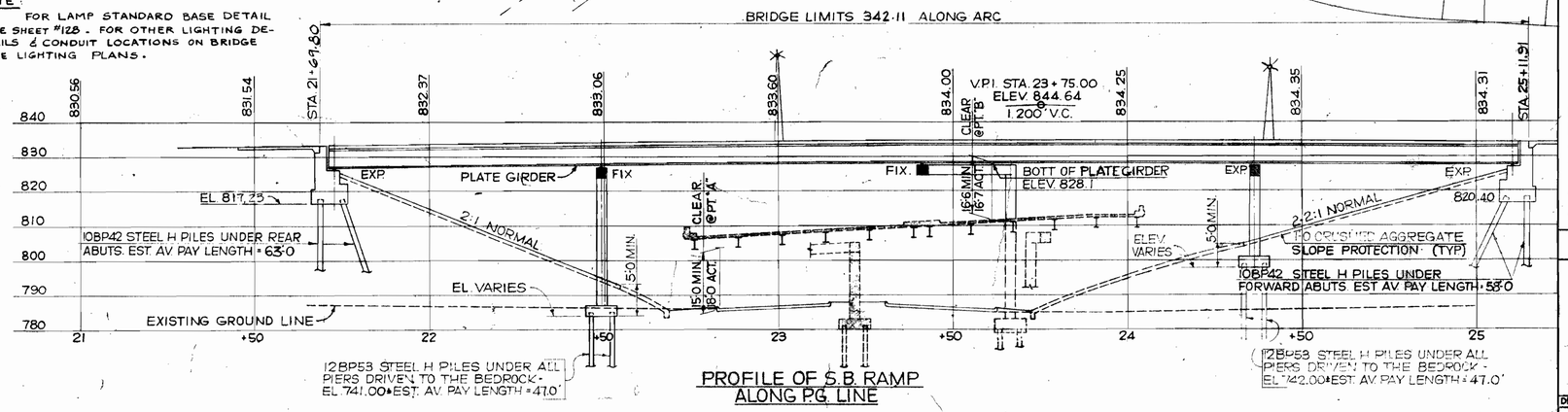
V.P.I. STA. 1008+00
ELEV. 794.88
600' V.C.

CUY.-71



V.P.I. STA. 23+75.00
ELEV. 844.64
1,200' V.C.

S.B. RAMP-"R"



PROFILE OF S.B. RAMP ALONG P.G. LINE

1984 A.D.T. 16,110

P.G. LINE - CURVE DATA

Δ = 30° 47' 34"
D = 03° 00' 00"
R = 1,909.86'
T = 525.93'
L = 1,026.43'

PROPOSED STRUCTURE

TYPE: CONTINUOUS WELDED PLATE GIRDERS WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE.
SPANS: 71'-8 - 88'-6 - 98'-8 - 78'-8
ROADWAY: 30'-0 F/F OF 2'-0 SAFETY CURBS.
LOAD FREQUENCY: C.F. 2,000 (57). ADEQUATE
SKEW: 52°35'-06" FOR AASHO ALTERNATE LOADING
WEARING SURFACE: 1" MONOLITHIC CONC.
APPROACH SLAB: AS-1-54 (25' LONG)
ALIGNMENT: 3° 00' 00" CURVE RT.
SUPERELEVATION: 0.0493'/FT.

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3, OHIO

SITE PLAN

BRIDGE NO. CUY.-71-0997
S.B. RAMP-"R" OVER CUY.-71

STA. 21+69.80 TO STA. 25+11.91

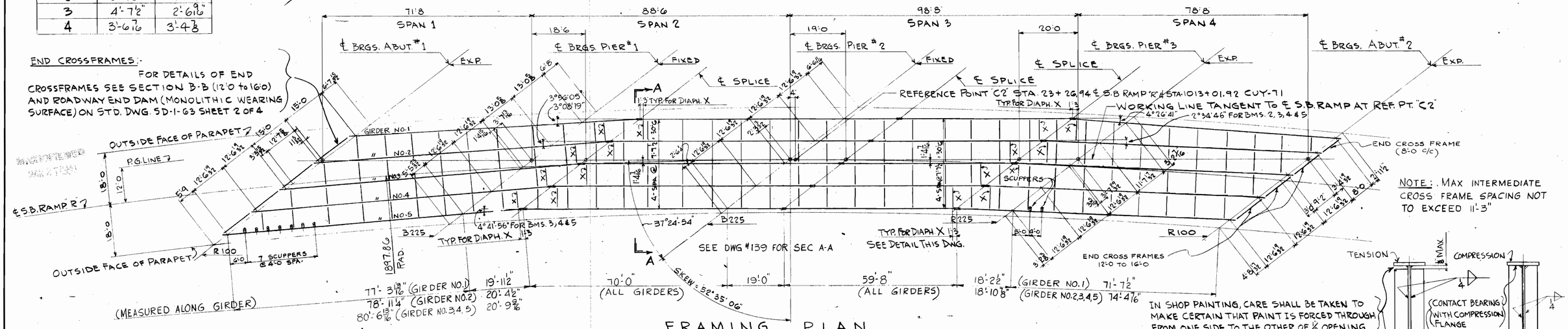
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.N.P.	DAF	DAF	Y.S.	PCK	1-29-65	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	CUY-71-9.60	

OFF-SET ALONG SKEW FROM FASCIA BEAM TO OUTSIDE FACE OF PARAPET

℄ SPAN	NORTH SIDE	SOUTH SIDE
1	7'-4 1/16"	4'-9 3/4"
2	6'-7 7/8"	4'-4 3/4"
3	4'-7 1/2"	2'-6 9/16"
4	3'-6 7/16"	3'-4 7/8"

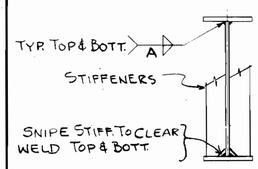
END CROSSFRAMES:-
FOR DETAILS OF END CROSSFRAMES SEE SECTION B-B (12'-0 to 16'-0) AND ROADWAY END DAM (MONOLITHIC WEARING SURFACE) ON STD. DWG. SD-1-63 SHEET 2 OF 4



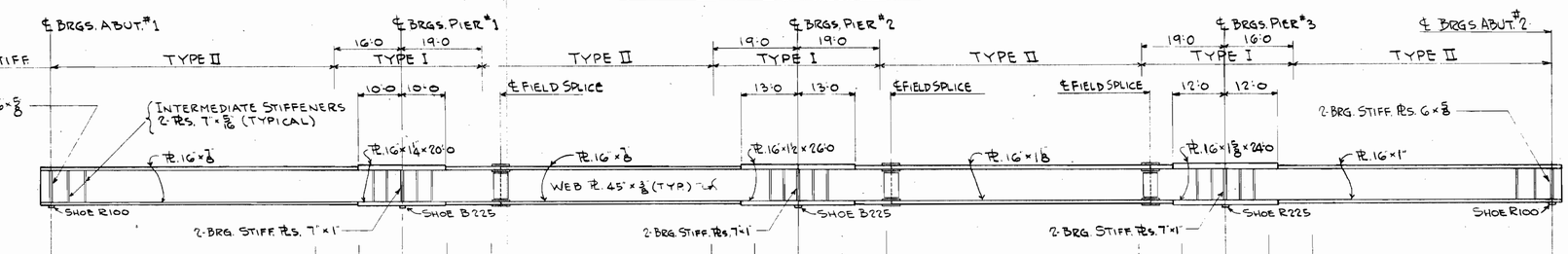
NOTE: MAX INTERMEDIATE CROSS FRAME SPACING NOT TO EXCEED 11'-3"

IN SHOP PAINTING, CARE SHALL BE TAKEN TO MAKE CERTAIN THAT PAINT IS FORCED THROUGH FROM ONE SIDE TO THE OTHER OF 1/8 OPENING

FRAMING PLAN

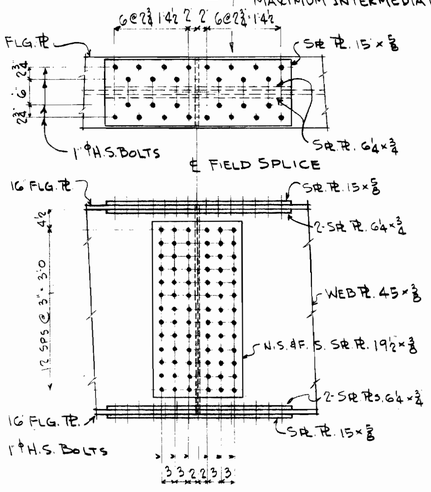


TYPICAL CROSS SECTION

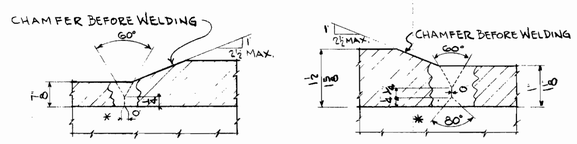


TYPICAL GIRDER ELEVATION

BEND IN GIRDER ALIGNMENT NOT SHOWN
BEND SPLICE PLATES AS NECESSARY (SEE FRAMING PLAN)

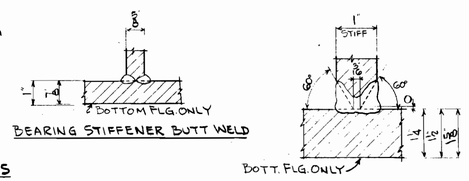


TYPICAL FIELD SPLICE



UNEQUAL FLANGE PLATES — UNEQUAL FLANGE PLATES

FLANGE SPLICES



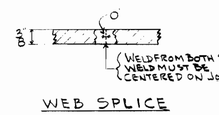
BEARING STIFFENER BUTT WELD — BEARING STIFFENER BUTT WELD

WELDING NOTES

1- ALL THE ABOVE FULL PENETRATION WELDS SHALL BE BACK-GAUGED AND WELDED AFTER WELDING FAR SIDE.
2- BUTT WELDS ON THE FLANGE PLATES SHALL BE GROUND FLUSH, THE FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS.

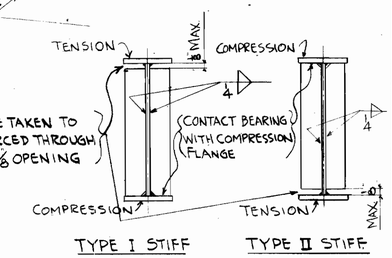
MARK	FLG. PL. THICKNESS	LEG SIZE OF FILLET WELD
A	7/8, 1, 1 1/8, 1 1/4 & 1 1/2	5/16
	1 5/8	3/8

TABLE OF WELD SIZES

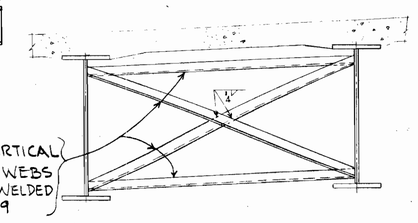


WEB SPLICE

✱ - WELD AFTER PLACING AT LEAST ONE PASS ON OTHER SIDE

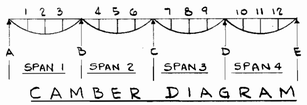


TYPE I STIFF — TYPE II STIFF.



DIAPHRAGM "X"
TYPICAL AT SPLICES (INDICATED ON PLAN)

DIAPHRAGM ∠s 3×3×5/16 WELD BOTH SIDES OF VERTICAL LEG AND TOP OF HORIZONTAL LEG TO BEAM WEBS WITH 1/4 CONTINUOUS FILLET WELD OR WELDED TO STIFF. AS SHOWN ON SECT. AA DWG. #139



CAMBER DIAGRAM
DEFLECTION AT QUARTER POINTS

NOTES:-
WELDED PLATE GIRDERS: IF ADDITIONAL SHOP SPLICES ARE NECESSARY, THEIR LOCATIONS AND DETAILS SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL

DEFLECTION & CAMBER

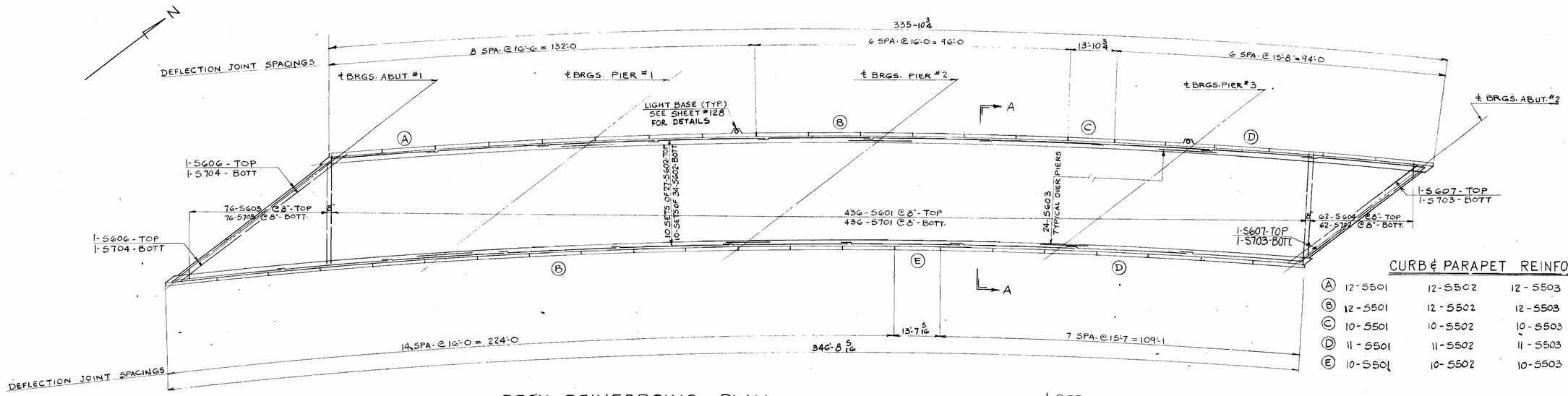
LOCATION	INSIDE BEAMS SEE CAMBER DIAGRAM												OUTSIDE BEAMS SEE CAMBER DIAGRAM											
POSITION	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
DEFLECTION DUE TO WEIGHT OF STEEL	1/32	1/16	5/32	1/32	1/16	3/32	5/32	1/8	3/32	0	3/32	1/32	1/32	1/16	0	0	3/32	0	1/32	1/8	1/32	3/32	1/32	
DEFLECTION DUE TO REMAINING DEAD LOAD	3/32	13/32	3/8	3/32	11/32	3/32	5/32	9/16	5/32	1/8	7/16	3/32	3/32	7/16	1/8	1/8	11/32	1/8	3/16	19/32	3/16	1/8	15/32	3/32
CONVEXITY REQUIRED FOR VERTICAL CURVE	1/4	11/32	1/4	29/32	25/32	1/2	1/2	3/4	25/32	3/16	4	3/16	1/4	11/32	1/4	29/32	25/32	1/2	1/2	3/4	25/32	3/16	1/4	3/16
SUM OF DEFLECTION AND CONVEXITY	3/8	13/16	3/8	1/32	3/16	5/8	11/16	1 7/16	31/32	5/16	25/32	5/16	5/8	27/32	3/8	1/32	7/16	5/8	23/32	15/32	1	11/32	13/16	5/16
REQUIRED CAMBER	3/8	7/8	3/8	1	3/8	5/8	3/4	3/4	1	3/8	3/4	3/8	3/8	7/8	3/8	1	3/8	5/8	3/4	3/4	1	3/8	3/4	3/8

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3, OHIO

FRAMING PLAN
BRIDGE NO. CUY-71-0997
S.B. RAMP "R" OVER CUY-71
STA. 21+69.80 TO STA. 25+11.91

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PCK	LAP		CJB	PCK	1-29-65	

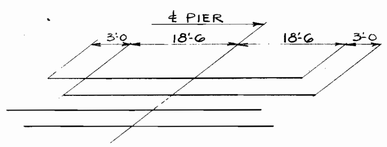
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	CUY.-71-9.60	



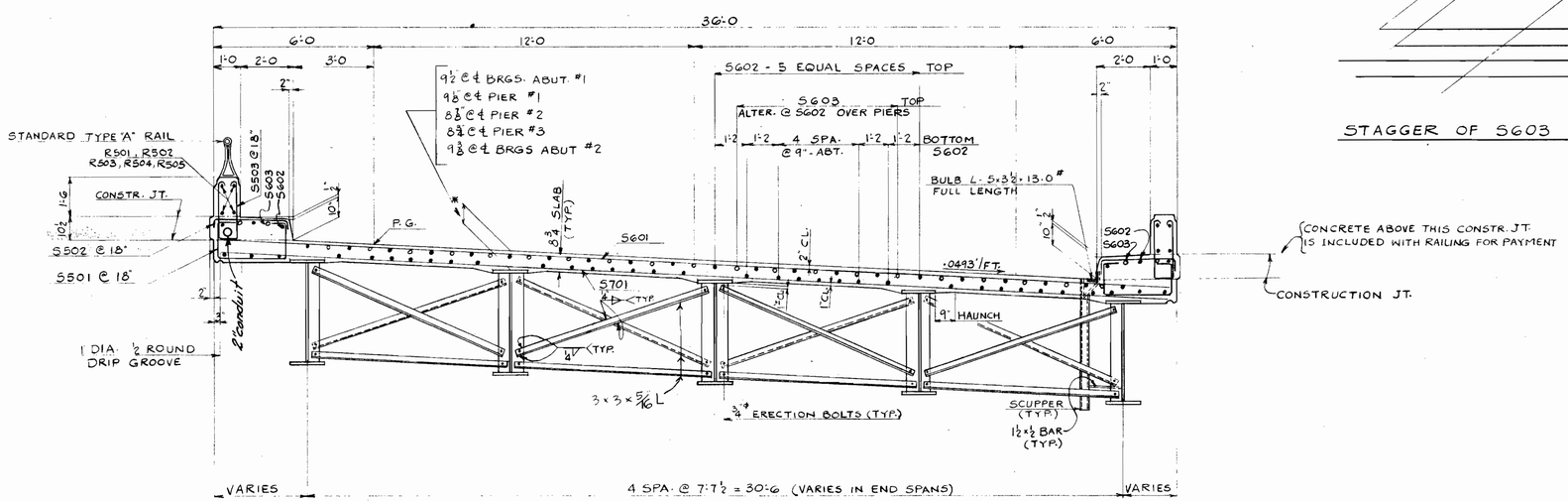
DECK REINFORCING PLAN

CURB & PARAPET REINFORCEMENT

A	12-S501	12-S502	12-S503	4-R505
B	12-S501	12-S502	12-S503	4-R502
C	10-S501	10-S502	10-S503	4-R506
D	11-S501	11-S502	11-S503	4-R507
E	10-S501	10-S502	10-S503	4-R508



STAGGER OF S603 BARS



SLAB THICKNESS SHOWN INCLUDES 1" FOR MONOLITHIC WEARING SURFACE.

SECTION AA

NOTES

— CONCRETE SHALL BE CLASS "C" FOR SUPERSTRUCTURE.

— DECK SLAB HAUNCH: A TYPICAL HAUNCH WIDTH OF 9" IS USED FOR COMPUTING QUANTITY 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.

— * THIS IS THE NOMINAL DIMENSION. THE QUANTITY OF THE 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 GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3, OHIO

DECK DETAILS

BRIDGE NO. CUY.-71-0997
S.B. RAMP "R" OVER CUY.-71
STA. 21+69.80 TO STA. 25+11.91

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PCK	VR		CJB	PCK	1-29-65	