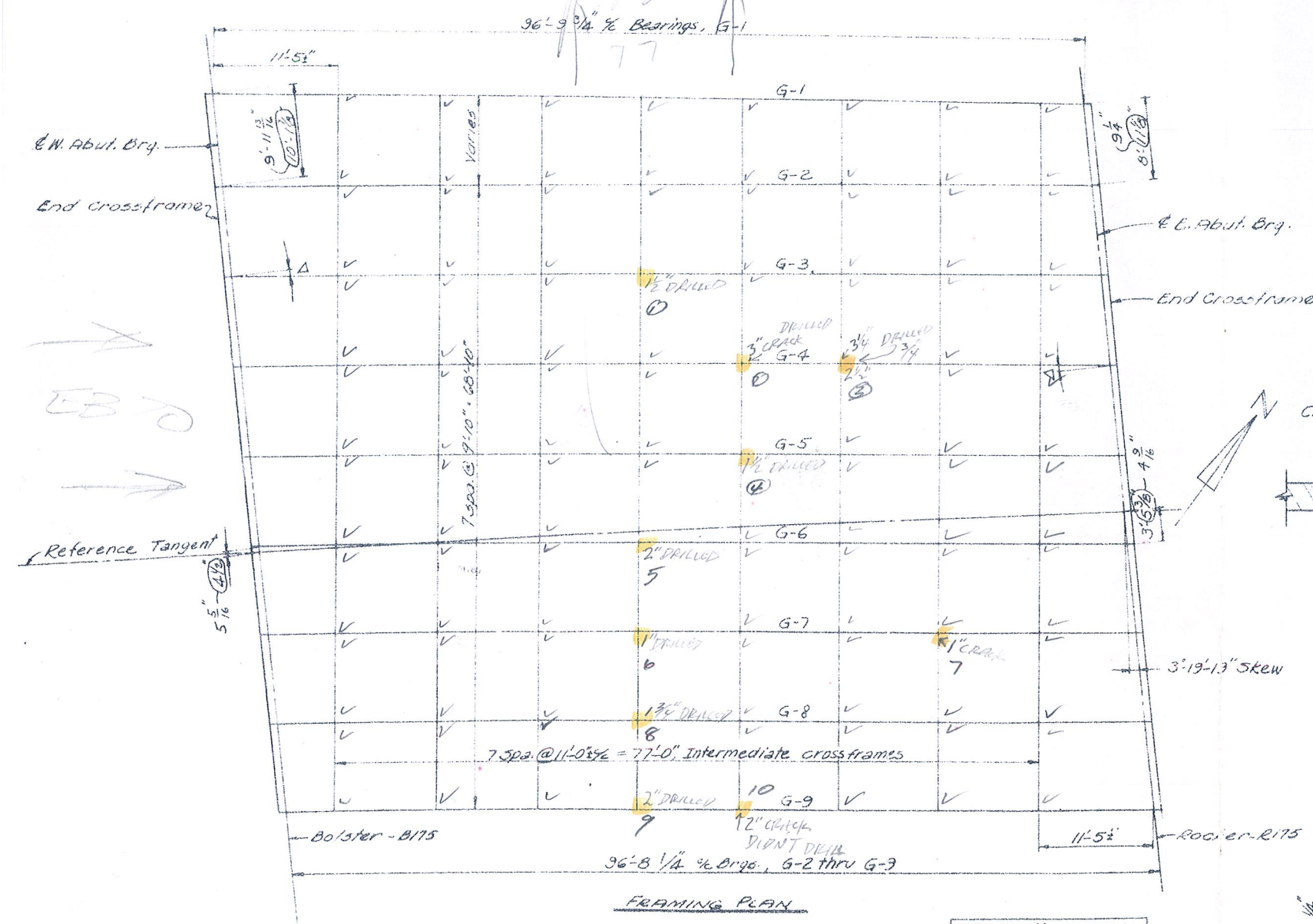


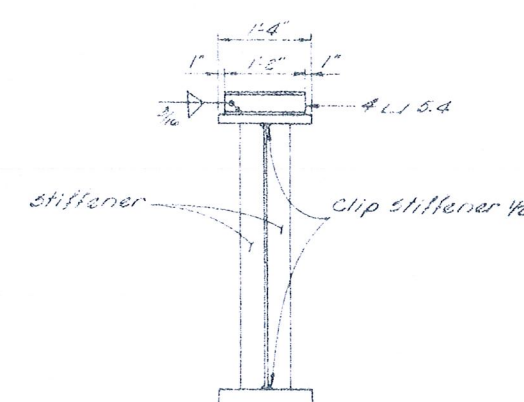
GUE
70-0994 R
CRACK INSPECTION
(see)

HALF GIRDER ELEVATION

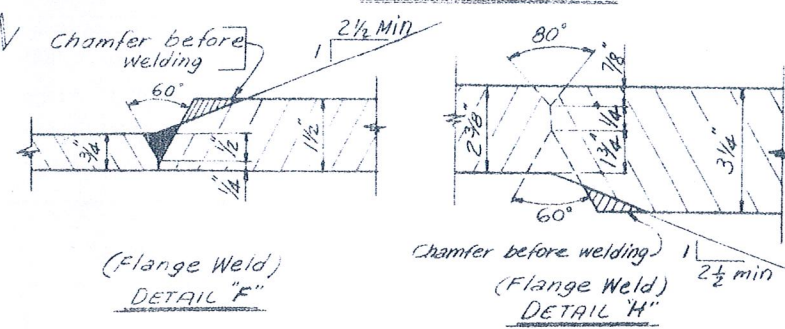


FRAMING PLAN

Deflection Angles	
Girder	Δ
G-1	6"-18"
G-2 thru G-9	5"-35"

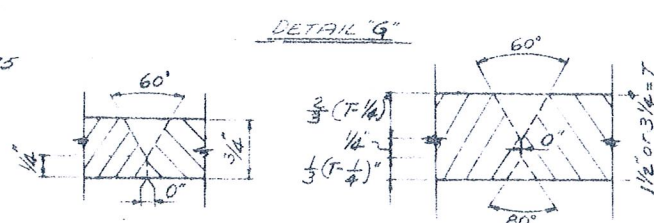


TYPICAL SECTION THRU GIRDER



See "Submerged Arc Note" on sheet 403

Weld from both sides
Welds must be centered on joints



OPTIONAL FLANGE SPLICE
Equal Thicknesses

NOTES:

1. Bearing stiffeners shall be milled to provide bearing contact with flange plates. Intermediate stiffeners shall have a close fit top and 1/8 inch max on bottom flange.
2. If additional shop splices are necessary, their location and detail shall be submitted to the Director for approval.
3. SHEAR CONNECTORS - Welded studs may be substituted for the channel shear connectors shown. The contractor shall submit 4 copies of computations and details of the studs for approval.
4. Shop web splices are optional.
5. The 1/2" side plates attached to the sole plate shall be omitted on all bearing devices on girders G-1, G-2, G-8 & G-9.

DEFLECTION and CAMBER				
LOCATION	1/4 & 3/4 PL.		1/2 PL.	
	Int.	Ext.	Int.	Ext.
Defl. due to wt. of steel	3/8"	3/8"	1/2"	1/2"
Defl. due to remain DL	1 1/8"	1 1/8"	2"	1 1/8"
Convexity due to Horiz. Curve	0	0	0	0
Total Camber	1 3/4"	1 1/2"	2 1/2"	2 1/4"
Required Camber	1 3/4"	1 3/4"	2 1/2"	2 1/2"

Int. indicates interior girders
Ext. indicates exterior girders

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
SUPERSTRUCTURE DETAILS BRIDGE No. GUE-40-0994 (E.B.) E.B. U.S. 40 OVER N.D. U.S. 21 GUERNSEY COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
RT	BAR		DFH	TLU	7-10-63
					REVISED
					2-6-64 11-20-64

TS. 592

GUERNSEY COUNTY
GUE-40-B.93
Part 2

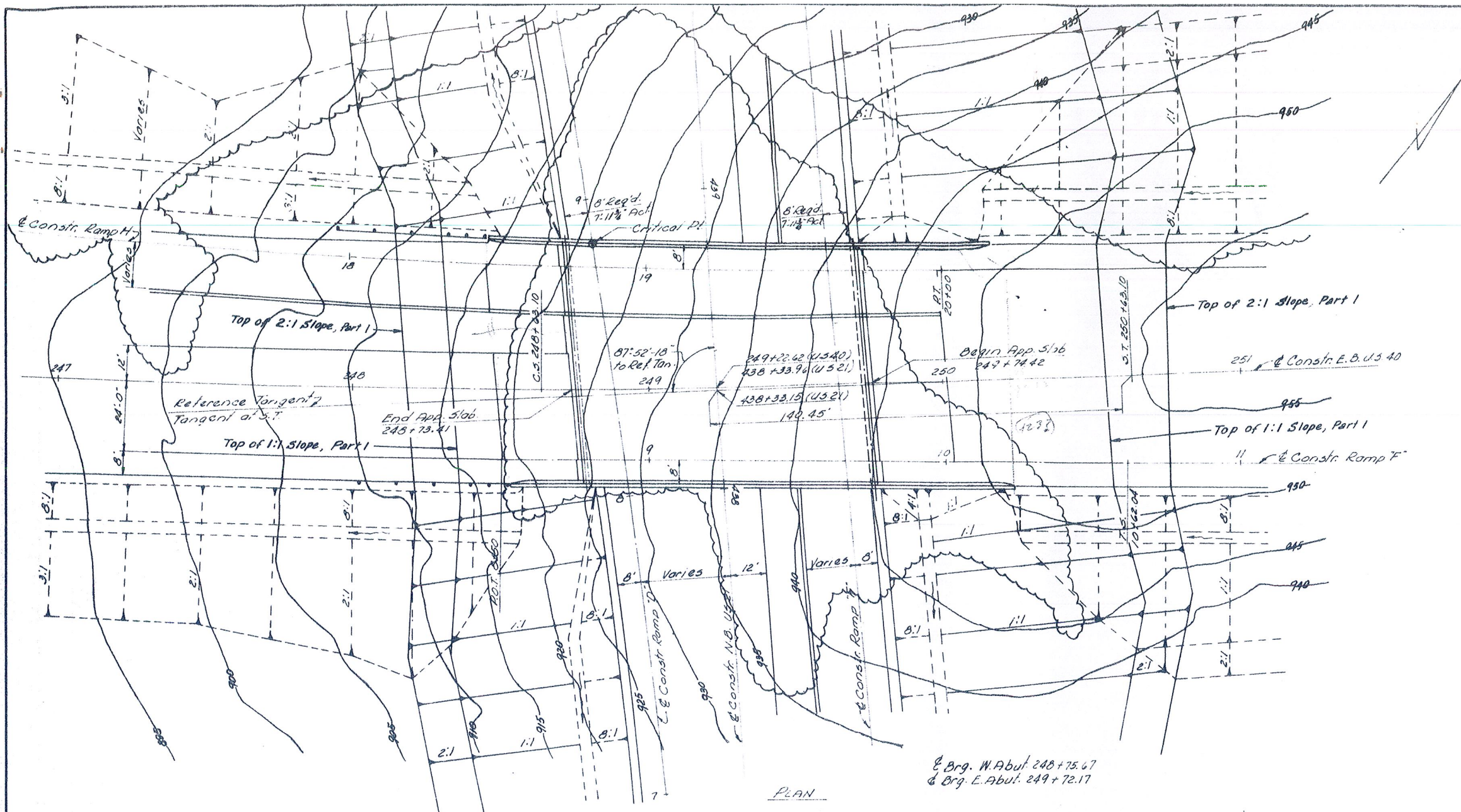
CURVE DATA

	E.B. U.S. 40	Ramp D	Ramp F	Ramp H
PI	239+85.00	7+77.63	13+38.30	18+50.14
Δ	40°50'22"	6°49'15"	46°00'00"	6°00'00"
D _c	2°00'	1°30'	25°00'	2°00'
L _s	200'		400'	

N.B. U.S. 21	
P.V.I.	434+00
V.C.	2150'
Elev.	875.22
Corr.	11.93
P.G.	863.29

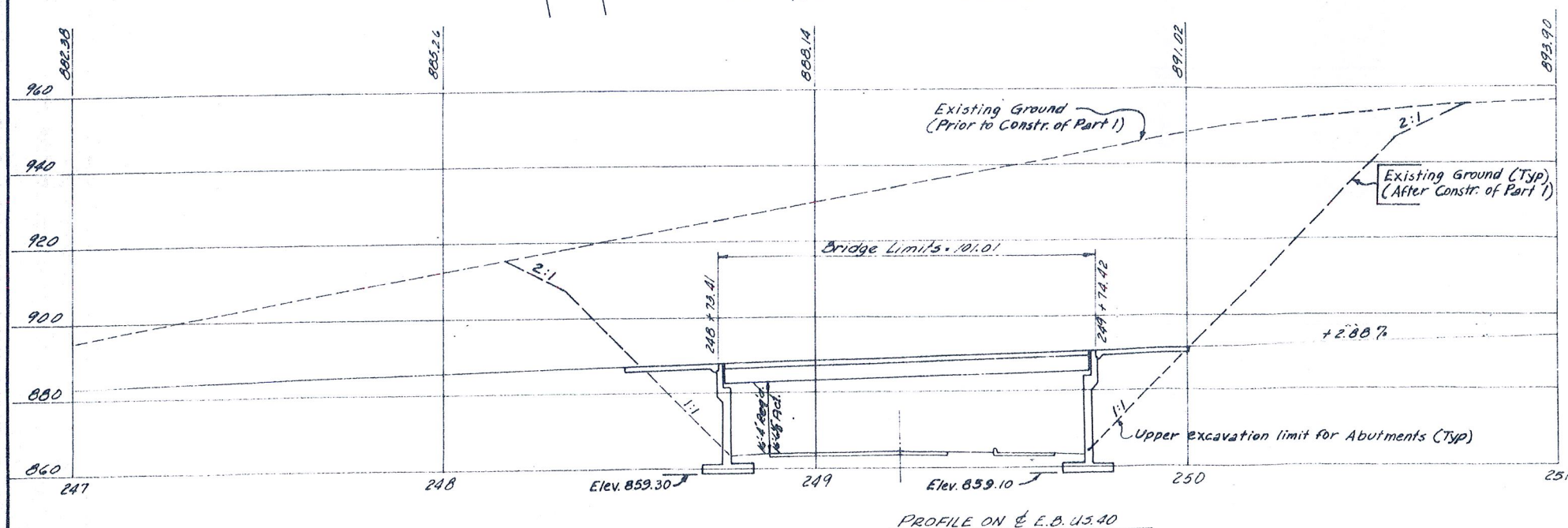
PROPOSED STRUCTURE

TYPE - Welded girder with composite concrete deck and concrete sub-structure.
SPAN - 96'-6" along E.B. U.S. 40
ROADWAY - Variable 11' concrete parapet with aluminum railing and 1'-2" curbs.
LOADING - C.F-2000 (57) adequate for AASHTO alternate loading.
WEARING SURFACE - 1" monolithic concrete.
SKW - 3°19'19" R.F. with respect to reference tangent.
ALIGNMENT - 2°00' curve and spiral
APPROACH SLABS - 25' long, see sheet 469
SUPERELEVATION - VARIES, .064 at 248+00, .056 at 250+50



PLAN

Br. W. Abut. 248+75.47
Br. E. Abut. 249+72.17



PROFILE ON E.B. U.S. 40

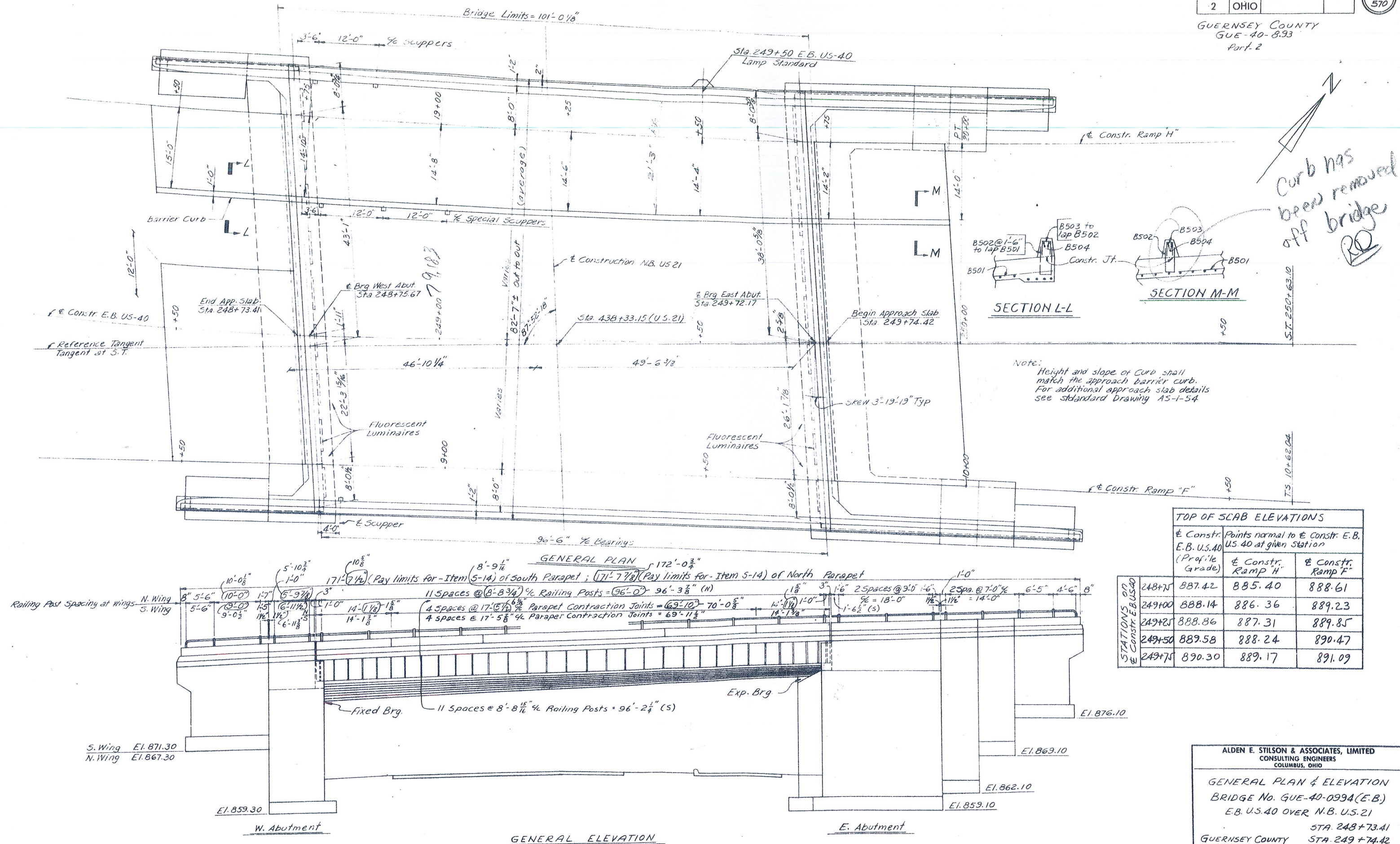
Note:
The contours shown on this sheet indicate the existing ground prior to the construction of GUE-40-B.93, Part 1. The solid slope lines and the contours outside these slope lines indicate the existing ground following the completion of GUE-40-B.93, Part 1. The dashed slope lines indicate the grading to be performed with this contract.

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CONSULTING ENGINEERS
COLUMBUS, OHIO

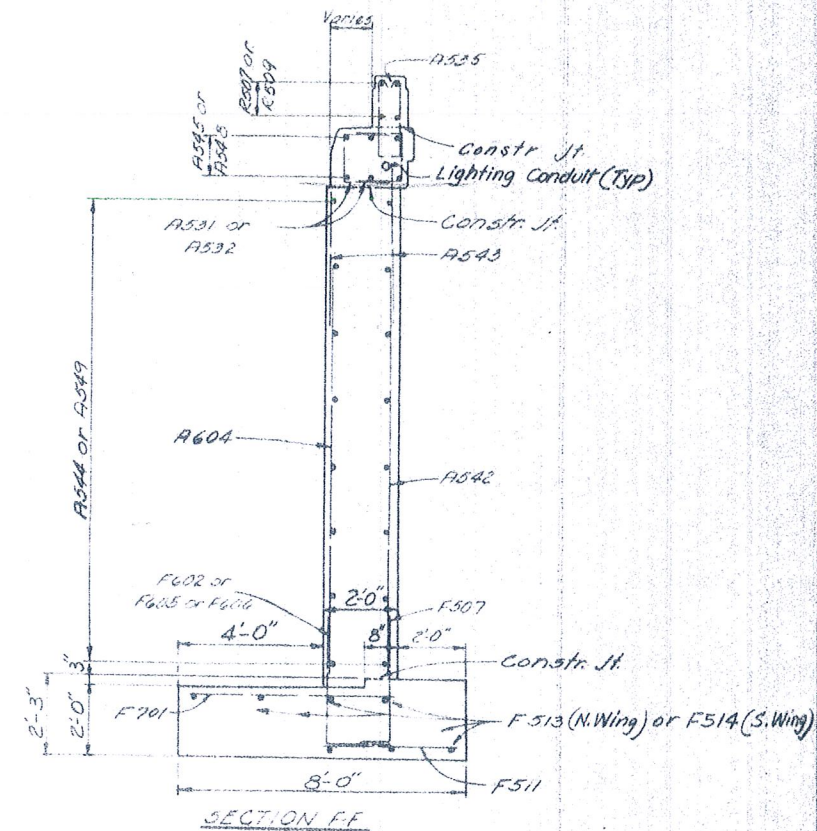
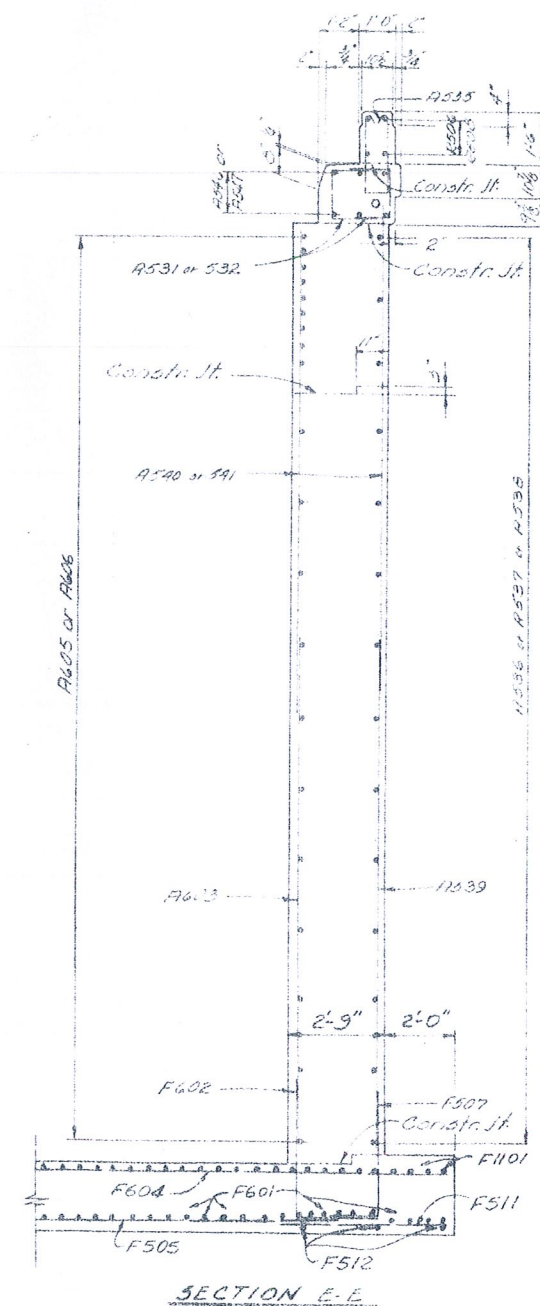
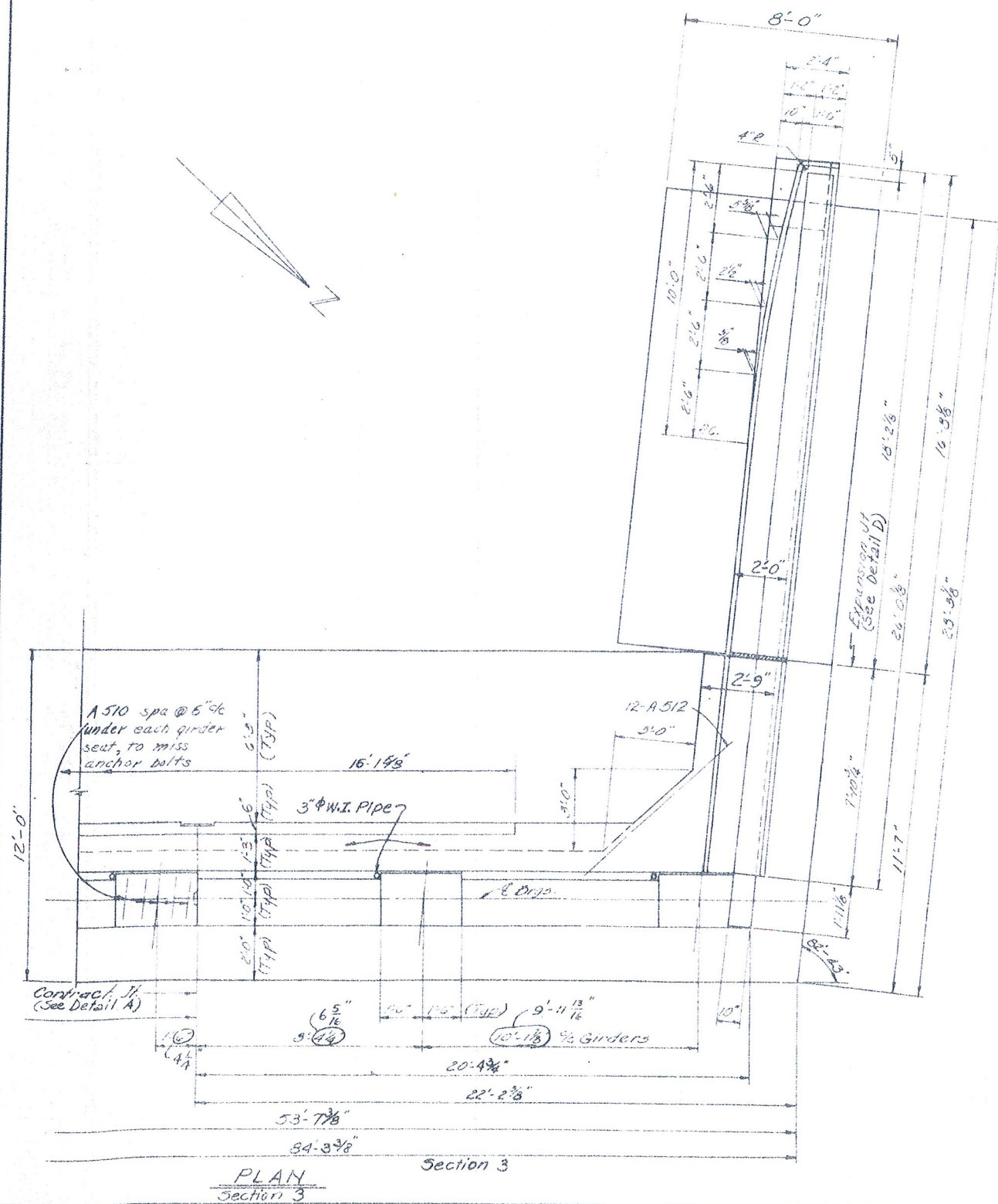
SITE PLAN
BRIDGE No. GUE-40-099A (E.B.)
E.B. U.S. 40 OVER N.B. U.S. 21

STA. 248+73.41
GUERNSEY COUNTY STA. 249+74.42

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TLV	TLV	J.C.W.	fn	T.L.J.	7/10/63	



TOP OF SLAB ELEVATIONS			
STATIONS ON E.B. US 40	E. Constr. E.B. U.S. 40 (Profile Grade)	Points normal to E. Constr. E.B. U.S. 40 at given Station	
		E. Constr. Ramp H	E. Constr. Ramp F
248+75	887.42	885.40	888.61
249+00	888.14	886.36	889.23
249+25	888.86	887.31	889.85
249+50	889.58	888.24	890.47
249+75	890.30	889.17	891.09



NOTES:
Curb and parapet dimensions are typical unless otherwise shown.
For additional notes and details, see sheets 470 and 472 thru 475.
GROUNDING SYSTEM: See sheet 406

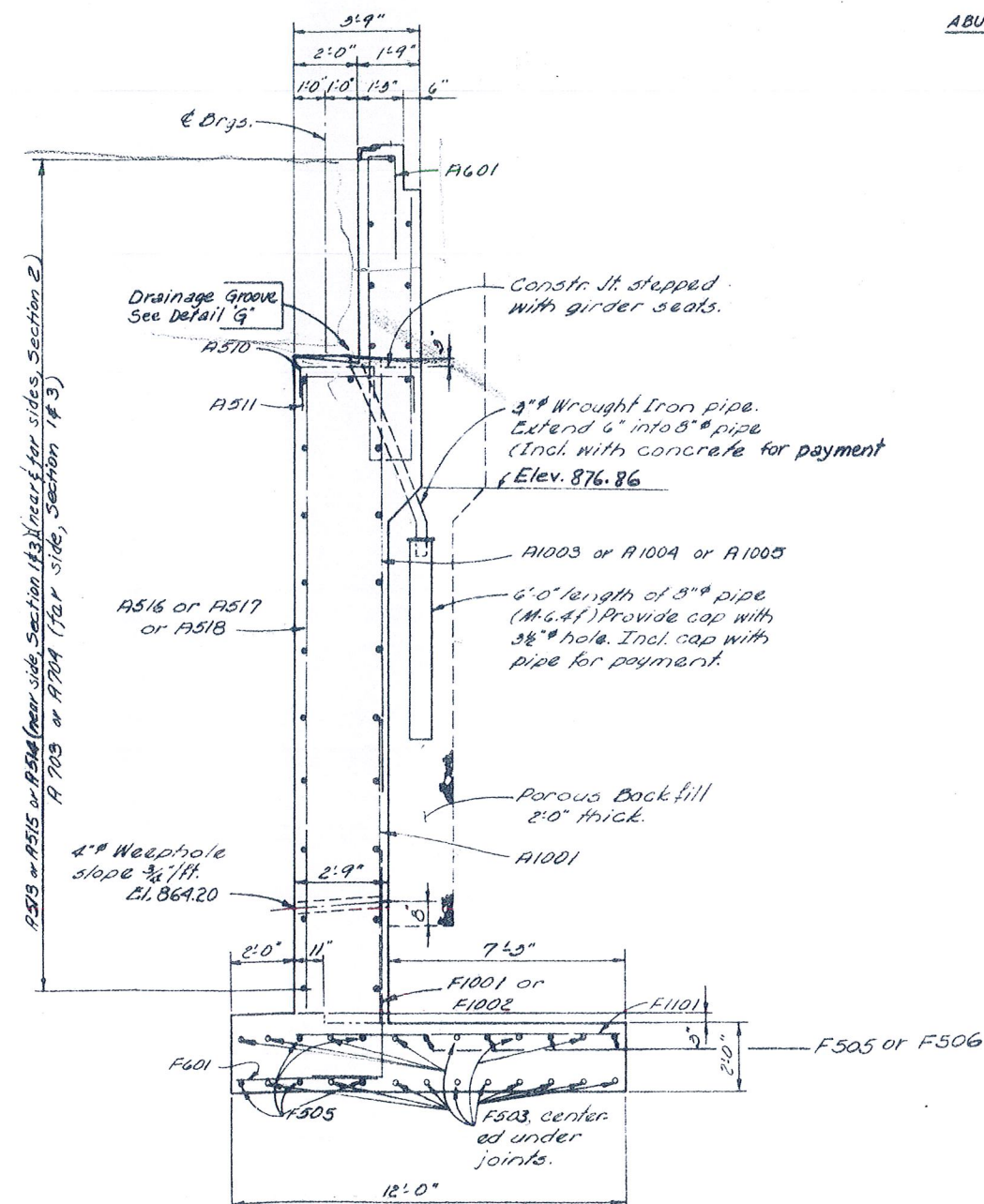
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
WEST ABUTMENT DETAILS BRIDGE No. GUE-40-0994 (E.D.) E.D. U.S. 40 OVER N.D. U.S. 21 GUERNSEY COUNTY STA-243 + 73.41 249 + 74.42						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	PAW		DFH	TLU	7-18-63	11-20-63

Part-2

ABUTMENT NOTES:

Procedure : Before the backfill is constructed the granular backfill shall be placed and compacted upto the level of the subgrade, with a 1:1 slope from the bridge seat to the subgrade.

Bridge Seat Reinforcing: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat on the West Abutment so as to avoid interference with the drilling of anchor bar holes.



TYPICAL SECTION

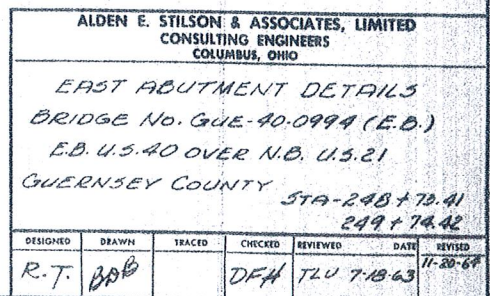
ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

WEST ABUTMENT DETAILS
BRIDGE No. GUE-40-0994 (E.B.)
E.B. US 40 OVER N.B. U.S. 21
GUERNSEY COUNTY

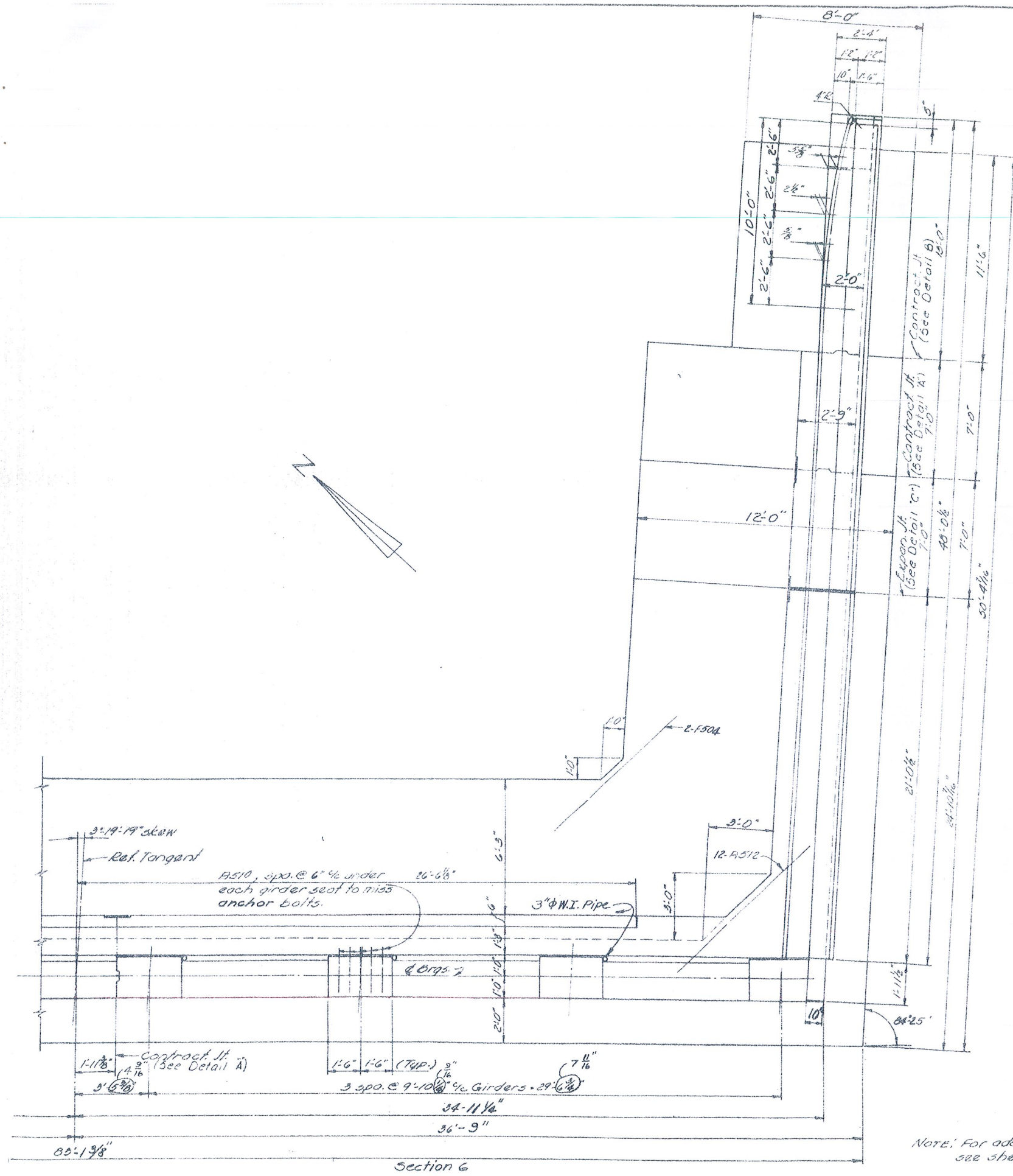
STA-243 + 73.41
249 + 74.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
R.T.	BSB		DFH	TLU	7/16/63	

Part-2



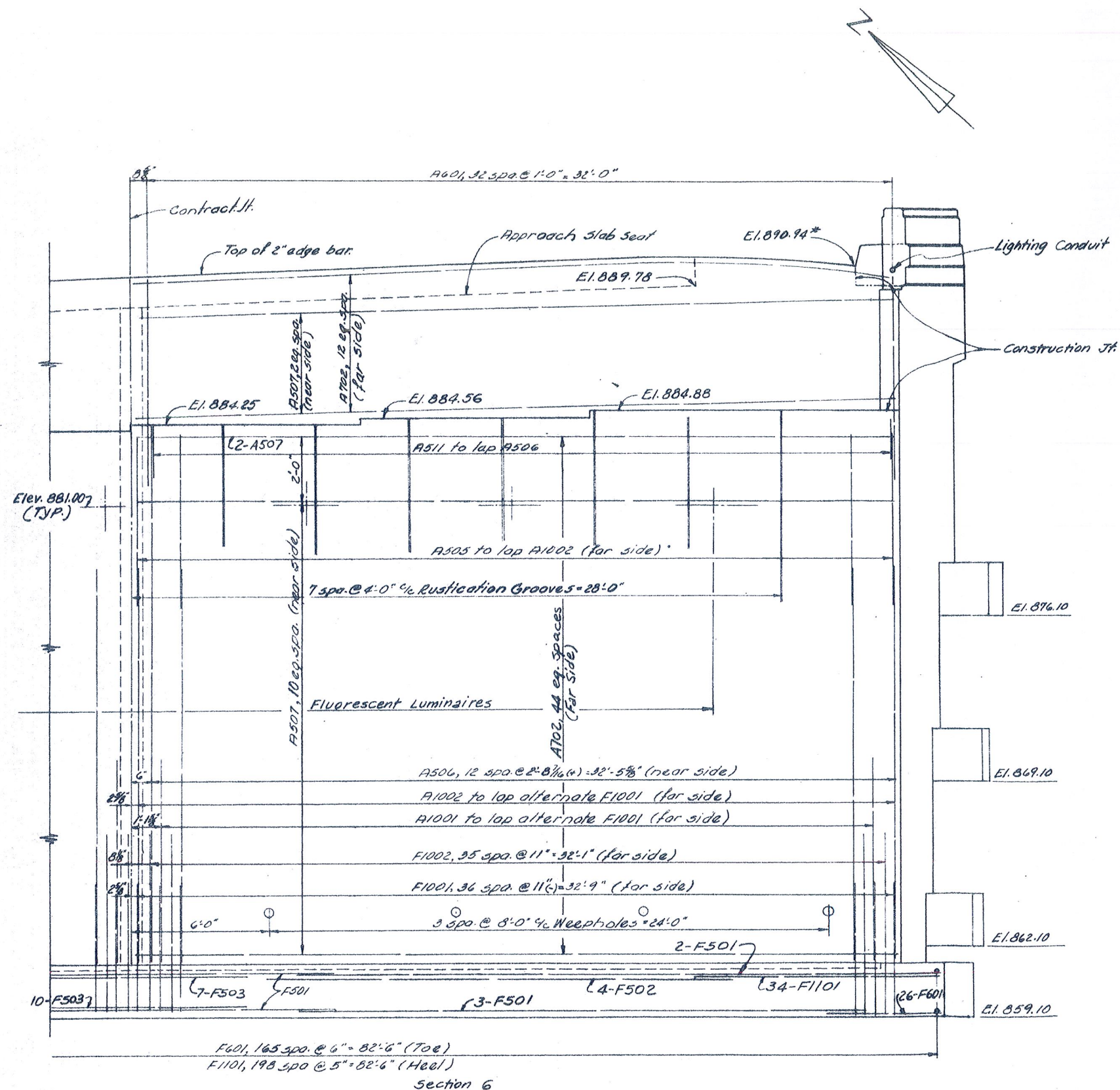
GUERNSEY COUNTY
GUE-40-B.93
Part-2



NOTE: For additional details & Notes
see sheets 473, 475, & 477 thru 480

PLAN
Section 6

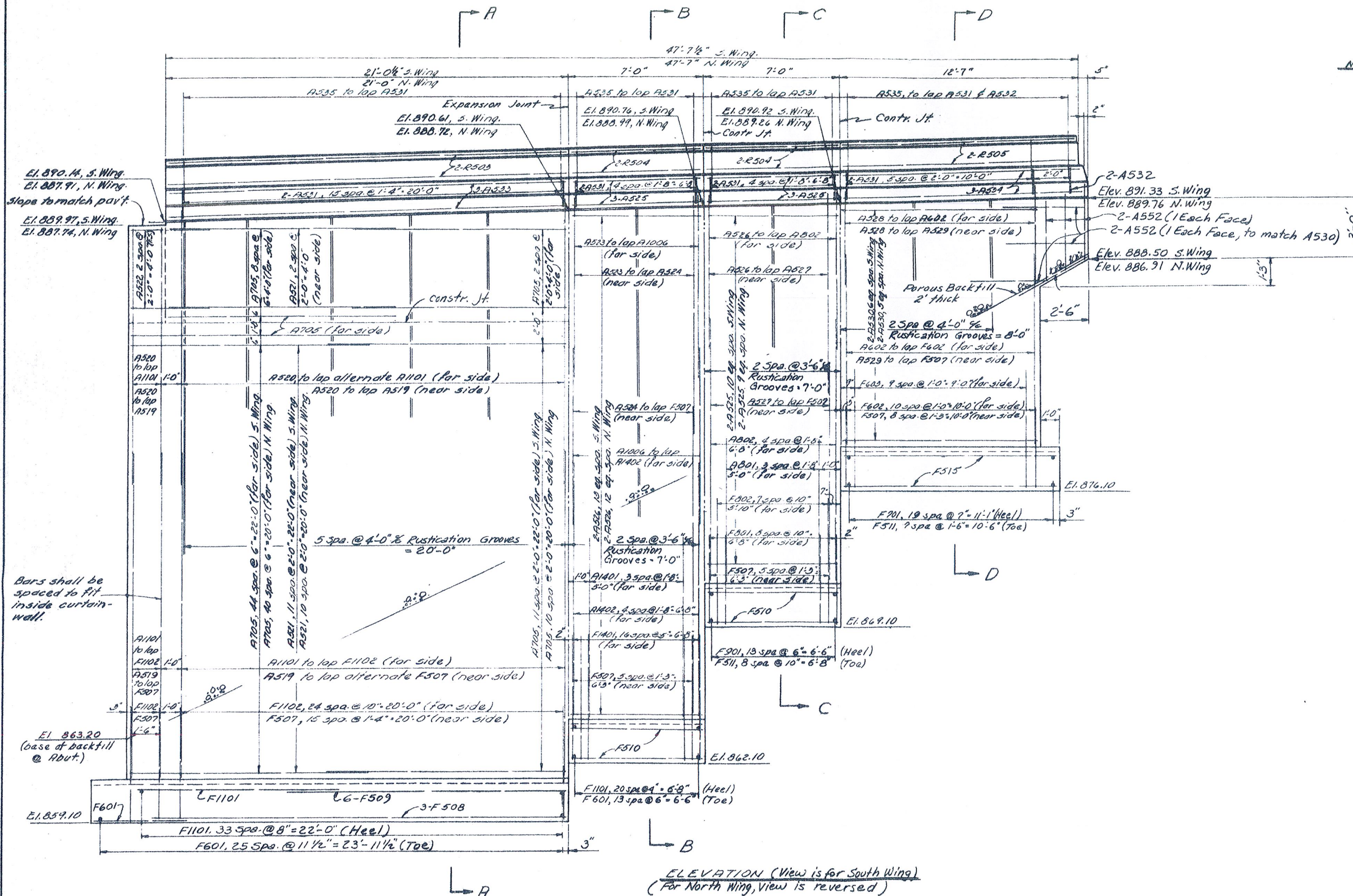
ALDEN E. STILSON & ASSOCIATES, LIMITED						
CONSULTING ENGINEERS						
COLUMBUS, OHIO						
EAST ABUTMENT DETAILS						
BRIDGE No. GUE-40-0994 (E.B.)						
E.B. U.S. 40 OVER N.B. U.S. 21						
GUERNSEY COUNTY STA-248+70.41						
249+74.42						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	BOB		DFH	TLU	7-18-63	11-20-64



ELEVATION
Section 6

NOTES: For additional details and Notes
see sheets 473, 475, 476, 477, & 480
Elevations marked with
an asterisk are to top of
2" edge bar.

ALDEN E. STILSON & ASSOCIATES, LIMITED						
CONSULTING ENGINEERS						
COLUMBUS, OHIO						
EAST ABUTMENT DETAILS						
BRIDGE No. GUE-40-0994 (E.B.)						
E.B. U.S. 40 OVER N.B. U.S. 21						
GUERNSEY COUNTY STA. 248+79.41						
249+74.42						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	DRB		DFH	TLU	7.10.63	

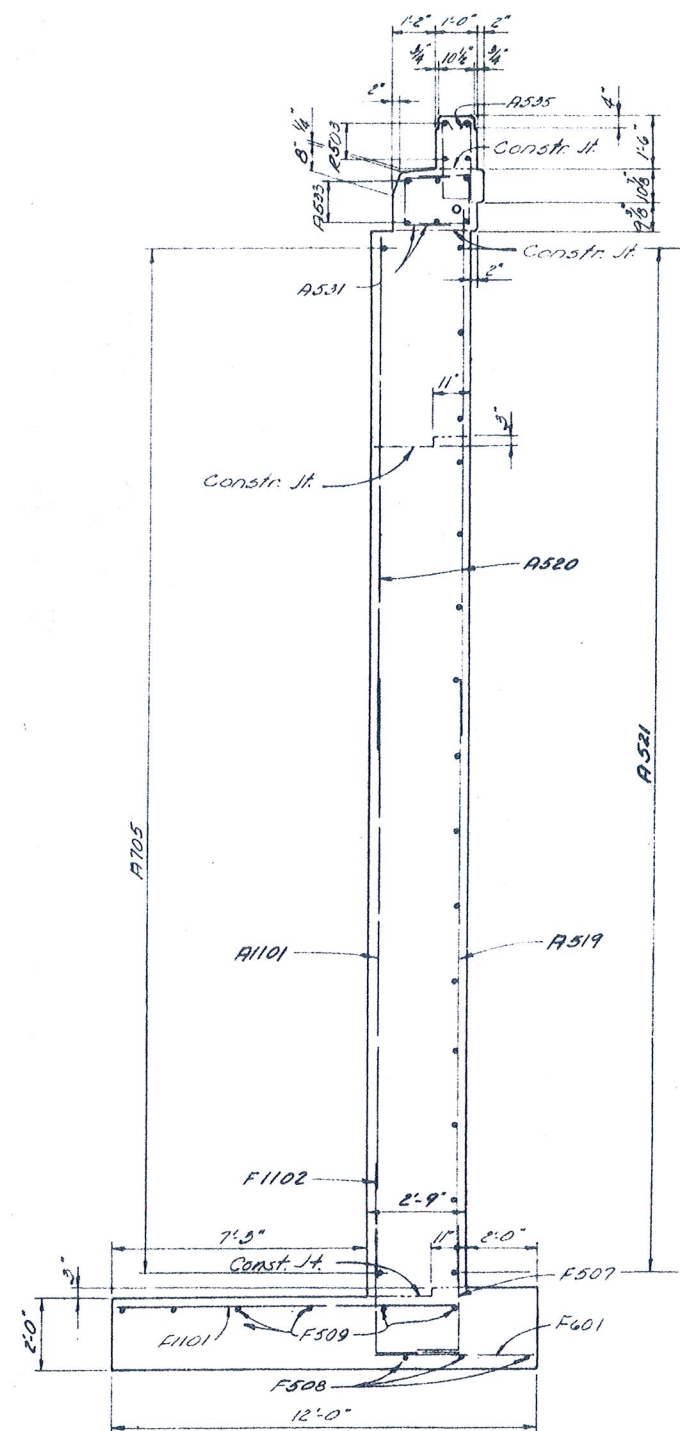


NOTES:

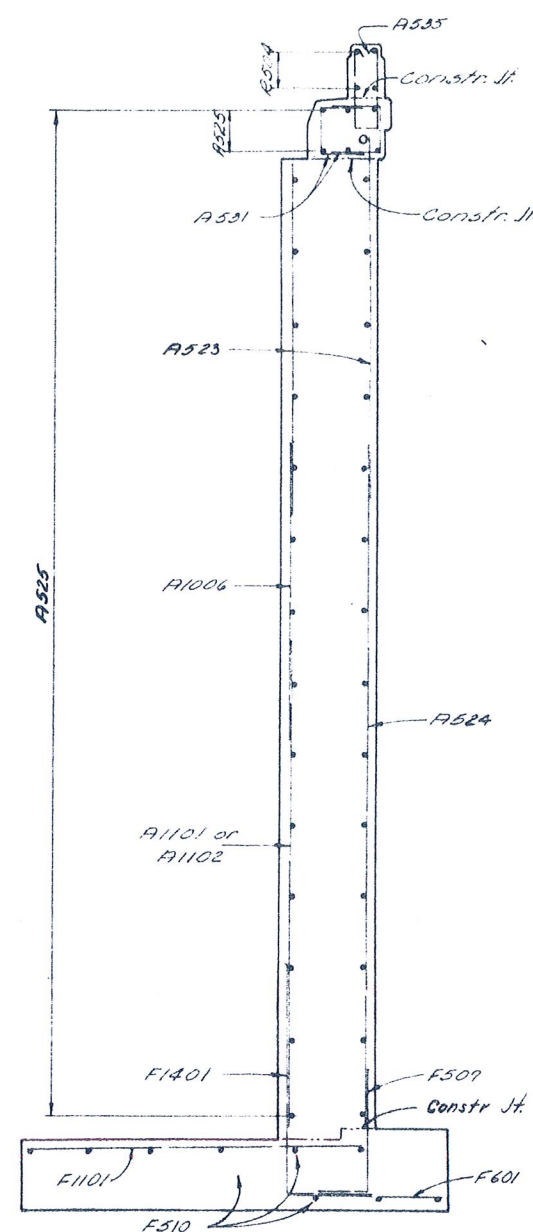
Slope Porous Backfill between elevations shown.
For additional notes and details See sheets 473, 475 thru 478 & 480

ALDEN E. STILSON & ASSOCIATES, LIMITED						
CONSULTING ENGINEERS						
COLUMBUS, OHIO						
EAST ABUTMENT						
WING DETAILS						
BRIDGE No. GUE-40-0994 (E.B.)						
E.B. US40 OVER N.B. U.S. 21						
GUERNSEY COUNTY STA 248+73.41						
249+74.42						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.M.		DFH	TLU	7-10-63	

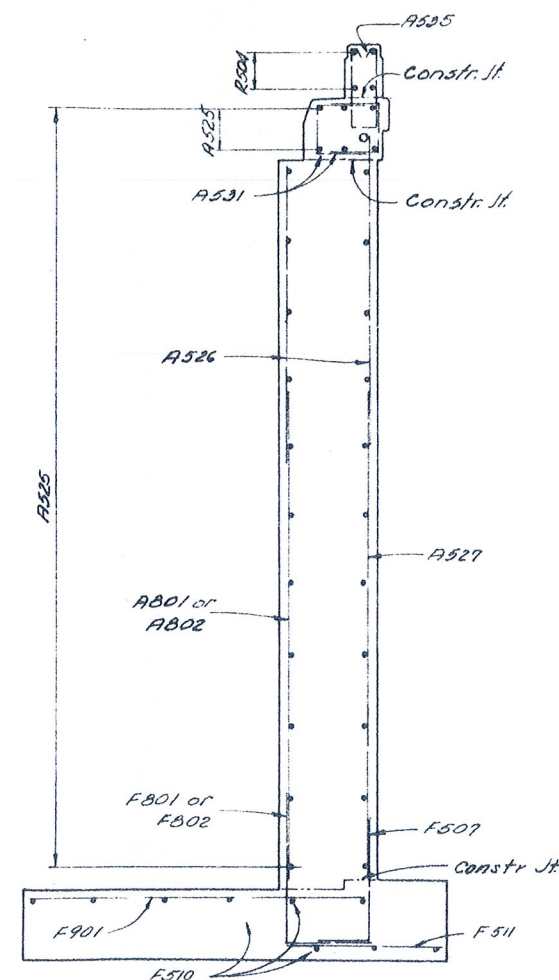
NOTE:
All dimensions typical unless otherwise shown.
For additional notes and details, see sheets 473 & 475 thru 479



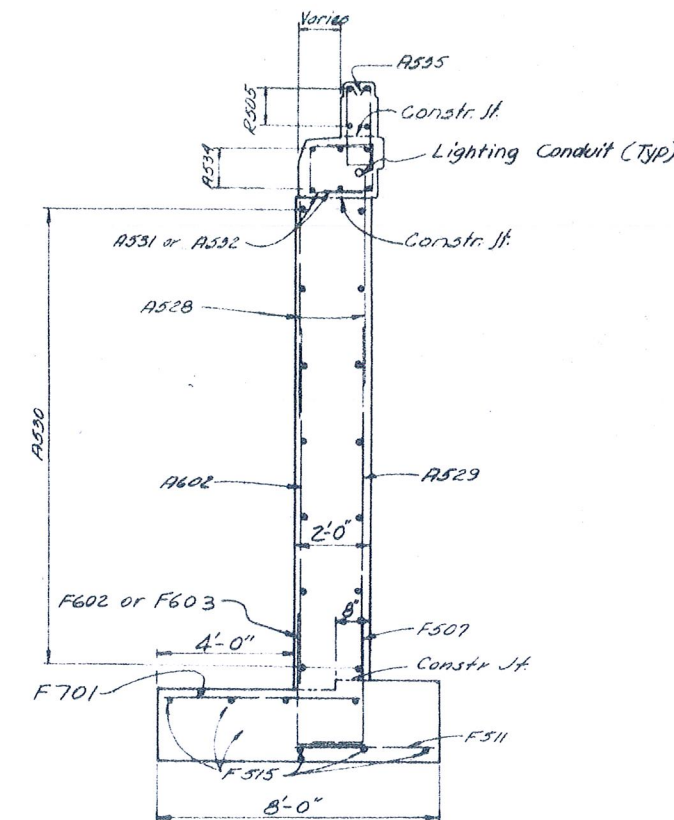
SECTION A-A



SECTION B-B

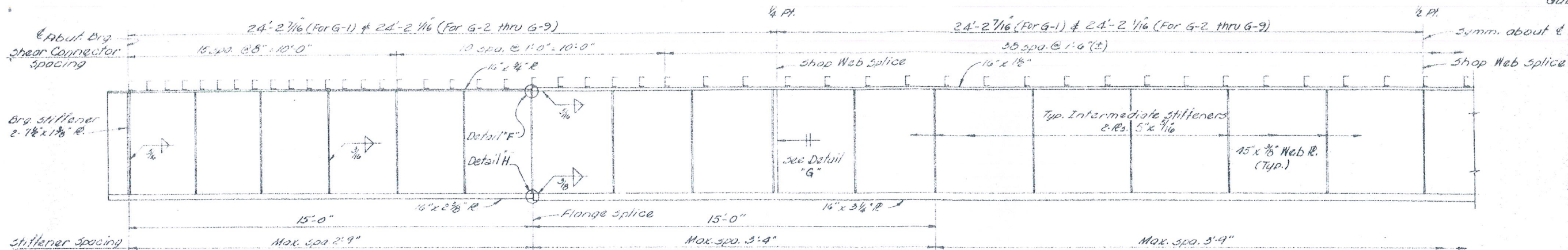


SECTION C-C

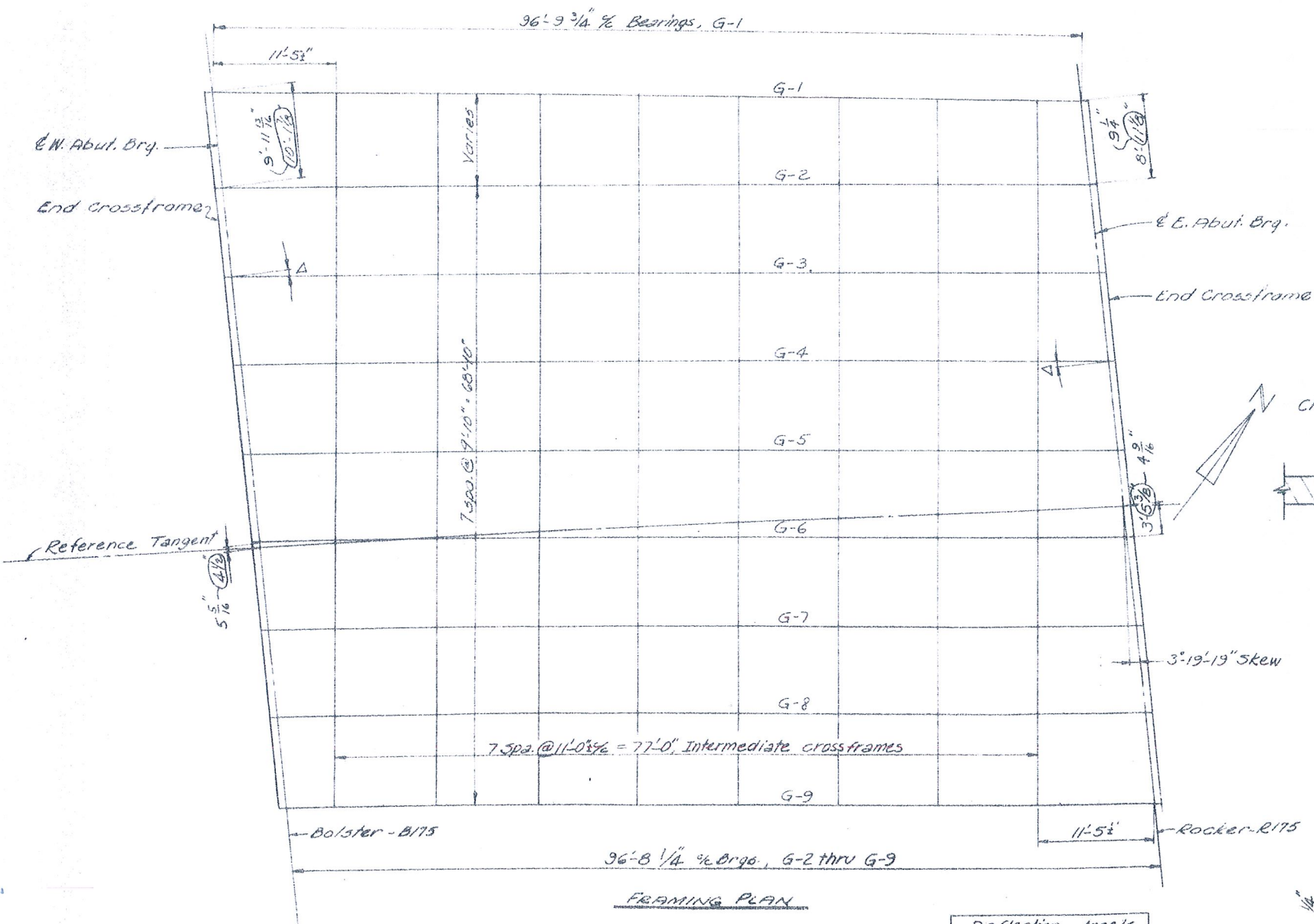


SECTION D-D

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
EAST ABUTMENT WING DETAILS						
BRIDGE No. GUE-40-0994 (E.B.)						
E.B. U.S. 40 OVER N.B. U.S. 21						
GUERNSEY COUNTY STA 248+79.41						
249+74.42						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	RAP		DEH	TLU	7/18/63	

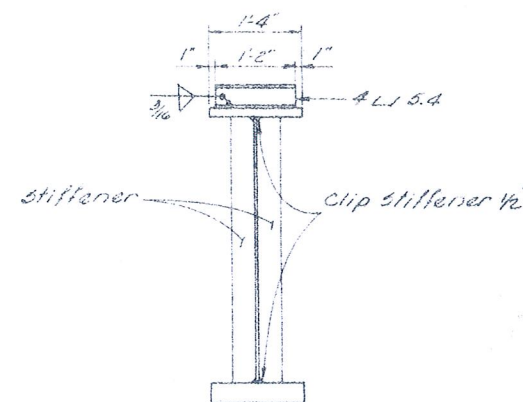


HALF GIRDER ELEVATION

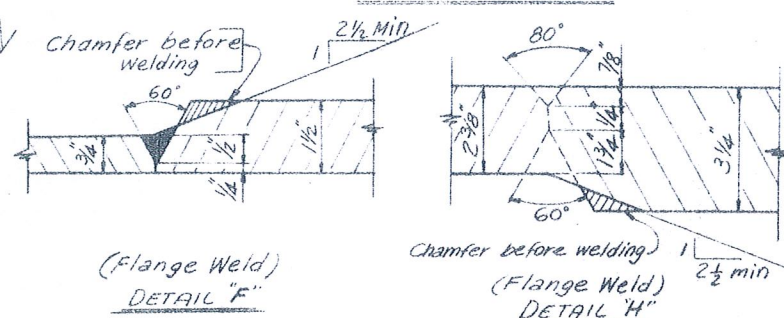


FRAMING PLAN

Girder	Deflection Angles
G-1	6'-18"
G-2 thru G-9	5'-35"



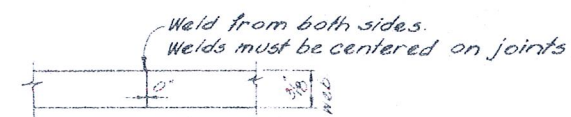
TYPICAL SECTION THRU GIRDER



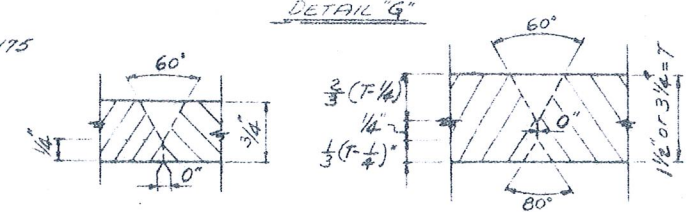
DETAIL "F"

DETAIL "H"

See "Submerged Arc Note" on sheet 403



DETAIL "G"



OPTIONAL FLANGE SPLICE
Equal Thicknesses

NOTES:

- Bearing stiffeners shall be milled to provide bearing contact with flange plates. Intermediate stiffeners shall have a close fit top and 1/8 inch max on bottom flange.
- If additional shop splices are necessary, their location and detail shall be submitted to the Director for approval.
- SHEAR CONNECTORS - Welded studs may be substituted for the channel shear connectors shown. The contractor shall submit 4 copies of computations and details of the studs for approval.
- Shop web splices are optional.
- The 1/2" side plates attached to the sole plate shall be omitted on all bearing devices on girders G-1, G-2, G-8 & G-9.

LOCATION	1/4 & 3/8 Pl.		1/2 Pl.	
	Int.	Ext.	Int.	Ext.
Defl. due to wt. of steel	3/8	3/8	1/2	1/2
Defl. due to remain DL	1 1/8	1 1/8	2	1 1/8
Convexity due to Horiz. Curve	0	0	0	0
Total Camber	1 3/4	1 1/2	2 1/2	2 1/4
Required Camber	1 3/4	1 3/4	2 1/2	2 1/2

Int. indicates interior girders
Ext. indicates exterior girders

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. GUE-40-0994 (E.B.)
E.B. U.S. 40 OVER N.B. U.S. 21
GUERNSEY COUNTY STA. 240+73.41
249+74.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
RT	BBB		DFH	TLU	7.10.63	11-20-64

* This dimension is from the top of the slab to the top of the web of the girder and 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 girder may not have the exact camber or conformation required to place it parallel to the finished grade.

**The haunch in the super-elevated deck slab adjacent to the top of steel girder, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" on the low side and between 9" and 12" on the high side. Except on the high side, the maximum slope shall not exceed 3 in/ft. Payment for deck slab conc. shall be based on the 9" width.

Concrete parapets are included in Item 5-14 for payment

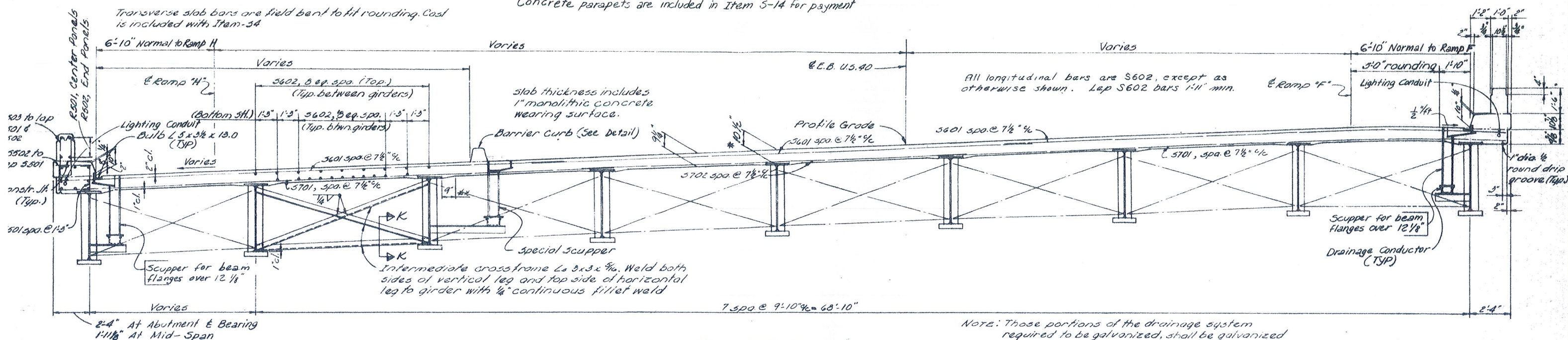
Curb and parapet dimensions and reinforcing are typical for both sides

Transverse slab bars shall be placed parallel to the
 & Bearing and spaced $7\frac{1}{2}$ " $\frac{1}{4}$ along Girder

For Details of Bridge lighting support See
Sheet 405.

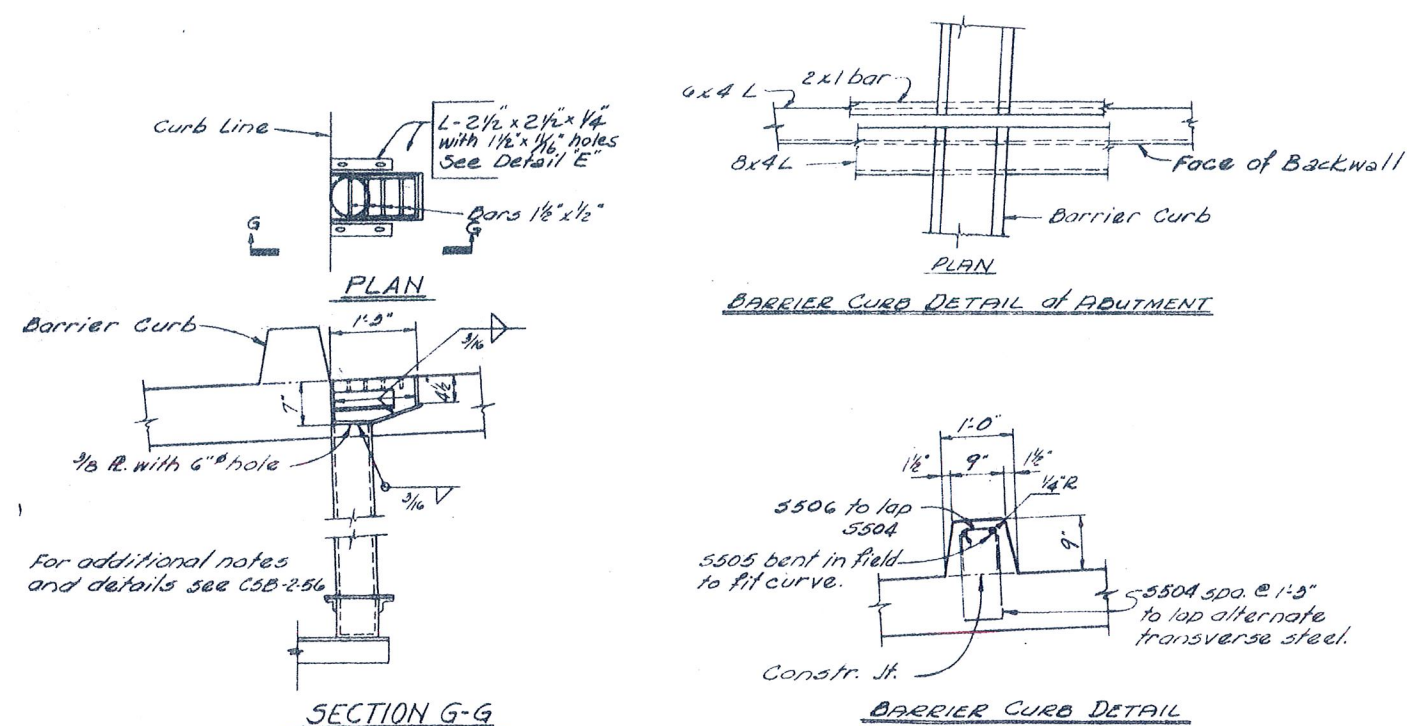
GUERNSEY COUNTY
GUE-40-8.93

Part-2

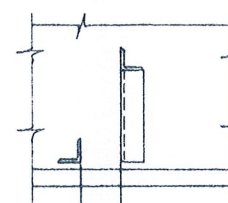


TRANSVERSE SECTION
Railing not shown

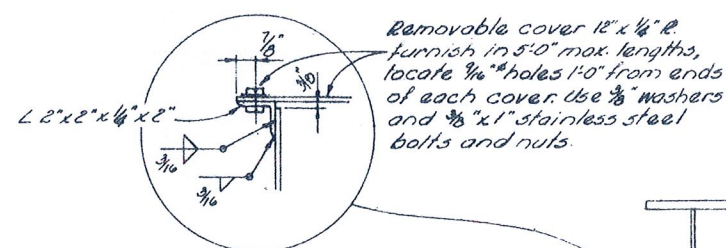
NOTE: Those portions of the drainage system required to be galvanized, shall be galvanized according to section M-7.4 (d) after all welding is completed.



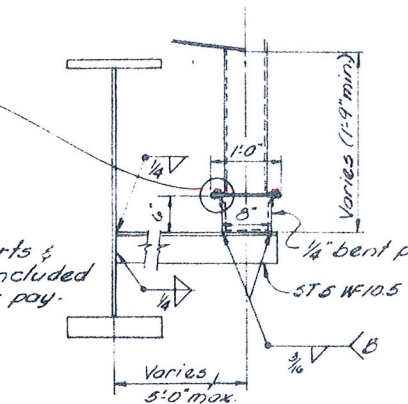
BARRIER CURB DETAIL of ABUTMENT



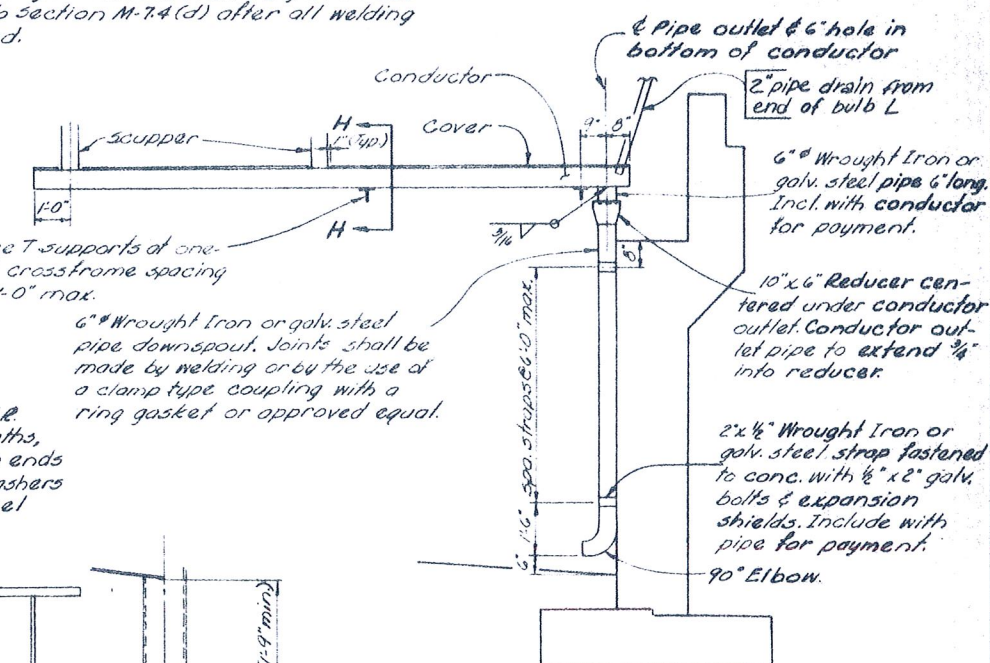
SECTION K-K



Conductors, supports & downspouts to be included under Item 5-29 for payment.

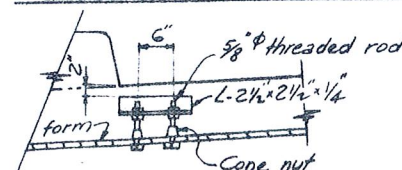


SECTION H-H



DOWNSPOUT & CONDUCTOR DETAIL
(Longitudinal section)

Note: Indent form at base of cone nut, bolt cone nut firmly to form. Remove cone nut with form and fill hole with grout



DETAIL "E"
(Scupper not shown)

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE No. GUE-40-0994 (E.B.)

E.B. U.S. 40 OVER N.B. U.S. 21

GUERNSEY COUNTY

57A-248+73.41
249+71.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIEWED
RT	BSD		DFH	TLU	7-18-63	