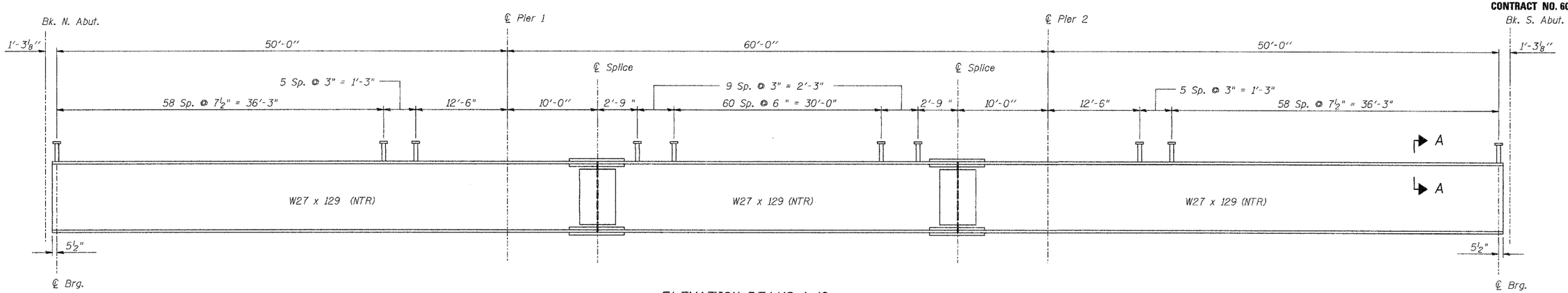
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	G-8-I-1	COOK	15	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60D59



ELEVATION BEAMS 1-10

Interior Girder Moment Table				
		0.4 Sp.1/0.6 Sp.3	Pier	0.5 Sp.2
Is	(in^4)	4760	4760	4760
Ic (n)	(in^4)	13774		13774
Ic (3n)	(in^4)	10064		10064
Ss	(in^3)	345	345	345
Sc (n)	(in^3)	572		572
Sc (3n)	(in^3)	475		475
Z	(in^3)			
DL	(k/')	0.99	1.60	0.99
Mdl	(' k)	178	-444	147
s DL	(k/')	0.61		0.61
Ms DL	(' k)	125		129
MLL	(' k)	430	-238	444
M (Imp)	(' k)	123	-66	120
5/3[MLL + M(Imp)]	(' k)	922	-508	939
Ma	(' k)	1592	-1237	1580
Mu	(' k)	3223		3223
fs DL non-comp	(ksi)	6.2	15.4	5.1
fs DL (comp)	(ksi)	3.2		3.3
fs 5/3[MLL + M(Imp)]	(ksi)	21.0	17.7	21.4
fs (Overload)	(ksi)	30.3	33.1	29.8
fs (total)	(ksi)		43.0	
VR	(k)	62.5		47.7

Interior Girder Reaction Table			
		Abutments	Pier
R_{DL}	(k)	31.1	96.9
R_{LL}	(k)	45.2	53.2
Imp.	(k)	12.9	14.8
R (Total)	(k)	89.2	164.9

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[M_{DL} + M_{SDL}+ 5/3(M_{LL}+ M(Imp))].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to M_{DL} + M_{SDL} +5/3(M_{LL} + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M_{DL} + M_{SDL} +5/3(M_{LL} + M(Imp))].

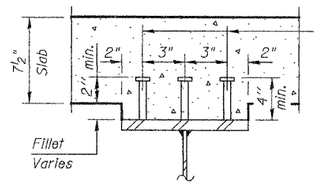
BILL OF MATERIAL

Item	Unit	Quantity
Furnishing Structural Steel	L. Sum	1

TOP OF GIRDER ELEVATIONS

(For Fabrication Only)

Beam	Location					
	℄ Brg. N. Abut.	℄ Brg. Pier 1	℄ Joint Splice 1	℄ Joint Splice 2	℄ Brg. Pier 2	℄ Brg. S. Abut.
1	643.76	643.77	643.77	643.60	643.53	643.17
2	643.93	643.94	643.95	643.78	643.71	643.35
3	644.10	644.12	644.12	643.96	643.89	643.54
4	644.27	644.29	644.30	644.15	644.08	643.72
5	644.44	644.47	644.48	644.33	644.26	643.91
6	644.35	644.37	644.37	644.24	644.17	643.82
7	644.17	644.20	644.20	644.07	644.00	643.65
8	643.99	644.02	644.03	643.90	643.83	643.49
9	643.81	643.85	643.86	643.73	643.66	643.33
10	643.63	643.67	643.68	643.56	643.50	643.16



¾" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (6210 Req'd.)

SECTION A-A

STUD SHEAR CONNECTORS ARE NOT PART OF THIS CONTRACT

NOTES:

N.T.R. denotes members to which notch toughness requirements are applicable.

For splice details, see sheet 14.

All steel shown on this sheet shall be AASHTO M270 Grade 50W.

REVISIONS	
NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION G-8-I-1
COOK COUNTY, SN 016-6566

GIRDER ELEVATION & MOMENT TABLE

DESIGN BY: AWH DRAWN BY: AWH
DATE: 8/29/07 CHECKED BY: JAN CHECKED BY: JAN

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