F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
343	*	COOK	24	19
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*7OHB-F & 7OD-Y-B-F   CONTRACT NO. 60B70

MOMENT AND REACTION TABLES

INTERIOR GIRDER MOMENT TABLE

		0.5 Span
I_s	$(10^6 \ mm^4)$	10137
$I_c \ (n)$	$(10^6 \ mm^4)$	28629
$I_c \ (3n)$	$(10^6 \ mm^4)$	19316
S_s	$(10^3 \ mm^3)$	26763
$S_c \ (n)$	$(10^3 \ mm^3)$	35632
$S_c \ (3n)$	$(10^3 \ mm^3)$	32729
Z	$(10^3 \ mm^3)$	-
DL	(kN/m)	17.03
M_{dl}	$(kN*m)$	2813
s DL	(kN/m)	9.05
M_{sDL}	$(kN*m)$	1494
MLL	$(kN*m)$	2134
M (Imp)	$(kN*m)$	437
5/3[MLL + M(Imp)]	$(kN*m)$	4285
M_a	$(kN*m)$	11169
M_u	$(kN*m)$	12806
fs DL non-comp	(MPa)	105.1
fs DL (comp)	(MPa)	46
fs 5/3[(MLL + M(Imp)]	(MPa)	120
fs (Overload)	(MPa)	271
fs (total)	(MPa)	
VR	(kN)	300

INTERIOR GIRDER REACTION TABLE

		Abut.
RDL	(kN)	474
RLL	(kN)	249
Imp.	(kN)	51
R (Total)	(kN)	774

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.
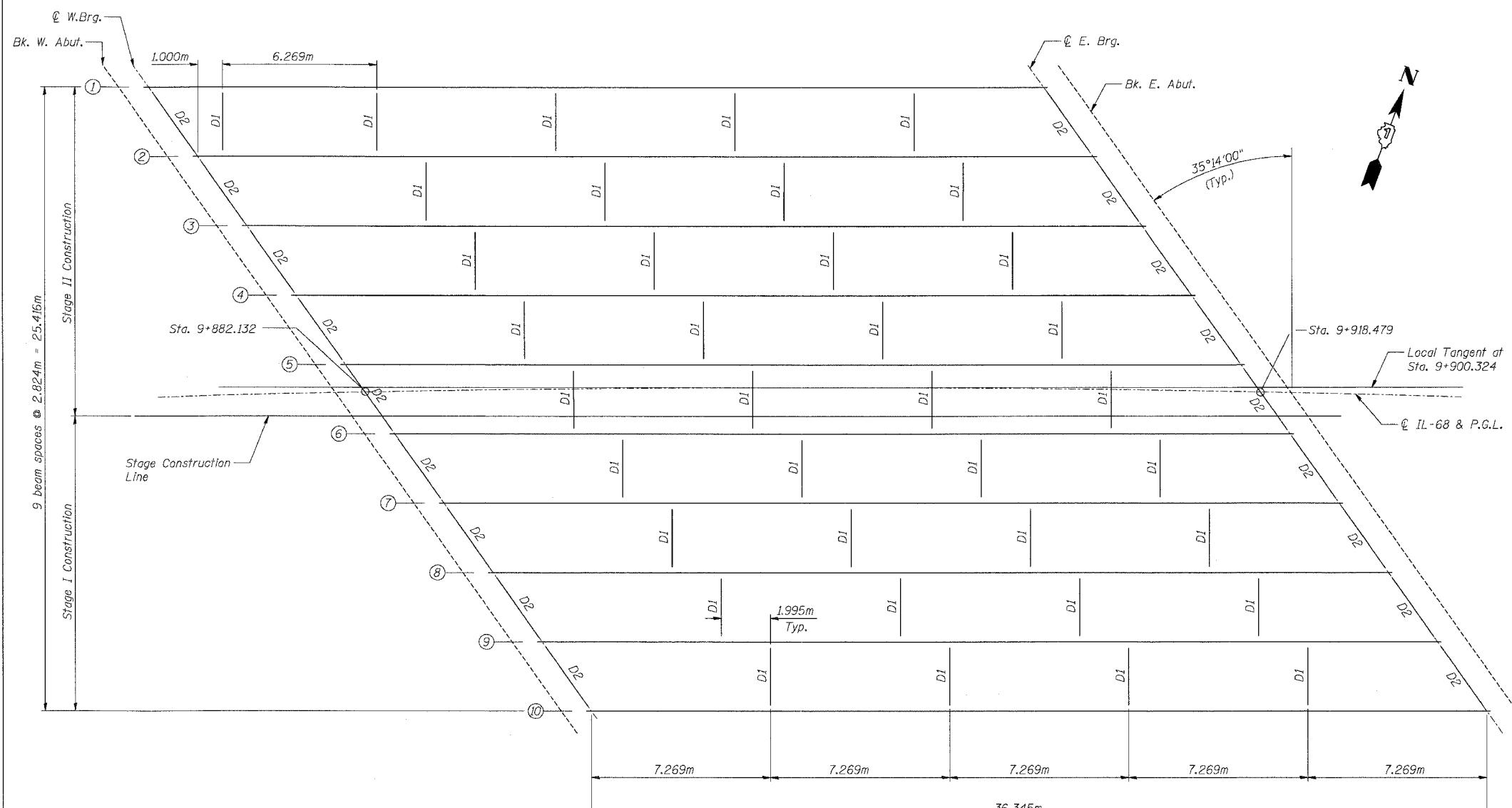
Ma (Applied Moment)=1.3[Mℓ + Msℓ +⁵⁄₃(Mℓ + M(Imp))].

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 Mℓ + Msℓ +⁵⁄₃(Mℓ + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[Mℓ + Msℓ +⁵⁄₃(Mℓ + M(Imp))].

FRAMING PLAN

NOTE:

For Girder elevation, diaphragm details, and top of girder elevations see Sht. S-20 of S-24.

SHT. S-19 OF S-24