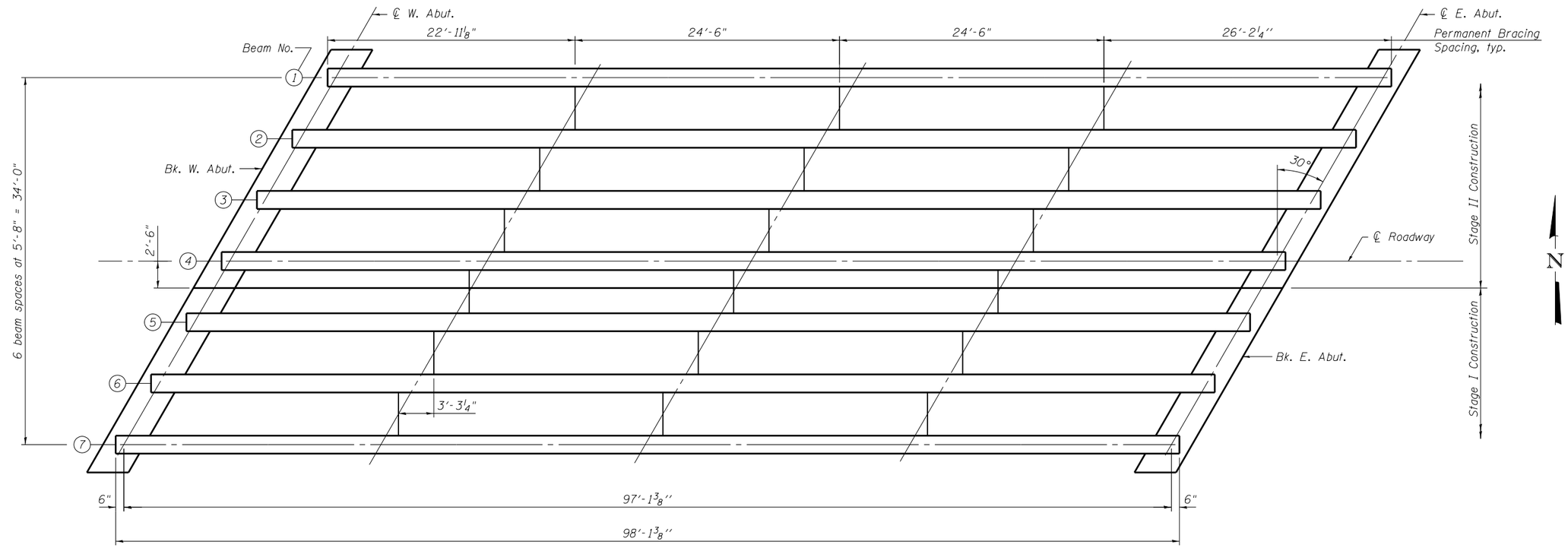
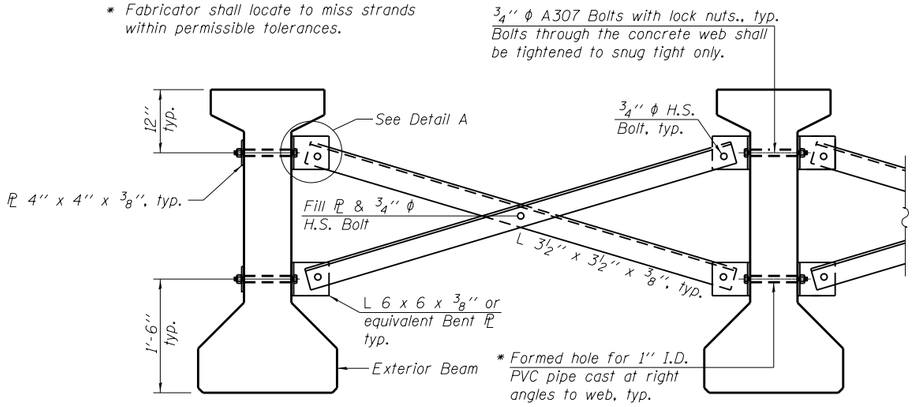


PLAN



Notes:

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.

Two hardened washers are required for each set of oversized holes.

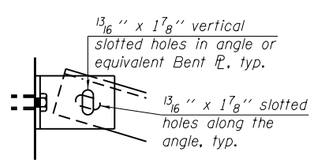
All holes shall be 15/16"ϕ unless otherwise noted.

5/16" x 3" x 3" plate washers are required over all slotted holes.

All bolts shall be galvanized according to AASHTO M232.

Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.



DETAIL A

PERMANENT BRACING DETAIL

INTERIOR BEAM MOMENT TABLE		
		0.5 Sp.
I	(in^4)	213,715
I'	(in^4)	471,963
S_b	(in^3)	8559
S_b'	(in^3)	12,447
S_t	(in^3)	7362
S_t'	(in^3)	29,348
DC1	(k/')	1.23
M_{DC1}	('k)	1450
DC2	(k/')	0.15
M_{DC2}	('k)	177
DW	(k/')	0.26
M_{DW}	('k)	307
M_{LL+IM}	('k)	1441

INTERIOR BEAM REACTION TABLE		
		Abut.
R_{DC1}	(k)	60
R_{DC2}	(k)	7
R_{DW}	(k)	13
R_{LL+IM}	(k)	85
R_{Total}	(k)	165

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{LL+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

FILE NAME = c:\pw_work\pwidot\sparksgw\d0325252\D590515-72A19-015-framing.dgn
CB PROJECT NO 10005-1

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = sparksgw	DESIGNED - CME	REVISED -	
	CHECKED - MCB/RKM	REVISED -	
PLOT SCALE = 10:8.000 ':' / in.	DRAWN - MML	REVISED -	
PLOT DATE = Oct-19-2012 02:14:53PM	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 059-0515
SHEET NO. 15 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	116BR-1	MACOUPIN	67	51
		CONTRACT NO. 72A19		
		ILLINOIS FED. AID PROJECT		