

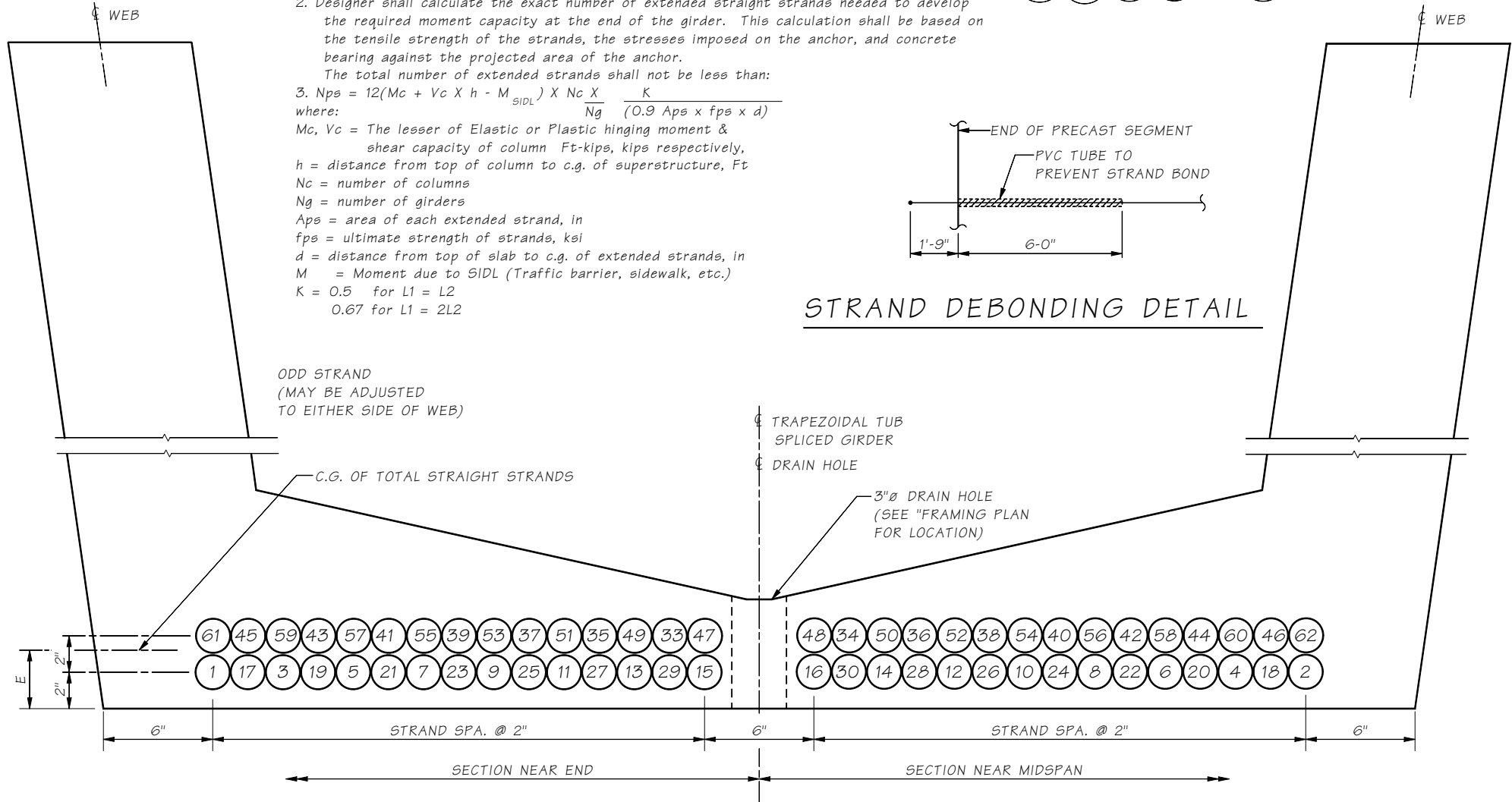
		END SEGMENT 1														MID-SEGMENT														END SEGMENT 2													
SPAN	GIRDER	MINIMUM CONCRETE COMPR. STRENGTH		END 1 TYPE		L	θ ₁ (DEG.)	θ ₂ (DEG.)	P ₁	PLAN LENGTH (ALONG & GIRDER GRADE)	STRAIGHT		C.G. STRANDS	L _d	END 1 TYPE	END 2 TYPE	L	θ ₁ (DEG.)	θ ₂ (DEG.)	PLAN LENGTH (ALONG & GIRDER GRADE)	STRAIGHT		C.G. STRANDS	L _d	END 1 TYPE	END 2 TYPE	L	θ ₁ (DEG.)	θ ₂ (DEG.)	P ₂	PLAN LENGTH (ALONG & GIRDER GRADE)	STRAIGHT		C.G. STRANDS	L _d								
		FINAL F'C (KSI)	RELEASE F'C (KSI)	NO. OF STRANDS	JACKING FORCE (KIPS)						E	NO. OF STRANDS									JACKING FORCE (KIPS)	E										NO. OF STRANDS	JACKING FORCE (KIPS)			E							

NOTES TO DESIGNER:

- This strand extension detail is to be used for continuous spans at moment resisting diaphragms only. This detail is not applicable to continuous spans using hinge diaphragms.
- Designer shall calculate the exact number of extended straight strands needed to develop the required moment capacity at the end of the girder. This calculation shall be based on the tensile strength of the strands, the stresses imposed on the anchor, and concrete bearing against the projected area of the anchor.
The total number of extended strands shall not be less than:
- $$Nps = 12(Mc + Vc \times h - M_{SIDL}) \times Nc \times \frac{K}{Ng \times (0.9 Aps \times fps \times d)}$$

where:
 Mc, Vc = The lesser of Elastic or Plastic hinging moment & shear capacity of column Ft-kips, kips respectively,
 h = distance from top of column to c.g. of superstructure, Ft
 Nc = number of columns
 Ng = number of girders
 Aps = area of each extended strand, in²
 fps = ultimate strength of strands, ksi
 d = distance from top of slab to c.g. of extended strands, in
 M = Moment due to SIDL (Traffic barrier, sidewalk, etc.)
 K = 0.5 for L1 = L2
 0.67 for L1 = 2L2

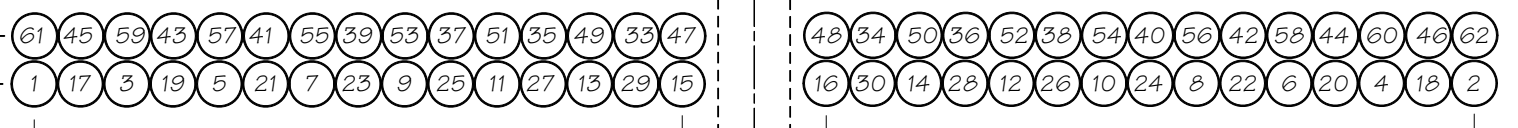
NOTE:
Dimensions shall be shown in Imperial units to the nearest 1/8th inch.



STRAND DEBONDING DETAIL

ODD STRAND (MAY BE ADJUSTED TO EITHER SIDE OF WEB)

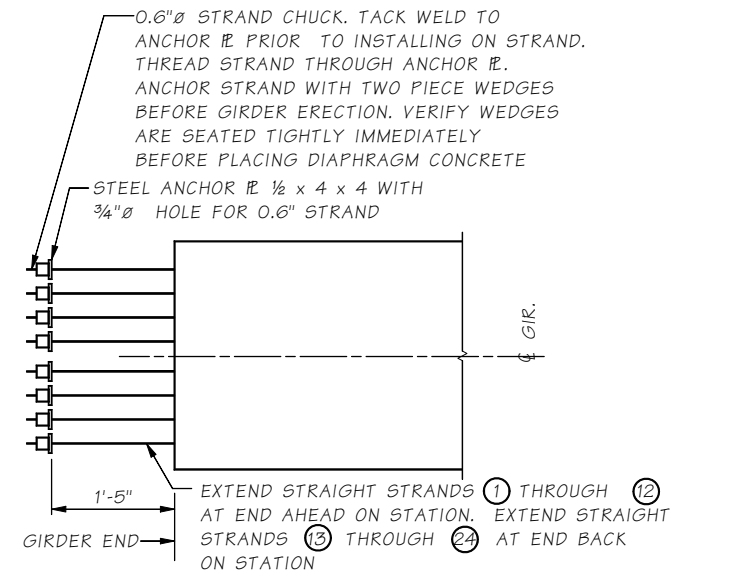
C.G. OF TOTAL STRAIGHT STRANDS



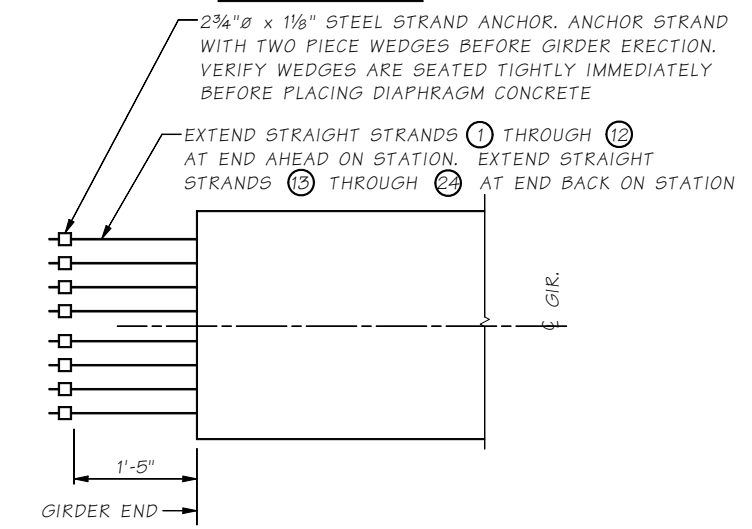
STRAND SPA. @ 2" SECTION NEAR END SECTION NEAR MIDSPAN

STRAND PATTERN

STRAND LOCATION SEQUENCE SHALL BE AS SHOWN (1), (2) ETC.



ALTERNATE # 1



ALTERNATE # 2

STRAND EXTENSION DETAIL FOR END TYPE D

NOT ALL EXTENDED STRANDS ARE SHOWN

SR JOB NO. 09-A4-0

Bridge Design Engr.	M:\STANDARDS\Girders\PT Trapezoidal Tubs\PT_TRAPEZOIDAL TUB 5.MAN	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor		10	WASH.			
Designed By		JOB NUMBER				
Checked By						
Detailed By						
Bridge Projects Engr.						
Prelim. Plan By						
Architect/Specialist	DATE	REVISION	BY	APP'D		

Fri Mar 06 10:28:27 2015

BRIDGE AND STRUCTURES OFFICE



STANDARD PRESTRESSED CONCRETE GIRDERS

TUB SPLICED GIRDER DETAILS 5 OF 5

BRIDGE SHEET NO.
SHEET
OF
SHEETS