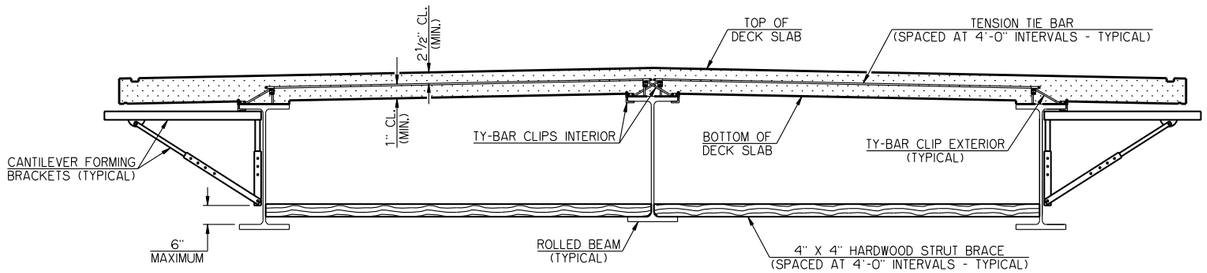
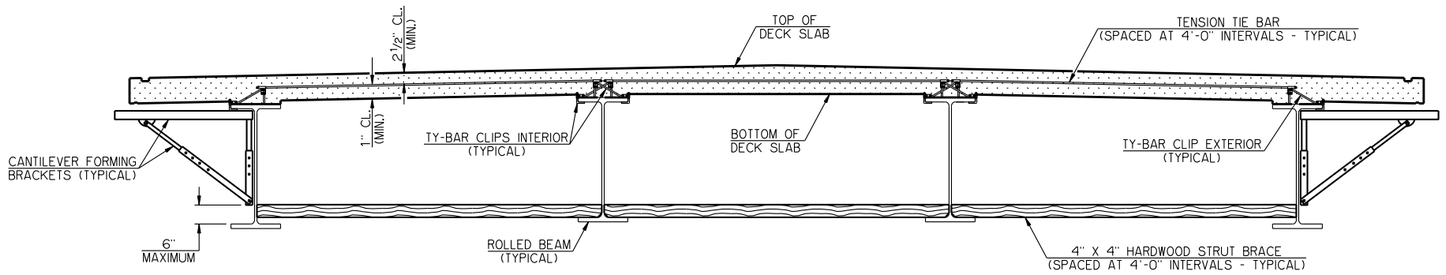
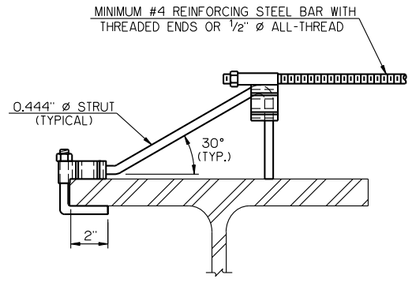


26' CLEAR ROADWAY

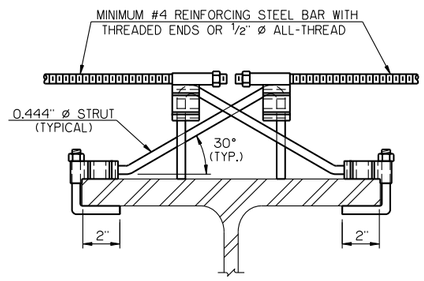


32' CLEAR ROADWAY

TYPICAL CROSS SECTIONS THRU SUPERSTRUCTURE SHOWING ROLLED BEAM BRACING

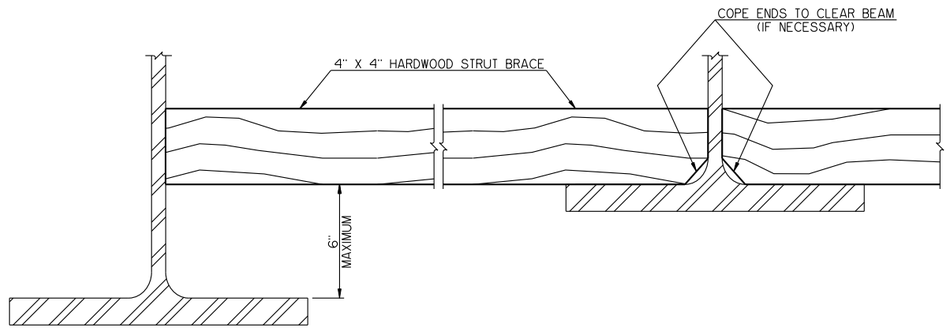


EXTERIOR



INTERIOR

TY-BAR CLIP DETAILS



EXTERIOR

INTERIOR

STRUT BRACE DETAILS

NOTES

WHEN PLACING THE DECK SLAB CONCRETE, THE ROLLED BEAMS SHALL BE BRACED AS SHOWN WITH CANTILEVER FORMING BRACKETS, TENSION TIE BARS, TY-BAR CLIPS AND STRUT BRACES INSTALLED AS SHOWN. THE TENSION TIE BARS, TY-BAR CLIPS AND STRUT BRACES SHALL BE SPACED ALONG THE BEAMS AT INTERVALS NO GREATER THAN 4 FEET. THE TENSION TIE BARS, TY-BAR CLIPS AND STRUT BRACES SHALL ALL BE PLACED IN LINE WITH ONE ANOTHER AND HAVE THE SAME SPACING. THE CANTILEVER FORMING BRACKETS SHALL BE SPACED ALONG BOTH EXTERIOR BEAMS SUCH THAT ONE CANTILEVER FORMING BRACKET ON EACH EXTERIOR BEAM IS PLACED IN LINE WITH EACH LINE OF THE TENSION TIE BARS, TY-BAR CLIPS AND STRUT BRACES. ALL OTHER REQUIRED CANTILEVER FORMING BRACKETS SHALL BE EVENLY SPACED BETWEEN THE CANTILEVER FORMING BRACKETS THAT ARE TO BE PLACED IN LINE WITH EACH LINE OF THE TENSION TIE BARS, TY-BAR CLIPS AND STRUT BRACES.

THE CANTILEVER FORMING BRACKETS SHALL BE USED AT THE EXTERIOR BEAMS TO PREVENT TWISTING OF THE BEAMS. ALL CANTILEVER FORMING BRACKETS SHALL BE ADJUSTABLE DURING PLACEMENT OF THE DECK SLAB CONCRETE AS REQUIRED TO MAINTAIN PROPER GRADES OF THE DECK SLAB OVERHANG. IF SHIMS ARE EMPLOYED TO ADJUST THE FORMING BRACKETS, A METHOD TO PREDICT THE CRUSH AND SETTLEMENT OF THE SHIMS MUST BE PROVIDED TO AND APPROVED BY THE ENGINEER PRIOR TO PLACING THE DECK SLAB CONCRETE. THE LEG BRACES ON THE CANTILEVER FORMING BRACKETS SHALL BEAR ON THE BEAM WEBS WITHIN 6" OF THE BOTTOM FLANGE. UNDER NO CIRCUMSTANCES SHALL THE CANTILEVER FORMING BRACKETS EXTEND BELOW THE BOTTOM FLANGE OF THE BEAMS. IN ADDITION, NO BEAMS SHALL BE SUPPORTED ON JACKS WHILE THE CANTILEVER FORMING BRACKETS ARE IN PLACE OR WHILE THE DECK SLAB CONCRETE IS BEING POURED OR CURED.

THE TENSION TIE BARS SHALL BE PLACED PERPENDICULAR TO THE BEAMS. THE TENSION TIE BARS SHALL BE A MINIMUM OF #4 REINFORCING STEEL BARS WITH THREADED ENDS OR 1/2" DIAMETER ALL-THREAD. THE TENSION TIE BARS SHALL BE ATTACHED TO THE TOP FLANGE OF THE BEAMS WITH TY-BAR CLIPS. NO WELDING TO THE TOP FLANGE OF THE BEAMS OR THE SHEAR CONNECTORS WILL BE PERMITTED. THE STRUT BRACING SHALL BE COMPOSED OF 4" X 4" HARDWOOD OR A MATERIAL OF AN EQUIVALENT STRENGTH. THE STRUTS SHALL BE PLACED AT EACH TENSION TIE BAR LOCATION AND BRACED AGAINST THE WEB OF THE BEAMS WITHIN 6" OF THE BOTTOM FLANGE.

THE CONTRACTOR SHALL SUBMIT TO THE BRIDGE ENGINEER FOR APPROVAL, AND COPY THE RESIDENT ENGINEER, WORKING DRAWINGS FOR THE BRACING SYSTEM. DRAWINGS OF THE PROPOSED BRACING SYSTEM SHALL BE APPROVED BY THE BRIDGE ENGINEER BEFORE ANY CONCRETE IS PLACED. IF THE CONTRACTOR ELECTS TO USE A BRACING SYSTEM OTHER THAN THAT SHOWN, THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE BRACING SYSTEM TO THE ENGINEER FOR APPROVAL. ALL DRAWINGS AND CALCULATIONS OF THE PROPOSED BRACING SYSTEM SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OKLAHOMA.

THE ROLLED BEAM BRACING WILL NOT BE MEASURED FOR PAYMENT. ALL COST OF THE BRACING INCLUDING THE COST OF CANTILEVER FORMING BRACKETS, REINFORCING STEEL, ALL-THREAD, TY-BAR CLIP CONNECTION DEVICES, HARDWOOD STRUT BRACES OR EQUIVALENT, PROFESSIONAL SERVICES, MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER CUBIC YARD OF "CLASS AA CONCRETE."

APPROVED BY BRIDGE ENGINEER Robert J Lusch DATE 9-9-2011

OKLAHOMA DEPARTMENT OF TRANSPORTATION
COUNTY BRIDGE STANDARD (ENGLISH)

ROLLED BEAM BRACING DETAILS FOR PLACEMENT OF DECK SLAB CONCRETE

26' AND 32' CLEAR ROADWAYS - CONVENTIONAL AND INTEGRAL - SKEWED 0° AND 30°

2009 SPECIFICATIONS	CB26..32-C..I-SK0..30-RB-BRACING	00E
		CB-965E