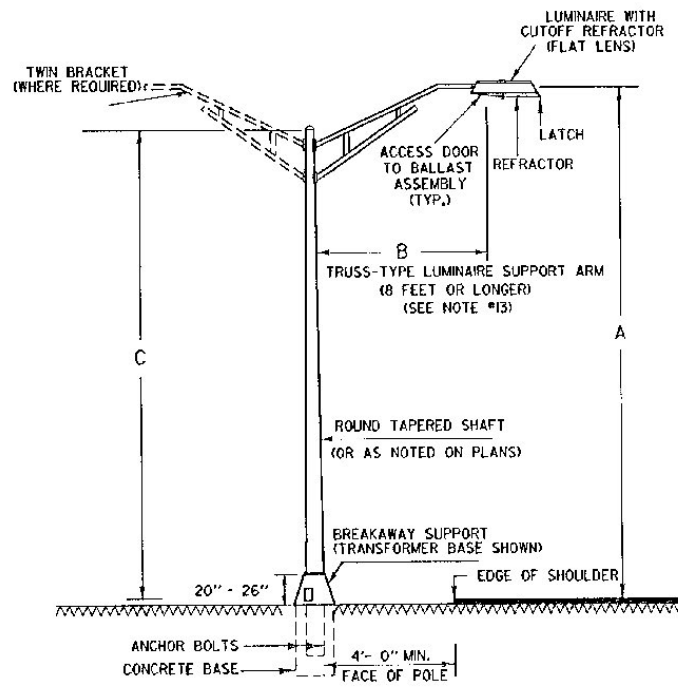
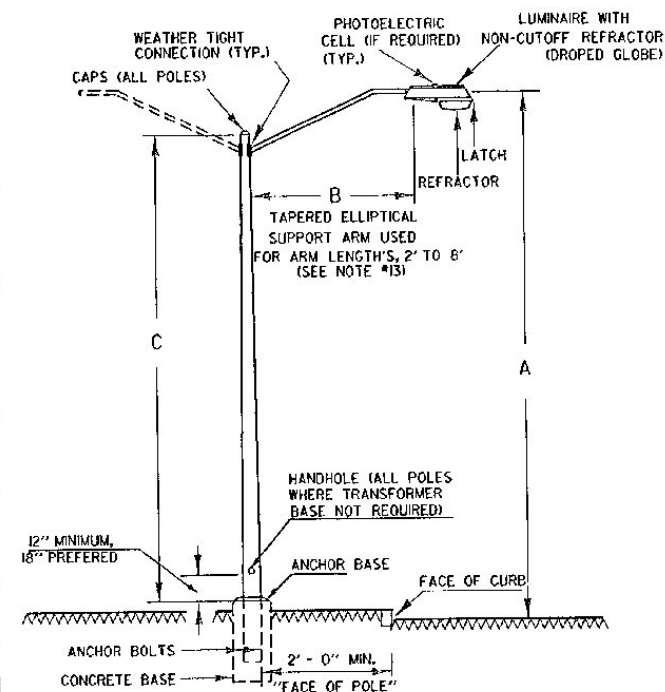


ROUND ALUMINUM AND STEEL POLES



DIMENSIONS:
A= MOUNTING HEIGHT
B= LUMINAIRE SUPPORT ARM LENGTH
C= POLE HEIGHT



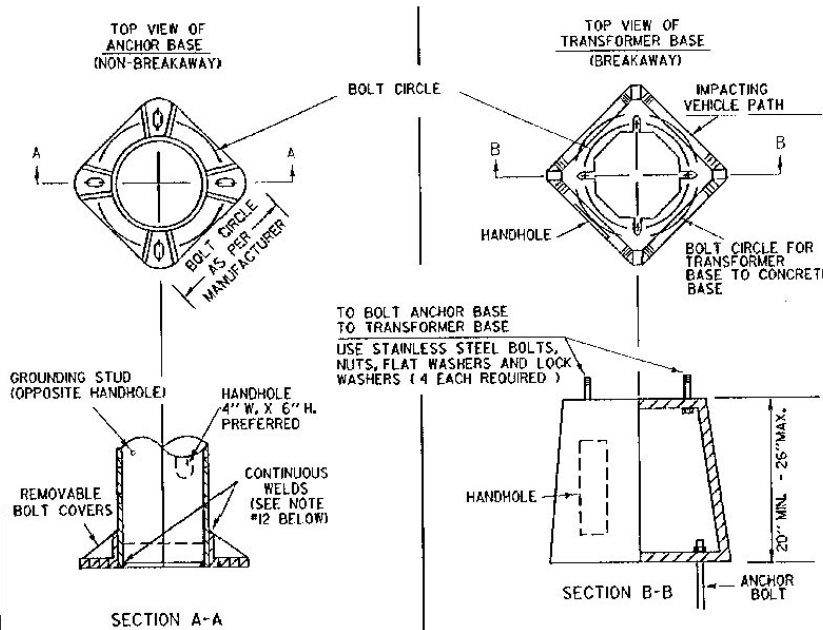
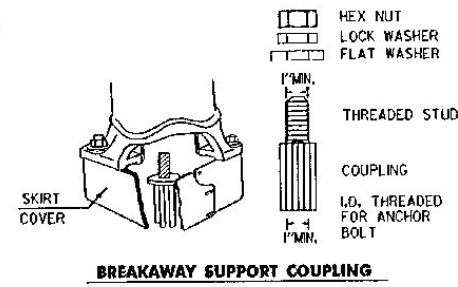
ALL SUPPORT ARMS TO BE EQUIPPED WITH 2" SLIPFITTER FOR MOUNTING LUMINAIRE UNLESS OTHERWISE INDICATED.

NOTES:
NON-BREAKAWAY SUPPORTS ARE APPROPRIATE IN SOME URBAN AREAS AS OUTLINED IN THE AASHTO "ROADSIDE DESIGN GUIDE".

BASES

NOTES:

- DIMENSIONS SHOWN FOR ANCHOR BASES AND TRANSFORMER BASES MAY VARY SLIGHTLY WITH DIFFERENT MANUFACTURERS.
- FOR BREAKAWAY DESIGN A TRANSFORMER BASE-BREAKAWAY COUPLINGS, OR OTHER APPROVED METHOD SHALL BE PLACED BETWEEN THE ANCHOR BASE AND THE CONCRETE BASE.
- ANCHOR BOLT TEMPLATE FURNISHED BY POLE MANUFACTURER.
- ALL NUTS, WASHERS, AND STUDS SHALL BE STAINLESS STEEL.

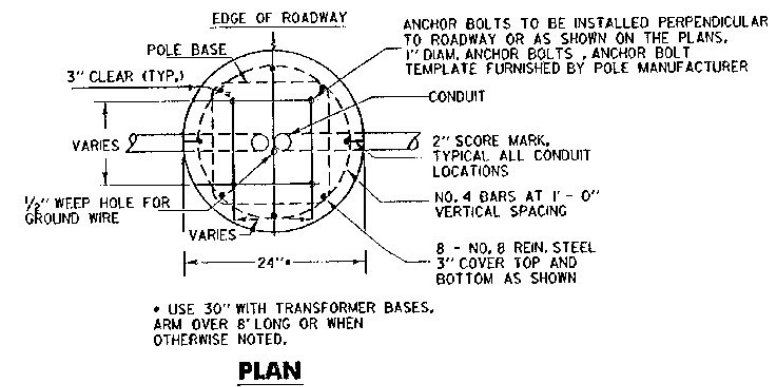


GUARDRAIL DEFLECTION CHART PER AASHTO - ROADSIDE DESIGN GUIDE 1988

TYPE	OR POST SPACING	DEFLECTION
THREE CABLE W/STEEL POSTS	16' - 0"	12'
W-BEAM W/WEAK POST	12' - 6"	12'
W/STRONG POST	6' - 3"	7'
BOX BEAM W/WEAK POST	6' - 0"	5'
THREE BEAM W/WEAK POST	12' - 6"	4'
W/STRONG POST	6' - 3"	2'
TWO-RAIL ELLIPTICAL ALUMINUM		2'

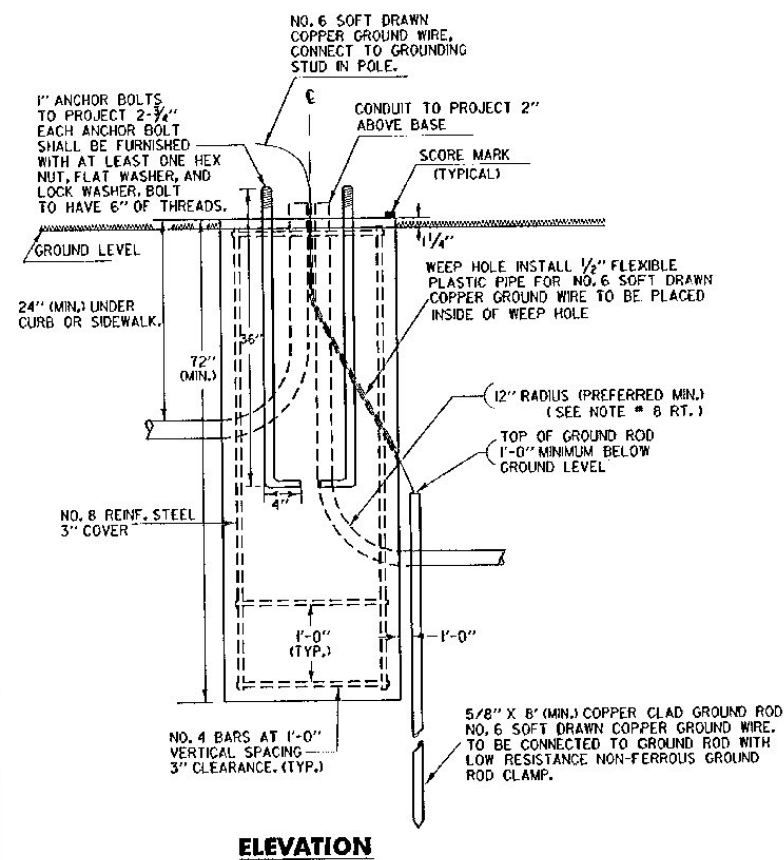
THIS CHART LISTS THE THEORETICAL DEFLECTION DISTANCE UPON IMPACT OF VARIOUS GUARDRAIL WITH DIFFERENT TYPES AND SPACINGS OF POSTS.

CONCRETE BASE



* USE 30" WITH TRANSFORMER BASES, ARM OVER 8' LONG OR WHEN OTHERWISE NOTED.

PLAN



ELEVATION

SCORE MARK DETAILS

POLES, ANCHOR BASES, ARMS, AND LUMINAIRES. GENERAL NOTES

- NO POLE SHALL BE INSTALLED WITHOUT A LUMINAIRE ALREADY ATTACHED.
- ANCHOR BASE AND ANCHOR BOLT DIMENSIONS SHOWN ARE FOR A SINGLE ARM POLE.
- ALL LIGHT POLES WHICH ARE PROVIDED WITH A BREAKAWAY FEATURE SHALL CONFORM TO THE REQUIREMENTS OF THE AASHTO 1985 STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, SECTION 7 AND SUBSEQUENT REVISIONS.
- A 12 FOOT OR LONGER ARM REQUIRES A 6 INCH OUTSIDE DIAMETER POLE TOP.
- LUMINAIRES SHALL MEET SPECIFICATIONS AS SHOWN ON THE PLANS.
- ALL ELECTRICAL MATERIAL AND ELECTRICAL WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE AREA ELECTRICAL INSPECTOR AND/OR THE POWER COMPANY WITH JURISDICTION IN THE PROJECT AREA.
- ALL WORK MUST MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, AS WELL AS LOCAL AND STATE CODES.
- ALL STREET LIGHT POLES SHALL HAVE A METAL TAG ATTACHED TO THE POLE. SEE PLAN DETAIL SHEET. PAYMENT FOR TAGS WILL BE SUBSIDIARY TO ITEM 679.15, STREET LIGHTING.
- POLES, BASE PLATES, AND ARMS SHALL MEET THE SPECIFICATION OF THE LATEST EDITION OF AASHTO-AGC-ARTBA'S "GUIDE TO STANDARDIZED HIGHWAY LIGHTING POLE HARDWARE".
- ANCHOR BOLTS WILL BE ACCEPTABLE WITH EITHER ROLLED OR CUT-IN THREADS WITH MINOR VARIATIONS FROM THE 1" DIAMETER.
- ALL LIGHT POLES SHALL HAVE A BREAKAWAY DESIGN FEATURE UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL WELDS SHALL BE AT LEAST AS STRONG AS THE MATERIAL BEING WELDED.
- LUMINAIRE SUPPORT ARMS IN A LENGTH OF 8 FEET ARE AVAILABLE IN EITHER SINGLE MEMBER OR TRUSS TYPE. PLAN SHEET SHALL SPECIFY WHICH IS TO BE USED. IF NOT SPECIFIED, OPTIONAL, OR IF REPLACEMENT, MATCH EXISTING OR SURROUNDING TYPE.
- POLE OFFSET (FACE OF POLE TO BACK OF GUARDRAIL) SHALL BE EQUAL TO OR GREATER THAN THE DEFLECTION DISTANCE SHOWN IN THE CHART.

CONCRETE BASE NOTES

- ALL CONCRETE BASES TO BE CONCRETE, CLASS B, AND SHALL HAVE A SMOOTH LEVEL TOP SURFACE FINISHED WITH A 1/2 INCH RADIUS EDGING TOOL.
- ALL REINFORCING STEEL TO CONFORM TO THE REQUIREMENTS FOR "REINFORCING STEEL".
- TEMPLATE FOR ANCHOR BOLTS, STAINLESS STEEL ANCHOR BOLTS, NUTS, AND WASHERS TO BE OBTAINED BY CONTRACTOR PRIOR TO CONSTRUCTION OF BASES.
- SCORE TOP OF CONCRETE BASE TO SHOW LOCATION OF CONDUIT(S).
- CONDUIT SIZE - AS SHOWN ON THE PLANS.
- ALL EXPOSED METAL HARDWARE SHALL BE GALVANIZED OR STAINLESS STEEL.
- IF THE ELECTRICAL CONDUIT IN THE CONCRETE BASE IS GALVANIZED STEEL, GROUNDING BUSHINGS SHALL BE USED.
- THE MINIMUM RADIUS FOR RIGID METALLIC OR NON-METALLIC ELECTRICAL CONDUIT SHALL BE SIX TIMES THE INSIDE DIAMETER OF THE CONDUIT.
- SEE STANDARD SHEET E-173 FOR PULL BOX DETAIL.

REVISIONS AND CORRECTIONS

MARCH 4, 1988 - FHWA REVIEW COMMENTS
OCT 21, 1992 - REVISED NOTES, DEFLECTION CHART AND REVISED TITLE BLOCK.

APPROVED:

SEPT. 10, 1987
DATE

Stephen R. MacArthur
DIRECTOR OF ENGINEERING

David A. Ross
TRAFFIC AND SAFETY ENGINEER

STREET LIGHTING DETAILS



**STANDARD
E-180**