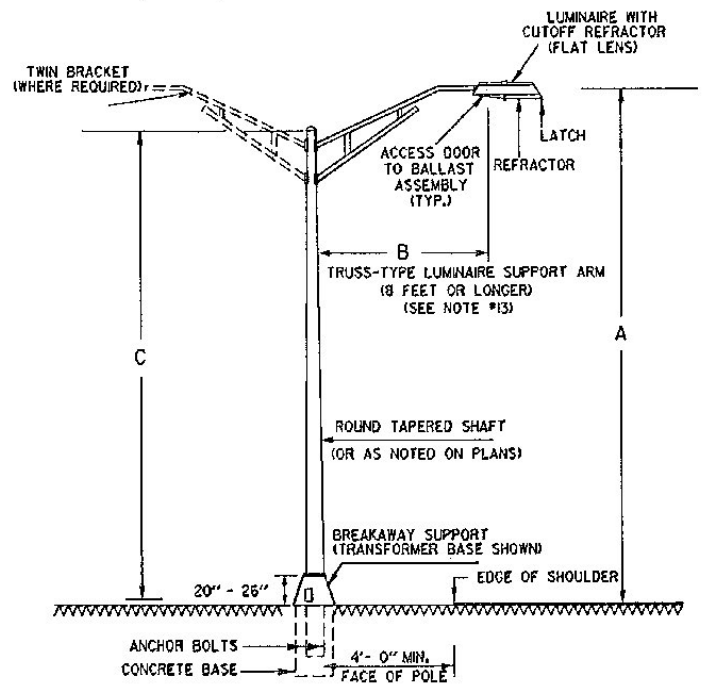
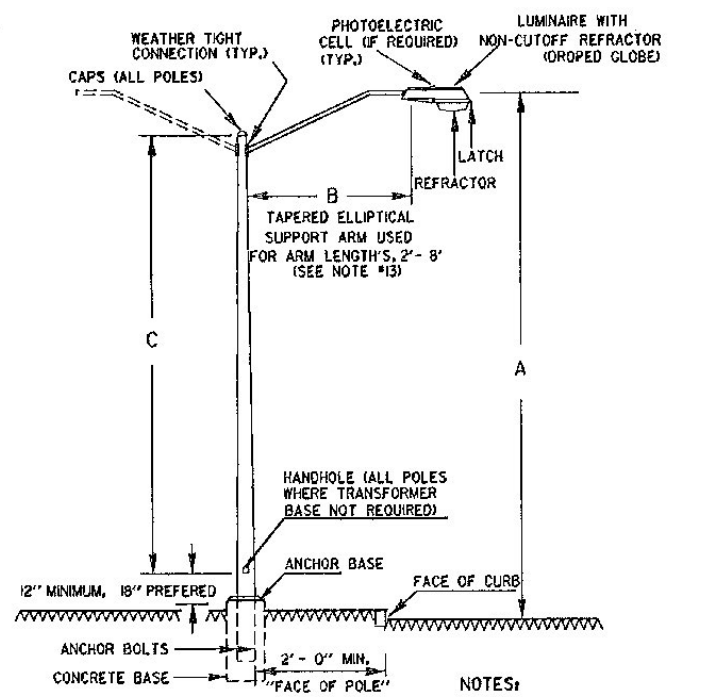


ROUND ALUMINUM AND STEEL POLES



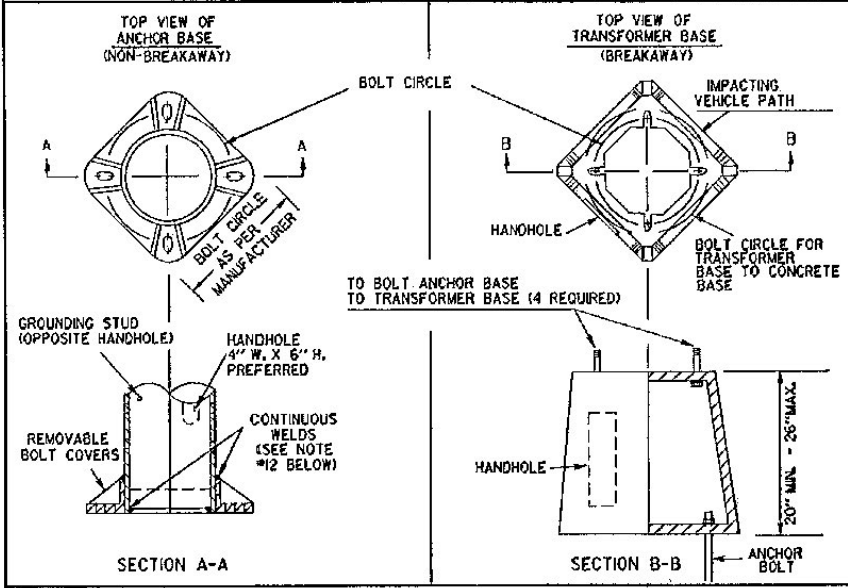
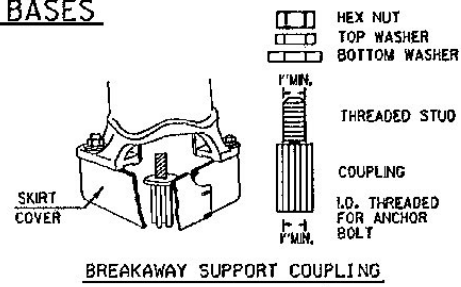
DIMENSIONS:
A= MOUNTING HEIGHT
B= LUMINAIRE SUPPORT ARM LENGTH
C= POLE HEIGHT



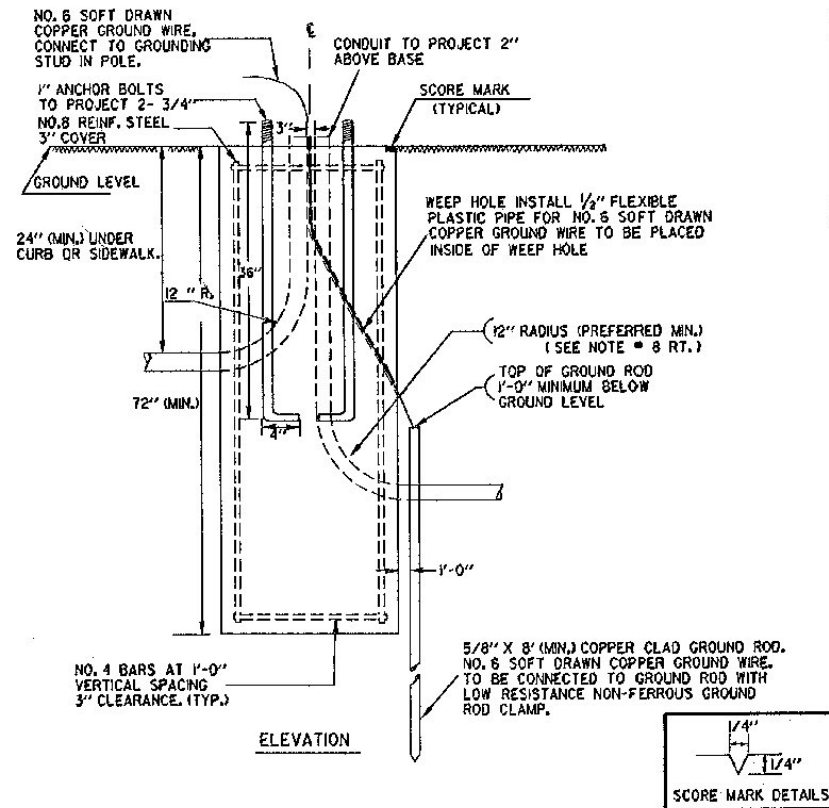
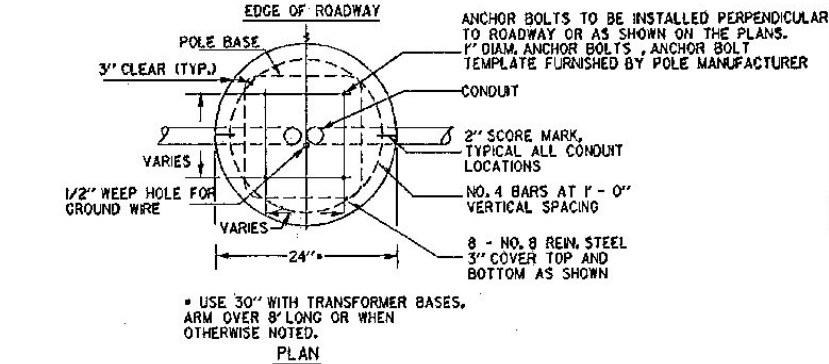
NOTES:
NON-BREAKAWAY SUPPORTS ARE APPROPRIATE IN URBAN AREAS WHERE THERE ARE CURBS AND SIDEWALKS AND WHERE POSTED SPEEDS ARE 30 M.P.H. OR LESS.
ALL SUPPORT ARMS TO BE EQUIPPED WITH 2" SLIPFITTER FOR MOUNTING LUMINAIRE UNLESS OTHERWISE INDICATED.

BASES

NOTES:
1) DIMENSIONS SHOWN FOR ANCHOR BASES AND TRANSFORMER BASES MAY VARY SLIGHTLY WITH DIFFERENT MANUFACTURERS.
2) FOR BREAKAWAY DESIGN A TRANSFORMER BASE, BREAKAWAY COUPLINGS, OR OTHER APPROVED METHOD SHALL BE PLACED BETWEEN THE ANCHOR BASE AND THE CONCRETE BASE.
3) ANCHOR BOLT TEMPLATE FURNISHED BY POLE MANUFACTURER.



CONCRETE BASE



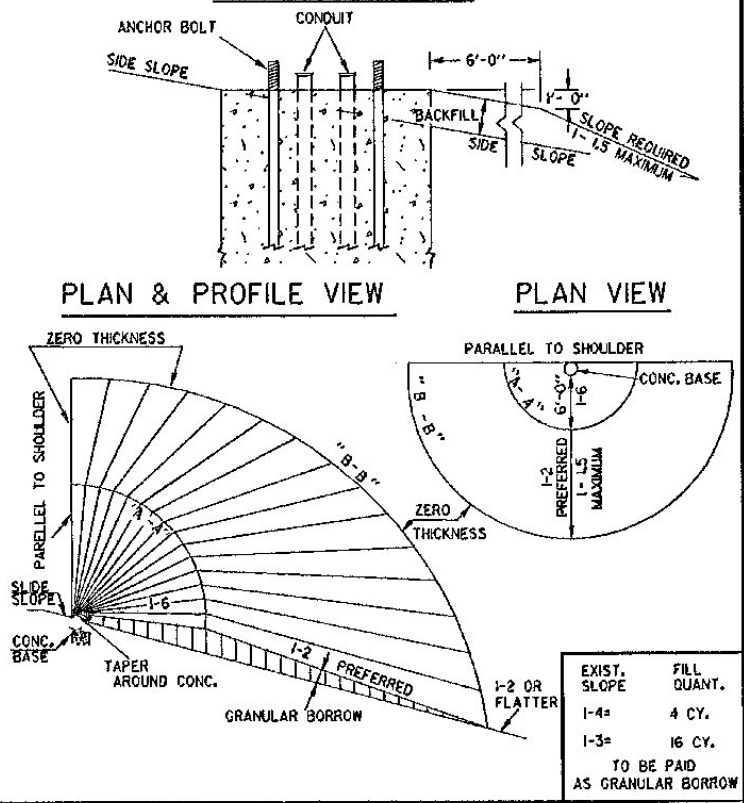
14. ANCHOR BOLTS AND WASHERS SHALL BE AN AUSTENITIC GRADE OF STAINLESS STEEL CONFORMING TO THE CHEMISTRY OF ASTM A276 TYPE 304 WITH THE FOLLOWING PHYSICAL PROPERTIES:

(a)	TENSILE STRENGTH, MINIMUM	80,000 psi
(b)	YIELD STRENGTH, MINIMUM	55,000 psi
(c)	ELONGATION IN 2 INCHES, MINIMUM	25 %
(d)	ROCKWELL B HARDNESS, MINIMUM	88

OR CHARPY V-NOTCH (AASHTO T243 USING H FREQUENCY OF TESTING), MINIMUM
15 ft - lbs. at 40°F

NUTS FOR THE ANCHOR BOLTS SHALL BE THE HEAVY HEX TYPE CONFORMING TO THE REQUIREMENTS OF ASTM A-194 GRADE 8.

SIDE SLOPE TREATMENT FOR CONCRETE BASE



CONCRETE BASE NOTES

1. ALL CONCRETE BASES TO BE CONCRETE, CLASS B.
2. ALL REINFORCING STEEL TO CONFORM TO THE REQUIREMENTS FOR 'REINFORCING STEEL'.
3. TEMPLATE FOR ANCHOR BOLTS, STAINLESS STEEL ANCHOR BOLTS, NUTS, AND WASHERS TO BE OBTAINED BY CONTRACTOR FROM POLE MANUFACTURER PRIOR TO CONSTRUCTION OF BASES.
4. SCORE TOP OF CONCRETE BASE TO SHOW LOCATION OF CONDUIT (S).
5. CONDUIT SIZE - AS SHOWN ON THE PLANS.
6. ALL EXPOSED METAL HARDWARE SHALL BE GALVANIZED OR STAINLESS STEEL.
7. IF THE ELECTRICAL CONDUIT IN THE CONCRETE BASE IS GALVANIZED STEEL, GROUNDING BUSHINGS SHALL BE USED.
8. THE MINIMUM RADIUS FOR RIGID GALVANIZED ELECTRICAL CONDUIT SHALL BE SIX TIMES THE INSIDE DIAMETER OF THE CONDUIT.
9. SEE STANDARD SHEET E-173 FOR PULL BOX DETAIL.

GUARD RAIL DEFLECTION CHART FOR PLACEMENT OF NON-FRANGIBLE SUPPORTS BEHIND GUARD RAIL. OFFSET, FACE OF RAIL TO FACE OF POLE.

Three Cable w/Lt. Steel Posts	12 ft.
Three Cable w/Hvy. Steel Posts	12 ft.
W-Beam w/Lt. Steel Posts	8 ft.
Box Beam w/Steel Posts	5 ft.
W-Beam w/Wood Posts	4 ft.
W-Beam w/Hvy. Steel Posts	4 ft.
Two-Rail Elliptical Aluminum	2 ft.

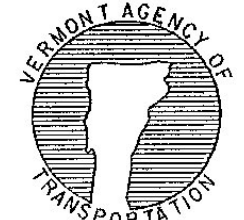
REVISIONS AND CORRECTIONS

MARCH 1, 1988 - FHWA REVIEW COMMENTS

APPROVED

SEPT. 10, 1987
DATE
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STREET LIGHTING DETAILS



STANDARD E-180