GENERAL NOTES

1. STEEL LIGHT STANDARDS SHALL have an 8 IN. OUTSIDE DIAMETER at the base with a 7 1/2 ft. MINIMUM WALL THICKNESS, AND A MAXIMUM TAPER THROUGHOUT. LIGHT STANDARDS SHALL BE RIGID, ROUND DR TWELVE SIDE, AND FABRICATED IN ACCORDANCE WITH SECTIONS 613 AND 715.


3. THE GATE ARMS SHALL BE FABRICATED FROM HIGH STRENGTH RECTANGULAR ALUMINUM AND 6061-T6 RECTANGULAR ALUMINUM TUBING. THE MAXIMUM ARM LENGTH SHALL BE 40 FT. THE RECTANGULAR ALUMINUM GATE SHALL BE SUPPLIED BY SAFETRAN, B&B ELECTRONIC, OR AN APPROVED EQUIVALENT.


6. THE HEIGHTS OF THE GATE ARM GUIDES WERE DETERMINED FOR A 29 FT. TALL TAPERED LIGHT STAND ARM WITH A BASE DIAMETER OF 8 IN. AND A TOP DIAMETER OF 4 IN. GUIDE LOCATIONS MAY BE ADJUSTED FOR VARIOUS GATE ARM LENGTHS AND WARNING LIGHT SPACINGS. THE HEIGHT OF THE GATE ARM OVER THE ROADWAY SHALL BE 3 FT. - 7 IN. TO 4 FT. - 7 IN. FROM THE BOTTOM OF THE ARM TO THE ROADWAY.


8. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL FIT SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL AND BE PADLOCKED IN PLACE. THE CONTRACTOR SHALL SUPPLY ONE HEAVY, WEATHERPROOF PADLOCK WITH TWO KEYS FOR EACH GATE ARM PIVOT. INFORMATION ON THE PADLOCK REQUIREMENTS WILL BE PROVIDED BY THE ENGINEER. PADLOCKS FOR EXISTING ARMATURES SHALL BE REPAIRED ALONE.

9. ELECTRICAL CONNECTION TO THE POWER SOURCE SHOWN ON THE PLANS WILL BE FITTED BY FORCE ACCOUNT IF NO POWER SOURCE IS AVAILABLE. INSTALL THE LUMINAIRE AND USE BATTERY OR SOLAR PANEL POWER FOR THE LED LIGHTS AS APPROVED BY THE ENGINEER.

10. GATE WARNING LIGHTS SHALL BE RED LED (TYPE B) HIGH INTENSITY. THE LIGHTS SHALL BE STEADY BURN AT THE CENTERLINE OF THE ROADWAY. THE GATE ARMS SHALL BE SUPPLIED BY SAFETRAN, B&B ELECTRONIC, OR AN APPROVED EQUIVALENT.

11. GALVANIZING: THE STEEL LIGHT STANDARDS, MAST ARMS, DROP GATE PIVOTS, SUPPORTS, GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 715. ALL ROUGH EDGES AND BURRS SHALL BE GROUNDED SMOOTH PRIOR TO GALVANIZING.

12. BOLTED CONNECTIONS: ALL BOLTS SHALL CONFORM TO ASTM A 307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH) BOLTS OR BS (HIGH STRENGTH BOLTS) AS REQUIRED BY THE ENGINEER. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ALUMINUM PAINT.

13. FIELD ASSEMBLY: IN SOME INSTALLATIONS, THE CONNECTION PLATES FOR THE LUMINAIRE ARMS MAY REQUIRE MODIFICATION TO ALLOW THE PIVOT SLEEVE TO SWING 45 DEGREES. ALL DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ALUMINUM PAINT.
ANCHOR BASE

BOLT CIRCLE DIAMETERS SHALL BE COMPATIBLE

1" TO 1'/4" x 3" TO 4" CONNECTOR BOLTS WITH TWO FLAT LOCK WASHERS IN CONFORMANCE WITH ASTM A 307 (FOUR REQUIRED)

17" TO 26" BOLT CIRCLE DIAMETER SHALL FIT THE LIGHT STANDARD FOUNDATION

NOTES:
1. HARDWARE SHALL CONFORM TO MANUFACTURER'S REQUIREMENTS.
2. A HAND HOLE IS NOT REQUIRED IN POLE IF A BREAK-AWAY TRANSFORMER BASE IS USED.

PAVEMENT CUTOUT 6" MIN. UNDERGROUND 30" MIN. UNDER ROADWAY 48" MAX.

18" MIN. SURFACING OR FINISHING GRADE

WARNING TAPE 6" TO 12" DEEP

COMPACTED BACKFILL

TYPICAL FOUNDATION SECTION

BREAK-AWAY SUPPORT COUPLING

TYPICAL CONDUIT BURIAL SECTION

TYPICAL CONCRETE FOUNDATION

NOTES:
1. THE CONTRACTOR SHALL COORDINATE TRENCHING WITH OTHER UNDERGROUND UTILITIES, RAMP METERING, AND IRRIGATION. THE CONTRACTOR SHALL USE COMMON TRENCHES AT ALL ROAD CROSSINGS WHERE POSSIBLE.
2. ONE #14 AWG LOCATE WIRE AND NYLON PULL STRING IN ALL EMPTY CONDUITS.

BREAK-WAY SUPPORT COUPLING

HEAVY HEX NUT WITH WASHER TORQUED TO MANUFACTURER'S RECOMMENDED VALUE

5' 4" CHAMFER, ALL EXPOSED EDGES

8 #7 REBARS (SPACE EVENLY)

2-W 2" MIN. DIA. CONDUITS (LOCATION OPTIONAL)

3" CLR. BETWEEN CONDUITS

4 ANCHOR BOLTS, ASTM A307 1" DIA. WITH TOP 8" GALVANIZED. THE ANCHORS CAN BE A DESIGN RECOMMENDED AND SUPPLIED AS A PART OF THE BREAK-AWAY SUPPORT COUPLING.

8 #7 REBARS (SPACE EVENLY)

2 ROUND TIES AT 1'-0" CENTERS

TYPICAL CONCRETE FOUNDATION

NOTES:
1. SEE POLE SUPPLIER DETAILS FOR BOLT CIRCLE AND PROJECTION.
2. ALL BREAKAWAY SUPPORT COUPLINGS SHALL MEET THE BREAKAWAY REQUIREMENTS STATED IN THE LATEST EDITION OF AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".
3. BREAKAWAY SUPPORT COUPLINGS SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL HAVE A COUPLING MANUFACTURER'S REPRESENTATIVE ON THE PROJECT PRIOR TO CONSTRUCTION TO INSPECT THE CONNECTIONS AND PROVIDE PERSONAL INSTRUCTION IN THE PREPARED INSTALLATION OF THE BREAKAWAY SUPPORT COUPLING.
4. LIGHT STANDARD FOUNDATIONS MAY BE PRECAST CONCRETE OR CAST-IN PLACE CONCRETE.
5. CONCRETE SHALL BE CLASS B.
6. EACH LIGHT STANDARD SHALL BE WIRED WITH A BREAKAWAY FUSED CONNECTOR AND BE GROUNDED AS STATED IN THE SPECIFICATIONS.
7. LIGHT STANDARDS SHALL NOT BE PLACED IN DITCHES OR OTHER LOW AREAS. EMBANKMENT AND BACKFILL SHALL BE COMPACTED IN CONFORMANCE WITH SECTION 203.
8. THE PHYSICAL SHAPES OF THE POLE CAPS, BRACKETS, AND CONCRETE PULL BOXES SHALL BE CONSIDERED APPROXIMATE AS SHOWN.
9. ALL NUTS, BOLTS, STUDS AND WASHERS SHALL BE GALVANIZED IN CONFORMANCE WITH ADDENDUM 2-22-20A

STANDARD PLAN NO. M-607-15

ROAD CLOSURE GATE

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HIGH WIND STOWING PROCEDURE

If arm cannot be brought back to the upright position
because of high winds, the following procedure can be used:
1. With arm in down position remove two 1/2 in. x 20 in. bolts
   from shear pin base. See the shear pin base detail.
2. Swivel arm using the 1/4 in. x 8 in. HS bolt as a pivot.
3. Swivel arm clear of roadway and secure by a delineator post.
4. Reset arm to upright position when weather permits.

NOTE: See details below.

GATE ARM PROFILE

DETAIL FOR HIGH WIND STOW POSITION

DETAIL TO SECURE GATE IN HIGH WIND

ROAD CLOSURE GATE
NOTES

1. POLE BASE PLATE SHALL CONFORM TO ASTM A 572, GRADE 42.
2. BOTTOM PLATE OF SLIP BASE ASSEMBLY SHALL CONFORM TO ASTM A 572, GRADE 50.
3. ALL STRUCTURAL STEEL SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE WITH ASTM A 123. ALL CONTACT AREAS OF THE STRUCTURAL STEEL SHALL BE FREE OF GALVANIZING BEADS AND RUNS.
4. SLIP BASE CONNECTING HARDWARE SHALL CONFORM TO ASTM A 325, AND SHALL BE ELECTROPLATED CADMIUM IN CONFORMANCE WITH ASTM B 766 TYPE NS.
5. KEEPER PLATE SHALL CONFORM TO ASTM A 653, GRADE 33, AND COATING 0.90.

LIGHT STANDARD BASE PLATE

SLIP BASE ASSEMBLY

SLIP BASE ASSEMBLY

BREAK-AWAY BASE

FOR INFORMATION ONLY

OPTIONAL BREAK-AWAY TYPE BASE

ROAD
CLOSURE GATE

STANDARD PLAN NO.
M-607-15

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