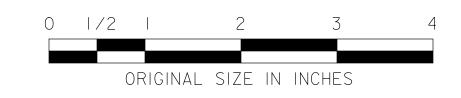


## **NOTES**

- I. BOTTOM OF MANHOLES SHALL BE SLOPED TOWARDS THE DRAIN HOLE.
- 2. CABLE RACKS SHALL BE SUPPLIED WITH ALL NECESSARY HARDWARE FOR INSTALLATION INCLUDING BUT NOT LIMITED TO DROP-IN ANCHORS, WASHERS, HEX HEAD SCREWS, LOCKS, AND SETTING TOOLS. THE RACKS SHALL BE CONSTRUCTED OF A NON-METALLIC MATERIAL SUCH AS POLYCARBONATE AND HAVE A MINIMUM OF FOUR (4) POINTS OF ATTACHMENT. A TOTAL OF EIGHT (8) CABLE RACKS SHALL BE INSTALLED PER MANHOLE.
- 3. PULLING IRONS SHALL BE AS SPECIFIED IN THE QUALIFIED PRODUCTS LIST.
- 4. MANHOLE FRAME AND COVER SHALL BE CONSTRUCTED OF FRP (FIBER GLASS REINFORCED PLASTIC) COMPOSITE MATERIALS WITH FRAME AND COVER SURPASSING THE LOADING REQUIREMENTS OF H20 AND EN124. A LIFTING TOOL SHALL BE SUPPLIED WITH EACH MANHOLE. THE MANHOLE COVER SHALL SIT FLUSH IN THE FRAME WITH THE TOP OF THE MANHOLE AND SHALL HAVE THE LETTERS "NJTA ELECTRIC" PRINTED ON IT.
- 5. ANCHOR BOLTS FOR SECURING THE MANHOLE TOP TO THE BASE SHALL CONFORM TO ASTM A307 CLASS A. THREADING SHALL BE 8 THREADS PER INCH, NC CLASS 2 AND SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153.
- 6. MANHOLE SHALL BE CONSTRUCTED WITH CLASS A CONCRETE WITH AIR ENTRAINMENT.
- 7. THE MANHOLE SHALL BE CONSTRUCTED WITH CONDUIT KNOCKOUTS SIZED AS SHOWN ON THIS SHEET. A MINIMUM OF FORTY (40) KNOCKOUTS SHALL BE AVAILABLE, DIVIDED AMONG THE FOUR WALLS OF THE MANHOLE. ALTERATIONS TO THE ORIENTATION SHOWN ON THIS SHEET FOR THE KNOCKOUTS SHALL BE APPROVED THROUGH THE SHOP DRAWING REVIEW PROCESS. CONDUITS ENTERING MANHOLES SHALL BE INSTALLED WITH CONDUIT END BUSHINGS, BELL ENDS, OR SIMILAR DEVICES TO PREVENT DAMAGE TO CABLES WHEN PULLED.
- 8. THE CAP OF THE MANHOLE SHALL BE SECURED TO THE BASE OF THE MANHOLE AT A MINIMUM OF EIGHT (8) LOCATIONS USING ANCHOR BOLTS AS SHOWN IN DETAIL A.
- 9. GROUND RODS SHALL BE 3/4" IN DIAMETER AND 10' LONG AS SPECIFIED IN THE QUALIFIED PRODUCTS LIST.
- IO. ALL OPEN CONDUIT TERMINATIONS SHALL HAVE RODENT BLOCKING MATERIAL INSTALLED. SEE STANDARD DRAWING E-16.
- II. ALL SPLICE CONNECTIONS IN UNDERGROUND JUNCTION BOXES, MANHOLES, AND JUNCTION BOX FOUNDATIONS SHALL BE RESIN ENCAPSULATED SPLICE KITS. SEE STANDARD SPECIFICATIONS AND QUALIFIED PRODUCTS LIST FOR DETAILS.
- 12. 10 CUBIC FEET OF CRUSHED STONE, MINIMUM 12" DEPTH.
- 13. MANHOLE COVER SHALL BE BONDED TO THE FRAME AND GROUND ROD VIA HIGHLY FLEXIBLE GROUND CABLE. THERE SHALL BE A MINIMUM OF 5'-O" OF SLACK BETWEEN THE TOP OF THE JUNCTION BOX AND COVER. GROUND CABLE SHALL BE ATTACHED TO THE WALL OF THE JUNCTION BOX VIA CABLE CLAMPS.
- 14. THE CONTRACTOR SHALL INSTALL EROSION PROTECTION MEASURES, AS DIRECTED ON THE PLANS. IN ANY CASE WHERE A MANHOLE IS TO BE INSTALLED ON A SLOPE WITHOUT EROSION PROTECTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.



## NEW JERSEY TURNPIKE AUTHORITY **NEW JERSEY TURNPIKE** GARDEN STATE PARKWAY

STANDARD DRAWINGS

## ROADWAY LIGHTING MANHOLE

OFFICE OF THE CHIEF ENGINEER NEW JERSEY TURNPIKE AUTHORITY WOODBRIDGE, NEW JERSEY

09/21

DATE

STANDARD DRAWING

E-15

OF