

TRAFFIC SIGNALS

1. TRAFFIC SIGNAL MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISION OF THE OHIO MANUAL OF TRAFFIC CONTROL DEVICES AND TO THE ODOT CONSTRUCTION MATERIAL SPECIFICATIONS (CMS) MANUAL.
2. NEW TRAFFIC SIGNAL INSTALLATIONS SHALL CONSIST OF SIGNAL SUPPORTS WITH MAST ARMS PER ODOT STANDARD CONSTRUCTION DRAWING TC-81.21. SIGNAL SUPPORTS AND MAST ARMS SHALL BE POWDER COATED BLACK PER CMS 711.02.
3. VEHICULAR SIGNAL HEADS SHALL BE BLACK, POLYCARBONATE, 12", LED, WITH TUNNEL VISORS AND BACKPLATES. THE BACKPLATES SHALL BE BLACK, ALUMINUM, AND LOUVERED WITH A YELLOW RETROREFLECTIVE BORDER PER ODOT CMS. THE SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARMS WITH THE RED LENS LOCATED IN FRONT OF THE MAST ARM PER ODOT STANDARD CONSTRUCTION DRAWING TC-85.20.
4. PEDESTRIAN SIGNAL HEADS SHALL BE BLACK, LED, COUNTDOWN, TYPE D2, WITH Z-CRATE VISORS. THE SYMBOLS SHALL BE FILLED IN, NOT OUTLINED. PEDESTRIAN SIGNAL HEADS MOUNTED TO A SIGNAL SUPPORT SHALL HAVE BRACKET ARMS RATHER THAN CLAMSHELL MOUNTS. BRACKET ARMS SHALL BE SCREWED INTO THE SUPPORT RATHER THAN BANDED.
5. PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED ON TOP OF THE PEDESTAL AND ATTACHED WITH A SLIP FITTER. THE PEDESTAL POLE SHALL BE ATTACHED TO A TRANSFORMER BASE. THE PEDESTAL POLE AND BASE SHALL BE POWDER COATED BLACK PER CMS 711.02.
6. PEDESTRIAN PUSHBUTTONS SHALL BE CIRCULAR AND YELLOW WITH A FLUSH-MOUNT ADAPTER. THE BUTTON SHALL HAVE A PIEZO DRIVEN SOLID STATE SWITCH WITH NO MOVING PARTS. THE BUTTON SHALL ALSO HAVE A RED LED INDICATOR LIGHT THAT ILLUMINATES WHEN THE BUTTON IS PUSHED. THE BUTTON SHALL EMIT A TWO-TONE BEEP WHEN THE BUTTON IS PUSHED.
7. PEDESTRIAN PUSHBUTTONS SHALL NOT BE INSTALLED FOR THE COORDINATED PHASES AT AN INTERCONNECTED INTERSECTION OR THE PRIMARY ROADWAY PHASES AT A NON-INTERCONNECTED INTERSECTION.
8. RADAR DETECTION UNITS AND ALL THE CORRESPONDING CABINET HARDWARE SHALL BE EMPLOYED FOR STOP BAR AND DILEMMA ZONE DETECTION
9. OVERHEAD STREET NAME SIGNS SHALL BE RIGIDLY MOUNTED TO MAST ARMS PER ITEM 630 IN THE ODOT CMS MANUAL. THE STREET NAME SIGNS SHALL BE SINGLE SIDED WITH WHITE LETTERS ON A GREEN BACKGROUND AND A 0.5 INCH WHITE BORDER. TYPE J REFLECTIVE SHEETING USING CMS 730.23 SHALL BE USED FOR THE SIGNS. STREET NAME LETTERS SHALL BE 12" UPPER-CASE AND 9" LOWER-CASE ON A 24" PLATE WITH VARIABLE WIDTHS BASED ON THE LENGTH OF THE STREET NAME. THE BACK OF THE SIGNS SHALL BE PAINTED BLACK.
10. THE PREFERRED MATERIAL FOR CONDUIT THAT IS JACKED OR DRILLED IS HDPE (CMS 725.052).
11. THE TRAFFIC SIGNAL CABINET SHALL BE A GROUND MOUNTED TYPE SUPER P44 WITH A RISER. THE CABINET SHALL BE ORIENTED SO THAT BOTH THE CONTROLLER DOOR AND UPS DOOR ARE SIDE BY SIDE. THE CABINET SHALL BE UNPAINTED NATURAL ALUMINUM. THE CONTROLLER CABINET SHALL BE A HYBRID NEMA TS2 TYPE 2 CABINET WITH NO BUS INTERFACE UNITS (BIU'S). THE CONTROLLER CABINET SHALL INCLUDE A SLIDE-OUT DOCUMENT DRAWER. THE CABINET SHALL ALSO BE EQUIPPED WITH A MOMENTARY PUSHBUTTON SWITCH FOR MANUAL OPERATION LOCATED IN THE POLICE ACCESS PANEL. UNLESS THE FRONT OF THE CABINET IS LOCATED ADJACENT TO A SIDEWALK, A CONTROLLER WORK PAD SHALL BE INSTALLED PER CMS 633 AND ODOT STANDARD CONSTRUCTION DRAWING TC-83.20.
12. THE TRAFFIC CONTROLLER SHALL BE THE LATEST ECONOLITE TS2/A2 MODEL (CURRENTLY THE COBALT) WITH ALL TELEMETRY MODULES INCLUDING ETHERNET FOR FULL COMMUNICATION CAPABILITY.
13. THE UPS BATTERY BACKUP UNIT SHALL BE RATED AT 1000 WATTS AND HAVE A RED LED INDICATOR LIGHT ON THE OUTSIDE OF THE CABINET THAT ILLUMINATES WHEN THE SIGNAL IS OPERATING ON BATTERY BACKUP. IF THE TRAFFIC SIGNAL IS PART OF AN INTERCONNECTED SYSTEM WITH COMMUNICATION TO THE CENTRAL COMPUTER IN ENGINEERING, THE FOLLOWING NOTIFICATION ALERTS SHALL BE PROGRAMMED: BATTERY ON AND LOW BATTERY. WHEN THE INTERSECTION IS OPERATING ON BATTERY BACKUP, THE UPS INVERTER SHALL BE PROGRAMMED TO PLACE THE INTERSECTION IN FLASH WHEN THE BATTERY CAPACITY REACHES 40%.
14. THE PREFERRED METHOD FOR SUPPLYING POWER TO THE TRAFFIC SIGNAL IS AN AERIAL FEED FROM DP&L TO THE SIGNAL POLE CLOSEST TO THE CONTROLLER CABINET. THE DISCONNECT SWITCH AND METER BASE SHALL BE MOUNTED ON THE SAME POLE WITH THE FEED THEN GOING UNDERGROUND FROM THE BASE OF THE POLE TO THE CONTROLLER CABINET. THE POWER SERVICE SHALL BE RATED FOR 30 AMPS AND 120 VOLTS.



ENGINEERING DIVISION
 44 W. HEBBLE AVENUE FAIRBORN, OHIO 45324
 PH: (937) 754-3055 FX: (937) 879-7395

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DWG NO: **TR-3.0**

NOTE 1: DRAWING VALID ONLY WHEN USED AS SHOWN AND IN CONJUNCTION WITH OTHER FAIRBORN ENGINEERING SPECIFICATIONS AND/OR DETAILS. THIS DRAWING REPRESENTS MINIMUM STANDARDS. ANY MODIFICATIONS TO THIS DETAIL SHALL FIRST BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

NOTE 2: CALL THE FOLLOWING AGENCIES AT LEAST 48 HOURS IN ADVANCE OF ANY EXCAVATION:
O.U.P.S. AT 8-1-1 AND O.A.G.P.U.P.S. AT (800) 925-0988

REV NO.	REV DATE	REV DESCRIPTION	REV NO.	REV DATE	REV DESCRIPTION

ISSUE DATE: **03/14/2017**

ENGR: **DNB**

APPROVED: **DPO**

SCALE: **NONE**

FILE: