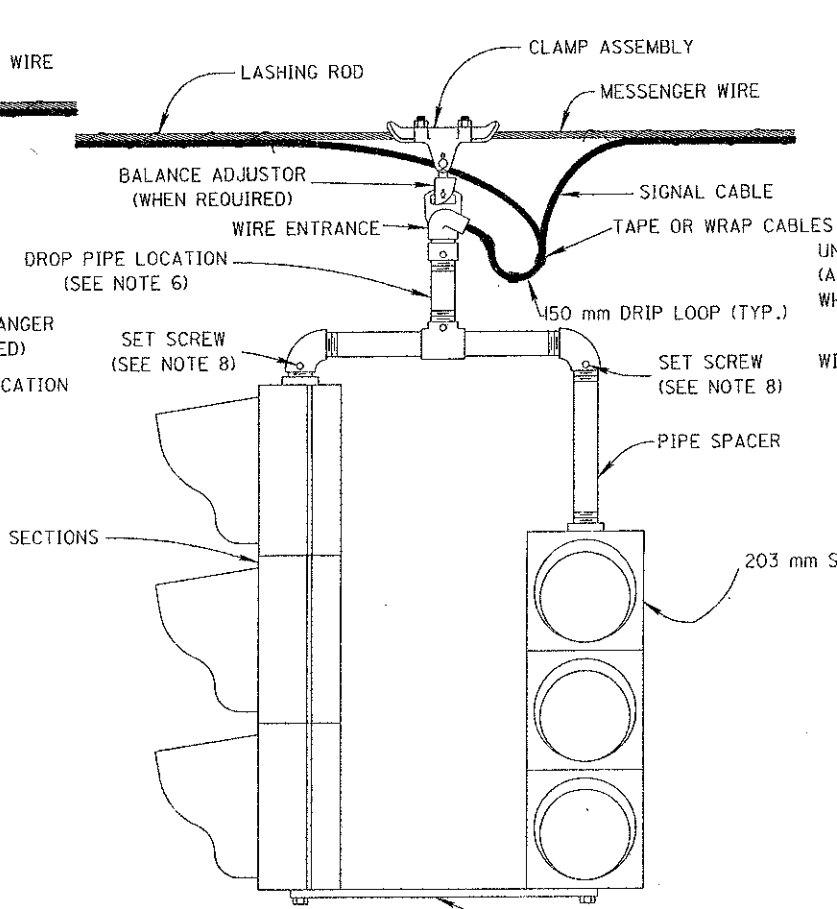
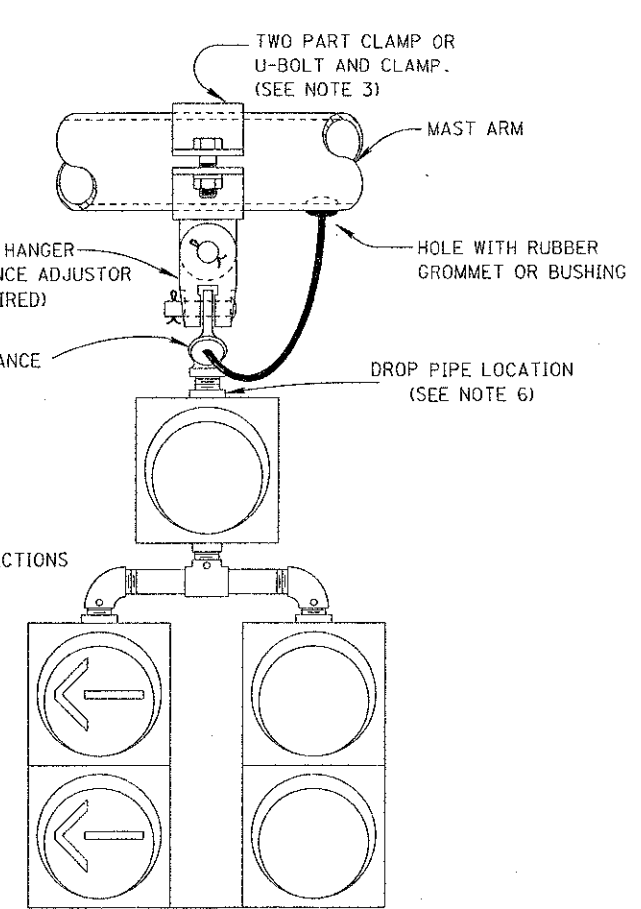


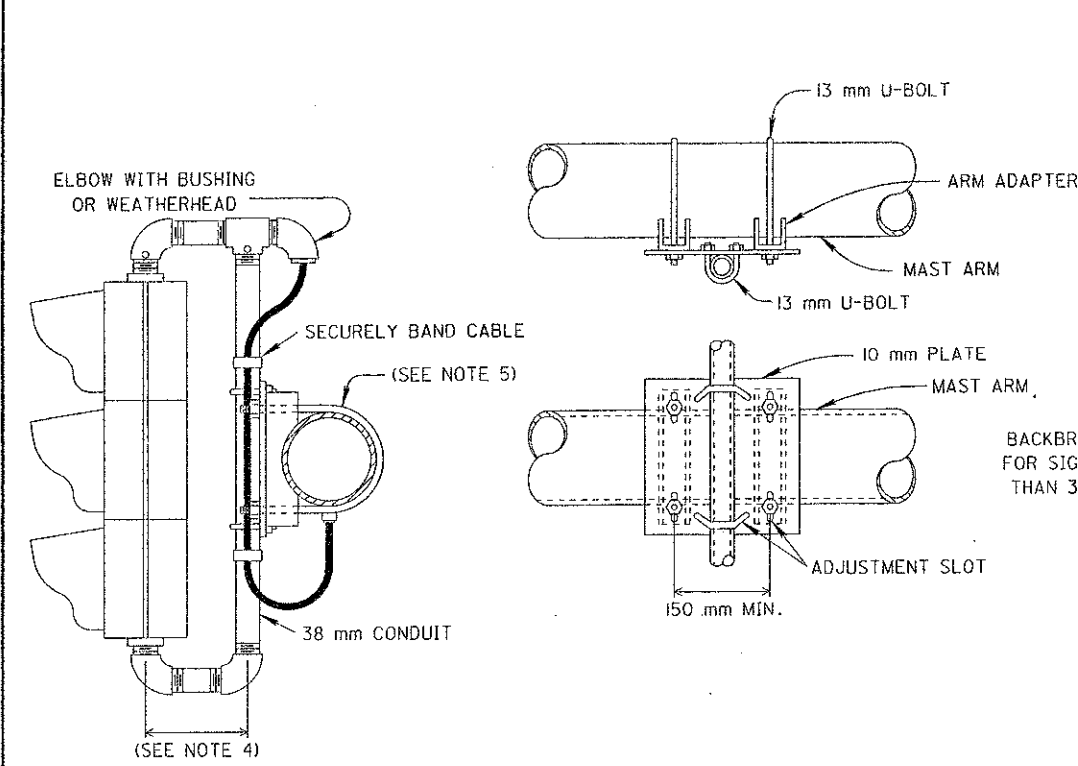
**SIGNAL HEAD SUSPENSION
WITH DISCONNECT**



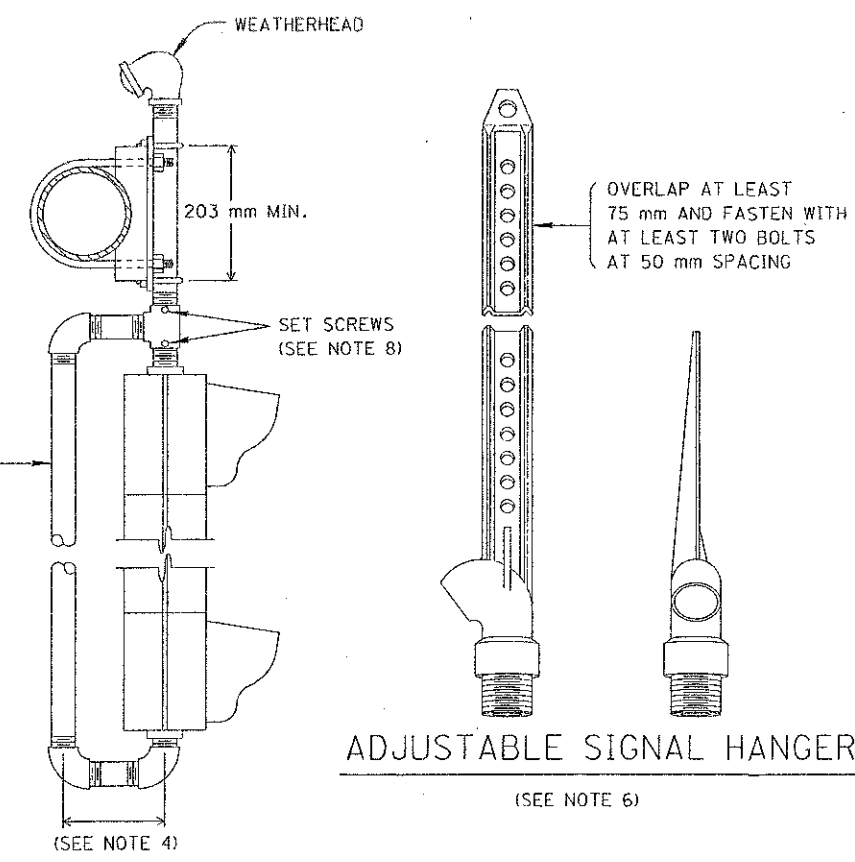
SIGNAL HEAD SUSPENSION



MAST ARM SIGNAL HEAD MOUNTING



RIGID SIGNAL HEAD MOUNTING FOR MAST ARMS



**ADJUSTABLE SIGNAL HANGER
(SEE NOTE 6)**

NOTES

1. SIGNAL HEAD CONDUIT BRACKETS AND CONDUIT FITTINGS SHALL BE GALVANIZED AND PAINTED TO MATCH THE BODY OF THE SIGNAL HEAD.
2. ALL SIGNAL HEAD ASSEMBLIES SHALL BE INSTALLED IN A PLUMB POSITION AND PERPENDICULAR TO THE APPROACH LANE. BALANCE ADJUSTORS OR OTHER APPROVED METHODS MAY BE USED IF NECESSARY.
3. THE MAST ARM CLAMP SHALL HAVE A MINIMUM STRENGTH AT YIELD TO SUPPORT A 900 kg LOAD.
4. A MINIMUM OF 430 mm IS REQUIRED FOR OPTICALLY PROGRAMMED SIGNAL HEADS AND A MINIMUM OF 150 mm FOR STANDARD SIGNAL HEADS.
5. ALTERNATE RIGID SIGNAL HEAD MOUNTING DEVICES FOR MAST ARMS MAY BE APPROVED BY THE ENGINEER UPON DEMONSTRATION THAT THEY PROVIDE ADEQUATE RIGIDITY, EQUAL RANGE OF ADJUSTMENT AND CAN BE TIGHTENED SUFFICIENTLY TO PREVENT MOVEMENT AND LOOSENING UNDER VIBRATION.
6. SIGNAL HEADS SHALL BE INSTALLED WITH A CLEARANCE ABOVE PAVEMENT ELEVATION AT THE CENTER OF THE ROADWAY OF 4.9 METERS MINIMUM, 5.5 METERS MAXIMUM. IT IS INTENDED THAT THIS CLEARANCE BE OBTAINED WITHOUT THE USE OF DROP PIPES, BUT RATHER BY THE CAREFUL SELECTION OF FOUNDATION HEIGHTS, ATTACHMENT HEIGHTS, ARM RISE, SPAN WIRE SAG AND OTHER FACTORS DURING THE CONSTRUCTION OF THE INSTALLATION. IF THE INSTALLATION CANNOT BE ADJUSTED TO THE PROPER CLEARANCE THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ALL SIGNALS WHICH EXCEED THE MAXIMUM. THE ENGINEER WILL, IN CONSULTATION WITH THE MAINTAINING AGENCY, DIRECT THE USE OF DROP PIPES OR WAIVE THE MAXIMUM CLEARANCE REQUIREMENT FOR EACH HEAD. IF DROP PIPES ARE NECESSARY, ADJUSTABLE SIGNAL HANGERS AS DETAILED MAY BE USED.
7. CABLE ENTRANCE OPENINGS ON DISCONNECT HANGERS SHALL RIGIDLY CLAMP CABLE TO PREVENT MOVEMENT OF THE CABLE WITHIN THE ENCLOSURE.
8. SIGNAL HEAD ROTATION SHALL BE PREVENTED BY THE USE OF SERRATED RINGS, SET SCREWS OR OTHER POSITIVE DEVICES INCORPORATED IN THE SIGNAL HOUSING AND AT CRITICAL LOCATIONS IN THE SUPPORTING HARDWARE.
9. ALL CONDUCTORS SHALL HAVE ADEQUATE CLEARANCE BETWEEN HANGERS, THIMBLES, BULLRINGS, ETC. IN ORDER TO AVOID DAMAGE FROM RUBBING.

M E T R I C	
BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL	DATE 11-24-93
OVERHEAD SIGNAL ATTACHMENTS	
STANDARD CONSTRUCTION DRAWING	TC-85.20M
APPROVED <i>[Signature]</i> ENGR. OF DESIGN SERVICES	