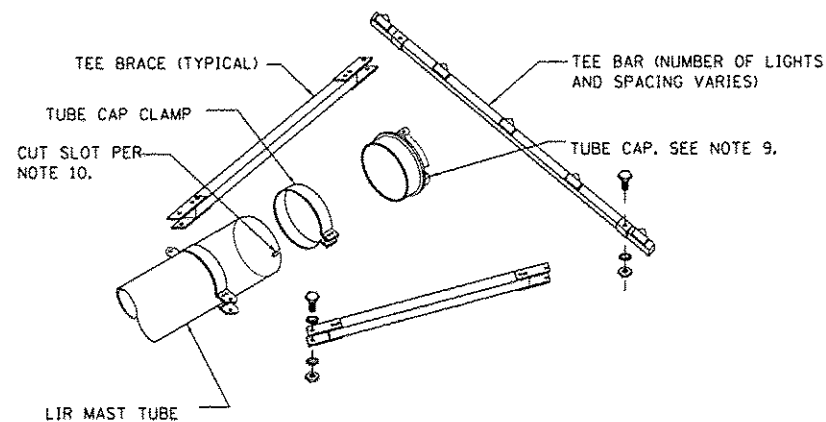
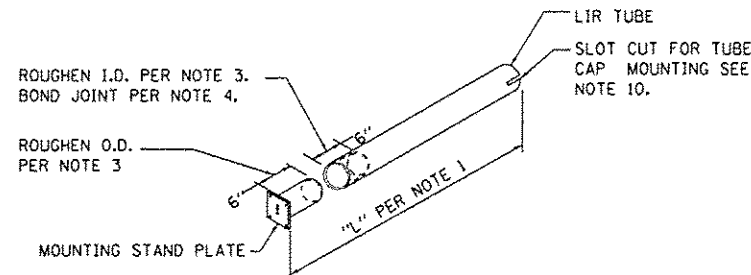


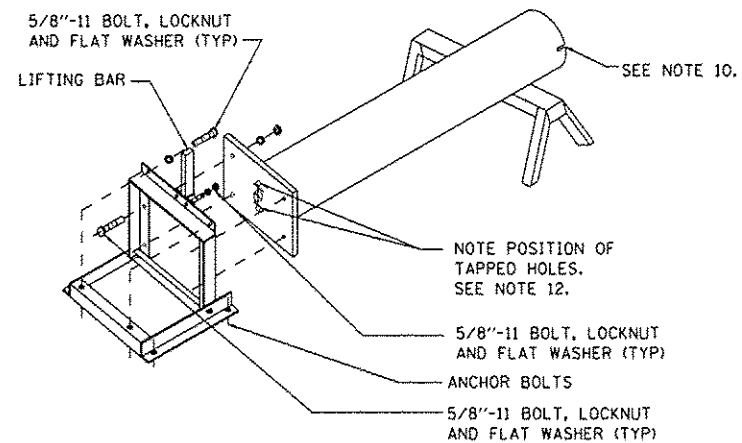
**DETAIL 1 - ELEVATION
MG-20 LIR STRUCTURE**



**DETAIL 3
TEE BRACE ASSEMBLY DETAILS**



**DETAIL 2
LIR MAST BONDING DETAILS**



TILTED CONDITION

NOTES:

1. THE CONTRACTOR SHALL ESTABLISH TOP OF FOUNDATION ELEVATION PER LIGHT BAR AND LAMP SCHEDULE. FOR EACH LIR TOWER AT A LIGHT STATION, THE CONTRACTOR SHALL FIELD-VERIFY THE ACTUAL FOUNDATION TOP ELEVATION PRIOR TO CUTTING LIR TUBE. THE CONTRACTOR SHALL DETERMINE THE REQUIRED TUBE LENGTH "L" AS FOLLOWS:
$$L = \text{LAMP C ELEVATION} - \text{FOUNDATION TOP ELEVATION} - (V + 6\frac{3}{4}')$$
2. THE FOUNDATION TOP OF ELEVATION MUST BE FIELD VERIFIED. THE DIMENSION "V" MAY NOT BE 10 3/4" AND IS DEPENDENT ON THE HARDWARE AND THEREFORE MUST BE FIELD VERIFIED.
3. CUT TUBE LENGTH FROM THE 20 FOOT TUBE "A" STOCK AS REQUIRED. USING A TABLE SAW WITH A DIAMOND OR CARBIDE ABRASIVE BLADE. ALL SAW CUTS SHALL BE PERPENDICULAR TO THE TUBE'S LONGITUDINAL AXIS. DEBURR CUT EDGES.
4. USE SAND PAPER TO ROUGHEN THE SURFACES TO BE BONDED TO THE STAND PLATE PER DETAIL "3". CLEAN THE ROUGHENED SURFACES WITH A SOLVENT (TRICHLOROETHYLENE, ACETONE, OR METHYL ETHYL KETONE).
5. CONTRACTOR SHALL BOND EACH JOINT BY SPREADING A LIGHT COAT OF MIXED ADHESIVE ON BOTH SURFACES TO BE BONDED. SLOWLY SLIDE THE TUBE ONTO THE STAND PLATE, WHILE ROTATING IT TO EXCLUDE AIR. THE BONDING ADHESIVE MATERIALS, 2-PART EPOXY, FUSOR 304-1 RESIN AND 304-2 HARDENER, FUSOR 304-1 AND 304-2 ARE AVAILABLE FROM LORD CORP CHEMICAL PRODUCTS GROUP, ERIE PA. THE ADHESIVE MUST BE MIXED AND CURED IN AIR TEMPERATURES WHICH DO NOT DROP BELOW 67°F. CURING IS COMPLETE AFTER 48 HOURS. FOLLOW MANUFACTURER'S INSTRUCTIONS.
6. ASSEMBLE LIR STRUCTURES IN HORIZONTAL POSITION PER DETAIL "2". TO TILT TOWER, SECURE MOUNTING STAND ON ANCHOR BOLTS. REMOVE TWO 5/8" BOLTS AT REAR OF MOUNTING STAND ASSEMBLY, AND PIVOT INNER SECTION UP TO VERTICAL POSITION. PLACE STAND PLATE (BOTTOM OF MAST) OVER FOUR 5/8" STUDS IN MOUNTING STAND, AND FASTEN WITH HEX NUTS. NOTE POSITION OF TAPPED HOLES IN STAND PLATE. HOLES MUST BE POSITIONED TO ACCOMMODATE INSTALLATION OF TUBE CAP AND TEE BAR ASSEMBLY PER DETAIL "5".
7. SEE INSTRUCTION BOOK TI 6850.77 FOR ADDITIONAL ASSEMBLY INSTRUCTIONS.
8. TWO SPARE "A" TUBES SHALL REMAIN IN STORAGE. RETURN TO STORAGE ANY TUBE REMNANT GREATER THAN 10' LONG.
9. TEE BAR SHALL BE ALIGNED PERPENDICULAR TO RUNWAY CENTERLINE +/- 1°.
10. A SMALL HOLE MUST BE CUT IN THE RUBBER LINER OF TUBE CAP TO ALLOW ACCESS FOR TEE BAR WIRING INSTALLATION. DO NOT REMOVE RUBBER LINER.
11. SAWCUT FOUR 2" LONG SLOTS, EQUALLY SPACED AROUND PERIMETER, IN TOP OF LIR TUBE TO ALLOW EASY INSERTION OF TUBE CAP.
12. THE SPLICE SHOWN IN DETAIL 5 IS REQUIRED ONLY FOR STATIONS WHICH PIVOT AT AN ANGLE TO RUNWAY CENTERLINE. SPLICE IS REQUIRED ONLY FOR STATIONS WHICH PIVOT PERPENDICULAR TO RUNWAY CENTERLINE. SPLICE SECTION ALLOWS CROSSBAR ASSEMBLY (WHEN CLAMPS ARE LOOSENED) TO BE ROTATED 90° TO ALLOW COMPLETE LOWERING OF TOWER.
13. THE CONTRACTOR SHALL COVER THE 2" CENTER HOLE OF THE MG-20 STAND PLATE ASSEMBLY WITH A 2"-DIA PLASTIC OR ALUMINUM MINI-LOUVER. McMASTER-CARR CAT. NO. 2016K23, 2016K13, AND 2016K3 MINI-LOUVERS MEET THIS REQUIREMENT. SEAL UNUSED HOLE IN THE STAND PLATE WITH A STAINLESS STEEL SCREEN.
14. FOR RVR SITES ONLY INSTALL A RUBBER GROMMET TO THE BOTTOM OF THE LIR POLE WHERE THE RVR CABLES ENTER. CUT THE GROMMET TO ALLOW CABLE ENTRY.
15. FOR MG-20 STRUCTURES REQUIRING THE BREAK-AWAY COUPLING KIT AS PER GLD-14-4, AN ADDITIONAL 6 3/4" MUST BE ADDED TO THE 6 3/4" DIMENSION IN ORDER TO CORRECTLY DETERMINE THE LENGTH OF TUBE REQUIRED "L". SEE NOTE 1 AND DETAIL 1 OF THIS SHEET.



USER NAME = mh091r	DESIGNED SJM	REVISED -
	DRAWN SJM	REVISED -
PLOT SCALE = 2:1	CHECKED SPG	REVISED -
PLOT DATE = 26-DEC-2012	DATE	REVISED 12/28/12 ADDENDUM 1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NAVAIDS
LIR STRUCTURE ASSEMBLY DETAILS
FOR TOWER TYPE MG-20

SCALE: N.T.S. SHEET NO. 15 OF 16 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	605BM
CONTRACT NO. 60G37				
ILLINOIS FED. AID PROJECT				

ADDED SHEET
GLD-120-1