

TRAFFIC CONTROL NOTES

CALC. BY: _____	LAKE COUNTY LAK-91-4.56	OHIO	6
DATE: _____		FHWA REGION 5	
CHKD. BY: _____		FEDERAL PROJECT	
DATE: _____			

4. THE ON-STREET MASTER SHALL ATTEMPT TO CONTACT THE CENTRAL OFFICE WHENEVER A SYSTEM MONITORED CONDITION OCCURS WHICH IS PROGRAMMED FOR IMMEDIATE REPORT. IF THE ON-STREET MASTER PROGRAM IS ON LINE IN THE CENTRAL OFFICE MONITOR, THE FAILURE REPORT WILL BE DISPLAYED ON THE CRT AND ALSO HARD-COPIED BY THE PRINTER. THE ON-STREET MASTER WILL CONTINUE TO CONTACT THE CENTRAL OFFICE MONITOR AT REGULAR INTERVALS UNTIL THE PROGRAM IS BROUGHT ON LINE AND THE MESSAGE IS TRANSMITTED.
5. UPON COMMAND FROM THE CENTRAL OFFICE FACILITY IT SHALL BE POSSIBLE TO DOWNLOAD MANUAL COMMANDS THAT WILL AFFECT THE FOLLOWING:
 - A. OVERRIDE PATTERN SELECTED BY MASTER
 - B. PLACE ENTIRE SYSTEM IN FREE OR FLASH
 - C. PLACE AN INTERSECTION IN FREE
 - D. PLACE AN INTERSECTION IN FLASH
 - E. PLACE SYSTEM IN TIME-OF-DAY MODE
6. UPON COMMAND FROM THE CENTRAL OFFICE FACILITY IT SHALL BE POSSIBLE TO RETRIEVE THE FOLLOWING LOG REPORTS:
 - A. PATTERN CHANGES
 - B. LOCAL INTERSECTION FAILURES
 - C. SENSOR FAILURE
 - D. VOLUME, OCCUPANCY AND SPEED
7. IT SHALL BE POSSIBLE TO SPECIFY THE TIME AND DATE FOR AUTOMATIC TRANSMISSION OF ANY COMBINATION ON ALL THE LOGS SPECIFIED IN 6.
8. THE CENTRAL OFFICE FACILITY SHALL BE SUPPLIED WITH THE OFF-LINE PROGRAMS PASSER II-90 AND TRANSYT 7F, AS DEVELOPED BY MCTRANS FOR TRAFFIC SIGNAL PROGRESSION ANALYSIS AND SIGNAL OPERATION OPTIMIZATION ANALYSIS FOR SINGLE INTERSECTIONS. ALL PROGRAMS SHALL OPERATE ON PC DOS OR MS DOS. ONE (1) COPY OF SOFTWARE AND DOCUMENTATION SHALL BE SUPPLIED. THE CENTRAL OFFICE MONITOR SHALL BE CAPABLE OF THE FOLLOWING:
 - A. ALL OFF-LINE PROGRAMS AND "CLOSED LOOP" SYSTEM SOFTWARE SHALL BE IMPLEMENTED THROUGH A COLOR MENU DRIVEN SYSTEM.
 - B. ALL OFF-LINE PROGRAMS AND "CLOSED LOOP" SOFTWARE SHALL BE STORED ON THE HARD DISK UNDER SEPARATE SUBDIRECTORIES. THERE SHALL ALSO BE SEPARATE SUBDIRECTORIES FOR DATA FILES FOR EACH OF OFF-LINE PROGRAMS AND "CLOSED LOOP" SOFTWARE.
9. THE CONTRACTOR SHALL SUPPLY TRAINING FOR CITY DESIGNATED PERSONAL. THE TRAINING SHALL INCLUDE OPERATION OF THE CENTRAL COMPUTER AND FIELD EQUIPMENT, MAINTENANCE OF ALL FIELD EQUIPMENT AND ASSISTANCE IN SYSTEM PARAMETER DEVELOPMENT. THE TRAINING PROGRAM SHALL BE AS FOLLOWS:

LOCAL CONTROL EQUIPMENT CONSTRUCTION TRAINING SHALL CONSIST OF AT LEAST TWO (2) HOURS OF INSTRUCTION FOR UP TO FIVE PERSONS. TRAINING SESSIONS WILL BE HELD IN CITY PROVIDED FACILITIES. TRAINING WILL INCLUDE THOROUGH FAMILIARIZATION WITH THE FOLLOWING FIELD EQUIPMENT:

 - A. LOCAL CONTROLLERS
 - B. INTERSECTION MULTIPLEX AND TELEMETRY AND MODEM UNITS

C. CONTROLLER ACCESSORIES AND AUXILIARY EQUIPMENT

THE COURSES SHALL COVER GENERAL FIELD MAINTENANCE AND TROUBLE-SHOOTING PROCEDURES AND TESTING PROCEDURES.

TRAFFIC RESPONSIVE MASTER CONTROLLER TRAINING SHALL CONSIST OF AT LEAST TWO (2) HOURS OF INSTRUCTION FOR UP TO FIVE CITY DESIGNATED PERSONS. TRAINING SESSIONS SHALL BE HELD AT THE SYSTEM SUPPLIER'S FACILITIES AND SHALL BE HELD IN CONJUNCTION WITH THE BENCH MARK TEST.

CENTRAL SOFTWARE TRAINING SHALL INCLUDE ALL ITEMS NECESSARY TO SET UP THE MONITORING OF INTERSECTION CONTROLLERS. THERE SHALL BE FOUR (4) HOURS OF TRAINING FOR UP TO FIVE (5) PERSONS. IT SHALL INCLUDE GENERAL MAINTENANCE AND TROUBLE SHOOTING PROCEDURES.

MAINTENANCE TRAINING (COMPUTER AND PERIPHERALS) SHALL CONSIST OF AT LEAST FOUR (4) HOURS OF INSTRUCTION AT A SITE SELECTED BY THE SYSTEM SUPPLIER FOR UP TO FIVE CITY DESIGNATED PERSONS. IT SHALL COVER DETAILED PROCEDURES FOR MAINTAINING AND TROUBLE SHOOTING THE MASTER CPU, MASTER COMMUNICATIONS DEVICES, AND MASTER PERIPHERAL EQUIPMENT. THE TRAINING SHALL COVER BOTH PRESENTATION OF RECOMMENDED PROCEDURES, AS WELL AS "HANDS ON" DEMONSTRATIONS OF METHODS TO ISOLATE, DETERMINE AND CORRECT EQUIPMENT MALFUNCTIONS.

FOLLOW-UP COMPUTER OPERATION TRAINING SHALL CONSIST OF AT LEAST EIGHT (8) HOURS OF TRAINING FOR UP TO FIVE CITY DESIGNATED PERSONS. IT SHALL BE HELD DURING THE 180 DAY GUARANTEE PERIOD AND IN CITY SUPPLIED FACILITIES. IT SHALL INCORPORATE A MANAGERIAL OVERVIEW OF THE SYSTEM AND SYSTEM OPERATION PROCEDURES TO FULLY FAMILIARIZE CITY PERSONAL WITH THE DAY-TO-DAY OPERATION OF THE SYSTEM.

THE CONTRACTOR SHALL PROVIDE ALL COURSE MATERIALS FOR ALL TRAINING SESSIONS, INCLUDING OPERATION MANUALS, REPAIR MANUALS, TEST EQUIPMENT, DEMONSTRATION MATERIALS, AND OTHER MATERIALS FOR DEVICES TO ASSURE A USEFUL SESSION. INSTRUCTORS SHALL BE KNOWLEDGEABLE ON THE OPERATION OF THE SYSTEM PROVIDED AND BE CAPABLE OF EFFICIENTLY AND ACCURATELY PRESENTING THIS KNOWLEDGE TO THE TRAINEES.

THE COSTS OF THE TRAINING, INCLUDING COURSE MATERIALS, TRAVEL OR SUBSISTENCE AND RELATED COSTS, SHALL BE ENTIRELY BORNE BY THE CONTRACTOR. COSTS SHALL BE INCIDENTAL TO THE UNIT PRICES BID FOR THE VARIOUS ITEMS OF EQUIPMENT UNDER THE CONTRACT.

10. BENCH MARK TESTING WILL BE ACCOMPLISHED AT THE SYSTEM SUPPLIER'S FACILITIES IN CONJUNCTION WITH THE TRAINING COURSE. THE PURPOSE OF BENCH MARK TESTING IS TO DEMONSTRATE THE CAPABILITIES OF THE SYSTEM WHICH THE SUPPLIER INTENDS TO FURNISH. THE COMPUTER, PERIPHERAL DEVICES AND ELEMENTS UTILIZED FOR THE TESTS NEED NOT BE THE SPECIFIC ITEMS WHICH WILL BE INSTALLED IN THE CITY BUT SHALL BE OF THE SAME TYPE, MODEL AND CAPACITY. (USE OF THE ACTUAL EQUIPMENT TO BE INSTALLED IN THE CITY IS PREFERRED.) BENCH MARK TESTING SHALL INCLUDE THE FOLLOWING:
 - A. LOAD AND OPERATE A BENCH MARK PROGRAM ON THE COMPUTER, UTILIZING ALL PERIPHERAL DEVICES AND AT LEAST TWO ACTUATED (FOUR PHASE MINIMUM) INTERSECTION CONTROLLERS.