NOTES: LOOP DETECTOR INSTALLATION AND TESTING I. LOOPS WITH A PERIMETER GREATER THAN 40' SHALL HAVE TWO TURNS, LOOPS WITH A PERIMETER LESS THAN OR EQUAL TO 40' SHALL HAVE THREE TURNS, UNLESS OTHERWISE NOTED ON THE PLANS. QUADRUPOLE LOOPS SHALL BE TWO TURNS IN A (2-4-2 CONFIGURATION), UNLESS OTHERWISE NOTED ON THE PLANS. TRAFFIC SIGNAL PRE-EMPTION INTERFACE WIRING DIAGRAM 2. LOOP AND FEEDER WIRE SHALL BE CONTINUOUS WITHOUT SPLICES EXCEPT AT THE LOOP/FEEDER WIRE SPLICE AS SHOWN. SPLICES SHALL BE ROSIN SOLDERED AND WATERPROOFED WITH AN ACCEPTED SPLICE KIT. A DRIAN WIRE SHALL BE GROUNDED IN THE CABINET AND INSULATED AT THE LOOP TO FEEDER WIRE SPLICE. SERIES CONNECTED LOOPS TEST SWITCH TO AMPLIFIER MOM. 3. THE LOOP TO FEEDER WIRE SPLICE, THE FEEDER WIRE JACKET AND LOOP WIRE JACKET IN DUCT SHALL BE COMPLETELY SEALED — TO CONTROLLER AND WATERPROOFED. JUMPER 4. THE CONTRACTOR MAY MAKE CONNECTIONS TO THE SIGNAL CABLE AND LOOP TO FEEDER WIRE CONNECTION AT THE TERMINAL STRIPS MOUNTED TO POLE INSIDE THE HAND HOLD COVER AS SHOWN IN DETAIL. HANDHOLE TERMINALS MUST BE EASILY ACCESSIBLE, BUT PROTECTED AGAINST ACCIDENTAL CONTACT. THE CONNECTION OF POWER CARRYING CIRCUITS MUST BE SEPERATED FROM LOOP OR LOGIC CIRCUITS. ALL CONNECTIONS TO TERMINAL STRIPS SHALL UTILIZE SPADE LUGS OR AS APPROVED BY THE ENGINEER. 600 -O-TO AMPLIFIER WIND LOOPS COUNTERCLOCKWISE; TAG WIRE EXITING SLOT AND TIE TO WHITE NOTE: SYSTEM IS WIRED "FAIL-SAFE" RELAY (SHOWN IN DE-ENERGIZED POSITION) 5. EACH LOOP SHALL HAVE A SEPERATE "FEEDER WIRE" UNLESS OTHERWISE NOTED ON THE PLANS. ALL FEEDER WIRES SHALL BE LABELED AS TO LOOP NUMBER AS DESIGNATED ON THE PLANS. N.O. RELAY ON LEAD OF FEEDER WIRE; WHEN LOOPS ARE TIED TO SAME VEHICLE DETECTOR, SERIES CONNECT IN CABINET AS SHOWN. OCTAL MT. BASE REMAINS ENERGIZED FOR NORMAL OPERATION. 6. ALL LOOP WIRE ENTERING CONCRETE PULL BOXES SHALL BE ENCLOSED IN CONDUIT. EACH LOOP WIRE SHALL ENTER CONCRETE PULL BOX OR POLE BASE THROUGH A SEPARATE PIECE OF ONE (1") HINCH CONDUIT. 7. LOOP WIRE FROM LOOP TO CONDUIT IS NOT TWISTED. LOOP WIRE IN THE CONDUIT MUST BE TWISTED TWO TO FIVE TURNS PER FOOT. SURGE 8. "30-DAY PERFORMANCE TEST SHALL NOT COMMENCE UNTIL ALL LOOPS ARE TESTED BY THE CONTRACTOR, THEN APPROVED AND ACCEPTED BY THE ENGINEER, AND THE TESTING RECORDS HAVE BEEN SUBMITTED TO THE ENGINEER. THE WARRENTY PERIOD FOR LOOPS SHALL NOT COMMENCE UNTIL TESTED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER. THE CONTRACTOR SHALL PERFORM TEST AND PROVIDE A RECORD TO THE ENGINEER AS LISTED IN THE LOOP DETECTOR TESTING PROCEDURE. HANDHOLE TERMINAL 9. UNLESS OTHERWISE APPROVED BY THE ENGINEER, BACKER ROD SHALL BE INSTALLED IN SHORT SECTIONS SPACED NO MORE THAN 18" APART AND WEDGED INTO THE SLOT TO THE CABLE IN PLACE, CABLE SHALL BE TOTALLY ENCAPSULATED IN SEALER. TO N.C. CONTACTS CONCRETE OPEN FOR ACTIVATION OF PREFMPT. SIGNAL POLE PULL BOX 10, "HOT POUR" SEALER SHALL NOT ALLOW WITH 705-LOOP WIRING IN DUCT. - BASE II. WHERE UNDERGROUND SPLICES OF SIGNAL CABLE ARE REQUIRED, CONNECTIONS SHALL BE SOLDERED AND COMPLETELY WATERPROOFED TO THE SATISIFACTION OF THE ENGINEER. WATERPROOFING SHALL EXTEND A MININUM OF TWO (2") INCHES PAST THE SIGNAL CABLE JACKET AND SHALL COMPLETELY COVER ALL INDIVIDUAL CONDUCTORS OF THE SIGNAL CABLE, WATERPROOFING DOES NOT APPLY TO CONNECTIONS 2' MIN. 12. THE CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE, ONLY ONE NEUTRAL IS REQUIRED FOR PEDESTRIAN SIGNALS, A SEPERATE 5C (TYPICAL) IS PROVIDED FOR PEDESTRIAN PUSH BUTTONS. QUADRUPOLE LOOP 10-A 13. TRAFFIC CONTROLLER CABINET LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER TO REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER. THE CONTROLLER CABINET SHALL BE WIRED SUCH THAT THE POWER TO LOAD SWITCHES CANNOT BACKFEED TO THE LOAD SWITCH POWER BUSS DURING FLASH OPERATION. SIGNAL POLE 2' MIN WHEN NECESSARY, USE A WOODEN STICK TO PUSH WIRE INTO SAWED SLOT. -CONCRETE TWO TURNS TRENCHING DETAIL TYPICAL PROCEDURE FOR DETECTOR LOOP TESTING TYPICAL INTERSECTION CUT DIAGONALS TO PREVENT PULL BOX (2-4-2 CONFIGURATION) SHARP BENDS OF WIRE. (FOR SAW CUT TRENCH IN ROADWAY) I. DISCONNECT AND TEST CONTINUITY (< 10 OHMS) IF CONTINUITY IS BAD, GO TO TEST 3. -2' MIN. 2. TEST INSULATION (@ 500 VOLT TEST > 10 MEG-OHM) RESTORE EXISTING ROADWAY 4"+1" (TYPICAL) SURFACE WITH COMPATIBLE TESTS 1& 2 ARE GOOD, NO FURTHER TESTING LIGHTNING SLOT CUT BY SAW SHOWING OVERLAP TO PROVIDE FULL IS NECESSARY, RECORDED RESULTS CONSIST OF TESTS 1& 2 FROM CONTROL CABINET WITH FEEDER WIRE MATERIAL PROTECTION CONNECTED TO LOOP. MIN. NOTE: CONCRETE PULL BOX COVERS SHALL CONCRETE TO DETECTOR 3. OPEN SPACE (DO NOT BREAK CONNECTION) REPEAT BE NON-METALLIC AND NON-CONDUCTIVE. TERMINAL FARTH TEST 1& 2 IF TEST 3 IS BAD, GO TO TEST 4. GROUND BUSS 000 4. BREAK SPLICE, INSTALL JUMPER IN CABINET, REPEAT TESTS 18 2 SEPARATELY FOR FEEDER AND FOR 000 CONDUIT FOR FEEDER TEST (1) TYPICAL SECTIONS FOR PULSE AND CONCRETE PULL BOX-*8 SOLID (MIN.) NOTE: CONDUIT SHALL BE INSTALLED IN FAILURES TYPICALLY RESULT FROM BROKEN WIRE IN PAVEMENT, FAULTY INSULATION OF LOOP OR FEEDER WIRE, OR POORLY INSULATED SPLICE CONNECTION. PRESENCE LOOP DETECTORS TEMPORARY CURB AS SHOWN OR AS DIRECTED BY THE ENGINEER, THE END OF CONDUIT SHALL BE WATER-TIGHT. GROUND FOR DRAIN WIRE CONTROLLER RESTORE EXISTING SURFACE (SHIELD) ROADWAY SURFACE CABINET GROUND WITH COMPATIBLE MATERIAL LOOP IN ASPHALT LOOP DETECTOR WIRE -SEALER I" CORE AT PAVEMENT LEAD WIRE 1.25° DIA. PVC CONDUIT JOINT OR FAILE AS REQUIRED FARTH CURB & GUTTER REMOVE CURB & REGROUT (MIN.) FEEDER WIRE BACKER ROD (SEAL END OF JACKET) CONDUIT SEE NOTE ON BACKER ROD. (PREFORMS: SEAL FROM FEEDER-SECTION C-C TUBE TO JACKET) S=2 1/2" IN ASPHALT SECTION D-D TYPICAL DETECTOR CONDUIT S=11/2" IN CONCRETE LOOP IN PAVEMENT PREFORMS = 4" SPLICE POINT BOTTOM OF SAW CUT X - DISCONNECT IF TESTS (), (2 & (3) FAIL PLUG CONDUIT TO PREVENT ENTRANCE-OF SEALER, DIRT AND WATER. CONCRETE PULL BOX SPECIAL NOTE: IF FEEDER WIRE JACKET IS LEFT UNSEALED AND WATER IS ALLOWED TO ENTER JACKET, CONTRACTOR WILL BE REQUIRED TO REPLACE FEEDER WIRE AT NO COST TO DEPARTMENT. ARKANSAS STATE HIGHWAY COMMISSION SECTION A-A PREFORMS - SAW COMPLETELY THROUGH CURB REVISED NOTES ISSUED AS STANDARD DRAWING 1'-6" CONCRETE COMBINATION ALTERNATE - WHEN INSTALLING PREFORMS ON SUBSTRATE, LEAD-INS MAY BE INSTALLED IN CONDUIT UNDERNEATH THE CURB AND GUTTER. LOOP DETECTOR CURB AND GUTTER INSTALLATION VISED PRE-EMPTION TEST SWITCH VISED NOTES STANDARD DRAWING SD-4

REVISION