

ELECTRICAL GENERAL NOTES:

1. ALL VEHICLE SIGNAL HEADS SHALL BE POLYCARBONATE AND HAVE 12 INCH L.E.D. INDICATIONS. ALL MOUNTING HARDWARE SHALL BE UNPAINTED ALUMINUM. THE CONTROLLER CABINET SHALL BE UNPAINTED ALUMINUM. ALL BOLTS, SCREWS, NUTS AND WASHERS SHALL BE STAINLESS STEEL. ANTI-SIEZE PASTE COMPOUND SHALL BE USED ON ALL MOUNTING HARDWARE FIELD CONNECTIONS.

2. BACKPLATES SHALL BE ABS PLASTIC.

3. THE LOCATION OF MAST ARM SUPPORTS SHALL BE APPROVED BY THE ENGINEER BEFORE FOUNDATIONS ARE CONSTRUCTED. MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE EDGE OF PAVEMENT OR 2 FEET FROM THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. IN CURBED SECTIONS, THE MAST ARM POLE SHALL BE LOCATED A MINIMUM OF 5 FEET FROM THE FACE OF CURB. THESE DISTANCES ARE TO THE NEAR FACE OF THE MAST ARM POLES. ALL MAST ARMS AND POLES SHALL BE GALVANIZED.

4. DEPTHS OF CONCRETE FOUNDATIONS FOR MAST ARM SUPPORTS (DETERMINED BY TABLE ON STANDARD 878001-08) ARE:

N.E. CORNER (I-64 E.B. ON-RAMP) 13.0 FT. (36" DIA.)
S.W. CORNER (I-64 W.B. ON-RAMP) 13.0 FT. (36" DIA.)

5. ALL TRAFFIC SIGNAL CABLES SHALL BE #14 AWG STRANDED COPPER, UNLESS OTHERWISE SPECIFIED. FIELD WIRES SHALL BE LANDED AT CONTROLLER OUTPUT TERMINALS USING ILSCO SLU-3S CONNECTORS OR EQUIVALENT.

6. THE LOCATION OF ALL DETECTOR LOOPS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT.

7. DETECTOR LOOP LEAD-IN SPLICES SHALL BE MADE IN A HANDHOLE PER ARTICLE 873.03 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD DRAWING 886001-01. CONDUCTORS SHALL BE SPLICED IN A RIGID MOLD. ROSIN-CORE SOLDER SHALL BE USED.

8. CALL DELAY SHALL NOT FUNCTION WHEN THE RELATED PHASES ARE IN THE GREEN MODE.

9. ALL HANDHOLES SHALL BE CAST-IN-PLACE PORTLAND CEMENT CONCRETE (PER ARTICLE 814.03(a)). THE CAST IN PLACE LEGEND IN THE COVER SHALL BE "TRAFFIC SIGNALS". SLOPE HANDHOLE COVERS TO MATCH PROPOSED GRADE ELEVATIONS.

10. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY ATTEMPT TO CONSTRUCT ANY COMPONENT OF THE VARIOUS TRAFFIC SIGNAL INSTALLATION. AGENCIES KNOWN TO HAVE UNDERGROUND FACILITIES WITHIN THE LIMITS OF THIS IMPROVEMENT ARE THE FOLLOWING: (MEMBER OF J.U.L.I.E. PHONE (800) 892-0123 ARE INDICATED BY *(CALL ONE WEEK BEFORE YOU PLAN TO DIG).

- *WATER - CITY OF O'FALLON
- *TELEPHONE - AT&T
- *GAS & ELECTRIC - AMEREN IP
- *SANITARY SEWER - CASEYVILLE TOWNSHIP ADVANCED WASTEWATER TREATMENT SYSTEM
- *CABLE T.V. - CHARTER COMMUNICATIONS
- *COMMUNICATIONS -

11. ALL INDUCTIVE LOOP DETECTORS SUPPLIED FOR THIS PROJECT SHALL HAVE THE CAPACITY OF OPERATING WITH BOTH DELAY AND EXTENSION MODES ACTIVE, IF A TIME SETTING IS PROGRAMMED. THEY SHALL BE RACK MOUNTED.

12. A 1/4" NYLON PULL ROPE SHALL BE FURNISHED AND INSTALLED IN ALL SIGNAL CONDUITS, THIS WORK SHALL BE INCLUDED WITH THE CONDUIT PAY ITEMS.

**DETECTOR LOOP REQUIREMENTS & CALCULATIONS
NORTH GREEN MOUNT ROAD & ON/OFF RAMP EB I-64**

LOOP	PHASE	LOOP SIZE (FEET)	REQUIRED NO. OF TURNS	CALCULATED DISTANCE (microhenries) μH	CALCULATED RESISTANCE (ohms) Ω
SB THRU 1	2	6' x 50'	3-6-3	814.8	2.25
SB THRU 2	2	6' x 50'	3-6-3	823.4	2.44
SB LT	5	6' x 50'	3-6-3	831.3	2.62
SB CCO 1	2	6' x 6'	6	335.8	2.27
SB CCO 2	2	6' x 6'	6	338.5	2.33
NB THRU	6	6' x 50'	3-6-3	830.2	2.60
NB RT	6	6' x 20'	3-6-3	384.4	1.79

**DETECTOR LOOP REQUIREMENTS & CALCULATIONS
NORTH GREEN MOUNT ROAD & ON/OFF RAMP WB I-64**







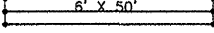
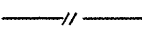





LOOP	PHASE	LOOP SIZE (FEET)	REQUIRED NO. OF TURNS	CALCULATED DISTANCE (microhenries) μH	CALCULATED RESISTANCE (ohms) Ω
SB THRU	2	6' x 50'	3-6-3	828.2	2.55
SB RT	2	6' x 20'	3-6-3	378.0	1.65
SB CCO	2	6' x 6'	6	336.0	2.27
NB THRU 1	1	6' x 50'	3-6-3	816.8	2.29
NB THRU 2	1	6' x 50'	3-6-3	822.3	2.42
NB LT	1	6' x 50'	3-6-3	830.2	2.60
NB CCO	6	6' x 6'	6	339.3	2.35

**DETECTOR LOOP REQUIREMENTS & CALCULATIONS
NORTH GREEN MOUNT ROAD & REGENCY PARK DR./PIERCE BLVD.**

LOOP	PHASE	LOOP SIZE (FEET)	REQUIRED NO. OF TURNS	CALCULATED DISTANCE (microhenries) μH	CALCULATED RESISTANCE (ohms) Ω
SB THRU	2	6' x 50'	3-6-3	803.6	1.99
SB CCO 1	2	6' x 6'	6	341.1	2.39
SB CCO 2	2	6' x 6'	6	343.7	2.45

THE ABOVE VALUES ARE CALCULATION OF COMBINED LOOP & LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN $\pm 20\%$ OF THESE VALUES.

TRAFFIC SIGNAL LEGEND

-  PROPOSED TRAFFIC SIGNAL MAST ARM W/STREET NAME SIGN & TRAFFIC SIGNAL SIGN
-  PROPOSED SIGNAL HEAD
-  PROPOSED SIGNAL HEAD W/BACKPLATE
-  PROPOSED RELOCATED SIGNAL HEAD
-  PROPOSED HANDHOLE
-  PROPOSED DOUBLE HANDHOLE
-  PROPOSED DETECTOR LOOP
-  PROPOSED CONDUIT: 'T' TRENCH, 'P' PUSHED, SIZE SPECIFIED
-  G.S.C. GALVANIZED STEEL CONDUIT
-  P.V.C.C. POLYVINYL CHLORIDE CONDUIT
-  STREET NAME SIGN ON MAST ARM
-  TRAFFIC SIGN ON MAST ARM
-  STREET NAME OR TRAFFIC SIGN

STANDARDS

- 000001
- 701101
- 701701
- 720001
- 720016
- 780001
- 814001
- 857001
- 873001
- 877001
- 878001
- 880006
- 886001
- 886006

SHEET NO.

41 OF **55**

Job No. 066-09
Scale: N/A
Drawn by: AJT
Design by: EF
Approved by: RAS
File Name: Shiloh Plans

ISSUE RECORD
4/20/12 PS&E SUBMITTAL

Corporate Engineering Certificate # 000381
Richard A. Schmidt
CIVIL ENGINEER
4/20/12

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**TRAFFIC SIGNAL PLANS
GENERAL NOTES**
N. GREEN MOUNT ROAD & I-64
E.B. RAMP, W.B. RAMP &
REGENCY PARK/PIERCE BLVD
SHILOH, ILLINOIS

F.A.U. RTE.	SECTION	COUNTY
9170	08-00333-12-PW	ST. CLAIR
ILLINOIS	CONTRACT NO. 97492	