ELECTRICAL GENERAL NOTES:

- 1. ALL VEHICLE SIGNAL HEADS SHALL HAVE 12 INCH L.E.D. INDICATIONS. ALL MOUNTING HARDWARE, SIGNAL POSTS, AND BASES 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. ALL TRAFFIC SIGNAL CABLES SHALL BE #14 AWG STRANDED COPPER, UNLESS OTHERWISE SPECIFIED. TERMINAL ENDS SHALL HAVE CRIMPED—ON FULL RING TONGUE CONNECTORS.
- 4. THE LOCATION OF ALL DETECTOR LOOPS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT.
- 5. 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. CONDUCTORS SHALL BE SPLICED IN A RIGID MOLD. ROSIN-CORE SOLDER SHALL BE USED.
- 6. CALL DELAY SHALL NOT FUNCTION WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
- 7. ALL HANDHOLES SHALL BE CAST-IN-PLACE PORTLAND CEMENT CONCRETE (PER ARTICLE 814.03(B)). THE CAST IN PLACE LEGEND IN THE COVER SHALL BE "TRAFFIC SIGNALS". SLOPE HANDHOLE COVERS TO MATCH PROPOSED GRADE ELEVATIONS.
- 8. 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).
- * CHARTER COMMUNICATIONS
- * SBC * GRANITE CITY
- * ILLINOIS CONSOLIDATED TELEPHONE
- * ILLINOIS AMERICAN WATER
- * MCLEOD USA
- * MISSISSIPPI RIVER TRANSMISSION
- 9. 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.
- 10. CABLE MARKING TAPE SHALL BE INCLUDED WITH THE PAY ITEM "TRENCH AND BACKFILL FOR ELECTRICAL WORK" AND INSTALLED PER ARTICLE 815.03(D) OF THE STANDARD SPECIFICTIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- 11. 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.
- 12. DEPTHS OF CONCRETE FOUNDATIONS FOR MAST ARM SUPPORT POLES ARE: N.E. CORNER 11.0 FT. S.W. CORNER 13.0 FT.
- 13. THE CONTRACTOR SHALL FABRICATE, DELIVER AND INSTALL 4 STREET NAME SIGNS AT THE SPECIFIED LOCATIONS. THE SIGNS AND INSTALLATION SHALL CONFORM TO SECTION 720 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARDS 720001 AND 720016. THE CONTRACTOR SHALL INSTALL THE STREET NAME SIGNS ON THE MAST ARM AS SHOWN ON THE PLANS.

DETECTOR LOOP REQUIREMENTS & CALCULATIONS 20th STREET AND MADISON AVENUE

LOOP	PHASE	LOOP SIZE (FT)	REQUIRED NO. OF TURNS	CALCULATED INDUCTANCE microhenries	CALCULATED RESISTANCE ohms
;				μH	
SB THRU/LT (20TH ST.)	4	6' x 50'	3-6-3	810.9	2.2
SB THRU/RT (20TH ST.)	4	6' x 50'	3-6-3	808.4	2.1
NB THRU/LT (20TH ST.)	3	6' × 50'	3-6-3	814.6	2.2
NB THRU/RT (20TH ST.)	3	6' x 50'	3-6-3	812.2	2.2
WB LT (MADISON AVE.)	1	6' x 50'	3-6-3	796.6	1.8
WB 1 (MADISON AVE.)	6	6' x 50'	3-6-3	791.1	1.7
WB 2 (MADISON AVE.)	6	6' x 50'	3-6-3	793.3	1.8
EB LT (MADISON AVE.)	5	6' x 50'	3-6-3	836.6	2.7
EB 1 (MADISON AVE.)	2	6' × 50'	3-6-3	831.1	2.6
EB 2 (MADISON AVE.)	2	6' x 50'	3-6-3	834.4	2.7
		"			
			*	*	
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THE ABOVE VALUES ARE CALCULATION OF COMBINED LOOP & LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN $\pm~20\%$ OF THESE VALUES.

STANDARDS
720001
720016
805001
814001
857001
877001
878001
880006
886001
886006

F.A.U. SECTION COUNTY 908902-00180-01-PV MADISON 28 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 97251

TRAFFIC SIGNAL LEGEND

••	PROPOSED SIGNAL POST
	PROPOSED HANDHOLE
6' X 50'	PROPOSED DETECTOR LOOP
	PROPOSED CONDUIT: 'T' TRENCH, 'P' PUSHED, SIZE SPECIFIED
- 181 -	PROPOSED SERVICE INSTALLATION
G.S.C.	GALVANIZED STEEL CONDUIT
P.V.C.C.	POLYVINYL CHLORIDE CONDUIT
\exists	TRAFFIC SIGN ON MAST ARM
$\langle \overline{A} \rangle$	TRAFFIC SIGN
	EXISTING CONTROLLER
+ D + 1	EXISTING SIGNAL HEAD
QII======	EXISTING TRAFFIC SIGNAL MAST ARM WITH TRAFFIC SIGN
	PROPOSED TRAFFIC SIGNAL MAST ARM WITH STREET NAME SIGN

PROPOSED PEDESTRIAN PUSH-BUTTON

SHEET NO. Job No. 160-04 2/17/05 Scale: NONE Drawn by: C.S K.W. Design by: Approved by: D.B.B. File Name: TS160-04 VISIO! 3/8/05 Crawford, Bunte, Brammei Traffic and Transportation Engineer CBB

k MADISON ILLINOIS

20th STREET & GRANITE CITY, II

GENERAL NOTES AND LEGEND