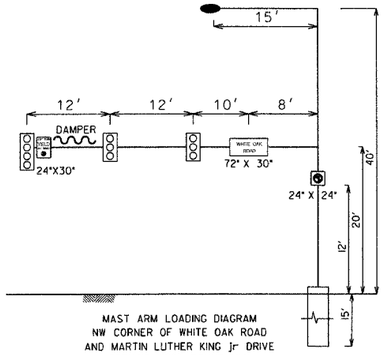
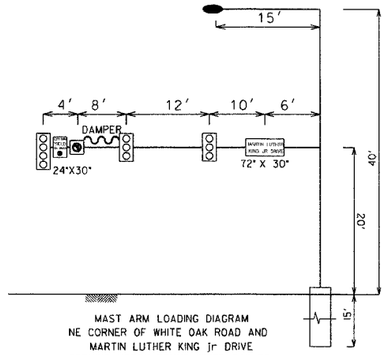
Contract No. 91362

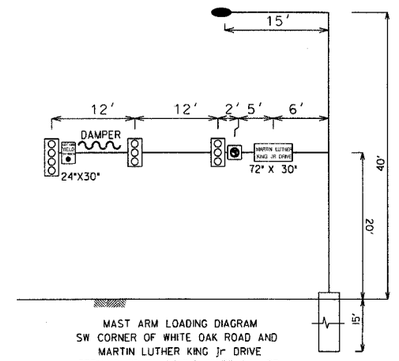
FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
6385	96-00306-00-SP	McLean	30	14
STA.	TO STA.			
FED. ROAD DIST. NO.,	ILLINOIS	FED. AID PROJECT		



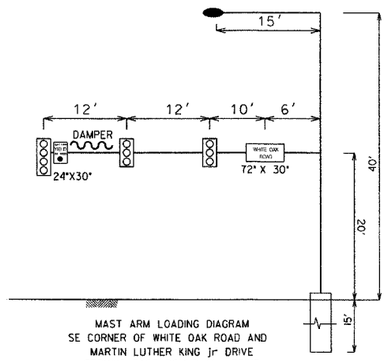
MAST ARM LOADING DIAGRAM
NW CORNER OF WHITE OAK ROAD
AND MARTIN LUTHER KING Jr DRIVE
SERVING WEST BOUND MLK



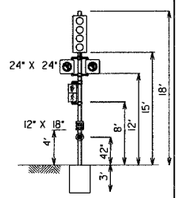
MAST ARM LOADING DIAGRAM
NE CORNER OF WHITE OAK ROAD AND
MARTIN LUTHER KING Jr DRIVE
SERVING NORTH BOUND WHITE OAK RD.



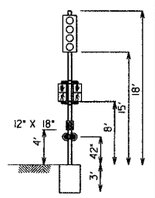
MAST ARM LOADING DIAGRAM
SW CORNER OF WHITE OAK ROAD AND
MARTIN LUTHER KING Jr DRIVE
SERVING SOUTH BOUND WHITE OAK RD.



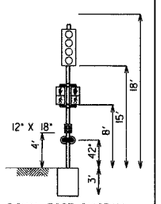
MAST ARM LOADING DIAGRAM
SE CORNER OF WHITE OAK ROAD AND
MARTIN LUTHER KING Jr DRIVE
SERVING EAST BOUND MLK DRIVE



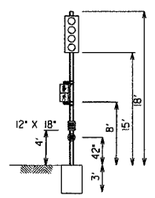
SIGNAL POST DIAGRAM
NW CORNER OF WHITE OAK RD
AND MARTIN LUTHER KING Jr DR
SERVING WB MLK



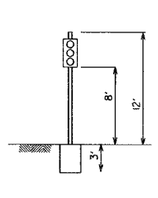
SIGNAL POST DIAGRAM
NE CORNER OF WHITE OAK RD
& MARTIN LUTHER KING Jr DR
SERVING NB WHITE OAK



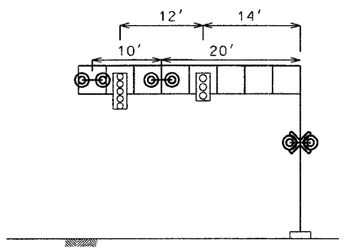
SIGNAL POST DIAGRAM
SW CORNER OF WHITE OAK RD
& MARTIN LUTHER KING Jr DR
SERVING SB WHITE OAK



SIGNAL POST DIAGRAM
SE CORNER OF WHITE OAK RD.
& MARTIN LUTHER KING Jr DR.
SERVING EB MLK DR.

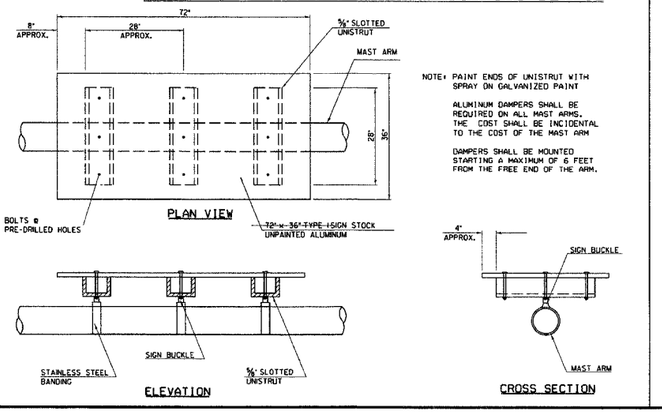


SIGNAL POST DIAGRAM
Sta 29+66.10, 33.5' Rt &
Sta 29+65,38.5' Lt
MARTIN LUTHER KING Jr DRIVE
SERVING EAST BOUND MLK DRIVE



RAILROAD TRANSOM LOCATION DIAGRAM
WEST OF RAILROAD TRACKS SERVING EAST BOUND MLK
TRANSOM AND FOUNDATION BY OTHERS
SIGNALS SHALL NOT BLOCK THE VISIBILITY OF THE
RAILROAD FLASHERS

MAST ARM DAMPENING DEVICE MOUNTING DETAIL



TRAFFIC SIGNAL QUANTITIES

NO.	PAY ITEM	DESCRIPTION		UNIT	QUANTITY
1	70101700	TRAFFIC CONTROL AND PROTECTION	*	L Sum	0.0
2	72000100	SIGN PANEL - TYPE 1		SQ FT	0.0
3	72000200	SIGN PANEL - TYPE 2		SQ FT	0.0
4	78002100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS		SQ FT	701.0
5	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"		FOOT	0.0
6	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 8"		FOOT	0.0
7	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"		FOOT	0.0
8	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"		FOOT	0.0
9	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"		FOOT	0.0
10	80500100	SERVICE INSTALLATION, TYPE A	*	EACH	0.0
11	80500200	SERVICE INSTALLATION, TYPE B	*	EACH	0.0
12	81012400	CONDUIT IN TRENCH, 1.1/4" DIA., PVC		FOOT	0.0
13	81012600	CONDUIT IN TRENCH, 2" DIA., PVC		FOOT	0.0
14	81012700	CONDUIT IN TRENCH, 2.1/2" DIA., PVC		FOOT	0.0
15	81013000	CONDUIT IN TRENCH, 4" DIA., PVC		FOOT	0.0
16	81013100	CONDUIT IN TRENCH, 6" DIA., PVC		FOOT	0.0
17	81021330	CONDUIT PUSHED, 2" DIA., PVC		FOOT	0.0
18	81021370	CONDUIT PUSHED, 4" DIA., PVC		FOOT	0.0
19	81021380	CONDUIT PUSHED, 5" DIA., PVC		FOOT	0.0
20	81100700	CONDUIT ATTACHED TO STRUCTURE, 2.1/2" DIA., GALVANIZED STEEL	*	FOOT	46.0
21	81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	*	EACH	0.0
22	81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	*	EACH	0.0
23	81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10		FOOT	0.0
24	81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6		FOOT	0.0
25	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK		FOOT	0.0
26	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT		EACH	0.0
27	82500505	LIGHTING CONTROLLER, SPECIAL	*	EACH	0.0
28	85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	*	EACH	0.0
29	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C		FOOT	0.0
30	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C		FOOT	0.0
31	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C		FOOT	0.0
32	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C		FOOT	0.0
33	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR		FOOT	0.0
34	87301705	ELECTRIC CABLE IN CONDUIT, RAILROAD INTERCONNECT, NO. 16 3 PAIR		FOOT	33.0
35	87502460	TRAFFIC SIGNAL POST, GALVANIZED STEEL 12 FT.		EACH	0.0
36	87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.		EACH	0.0
37	87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.		EACH	0.0
38	87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.		EACH	0.0
39	87702940	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT.		EACH	0.0
40	87800100	CONCRETE FOUNDATION, TYPE A		FOOT	0.0
41	87800200	CONCRETE FOUNDATION, TYPE D		FOOT	0.0
42	87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER		FOOT	0.0
43	88000160	SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED		EACH	0.0
44	88000170	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED		EACH	0.0
45	88000220	SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED		EACH	0.0
46	88000230	SIGNAL HEAD, 1-FACE, 4-SECTION, MAST ARM MOUNTED	*	EACH	0.0
47	88100200	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED		EACH	0.0
48	88200110	TRAFFIC SIGNAL BACKPLATE, LOUVERED		EACH	0.0
49	88500500	INDUCTION LOOP DETECTOR AMPLIFIER,	*	EACH	0.0
50	88500525	INDUCTION LOOP DETECTOR AMPLIFIER WITH SYSTEM OUTPUT	*	EACH	0.0
51	88600100	DETECTOR LOOP, TYPE I		FOOT	0.0
52	88800100	PEDESTRIAN PUSH-BUTTON		EACH	0.0
53	89100400	ILLUMINATED SIGN, LED		EACH	0.0
54	X0323885	TRAFFIC SIGNAL BATTERY BACKUP SYSTEM	*	EACH	1.0

SCHEDULE OF TRAFFIC SIGNAL HEADS

1 EACH SIGNAL HEAD, POLYCARBONATE, 1-FACE, 3 SECTION BRACKET MOUNTED, 12" LENSES.

5 EACH SIGNAL HEAD, POLYCARBONATE, 1-FACE, 4 SECTION BRACKET MOUNTED, 12" LENSES.

9 EACH SIGNAL HEAD, POLYCARBONATE, 1-FACE, 3 SECTION MAST ARM MOUNTED, 12" LENSES.

5 EACH SIGNAL HEAD, POLYCARBONATE, 1 FACE, 4 SECTION MAST ARM MOUNTED, 12" LENSES.

20 EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED

NOTE LED LAMPS ARE REQUIRED FOR FOR ALL INDICATIONS.

GENERAL NOTES

1. The Contractor is responsible for the cost of uncovering or hand digging around utilities as necessary, incidental to the respective contract pay item.

2. Exact signal location may be modified in field to avoid existing utilities, as directed by the City Engineer.

3. All signal bases shall be located a minimum of 6 feet from the face of the curb unless approved otherwise by the City Engineer.

4. All mast arm pole bases shall be protected by a stainless steel mesh screening around the base bolts to prevent rodent entry. The mesh shall be secured to the base by stainless steel banding as incidental to the individual mast arm assembly pay item.

5. No additional compensation will be allowed for placing conduit at greater than 2 feet minimum depth to avoid obstacles such as underground utilities.

6. A 12 gauge stranded THHN wire shall be furnished and left in place in all conduits between hand holes and foundations with six (6) feet of slack at each hand hole as incidental to the conduit pay item.

7. Drilling holes through existing curb and gutter, inserting conduit and filling with approved sealer for detector loops is incidental to the detector loop pay item.

8. All mast arm mounted signal heads on each individual mast arm shall be mounted so the red indications are level with each other.

9. All bracket mounted heads shall be mounted on side of pole as directed by the City Engineer in order to minimize vehicle damage.

10. All LED signal lenses shall be of the same type, design and appearance and be from the same manufacturer for any given intersection.

11. The electrical conductors for all traffic signal heads shall be 14 gauge solid, soft copper.

12. The proposed traffic signal control cabinet shall be furnished with a door switch, conflict flash and manual flash inputs wired to the appropriate controller "D" connector inputs. The cabinet shall also be furnished with a manual control switch and manual cord within the police compartment door as incidental to the controller pay item.

13. An Innovative Technologies model HS-P-SP-120A-30A-RJ suppressor or approved equal with a 3 position terminal block shall be mounted on an aluminum plate below the cabinet power distribution panel. Incoming power shall connect to the terminal block which shall feed the IT suppressor through 10 gauge solid copper wire (AC+, AC-, Gnd.) with approximately ten 1.5 to 2 inch coils in the AC+ and AC- lines.

14. All detector loop amplifiers shall be rack mounted and shall be labeled on the edge of the shelf below the amplifier with their respective directions, phases, loop terminals and controller inputs.

15. Contractor shall submit shop drawings for all signal components to the City of Bloomington for approval prior to ordering.

16. The Contractor shall be responsible for obtaining electrical service for the traffic signals and street lighting. The Contractor shall contact the power supplier prior to beginning work in order to meet the power supplier?(s) requirements. Contractor shall notify the Engineer a minimum of 72 hours before the circuit is energized.

17. Mast arm luminaire service shall be energized from the opposite transformer phase of the traffic signal service.

18. The Engineer shall be notified at least 72 hours prior to signal turn on.

19. The Contractor shall arrange for a factory supplier representative to be present at the intersection when the signals are turned on as incidental to the controller pay item.

20. The City reserves the right to cancel any turn on if the City deems the situation unsafe for reasons such as bad weather, peak hour traffic conditions or road condition.

21. The Contractor shall be responsible for having the cabinet energized and fully functional with field displays turned off a minimum of 24 hours prior to scheduled signal turn on.

22. Signal turn on shall be scheduled between 9 and 10 am.

23. The City Electricians shall assist with the programming of the traffic signal controller. The Contractor shall notify the City Electricians by contacting (309)434-2225 a minimum of 72 hours prior to controller being ready for programming. The Contractor shall be responsible for the programming of all video detection parameters.

24. The Contractor shall provide the Engineer with the controller, conflict monitor and one set of the cabinet prints a minimum of 72 hours prior to energizing the cabinet.

25. The Contractor shall verify the exact location of all utilities prior to beginning construction. (J.U.L.I.E. 1-800-829-0123)

26. All lenses shall be 12" unless otherwise noted.

27. All mast arm mounted signal heads on each individual mast are shall be mounted so that the red indications are level with each other.

28. All threads or bolts used in assembly of traffic signal components shall be coated with a non-lead based, anti-seize compound, similar to lead plate, prior to assembly

29. Ground rods shall be solid copper, or copper clad steel

30. A 24 x 30? aluminum left turn yield on green sign shall be mounted 6 to 12 inches to the right of each 4 section mast arm mounted left turn signal

31. All bracket mounted heads shall be mounted on the side of the pole as directed by the city engineer in order to minimize vehicle damage.

Lewis, Yockey & Brown, Inc.
Consulting Engineers & Land Surveyors
501 North Main Street Bloomington, Illinois Ph. (309) 829-2552
222 East Center Street LeRoy, Illinois Ph. (309) 962-8151
155 South Elm Street El Paso, Illinois Ph. (309) 527-2552

Date	Design 558
5-22-06	
Rev. 9-12-06	Drn. EFD
12-20-06	Chk. EFD
1-17-07	App. LDY

MLK and White Oak Road
Intersection Improvements
Traffic Signal Notes and
Mast Arm Diagrams

Sheet 14 of 30

4018.63