

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
316	(116) I	BUREAU	6	1

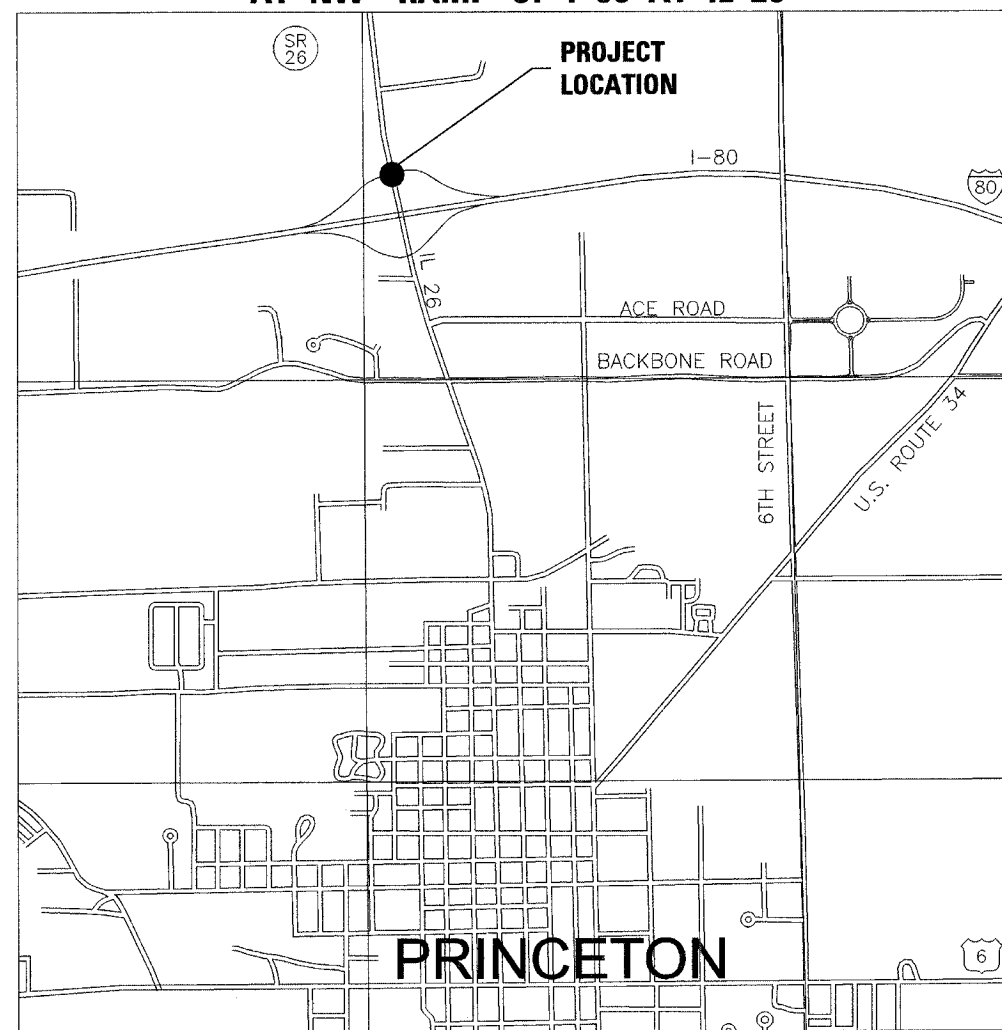
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FAP 316 (IL 26)
SECTION (116) I

BUREAU COUNTY
C-93-022-07

RELOCATE TRAFFIC SIGNALS
AT NW RAMP OF I-80 AT IL 26



PRINCETON
LOCATION MAP

INDEX OF SHEETS

- COVER SHEET
- GENERAL NOTES AND SUMMARY OF QUANTITIES
- TRAFFIC SIGNAL PLAN
- CABLE PLAN
- TRAFFIC SIGNAL DETAILS
- SOIL BORINGS

HIGHWAY STANDARDS

- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 701006-02 OFF-ROAD OPERATIONS, 2L, 2W, 4.5M (15') TO 600mm (24") FROM PAVEMENT EDGE
- 701701-04 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 702001-06 TRAFFIC CONTROL DEVICES
- 857001 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 873001-01 TRAFFIC SIGNAL GROUNDING & BONDING
- 877001-02 STEEL MAST ARM ASSEMBLY AND POLE
- 878001-05 CONCRETE FOUNDATION DETAILS
- 880006 TRAFFIC SIGNAL MOUNTING DETAILS
- 880001 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

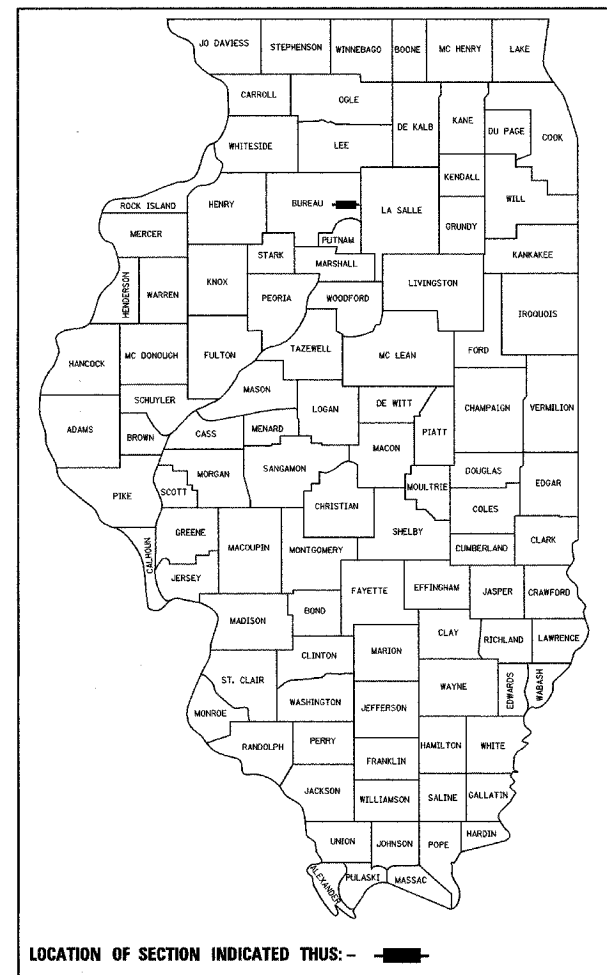
DISTRICT 3 NO. (815) 434-6131

PROJECT ENGINEER: JOE KANNEL
UNIT CHIEF: MICHELE LINDEMANN
TOWNSHIP: PRINCETON

REVISD 4/2/07

CONTRACT NO. 66696

D-93-016-07



LOCATION OF SECTION INDICATED THUS: -

1-18-2007
date



expires 11-30-2007

Jorge L. Sanchez
signature
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-001717

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 2/6 20 07

James D. Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 23, 20 07

Eric E. Haral
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

March 23, 20 07

Milton R. Svec, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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CHAMLIN
ASSOCIATES
PERU ILLINOIS MORRIS

* DATE - 1/07
* TSCOVER - DGN

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
316	(116) I	BUREAU	6	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION (J.U.L.I.E. 800/892-0123). CONTACT IDOT FOR HIGHWAY LIGHTING LOCATE.
- ALL TRAFFIC SIGNAL HEADS SHALL BE 12" POLYCARBONATE, UNLESS OTHERWISE NOTED.
- ALL SIGNAL BASES SHALL BE LOCATED AT 6 FOOT MINIMUM CLEARANCE FROM CURB UNLESS OTHERWISE DIRECTED BY ENGINEER.
- ALL CONDUIT IN TRENCH SHALL BE P.V.C. ALL CONDUIT PUSHED MAY BE GALVANIZED STEEL OR P.V.C. CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
- A 1/4" DIAMETER CONTINUOUS NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OR CONTROLLER AS INCIDENTAL TO THE RESPECTIVE CONDUIT PAY ITEM.
- THE DEPARTMENT OF TRANSPORTATION (815-434-8505) SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO THE TURNING ON OF THE NEW SIGNALS.
- NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FOOT MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
- ALL MAST ARM SIGNAL HEADS ON AN INDIVIDUAL MAST ARM SHALL BE MOUNTED SO THAT THE "RED" INDICATIONS ARE LEVEL WITH EACH OTHER.
- THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES, AS NECESSARY, INCIDENTAL TO THE CONDUIT PAY ITEM.
- ALL THREADS OF BOLTS USED IN TRAFFIC COMPONENT ASSEMBLIES SHALL BE COATED WITH A NON-LEAD BASED ANTI-SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
- BACK PLATES MUST BE POLYCARBONATE WITH A DEEP BACK FLANGE.
- THE CONTRACTOR SHALL PROVIDE 3 FOOT SLACK CABLE IN EACH TRAFFIC SIGNAL STRUCTURE: MAST ARM, POST, CONTROLLER. THE SLACK, WHICH IS IN ADDITION TO THE VERTICAL LENGTH OF CABLE DEFINED IN THE SPECIFICATIONS, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH CABLE.
- ALL GROUNDING MATERIALS FOR TRAFFIC SIGNAL CONCRETE FOUNDATIONS SHALL REFER TO SECTION 806 IN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2007
- TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED SIGNAL PAY ITEMS.
- ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED. CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.
- ALL NEW TRAFFIC AND PEDESTRIAN SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	100% STATE YO31-IF
67100100	MOBILIZATION	LSUM	1	1
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	1	1
* 72000100	SIGN PANEL - TYPE 1	SQ FT	9	9
81012700	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	9	9
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	9	9
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1
△ 87200400	SPAN WIRE	FOOT	455	455
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	195	195
△ 87200500	TETHER WIRE	FOOT	267	267
87700260	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1	1
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13	13
87900200	DRILL EXISTING HANDHOLE	EACH	1	1
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2	2
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	2	2
△ 89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	8	8
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1
△ X0325730	TRAFFIC SIGNAL WOOD POLE, 45 FT, CLASS 2	EACH	2	2
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	34	34

* SPECIALTY ITEM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT THREE

PREPARED BY: *Rid Powell*
DISTRICT STUDIES & PLANS ENGINEER

DATE: 2-6-07

EXAMINED BY: *[Signature]*
DISTRICT CONSTRUCTION ENGINEER

[Signature]
DISTRICT MATERIALS ENGINEER

[Signature]
DISTRICT OPERATIONS ENGINEER

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL GENERAL NOTES AND
SUMMARY OF QUANTITIES
FAP 316 (IL 26)
SECTION (116) I
BUREAU COUNTY

SCALE: DATE 1/07 DRAWN BY ARR CHECKED BY JLS

△ REVISED 4/2/07

CONSTRUCTION NOTES

REPLACE SPAN WIRE MOUNTED SIGNAL HEADS ON RAMP "D" WITH NEW SIGNAL HEADS AND A STEEL MAST ARM ASSEMBLY AND POLE AT THE SOUTHWEST CORNER OF THE INTERSECTION.

PLACE ADDITIONAL TEMPORARY WOOD POLES BETWEEN THE EXISTING POLES SUPPORTING THE NORTHBOUND AND SOUTHBOUND SIGNALS AS SHOWN.

REPLACE ALL EXISTING SPAN AND TETHER WIRE. NOTE THAT NO NEW TETHER WIRES WILL BE REQUIRED WEST OF THE NEW WOOD POLES.

RELOCATE ALL REMAINING EXISTING SIGNAL HEADS AND REQUIRED SIGNAL CABLES TO NEW SPAN AND TETHER WIRES.

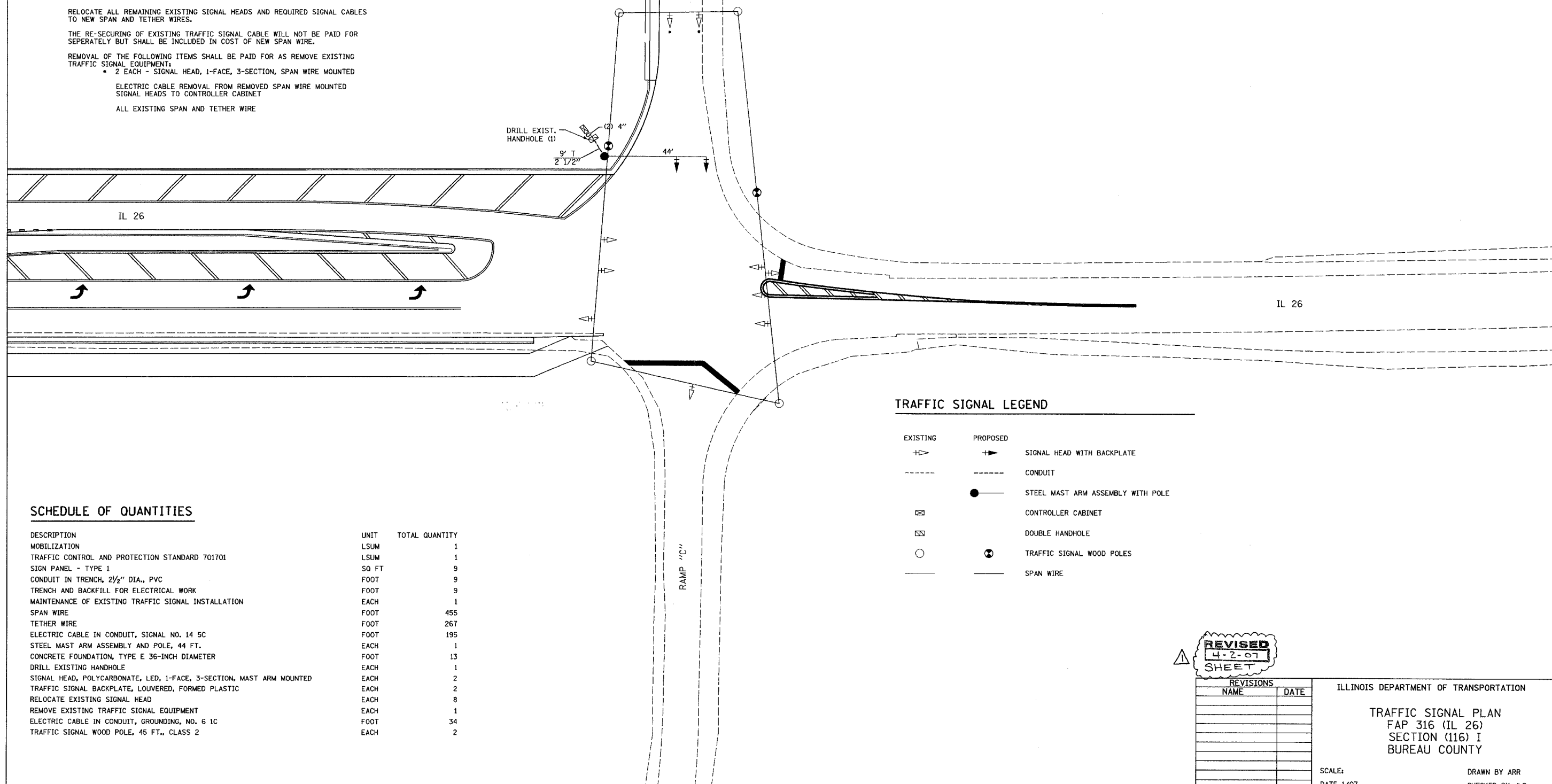
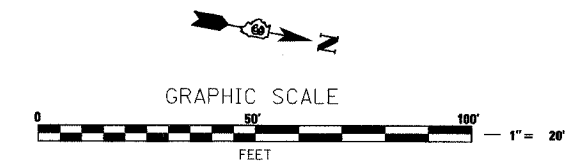
THE RE-SECURING OF EXISTING TRAFFIC SIGNAL CABLE WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN COST OF NEW SPAN WIRE.

REMOVAL OF THE FOLLOWING ITEMS SHALL BE PAID FOR AS REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT:

- 2 EACH - SIGNAL HEAD, 1-FACE, 3-SECTION, SPAN WIRE MOUNTED

ELECTRIC CABLE REMOVAL FROM REMOVED SPAN WIRE MOUNTED SIGNAL HEADS TO CONTROLLER CABINET

ALL EXISTING SPAN AND TETHER WIRE



TRAFFIC SIGNAL LEGEND

EXISTING	PROPOSED	
→	→	SIGNAL HEAD WITH BACKPLATE
---	---	CONDUIT
⊠	●	STEEL MAST ARM ASSEMBLY WITH POLE
⊠	⊠	CONTROLLER CABINET
⊠	⊠	DOUBLE HANDHOLE
○	⊙	TRAFFIC SIGNAL WOOD POLES
—	—	SPAN WIRE

SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	TOTAL QUANTITY
MOBILIZATION	LSUM	1
TRAFFIC CONTROL AND PROTECTION STANDARD 701701	LSUM	1
SIGN PANEL - TYPE 1	SQ FT	9
CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	9
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	9
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
SPAN WIRE	FOOT	455
TETHER WIRE	FOOT	267
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	195
STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13
DRILL EXISTING HANDHOLE	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	2
RELOCATE EXISTING SIGNAL HEAD	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	34
TRAFFIC SIGNAL WOOD POLE, 45 FT., CLASS 2	EACH	2

REVISED
4-2-07
SHEET

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL PLAN
FAP 316 (IL 26)
SECTION (116) I
BUREAU COUNTY

SCALE: DATE 1/07

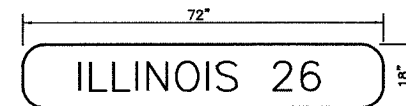
DRAWN BY ARR
CHECKED BY JLS

PLOT DATE = 3/07
FILE NAME = TSP.LANDON
USER NAME = ARR

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
316	(116) I	BUREAU	6	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

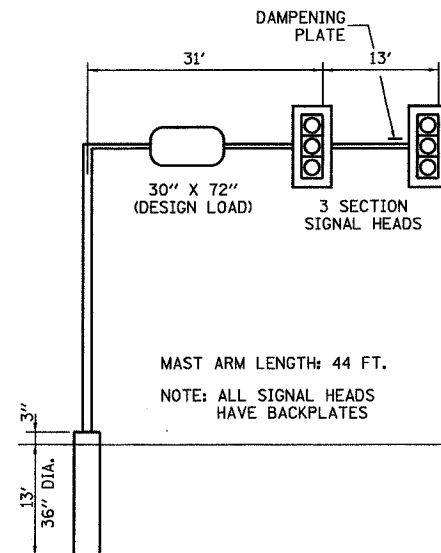
ELECTRICAL LOAD FOR INTERSECTION				
STREET NAME	COMPONENT	NUMBER	WATTAGE EACH	BURNTIME %
RAMPS "C" & "D"	RED (LED)	2	10	70
	YELLOW (LED)	2	19	5
	GREEN (LED)	2	14	25
	RED	1	135	70
	YELLOW	1	135	5
	GREEN	1	135	25
IL 26	RED	7	135	25
	YELLOW	7	135	5
	GREEN	7	135	70
	YELLOW ARROW LT.	2	135	5
	GREEN ARROW LT.	2	135	5
		2	90	70
		2	90	30
TRAFFIC SIGNAL CABINET	CONTROLLER	1	6	100
	VEHICLE DETECTORS	4	4	100

AGENCY RESPONSIBLE FOR TRAFFIC SIGNAL ENERGY CHARGES:
CITY OF PRINCETON



TYPE A SHEETING REQUIRED
8" D SERIES LETTERS
1 SIGN REQUIRED = 9.00 SQ. FT. EACH
= 9.00 SQ. FT. TOTAL

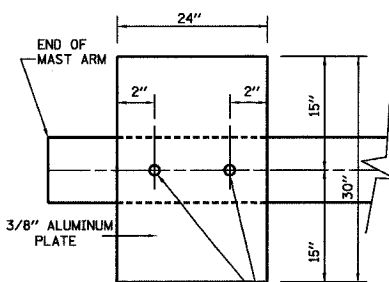
THIS STREET NAME SIGN SHALL BE PLACED ON THE
MAST ARMS PARALLEL WITH ILLINOIS ROUTE 26



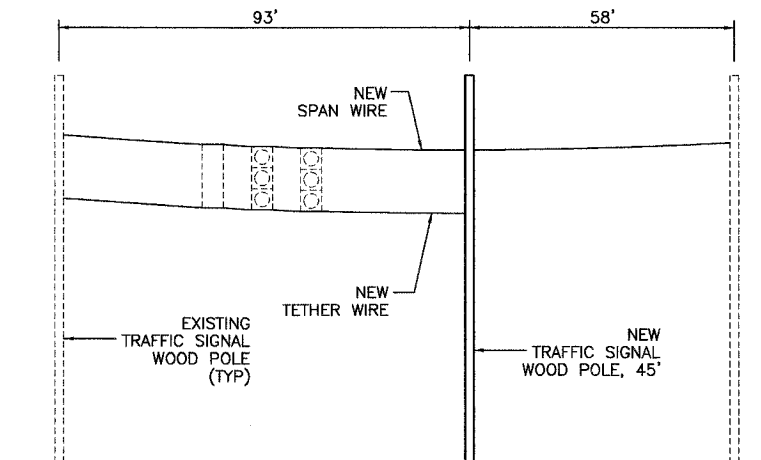
WESTBOUND OVER RAMP "D"
SOUTHWEST CORNER
NOT TO SCALE

NOTE:

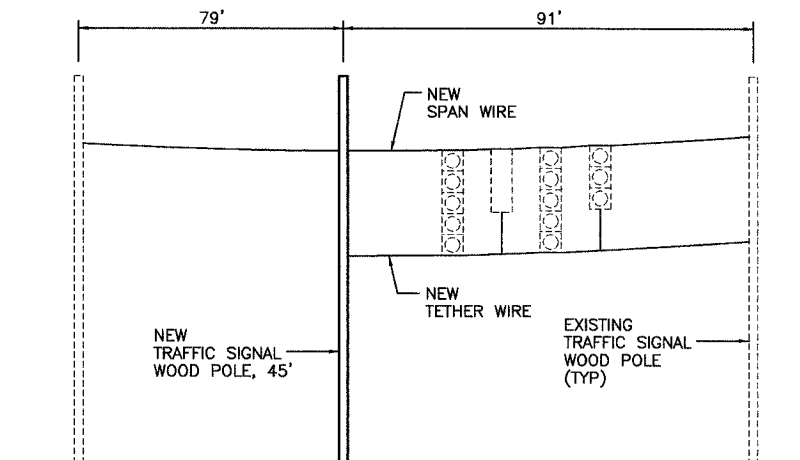
DAMPENING DEVICE SHALL CONSIST OF A 24" X 30" TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 30" LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.



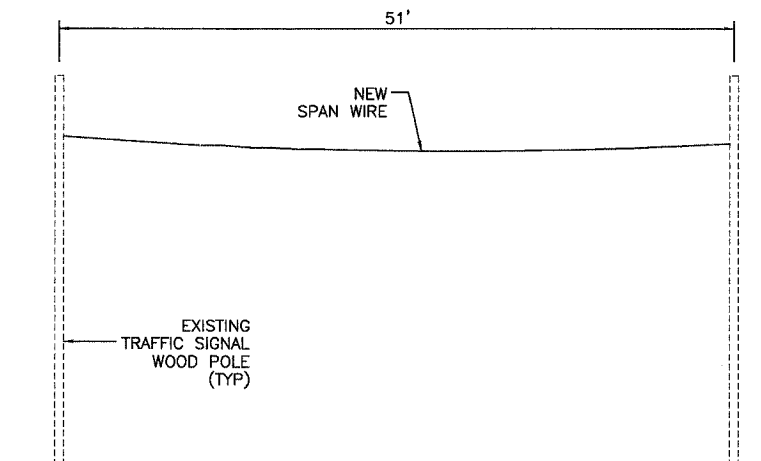
2-5/8" STAINLESS STEEL BOLTS THROUGH STAINLESS STEEL BANDING
NOTE:
MOUNT DAMPENING PLATE TO END OF EACH TRAFFIC SIGNAL MAST ARM.
DAMPENING PLATE DETAIL - TOP VIEW



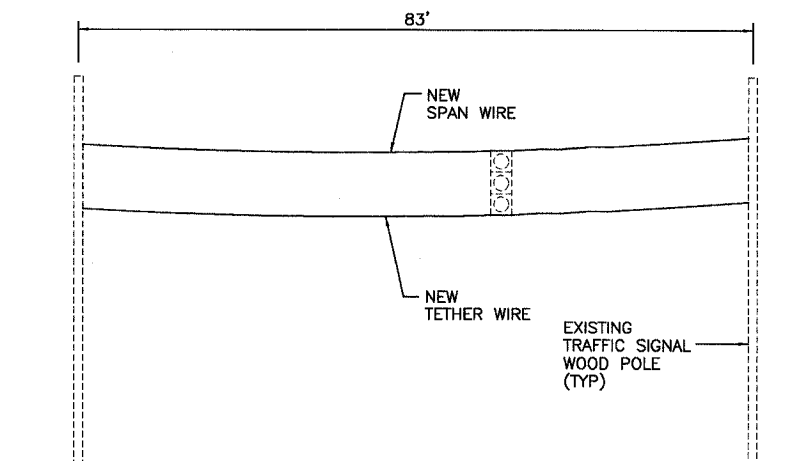
SOUTHBOUND
NOT TO SCALE



NORTHBOUND
NOT TO SCALE



WESTBOUND OVER RAMP "D"
NOT TO SCALE



WESTBOUND OVER RAMP "C"
NOT TO SCALE

REVISED
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ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL DETAILS
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