04-29-11 LETTING ITEM 004

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	59	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60K19		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

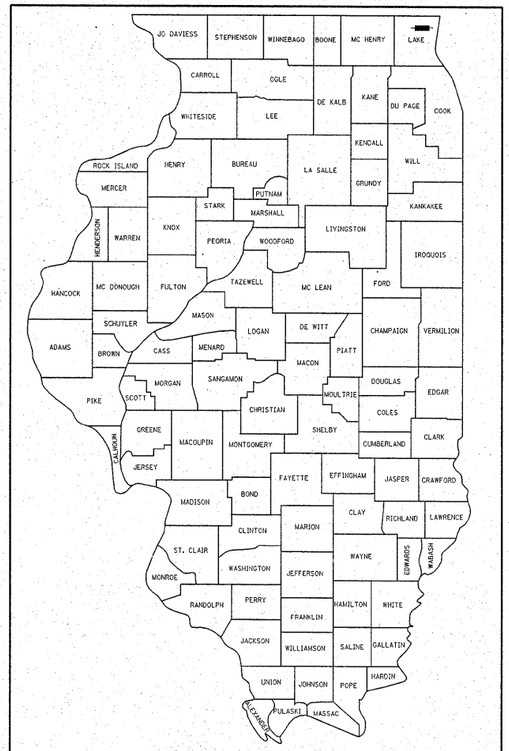
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

THE PROJECT IS LOCATED IN VILLAGE OF GREEN OAKS

F.A.P. ROUTE 352: IL 137 (BUCKLEY RD)
AT O'PLAINE RD
SECTION: 56N–4
CHANNELIZATION
PROJECT: CMF-0352(014)
LAKE COUNTY
C–91–445–10

D–91–445–10

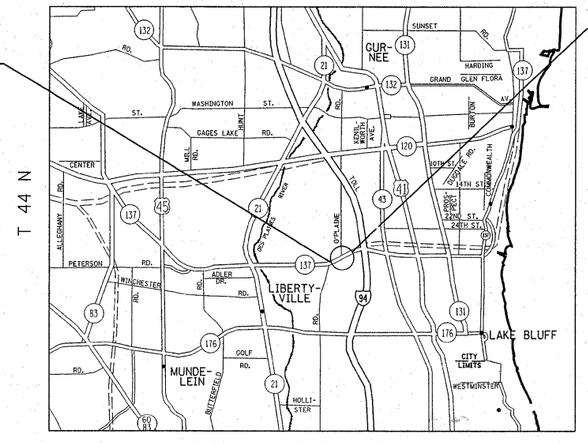


LOCATION OF SECTION INDICATED THUS:– ▬

R 11 E

PROJECT BEGINS STA. 102+59

PROJECT ENDS STA. 112+10.9



LIBERTYVILLE TOWNSHIP

TRAFFIC DATA:
2009 ADT = 28300 (IL 137)
= 11500 (O'PLAINE RD)
POSTED SPEED LIMIT = 45 MPH

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
OR 811

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED FEBRUARY 1, 20 11

Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 25 20 11

Scott E. Stitt, P.E. /bl
acting ENGINEER OF DESIGN AND ENVIRONMENT

March 25 20 11

Christine M. Reed /bl
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER KARI SMITH (847) 705–4437
PROJECT MANAGER KEN ENG

GROSS & NET LENGTH OF PROJECT = 1023 LINEAL FEET = .193 MILES

CONTRACT NO. 60K19

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

STATE STANDARDS

000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

280001-05 TEMPORARY EROSION CONTROL SYSTEM

442201-03 CLASS C AND D PATCHES

542301-03 PRECAST REINFORCED CONCRETE FLARED END SECTION

602011-02 CATCH BASIN, TYPE C

602401-03 MANHOLE, TYPE A

604001-03 FRAME AND LIDS TYPE 1

604036-02 GRATE, TYPE 8

604091-02 FRAME AND GRATE, TYPE 24

701301-04 LANE CLOSURE, 2L, 2W SHORT TIME OPERATIONS

701101-02 OFF-ROAD OPERATION, MULTILANE, 15' (4.5M) TO 24" (600MM) FROM PAVEMENT EDGE

701106-02 OFF-ROAD OPERATION, MULTILANE, 15' (4.5M) TO 24" (600MM) FROM PAVEMENT EDGE

701311-03

701422-03 LANE CLOSURE, MULTILANE, FOR SPEEDS>45 TO 55 MPH

701326-04

701426-04 LANE CLOSURE, MULTILANE INTERMITTENT OR MOVING OPERTION FOR SPEEDS > 45 MPH

701502-04

701606-07 URBAN LANE CLOSURE MULTILANE, 2W WITH MOUNTABLE MEDIAN

701602-05

701701-07 URBAN LANE CLOSURE, MULTILANE INTERSECTION

701801-04 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE

701901-01 TRAFFIC CONTROL DEVICES

814001-02 HANDHOLES

814006-02 DOUBLE HANDHOLES

857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES

862001-01
~~826001~~ UNINTERRUPTABLE POWER SUPPLY (UPS)

873001-02 TRAFFIC SIGNAL GROUNDING AND BONDING

877001-04 STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'

878001-08 CONCRETE FOUNDATION DETAIL

886001-01 DETECTOR LOOP INSTALLATIONS

880001-01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND VILLAGES OF GREEN OAKS.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES (40 MM) WHERE THE SPEED LIMIT IS 40 MPH (80 KM/H) OR LESS AND 1 INCH (25 MM) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (80 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75 MM) MAY BE ALLOWED IF THE EDGE OFTHE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

UNLESS OTHER CONDITIONS WARRANT EXTENDED LANE CLOSURE AS DETERMINED AND APPROVED IN WRITING BY THE ENGINEER OR AS PROVIDED FOR IN THE CONTRACT SPECIFICATIONS, OVERNIGHT CLOSURES SHALL NOT BE ALLOWED FOR REHABILITATION PROJECTS INVOLVING DAYTIME MILLING AND RESURFACING OPERATIONS AND CLASS D PATCHING.

THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON AREA TRAFFIC FIELD ENGINEER AT (847) 438-2300 A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKING.

BEFORE BEGINING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERANCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKINGS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKINGS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470. A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINING OF WORK.

ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

PROPOSED SEGMENTAL CONCRETE BLOCK WALL SHALL NOT EXCEED 3 FT IN HEIGHT.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS- RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN IN THE PLANS.

FILE NAME = c:\pw_work\pwidot\sbebawa\d0188337\P142809-Design.dgn	USER NAME = sbebawa	DESIGNED - Designed By	REVISED - Revised By1	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL137 @ O'PLAINE RD. Rev.
	PLOT SCALE = 49.9999 ' / IN.	DRAWN - Drawn By	REVISED - Revised By2		INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES
	PLOT DATE = 2/28/2011	CHECKED - Checked By	REVISED - Revised By3		SCALE: Scale | SHEET NO. OF SHEETS | STA. TO STA.
		DATE - Checked Date	REVISED - Revised By4		

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	2
		CONTRACT NO. 60K19		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 FEDERAL 80% STATE 20%	TRAFFIC 0021 FEDERAL 80% STATE 10% COUNTY 5% VILLAGE 5%	TRAFFIC 0021 100% VILLAGE
87702654	STEEL MAST ARM ASSEMBLY { AND POLE WITH DUAL MAST ARMS, 42 FT. { 48 FT. AND	EACH	1		1	
~~X6327211~~	~~RELOCATE SWITCH~~	~~EACH~~	~~2~~	~~1~~	~~1~~	
X0327212	FURNISHING STEEL PILES W6X25 (SPECIAL)	FOOT	380	380		
X5120005	DRIVING PILES (SPECIAL)	FOOT	380	380		
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	6	6		
20200100	EARTH EXCAVATION	CU YD	507	507		
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	318	318		
20800150	TRENCH BACKFILL	CU YD	115	115		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	339	339		
21101805	COMPOST FURNISH AND PLACE, 2"	SQ YD	97	97		
25000210	SEEDING, CLASS 2A	ACRE	0.05	0.05		
25000310	SEEDING, CLASS 4	ACRE	0.02	0.02		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	4.5	4.5		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	4.5	4.5		
25100630	EROSION CONTROL BLANKET	SQ YD	1216	1216		
25200200	SUPPLEMENTAL WATERING	UNIT	12	12		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100	100		
28000400	PERIMETER EROSION BARRIER	FOOT	770	770		
28000510	INLET FILTERS	EACH	8	8		
28100105	STONE RIPRAP, CLASS A3	SQ YD	16	16		
28200200	FILTER FABRIC	SQ YD	16	16		
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	8	8		
40600300	AGGREGATE (PRIME COAT)	TON	40	40		
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	15	15		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	95	95		
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	483	483		
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	988	988		
42000506	PORTLAND CEMENT CONCRETE PAVEMENT 10 1/4" (JOINTED)	SQ YD	115	115		
42001300	PROTECTIVE COAT	SQ YD	927	927		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	5038	5038		

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 FEDERAL 80% STATE 20%	TRAFFIC 0021 FEDERAL 80% STATE 10% COUNTY 5% VILLAGE 5%	TRAFFIC 0021 100% VILLAGE
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	9191	9191		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	799	799		
44000600	SIDEWALK REMOVAL	SQ FT	668	668		
44201777	CLASS D PATCHES, TYPE II, 11 INCH	SQ YD	276	276		
44201781	CLASS D PATCHES, TYPE III, 11 INCH	SQ YD	92	92		
44201783	CLASS D PATCHES, TYPE IV, 11 INCH	SQ YD	150	150		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	594	594		
50200100	STRUCTURE EXCAVATION	CU YD	105	105		
50300225	CONCRETE STRUCTURES	CU YD	41.6	41.6		
50800105	REINFORCEMENT BARS	POUND	4630	4630		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	810	810		
54002020	EXPANSION BOLTS 3/4 INCH	EACH	8	8		
54003000	CONCRETE BOX CULVERTS	CU YD	4.8	4.8		
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1	1		
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	30	30		
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	90	90		
550A0090	STORM SEWERS, CLASS A, TYPE 1 18"	FOOT	397	397		
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	72	72		
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	1	1		
60107600	PIPE UNDERDRAINS 4"	FOOT	130	130		
60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	25	25		
60207605	CATCH BASINS, TYPE C, TYPE 8 GRATE	EACH	1	1		
60208240	CATCH BASINS, TYPE C, TYPE 24 FRAME AND GRATE	EACH	4	4		
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	3	3		
~~60221102~~	~~MANHOLES, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE~~	~~EACH~~	~~1~~	~~1~~		
60250500	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60255800	MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	2	2		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	799	799		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6		
67100100	MOBILIZATION	L SUM	1	1		

Rev.

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	PLOT DATE = 2/9/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	3
		CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 FEDERAL 80% STATE 20%	TRAFFIC 0021 FEDERAL 80% STATE 10% COUNTY 5% VILLAGE 5%	TRAFFIC 0021 100% VILLAGE
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		
~~70102625~~	~~TRAFFIC CONTROL AND PROTECTION, STANDARD 701606~~	~~L SUM~~	~~1~~	~~1~~		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1		
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	9099	9099		
70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	291.2	291.2		
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	6533	6533		
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	1650	1650		
70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	270	270		
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	369	369		
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	205	205		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1000	1000		
72000100	SIGN PANEL - TYPE 1	SQ FT	16.5	16.5		
72000200	SIGN PANEL - TYPE 2	SQ FT	27.5	27.5		
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	291.2	291.2		
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5709	5709		
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1580	1580		
* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	270	270		
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	348	348		
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	205	205		
78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	824	824		
78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	69	69		
78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	21	21		
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	180	180		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	162	162		
* 81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1247	817	430	

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 FEDERAL 80% STATE 20%	TRAFFIC 0021 FEDERAL 80% STATE 10% COUNTY 5% VILLAGE 5%	TRAFFIC 0021 100% VILLAGE
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	263	245	18	
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	99	99		
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	116	116		
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	359	359		
81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	40	40		
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	382	382		
X8100105	CONDUIT SPLICE	EACH	1	1		
81400100	HANDHOLE	EACH	6	6		
81400200	HEAVY-DUTY HANDHOLE	EACH	4	4		
81400300	DOUBLE HANDHOLE	EACH	1	1		
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1805	1375	430	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2	2		
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1	1		
* 86400100	TRANSCEIVER - FIBER OPTIC	EACH	1	1		
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	195	195		
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	635	130	130	375
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1795	1795		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2940	2940		
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2300	2300		
87301800	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 4 2 C	FOOT	295	295		
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1	1		
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3	3		
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1	1		
87702610	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 38 FT. AND 46 FT.	EACH	1	1		
87702890	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 32 FT.	EACH	1	0.5	0.5	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16	16		

*Specialty Items

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	PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/9/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 FEDERAL 80% STATE 20%	TRAFFIC 0021 FEDERAL 80% STATE 10% COUNTY 5% VILLAGE 5%	TRAFFIC 0021 100% VILLAGE
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4	4		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	50	44.5	5.5	
87900200	DRILL EXISTING HANDHOLE	EACH	4	4		
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	5	5		
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	2		
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	2		
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	8	8		
88030220	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1	1		
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1	1		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	13	13		
88500100	INDUCTIVE LOOP DETECTOR	EACH	9	9		
88600100	DETECTOR LOOP, TYPE I	FOOT	1301	1301		
88700200	LIGHT DETECTOR	EACH	2			2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1			1
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1		
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	9768	4915	4853	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1		
89502380	REMOVE EXISTING HANDHOLE	EACH	10	10		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	7	7		
* 87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C	FOOT	4825	2412.5	2412.5	
X0326309	RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	2	1	1	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	41.5	41.5		
X4060826	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	416	416		
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1	1		
X0325982	GROUND EXISTING HANDHOLE	EACH	2	2		
86200120	UNINTERRUPTIBLE POWER SUPPLY	EACH	1	1		
87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	4880	2440	2440	
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	2245	2245		
87300750	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	375			375
X0327210	ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4C	FOOT	260	130	130	
Z0001050	AGGREGATE SUBGRADE 12"	SQ YD	1080	1080		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	102.8	102.8		
Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1	1		
Z0033050	COAXIAL CABLE IN CONDUIT	FOOT	260	130	130	
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1		
X6020094	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE	EACH	1	1		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	6.3	6.3		
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	3	3		
Z0004562	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	150	150		
* X0326310	RELOCATE EXISTING SWITCH (SPECIAL)	EACH	2	1	1	
* ~~87300925~~	~~ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C~~	~~FOOT~~	~~4825~~	~~2412.5~~	~~2412.5~~	
70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	1	1		
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 702602	L SUM	1	1		

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		DRAWN -	REVISED -
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	PLOT DATE = 2/9/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	5
		CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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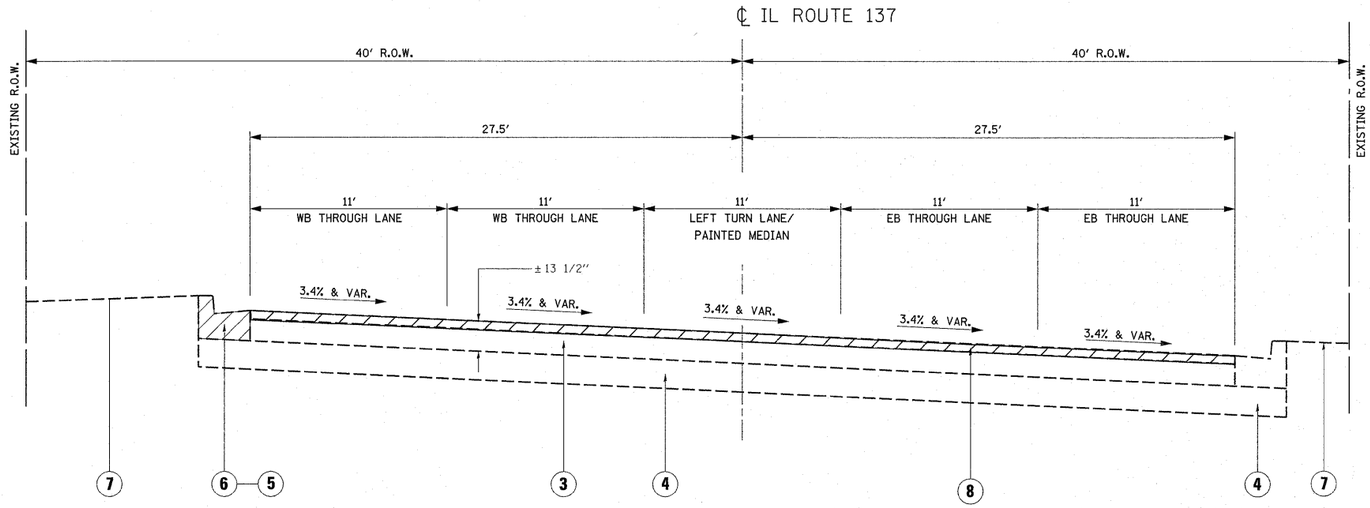
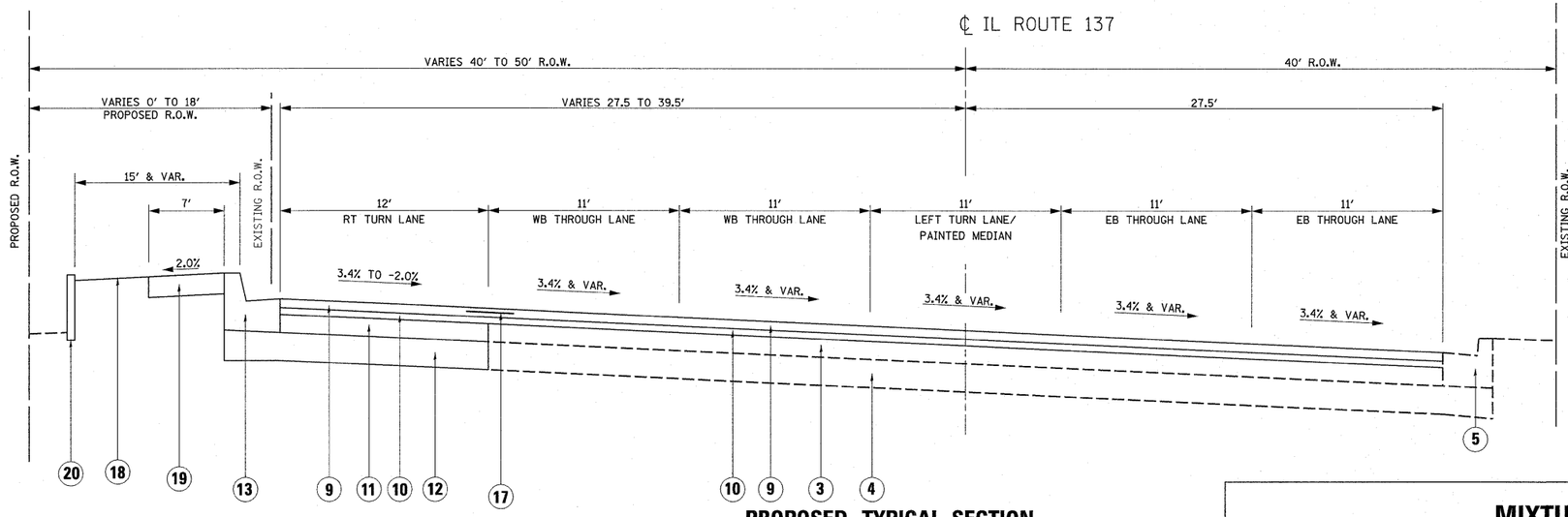


EXISTING TYPICAL SECTION

STA. 102+59 TO STA. 110+27.5



PROPOSED TYPICAL SECTION

STA. 102+59 TO STA. 110+27.5

LEGEND

1. EXISTING P.C.C PAVEMENT, 10″
2. EXISTING HMA PAVEMENT, 13 1/2″
3. EXISTING HMA AFTER MILLING, 11″
4. EXISTING AGGREGATE SUBGRADE
5. EXISTING COMB. CONC. CURB & GUTTER B–6.24
6. EXISTING COMB. CONC. CURB & GUTTER REMOVAL
7. EXISTING PARKWAY
8. PROP. HOT–MIX ASPHALT SURFACE REMOVAL, 2 1/2″
9. PROP. POLY. HOT–MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4″
10. PROP. POLY. LEVELING BINDER (MACHINE METHOD), IL–4.75, N50, 3/4″
11. PROP. HOT–MIX ASPHALT BINDER COURSE, IL–19.0, N70, 9 3/4″ (SEE ROADWAY PLAN)
12. PROP AGGREGATE SUB–GRADE, 12″ (SEE ROADWAY PLAN)
13. PROP. COMB. CONCRETE CURB AND GUTTER B–6.24
14. PROP. PCC PAVEMENT (JOINTED), 10 1/4″ (SEE ROADWAY PLAN)
15. PROP. DRILL & GROUT (#8) EPOXY COATED DEFORMED STEEL TIE BAR, 24″ LONG, 24″ C–C – COST INCLUDED IN JOINTED P.C.C PAVEMENT, 10 1/4″
16. PROP. (#6) TIE BARS (EPOXY COATED) AT 24″ C–C COST INCLUDED IN COMB. CONC. CURB & GUTTER, TYPE B–6.24
17. PROP. STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROP. TOPSOIL AND SEEDING
19. PROP. P.C.C SIDEWALK, 5″
20. PROP. RETAINING WALL (108+24.6 TO 111+00)

✳ RIGHT TURN LANE CROSS SLOPE TRANSITION

STOP BAR TO STA. 108+59.86: CROSS SLOPE = -2.0%

STA. 108+59.86 TO STA. 109+90.86: CROSS SLOPE TRANSITIONS FROM -2.0% TO 3.4%

STA. 109+90.86 TO STA. 112+10.86: CROSS SLOPE = 3.4%

NOTE:

PER BDE FIG. 36-21, MAINLINE SUPERELEVATION RATE MAINTAINED THROUGH LEFT TURN TAPER.

THE CONTRACTOR SHALL MILL FIRST THEN PATCH

MIXTURE REQUIREMENTS

MIXTURE USES	VOIDS
POLY. HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 (IL 9.5 mm)	4% AT 90 GYR.
POLY. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	4% AT 50 GYR.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0,N70	4% AT 70 GYR.
CLASS D PATCHES (HMA BINDER IL-19 mm)	4% AT 70 GYR.

NOTE 1: THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE IS 112 LBS/SQYD/IN

NOTE 2: THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

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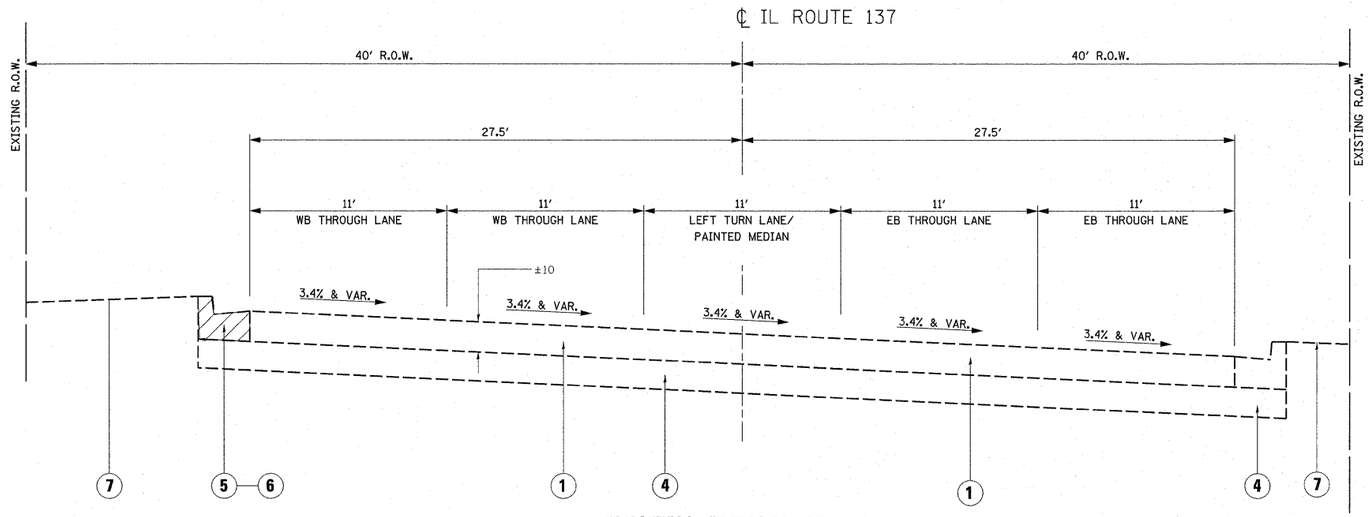
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 137 AND O'PLAINE ROAD
EXISTING & PROPOSED TYPICAL SECTIONS

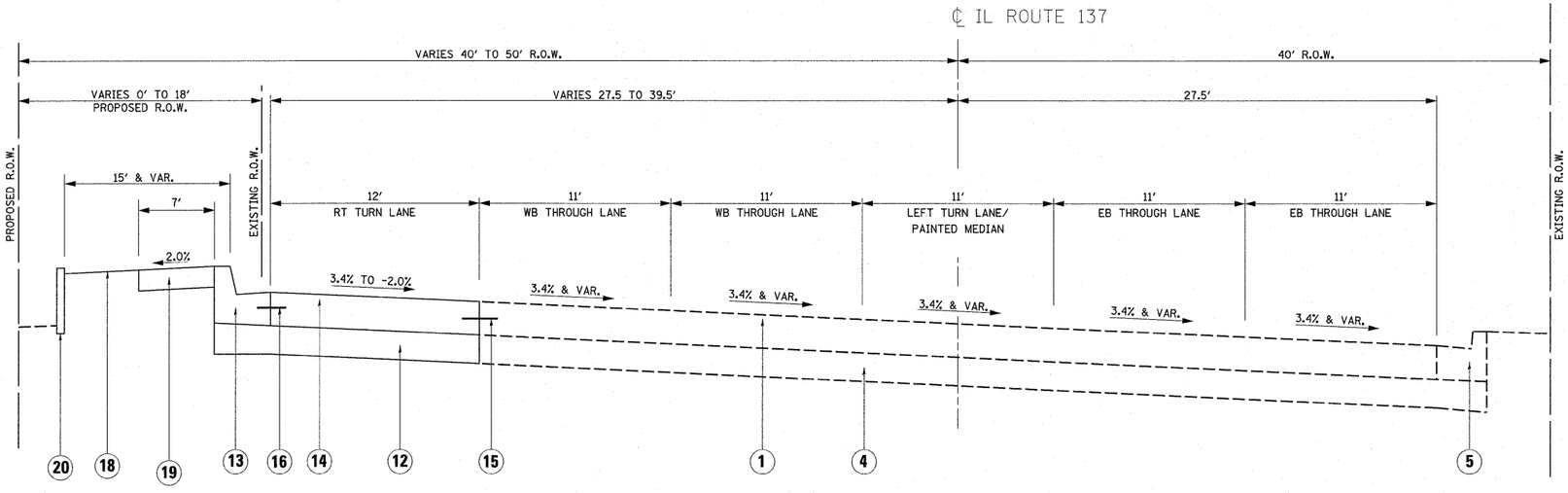
SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	6
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		



EXISTING TYPICAL SECTION

STA. 110+27.5 TO STA. 112+10.86



PROPOSED TYPICAL SECTION

STA. 110+27.5 TO STA. 112+10.86

✳ RIGHT TURN LANE CROSS SLOPE TRANSITION

STOP BAR TO STA. 108+59.86: CROSS SLOPE = -2.0%

STA. 108+59.86 TO STA. 109+90.86: CROSS SLOPE TRANSITIONS FROM -2.0% TO 3.4%

STA. 109+90.86 TO STA. 112+10.86: CROSS SLOPE = 3.4%

NOTE:

PER BDE FIG. 36-2I, MAINLINE SUPERELEVATION RATE MAINTAINED THROUGH LEFT TURN TAPER.

LEGEND

1. EXISTING P.C.C PAVEMENT, 10"
2. EXISTING HMA PAVEMENT, 13 1/2"
3. EXISTING HMA AFTER MILLING, 11"
4. EXISTING AGGREGATE SUBGRADE
5. EXISTING COMB. CONC. CURB & GUTTER B-6.24
6. EXISTING COMB. CONC. CURB & GUTTER REMOVAL
7. EXISTING PARKWAY
8. PROP. HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
9. PROP. POLY. HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4"
10. PROP. POLY. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"
11. PROP. HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 9 3/4" (SEE ROADWAY PLAN)
12. PROP AGGREGATE SUB-GRADE, 12" (SEE ROADWAY PLAN)
13. PROP. COMB. CONCRETE CURB AND GUTTER B-6.24
14. PROP. PCC PAVEMENT (JOINTED), 10 1/4" (SEE ROADWAY PLAN)
15. PROP. DRILL & GROUT (#8) EPOXY COATED DEFORMED STEEL TIE BAR, 24" LONG, 24" C-C - COST INCLUDED IN JOINTED P.C.C PAVEMENT, 10 1/4"
16. PROP. (#6) TIE BARS (EPOXY COATED) AT 24" C-C COST INCLUDED IN COMB. CONC. CURB & GUTTER, TYPE B-6.24
17. PROP. STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROP. TOPSOIL AND SEEDING
19. PROP. P.C.C SIDEWALK, 5"
20. PROP. RETAINING WALL (108+24.6 TO 111+00)

FILE NAME = P142609-Design.dgn	USER NAME = abebawo	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 137 AND O'PLAINE ROAD EXISTING & PROPOSED TYPICAL SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					352	56N-4	LAKE	50	7
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -							CONTRACT NO. 60K19		
	PLOT DATE = 2/8/2011	DATE -	REVISED -		SCALE: NONE	SHEET NO. OF SHEETS	STA. TO STA.			ILLINOIS FED. AID PROJECT		

EARTHWORK SCHEDULE

IL RTE. 137	EARTH EXCAVATION (CU. YD)	UNSUITABLE MATERIAL (CU.YD.)	EXCAVATION USED AS EMBANKMENT (SHRINKAGE 15%) (CU.YD.)	EMBANKMENT (CU. YD.)	EARTH WORK BALANCE SURPLUS (+) OR SHORTAGE (-) (CU. YD.)
102+59 TO 112+10.86	305	251	259	386	-127
O'PLAINE RD					
41+62 TO 49+40	202	67	172	10	163
TOTAL	507	318	431	396	35

NOTE:

A THICKNESS OF 6 INCHES OF TOPSOIL STRIPPING SHALL BE USED FOR REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL.

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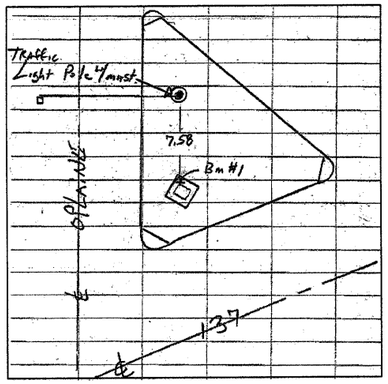
	PLOT SCALE = 49.9999 ' / IN.	DRAWN - Drawn By	REVISED - Revised By2		SCALE: Scale | SHEET NO. OF SHEETS | STA. TO STA.
	PLOT DATE = 2/8/2011	CHECKED - Checked By	REVISED - Revised By3		
		DATE - Checked Date	REVISED - Revised By4		

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	COOK	50	8
		CONTRACT NO. 60K19		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CONTROL POINT #101

BM #1 = CONTROL POINT 101
N 2055675.7106
E 1097494.9060
ELEV.= 693.08'

IL. RTE. 137
(BUCKLEY ROAD)

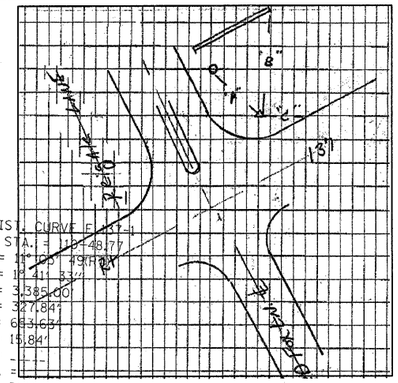
O'PLAINE ROAD

PROJECT BEGINS
STA. 102+59

STA. 104+89.91 ℄ IL 137 =
STA. 44+70.91 ℄ O'PLAINE ROAD

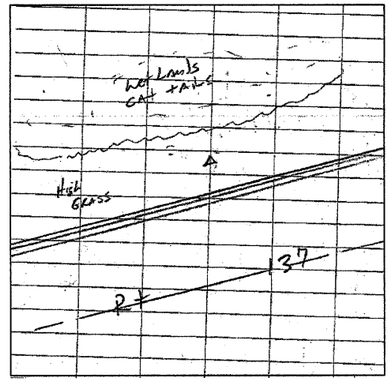
LIMIT OF PROJECT
STA. 49+40

CPT #104



CONTROL POINT #102

CONTROL POINT 102
N 2056159.9652
E 1098209.1003
ELEV.= 692.713'



CONTROL POINT #103

PROJECT ENDS
STA. 112+10.86

CONTROL POINT 103
N 2055934.8792
E 1097840.9083
ELEV.= 691.543'

POT Sta 100+00.00

100+00

45+00

105+00

110+00

115+00

BM #1/CPT #101

PC Sta 107+20.93

51°48'15"

CPT #103

REIGATE LANE

PT Sta 113+74.56

CPT #102

POT Sta 115+12.10

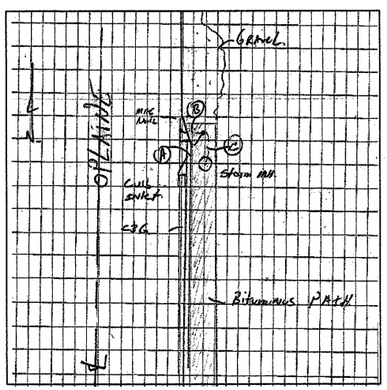
HORACE COURT

LIMIT OF PROJECT
STA. 41+62

CPT #106

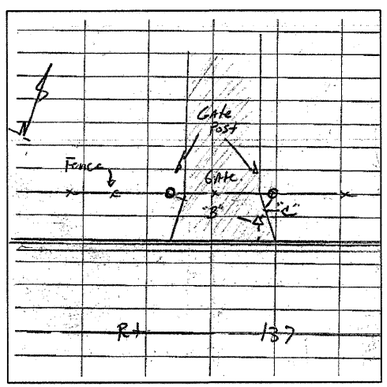
40+00

PLACID LANE



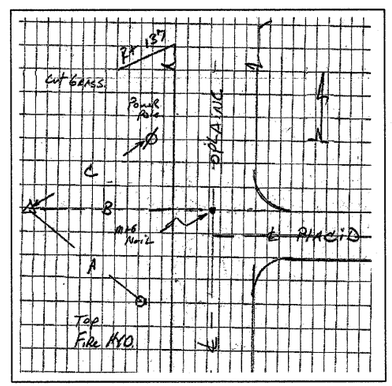
CONTROL POINT #104

CONTROL POINT 104
N 2056170.5787
E 1097491.0996
ELEV.= 691.181'



CONTROL POINT #105

UNABLE TO LOCATE



CONTROL POINT #106

CONTROL POINT 106
N 2055142.0226
E 1097408.3349
ELEV.= 691.579'

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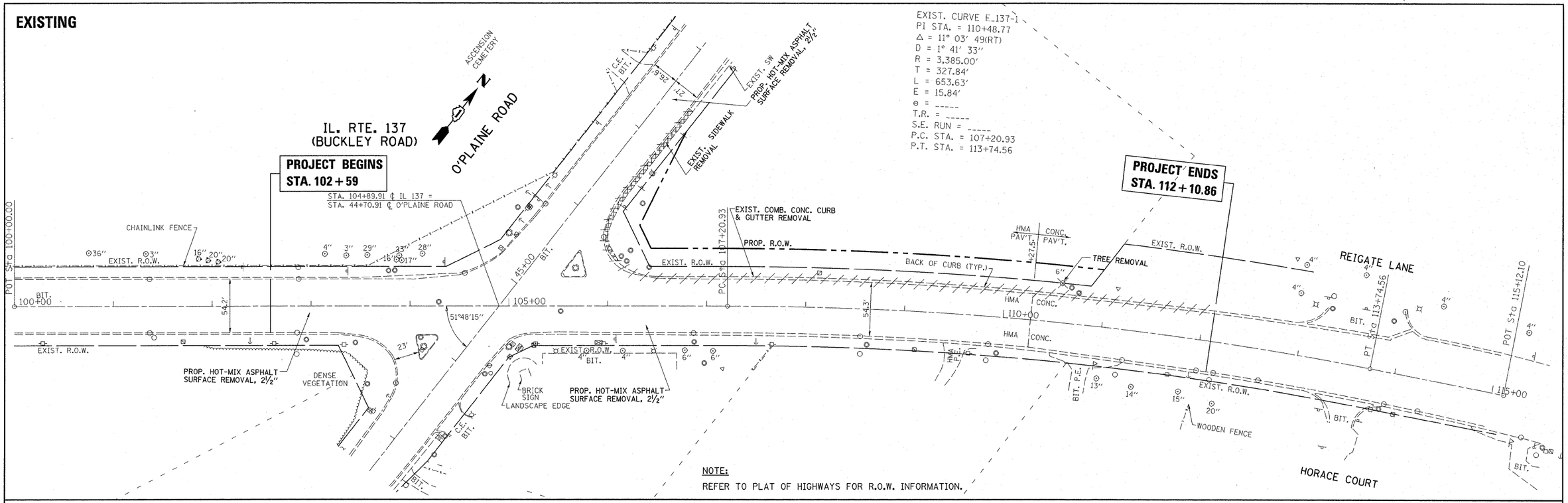
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
ALIGNMENT, TIES & BENCHMARK PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. 100+00.00 TO STA. 115+12.10

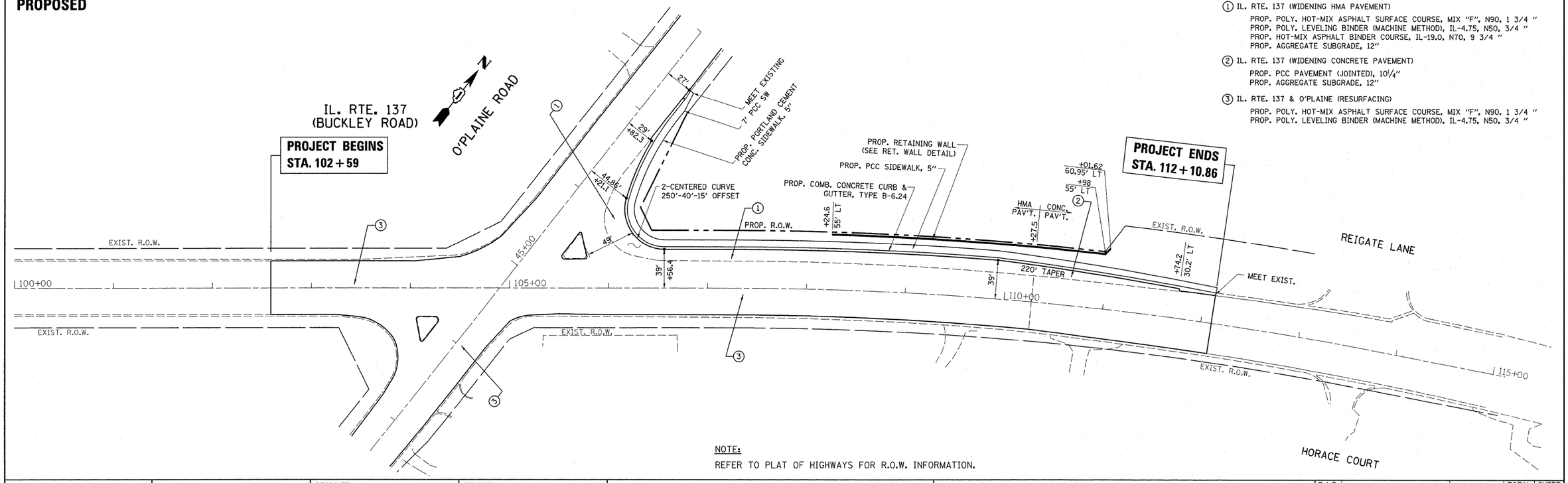
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	9
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

EXISTING



NOTE:
REFER TO PLAT OF HIGHWAYS FOR R.O.W. INFORMATION.

PROPOSED



① IL. RTE. 137 (WIDENING HMA PAVEMENT)
PROP. POLY. HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4 "
PROP. POLY. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4 "
PROP. HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 9 3/4 "
PROP. AGGREGATE SUBGRADE, 12"

② IL. RTE. 137 (WIDENING CONCRETE PAVEMENT)
PROP. PCC PAVEMENT (JOINTED), 10¼"
PROP. AGGREGATE SUBGRADE, 12"

③ IL. RTE. 137 & O'PLAINE (RESURFACING)
PROP. POLY. HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4 "
PROP. POLY. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4 "

NOTE:
REFER TO PLAT OF HIGHWAYS FOR R.O.W. INFORMATION.

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	PLOT DATE = 2/8/2011	DATE -	REVISED -

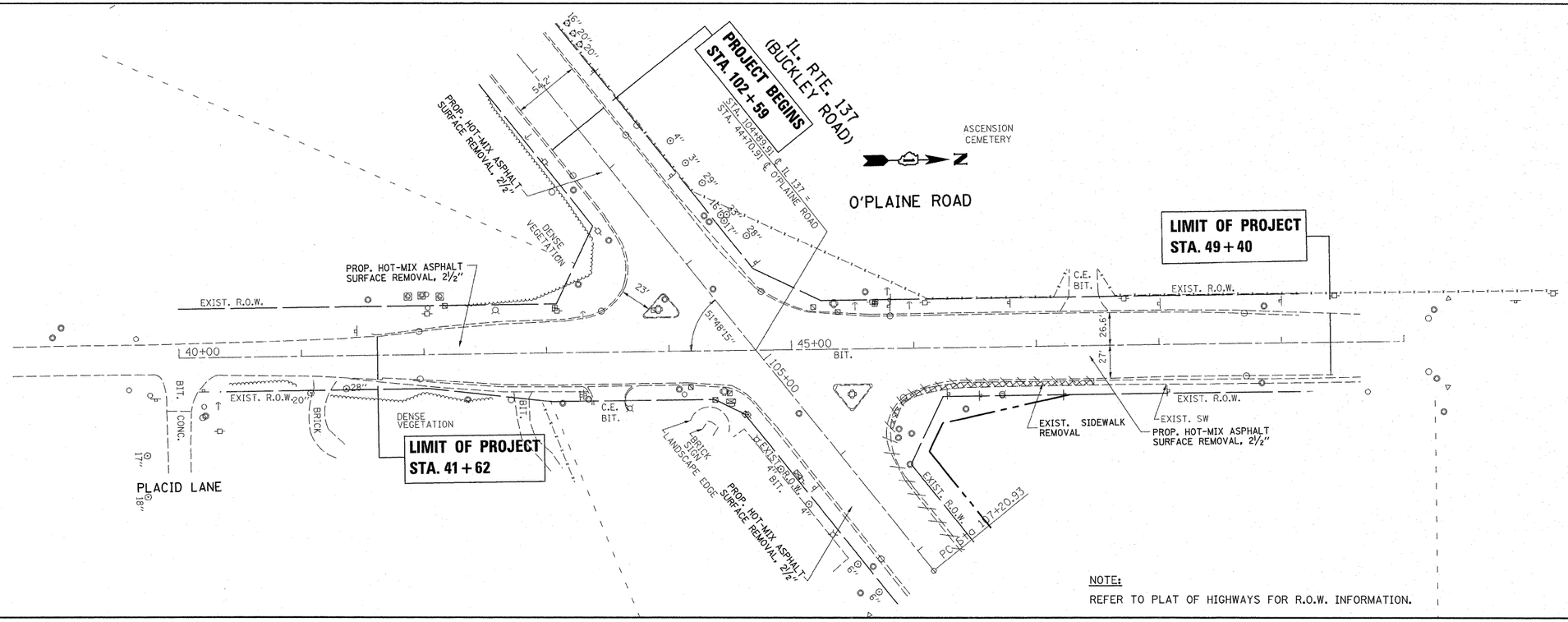
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 & O'PLAINE ROAD
EXISTING & PROPOSED ROADWAY PLAN

SCALE: 1"= 50′ | SHEET NO. OF SHEETS | STA. 100+00.00 TO STA. 115+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	10
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

EXISTING



NOTE:
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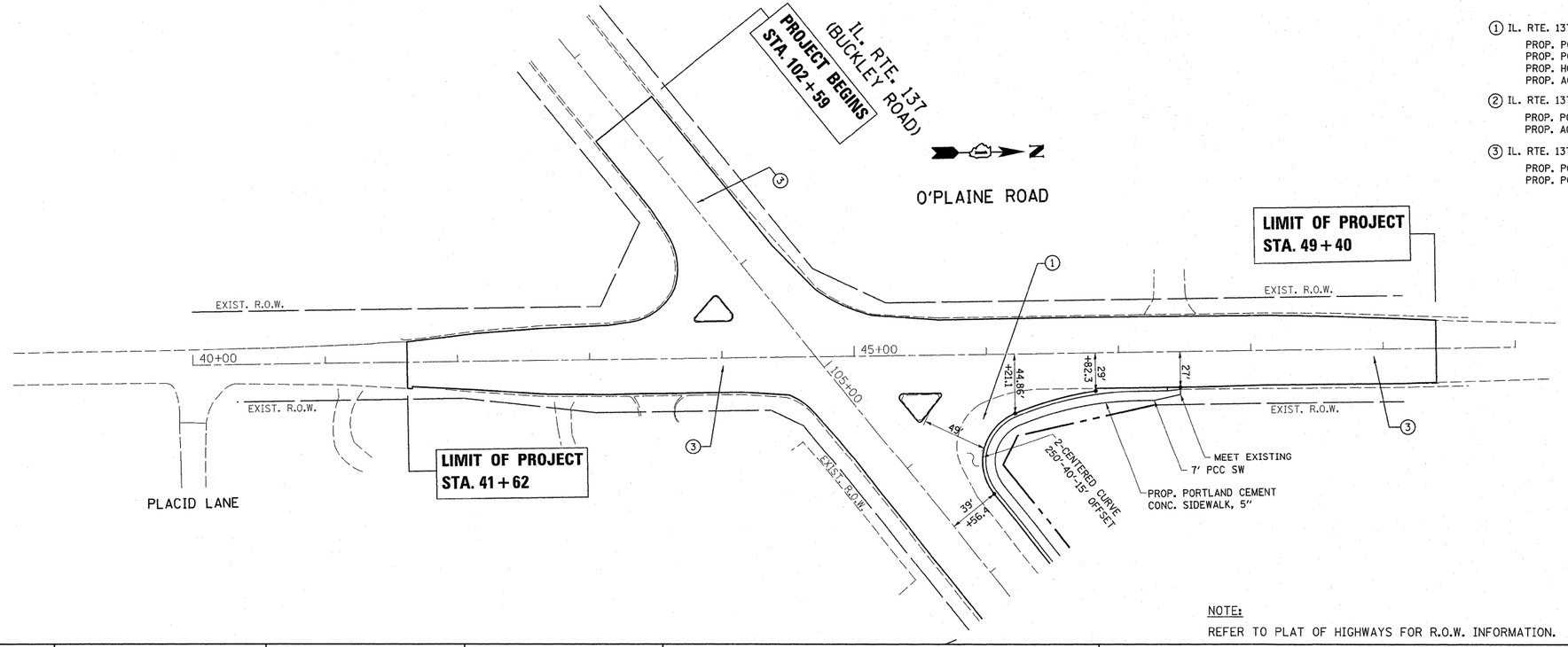
PROPOSED



① IL. RTE. 137 (WIDENING HMA PAVEMENT)
PROP. POLY. HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4 "
PROP. POLY. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4 "
PROP. HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 9 3/4 "
PROP. AGGREGATE SUBGRADE, 12"

② IL. RTE. 137 (WIDENING CONCRETE PAVEMENT)
PROP. PCC PAVEMENT (JOINTED), 10¼"
PROP. AGGREGATE SUBGRADE, 12"

③ IL. RTE. 137 & O'PLAINE (RESURFACING)
PROP. POLY. HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4 "
PROP. POLY. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4 "

NOTE:
REFER TO PLAT OF HIGHWAYS FOR R.O.W. INFORMATION.

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	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

O'PLAINE RD. AT IL. ROUTE 137
EXISTING & PROPOSED ROADWAY PLAN

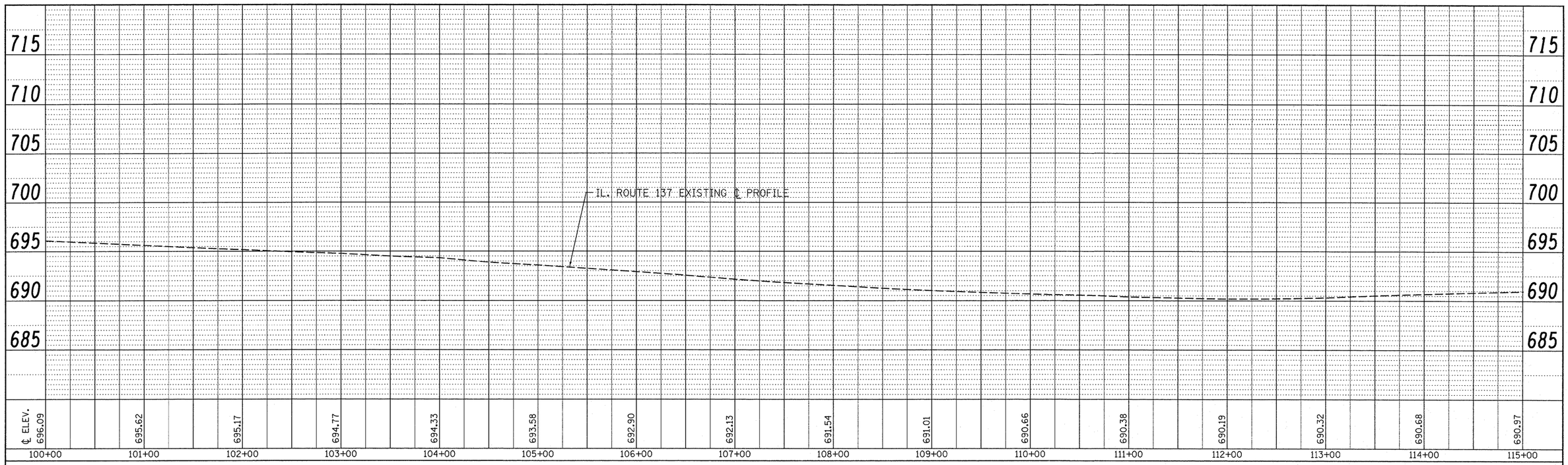
SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. 40+00.00 TO STA. 50+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	11
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

PLAN

SURVEYED		
PLOTTED		
DRAWN	CHECKED	
ALIGNMENT	CHECKED	
NOTE BOOK	RT. OF WAY	CHECKED
NO.	CADD FILE NAME	

BY	DATE



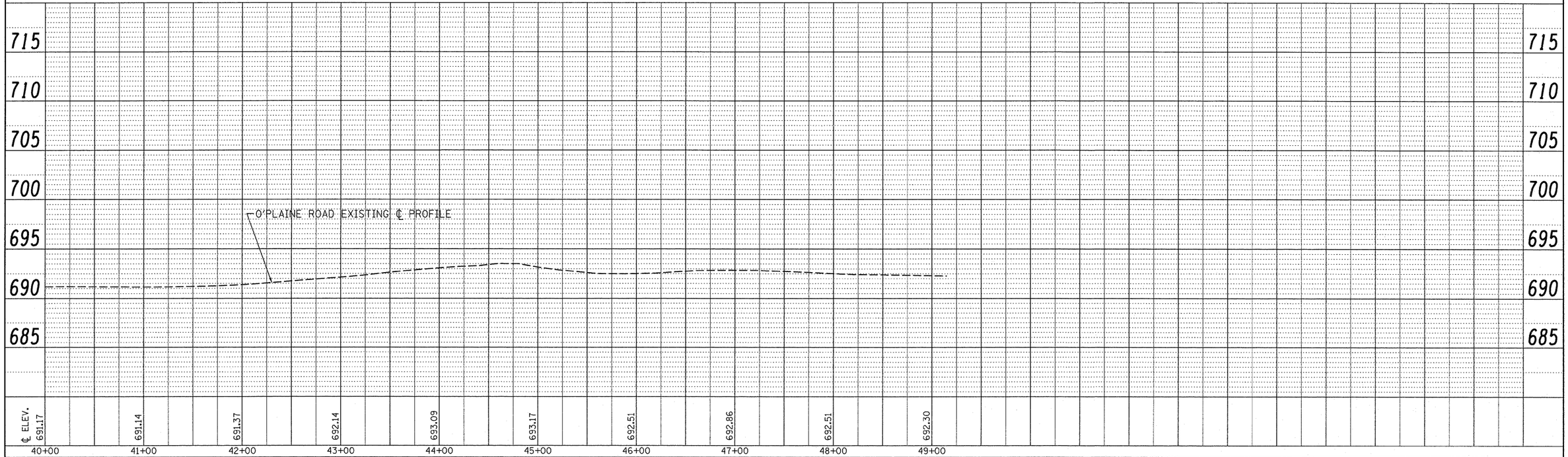
NOTE:

HORIZONTAL SCALE: 1"= 50'
VERTICAL SCALE: 1"= 5'

PROFILE

SURVEYED		
PLOTTED		
DRAWN	CHECKED	
BAR. NOTED		
NOTE BOOK	STRUCTURE NOTATNS	CHKD
NO.		

BY	DATE



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	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

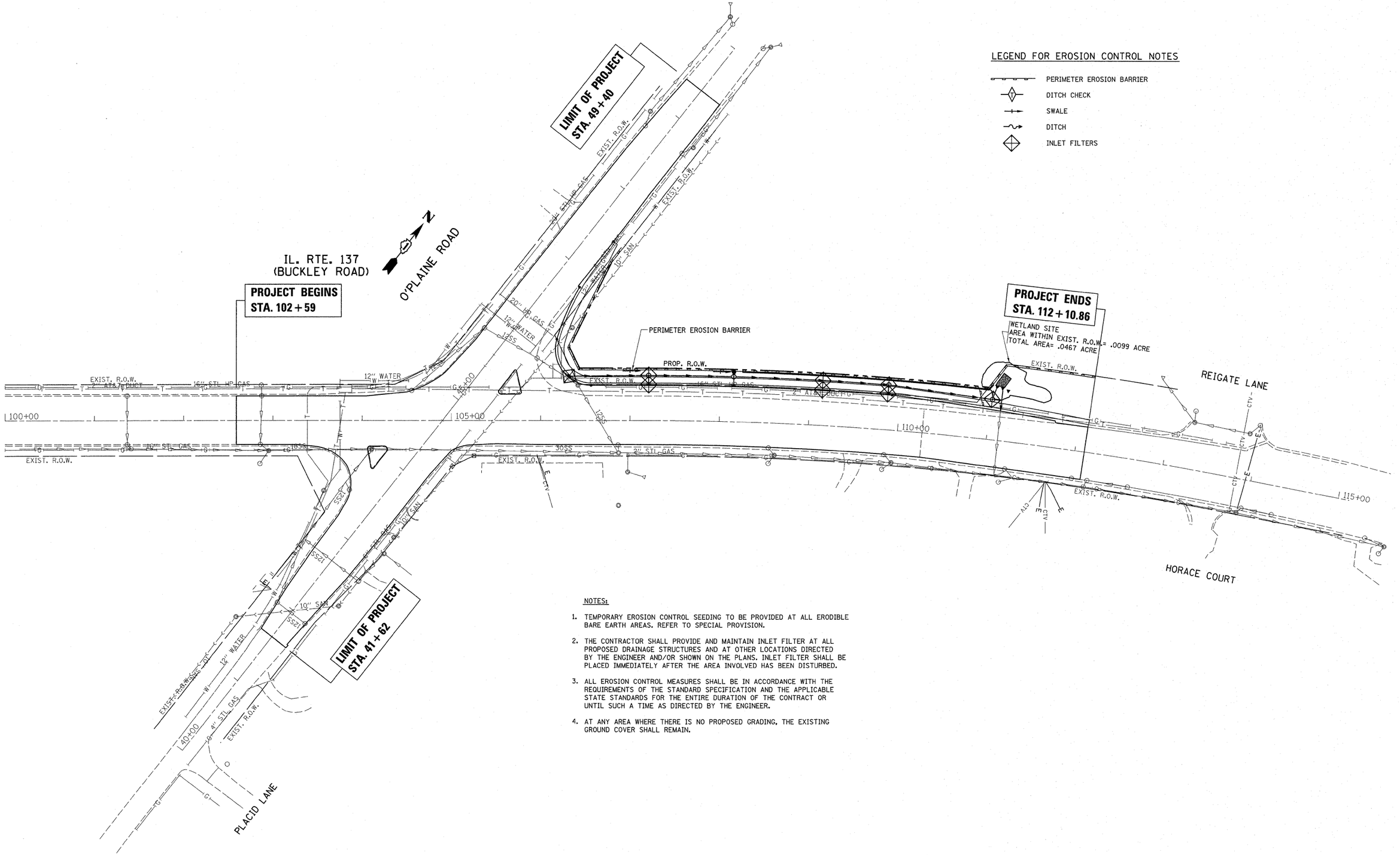
IL. ROUTE 137 & O'PLAINE ROAD
ROADWAY PROFILE

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4 LAKE	LAKE	50	12

CONTRACT NO. 60K19

ILLINOIS | FED. AID PROJECT



LEGEND FOR EROSION CONTROL NOTES

- PERIMETER EROSION BARRIER
- DITCH CHECK
- SWALE
- DITCH
- INLET FILTERS

NOTES:

1. TEMPORARY EROSION CONTROL SEEDING TO BE PROVIDED AT ALL ERODIBLE BARE EARTH AREAS. REFER TO SPECIAL PROVISION.
2. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN INLET FILTER AT ALL PROPOSED DRAINAGE STRUCTURES AND AT OTHER LOCATIONS DIRECTED BY THE ENGINEER AND/OR SHOWN ON THE PLANS. INLET FILTER SHALL BE PLACED IMMEDIATELY AFTER THE AREA INVOLVED HAS BEEN DISTURBED.
3. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATION AND THE APPLICABLE STATE STANDARDS FOR THE ENTIRE DURATION OF THE CONTRACT OR UNTIL SUCH A TIME AS DIRECTED BY THE ENGINEER.
4. AT ANY AREA WHERE THERE IS NO PROPOSED GRADING, THE EXISTING GROUND COVER SHALL REMAIN.

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		DRAWN -	REVISED -
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	PLOT DATE = 2/8/2011	DATE -	REVISED -

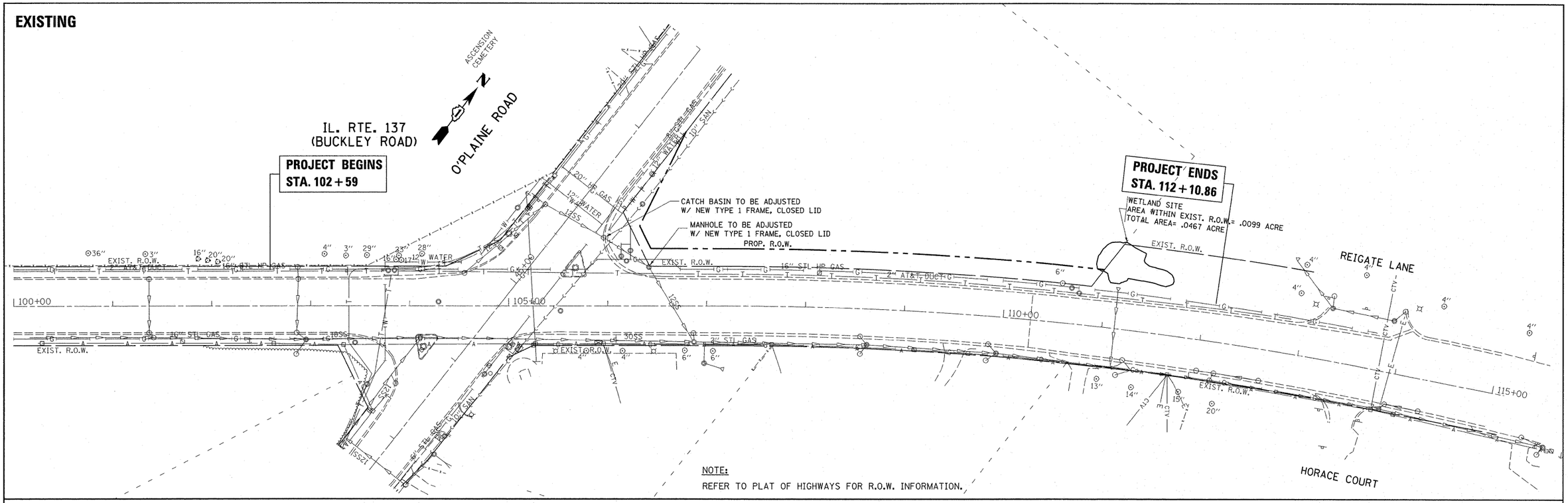
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 & O'PLAINE ROAD
EROSION CONTROL PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. 100+00.00 TO STA. 115+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	13
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

EXISTING

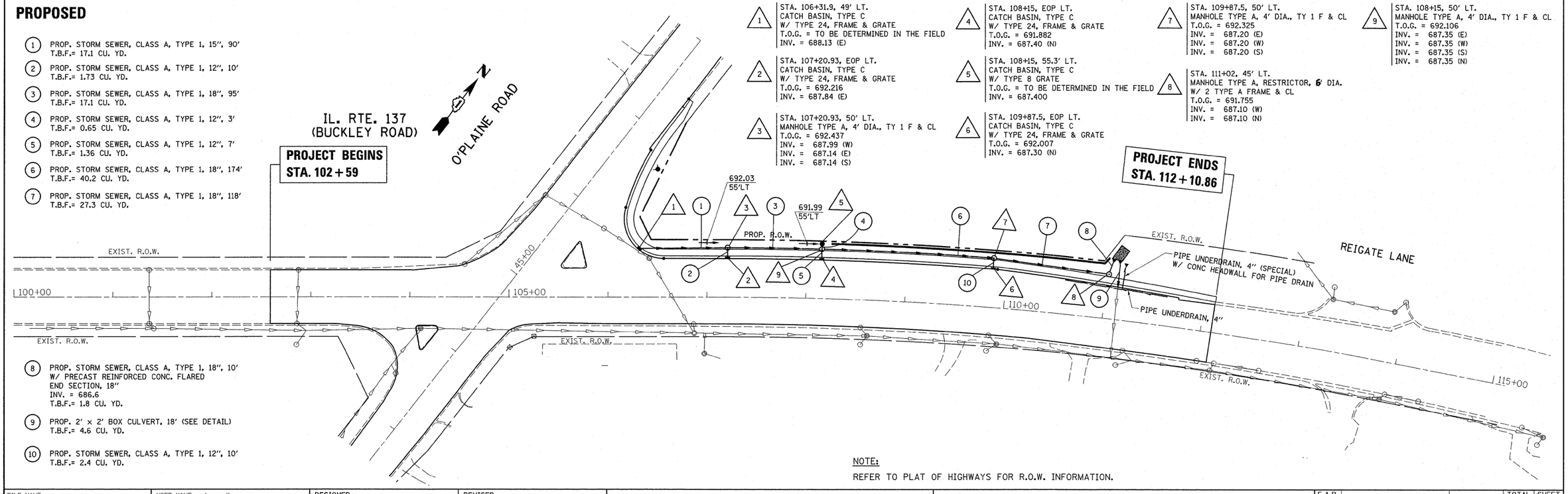


NOTE:
REFER TO PLAT OF HIGHWAYS FOR R.O.W. INFORMATION.

PROPOSED

1. PROP. STORM SEWER, CLASS A, TYPE 1, 15", 90'
   T.B.F.= 17.1 CU. YD.
2. PROP. STORM SEWER, CLASS A, TYPE 1, 12", 10'
   T.B.F.= 1.73 CU. YD.
3. PROP. STORM SEWER, CLASS A, TYPE 1, 18", 95'
   T.B.F.= 17.1 CU. YD.
4. PROP. STORM SEWER, CLASS A, TYPE 1, 12", 3'
   T.B.F.= 0.65 CU. YD.
5. PROP. STORM SEWER, CLASS A, TYPE 1, 12", 7'
   T.B.F.= 1.36 CU. YD.
6. PROP. STORM SEWER, CLASS A, TYPE 1, 18", 174'
   T.B.F.= 40.2 CU. YD.
7. PROP. STORM SEWER, CLASS A, TYPE 1, 18", 118'
   T.B.F.= 27.3 CU. YD.
8. PROP. STORM SEWER, CLASS A, TYPE 1, 18", 10'
   W/ PRECAST REINFORCED CONC. FLARED
   END SECTION, 18"
   INV. = 686.6
   T.B.F.= 1.8 CU. YD.
9. PROP. 2' x 2' BOX CULVERT, 18' (SEE DETAIL)
   T.B.F.= 4.6 CU. YD.
10. PROP. STORM SEWER, CLASS A, TYPE 1, 12", 10'
    T.B.F.= 2.4 CU. YD.

1. STA. 106+31.9, 49' LT.
   CATCH BASIN, TYPE C
   W/ TYPE 24, FRAME & GRATE
   T.O.G. = TO BE DETERMINED IN THE FIELD
   INV. = 688.13 (E)
2. STA. 107+20.93, EOP LT.
   CATCH BASIN, TYPE C
   W/ TYPE 24, FRAME & GRATE
   T.O.G. = 692.216
   INV. = 687.84 (E)
3. STA. 107+20.93, 50' LT.
   MANHOLE TYPE A, 4' DIA., TY 1 F & CL
   T.O.G. = 692.437
   INV. = 687.99 (W)
   INV. = 687.14 (E)
   INV. = 687.14 (S)
4. STA. 108+15, EOP LT.
   CATCH BASIN, TYPE C
   W/ TYPE 24, FRAME & GRATE
   T.O.G. = 691.882
   INV. = 687.40 (N)
5. STA. 108+15, 55.3' LT.
   CATCH BASIN, TYPE C
   W/ TYPE 8 GRATE
   T.O.G. = TO BE DETERMINED IN THE FIELD
   INV. = 687.400
6. STA. 109+87.5, EOP LT.
   CATCH BASIN, TYPE C
   W/ TYPE 24, FRAME & GRATE
   T.O.G. = 692.007
   INV. = 687.30 (N)
7. STA. 109+87.5, 50' LT.
   MANHOLE TYPE A, 4' DIA., TY 1 F & CL
   T.O.G. = 692.325
   INV. = 687.20 (E)
   INV. = 687.20 (W)
   INV. = 687.20 (S)
8. STA. 111+02, 45' LT.
   MANHOLE TYPE A, RESTRICTOR, 6' DIA.
   W/ 2 TYPE A FRAME & CL
   T.O.G. = 691.755
   INV. = 687.10 (W)
   INV. = 687.10 (N)
9. STA. 108+15, 50' LT.
   MANHOLE TYPE A, 4' DIA., TY 1 F & CL
   T.O.G. = 692.106
   INV. = 687.35 (E)
   INV. = 687.35 (W)
   INV. = 687.35 (S)
   INV. = 687.35 (N)



NOTE:
REFER TO PLAT OF HIGHWAYS FOR R.O.W. INFORMATION.

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		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/23/2011	DATE -	REVISED -

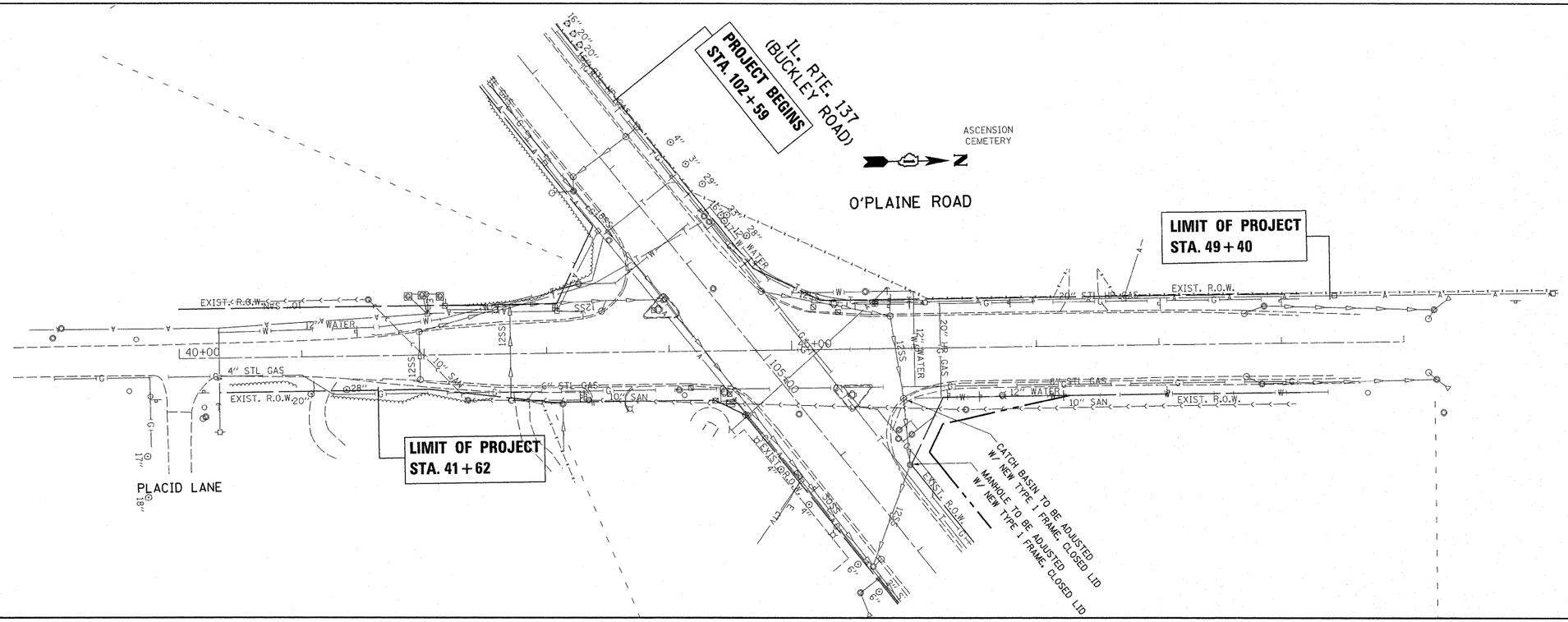
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 & O'PLAINE ROAD
EXISTING & PROPOSED DRAINAGE PLAN

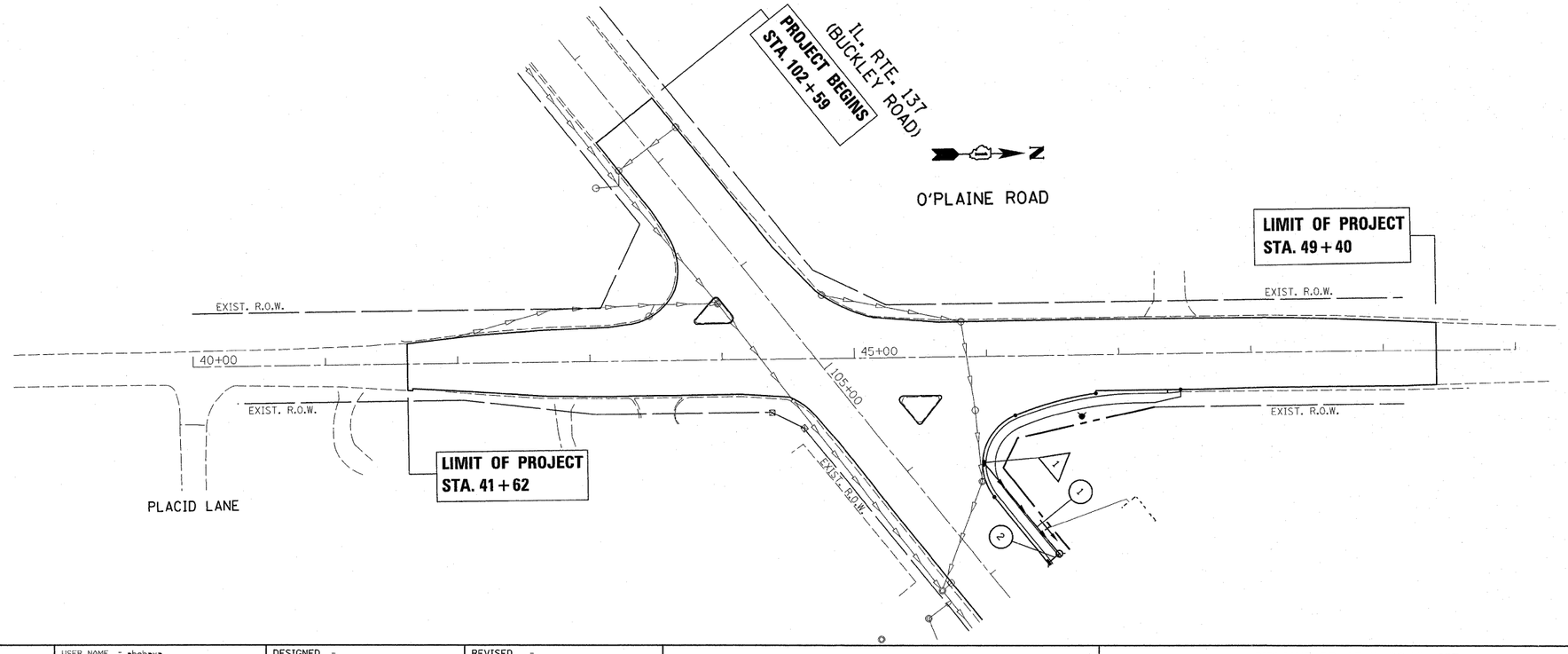
SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. 100+00.00 TO STA. 115+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	14
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

EXISTING



PROPOSED



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	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

O'PLAINE RD. AT IL. ROUTE 137
EXISTING & PROPOSED DRAINAGE PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. 40+00.00 TO STA. 50+00.00

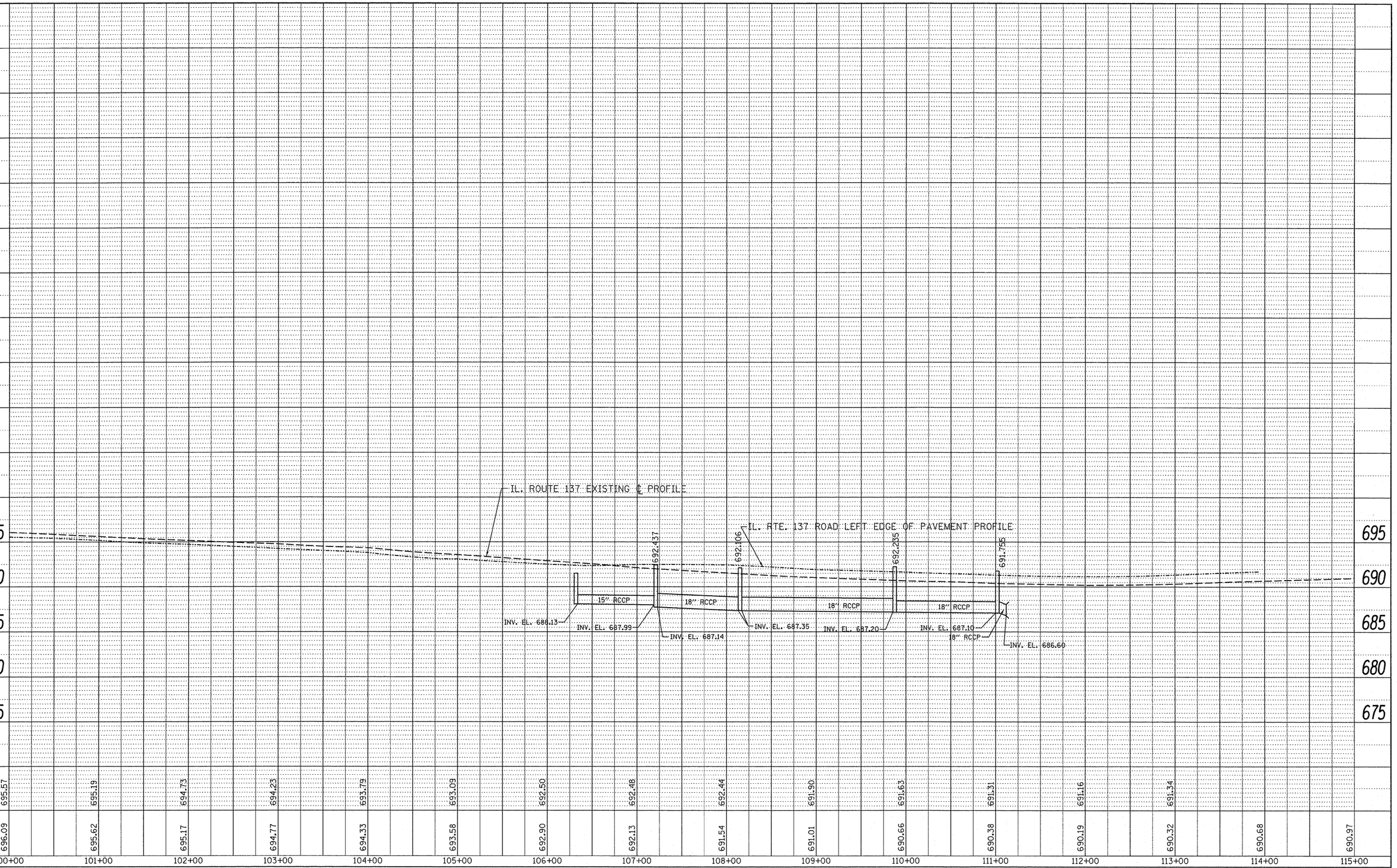
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	15
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

PLAN

	SURVEYED		BY	DATE
NOTE BOOK	PLOTTED			
NO.	ALIGNMENT CHECKED			
	RT. R/W MONUMENTED			
	CADD FILE NAME			

PROFILE

	SURVEYED		BY	DATE
NOTE BOOK	PLOTTED			
NO.	GRADES CHECKED			
	R/W MONUMENTED			
	STRUCTURE NO.	FAP RTE.		



	100+00	101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00	109+00	110+00	111+00	112+00	113+00	114+00	115+00
℄ ELEV. 696.09	696.09	695.62	695.17	694.77	694.33	693.58	692.90	692.13	691.54	691.01	690.66	690.38	690.19	690.32	690.68	690.97
EDGE OF PAVT. 695.57	695.57	695.19	694.73	694.23	693.79	693.09	692.50	692.48	692.44	691.90	691.63	691.31	691.16	691.34		

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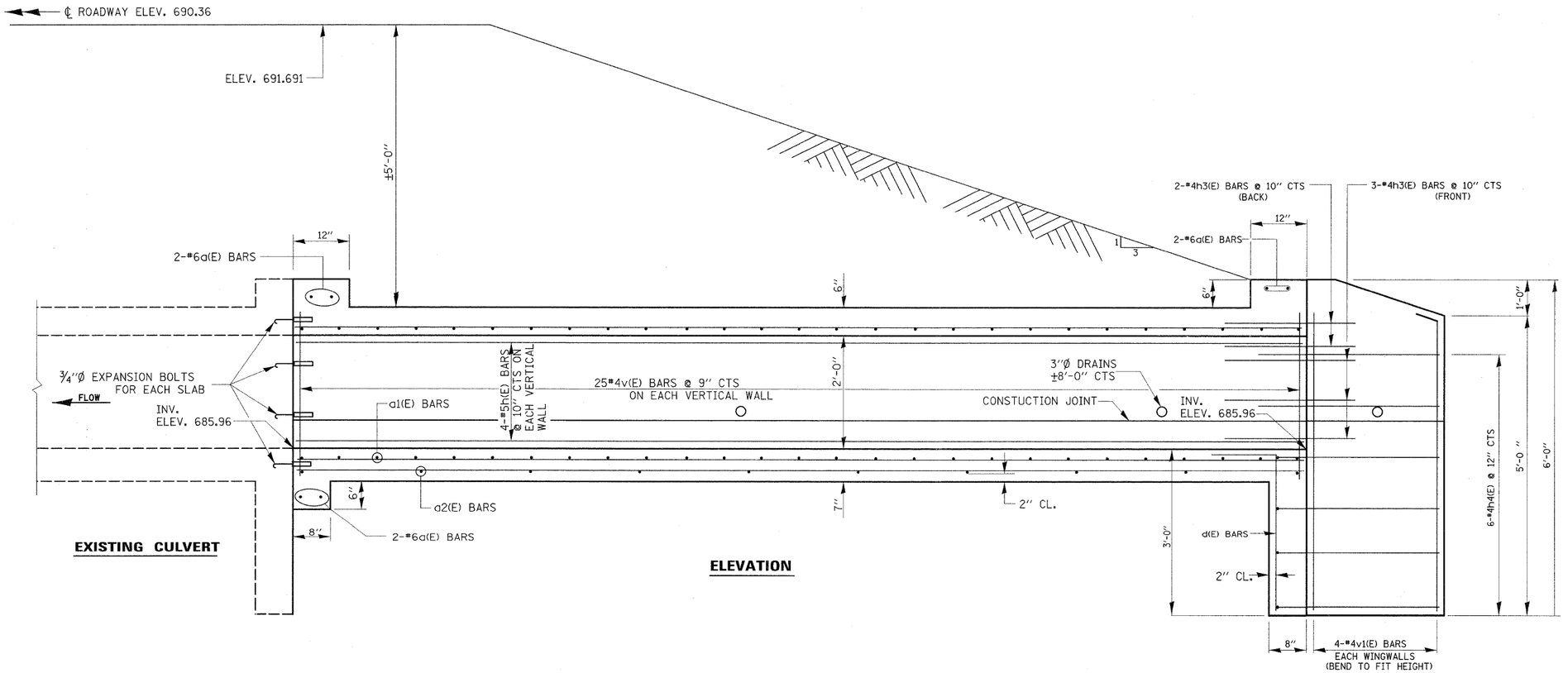
	PLOT DATE = 2/23/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 & O'PLAINE ROAD
DRAINAGE PROFILE

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4 LAKE	LAKE	50	16
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			



BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	6	#6	3'-9"	——
a1(E)	57	#5	3'-8"	⊂⊃
a2(E)	10	#4	2'-3"	——
d(E)	3	#4	4'-6"	⌐
h(E)	8	#5	17'-9"	——
h1(E)	5	#4	17'-9"	——
h2(E)	6	#5	17'-9"	——
h3(E)	10	#4	4'-0"	——
h4(E)	12	#4	4'-3"	——
v(E)	50	#4	2'-9"	——
v1(E)	8	#4	5'-0"	——
REINFORCEMENT BARS, EPOXY COATED			POUND	810
CONCRETE BOX CULVERT			CU.YD.	4.8
EXPANSION BOLTS ¾ INCH			EACH	8

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

GENERAL NOTES:

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53, GRADE 60.

ALL CONSTRUCTION JOINTS SHALL BE BONDED.

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS, EPOXY COATED	POUND	810
CONCRETE BOX CULVERT	CU.YD.	4.8
EXPANSION BOLTS ¾ INCH	EACH	8

FILE NAME = c:\pw_work\pwidot\tmiakosmv\d0101671\IL137@OPlaine.dgn	USER NAME = tmiakosmv	DESIGNED -	REVISED -
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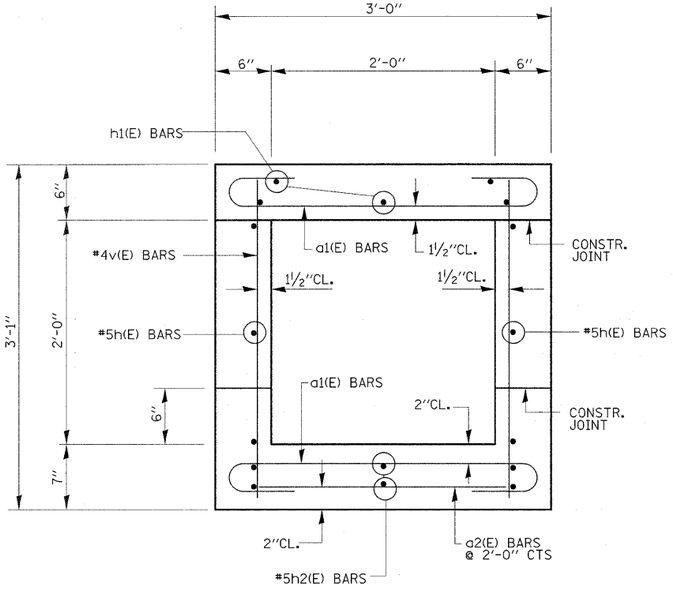
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

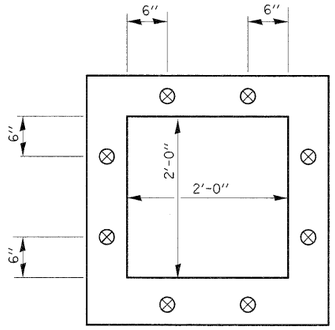
ILLINOIS ROUTE 137 AT O'PLAINE ROAD
2'–0" x 2'–0" BOX CULVERT EXTENSION

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	N/A	LAKE	50	17
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		



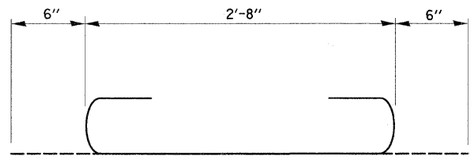
SECTION A–A



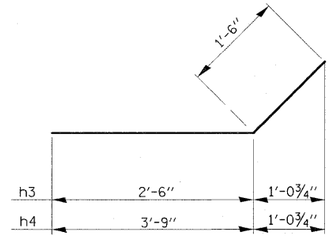
SECTION THRU BARREL

SHOWING EXPANSION BOLTS

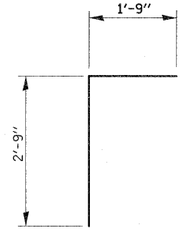
EXPANSIONS BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND ¾" Ø HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE.



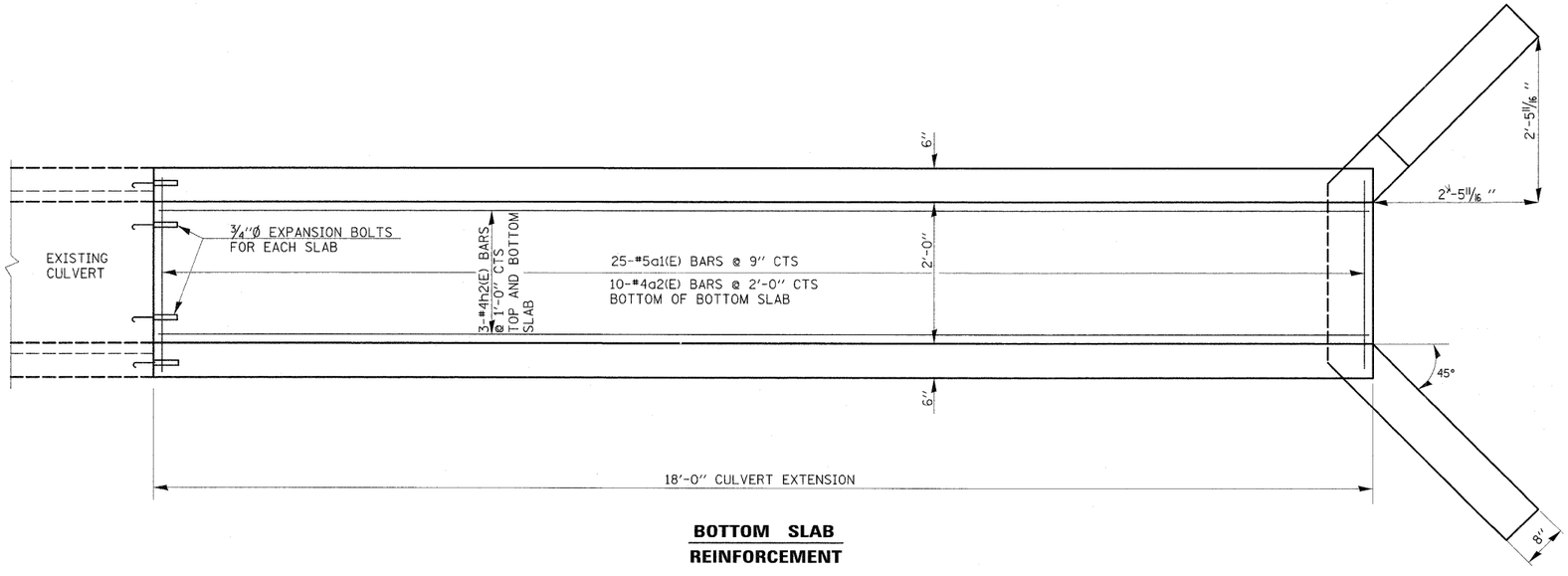
BAR a1(E)



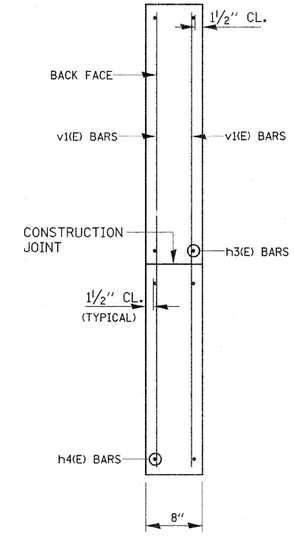
BAR h3 & h4



BAR d(E)



BOTTOM SLAB REINFORCEMENT



SECTION B–B

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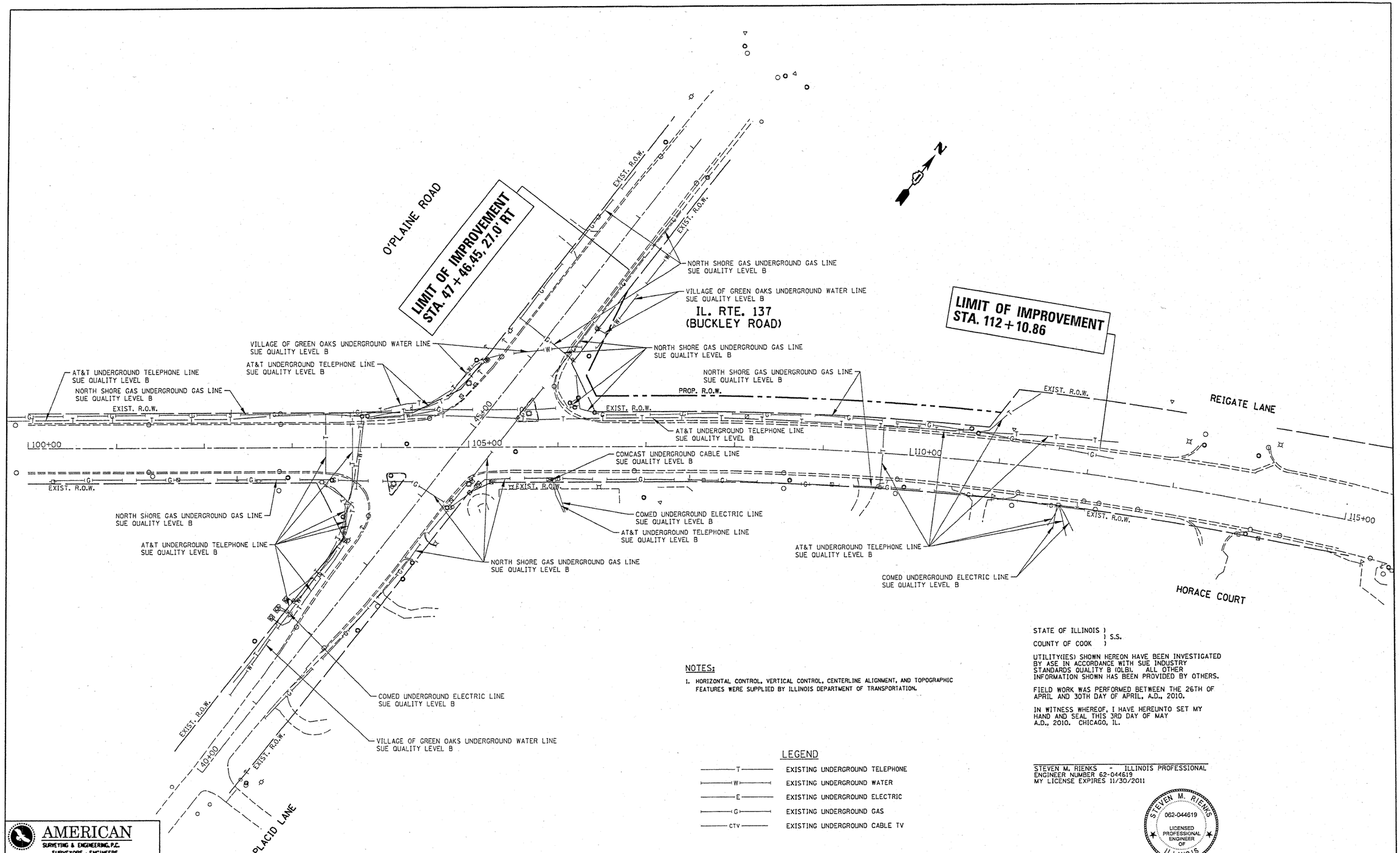
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 137 AT O'PLAINE ROAD
2'–0" x 2'–0" BOX CULVERT EXTENSION

SCALE: | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	N/A	LAKE	50	18
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. HORIZONTAL CONTROL, VERTICAL CONTROL, CENTERLINE ALIGNMENT, AND TOPOGRAPHIC FEATURES WERE SUPPLIED BY ILLINOIS DEPARTMENT OF TRANSPORTATION.

LEGEND

T	EXISTING UNDERGROUND TELEPHONE
W	EXISTING UNDERGROUND WATER
E	EXISTING UNDERGROUND ELECTRIC
G	EXISTING UNDERGROUND GAS
CTV	EXISTING UNDERGROUND CABLE TV

STATE OF ILLINOIS)
) S.S.
COUNTY OF COOK)

UTILITY(IES) SHOWN HEREON HAVE BEEN INVESTIGATED BY ASE IN ACCORDANCE WITH SUE INDUSTRY STANDARDS QUALITY B (QLB). ALL OTHER INFORMATION SHOWN HAS BEEN PROVIDED BY OTHERS.

FIELD WORK WAS PERFORMED BETWEEN THE 26TH OF APRIL AND 30TH DAY OF APRIL, A.D., 2010.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL THIS 3RD DAY OF MAY A.D., 2010. CHICAGO, IL.

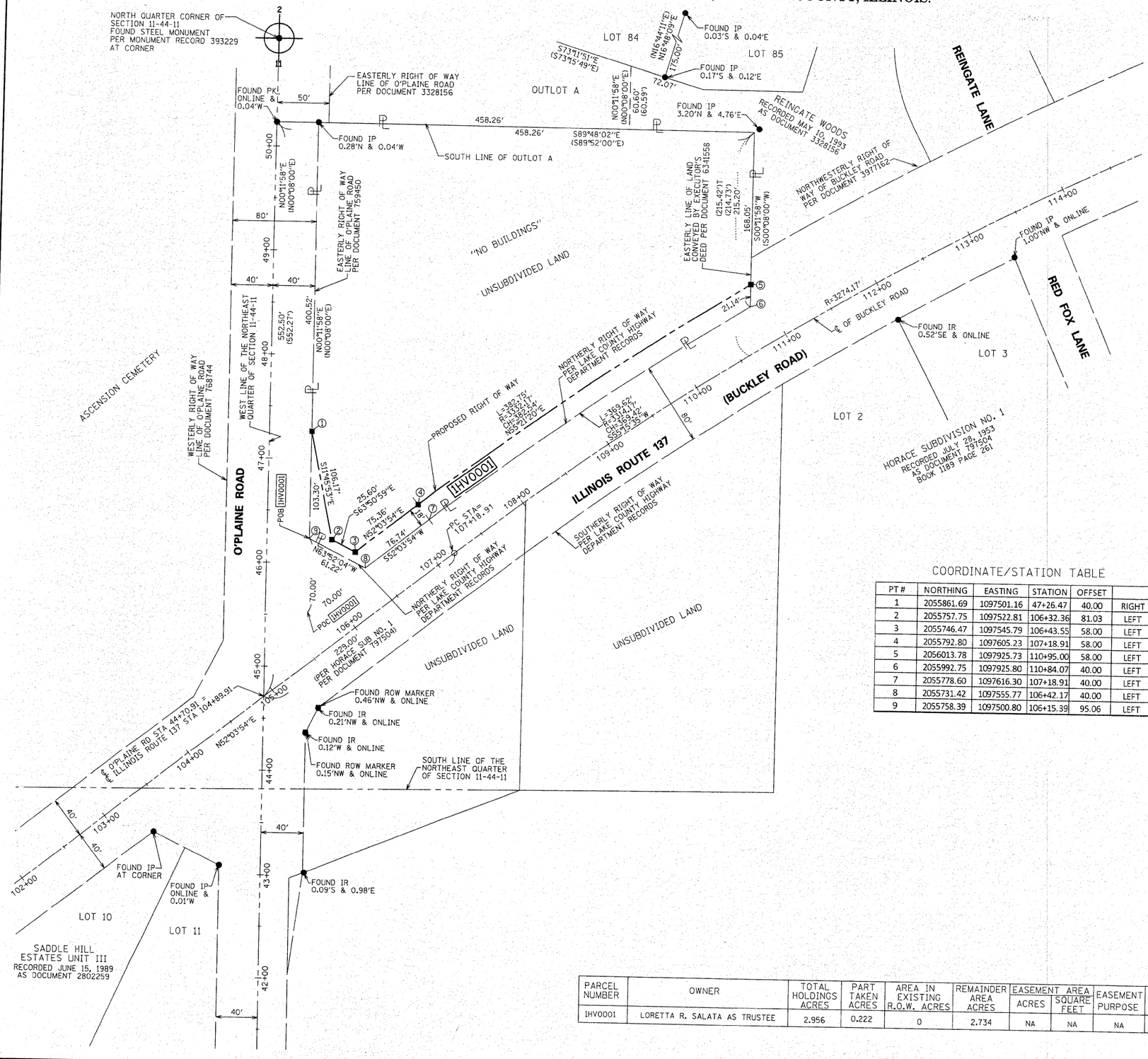
STEVEN M. RIENKS - ILLINOIS PROFESSIONAL ENGINEER NUMBER 62-044619
MY LICENSE EXPIRES 11/30/2011

STEVEN M. RIENKS 062-044619 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

AMERICAN
SURVEYING & ENGINEERING, P.C.
SURVEYORS ENGINEERS
GEODESISTS MAPPING SCIENTISTS
Chicago: 312-277-2000 / Fax 312-277-2002
Dixon: 815-288-6231 / Fax 815-288-6277
Aurora: 603-897-4105 / Fax 630-897-4121
Illinois Professional Design Firm No. 184-003192

FILE NAME = P142609-sht-sue.dgn	USER NAME = abebewa	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL. ROUTE 137 & O'PLAINE ROAD EXISTING UTILITY PLAN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			352	56N-4	LAKE	50	19
	PLOT SCALE = 100.1218 ' / IN.	CHECKED -	REVISED -					CONTRACT NO. 60K19		
	PLOT DATE = 10/15/2010	DATE -	REVISED -		SCALE: 1"= 50' SHEET NO. OF SHEETS STA. 100+00.00 TO STA. 115+00.00			ILLINOIS FED. AID PROJECT		

PART OF THE NORTHEAST QUARTER OF SECTION 11 TWP. 44 N., R. 11 E. OF THE 3RD. P.M., IN LAKE COUNTY, ILLINOIS.



LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER, QUARTER SECTION LINE
- PLATTED LOT LINES
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT
- 129.32' MEASURED DIMENSION
- 129.32' (COMP) COMPUTED DIMENSION
- (129.32') RECORDED DIMENSION
- EXISTING BUILDING
- SANITARY MANHOLE
- STORM INLET
- STORM MANHOLE
- HAND HOLE
- FIRE HYDRANT

GRAPHIC SCALE FEET 0 50 100
SCALE: 1" = 50'

Bearings are referenced to the Illinois State Plane Coordinate Grid System, NAD83, East Zone, as determined by G.P.S. observation

- ● IRON PIPE OR ROD FOUND ○ REPLACED AFTER CONSTRUCTION
- \+ CUT CROSS FOUND OR SET
- ● T1 T2 T3 **THESE STAKES REFERENCE FOUND OR SET MONUMENTATION.** SET 5/8 INCH IRON ROD FLUSH WITH GROUND TO TIE FOUND IRON STAKE IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- • BT1 BT2 BT3 **THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION.** BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ■ **STAKING OF PROPOSED RIGHT OF WAY.** SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- ■ M **STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS.** BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ◔ PERMANENT SURVEY MARKER, I.D.O.T. STANDARD 2135 (TO BE SET BY OTHERS)
- □ RIGHT OF WAY STAKING PROPOSED TO BE SET

COORDINATE/STATION TABLE

PT #	NORTHING	EASTING	STATION	OFFSET	
1	2055861.69	1097501.16	47+26.47	40.00	RIGHT
2	2055757.75	1097522.81	106+32.36	81.03	LEFT
3	2055746.47	1097545.79	106+43.55	58.00	LEFT
4	2055792.80	1097605.23	107+18.91	58.00	LEFT
5	2056013.78	1097925.73	110+95.00	58.00	LEFT
6	2055992.75	1097925.80	110+84.07	40.00	LEFT
7	2055778.60	1097616.30	107+18.91	40.00	LEFT
8	2055731.42	1097555.77	106+42.17	40.00	LEFT
9	2055758.39	1097500.80	106+15.39	95.06	LEFT

PARCEL NUMBER	OWNER	TOTAL HOLDINGS ACRES	PART TAKEN ACRES	AREA IN EXISTING R.O.W. ACRES	REMAINDER AREA ACRES	EASEMENT AREA ACRES	EASEMENT AREA SQUARE FEET	EASEMENT PURPOSE	PERMANENT INDEX NUMBER	PROPERTY ACQUIRED BY
1HV0001	LORETTA R. SALATA AS TRUSTEE	2.956	0.222	0	2.734	NA	NA	NA	11-11-200-017	

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT WE, SPACECO, INC. AN ILLINOIS PROFESSIONAL DESIGN FIRM, NUMBER 184-001157, HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 11, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, LAKE COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED, MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED THIS _____ DAY OF _____ 20 ____ A.D. AT ROSEMONT, ILLINOIS

_____
C. BRIAN LOUNSBURY, I.P.L.S. No. 035-2841
LICENSE EXPIRES: 11-30-2010
(VALID ONLY IF EMBOSSED SEAL AFFIXED)

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

RECEIVED
JUN 10 2010
PLATS & LEGALS

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PLAT OF HIGHWAYS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
IL RTE 137 (BUCKLEY ROAD)

SECTION: AT O'PLAINE ROAD COUNTY: LAKE
PROJECT JOB NO.: R-91-003-10
STATION 106+15.39 TO STATION 111+01.65
SCALE: 1"=50' SHEET 2 OF 2

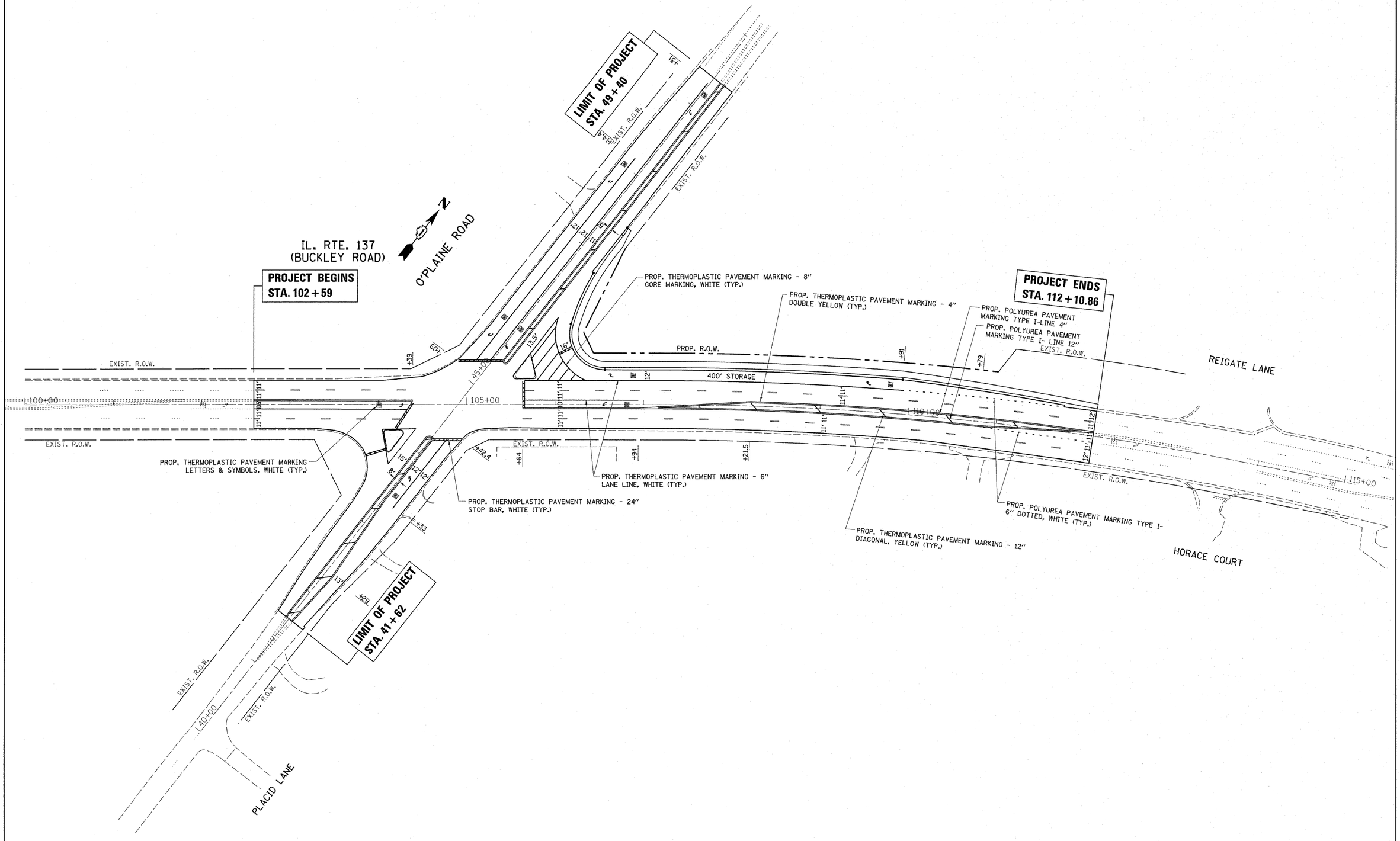
BUREAU OF LAND ACQUISITION 20 of 50
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196

ILLINOIS ROUTE 137 SECTION: AT O'PLAINE ROAD LAKE COUNTY

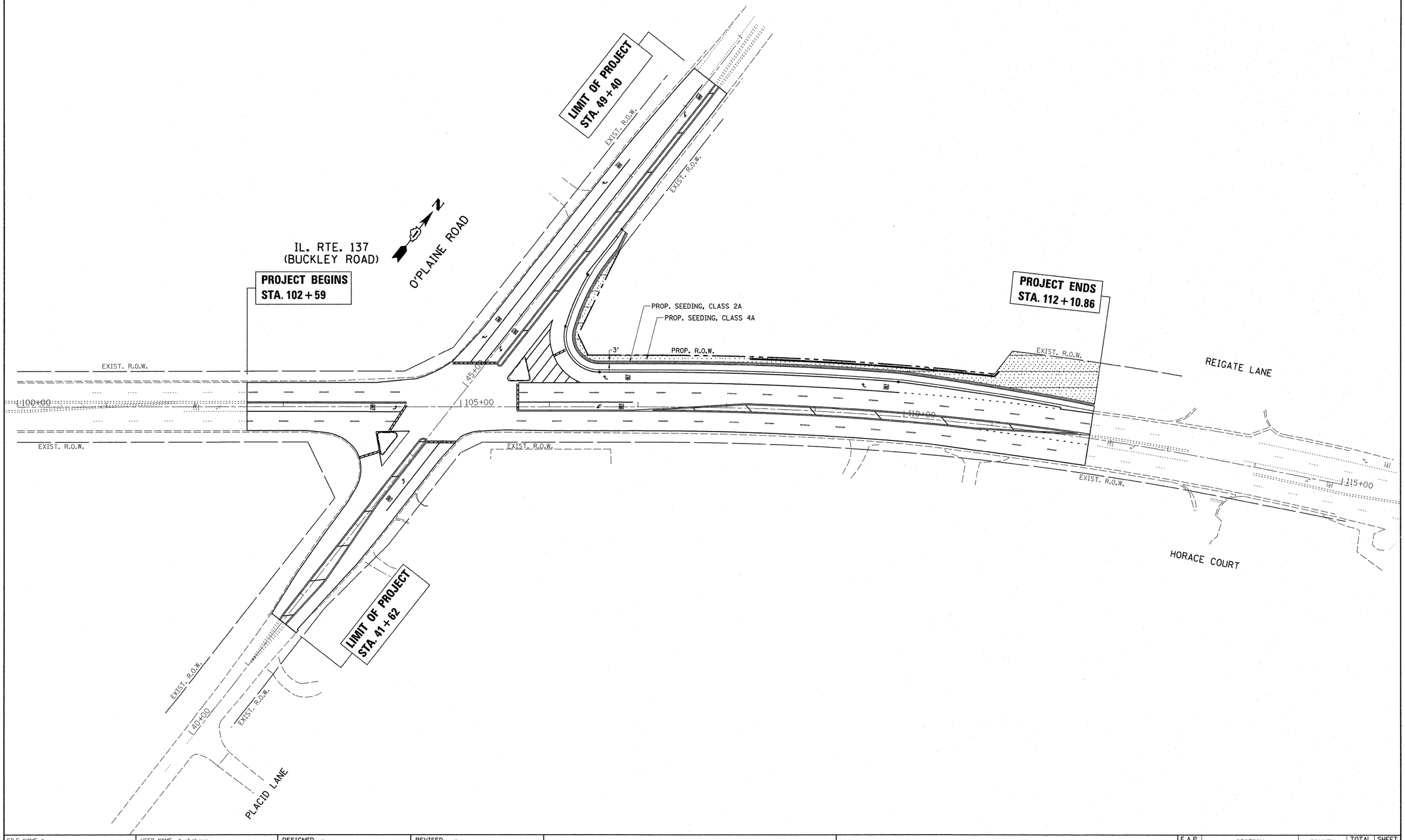
REVISION DATE: 06/10/2010 REVISION PER IDOT

JOB NO.: R-91-003-10 MADE BY JWM

RECORDING: RECORDED ON



FILE NAME = P142609-sht-pmk.dgn	USER NAME = abebawa	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**IL. ROUTE 137 @ O'PLAINE ROAD PAVEMENT MARKING PLAN**			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					352	56N-4	LAKE	50	2-I
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -							CONTRACT NO. 60K19		
	PLOT DATE = 2/8/2011	DATE -	REVISED -		SCALE: 1"= 50'	SHEET NO. OF SHEETS	STA. 100+00.00 TO STA. 115+00.00			ILLINOIS FED. AID PROJECT		



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	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
LANDSCAPING PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. 100+00.00 TO STA. 115+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	22
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.

2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.

3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12", HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.

4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.

5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

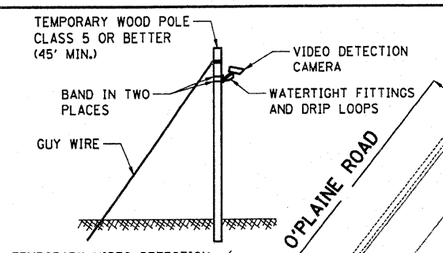
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

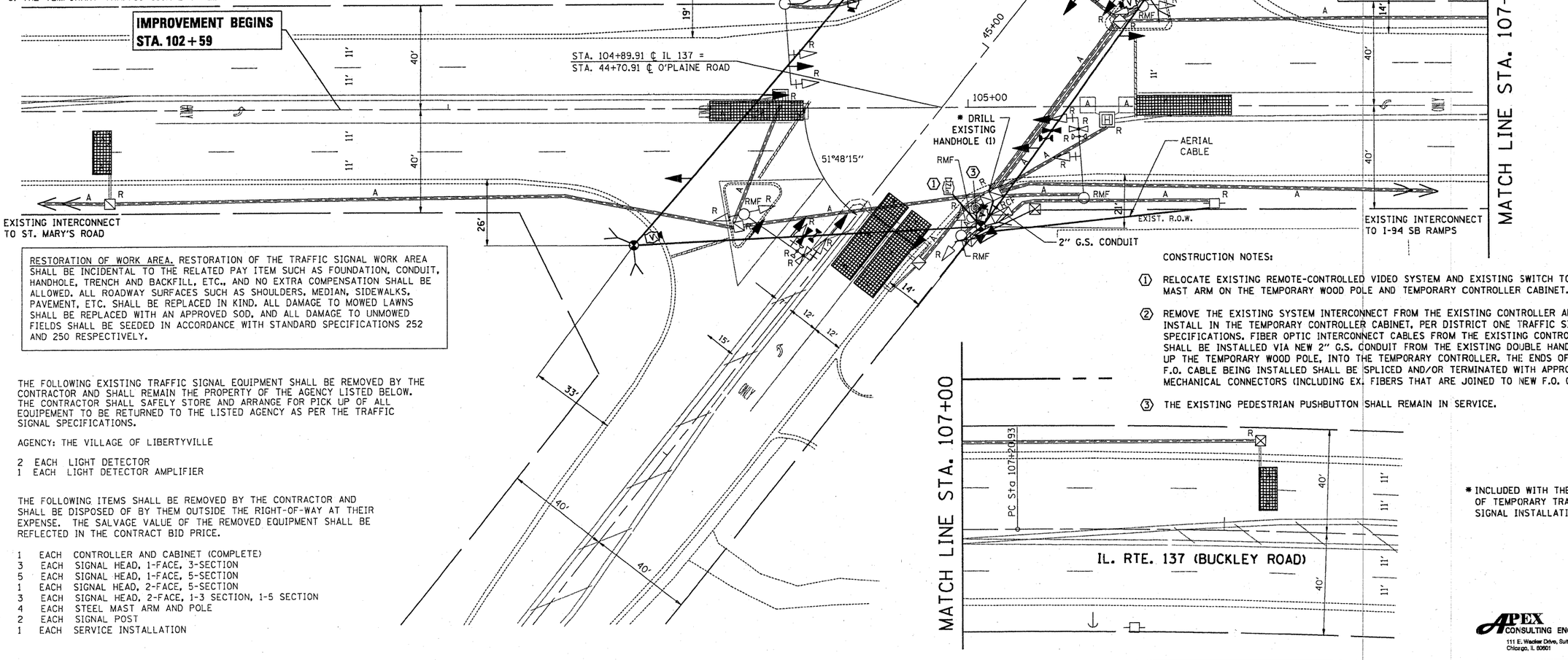
7. UNITERUPRUPTABLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.

9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.

10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLING AND MAINTAINING THE CAMERAS TO THE SASTISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.





NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEMS.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPEMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: THE VILLAGE OF LIBERTYVILLE

2 EACH LIGHT DETECTOR
1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CABINET (COMPLETE)
3 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
5 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
1 EACH SIGNAL HEAD, 2-FACE, 5-SECTION
3 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
4 EACH STEEL MAST ARM AND POLE
2 EACH SIGNAL POST
1 EACH SERVICE INSTALLATION

CONSTRUCTION NOTES:

(1) RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM AND EXISTING SWITCH TO THE MAST ARM ON THE TEMPORARY WOOD POLE AND TEMPORARY CONTROLLER CABINET.

(2) REMOVE THE EXISTING SYSTEM INTERCONNECT FROM THE EXISTING CONTROLLER AND INSTALL IN THE TEMPORARY CONTROLLER CABINET, PER DISTRICT ONE TRAFFIC SIGNAL SPECIFICATIONS. FIBER OPTIC INTERCONNECT CABLES FROM THE EXISTING CONTROLLER SHALL BE INSTALLED VIA NEW 2" G.S. CONDUIT FROM THE EXISTING DOUBLE HANDHOLE, UP THE TEMPORARY WOOD POLE, INTO THE TEMPORARY CONTROLLER. THE ENDS OF THE F.O. CABLE BEING INSTALLED SHALL BE SPLICED AND/OR TERMINATED WITH APPROVED MECHANICAL CONNECTORS (INCLUDING EX. FIBERS THAT ARE JOINED TO NEW F.O. CABLE).

(3) THE EXISTING PEDESTRIAN PUSHBUTTON SHALL REMAIN IN SERVICE.

* INCLUDED WITH THE COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION

APEX CONSULTING ENGINEERS, LLC
111 E. Wacker Drive, Suite 520
Chicago, IL 60601

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		DRAWN - WHI	REVISED -
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	PLOT DATE = 1/6/2011	DATE - 11/08/10	REVISED -

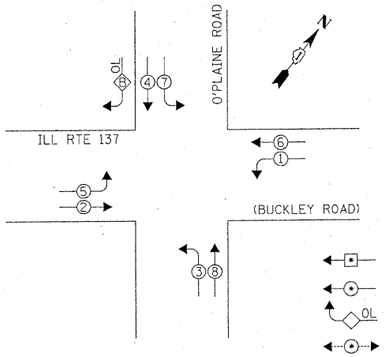
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 137 @ O'PLAINE ROAD
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	23
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

TEMPORARY CONTROLLER SEQUENCE



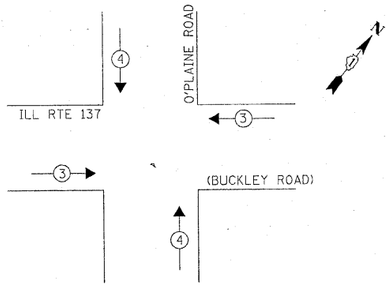
LEGEND

- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
B	=	4	+	5

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

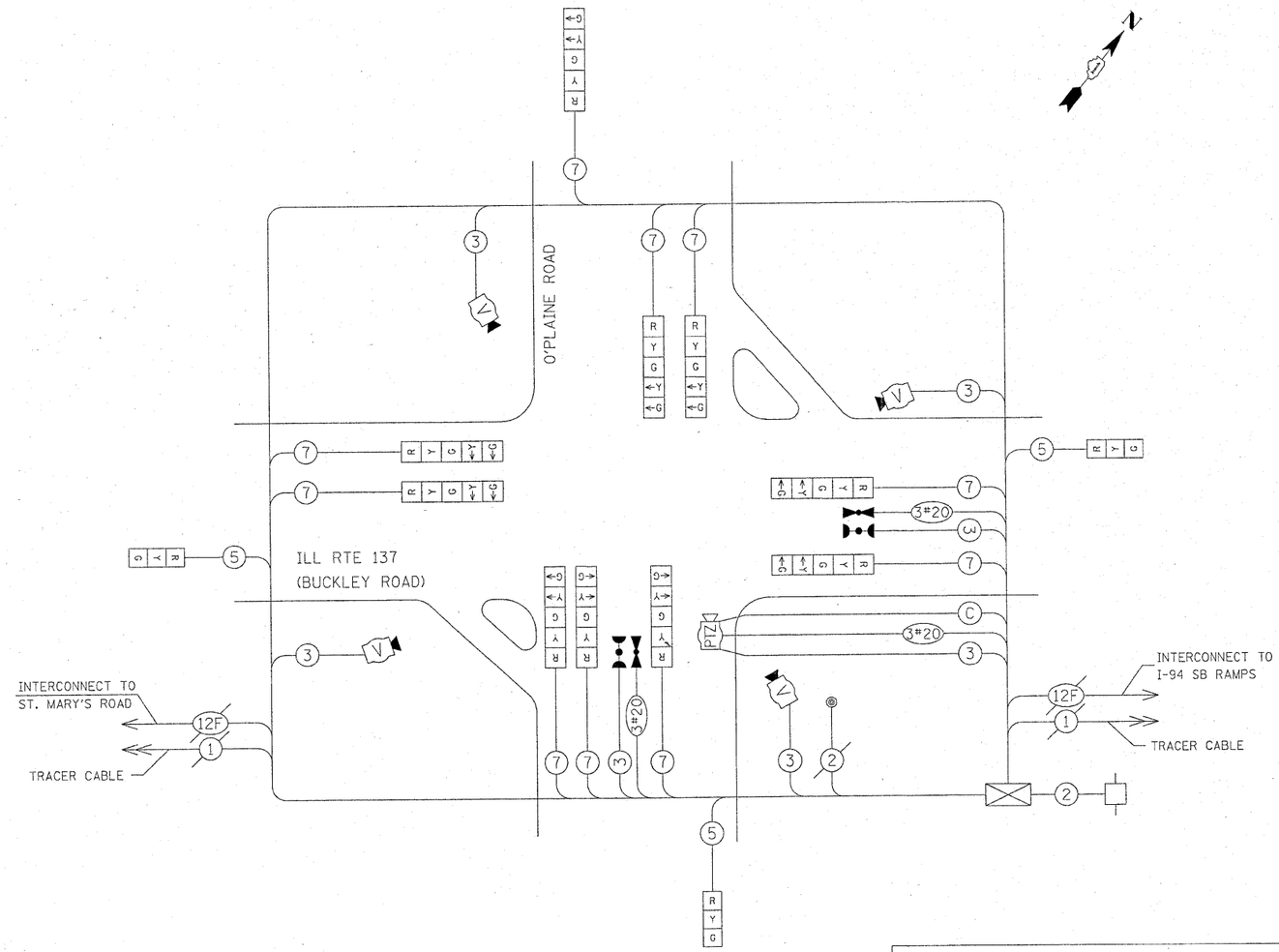
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	X WATTAGE INCAND.	LED	X % OPERATION	
SIGNAL (RED)	13		17	0.50	110.50
(YELLOW)	13		25	0.25	81.25
(GREEN)	13		15	0.25	48.75
ARROW	20		12	0.10	24.00
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	1	150		1.00	150.00
FLASHER				0.05	
				TOTAL=	514.50

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: _____
PHONE:
COMPANY: COMMONWEALTH EDISON



TEMPORARY CABLE PLAN

CONSTRUCTION NOTES:

(1) RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM AND EXISTING SWITCH TO THE MAST ARM ON THE TEMPORARY WOOD POLE AND TEMPORARY CONTROLLER CABINET.

(2) REMOVE THE EXISTING SYSTEM INTERCONNECT FROM THE EXISTING CONTROLLER AND INSTALL IN THE TEMPORARY CONTROLLER CABINET, PER DISTRICT ONE TRAFFIC SIGNAL SPECIFICATIONS. FIBER OPTIC INTERCONNECT CABLES FROM THE EXISTING CONTROLLER SHALL BE INSTALLED VIA NEW 2" G.S. CONDUIT FROM THE EXISTING DOUBLE HANDHOLE, UP THE TEMPORARY WOOD POLE, INTO THE TEMPORARY CONTROLLER. THE ENDS OF THE F.O. CABLE BEING INSTALLED SHALL BE SPLICED AND/OR TERMINATED WITH APPROVED MECHANICAL CONNECTORS (INCLUDING EX. FIBERS THAT ARE JOINED TO NEW F.O. CABLE).

(3) THE EXISTING PEDESTRIAN PUSHBUTTON SHALL REMAIN IN SERVICE UNTIL THE PROPOSED PEDESTRIAN PUSHBUTTON IS OPERATIONAL.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

APEX CONSULTING ENGINEERS, LLC
111 E. Wacker Drive Suite 528
Chicago, IL 60601

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		DRAWN - WHI	REVISED -	
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	PLOT DATE = ⊕DATE⊕	DATE - 11/08/10	REVISED -	

IL. ROUTE 137 @ O'PLAINE ROAD
TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM AND TEMPORARY EMERGENCY PREEMPTION SEQUENCE

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	24
		CONTRACT NO. 60K19		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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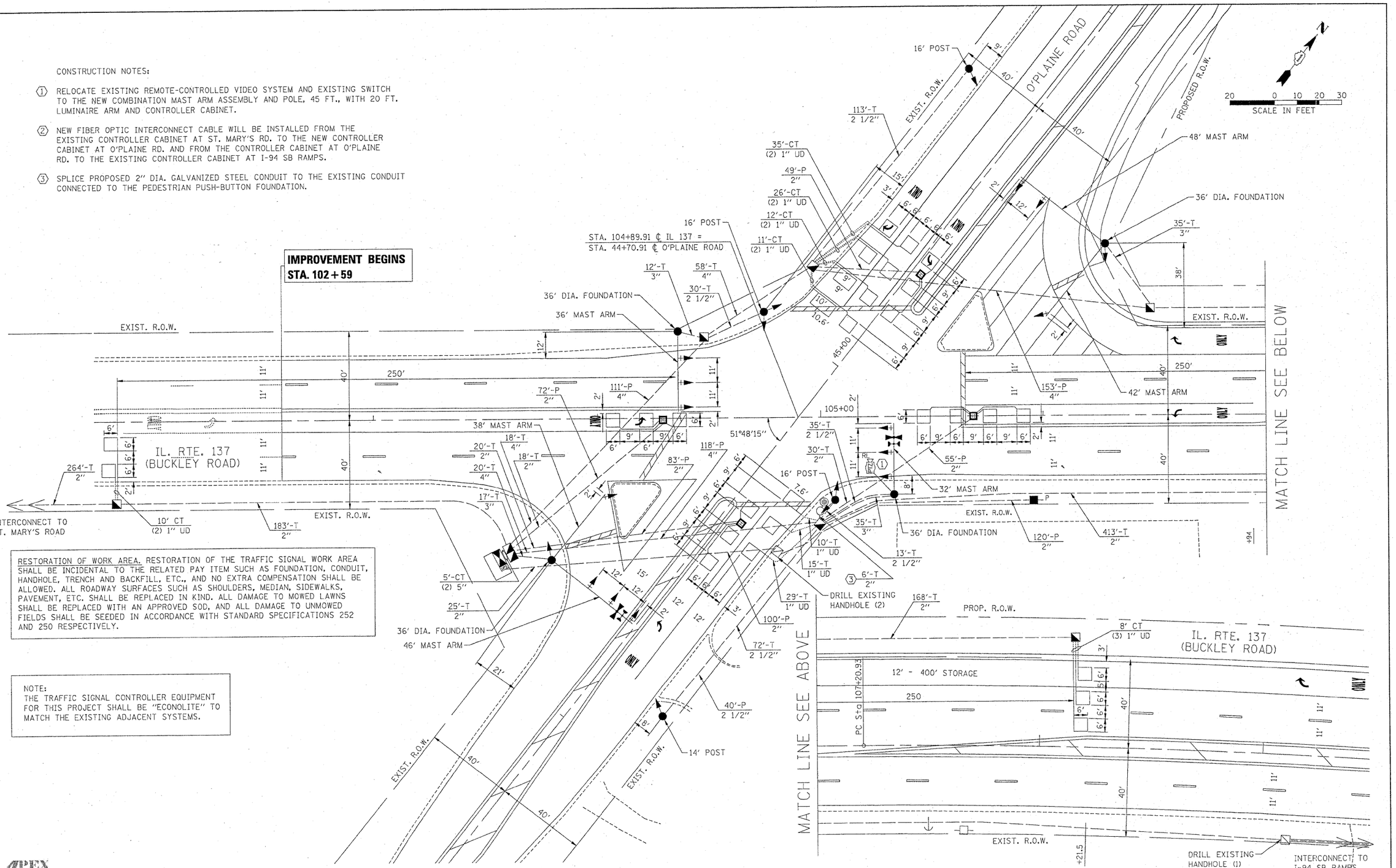
CONSTRUCTION NOTES:

1. RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM AND EXISTING SWITCH TO THE NEW COMBINATION MAST ARM ASSEMBLY AND POLE, 45 FT., WITH 20 FT. LUMINAIRE ARM AND CONTROLLER CABINET.
2. NEW FIBER OPTIC INTERCONNECT CABLE WILL BE INSTALLED FROM THE EXISTING CONTROLLER CABINET AT ST. MARY'S RD. TO THE NEW CONTROLLER CABINET AT O'PLAINE RD. AND FROM THE CONTROLLER CABINET AT O'PLAINE RD. TO THE EXISTING CONTROLLER CABINET AT I-94 SB RAMPS.
3. SPLICE PROPOSED 2" DIA. GALVANIZED STEEL CONDUIT TO THE EXISTING CONDUIT CONNECTED TO THE PEDESTRIAN PUSH-BUTTON FOUNDATION.



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEMS.

APEX CONSULTING ENGINEERS, LLC
111 E. Wacker Drive Suite 520
Chicago, IL 60601

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	PLOT DATE = $DATE$	DATE - 11/08/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
PROPOSED TRAFFIC SIGNAL MODERNIZATION PLAN

SCALE: 1" = 20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	25
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

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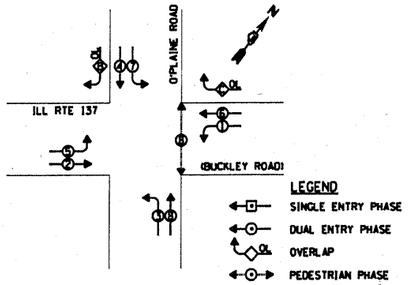
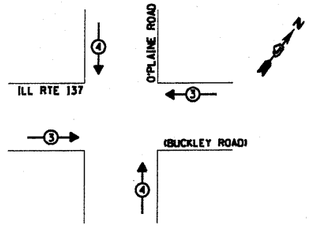
CONTROLLER SEQUENCE



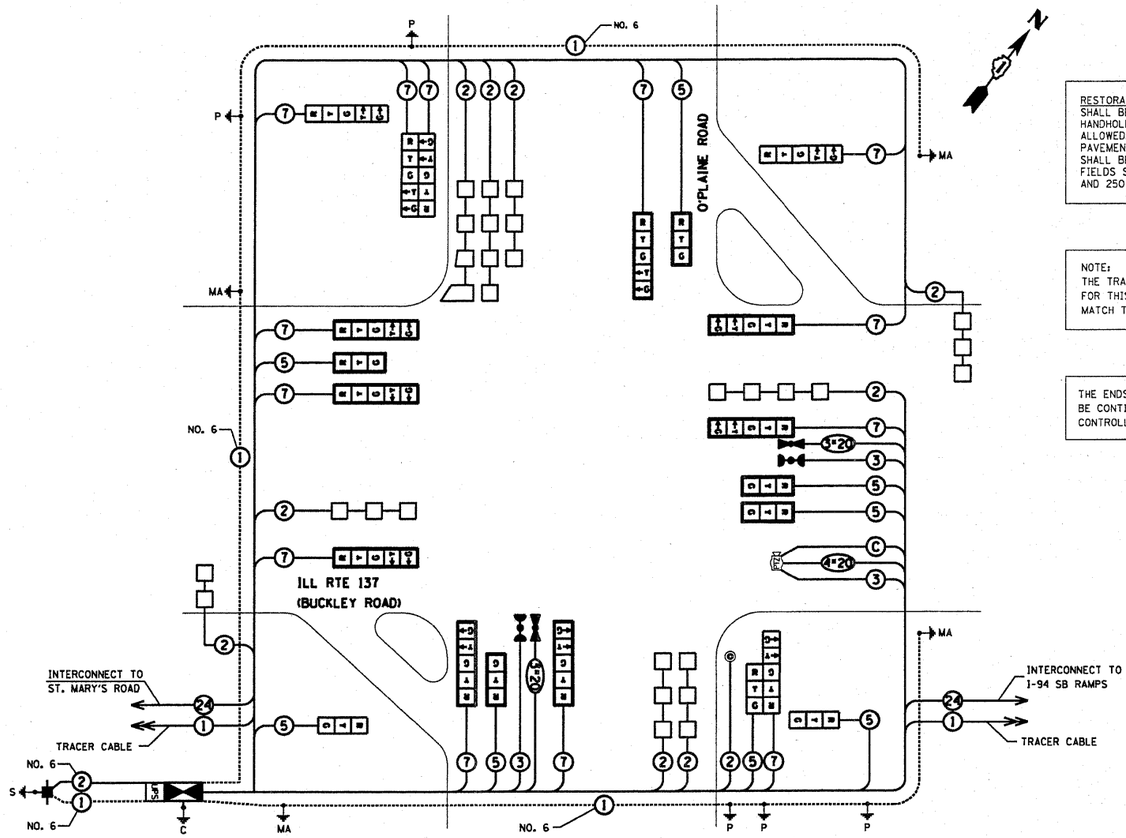
PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
B	=	4	+	5
C	=	6	+	7

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	⇄	⇅



CABLE PLAN

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

THE ENDS OF THE TRACER CABLES SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINETS.

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
16.5	SQ FT	SIGN PANEL - TYPE 1
27.5	SQ FT	SIGN PANEL - TYPE 2
387	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
263	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
99	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
116	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
359	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
40	FOOT	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL
382	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
1	EACH	CONDUIT SPLICE
6	EACH	HANDHOLE
4	EACH	HEAVY-DUTY HANDHOLE
1	EACH	DOUBLE HANDHOLE
945	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
195	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
635	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1795	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
2940	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
2300	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1-PAIR
295	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 4 2C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
3	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 38 FT. AND 46 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 32 FT.
16	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
50	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
2	EACH	DRILL EXISTING HANDHOLE
5	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
8	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, L.E.D., 2-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
13	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
9	EACH	INDUCTIVE LOOP DETECTOR
1301	FOOT	DETECTOR LOOP, TYPE I
* 2	EACH	LIGHT DETECTOR
* 1	EACH	LIGHT DETECTOR AMPLIFIER
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
63	FOOT	REMOVE EXISTING CABLE FROM CONDUIT
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
10	EACH	REMOVE EXISTING HANDHOLE
7	EACH	REMOVE EXISTING CONCRETE FOUNDATION
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
2	EACH	RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (SPECIAL)
2	EACH	RELOCATE EXISTING SWITCH
1	EACH	SERVICE INSTALLATION, POLE MOUNT
2	EACH	GROUNDING EXISTING HANDHOLE FRAME & COVER
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
2245	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
* 375	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED
260	FOOT	ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4/C
260	FOOT	COAXIAL CABLE IN CONDUIT
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 42 FT. AND 48 FT.

* 100% COST TO THE LIBERTYVILLE FIRE PROTECTION DISTRICT

I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	X	WATTAGE (INCAND)	WATTAGE (LED)	X	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	21			17		0.50	178.50
(YELLOW)	21			25		0.25	131.25
(GREEN)	21			15		0.25	78.75
ARROW	26			12		0.10	31.20
PED. SIGNAL	-			25		1.00	-
CONTROLLER	1			100		1.00	100.00
ILLUM. SIGN	-			25		0.05	-
FLASHER						0.05	
						TOTAL=	519.70

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: JOE HURLEY
PHONE: (847) 816-5503
COMPANY: COMMONWEALTH EDISON

APEX CONSULTING ENGINEERS, LLC
111 E. Wacker Drive, Suite 520
Chicago, IL 60601

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		DRAWN - WHI	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - DEB	REVISED -
	PLOT DATE = 1/6/2011	DATE - 11/08/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY PREEMPTION SEQUENCE

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4		50	26
		CONTRACT NO. 60K19		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FIBER OPTIC COMMUNICATION SYSTEM
SCHEDULE OF QUANTITIES

DE NO.	PAY ITEM	UNIT	QUANTITY
80100	DETECTOR LOOP, TYPE I	FOOT	1620 ⚠1
200500	GALVANIZED STEEL CONDUIT IN TRENCH 2"	FOOT	15049
200910	GALVANIZED STEEL CONDUIT IN TRENCH 4"	FOOT	12
201000	GALVANIZED STEEL CONDUIT IN TRENCH 5"	FOOT	20
201500	GALVANIZED STEEL CONDUIT, PUSHED 2"	FOOT	1301
202500	GALVANIZED STEEL CONDUIT, PUSHED 4"	FOOT	120
203000	GALVANIZED STEEL CONDUIT, PUSHED 5"	FOOT	120
310500	ELECTRIC CABLE IN CONDUIT NO.14 2/C, TWISTED, SHIELDED	FOOT	2040 ⚠1
350400	CONCRETE HANDHOLE	EACH	29 ⚠1
350600	CONCRETE DOUBLE HANDHOLE	EACH	3
381000	TRENCH AND BACKFILL	FOOT	16250
450210	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4590 ⚠1
520100	DRILL EXISTING HANDHOLE	EACH	14 ⚠1
540050	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 12F	FOOT	26100 ⚠1

NOTES:

1. QUANTITIES FOR INTERSECTION ITEMS ARE INCLUDED ON THE TRAFFIC SIGNAL CABLE PLANS FOR ST. MARY'S ROAD.
2. ONLY ABANDONED ELECTRIC CABLE SHALL BE PULLED FROM THE CONDUITS THAT REMAIN USE.

NOTES:

1. AN ECONOLITE FULL-ACTUATED CONTROLLER AND CABINET AND TRANSCEIVER (FIBER-OPTIC), SHALL BE INSTALLED AT THE FOLLOWING INTERSECTIONS:

   ST. MARY'S ROAD-IL. RTE 137
   O'PLAINE ROAD-IL. RTE. 137
   NORMAN DRIVE-IL. RTE. 43

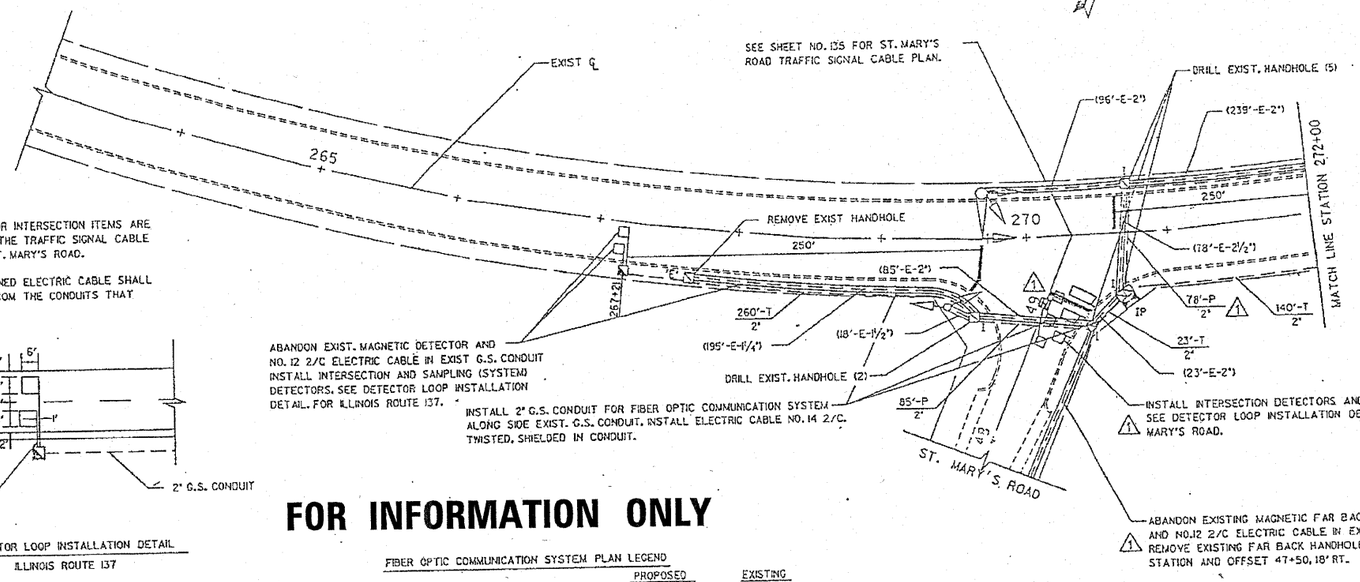
2. INSTALL TRANSCEIVER-FIBER OPTIC IN EXISTING CONTROLLER CABINETS AT THE FOLLOWING INTERSECTIONS:

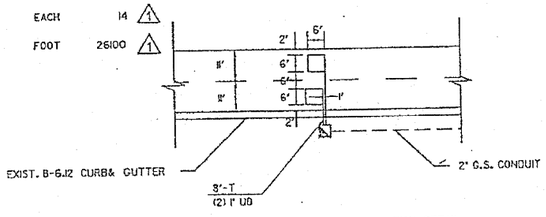
   RAMPS A AND B (TRI-STATE TOLLWAY)-IL. RTE. 137
   RAMPS C AND D (TRI-STATE TOLLWAY)-IL. RTE. 137
   ABBOTT GATE 3-IL. RTE. 137

3. PROPOSED FIBER OPTIC COMMUNICATION SYSTEM WILL BE INSTALLED AND FULLY OPERATIONAL BEFORE DISCONNECTING AND REMOVING ANY EXISTING INTERCONNECT CABLE.

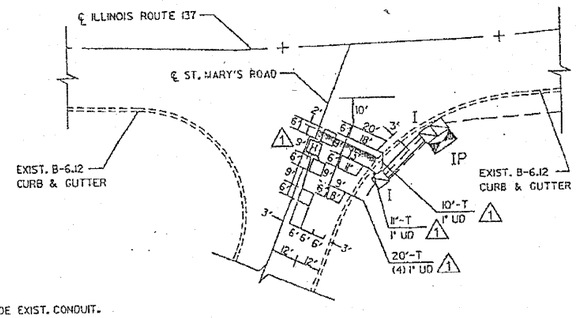
4. IN ADDITION TO THE CABLE SLACK REQUIRMENTS AS STATED IN THE STANDARD SPECIFICATIONS, AN ADDITIONAL 15' FIBER OPTIC CABLE SLACK SHALL BE LEFT IN EACH HANDHOLE AND DOUBLE HANDHOLE, BETWEEN STATIONS 356+00 AND 396+00 ON ILLINOIS ROUTE 137 AND BETWEEN STATIONS 147+00 AND 182+00 ON ILLINOIS ROUTE 43.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE 'ECONOLITE' TO MATCH THE EXISTING ADJACENT SYSTEM





DETECTOR LOOP INSTALLATION DETAIL
ILLINOIS ROUTE 137



FOR INFORMATION ONLY

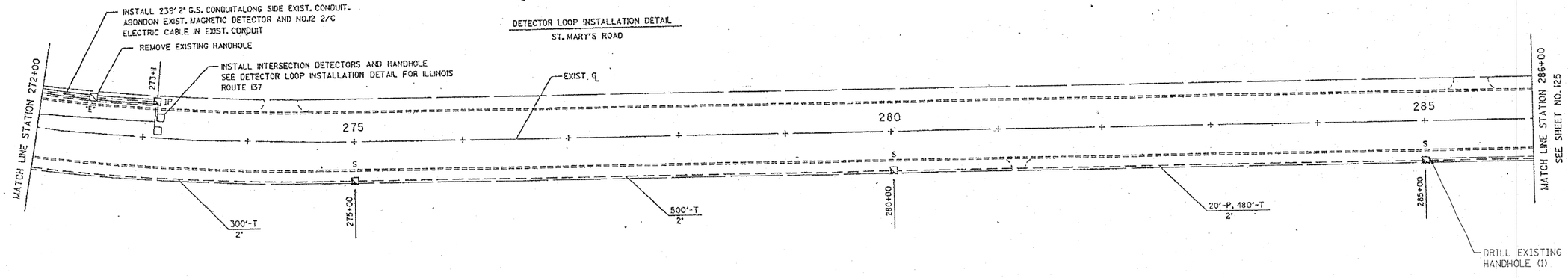
FIBER OPTIC COMMUNICATION SYSTEM PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY DUTY HANDHOLE	H	
G.S. CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP	CT	
COMMON TRENCH		
UNIT DUCT	UD	
SYSTEM	S	
INTERSECTION	IP	I
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
MAST ARM POLE AND FOUNDATION		O
SIGNAL POST		①
JUNCTION BOX		"E"

NOTES

1. TRAFFIC SIGNALS SHALL REMAIN FULLY OPERATIONAL DURING INSTALLATION OF PROPOSED TRAFFIC SIGNAL ITEMS
2. THE CONTRACTOR SHALL PLACE THE FIBER OPTIC COMMUNICATION SYSTEM HANDHOLES AND CONDUIT AS CLOSE TO THE RIGHT-OF-WAY LINE AS POSSIBLE OR, AS DIRECTED BY THE ENGINEER.

DETECTOR LOOP INSTALLATION DETAIL
ST. MARY'S ROAD



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	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
INTERCONNECT PLAN AND SCHEMATIC

SCALE: 1" = 50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	27
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

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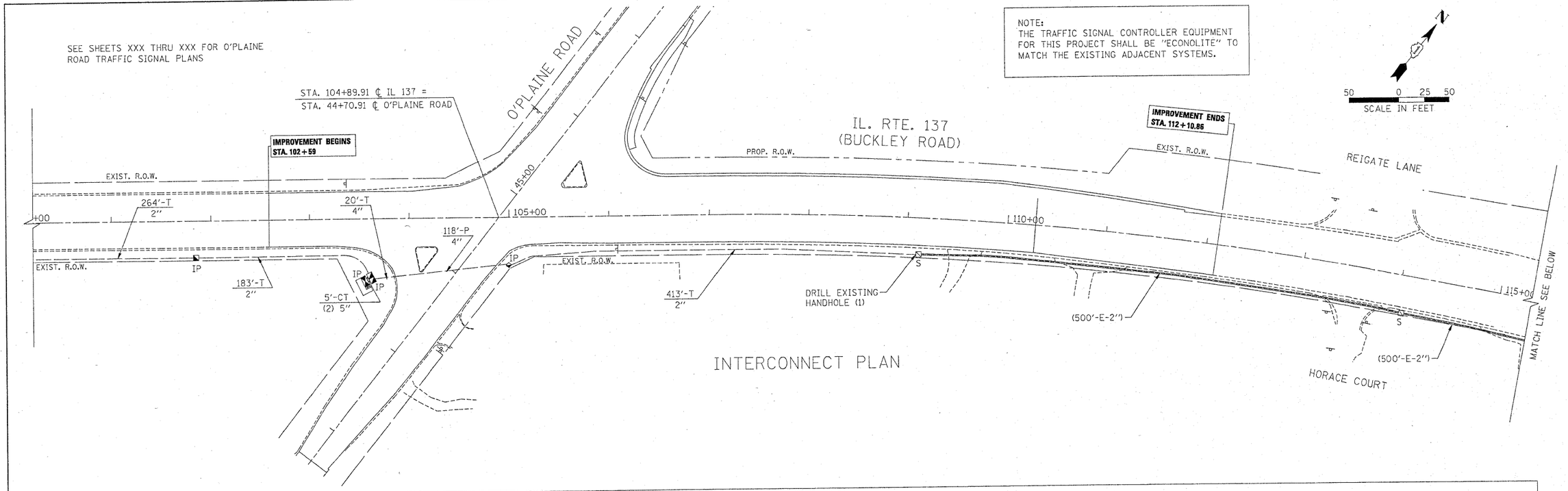
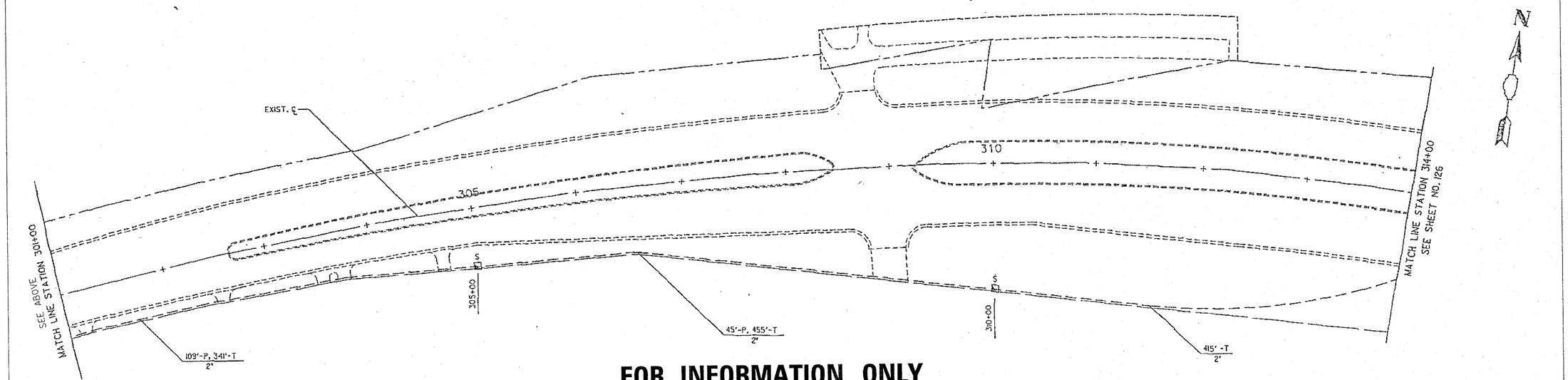
SEE SHEETS XXX THRU XXX FOR O'PLAINE ROAD TRAFFIC SIGNAL PLANS

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEMS.



INTERCONNECT PLAN



FOR INFORMATION ONLY

APEX CONSULTING ENGINEERS, LLC

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		DRAWN - WHI	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
INTERCONNECT PLAN

SCALE: 1" = 50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	28
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

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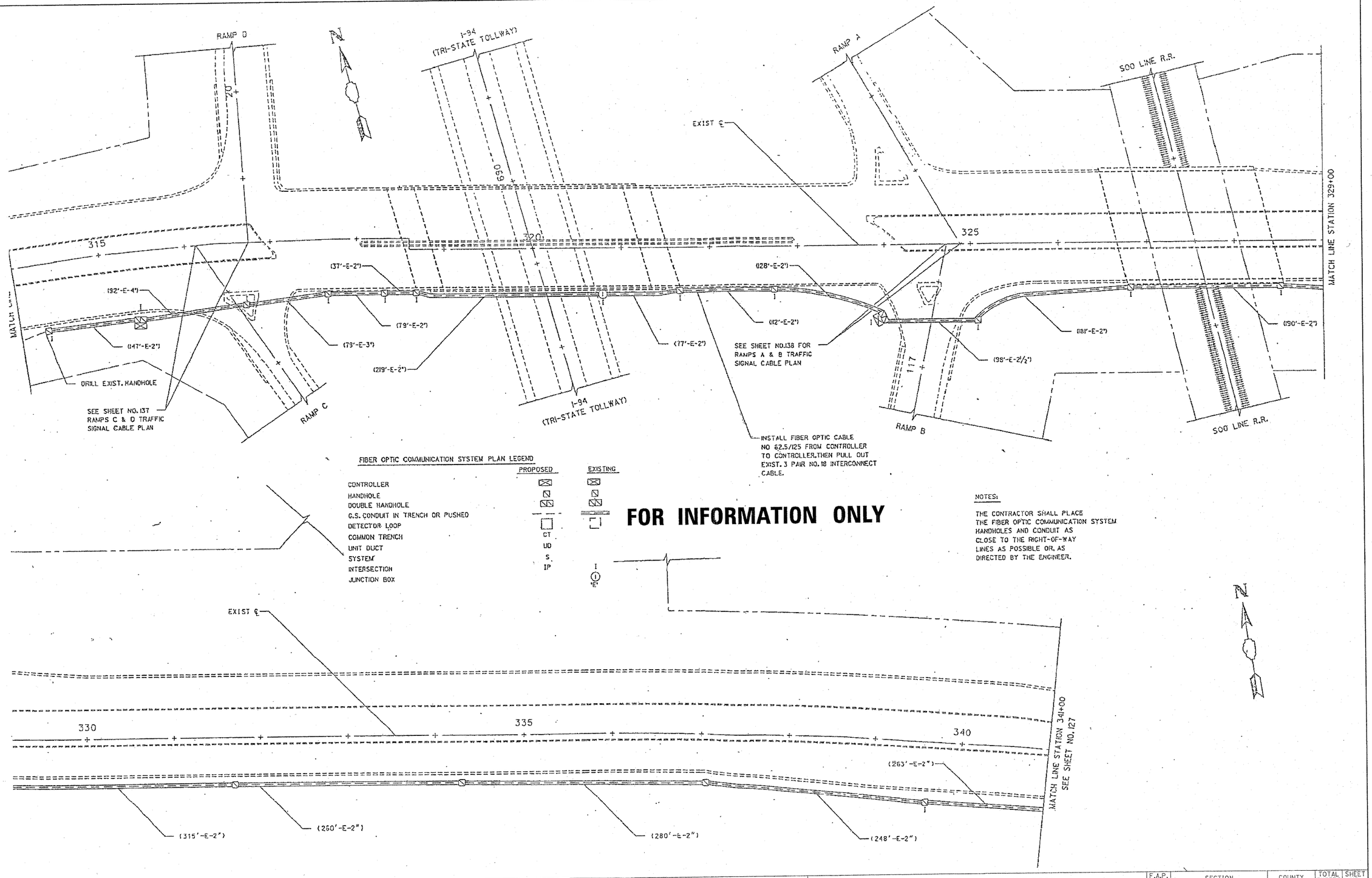

FIBER OPTIC COMMUNICATION SYSTEM PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
HANDHOLE	▨	▨
DOUBLE HANDHOLE	▨	▨
G.S. CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP	□	[ ]
COMMON TRENCH	CT	
UNIT DUCT	UD	
SYSTEM	S	
INTERSECTION	IP	
JUNCTION BOX		I (1) 'E'

FOR INFORMATION ONLY

NOTES:

THE CONTRACTOR SHALL PLACE THE FIBER OPTIC COMMUNICATION SYSTEM HANDHOLES AND CONDUIT AS CLOSE TO THE RIGHT-OF-WAY LINES AS POSSIBLE OR, AS DIRECTED BY THE ENGINEER.

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	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
INTERCONNECT PLAN

SCALE: 1" = 50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	29
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

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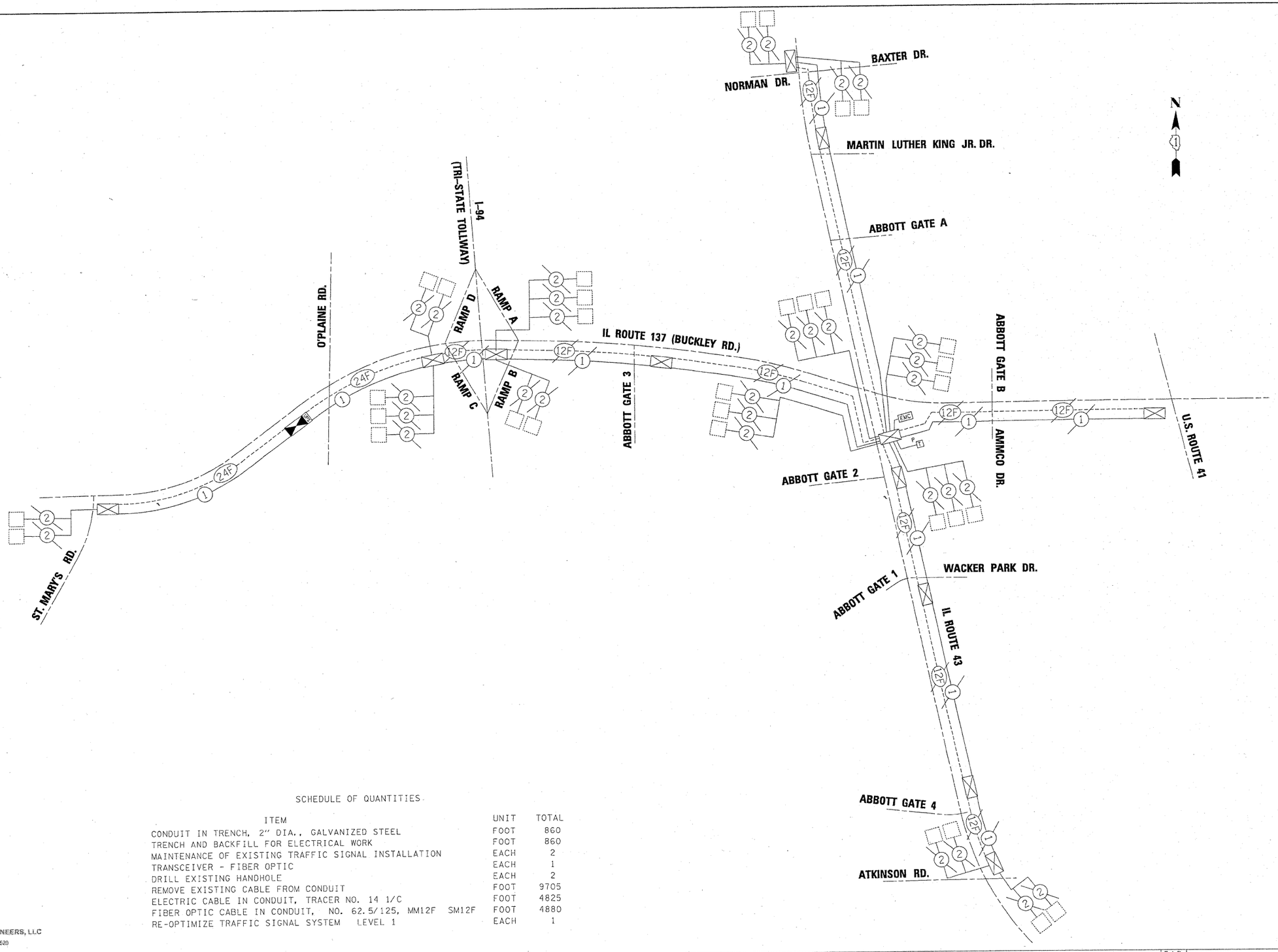

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	860
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	860
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
TRANSCEIVER - FIBER OPTIC	EACH	1
DRILL EXISTING HANDHOLE	EACH	2
REMOVE EXISTING CABLE FROM CONDUIT	FOOT	9705
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	FOOT	4825
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	4880
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1

APEX CONSULTING ENGINEERS, LLC
111 E. Wacker Drive Suite 520
Chicago, IL 60601

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		DRAWN - WHI	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 @ O'PLAINE ROAD
INTERCONNECT SCHEMATIC

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	30
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

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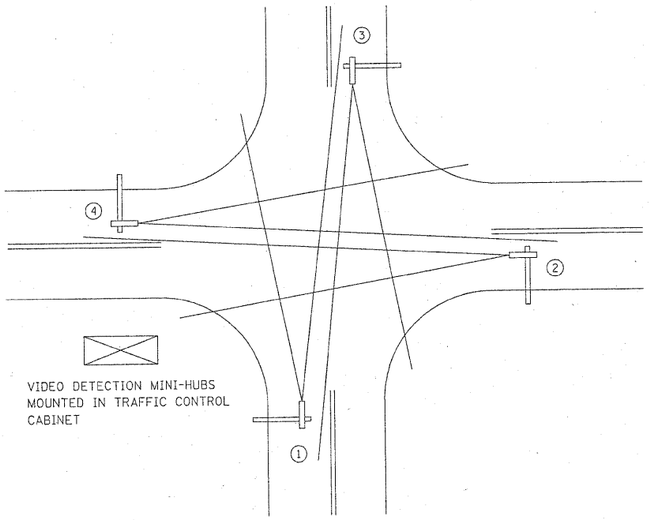
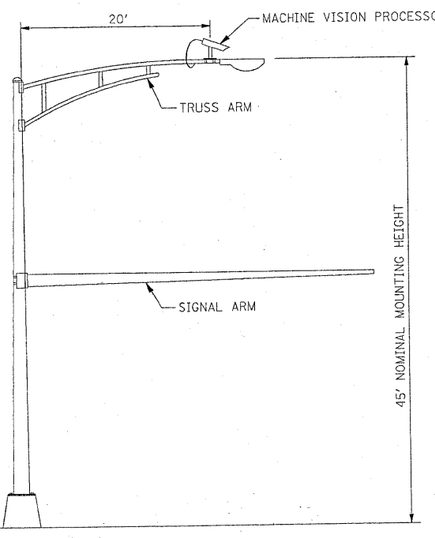


TYPICAL VIDEO VEHICLE DETECTION SYSTEM

(NOT TO SCALE)

(4) MACHINE VISION PROCESSOR ASSEMBLIES AND BRACKETS ① ② ③ ④
POWER CABLE TO EACH MACHINE VISION PROCESSOR (24 VAC)



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS

(NOT TO SCALE)

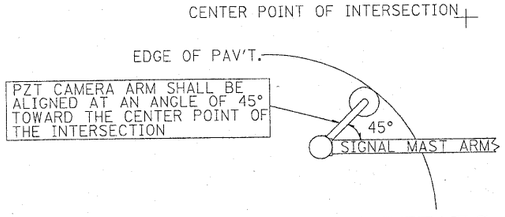
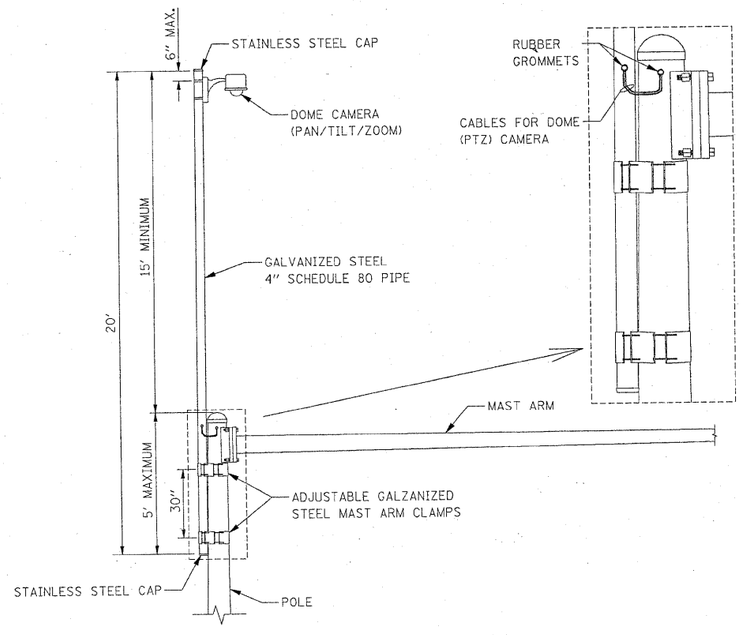


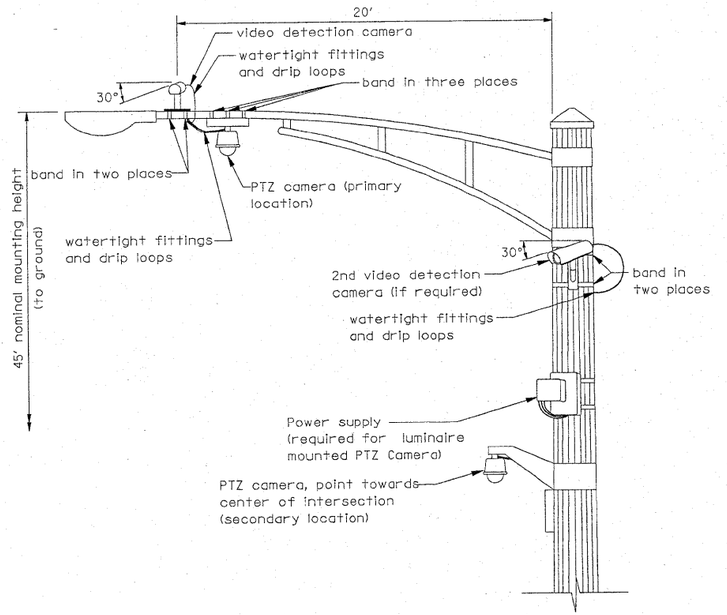
IMAGE SENSOR MOUNTING DETAILS

(NO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL

(NOT TO SCALE)



VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL

(NOT TO SCALE)

NOTES FOR SINGLE, DUAL AND MULTIPLE MVP MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
- AIM BRACKET TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
- MOUNT MACHINE VISION PROCESSOR AIMING DOWN AT 30 DEGREE ANGLE.

REVISIONS	DATE
Mounting Details Revised	5/08
2nd Camera Locat. added	1/1409

LakeCounty Division of Transportation

APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

VIDEO DETECTION DETAILS

LC8900

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
		/ /		DSGNR/LIAISON:	
		/ /		PLOTTED BY:	$USRN$ $$DAT$$$$

FILE NAME: $FILE$

LakeCounty Division of Transportation

VIDEO DETECTION DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
CH		56N-4	50	31

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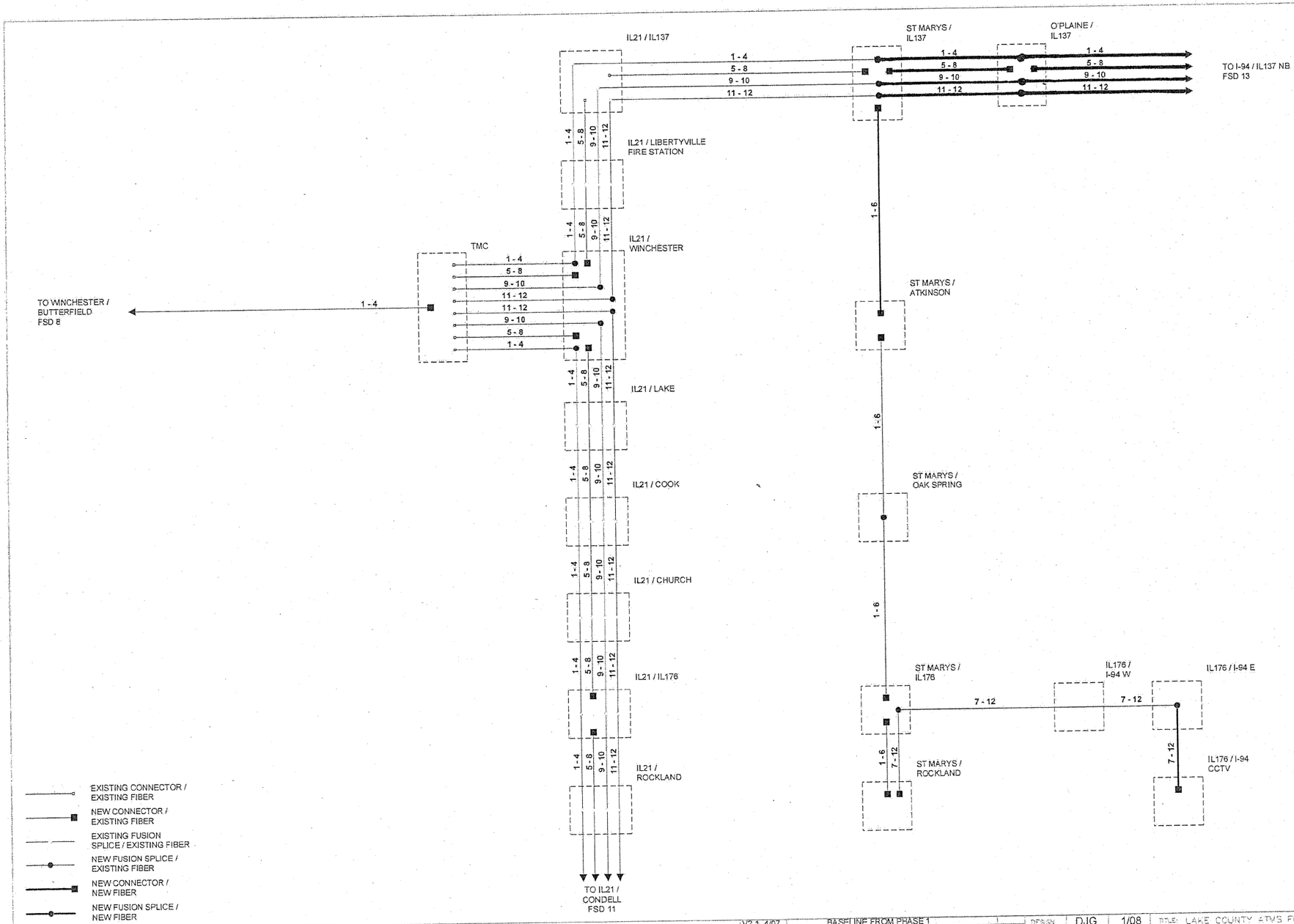


Delcan
TRANSPORTATION + INFORMATION TECHNOLOGY + WATER

CLIENT: LakeCounty Division of Transportation

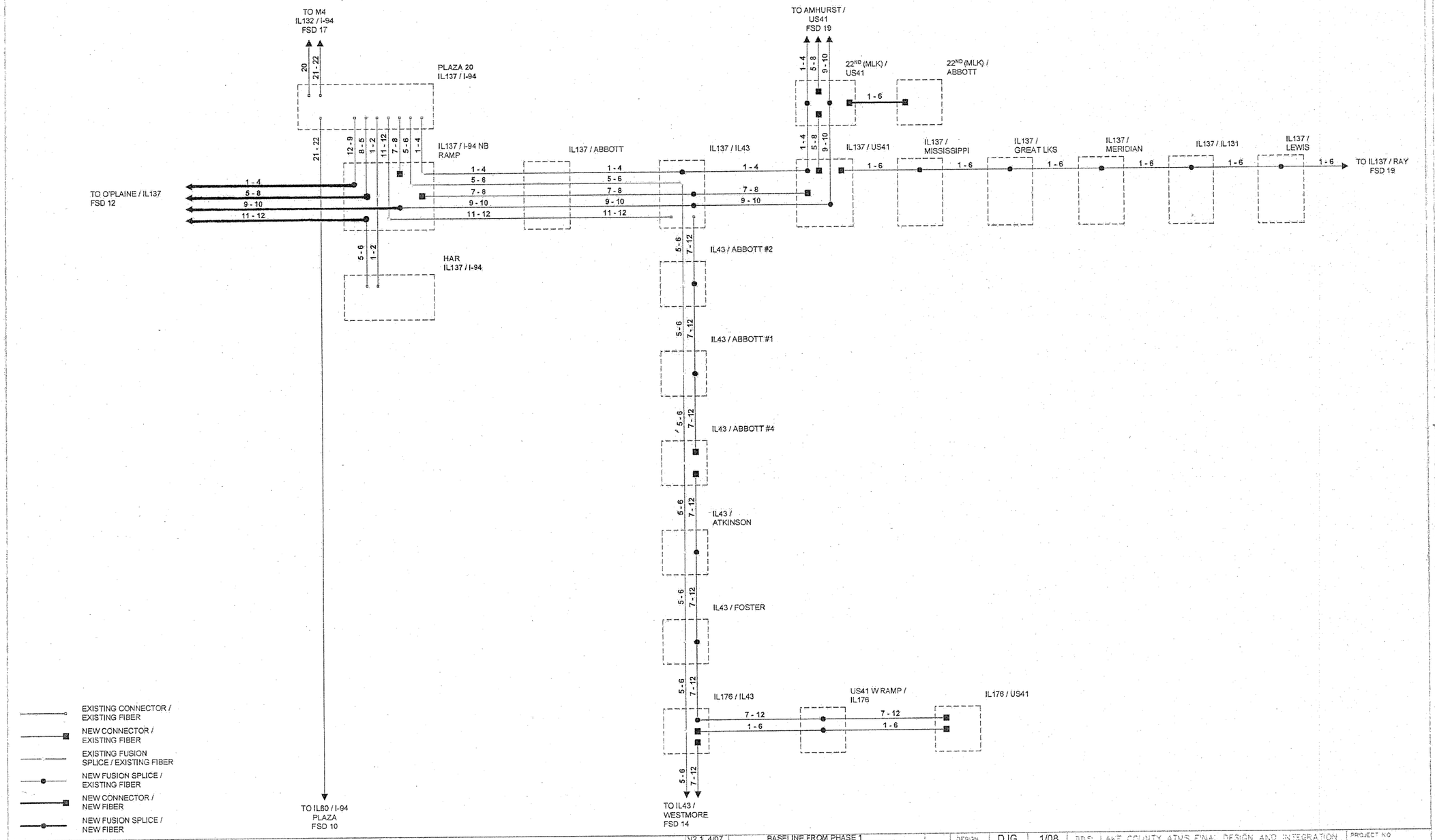
NO.	DATE	FILE NAME: SFILES
V2.1	4/07	BASELINE FROM PHASE 1
V4.0	1/08	PHASE II ADDITIONS

DESIGN	DJG	1/08
DRAWN	DJG	1/08
CHECKED	DJG	1/08
SCALE	NOT TO SCALE	
DATE	1/25/08	

TITLE: LAKE COUNTY ATMS FINAL DESIGN AND INTEGRATION

FIBER SPLICING DIAGRAM - 12
IL21 / IL137

PROJECT NO. 07-00268-07-TL
SHEET 32 OF 50
DRAWING NO



Delcan
TRANSPORTATION - INFORMATION TECHNOLOGY - WATER

CLIENT:
LakeCounty
Division of Transportation

V2.1 4/07	BASELINE FROM PHASE 1	
V4.0 1/08	PHASE II ADDITIONS	
NO.	DATE	
FILE NAME	SFILE5	

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DRAWN	DJG	1/08
CHECKED	DJG	1/08
SCALE	NOT TO SCALE	
DATE	1/25/08	

TITLE: LAKE COUNTY ATMS FINAL DESIGN AND INTEGRATION

FIBER SPLICING DIAGRAM - 13
IL137 / IL43

PROJECT NO
07-00268-07-TL
SHEET 33 OF 50
DRAWING NO

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

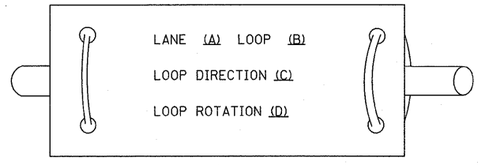
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

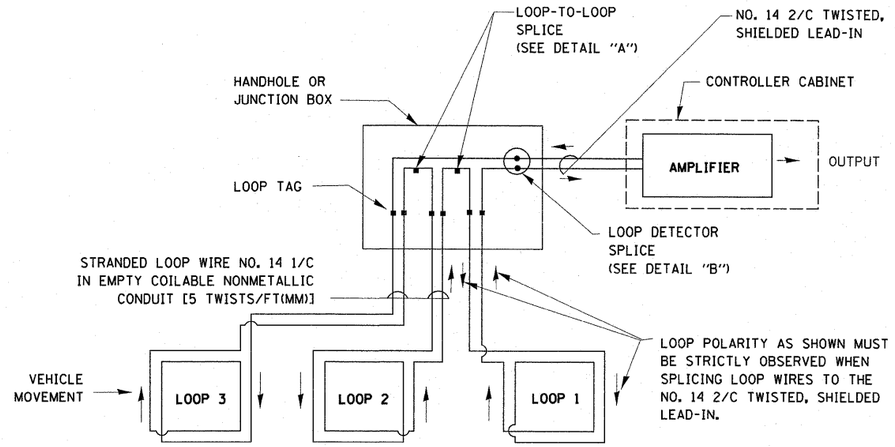


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

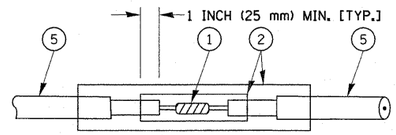
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

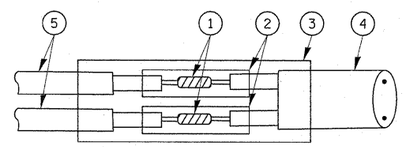


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

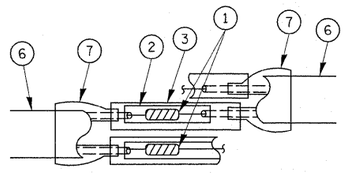


DETAIL "A"
LOOP-TO-LOOP SPLICE



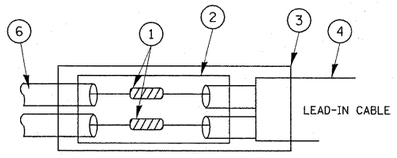
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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		DRAWN - BCK	REVISED -
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	PLOT DATE = 2/28/2011	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

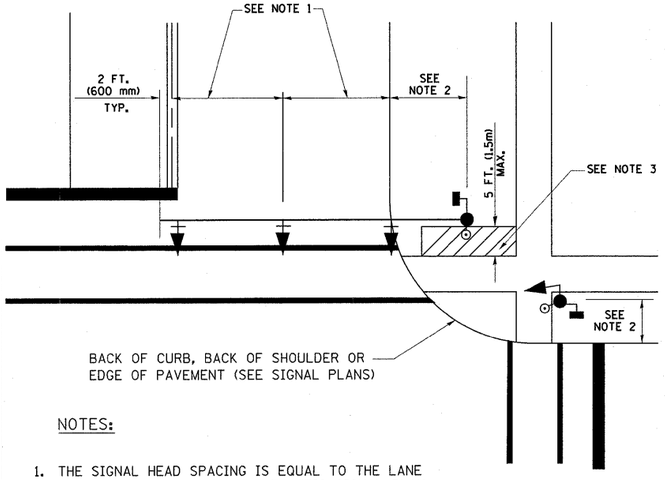
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	33A
	TS-05	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

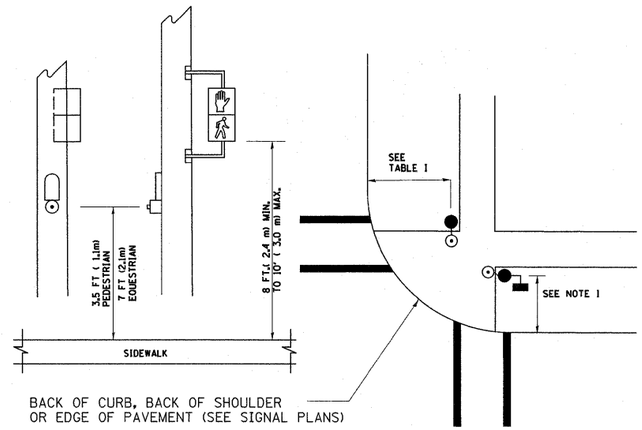
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

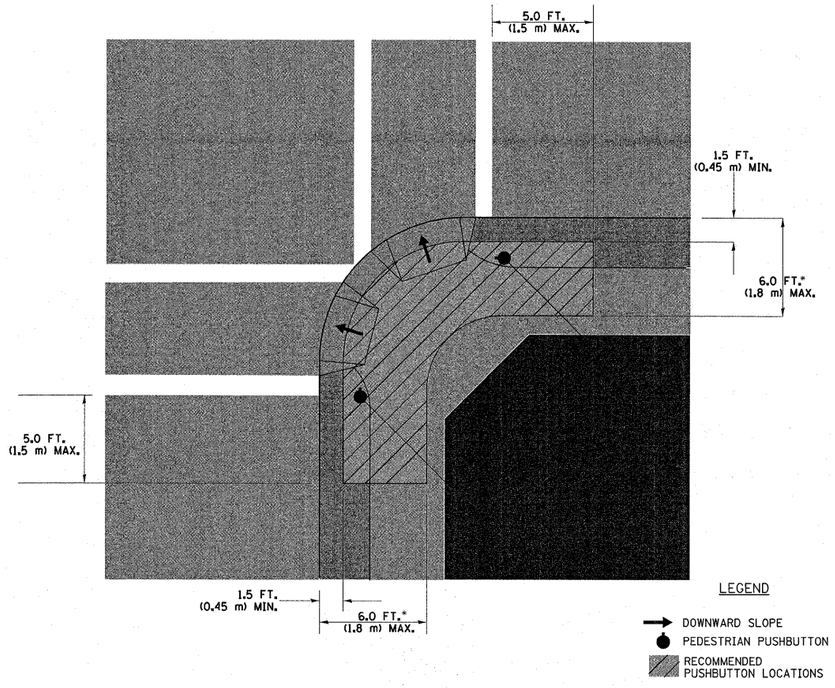
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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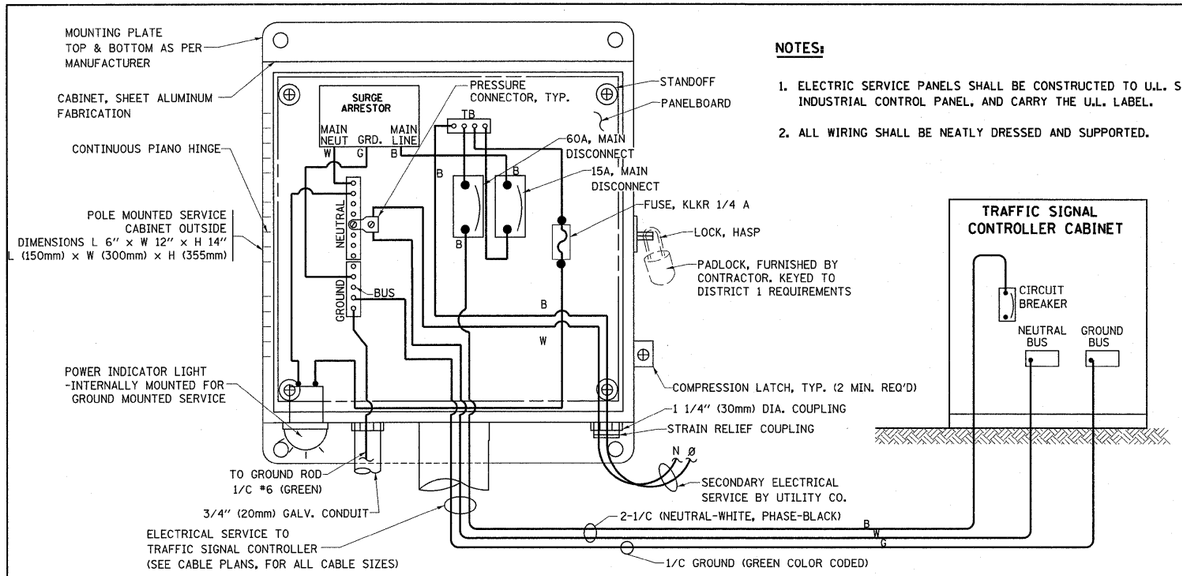
	PLOT DATE = 2/28/2011	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	33B
	TS-05	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



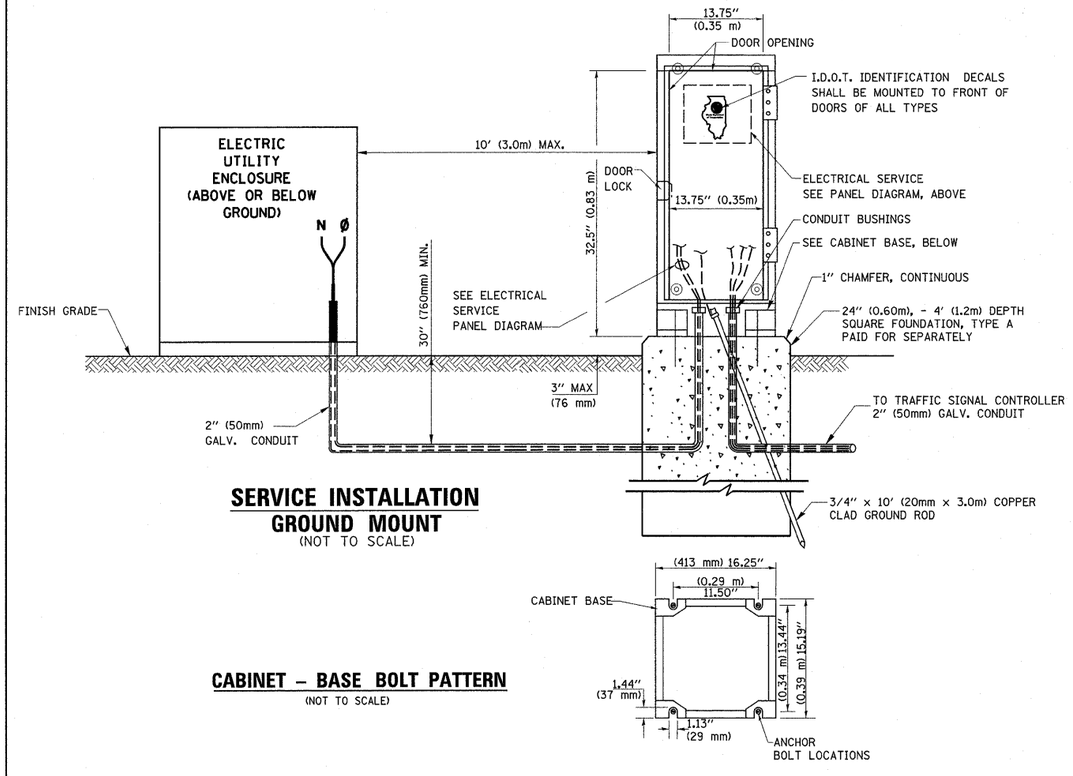
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

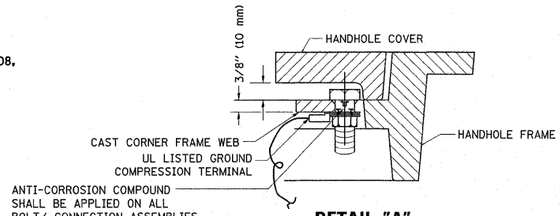


SERVICE INSTALLATION GROUND MOUNT

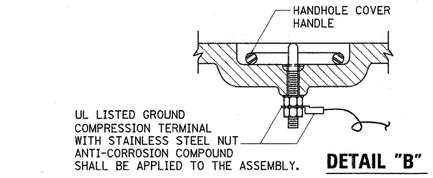
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

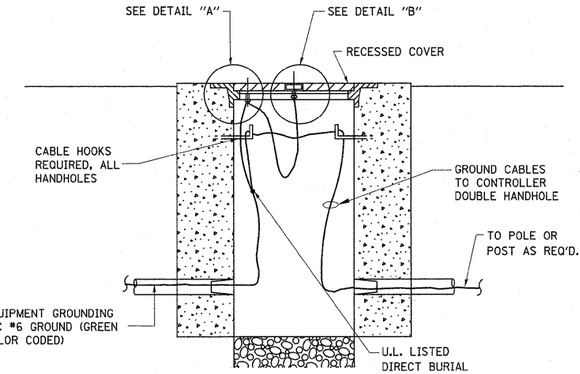
(NOT TO SCALE)



DETAIL "A"

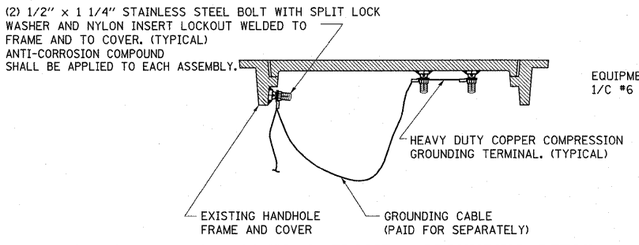


DETAIL "B"



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



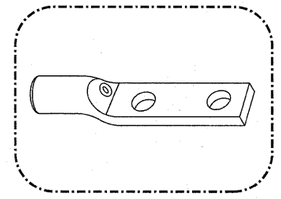
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

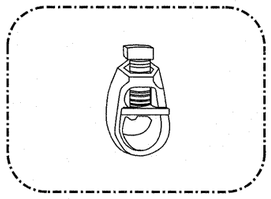
NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



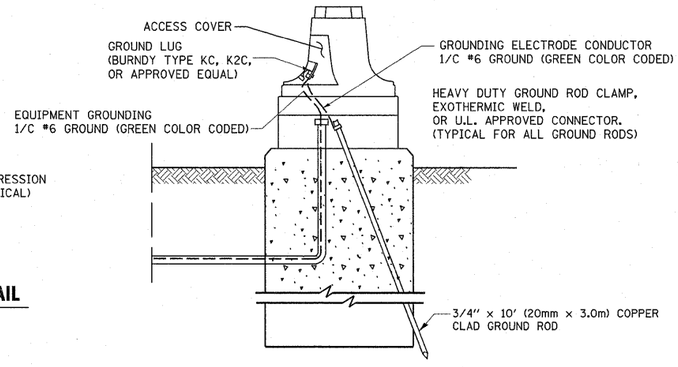
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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	PLOT DATE = 2/28/2011	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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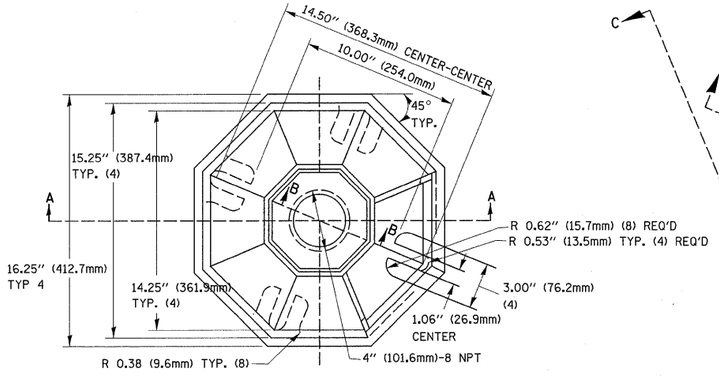
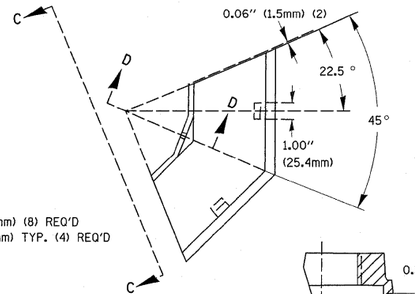
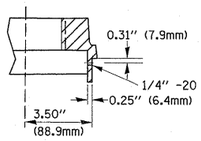
	TS-05	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

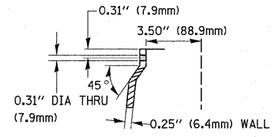


TOP VIEW

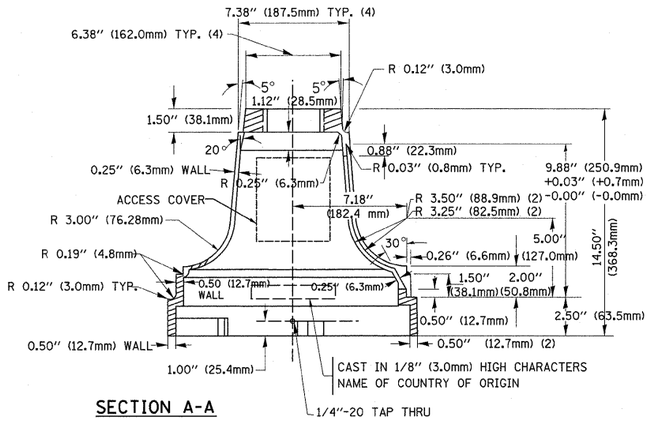




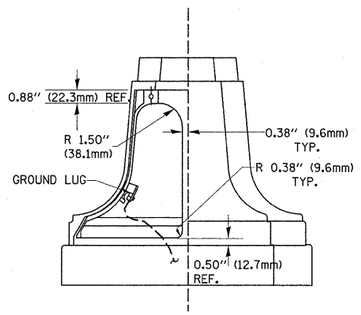
SECTION B-B



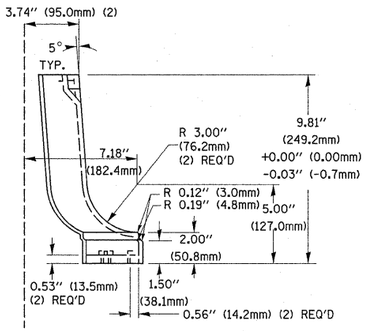
SECTION D-D



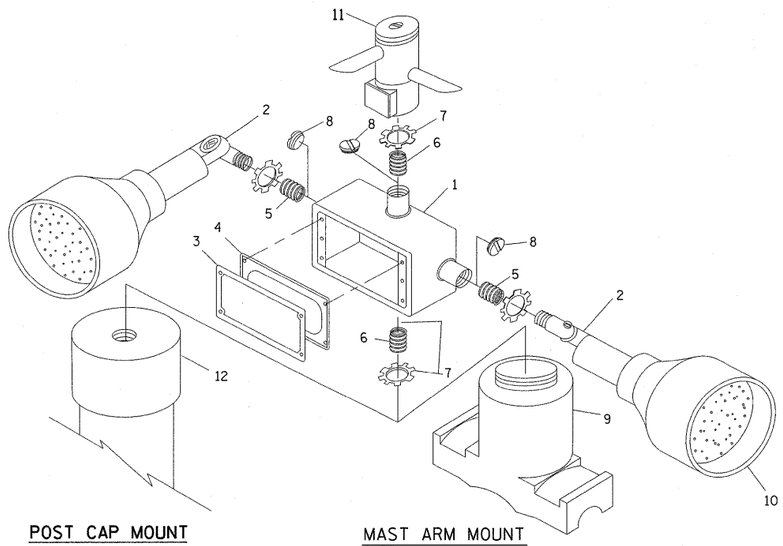
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



POST CAP MOUNT

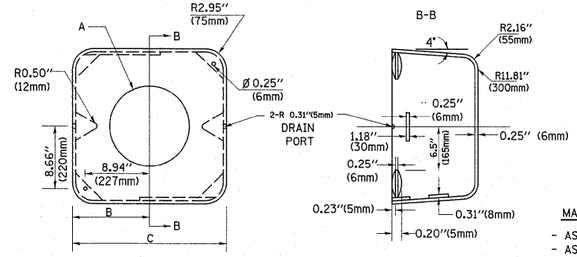
MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ¾"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

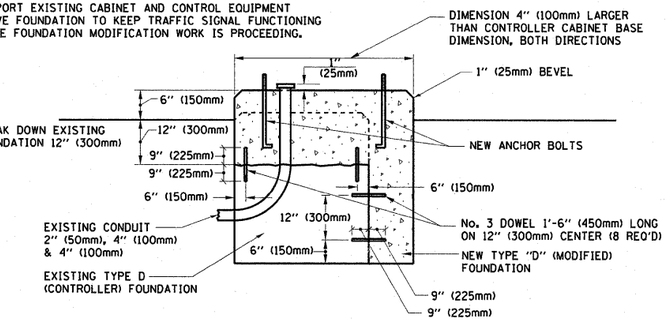
A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

SHROUD

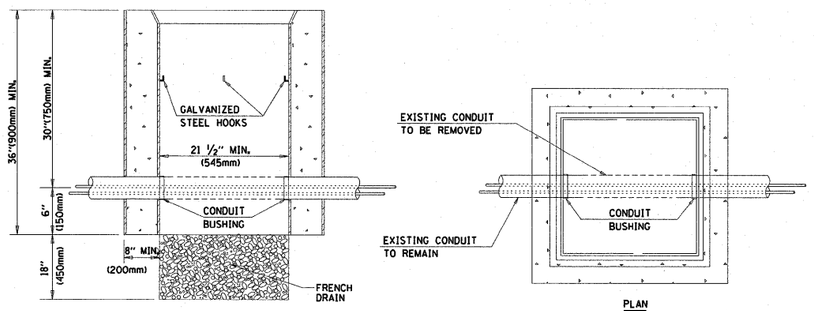
NOTES:

1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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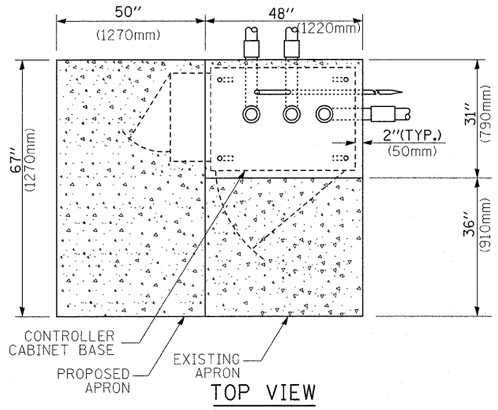
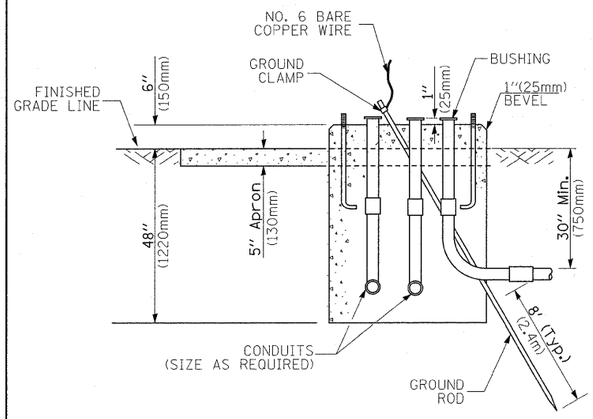
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

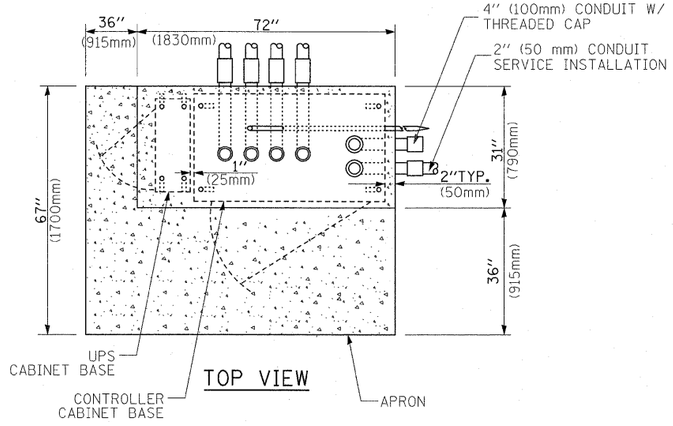
SCALE: NONE | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

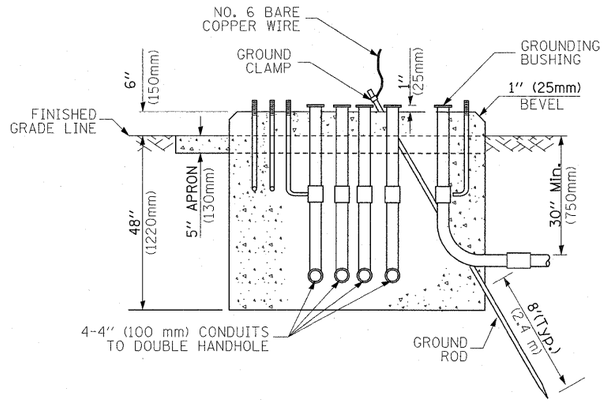
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	33D
	TS-05	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



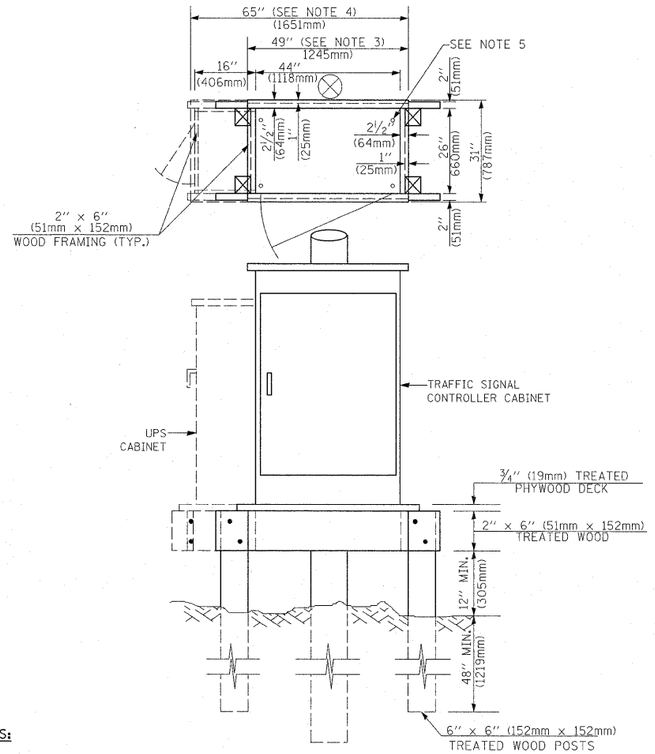


TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET





TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	33E
	TS-05	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET			
COMMUNICATIONS CABINET	R CC	E C C	CC
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTIBLE POWER SUPPLY	R UPS	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G ◄Y ◄G	R Y G ◄Y ◄G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD		R Y G ◄Y ◄G "P"	R Y G ◄Y ◄G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		1	1

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		1	1
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RMF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		P	
EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PP	
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

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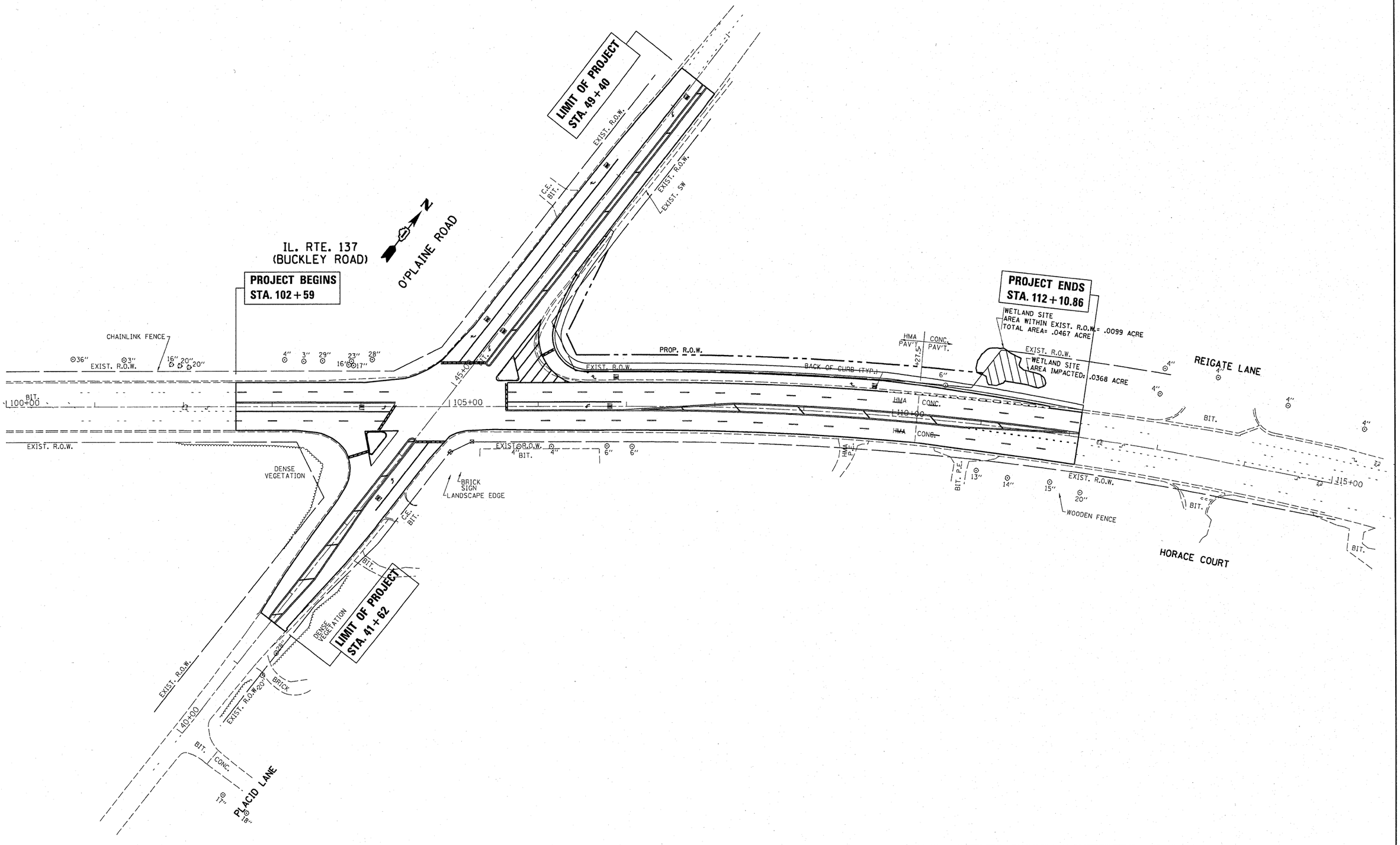
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	33F
	TS-05	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 137 & O'PLAINE ROAD
WETLAND LOCATIONS

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. 100+00.00 TO STA. 115+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	34
		CONTRACT NO. 60K19		
	ILLINOIS	FED. AID PROJECT		

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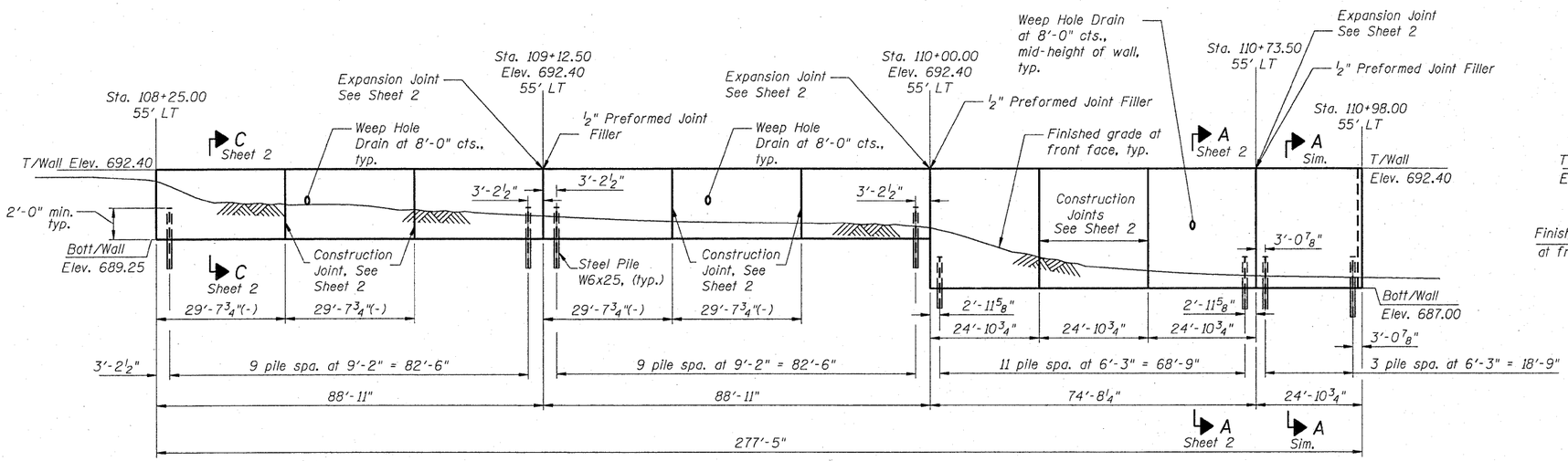
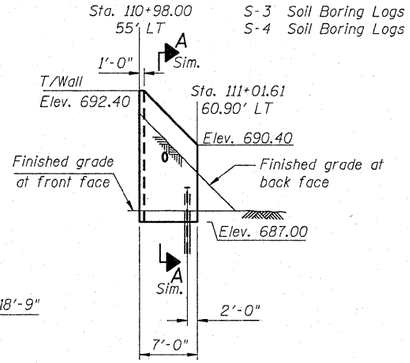


ELEVATION

(Looking North)

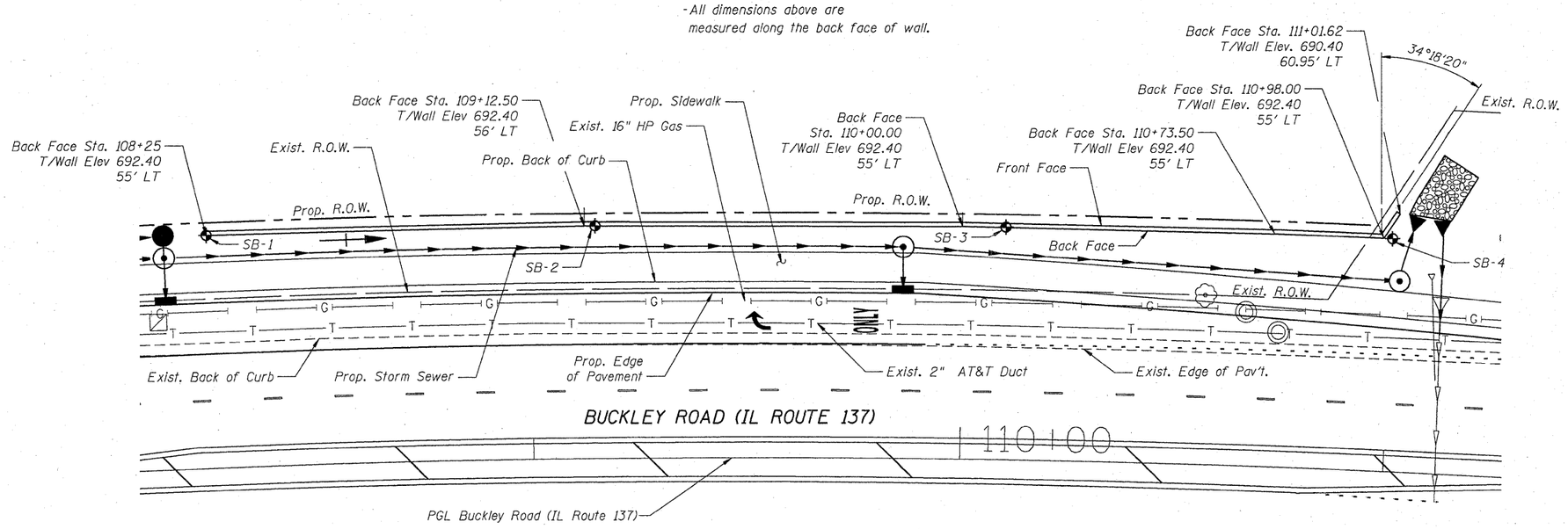
-All dimensions above are measured along the back face of wall.



ELEVATION

(See Detail D on Sheet 2)

INDEX OF SHEETS



PLAN

◆ = Soil Boring Location

Sim. = Similar

EXIST. CURVE E_137-1
PI STA. = 110+48.77
Δ = 11° 03' 49(RT)
D = 1° 41' 33"
R = 3,385.00'
T = 327.84'
L = 653.63'
E = 15.84'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 107+20.93
P.T. STA. = 113+74.56

CURVE DATA

STATE OF ILLINOIS
ROBERT G. DAVIES
081-004666
McHENRY, IL
LICENSED STRUCTURAL ENGINEER
EXPIRES: 11/30/2012
Applies To SHEET 1&2
2/3/2011

DESIGN SPECIFICATIONS

AASHTO LRFD 5th Edition
Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

GENERAL PLAN AND ELEVATION RETAINING WALL BUCKLEY ROAD (IL Route 137) (FAP Route 352) SECTION NO. 56N-4 LAKE COUNTY STA. 108+25.00 TO STA. 111+01.61

COMPANY NAME: #COMPANY_NAME#
PROJECT CONTACT: Robert G. Davies
CLIENT: City of Aurora
DATE PLOTTED: 2/3/2011 9:54:11 AM
FILE NAME: 8610056.04-sht-GPE
PLOT DRAWN: patiah
PEN TABLE: Street 22x34.tbl

Illinois Professional Design Firm # 184-000106
SEC Group, Inc.
An HR Green Company
420 N. Front Street, McHenry, IL 60050-3138
t. 815.385.1776 f. 815.385.1781
www.secgroup.com
<Aid Henry, IL <Yorkville, IL <New Lenox, IL <Chicago, IL

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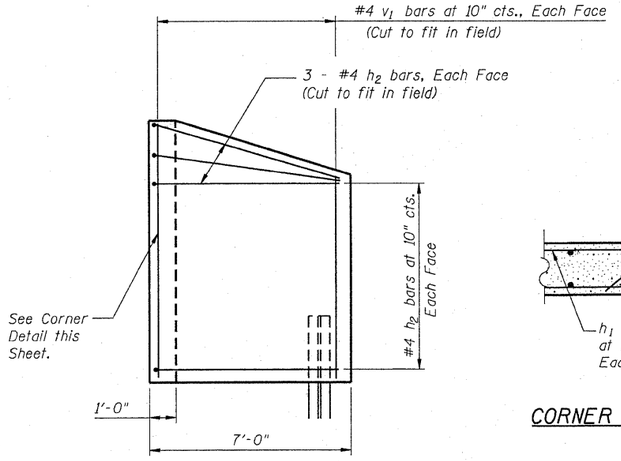
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN -	REVISED -	
PLOT DATE = 2/3/11	CHECKED - 2/3/11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

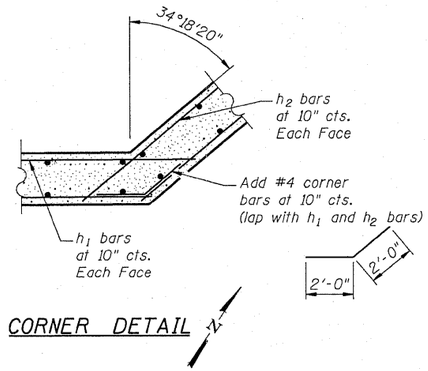
GENERAL PLAN AND ELEVATION RETAINING WALL

SHEET NO. 1 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	35
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		



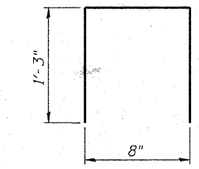
DETAIL D



CORNER DETAIL

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yds.	105
Concrete Structures	Cu. Yds.	41.6
Reinforcement Bars	Pounds	4,840
Geocomposite Wall Drain	Sq. Yds.	72
Porous Granular Embankment (Special)	Cu. Yds.	41.5
Furnishing Steel Piles W6x25 (Special)	Foot	370
Driving Piles (Special)	Foot	370



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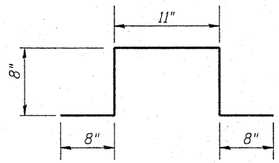
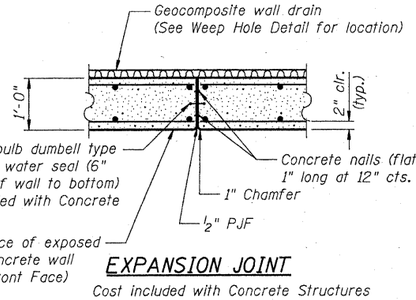
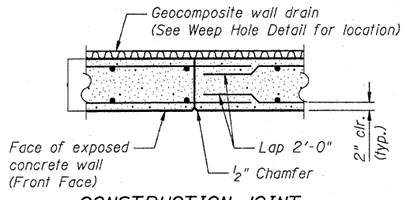


BAR s_1



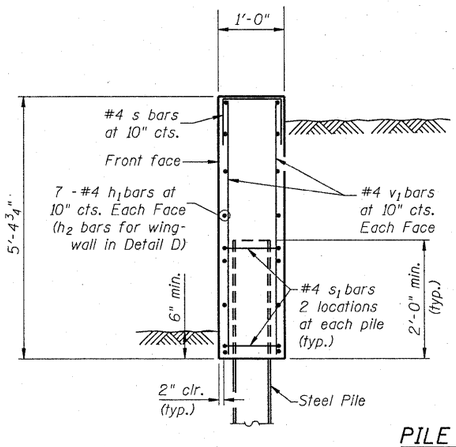
EXPANSION JOINT

Cost included with Concrete Structures

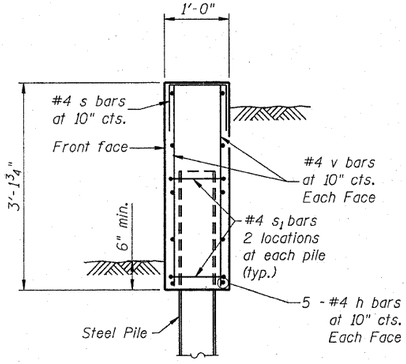


CONSTRUCTION JOINT

Cost included with Concrete Structures



SECTION A-A



SECTION C-C

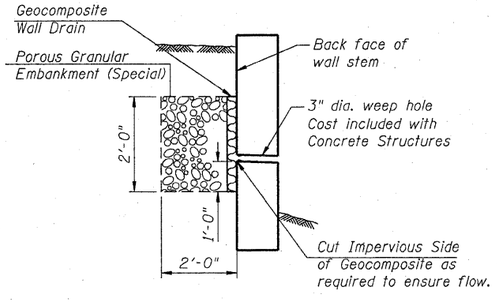
PILE DATA

Type: Steel W6x25
Est. Minimum Length: 10' *
No. Production Piles: 46
No. Test Piles: 0
* Minimum Embedment = 8'-0"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	60	#4	30'-11"	——
h_1	56	#4	26'-2"	——
h_2	14	#4	7'-8"	——
s	337	#4	3'-2"	⊓
s_1	74	#4	3'-7"	⊓
v	421	#4	2'-10"	——
v_1	254	#4	5'-1"	——

Structure Excavation	Cu. Yd.	105
Reinforcement Bars	Pound	4,840
Concrete Structures	Cu. Yd.	41.6
Furnishing Steel piles W6x25 (Special)	Foot	370
Driving Piles (Special)	Foot	370



WEEP HOLE DRAIN DETAIL

NOTES:

Cut h_1 and h_2 bars in field to maintain clear cover from edge of concrete.

Bend h_2 bars in the field to fit.

Steel Piling shall be driven to not less than a minimum embedment length of 8'-0".

Stations and offsets based on proposed PGL for Buckley Road.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Supplemental Specifications and Recurring Special Provisions.

COMPANY NAME: $COMPANY_NAME$
PROJECT CONTACT: Robert G. Davies
CLIENT: City of Aurora
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PEN TABLE: Struct 22x34.tbl

Illinois Professional Design Firm # 184.001108
SEC Group, Inc.
An HR Green Company
420 N. Front Street,
McHenry, IL 60050-2138
t. 815.385.1778 f. 815.385.1781
www.secgroup.com
McHenry, IL • Rockford, IL • New Lenox, IL • Chicago, IL

USER NAME = whood	DESIGNED -	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN -	REVISED -	
PLOT DATE = 2/3/2011	CHECKED - 2/3/11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL, AND DETAILS

SHEET NO. 2 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	35A
		CONTRACT NO. 60K19		
		ILLINOIS FED. AID PROJECT		

PROJECT Retaining Wall, IL Route 137, Green Oaks, Illinois
CLIENT SEC Group, Inc., McHenry, Illinois
BORING 1 DATE STARTED 12-17-10 DATE COMPLETED 12-17-10 JOB L-76,219

ELEVATIONS
GROUND SURFACE 691.4
END OF BORING 671.4

WATER LEVEL OBSERVATIONS
▽ WHILE DRILLING Dry
▽ AT END OF BORING Dry
▼ 24 HOURS

Sta. 108+25; 55' Lt.

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							1.1	690.3	FILL - Black clayey TOPSOIL (OL) A-7-6 Silty Clay
	1	SS	12	19.5	4.5+*	110	3.0	688.4	FILL - Black and brown silty CLAY, little sand, trace gravel, moist (CL) A-6 Clay
	2	SS	10	13.4	2.25*	124	5.5	685.9	FILL - Brown silty CLAY, little to some sand, trace gravel, moist (CL) A-6 Clay Loam
	3	SS	19	16.8	6.57 4.5+*				
	4	SS	24	18.4	4.5+*				Hard brown silty CLAY, little sand and gravel, moist (CL) A-6 Clay Loam
	5	SS	22	18.4	4.5+*		13.0	678.4	
	6	SS	14	21.9	2.05 3.0*				Very tough brown and gray silty CLAY, little sand, trace gravel, moist (CL) A-7-6 Clay
	7	SS	14	21.9	2.5*		18.0	673.4	
	8	SS	12	21.8	2.15 2.0*				Very tough gray silty CLAY, little sand, trace gravel, moist (CL) A-7-6 Clay
									End of Boring at 20.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

DRILL RIG NO. 256

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 76219.GPJ TSC_ALL.GDT 1/25/11

PROJECT Retaining Wall, IL Route 137, Green Oaks, Illinois
CLIENT SEC Group, Inc., McHenry, Illinois
BORING 2 DATE STARTED 12-17-10 DATE COMPLETED 12-17-10 JOB L-76,219

ELEVATIONS
GROUND SURFACE 691.5
END OF BORING 671.5

WATER LEVEL OBSERVATIONS
▽ WHILE DRILLING Dry
▽ AT END OF BORING Dry
▼ 24 HOURS

Sta. 109+15; 55' Lt.

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							1.0	690.5	FILL - Black clayey TOPSOIL (OL) A-7-6 Silty Clay
	1	SS	15	17.0	4.5+*	114	3.0	688.5	FILL - Brown and black silty CLAY, little sand and gravel, moist (CL) A-6 Clay Loam
	2	SS	12	17.7	4.5+*				
	3	SS	19	17.4	4.5+*				Hard brown and gray silty CLAY, little sand and gravel, moist (CL) A-6 Clay Loam
	4	SS	24	18.8	5.32 4.5+*				
	5	SS	22	18.6	4.5+*		13.0	678.5	
	6	SS	13	20.0	2.08 2.25*				Very tough to tough gray silty CLAY, little sand, trace gravel, moist (CL) A-7-6 Clay
	7	SS	11	20.5	2.75*				
	8	SS	14	20.3	1.89 1.75*				
									End of Boring at 20.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

DRILL RIG NO. 256

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 76219.GPJ TSC_ALL.GDT 1/25/11

COMPANY NAME: #COMPANY_NAME#
PROJECT CONTACT: Robert G. Davies
CREATED: City of Aurora
DATE PLOTTED: 2/3/2011 8:30:23 AM
FILE NAME: B610196.04-sht-sbor-01.dgn
PLOT DRIVER: pdf.pltPEN TABLES: STY.ctb 22x34.tbl

SEC Group, Inc.
An HR Green Company
420 N. Front Street, McHenry, IL 60050-3136
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<McHenry, IL <Yorkville, IL <New Lenox, IL <Chicago, IL
Illinois Professional Design Firm # 184-000106

USER NAME = whood | DESIGNED - | REVISED -
CHECKED - | REVISED -
PLOT SCALE = | DRAWN - | REVISED -
PLOT DATE = 2/3/2011 | CHECKED - 2/3/11 | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS
SHEET NO. 3 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	39B
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

PROJECT Retaining Wall, IL Route 137, Green Oaks, Illinois

CLIENT SEC Group, Inc., McHenry, Illinois

BORING 3 DATE STARTED 12-17-10 DATE COMPLETED 12-17-10 JOB L-76,219

ELEVATIONS

GROUND SURFACE 689.4

END OF BORING 669.4

Sta. 110+10; 55' Lt.

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING Dry

▽ AT END OF BORING Dry

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0										
								1.2	688.2	FILL - Black clayey TOPSOIL (OL) A-7-6 Silty Clay
		1	SS	12	14.2	4.5+*				Hard brown and gray very silty CLAY, little sand, trace gravel, moist (CL-ML) A-4 Clay Loam
								3.0	686.4	
5		2	SS	20	15.5					Firm brown and gray clayey SILT, little sand, trace gravel, moist (CL-ML) A-4 Silty Loam
								5.5	683.9	
		3	SS	21	18.1	3.5*				Very tough brown very silty CLAY, little sand, trace gravel, moist (CL-ML) A-6 Clay Loam
								8.0	681.4	
		4	SS	27	15.5					Firm brown and gray clayey SILT, little sand, trace gravel, moist (CL-ML) A-4 Silty Loam
10								10.5	678.9	
		5	SS	15	20.1	2.25*				Very tough brown and gray silty CLAY, little sand, trace gravel, moist (CL) A-7-6 Clay
15		6	SS	14	21.4	2.15 2.0*				
								15.5	673.9	
		7	SS	11	21.0	1.75*				Tough to very tough gray silty CLAY, little sand, trace gravel, moist (CL) A-7-6 Clay
20		8	SS	12	21.1	2.55 2.25*				
										End of Boring at 20.0'
25										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DRILL RIG NO. 256

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 76219.GPJ TSC_ALLCOT 1.25.11

PROJECT Retaining Wall, IL Route 137, Green Oaks, Illinois

CLIENT SEC Group, Inc., McHenry, Illinois

BORING 4 DATE STARTED 12-17-10 DATE COMPLETED 12-17-10 JOB L-76,219

ELEVATIONS

GROUND SURFACE 688.0

END OF BORING 668.0

Sta. 111+00; 55' Lt.

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING Dry

▽ AT END OF BORING Dry

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0										
								1.2	686.8	FILL - Black clayey TOPSOIL (OL) A-7-6 Silty Clay
		1	SS	6	27.8	1.25*				Tough to very tough brown and gray silty CLAY, little sand, very moist to moist (CL/CH) A-7-6 Clay
5		2	SS	8	27.3	2.15 2.5*				
								5.5	682.5	
		3	SS	13	20.3	4.5+*				Hard brown and gray silty CLAY, little sand, trace gravel, moist (CL) A-7-6 Clay
		4	SS	16	17.2	7.69 4.5+*				
10		5	SS	22	20.7	4.5+*				
								13.0	675.0	
15		6	SS	19	19.7	2.81 2.0*				Very tough gray silty CLAY, little sand and gravel, moist (CL) A-6 Clay Loam
		7	SS	18	19.3	2.5*				
20		8	SS	19	19.6	2.75*				End of Boring at 20.0'
25										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DRILL RIG NO. 256

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 76219.GPJ TSC_ALLCOT 1.25.11

COMPANY NAME: $COMPANY_NAME$
PROJECT CONTACT: Robert G. Davies
CLIENT: City of Aurora
DATE PLOTTED: 2/3/2011 9:39:16 AM
FILE NAME: B610196.04-sht-abor02.dgn
PLOT DRIVER: pdfcal4
PEN TABLE: Struct 22x34.tbl

SEC Group, Inc.
An HR Green Company
420 N. Front Street,
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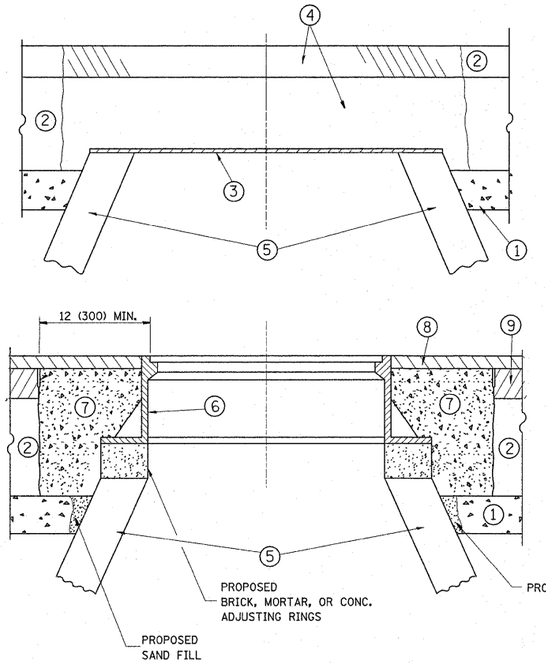
USER NAME = whood | DESIGNED - | REVISED -
CHECKED - | REVISED -
PLOT SCALE = | DRAWN - | REVISED -
PLOT DATE = 2/3/2011 | CHECKED - 2/3/11 | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS

SHEET NO. 4 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	35
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.

B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.

C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.

D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.

B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.

C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

(1) SUB-BASE GRANULAR MATERIAL

(2) EXISTING PAVEMENT

(3) 36 (900) DIAMETER METAL PLATE

(4) PROPOSED CRUSHED STONE AND HMA SURFACE MIX

(5) EXISTING STRUCTURE

(6) FRAME AND LID (SEE NOTES)

(7) CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE

(8) PROPOSED HMA SURFACE COURSE

(9) PROPOSED HMA BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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		DRAWN -	REVISED - A. ABBAS 03-21-97
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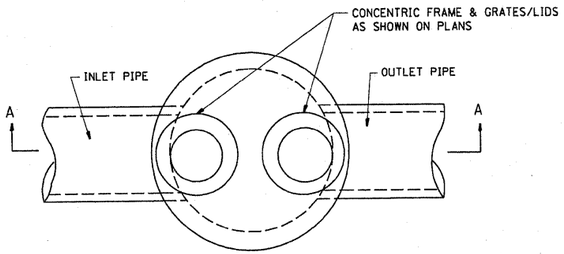
	PLOT DATE = 2/8/2011	DATE - 10-25-94	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

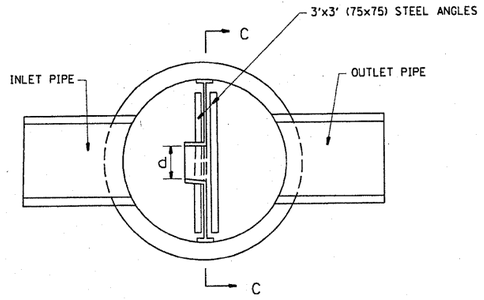
DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

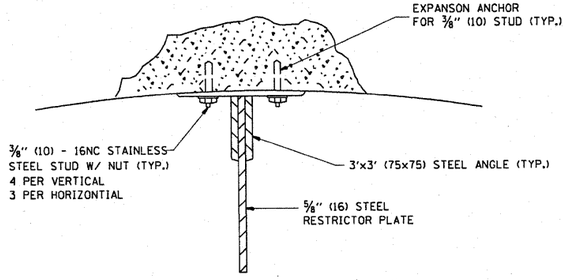
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	36
	BD600-03 (BD-8)	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



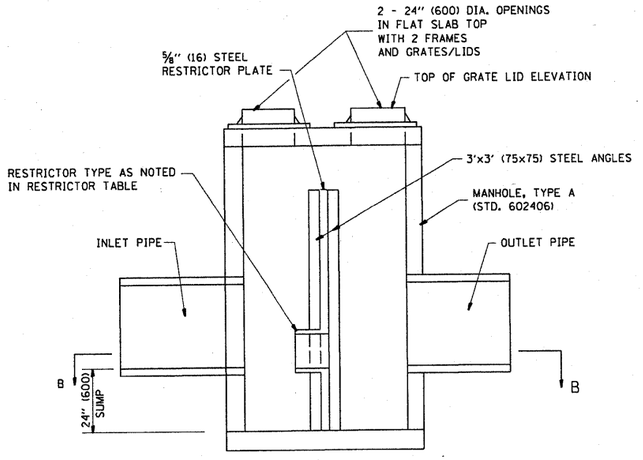
PLAN



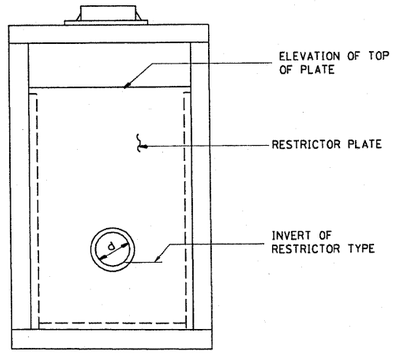
SECTION B-B



ANGLE FASTENER DETAIL



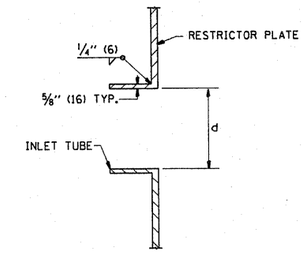
SECTION A-A



SECTION C-C

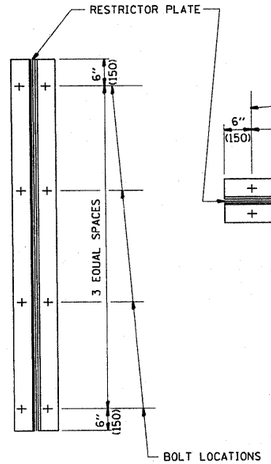
NOTES:

1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
3. BASIS OF PAYMENT: "MANHOLES ,TYPE A, 6 FT. (1.8 m)-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE" EACH

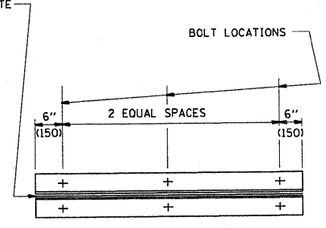


INLET TUBE DETAIL

STATION	MANHOLE DIAMETER	FRAME AND GRATE	RESTRICTOR TYPE	INSIDE RESTRICTOR TYPE DIAMETER in. (mm) (d)	INVERT OF RESTRICTOR TYPE	ELEVATION OF TOP OF PLATE OVERFLOW
STA. 111+02	6' DIA.	TYPE A, CL	2	8.2"	687.92	688.60



TYPICAL VERTICAL ANGLES
LOOKING TOWARD MANHOLE WALL



TYPICAL HORIZONTIAL
ANGLES LOOKING TOWARD
BOTTOM OF MANHOLE

TOTAL BOLTS REQUIRED: 22

NOTE:

1. ANGLES SHOULD BE 3x3x⅜ (75x75x75)
2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
3. HORIZONTIAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

STEEL ANGLE BOLTING DETAILS

RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENTRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: ½ TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-½ DIA.	LENGTH: 2-½ DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

VALUES OF "C" FOR CIRCULAR
AND SQUARE ORIFICES

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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		DRAWN -	REVISED - E. GOMEZ 08-28-00
	PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 01-08-01
	PLOT DATE = 2/23/2011	DATE - 09-09-94	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MANHOLE WITH RESTRICTOR PLATE

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	37
	BD600-04 (BD-12)	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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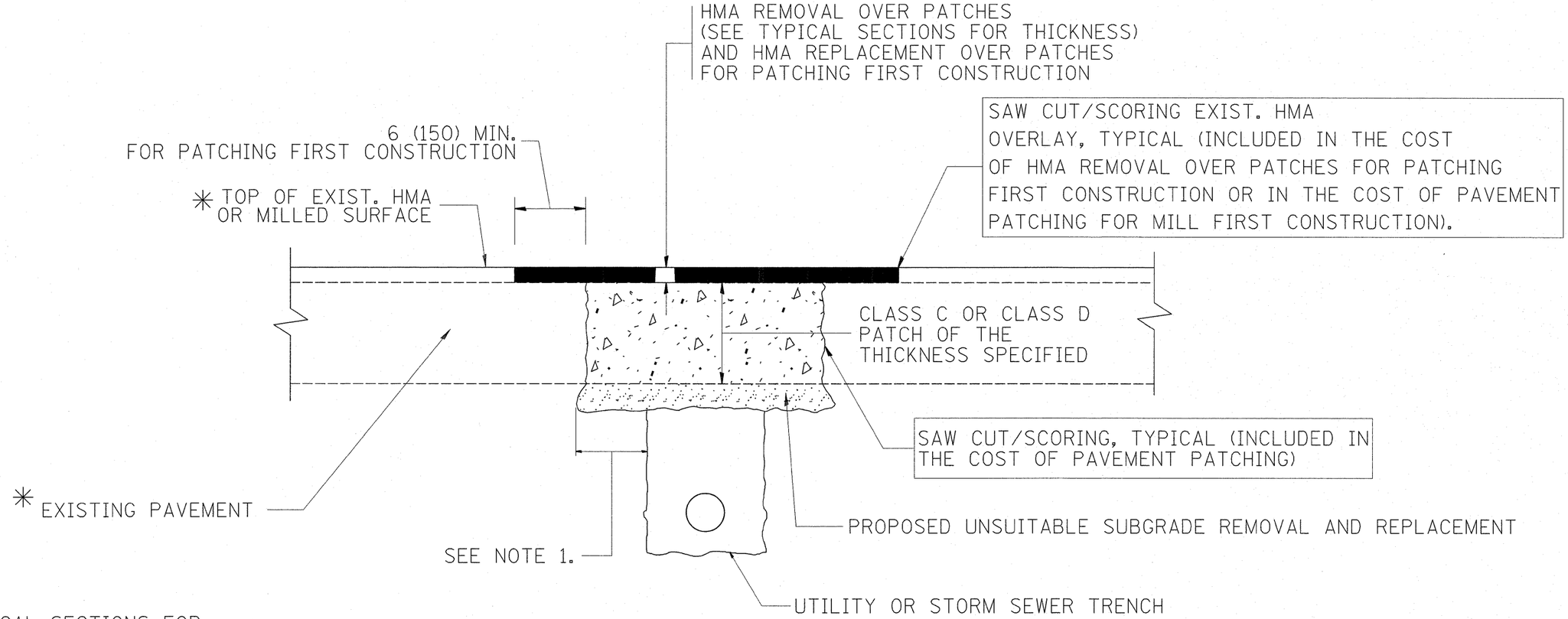

✳ SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4½ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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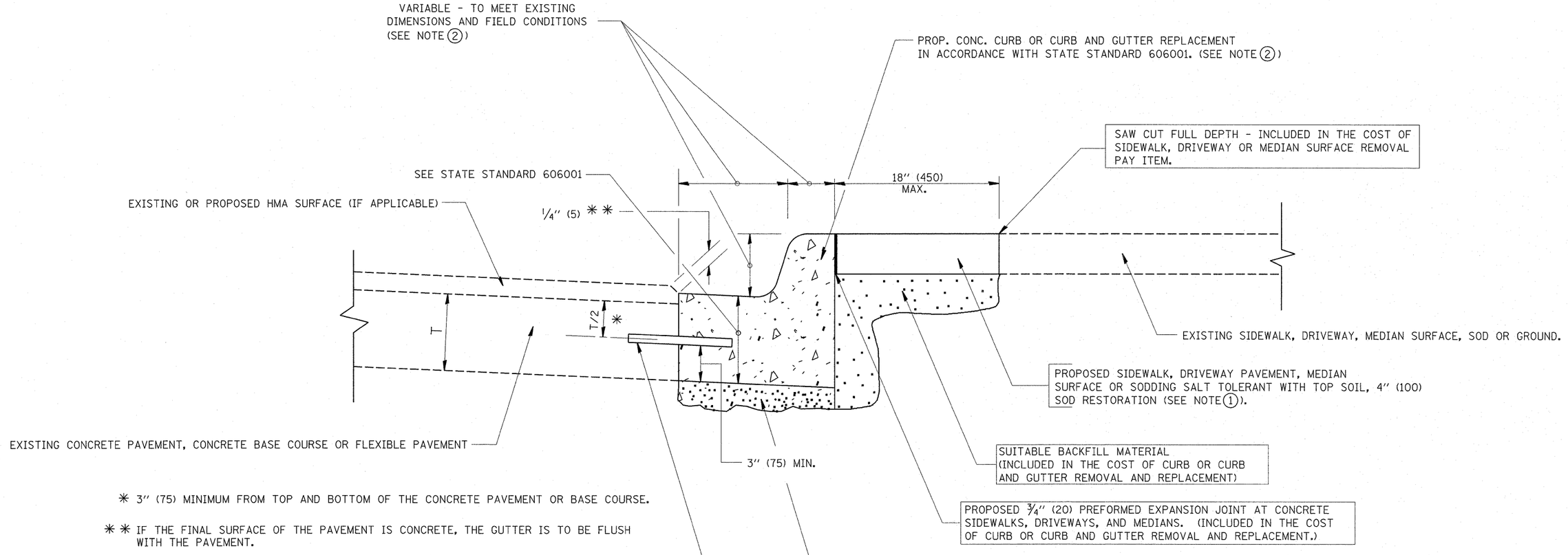
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - R. BORO 09-04-07
	PLOT DATE = 2/8/2011	DATE - 10-25-94	REVISED - K. ENG 10-27-08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	38
	BD400-04 (BD-22)	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

* * IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: (1) SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY,

(2) FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

(3) CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

(4) FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

(5) LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

(6) THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

(7) THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

(8) THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

BASIS OF PAYMENT:

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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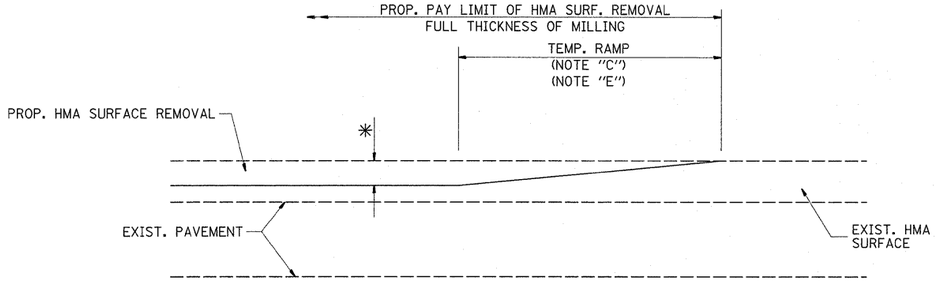
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 01-22-01
	PLOT DATE = 2/8/2011	DATE - 03-11-94	REVISED - R. BORO 12-15-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

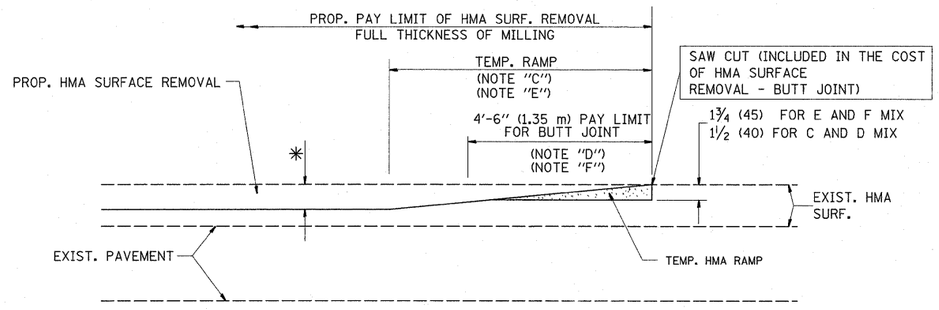
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	39
	BD600-06 (BD-24)	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

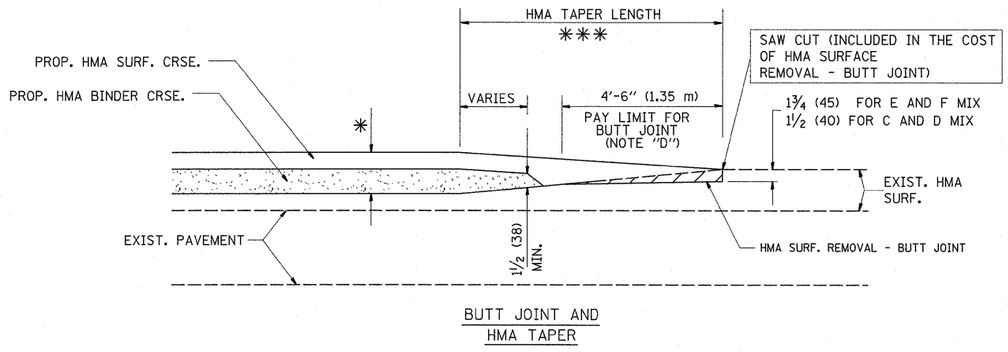


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

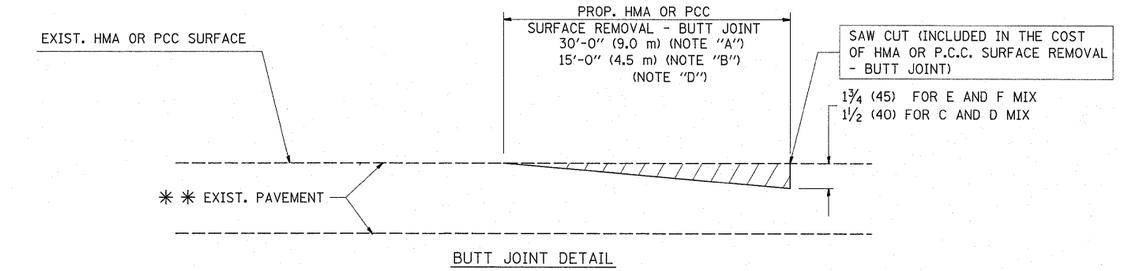
OPTION 2

TYPICAL TEMPORARY RAMP

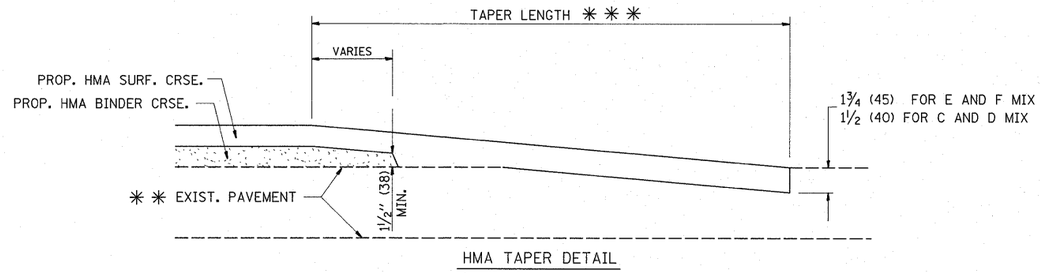


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

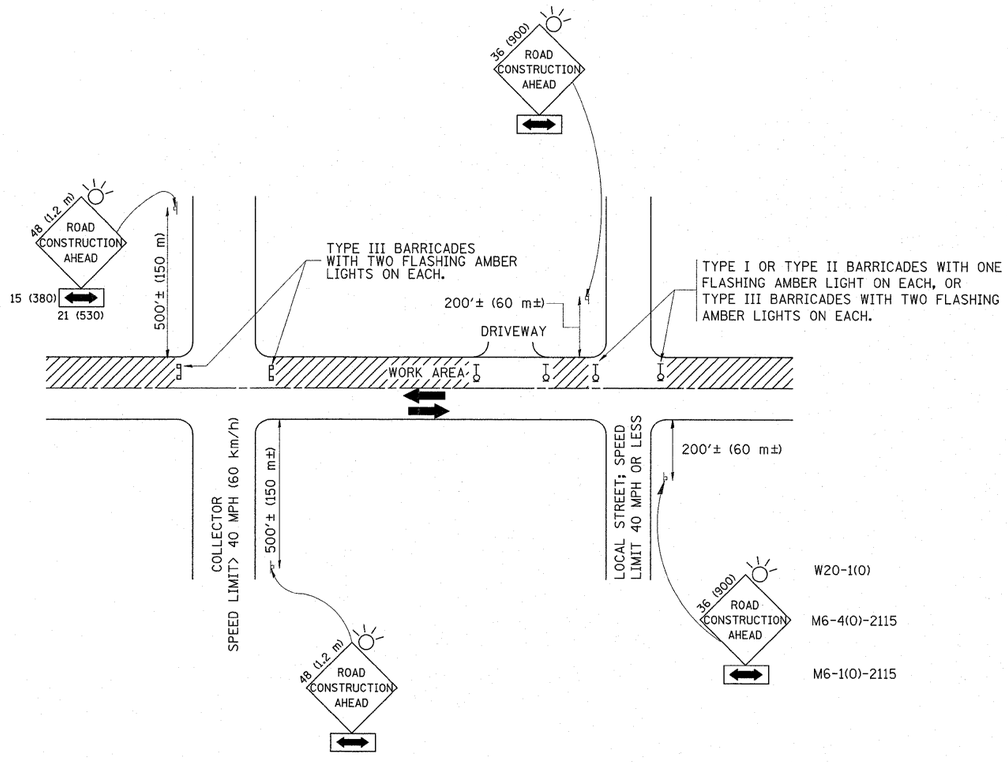
FILE NAME = c:\pw_work\pwidot\abebawa\d0188337\P142609-Design.dgn	USER NAME = abebawa	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 2/8/2011	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	40
	BD400-05 BD32	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

FILE NAME = c:\pw_work\pwidot\abebawa\d0188337\P142609-Design.dgn	USER NAME = abebawa	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 2/8/2011	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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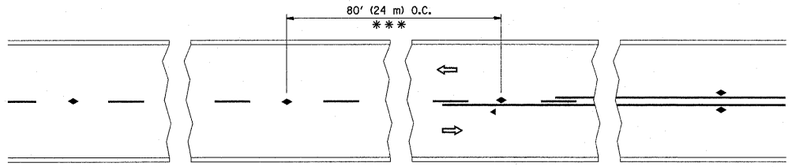
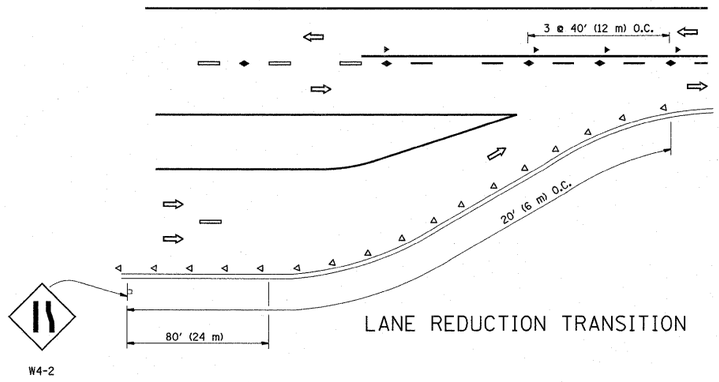
	TC-10	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

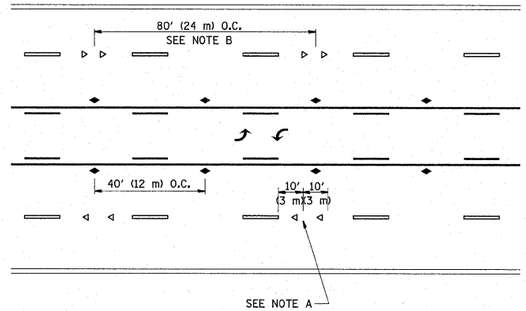


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

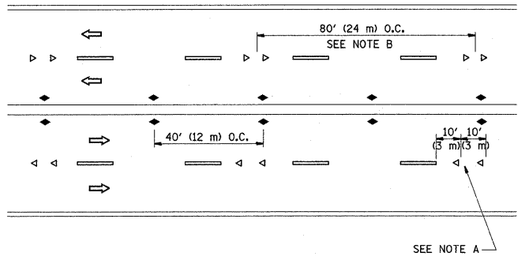
TWO-LANE/TWO-WAY



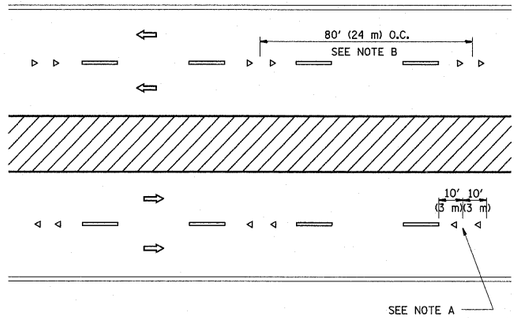
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

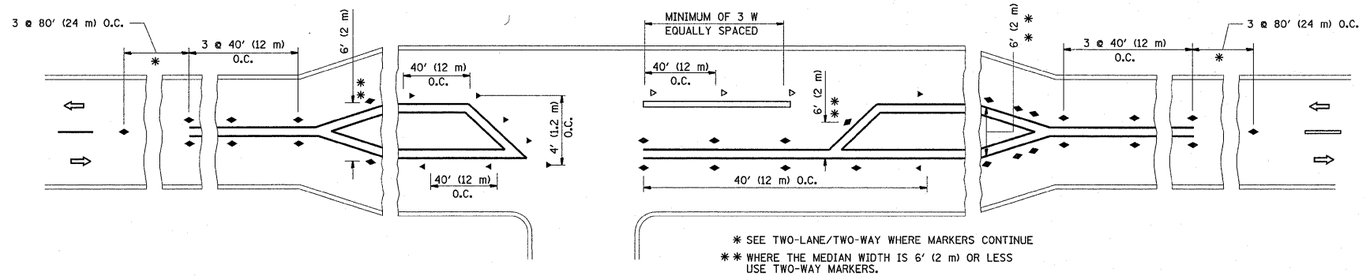
SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.



* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

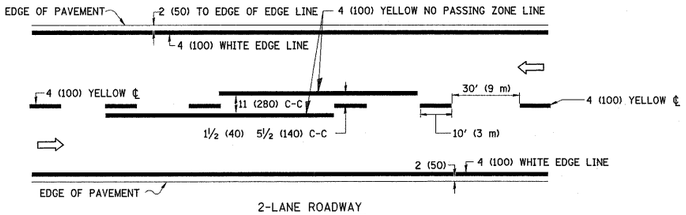
** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

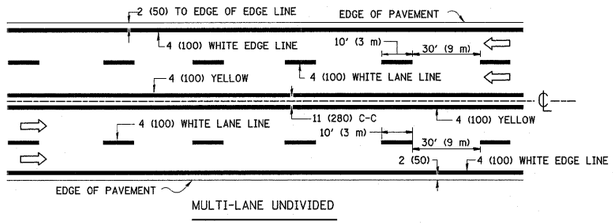
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = c:\pw_work\pwidot\abebawa\d0188337\P142689-Design.dgn	USER NAME = abebawa	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)**
		DRAWN -	REVISED - T. RAMMACHER 03-12-99		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00		
	PLOT DATE = 2/8/2011	DATE -	REVISED - C. JUCIUS 09-09-09		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

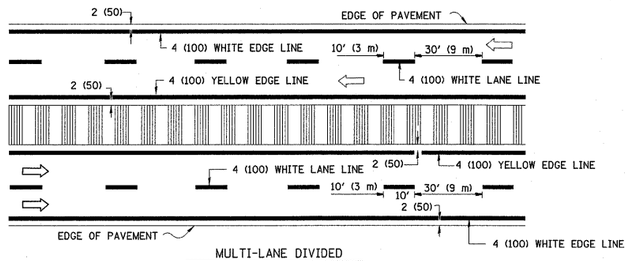
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	42
	TC-11	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



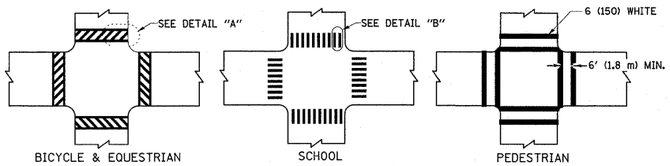
MULTI-LANE UNDIVIDED



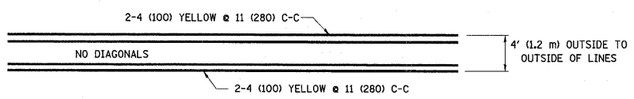
MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

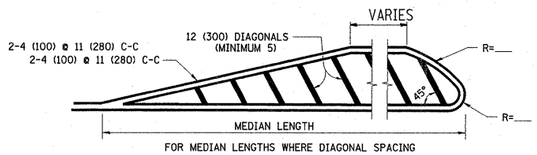
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



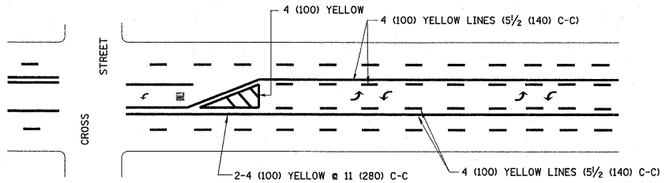
4' (1.2 m) WIDE MEDIANS ONLY



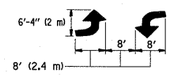
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

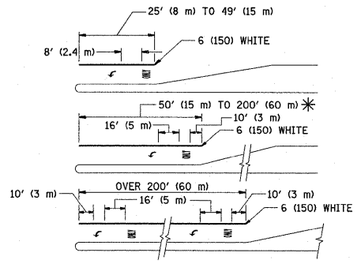


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

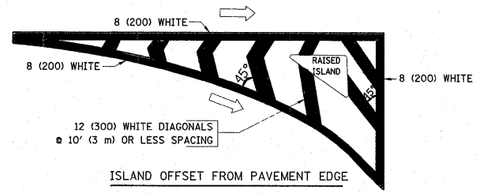


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m^2) ONLY AREA = 20.8 SQ. FT. (1.9 m^2)

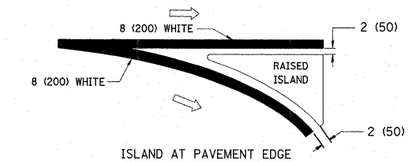
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 ⧈ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ⧈ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 ⧈ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 ⧈ 6 (150) 12 (300) ⧈ 45° 12 (300) ⧈ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 ⧈ 4 (100) WITH 12 (300) DIAGONALS ⧈ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS ⧈ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
SHOULDER DIAGONALS	12 (300) ⧈ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

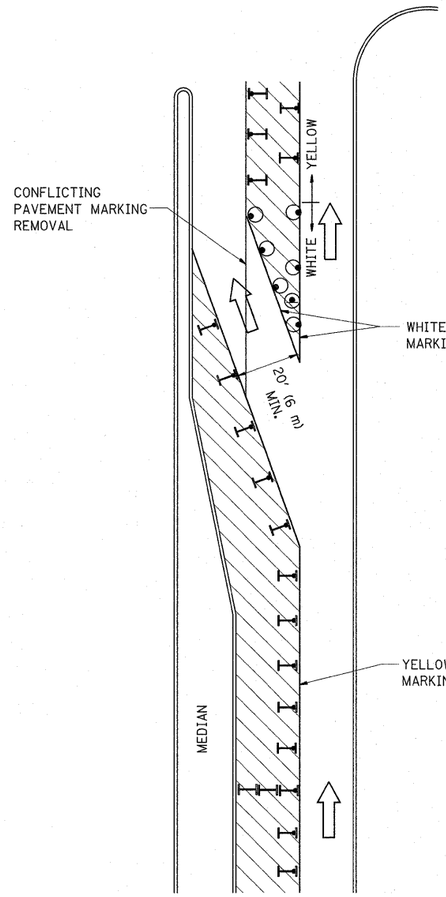
FILE NAME = c:\pw_work\pwidot\abebawa\d0189337\P142889-Design.dgn	USER NAME = abebawa	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
		DRAWN -	REVISED -C. JUCIUS 09-09-09
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/8/2011	DATE - 03-19-90	REVISED -

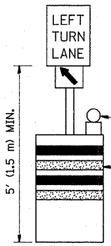
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	43
	TC-13	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





R 3-I100L 24 x 24 (600 x 600)

M6-2L 21 x 15 (530 x 380)

OPTIONAL FLASHING LIGHT

STANDARD 701901
SEE NOTE 8

GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHR 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

All dimensions are in inches (millimeters) unless otherwise shown.

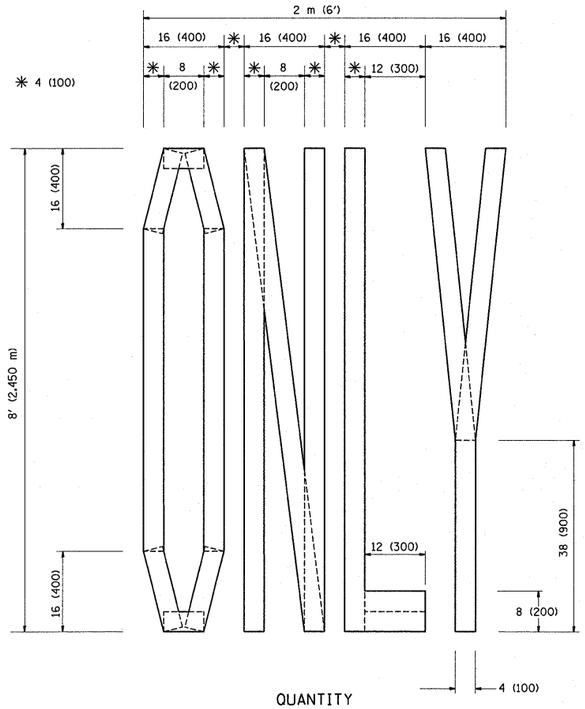
FILE NAME = c:\pw_work\pwidot\abebawa\d0188337\P142609-Design.dgn	USER NAME = abebawa	REVISED -T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
		REVISED - A. HOUSEH 11-07-95	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	REVISED - A. HOUSEH 10-12-96	REVISED -
	PLOT DATE = 2/8/2011	REVISED -T. RAMMACHER 01-06-00	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)

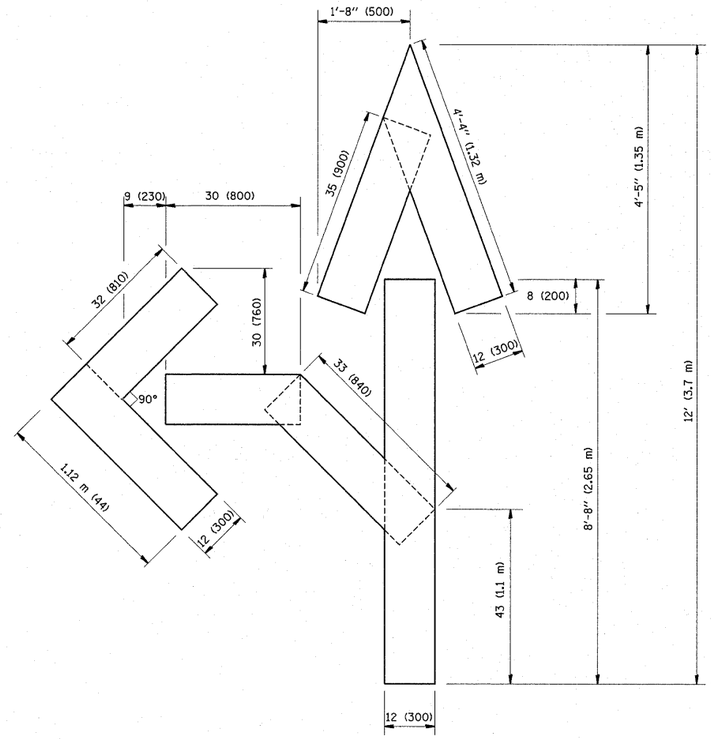
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	44
	TC-14	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)

QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)



QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

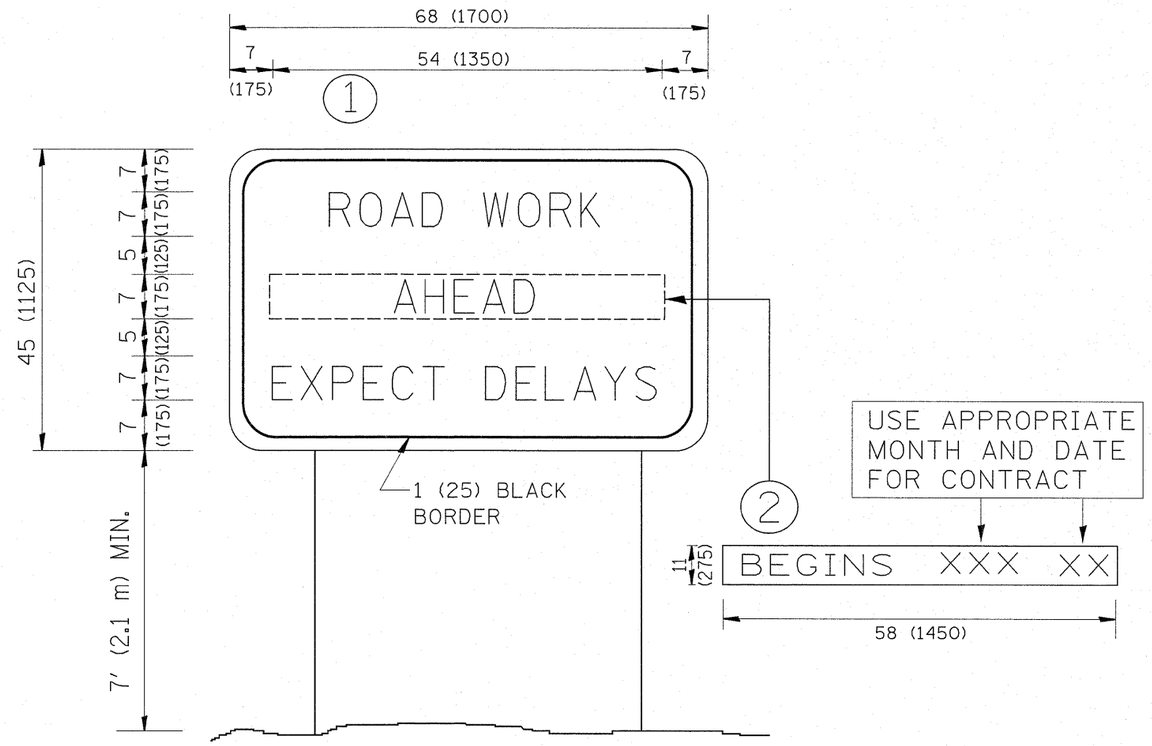
FILE NAME = c:\pw_work\pwidot\abebawa\d0188337\P142009-Design.dgn	USER NAME = abebawa	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 2/8/2011	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	45
	TC-16	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = o:\pw_work\pwidot\abebawa\d0188337\P142629-Design.dgn	USER NAME = abebawa	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99
	PLOT DATE = 2/8/2011	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

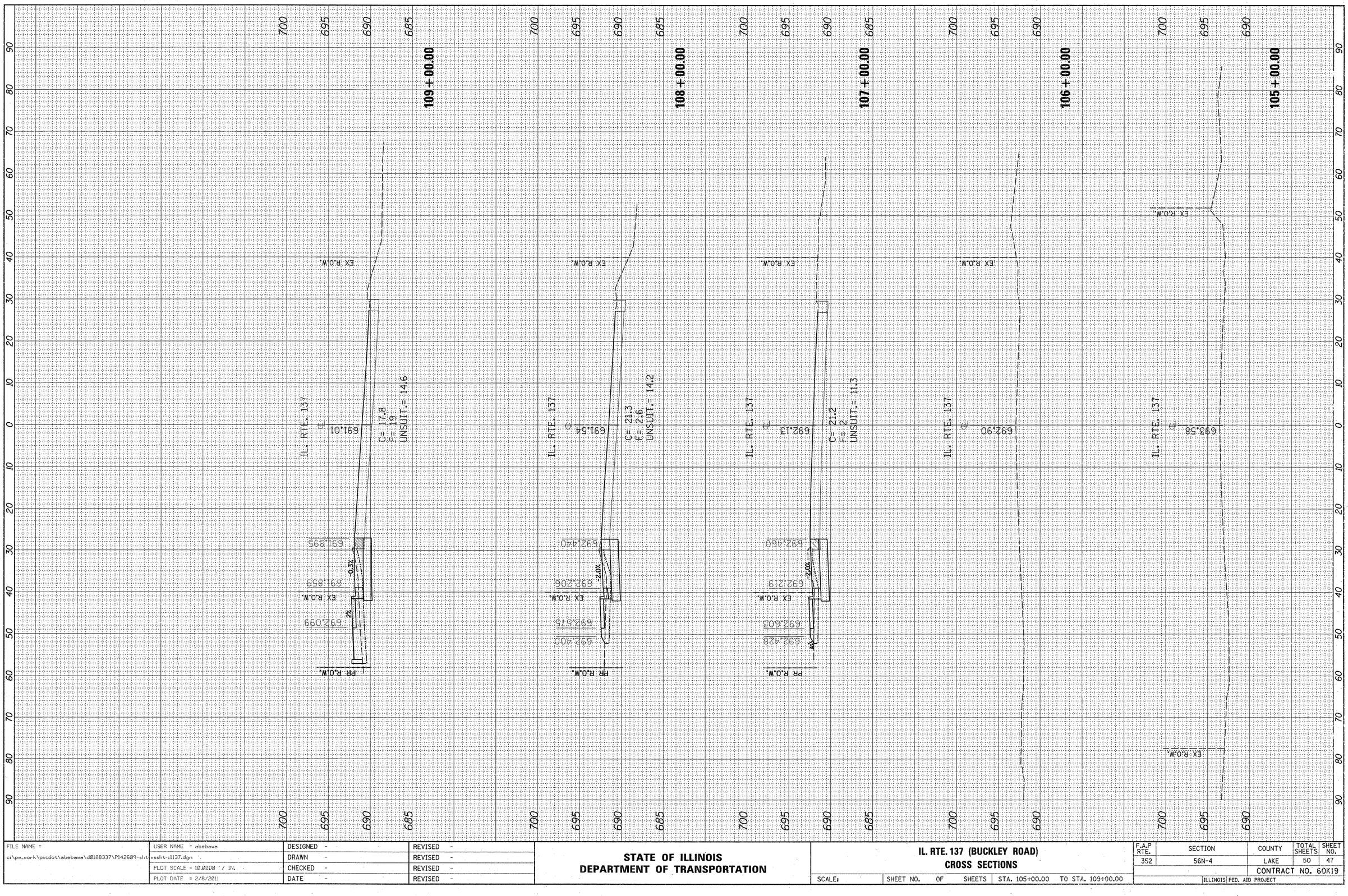
ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	46
	TC-22	CONTRACT NO. 60K19		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TYPIN RATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TYPIN RATE		
	AREAS		
	AREAS CHECKED		



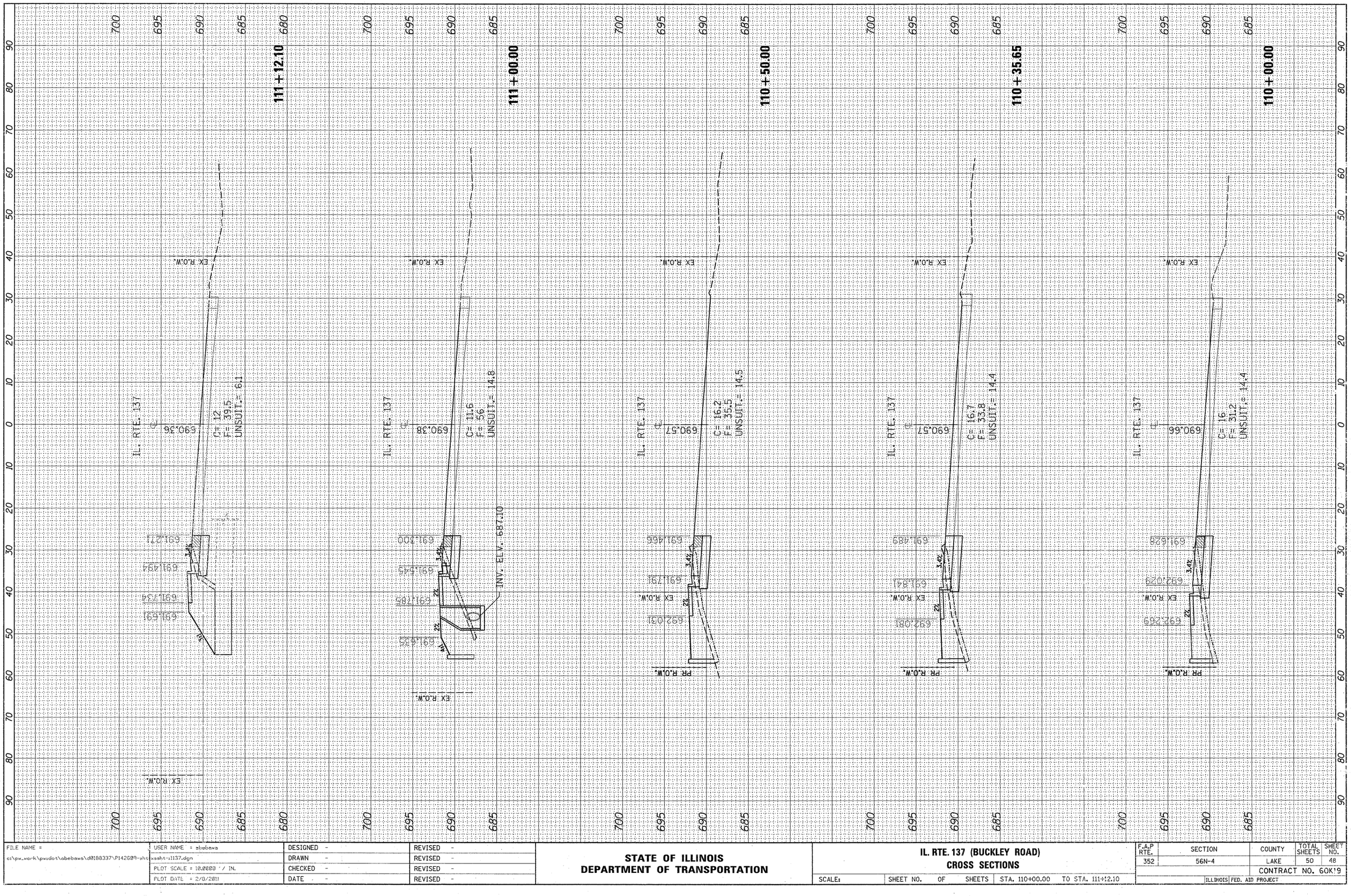
FILE NAME = c:\pw_work\pwidot\abebawa\d0188337\P142609-sht-xssht-il137.dgn	USER NAME = abebawa	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. RTE. 137 (BUCKLEY ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 105+00.00 TO STA. 109+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	47
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TYPED/CHECKED		
NOTE BOOK	AREAS	
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TYPED/CHECKED		
NOTE BOOK	AREAS	
NO.	AREAS CHECKED	

FILE NAME = c:\pw_work\pwidot\abebawa\d0188337\P142609-sht-xssht-il137.dgn	USER NAME = abebawa	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

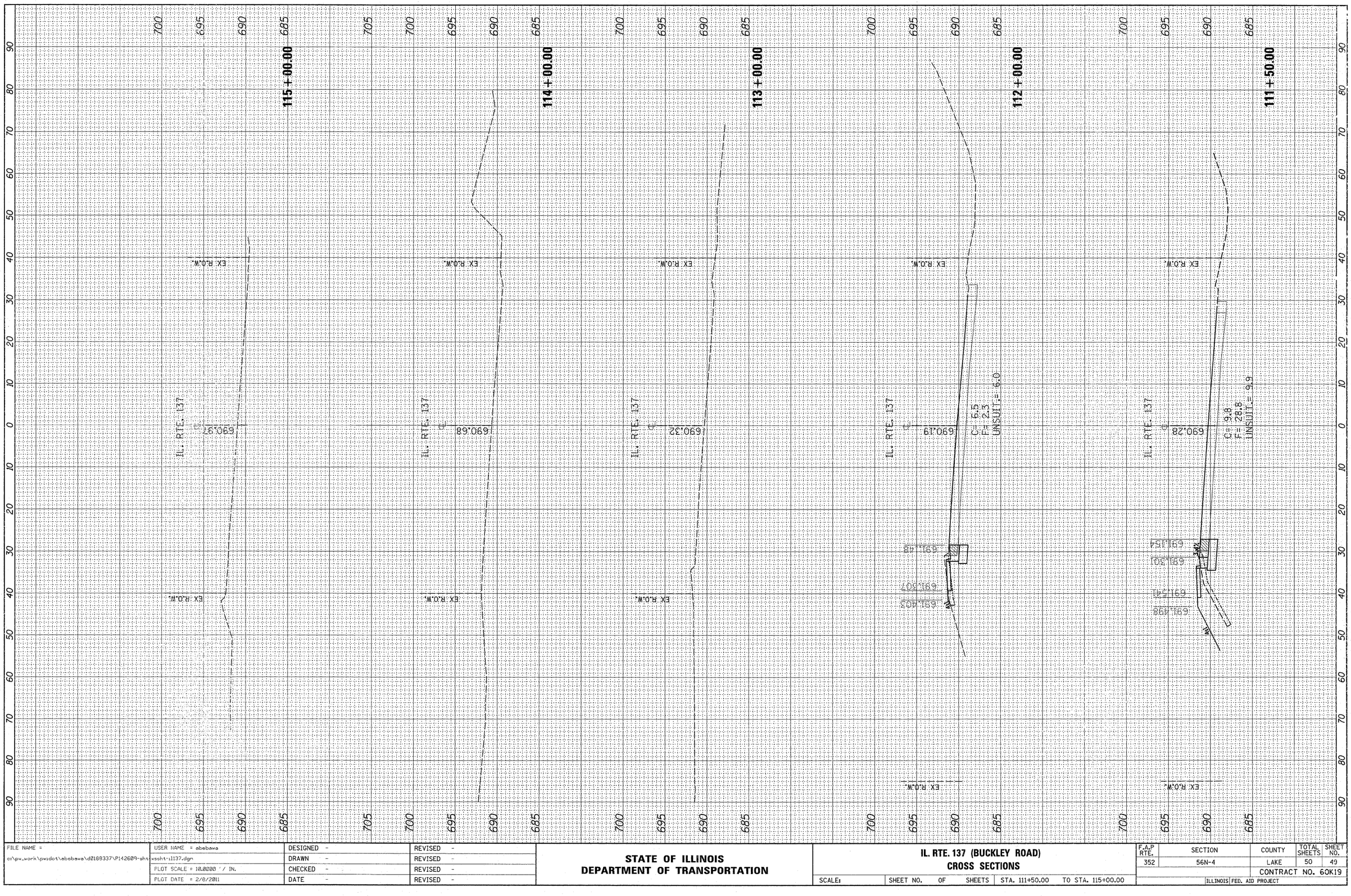
IL. RTE. 137 (BUCKLEY ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 110+00.00 TO STA. 111+12.10

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	48
		CONTRACT NO. 60K19		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TYPED		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TYPED		
	AREAS		
	AREAS CHECKED		



FILE NAME =	USER NAME = abebawa	DESIGNED -	REVISED -
c:\pw_work\pwidot\abebawa\d0188337\P142609-sht-xssht-il137.dgn		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. RTE. 137 (BUCKLEY ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 111+50.00 TO STA. 115+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	49
		CONTRACT NO. 60K19		
	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TOPSOIL		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TOPSOIL		
	AREAS		
NO.	AREAS CHECKED		

O'PLANE ROAD
692.30
692.51
692.86
692.51
C= 105.6
F= 0
UNSUIT.= 27.2
C= 4.3
F= 5.5
UNSUIT.= 9.1
-3.0%
-2.0%
-2.0%
49+00.00
48+00.00
47+00.00
46+00.00
695
690
685
700

FILE NAME =	USER NAME = abebawa	DESIGNED -	REVISED -
c:\pw_work\pwidot\abebawa\d0188337\P142609-sht-xssht-oplaine.dgn		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/8/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

O'Plane Road
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 46+00.00 TO STA. 49+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	56N-4	LAKE	50	50
		CONTRACT NO. 60K19		
	ILLINOIS	FED. AID PROJECT		