

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

FAP ROUTE 334 (US 12)
 SECTION SY-2-N
 AT HONEY LAKE ROAD
 TRAFFIC SIGNAL INSTALLATION & INTERSECTION IMPROVEMENTS
 PROJECT: HSIP-0334(020)
 LAKE COUNTY
 C-91-775-10

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	1
		ILLINOIS	CONTRACT NO. 60L68	

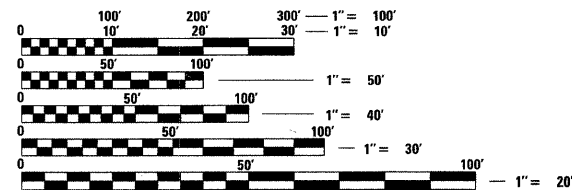
FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA
 ADT: 42,500 (3% TRUCKS)
 SPEED LIMIT: 45 MPH

THE IMPROVEMENT IS LOCATED WITHIN
 THE VILLAGE OF LAKE ZURICH



GRAEF 8501 W. Higgins Road; Suite 280
 Chicago, Illinois 60631
 (773) 399-0112

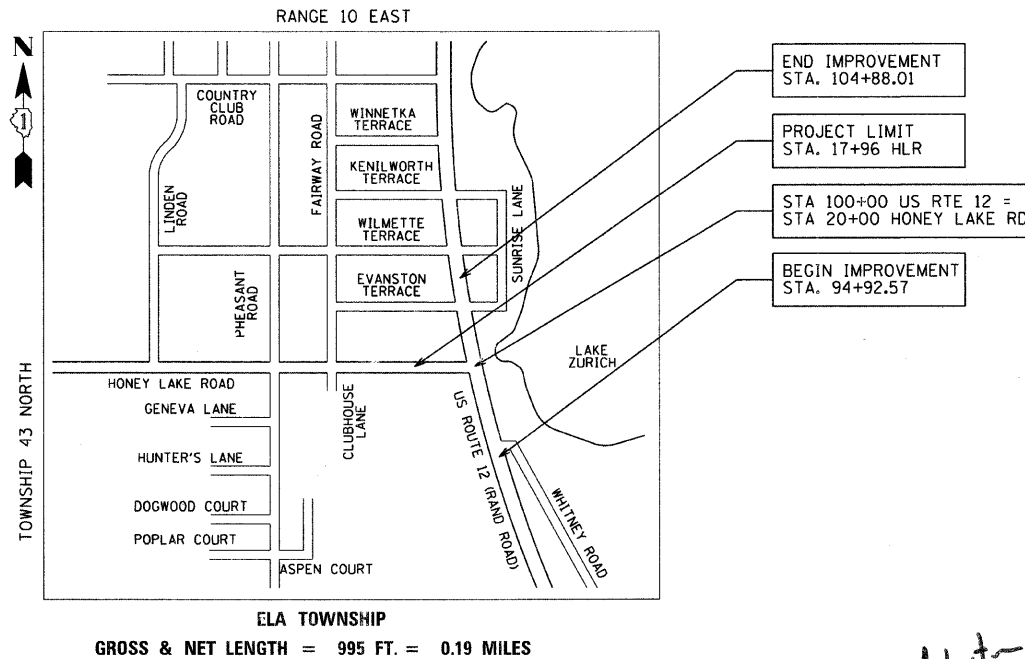


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
 ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
 CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
 ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811

PROJECT ENGINEER: PETER JOHNSTON (GRAEF) 773-399-0112
 PROJECT MANAGER: KEN ENG (IDOT) 847-705-4247

CONTRACT NO. 60L68



Peter M. Johnston
 1-31-11

PETER M. JOHNSTON
 062-047647
 REGISTERED PROFESSIONAL ENGINEER
 OF ILLINOIS
 Expires 11-30-11

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED JANUARY 24, 20 11

Deanne M. O'Keefe
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
 March 25 20 11

Scott E. Stett P.E. ILL.
 acting ENGINEER OF DESIGN AND ENVIRONMENT
 March 25 20 11

Christina M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS

INDEX OF SHEETS
SHEET NO. DESCRIPTION

1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES
3-4	SUMMARY OF QUANTITIES
5	TYPICAL SECTIONS
6	ALIGNMENT AND TIES SHEET
7	ROADWAY PLAN AND PROFILE
8	EROSION CONTROL AND LANDSCAPING SHEET
9	DRAINAGE PLAN AND PROFILE
10	PAVEMENT MARKING AND REMOVAL SHEET
11-19	TRAFFIC SIGNALS
20-22	CROSS SECTIONS
23	DRIVEWAY DETAILS-DISTANCE BETWEEN R.O.W. AND FACE OF CURB IS < 15' (BD02)
24	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT (BD22)
25	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS (TC10)
26	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT) (TC11)
27	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC13)
28	ARTERIAL ROAD INFORMATION SIGN (TC22)
29-34	STANDARD TRAFFIC SIGNAL DESIGN DETAILS (TS05)

HIGHWAY STANDARDS

STD. NO.	TITLE
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
424001-05	CURB RAMPS FOR SIDEWALK
442201-03	CLASS C AND D PATCHES
602001-02	CATCH BASIN, TYPE A
602011-02	CATCH BASIN, TYPE C
602301-03	INLET TYPE A
602401-03	MANHOLE, TYPE A
602601-02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-03	FRAME AND LIDS, TYPE 1
604036-02	GRATE, TYPE 8
604061-02	FRAME AND GRATES, TYPE 24
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606006-02	OUTLETS FOR CONCRETE CURB AND GUTTER TYPE B-6.24 (B-15.60)
606301-04	PC CONCRETE ISLANDS AND MEDIANS
701101-02	OFF-RD OPERATIONS, MULTILANE 15' (4.5 m) TO 24' (600 mm) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-07	URBAN LANE CLOSURE MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-07	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-01	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-02	SIGN PANEL MOUNTING DETAILS
728001-01	TELESCOPING STEEL SIGN SUPPORT
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
805001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
814001-02	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE EQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
876001-01	PEDESTRIAN PUSH BUTTON POST
877001-04	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-08	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES AND THE VILLAGE OF LAKE ZURICH AT (847) 540-1696 FOR FIELD LOCATIONS OF SANITARY SEWER AND WATER MAIN. (48 HOUR NOTIFICATION IS REQUIRED).
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF LAKE ZURICH.
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
4. WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
5. THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM 72 HOURS IN ADVANCE OF BEGINNING WORK.
6. THE RESIDENT ENGINEER SHALL CONTACT DEBBIE HANLON, AREA TRAFFIC FIELD ENGINEER AT (847) 238-2300 AT LEAST (2) WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
7. ALL PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE PROJECT ACCORDING TO DISTRICT 1 TYPICAL PAVEMENT MARKING AND DETAILS SHOWN ON THE PLANS.
8. ALL HMA PAVEMENT PATCHING SHALL BE CLASS D.
9. ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.
10. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN FOR FUTURE REFERENCE ALL EXISTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
11. MATCH EXISTING PAVEMENT MARKINGS AT PROJECT LIMITS.
12. ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
13. DRAINAGE ADJUSTMENT, CLEANING OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
14. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT
15. 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.

SUMMARY OF QUANTITIES				90% FED. 10% STATE		90% FED. 10% STATE	
ITEM NO.	DESCRIPTION	UNIT	URBAN TOTAL QUANTITY	0021 SAFETY	0021 100% VILLAGE OF LAKE ZURICH	0031 LANDSCAPING	0040 STORM SEWERS
20200100	EARTH EXCAVATION	CU YD	327	327			
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	376	376			
20800150	TRENCH BACKFILL	CU YD	119	119			
21101615	TOPSOIL, FURNISH AND PLACE, 4"	SQ YD	1,812			1,812	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	22			22	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	22			22	
25200110	SODDING, SALT TOLERANT	SQ YD	1,812			1,812	
25200200	SUPPLEMENTAL WATERING	UNIT	54			54	
28000400	PERIMETER EROSION BARRIER	FOOT	722	722			
28000510	INLET FILTERS	EACH	18	18			
31101200	SUB BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	516	516			
35300500	PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ YD	516	516			
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	192	192			
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	13	13			
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	13	13			
40603240	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	65	65			
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	21	21			
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	45	45			
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	51	51			
42001300	PROTECTIVE COAT	SQ YD	800	800			
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	2,373	2,373			
42400800	DETECTABLE WARNINGS	SQ FT	50	50			
44000100	PAVEMENT REMOVAL	SQ YD	138	138			
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	533	533			
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	192	192			
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	857	857			
44000600	SIDEWALK REMOVAL	SQ FT	1,895	1,895			
44004250	PAVED SHOULDER REMOVAL	SQ YD	182	182			
44002208	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 2"	SQ YD	117	117			
44201713	CLASS D PATCHES, TYPE I, 6 INCH	SQ YD	99	99			
44201785	CLASS D PATCHES, TYPE I, 12 INCH	SQ YD	4	4			
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	250	250			
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	52				52
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	77				77
55100500	STORM SEWER REMOVAL 12"	FOOT	40				40
60200805	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 8 GRATE	EACH	1				1
60201340	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 24 FRAME AND GRATE	EACH	1				1
60208240	CATCH BASINS, TYPE C, TYPE 24 FRAME AND GRATE	EACH	6				6
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2				2
60219540	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 24 FRAME AND GRATE	EACH	1				1
60237470	INLETS, TYPE A, TYPE 24 FRAME AND GRATE	EACH	1				1
60257900	MANHOLES TO BE RECONSTRUCTED	EACH	3				3
60500050	REMOVING CATCH BASINS	EACH	1				1
60500060	REMOVING INLETS	EACH	4				4
60600095	CLASS SI CONCRETE (OUTLET)	CU YD	3				3
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	1,530	1,530			
60620000	CONCRETE MEDIAN, TYPE SB-6.24	SQ FT	240	240			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6			
67100100	MOBILIZATION	L SUM	1	1			
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1			

* DENOTES SPECIALTY ITEM

SUMMARY OF QUANTITIES				90% FED. 10% STATE		90% FED. 10% STATE	
ITEM NO.	DESCRIPTION	UNIT	URBAN TOTAL QUANTITY	0021 SAFETY	0021 100% VILLAGE OF LAKE ZURICH	0031 LANDSCAPING	0040 STORM SEWERS
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1			
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1			
* 72000100	SIGN PANEL - TYPE 1	SQ FT	25	25			
* 72000200	SIGN PANEL - TYPE 2	SQ FT	44	44			
* 72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	13	13			
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	218	218			
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	463	463			
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1,209	1,209			
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	114	114			
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	42	42			
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	42	42			
* 81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	721	721			
* 81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	59	59			
* 81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	205	205			
* 81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	40	40			
* 81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	426	426			
* 81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	232	232			
* 81400100	HANDHOLE	EACH	4	4			
* 81400200	HEAVY-DUTY HANDHOLE	EACH	4	4			
* 81400300	DOUBLE HANDHOLE	EACH	1	1			
* 81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1,025	1,025			
* 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	787	787			
* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,435	812	623		
* 87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2,041	2,041			
* 87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	859	859			
* 87300805	ELECTRIC CABLE IN TRENCH, SERVICE, NO. 6 2 C	FOOT	35	35			
* 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1,474	1,474			
* 87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2	2			
* 87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2	2			
* 87700270	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1	1			
* 87700280	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	1	1			
* 87702330	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 26 FT.	EACH	1	1			
* 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16	16			
* 87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4	4			
* 87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	40	40			
* 87900200	DRILL EXISTING HANDHOLE	EACH	2	2			
* 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8	8			
* 88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1	1			
* 88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1	1			
* 88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2	2			
* 88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1	1			
* 88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4	4			
* 88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10	10			
* 88500100	INDUCTIVE LOOP DETECTOR	EACH	6	6			
* 88600100	DETECTOR LOOP, TYPE I	FOOT	587	587			

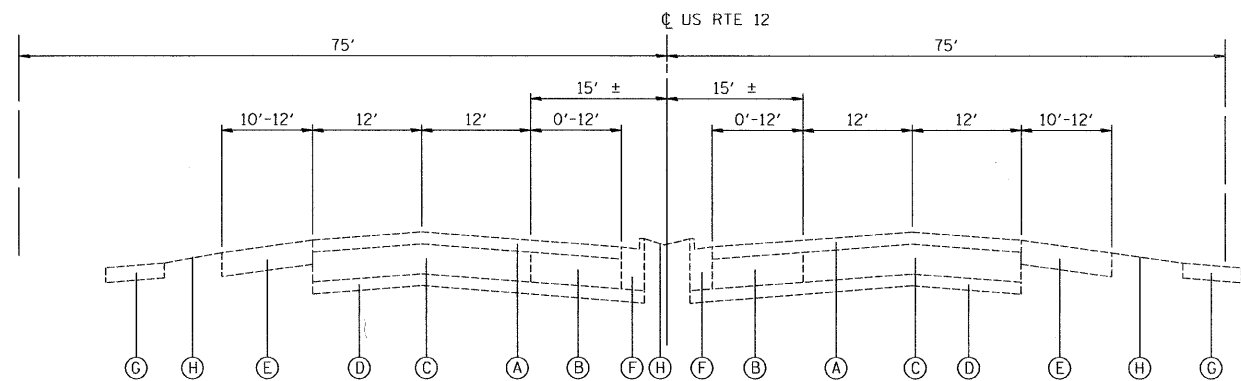
* DENOTES SPECIALTY ITEM

SUMMARY OF QUANTITIES				90% FED. 10% STATE	90% FED. 10% STATE		
ITEM NO.	DESCRIPTION	UNIT	URBAN TOTAL QUANTITY	0021 SAFETY	0021 100% VILLAGE OF LAKE ZURICH	0031 LANDSCAPING	0040 STORM SEWERS
* 88700200	LIGHT DETECTOR	EACH	3		3		
* 88700300	LIGHT DETECTOR AMPLIFIER	EACH	1		1		
* 88800100	PEDESTRIAN PUSH-BUTTON	EACH	4	4			
* 89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2,340	2,340			
* 89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	490	490			
* 89502380	REMOVE EXISTING HANDHOLE	EACH	1	1			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1			
Δ Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	20				20
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	76	76			
Z0056608	STORM SEWER (WATER MAIN REQUIREMENTS) 12 INCH	FOOT	21				21
X4022000	TEMPORARY ACCESS (COMMERCIAL ENTRANCE)	EACH	2	2			
X4060826	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	30	30			
Δ X5539700	STORM SEWERS TO BE CLEANED	FOOT	1,562				1,562
X6025600	MANHOLES TO BE ADJUSTED (SPECIAL)	EACH	1				1
* 80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1	1			
* 86200120	UNINTERRUPTIBLE POWER SUPPLY	EACH	1	1			
* 87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1,170	1,170			
* 87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 IC	FOOT	1,170	1,170			
* 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING, NO. 6 1C	FOOT	579	579			
* 87300750	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	623		623		

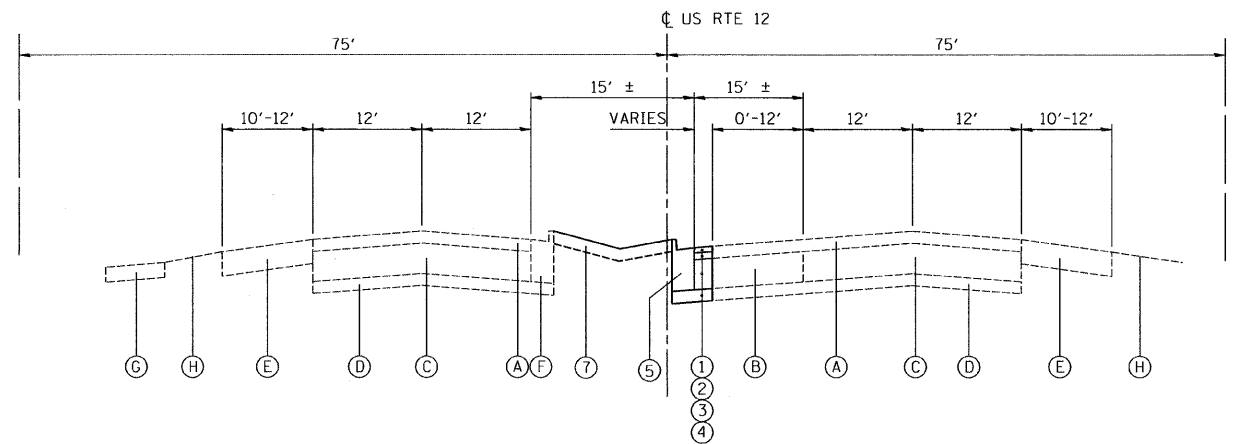
* DENOTES SPECIALTY ITEM
Δ = NON-PARTICIPATING

EARTHWORK					
	STATION	TOTAL LENGTH	20200100	20201200	EMBANKMENT CY
			EARTH EXCAVATION CY	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL CY	
South Median	94+93				
	95+51	58	12	16	2
	97+00	149	46	34	4
	97+98	98	24	12	1
	99+50	152	27	6	0
North Median	100+50				
	100+60	10	10	4	0
	100+70	10	6	4	0
	100+85	15	2	5	1
	101+50	65	11	20	3
	102+68	118	37	38	6
104+88	220	60	69	13	
East Side of US 12 (sidewalk)	99+03				
	99+50	47	2	7	6
	100+00	50	4	14	10
	100+50	50	3	13	12
	100+60	10	1	3	3
	100+70	10	1	3	3
	100+85	15	1	4	5
	101+50	65	5	16	15
	102+68	118	10	27	15
102+91	23	1	3	1	
SW Quad	99+34				
	99+50	16	1	2	2
99+95	45	3	5	5	
NW Quad	100+50				
	100+60	10	1	4	3
	100+70	10	1	5	9
	100+85	15	1	8	16
Left Side	101+34				
	101+50	16	1	2	1
	102+68	118	40	42	13
	103+28	60	17	14	4
TOTAL			327	376	152

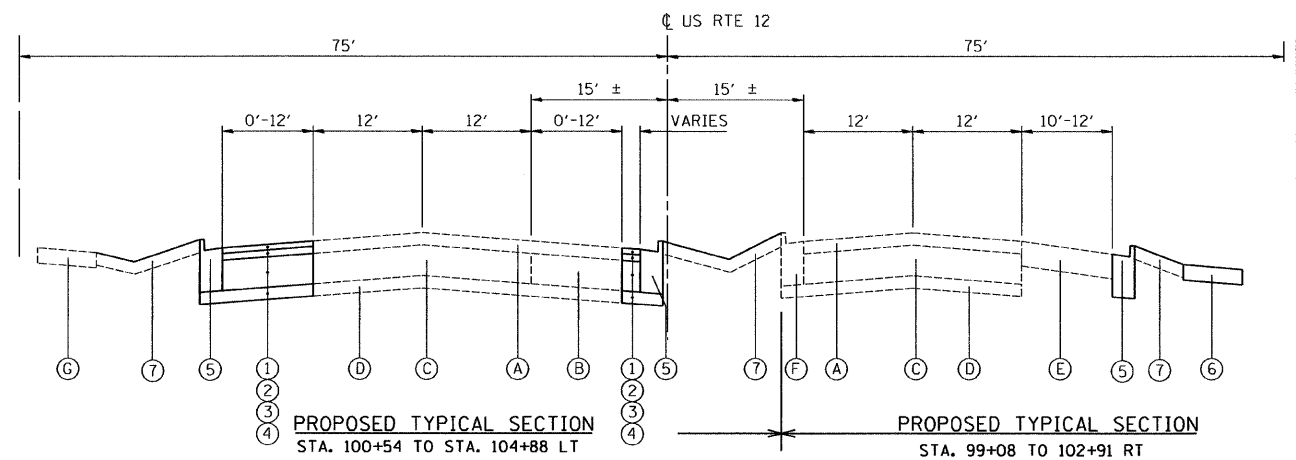
20400800
-127 FURNISH EXCAVATION
Assume 15% shrinkage factor



EXISTING TYPICAL SECTION
STA. 94+92 TO STA. 104+88



PROPOSED TYPICAL SECTION
STA. 94+92 TO STA. 97+98

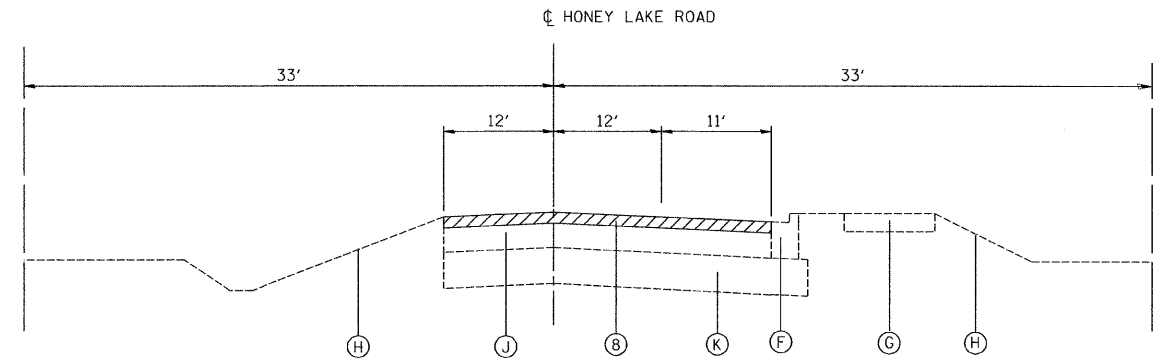


EXISTING CONDITIONS:

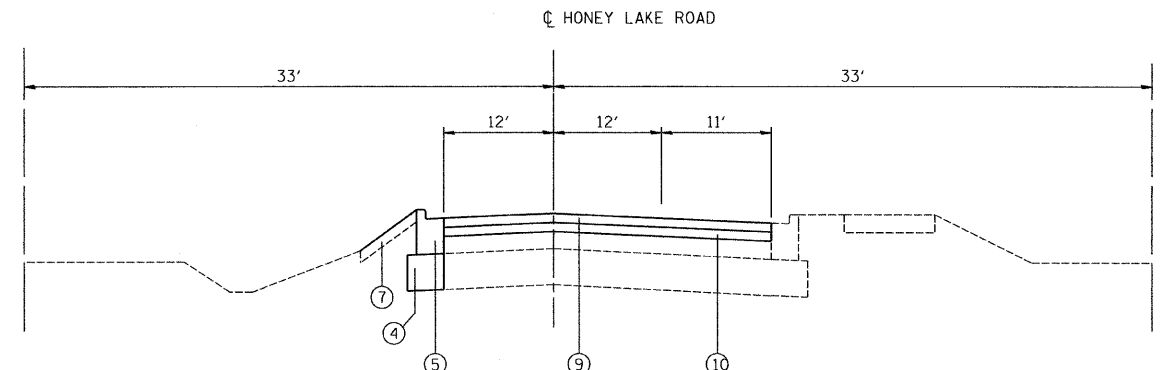
- (A) HMA SURFACE COURSE 4"±
 - (B) HMA BASE COURSE 10"
 - (C) PCC BASE COURSE 10"
 - (D) AGGREGATE SUBBASE 4"
 - (E) HMA SHOULDER 8"
 - (F) COMBINATION CURB AND GUTTER
 - (G) SIDEWALK
 - (H) GRASS MEDIAN OR SLOPE
 - (J) HMA PAVEMENT
 - (K) AGGREGATE BASE COURSE
- SEE REMOVAL PLANS FOR LOCATIONS OF ITEMS TO BE REMOVED

PROPOSED IMPROVEMENTS:

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4"
- (2) POLYMERIZED HOT-MIX ASPHALT BINDER COURSE IL-19.0, N90, 2 1/4"
- (3) PCC BASE COURSE, 10"
- (4) SUBBASE GRANULAR MATERIAL, 4"
- (5) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- (6) PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
- (7) TOPSOIL, FURNISH & PLACE, 4" SODDING, SALT TOLERANT FERTILIZER NUTRIENTS
- (8) HMA SURFACE REMOVAL 2 1/4"
- (9) HOT-MIX ASPHALT SURFACE COURSE, MIX D, N70, 1 1/2"
- (10) POLYMERIZED LEVELING BINDER (MACHINE METHOD) IL 4.75, N50, 1"



EXISTING TYPICAL SECTION
STA. 17+96 TO STA 19+50



PROPOSED TYPICAL SECTION
STA. 17+96 TO STA 19+50

*CONTRACTOR SHALL MILL FIRST BEFORE PATCHING

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS @ Ndes
ROADWAY - US 12	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 (IL 9.5mm) (1 3/4")	4% @ 90 GYR
POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90 (2 1/4")	4% @ 50 GYR
ROADWAY - HONEY LAKE ROAD	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5mm) (1 1/2")	4% @ 70 GYR
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL 4.75, N50 (1")	4% @ 50 GYR
HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 (IL 9.5mm) (2")	4% @ 90 GYR
PATCHING	
CLASS D PATCHES (HMA BINDER IL 19mm) (6 INCHES) (IN TWO LIFTS)	4% @ 70 GYR
CLASS D PATCHES (HMA BINDER IL 19mm) (12 INCHES) (IN THREE LIFTS)	4% @ 70 GYR
DRIVEWAYS	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL 9.5mm) 2"	4% @ 50 GYR
HOT-MIX ASPHALT BASE COURSE (HMA BINDER IL 19 mm) 8" (IN TWO LIFTS)	4% @ 50 GYR

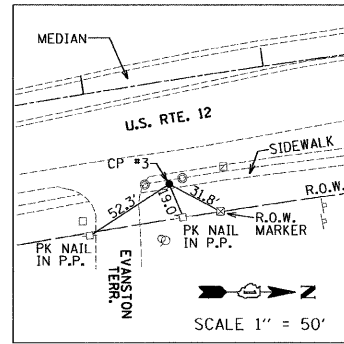
THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SQ YD/IN.

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.

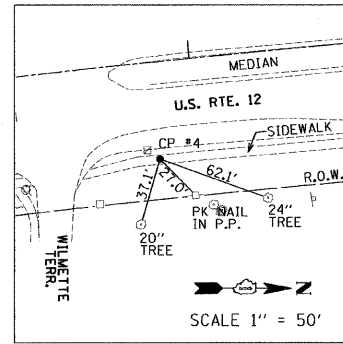
ALIGNMENT COORDINATES - U.S. RTE. 12			
STATION	N	E	
POB/PC	90+05.06	2,013,722.14	1,044,754.74
PI	100+49.73	2,014,697.83	1,044,381.45
PT	110+75.93	2,015,741.66	1,044,339.60

ALIGNMENT COORDINATES - HONEY LAKE RD.			
STATION	N	E	
POB	12+00.00	2,014,680.44	1,043,673.16
POT	20+00.00	2,014,675.34	1,044,473.14



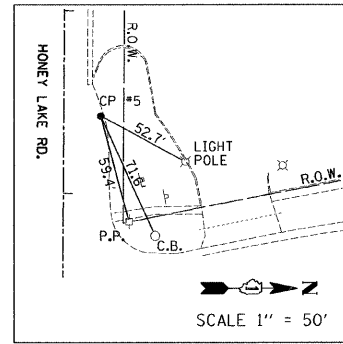
CONTROL POINT #3
CHISELED "X" IN CONCRETE WALK

STATION 103+39.02, 55.58' RT.
N 2,015,017.32
E 1,044,466.54
ELEV=859.57'



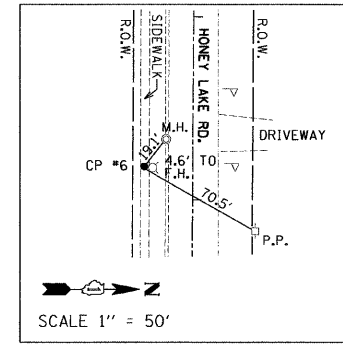
CONTROL POINT #4
CHISELED "X" IN CONCRETE WALK

STATION 106+78.45, 53.22' RT.
N 2,015,350.70
E 1,044,420.85
ELEV=859.51'



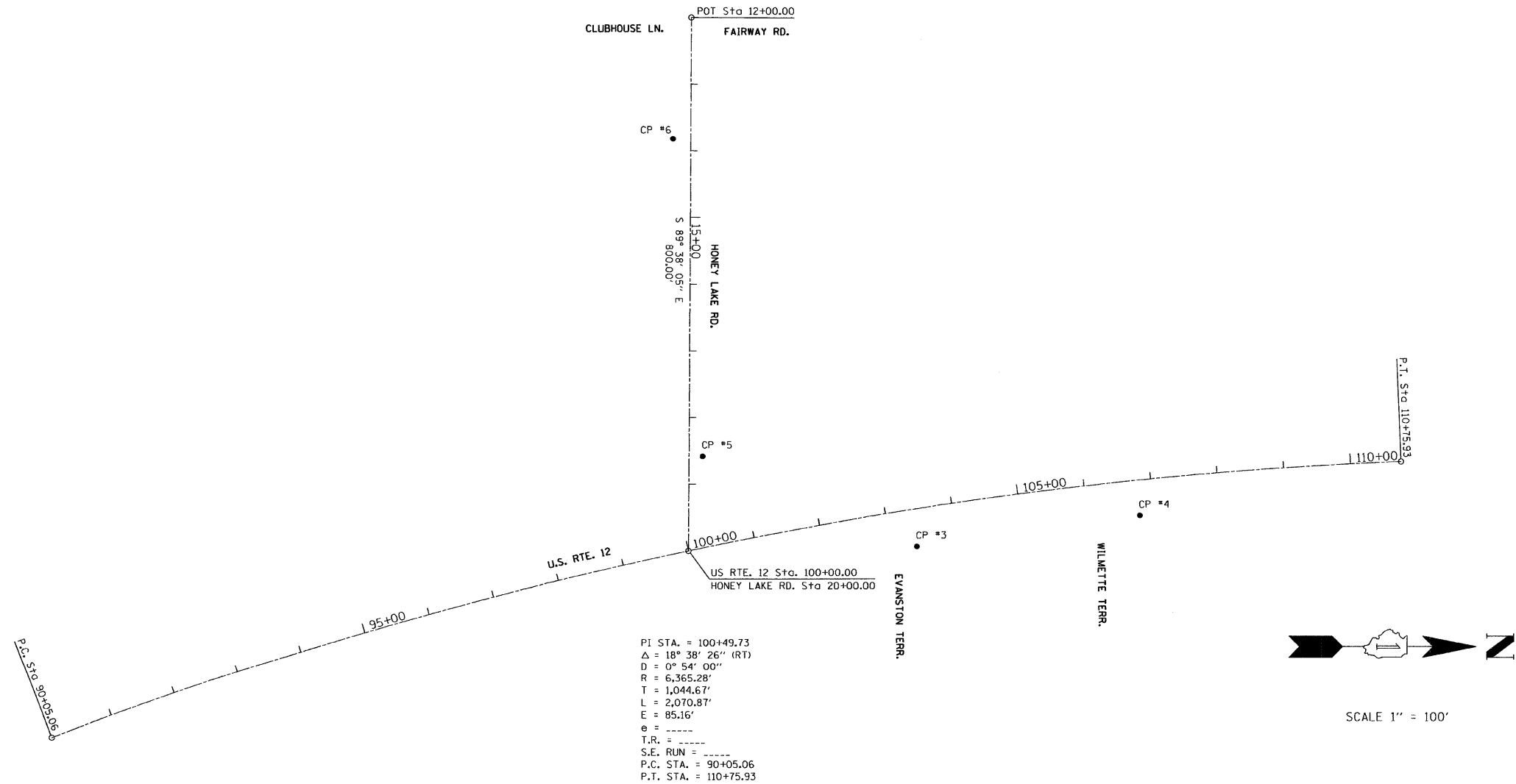
CONTROL POINT #5
PK NAIL IN ASPHALT SHOULDER

STATION 18+58.03, 20.35' LT.
N 2,014,696.59
E 1,044,331.30
ELEV=854.57'



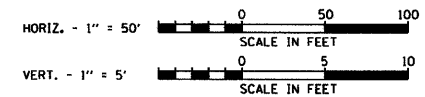
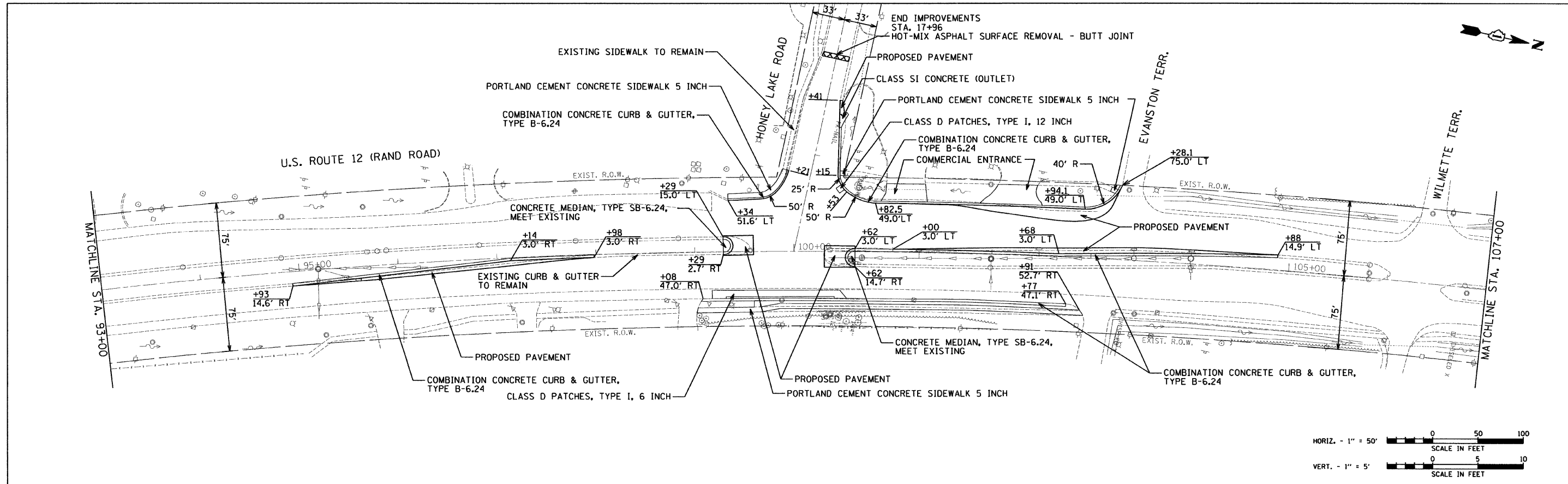
CONTROL POINT #6
CHISELED "X" IN CONCRETE WALK

STATION 13+82.16, 26.66' RT.
N 2,014,652.62
E 1,043,855.14
ELEV=849.19'

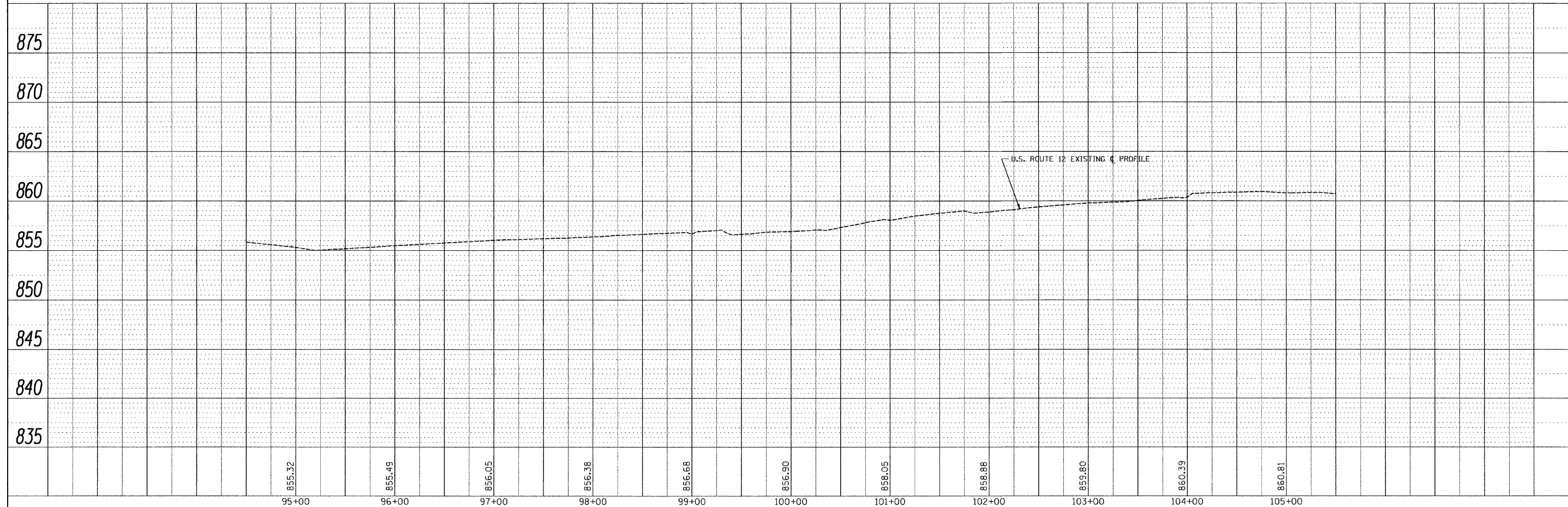


FILE NAME =	USER NAME = USER.	DESIGNED - TP / EF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD ALIGNMENT AND TIES	F.A.P. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 6			
FILEL	PLOT SCALE = 100.00' / IN.	DRAWN - TP / EF	REVISED -			SCALE: 1"=100'	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 60L68			
	PLOT DATE = 2/14/2011	CHECKED - RS	REVISED -			ILLINOIS FED. AID PROJECT							
		DATE - 02-14-2011	REVISED -										

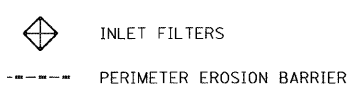
PLAN SURVEYED BY DATE
 ALIGNMENT CHECKED
 RT. OF WAY CHECKED
 NOTE BOOK NO. _____
 PLOTTING FILE NAME



PROFILE SURVEYED BY DATE
 GRADES CHECKED
 B.M. NOTED
 STRUCTURE NOTATIONS CHFD
 NOTE BOOK NO. _____

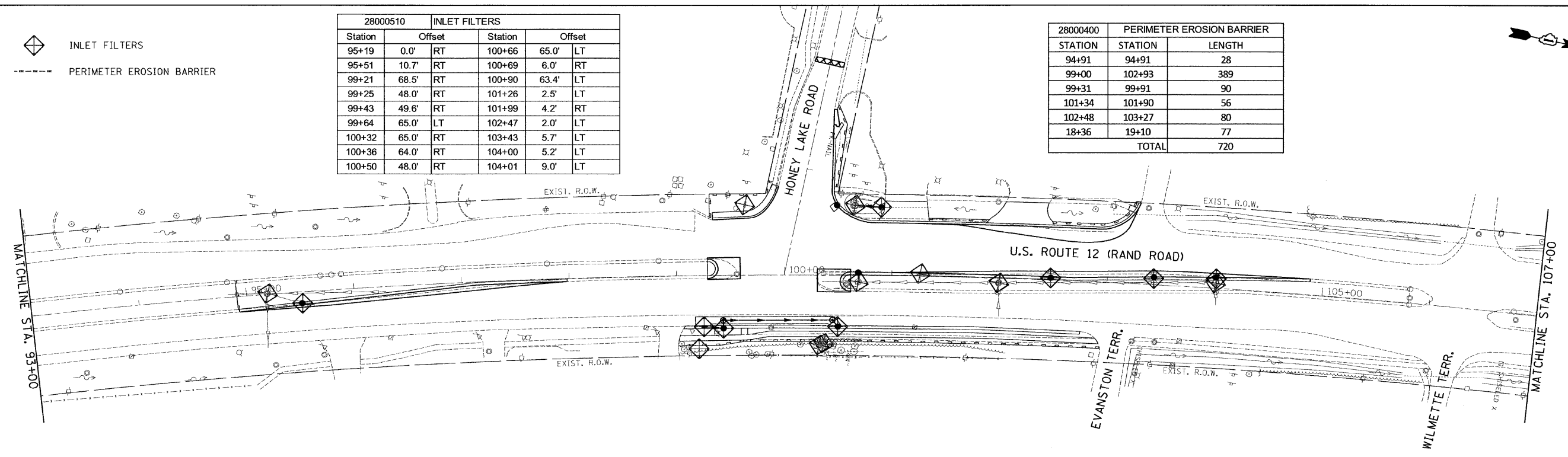


FILE NAME =	USER NAME = USER	DESIGNED - TP / EF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD ROADWAY PLAN AND PROFILE	F.A.P. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 7	
#FILE#	PLOT SCALE = 50.0000' / IN.	DRAWN - TP / EF	REVISED -			SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 94+92.57 TO STA. 104+88.01	CONTRACT NO. 60L68		
	PLOT DATE = 2/14/2011	CHECKED - RS	REVISED -			ILLINOIS FED. AID PROJECT					
		DATE - 02-14-2011	REVISED -								

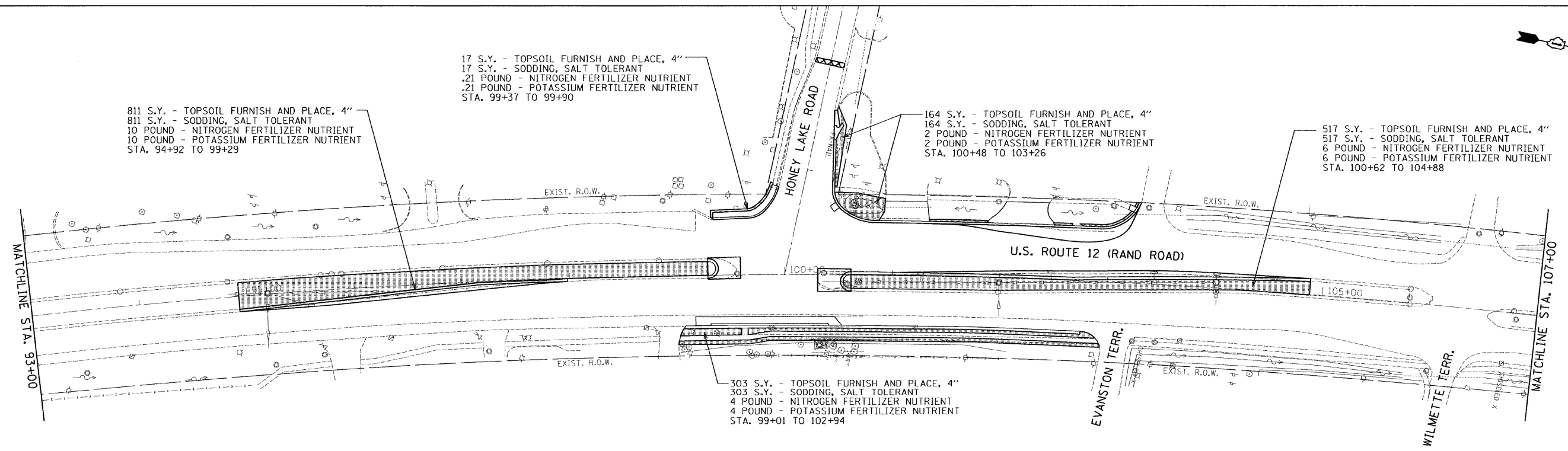


28000510		INLET FILTERS			
Station	Offset	Station	Offset	Station	Offset
95+19	0.0'	RT	100+66	65.0'	LT
95+51	10.7'	RT	100+69	6.0'	RT
99+21	68.5'	RT	100+90	63.4'	LT
99+25	48.0'	RT	101+26	2.5'	LT
99+43	49.6'	RT	101+99	4.2'	RT
99+64	65.0'	LT	102+47	2.0'	LT
100+32	65.0'	RT	103+43	5.7'	LT
100+36	64.0'	RT	104+00	5.2'	LT
100+50	48.0'	RT	104+01	9.0'	LT

28000400			PERIMETER EROSION BARRIER	
STATION	STATION	LENGTH	STATION	LENGTH
94+91	94+91	28		
99+00	102+93	389		
99+31	99+91	90		
101+34	101+90	56		
102+48	103+27	80		
18+36	19+10	77		
		TOTAL		720



EROSION CONTROL PLAN



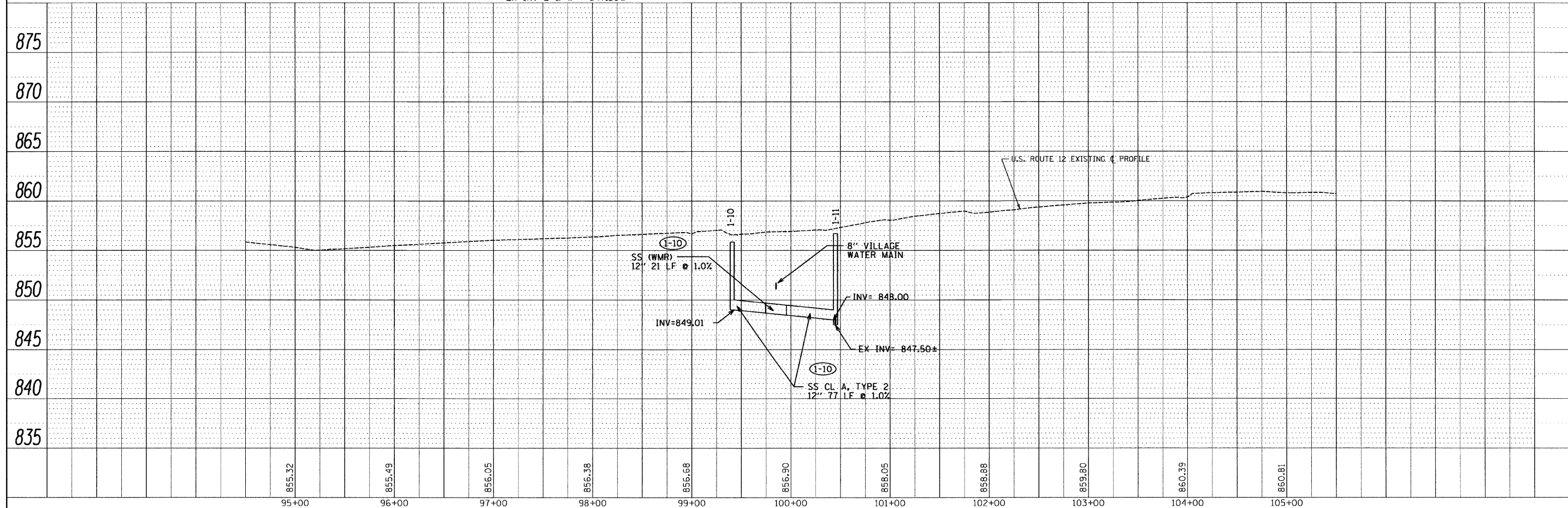
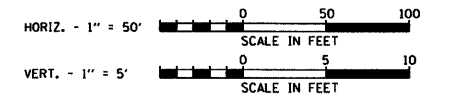
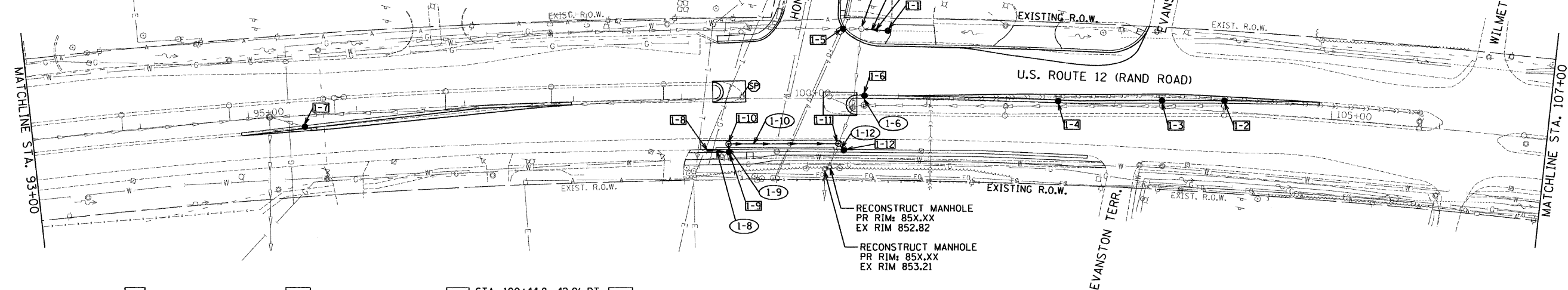
LANDSCAPING PLAN

FILE NAME =	USER NAME = USER	DESIGNED - TP / EF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD EROSION CONTROL AND LANDSCAPING PLANS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
*FILE#	PLOT SCALE = 50,0000' / IN.	DRAWN - TP / EF	REVISED -			334	SY-2-N	LAKE	34	8	
	PLOT DATE = 2/14/2011	CHECKED - RS	REVISED -			CONTRACT NO. 60L68					
		DATE - 02-14-11	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE: 1"=50'		SHEET NO. OF SHEETS		STA. 93+00 TO STA. 107+00			

PLAN	SURVEYED	DATE
NOTE BOOK	ALIGNED	
NO.	RT. OF WAY CHECKED	
	NO.	
	FILE NAME	

PROFILE	SURVEYED	DATE
NOTE BOOK	ALIGNED	
NO.	RT. OF WAY CHECKED	
	NO.	
	FILE NAME	

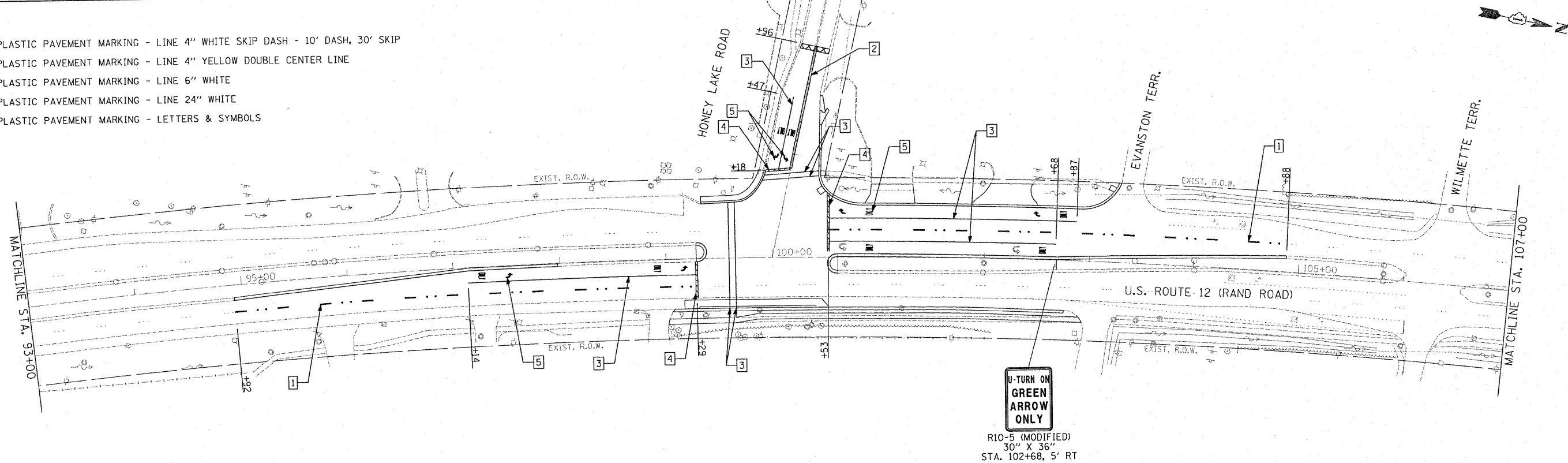
- 1-1 STA. 100+90, 63.4' LT CATCH BASIN TYPE A 4' DIA TYPE 8 GRATE RIM EL. = ± 857.0 N INV. = 854.40 S INV. = 851.90 CONNECT TO EXISTING PIPE
- 1-2 STA. 104+01, 9.0' RT CATCH BASIN TYPE C TYPE 24 F&G RIM EL. = 860.0 E INV. = 856.50 CONNECT TO EXISTING PIPE
- 1-3 STA. 103+43, 5.7' LT CATCH BASIN TYPE C TYPE 24 F&G RIM EL. = 859.7 E INV. = 856.20 CONNECT TO EXISTING PIPE
- 1-4 STA. 102+47, 2.0' LT CATCH BASIN TYPE C TYPE 24 F&G RIM EL. = 858.5 E INV. = 855.40 CONNECT TO EXISTING PIPE
- 1-5 STA. 100+49.2, 64.8' LT MANHOLE, TYPE A, 4' DIA TYPE 24 F&G RIM EL. = 856.72 E INV. = 848.61 CONSTRUCT OVER EXISTING PIPE
- 1-6 STA. 10+69.2, 3.0' LT CATCH BASIN TYPE C TYPE 24 F&G RIM EL. = 857.70 E INV. = 854.30
- 1-7 STA. 95+51, 10.7' RT CATCH BASIN, TYPE C TYPE 24 F&G RIM EL. = 855.35 SW INV. = 851.64 CONNECT TO EXISTING PIPE
- 1-8 STA. 99+25, 47.8' RT INLET, TYPE A TYPE 24 F&G RIM EL. = 855.75 N INV. = 852.45
- 1-9 STA. 99+43, 49.6' RT CATCH BASIN TYPE A 4' DIA, TYPE 24 F&G RIM EL. = 855.80 S INV. = 852.27 W INV. = 852.30
- 1-10 STA. 99+43, 42.1' RT MANHOLE, TYPE A 4' DIA, TYPE 1 F&CL RIM EL. = 856.00 E INV. = 852.25 N INV. = 849.16
- 1-11 STA. 100+44.8, 42.0' RT MANHOLE, TYPE A 4' DIA, TYPE 1 F&CL RIM EL. = 856.70 N INV. = 853.44 S INV. = 848.00 EX INV E & W = 847.50±
- 1-12 STA. 100+50, 47.0' RT CATCH BASIN TYPE C TYPE 24 F&G RIM EL. = 856.52 E INV. = 853.52
- 1-1 SS CL A, TY 1, 12" 20 LF @ 5.00% CONNECT TO EXISTING MANLOLE INV = 850.90
- 1-6 SS CL A, TY 1, 12" 4 LF @ 1.00% 1 CY TRENCH BACKFILL
- 1-8 SS CL A, TY 1, 12" 18 LF @ 1.00% 1 CY TRENCH BACKFILL
- 1-9 SS CL A, TY 1, 12" 5 LF @ 1.00% 1 CY TRENCH BACKFILL
- 1-10 SS CL A, TYP 2, 12" 77 LF @ 1.00% SS (W/MR) 12" 21 LF @ 1.00% 114 CY TRENCH BACKFILL
- 1-12 SS CL A, TY 1, 12" 5 LF @ 1.00% 2 CY TRENCH BACKFILL



FILE NAME =	USER NAME = USER	DESIGNED - TP / EF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD DRAINAGE PLAN AND PROFILE	F.A.P. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 9	
#FILE#	PLOT SCALE = 50,0000' / IN.	DRAWN - TP / EF	REVISED -			SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 94+92.57 TO STA. 104+88.01	CONTRACT NO. 60L68		ILLINOIS FED. AID PROJECT
	PLOT DATE = 2/14/2011	CHECKED - RS	REVISED -								
		DATE = 02-14-2011	REVISED -								

LEGEND

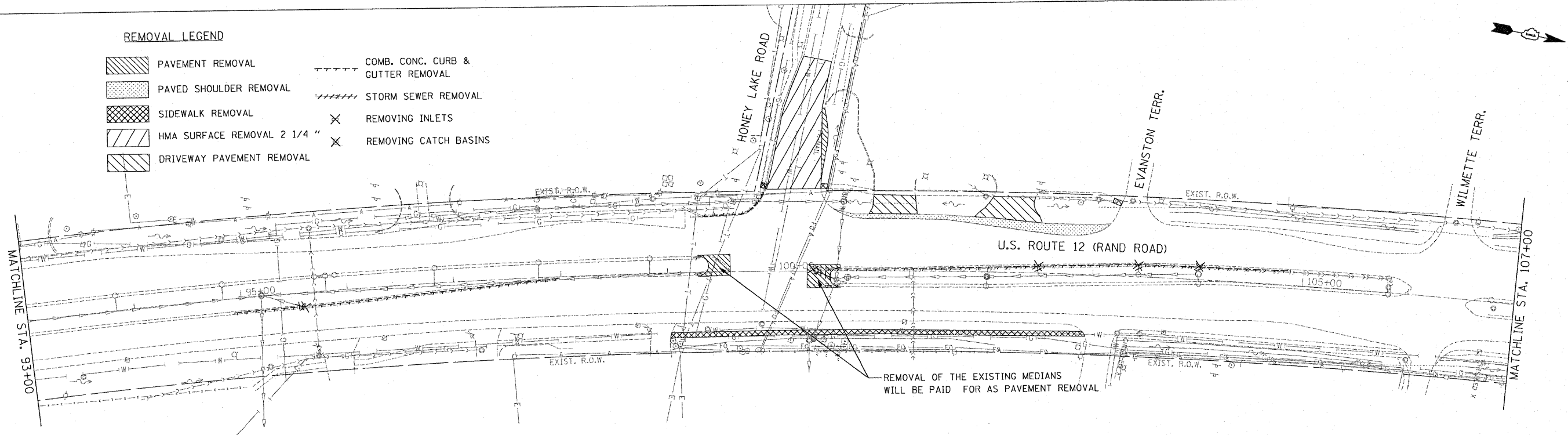
- 1 THERMOPLASTIC PAVEMENT MARKING - LINE 4" WHITE SKIP DASH - 10' DASH, 30' SKIP
- 2 THERMOPLASTIC PAVEMENT MARKING - LINE 4" YELLOW DOUBLE CENTER LINE
- 3 THERMOPLASTIC PAVEMENT MARKING - LINE 6" WHITE
- 4 THERMOPLASTIC PAVEMENT MARKING - LINE 24" WHITE
- 5 THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS



PAVEMENT MARKING PLAN

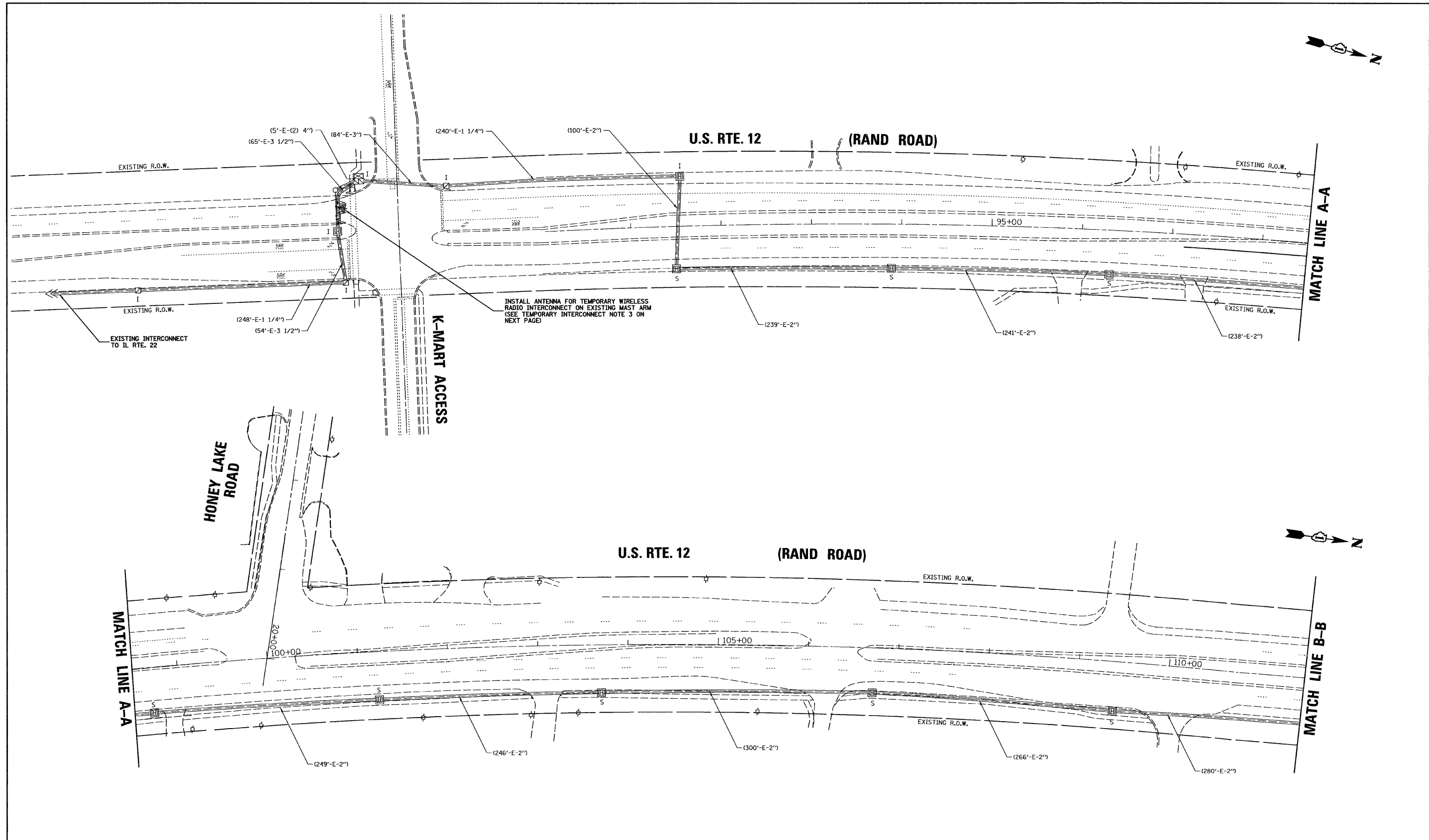
REMOVAL LEGEND

- PAVEMENT REMOVAL
- COMB. CONC. CURB & GUTTER REMOVAL
- PAVED SHOULDER REMOVAL
- STORM SEWER REMOVAL
- SIDEWALK REMOVAL
- REMOVING INLETS
- HMA SURFACE REMOVAL 2 1/4"
- REMOVING CATCH BASINS
- DRIVEWAY PAVEMENT REMOVAL



EXISTING CONDITIONS AND REMOVAL PLAN

FILE NAME =	USER NAME = .USER.	DESIGNED - TP / EF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD PAVEMENT MARKING AND REMOVAL PLANS				F.A.P. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 10
#FILE#	PLOT SCALE = 50.0000' / IN.	DRAWN - TP / EF	REVISED -		SCALE: 1"=50'	SHEET NO.	OF	SHEETS	STA. 93+00 TO STA. 107+00	ILLINOIS FED. AID PROJECT			
	PLOT DATE = 2/15/2011	CHECKED - RS	REVISED -							CONTRACT NO. 60L68			
		DATE - 02-14-11	REVISED -										



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

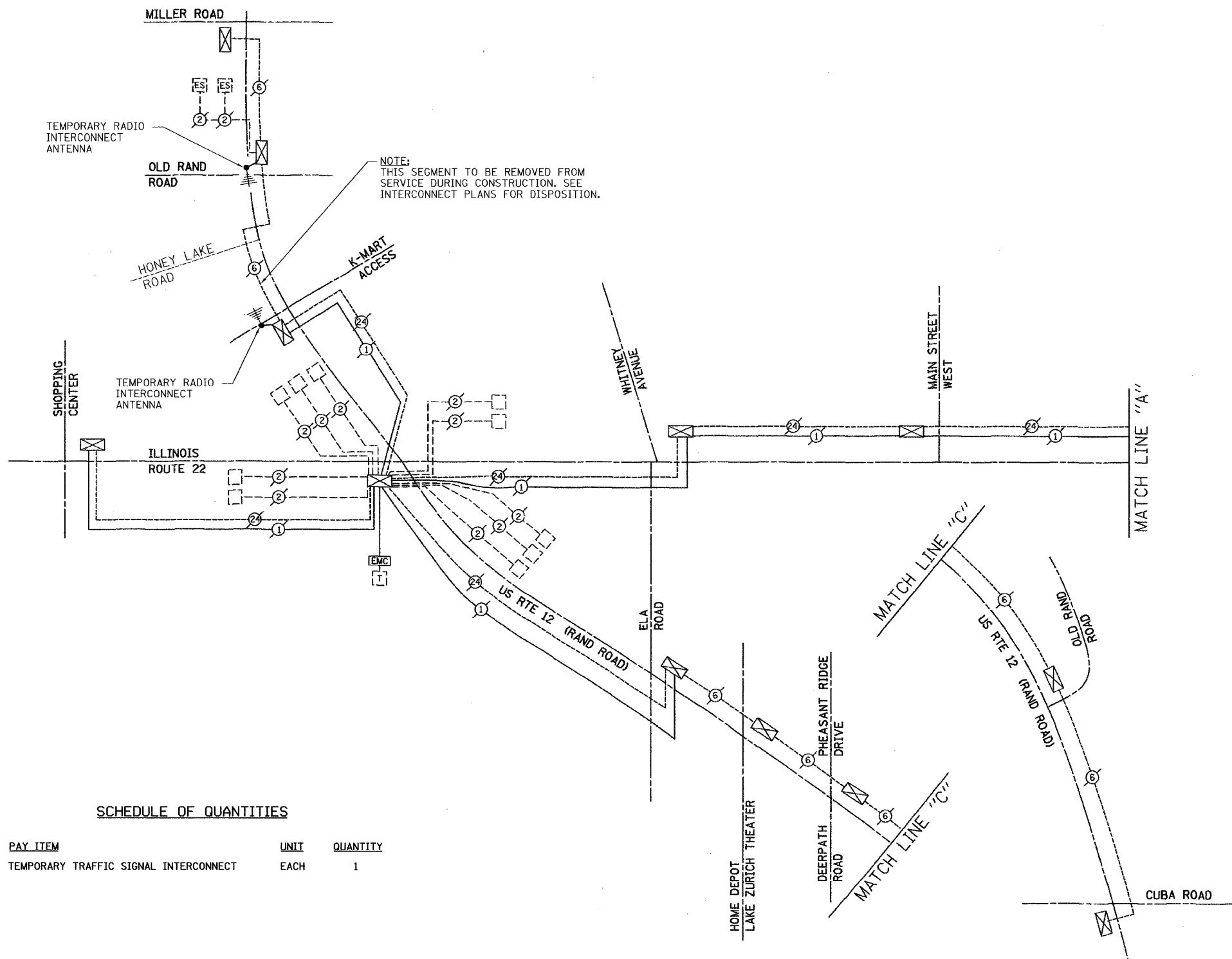
PREPARED BY:
CEMCON, Ltd.
 Consulting Engineers, Land Surveyors & Planners
 2280 White Oak Circle, Suite 100
 Aurora, Illinois 60504-9675
 Ph: 630.862.2100 Fax: 630.862.2199
 E-Mail: codd@cemcon.com Website: www.cemcon.com

FILE NAME = \MICROST\352087\TEMP INTERCONNECT.DGN	USER NAME = RDS	DESIGNED - KK	REVISED -
PLOT SCALE = 1"=50'	CHECKED - BPT	DRAWN - JGC	REVISED -
PLOT DATE = 1-13-11	DATE - 2-3-11	CHECKED - BPT	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TEMPORARY INTERCONNECT PLAN U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD			
SCALE: N.T.S.	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	11
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L68	



NOTE:
THIS SEGMENT TO BE REMOVED FROM SERVICE DURING CONSTRUCTION. SEE INTERCONNECT PLANS FOR DISPOSITION.

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
TEMPORARY TRAFFIC SIGNAL INTERCONNECT	EACH	1

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

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
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Aurora, Illinois 60504-9675
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E-Mail: codd@cemcon.com Website: www.cemcon.com

FILE NAME = \MICROST\352887\TEMP SCHEMATIC.DGN	USER NAME = RDS	DESIGNED - KK	REVISED -
		DRAWN - JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 2-3-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY INTERCONNECT SCHEMATIC
U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	13
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L68	

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, MEDIANS, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:

THE CHANGEABLE MESSAGE SIGNS SHALL BE TURNED ON ONE WEEK PRIOR TO THE INTERSECTION TRAFFIC SIGNAL BEING TURNED ON AND SHALL REMAIN IN OPERATION FOR TWO WEEKS. THE CHANGEABLE MESSAGE SIGNS SHALL NOTIFY DRIVERS OF THE NEW TRAFFIC SIGNAL. THERE SHALL BE TWO SIGNS - ONE DIRECTED TO THE SOUTHBOUND TRAFFIC AND ONE DIRECTED TO NORTHBOUND TRAFFIC.

NOTE:

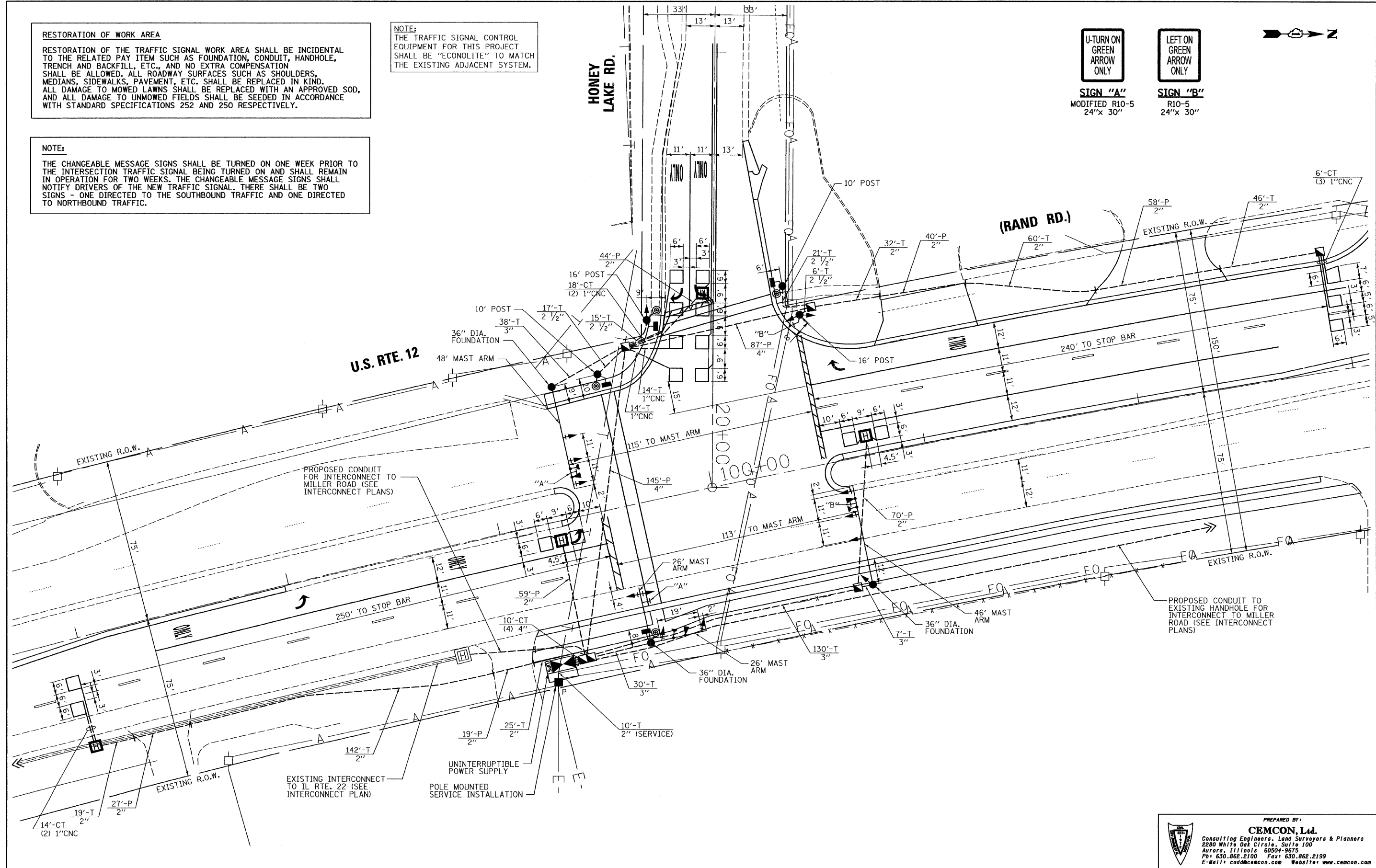
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



SIGN "A"
MODIFIED R10-5
24"x 30"



SIGN "B"
R10-5
24"x 30"



FILE NAME = VMICR0ST\352087\HONEY LAKE SIG.DGN	USER NAME = RDS	DESIGNED - KK	REVISED -
	PLOT SCALE = 1"=20'	DRAWN - JGC	REVISED -
	PLOT DATE = 1-13-11	CHECKED - BPT	REVISED -
		DATE - 2-3-11	REVISED -

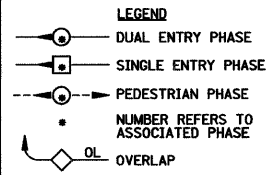
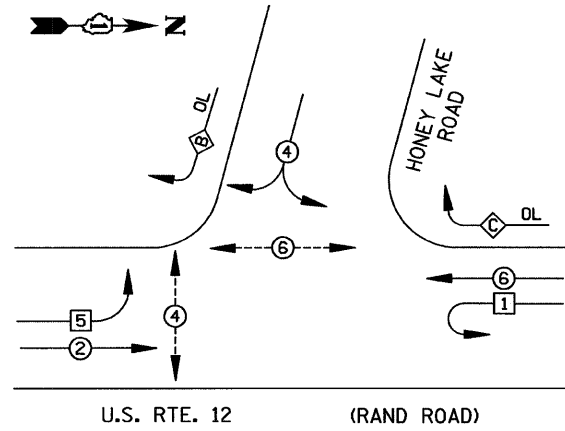
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL INSTALLATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD**

F.A.P. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 14
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L68	

PREPARED BY:
CEMCON, Ltd.
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Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

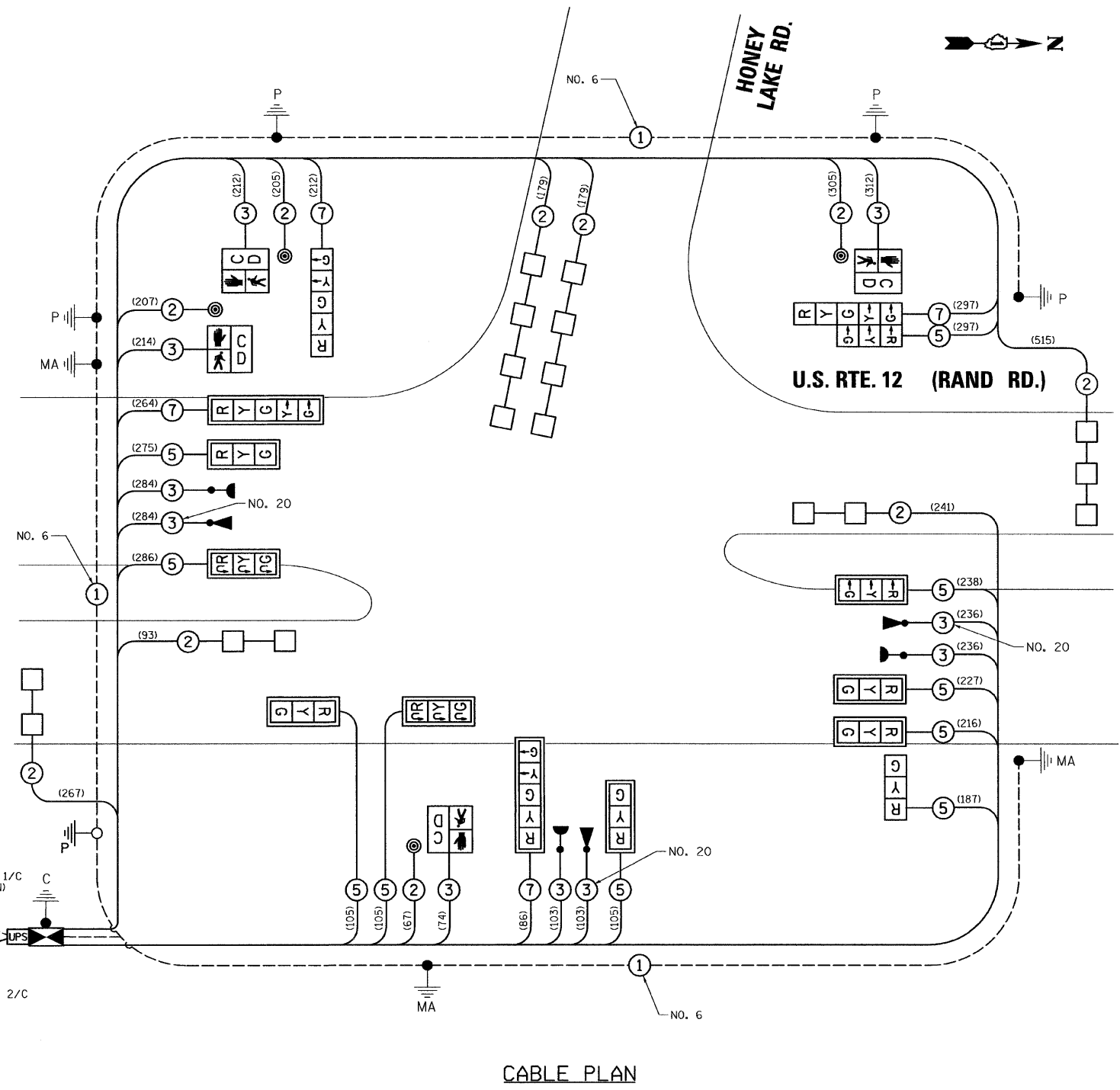
RIGHT TURN OVERLAP DESIGNATION

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

SCHEDULE OF QUANTITIES

SIGN PANEL, TYPE 1	SQ FT	20
SIGN PANEL, TYPE 2	SQ FT	43.5
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	334
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	59
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	205
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	40
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	313
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	232
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	638
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	784
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1435
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2041
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	859
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	35
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1474
HANDHOLE	EACH	4
HEAVY DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	1
TRANSCEIVER-FIBER OPTIC	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 26 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	40
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	6
DETECTOR LOOP, TYPE 1	FOOT	587
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH BUTTON	EACH	4
SERVICE INSTALLATION, POLE MOUNT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	579
	FOOT	623

• 100% COST TO THE VILLAGE OF LAKE ZURICH
 •• PARTIAL COST TO THE VILLAGE OF LAKE ZURICH



CABLE PLAN

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	14	135	17	0.50	119
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	438.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 W. CENTER COURT
 SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: _____
 PHONE: _____
 COMPANY: COMED

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, MEDIANS, 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 CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

NOTE:
 (XXX) DENOTES CABLE LENGTH TO CONTROLLER CABINET WITH SLACK CABLE.

FILE NAME = \MICROST\352887\HONEY LAKE CAB.DGN	USER NAME = RDS	DESIGNED - KK	REVISED -
	PLOT SCALE = 1"=20'	DRAWN - JGC	REVISED -
	PLOT DATE = 1-13-11	CHECKED - BPT	REVISED -
		DATE - 2-3-11	REVISED -

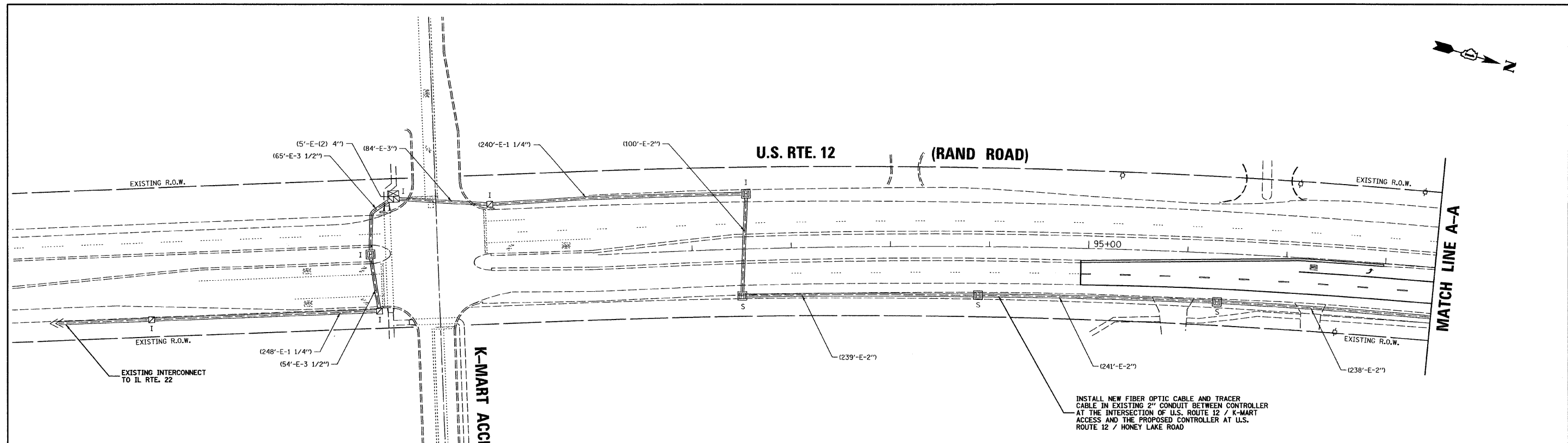
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM U.S.ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD
---------------------------------------------------	------------------------------------------------------------------------------------------------------------------

SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 15
CONTRACT NO. 60L68				

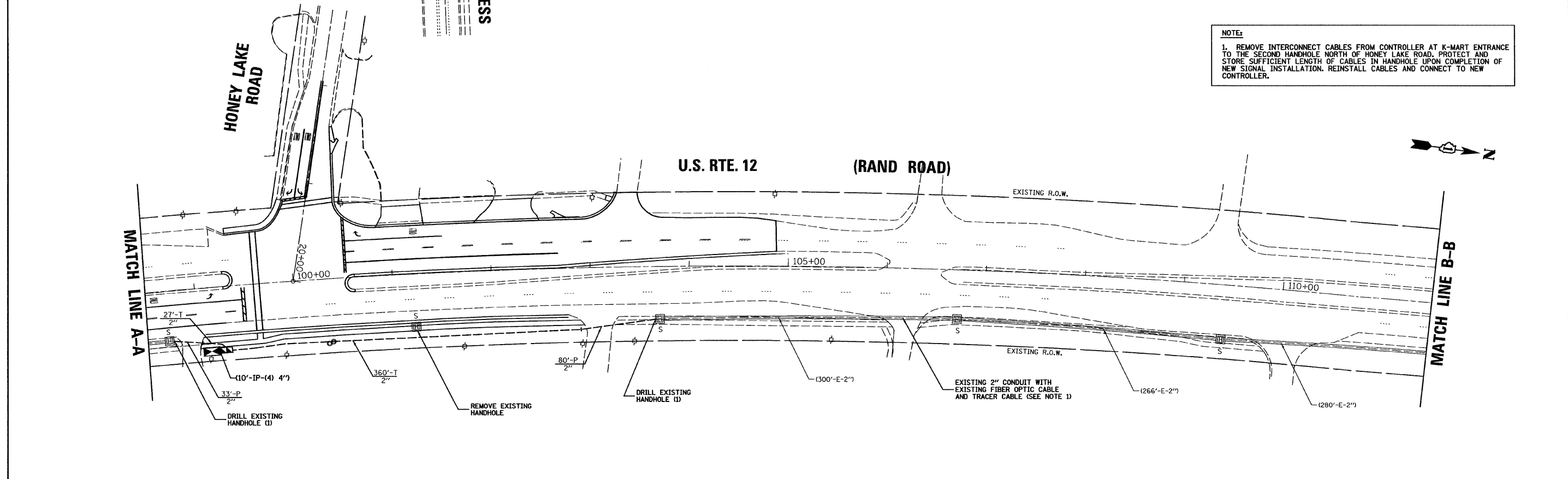
PREPARED BY:
CEMCON, Ltd.
 Consulting Engineers, Land Surveyors & Planners
 2250 White Oak Circle, Suite 100
 Aurora, Illinois 60504-9675
 Ph: 630.862.2100 Fax: 630.862.2199
 E-Mail: oadd@cemcon.com Website: www.cemcon.com

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



INSTALL NEW FIBER OPTIC CABLE AND TRACER CABLE IN EXISTING 2" CONDUIT BETWEEN CONTROLLER AT THE INTERSECTION OF U.S. ROUTE 12 / K-MART ACCESS AND THE PROPOSED CONTROLLER AT U.S. ROUTE 12 / HONEY LAKE ROAD

NOTE:
 1. REMOVE INTERCONNECT CABLES FROM CONTROLLER AT K-MART ENTRANCE TO THE SECOND HANDHOLE NORTH OF HONEY LAKE ROAD. PROTECT AND STORE SUFFICIENT LENGTH OF CABLES IN HANDHOLE UPON COMPLETION OF NEW SIGNAL INSTALLATION. REINSTALL CABLES AND CONNECT TO NEW CONTROLLER.



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

PREPARED BY:
CEMCON, Ltd.
 Consulting Engineers, Land Surveyors & Planners
 2280 White Oak Circle, Suite 100
 Aurora, Illinois 60504-9875
 Ph: 630.862.2100 Fax: 630.862.2199
 E-Mail: codd@cemcon.com Website: www.cemcon.com

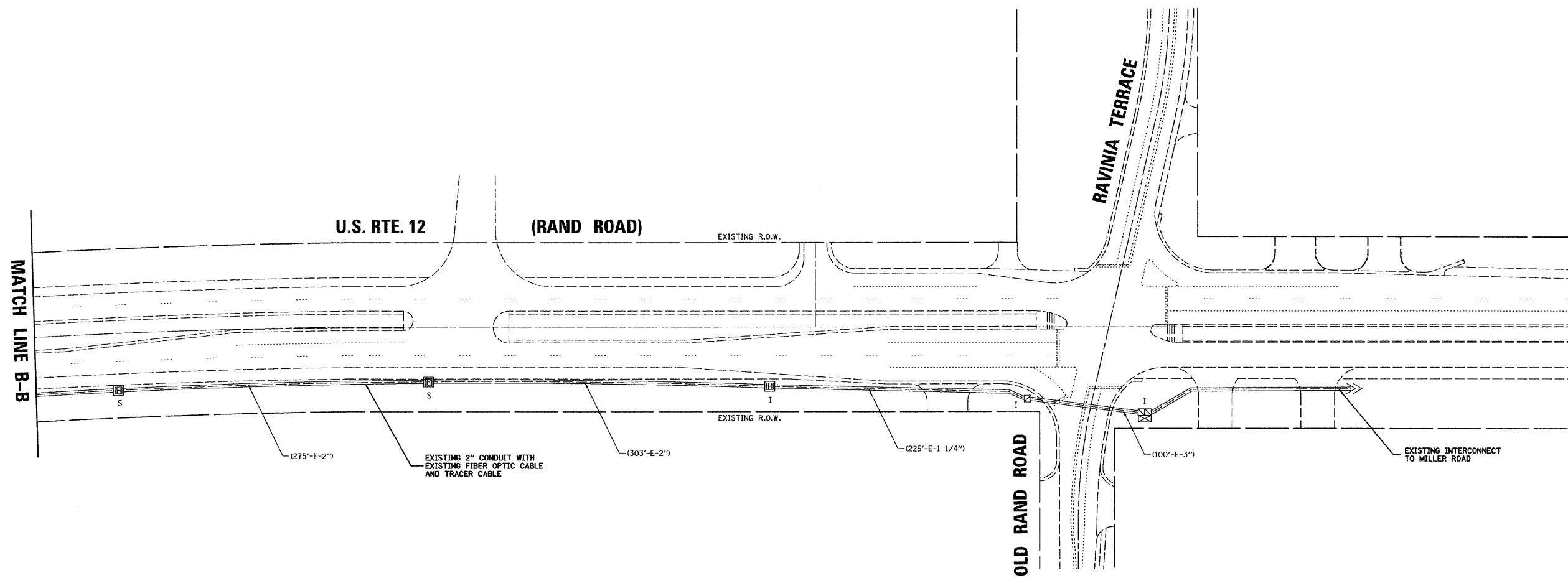
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	PLOT DATE = 1-13-11	CHECKED - BPT	REVISED -
		DATE - 2-3-11	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
 U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	16
CONTRACT NO. 60L68				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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

PREPARED BY:
CEMCON, Ltd.
 Consulting Engineers, Land Surveyors & Planners
 2280 White Oak Circle, Suite 100
 Aurora, Illinois 60504-9875
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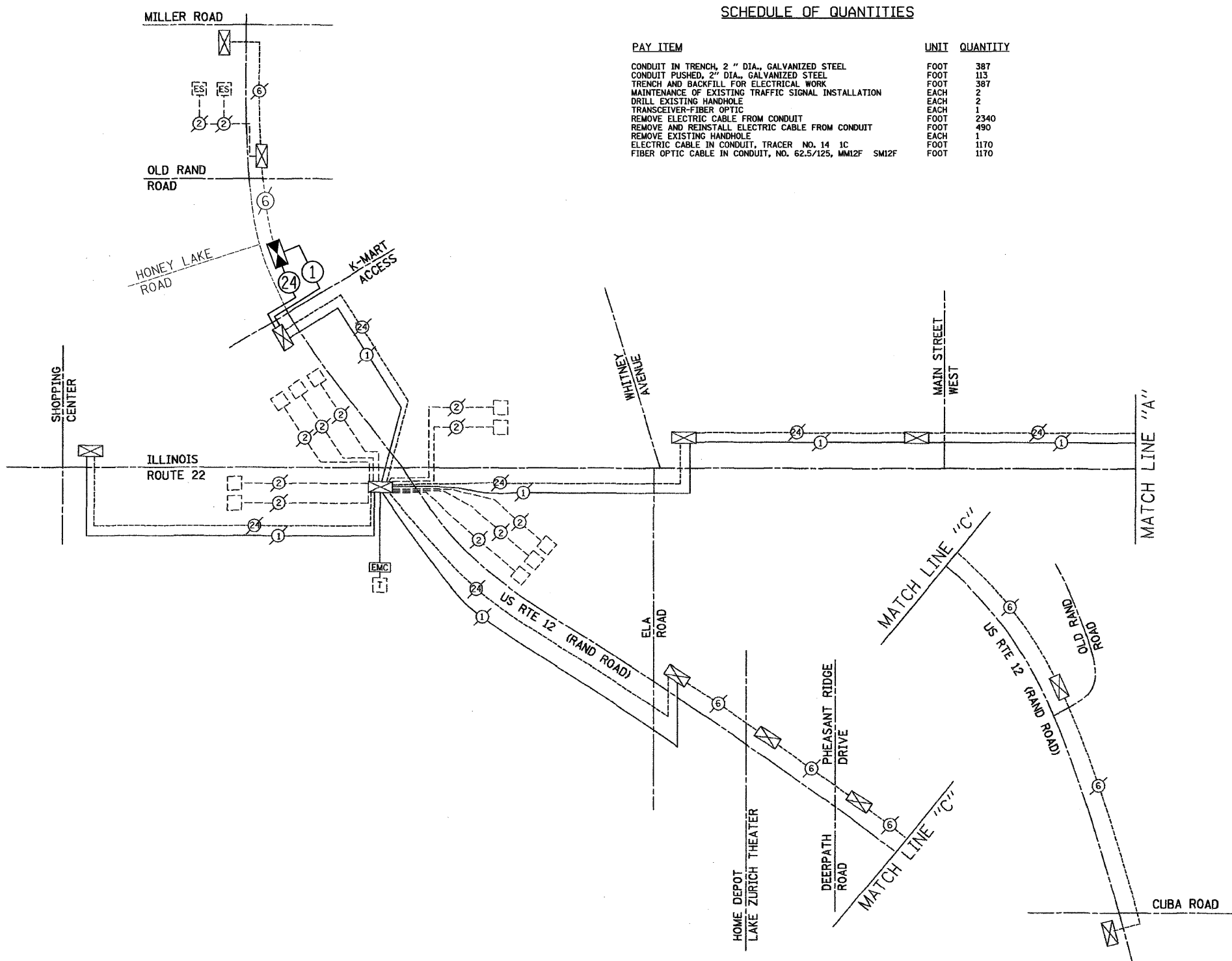
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	PLOT DATE = 1-13-11	CHECKED - BPT	REVISED -
		DATE - 2-3-11	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
 U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	17
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L68	



SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	387
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	113
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	387
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
DRILL EXISTING HANDHOLE	EACH	2
TRANSCIVER-FIBER OPTIC	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2340
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	490
REMOVE EXISTING HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	1170
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1170



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

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: oadd@cemcon.com Website: www.cemcon.com

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	PLOT SCALE = 1"=20'	DRAWN - JGC	REVISED -
	PLOT DATE = 1-13-11	CHECKED - BPT	REVISED -
		DATE - 2-3-11	REVISED -

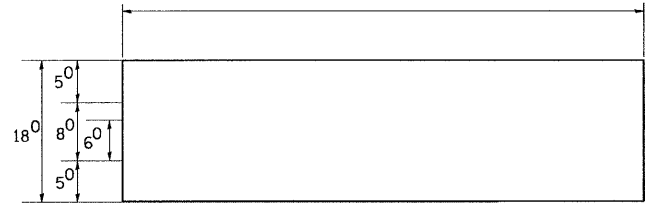
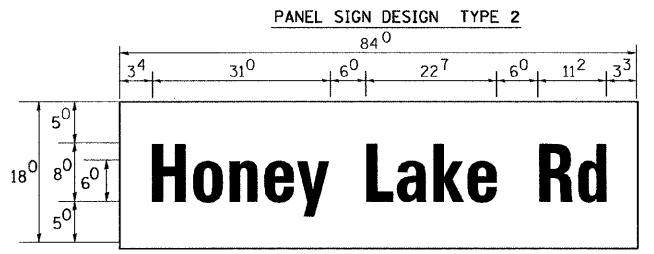
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT SCHEMATIC
U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD**

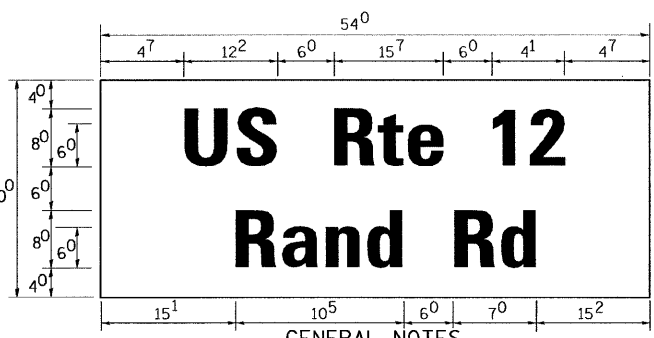
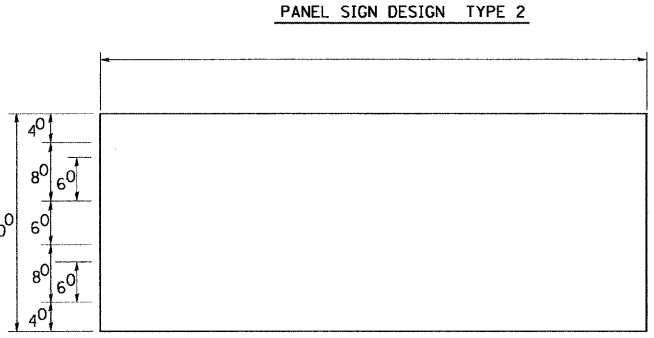
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	18
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 60L68



NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS



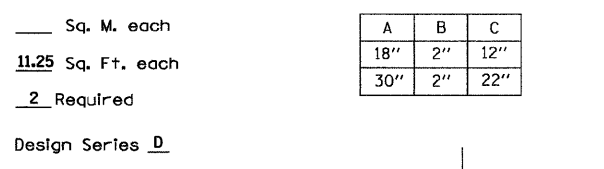
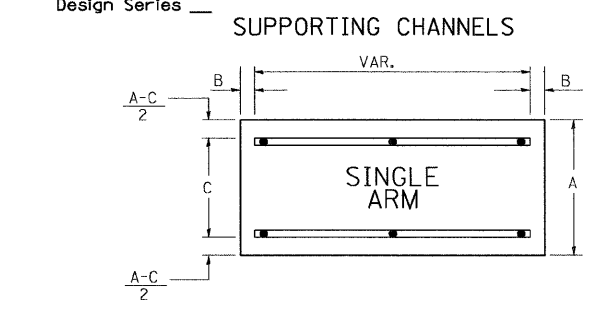
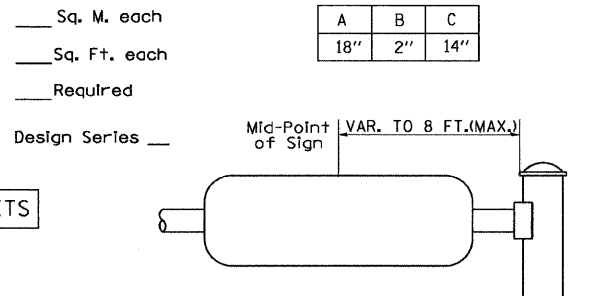
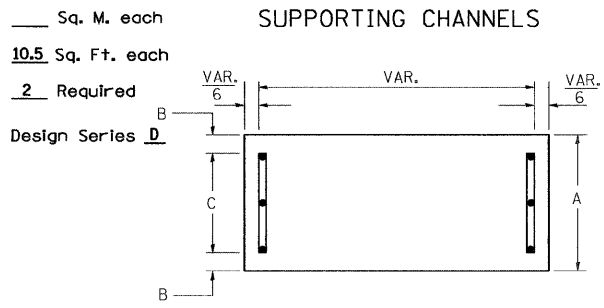
GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
- THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 8'-0".
- ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:

* J.O. HERBERT CO. MIDLOTHIAN, VA. * WESTERN REMAC INC. WOODRIDGE, IL.

PARTS LISTING:
SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
SELF TAPPING WITH NEOPRENE WASHER
BRACKETS PART #HPN034 (UNIVERSAL)
CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.



SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM shall be used. See Note #5.

Upper Case To Lower Case
Spacing Chart 8-6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER															
	acde		bhikl		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ²	1 ⁴
B	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁶	1 ⁷
C E G	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
D O Q R	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
F	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²
H I M N	2 ⁰	2 ¹	2 ²	2 ⁴	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹	2 ⁰	2 ¹
J U	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹
K L	1 ¹	1 ²	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
P	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
S	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
T	1 ¹	1 ²	1 ⁶	1 ⁷	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
V	0 ⁶	1 ⁰	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
Y	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁵	0 ⁷	0 ⁵	0 ⁶	0 ⁶	1 ⁰	1 ¹	1 ²
Z	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹

Lower Case To Lower Case
Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER															
	acde		bhikl		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷
l m n q u	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
b f k o p s	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
c e	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
r	0 ⁶	1 ⁰	1 ²	1 ⁴	0 ⁶	1 ⁰	0 ³	0 ³	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰
t z	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
v y	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²
w	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
x	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴

Number To Number
Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER																			
	0		1		2		3		4		5		6		7		8		9	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁶	1 ⁷
1	2 ⁰	2 ¹	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁴	1 ⁵	2 ⁰	2 ¹	2 ⁰	2 ¹
2 3 4	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵
5	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵
6	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵
7	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁵	0 ⁵	0 ⁶	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ²	1 ⁴
8	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁴	1 ⁵

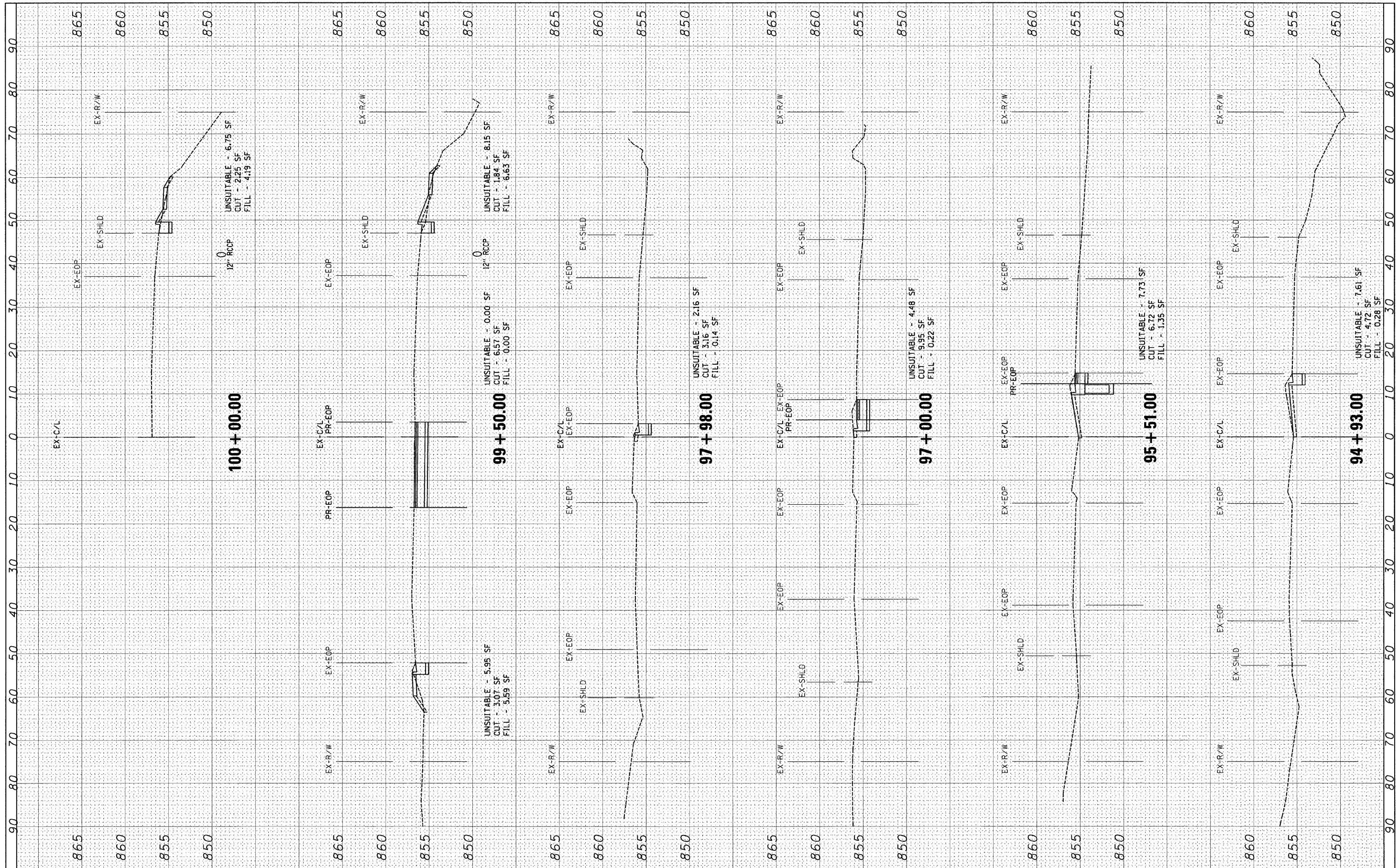
EXAMPLE. 2³ DENOTES 3"

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS				8 INCH UPPER CASE LETTERS				LETTERS	6 INCH LOWER CASE LETTERS	
	SERIES		SERIES		SERIES		SERIES			C	D
	C	D	C	D	C	D	C	D			
A	3 ⁶	5 ⁰	5 ⁰	6 ⁵	a	3 ⁵	4 ²				
B	3 ²	4 ⁰	4 ³	5 ³	b	3 ⁵	4 ²				
C	3 ²	4 ⁰	4 ³	5 ³	c	3 ⁵	4 ¹				
D	3 ²	4 ⁰	4 ³	5 ³	d	3 ⁵	4 ²				
E	3 ⁰	3 ⁵	4 ⁰	4 ⁷	e	3 ⁵	4 ²				
F	3 ⁰	3 ⁵	4 ⁰	4 ⁷	f	2 ³	2 ⁶				
G	3 ²	4 ⁰	4 ³	5 ³	g	3 ⁵	4 ²				
H	3 ²	4 ⁰	4 ³	5 ³	h	3 ⁵	4 ²				
I	0 ⁷	0 ⁷	1 ¹	1 ²	i	1 ¹	1 ¹				
J	3 ⁰	3 ⁶	4 ⁰	5 ⁰	j	2 ⁰	2 ²				
K	3 ²	4 ¹	4 ³	5 ⁴	k	3 ⁵	4 ²				
L	3 ⁰	3 ⁵	4 ⁰	4 ⁷	l	1 ¹	1 ¹				
M	3 ⁷	4 ⁵	5 ¹	6 ¹	m	6 ⁰	7 ⁰				
N	3 ²	4 ⁰	4 ³	5 ³	n	3 ⁵	4 ²				
O	3 ⁴	4 ²	4 ⁵	5 ⁵	o	3 ⁶	4 ³				
P	3 ²	4 ⁰	4 ³	5 ³	p	3 ⁵	4 ²				
Q	3 ⁴	4 ²	4 ⁵	5 ⁵	q	3 ⁵	4 ²				
R	3 ²	4 ⁰	4 ³	5 ³	r	2 ⁶	3 ²				
S	3 ²	4 ⁰	4 ³	5 ³	s	3 ⁶	4 ²				
T	3 ⁰	3 ⁵	4 ⁰	4 ⁷	t	2 ⁷	3 ²				
U	3 ²	4 ⁰	4 ³	5 ³	u	3 ⁵	4 ²				
V	3 ⁵	4 ⁴	4 ⁷	6 ⁰	v	4 ²	4 ⁷				
W	4 ⁴	5 ²	6 ⁰	7 ⁰	w	5 ⁵	6 ⁴				
X	3 ⁴	4 ⁰	4 ⁵	5 ³	x	4 ⁴	5 ¹				
Y	3 ⁶	5 ⁰	5 ⁰	6 ⁶	y	4 ⁶	5 ³				
Z	3 ²	4 ⁰	4 ³	5 ³	z	3 ⁶	4 ³				

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

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



FILE NAME =
 #FILE#

USER NAME = _USER_
 PLOT SCALE = 10.0005' / IN.
 PLOT DATE = 2/14/2011

DESIGNED - EF	REVISED -
DRAWN - EF	REVISED -
CHECKED - RS	REVISED -
DATE - 02-14-2011	REVISED -

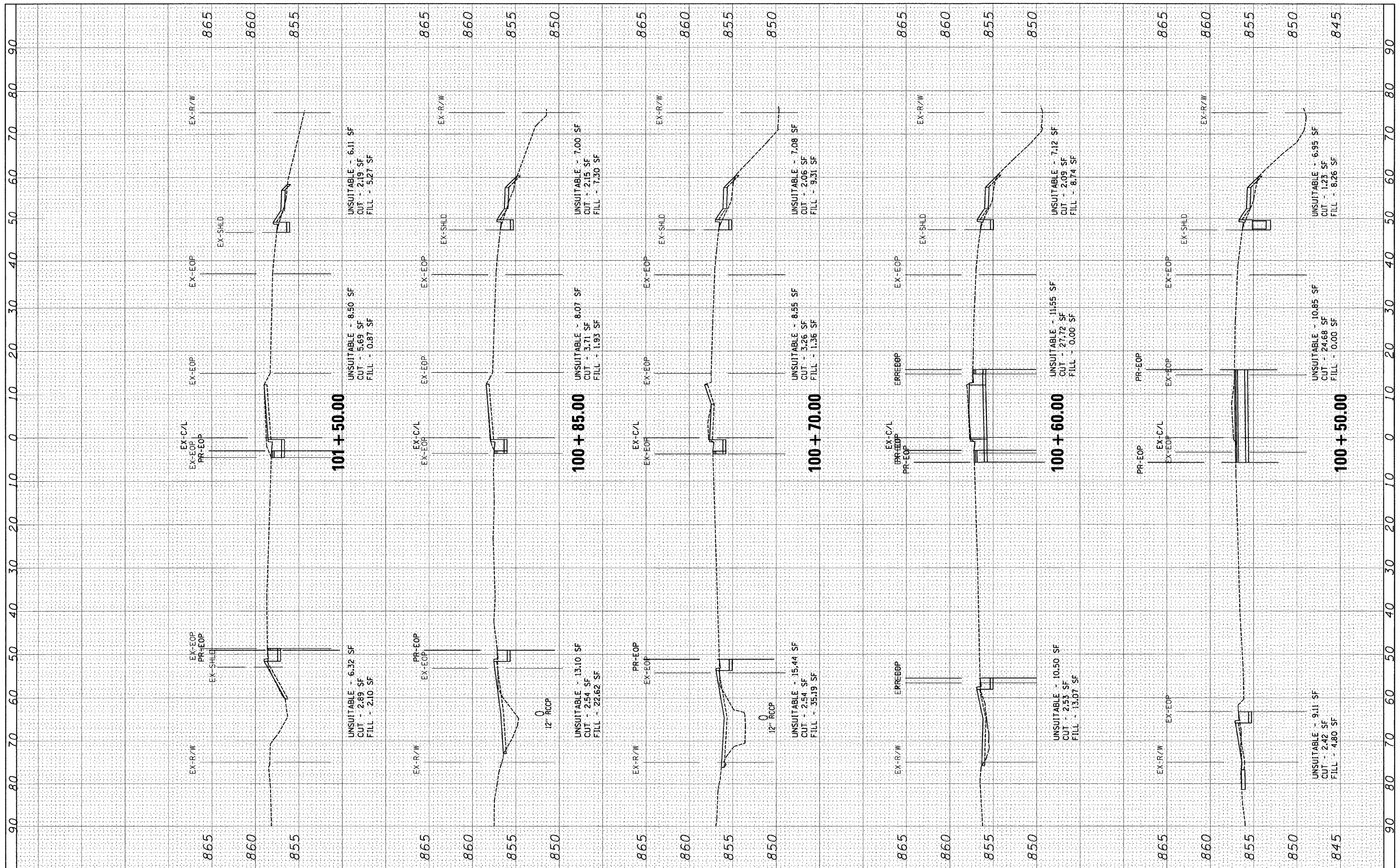
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD
 CROSS SECTIONS
 SCALE: 10H : 5V SHEET NO. OF 3 SHEETS STA. 94+93.00 TO STA. 100+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	20
				CONTRACT NO. 60L68
ILLINOIS FED. AID PROJECT				

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

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



FILE NAME - #FILEL*

USER NAME - USER.
 PLOT SCALE = 10.0005' / IN.
 PLOT DATE = 2/14/2011

DESIGNED - EF	REVISED -
DRAWN - EF	REVISED -
CHECKED - RS	REVISED -
DATE - 02-14-2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

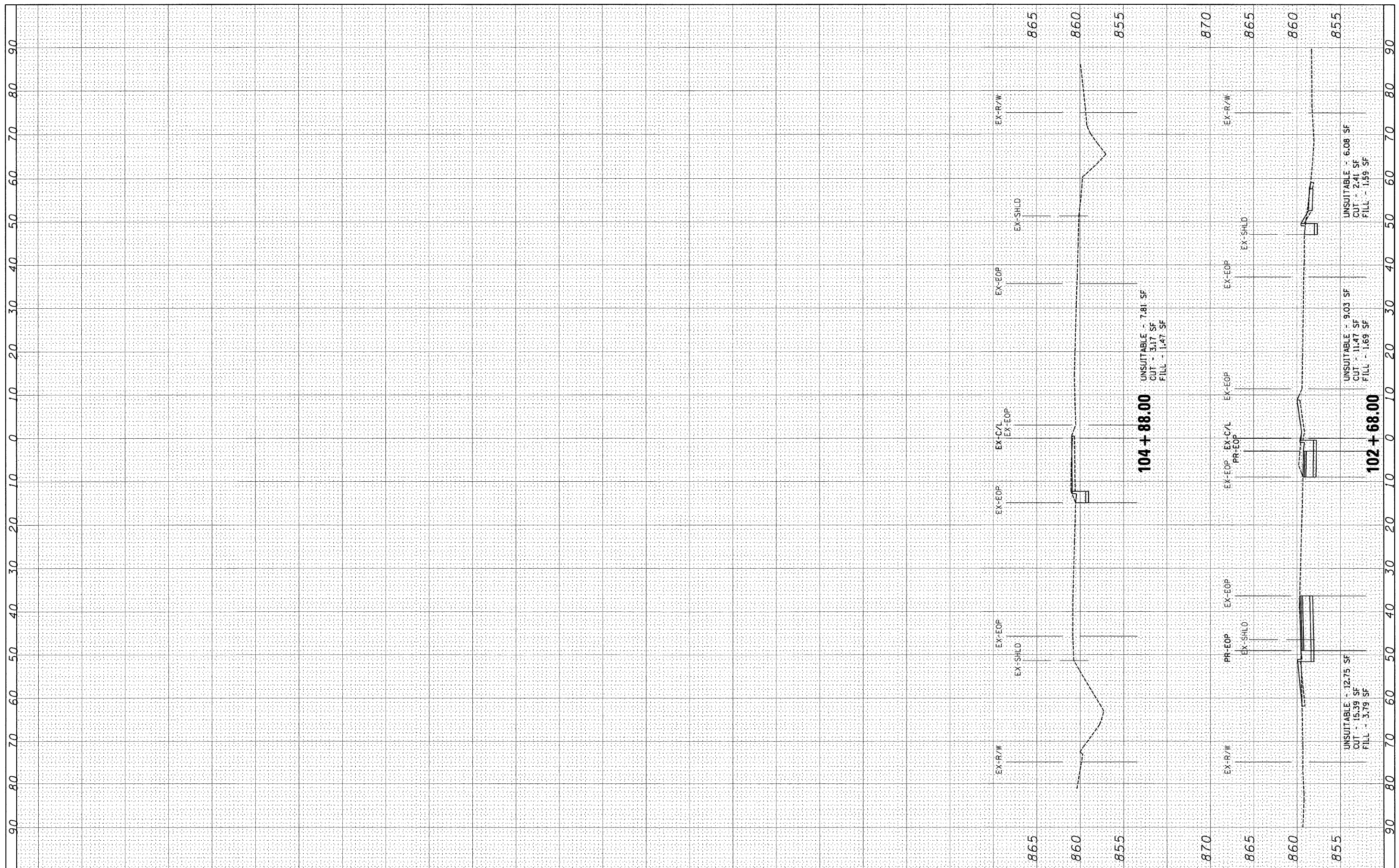
**U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD
CROSS SECTIONS**

SCALE: 10H : 5V SHEET NO. OF 3 SHEETS STA. 100+50.00 TO STA. 101+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	21
CONTRACT NO. 60L68			ILLINOIS FED. AID PROJECT	

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

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



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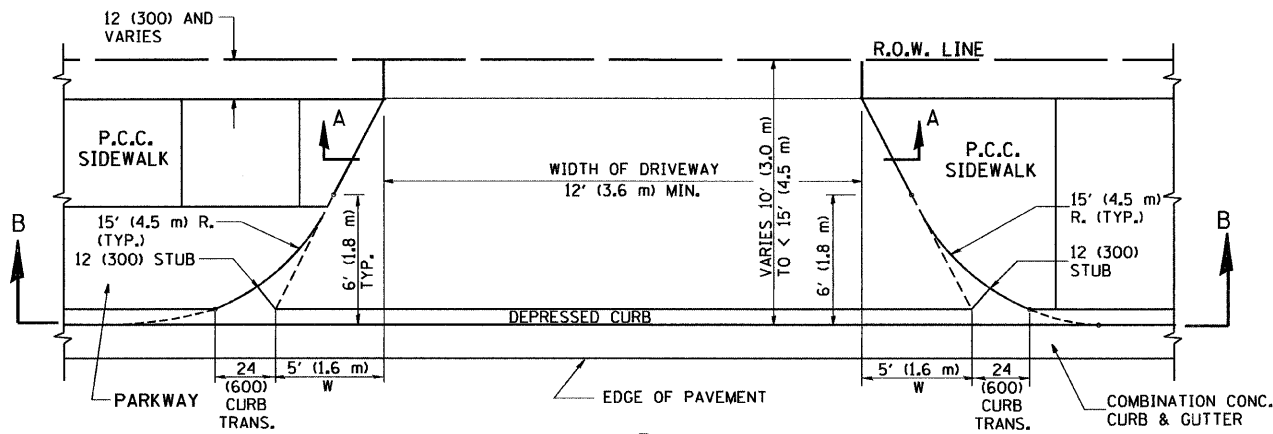
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	DATE - 02-14-2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

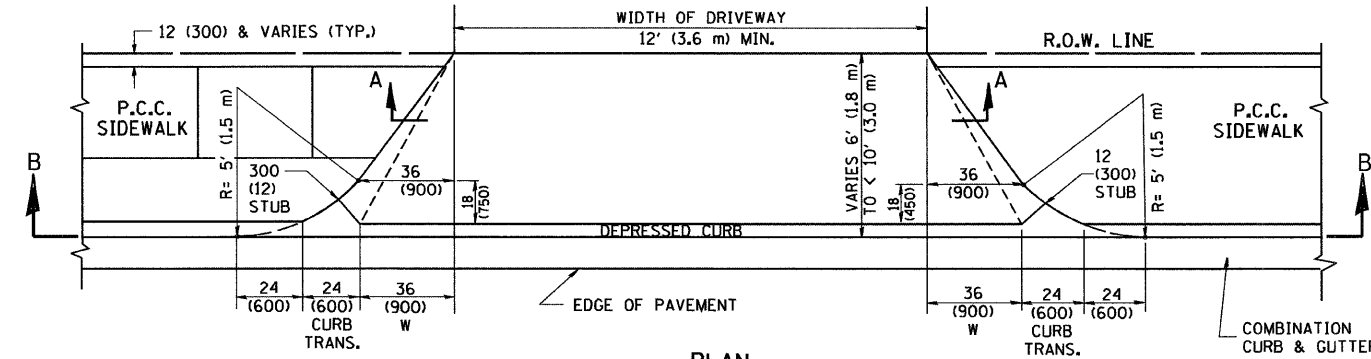
**U.S. ROUTE 12 (RAND ROAD) AT HONEY LAKE ROAD
 CROSS SECTIONS**

SCALE: 10H : 5V SHEET NO. OF 3 SHEETS STA. 102+68.00 TO STA. 104+88.00

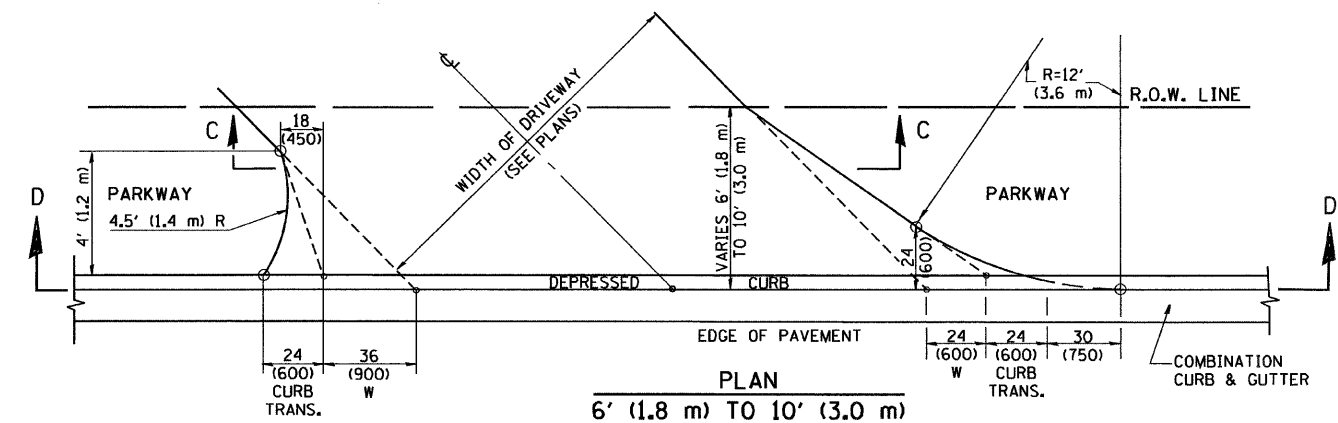
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	22
				CONTRACT NO. 60L68
ILLINOIS FED. AID PROJECT				



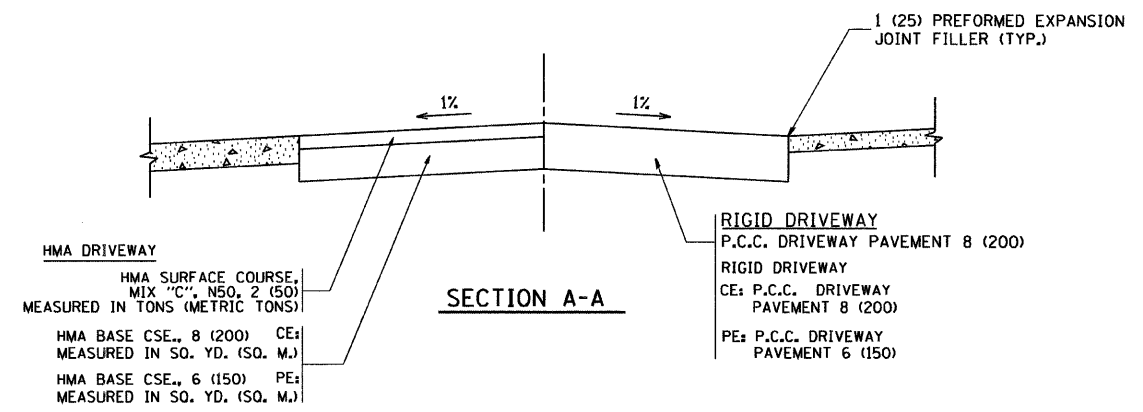
PLAN
10' (3.0 m) TO < 15' (4.5 m)



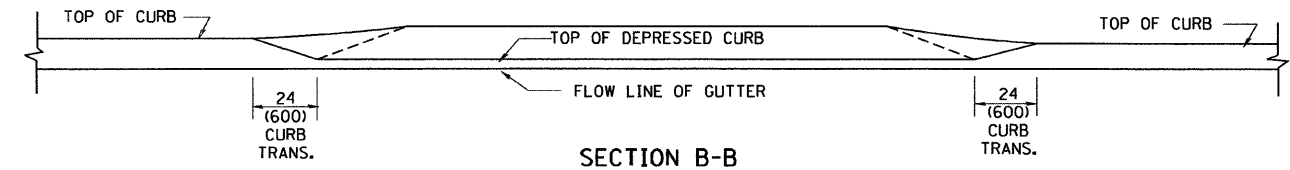
PLAN
6' (1.8 m) TO < 10' (3.0 m)



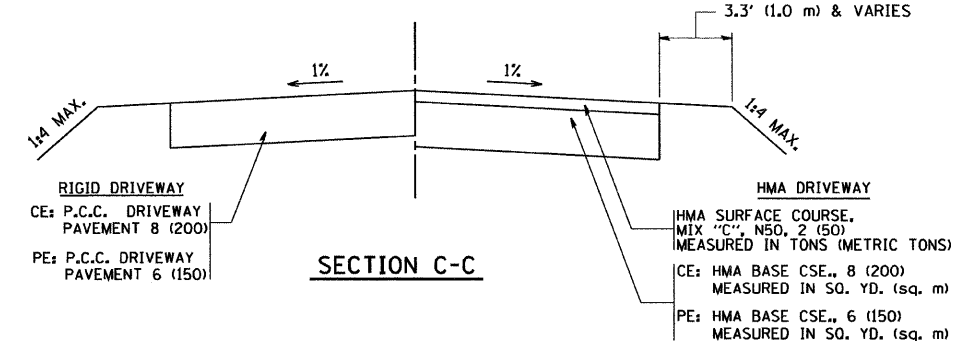
PLAN
6' (1.8 m) TO 10' (3.0 m)



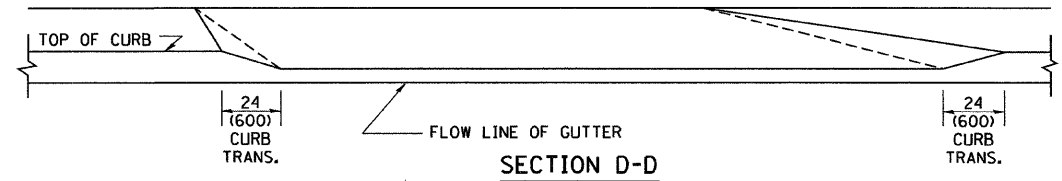
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

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

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USER NAME = gaglianobt
PLOT SCALE = 50.0000' / IN.
PLOT DATE = 1/4/2008

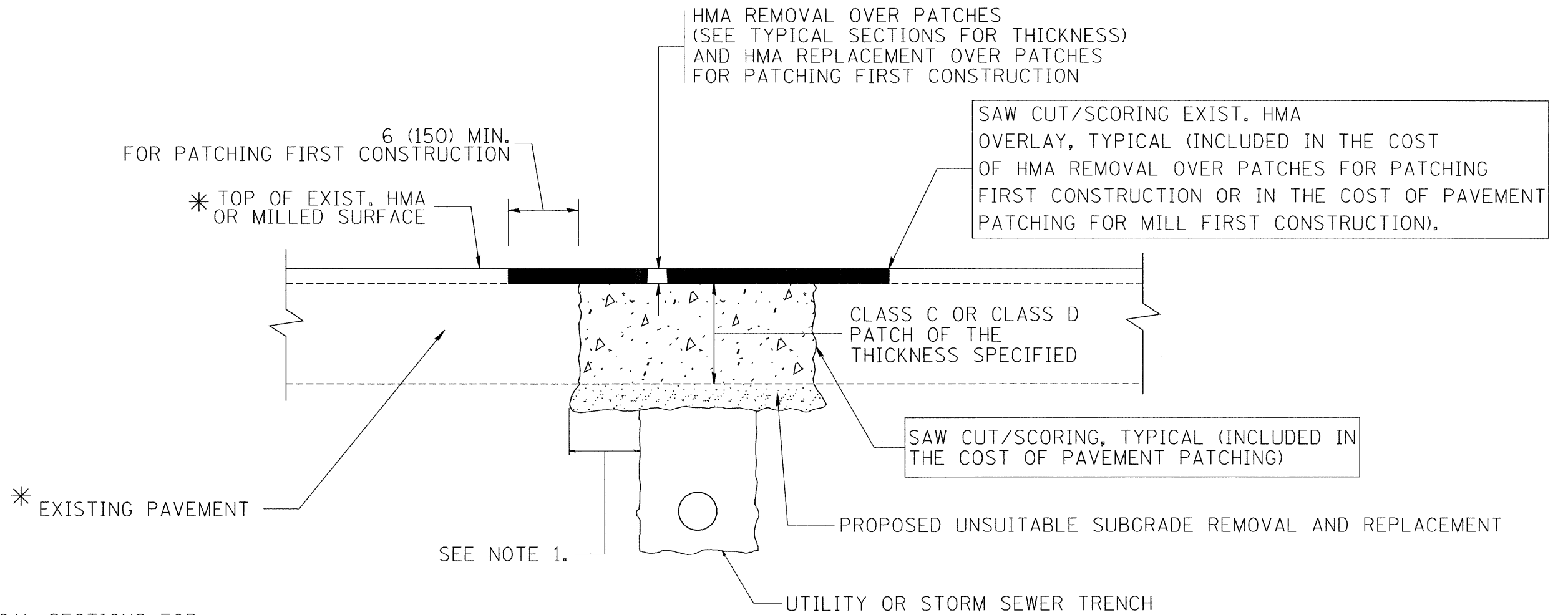
DESIGNED - R. SHAH
DRAWN -
CHECKED -
DATE - 11-06-95

REVISED - T. HOLTZ 04-08-97
REVISED - M. GOMEZ 04-06-01
REVISED - P. LoFLEUR 04-15-03
REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	23
BD400-02 (BD-02)			CONTRACT NO. 60L68	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



* 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)

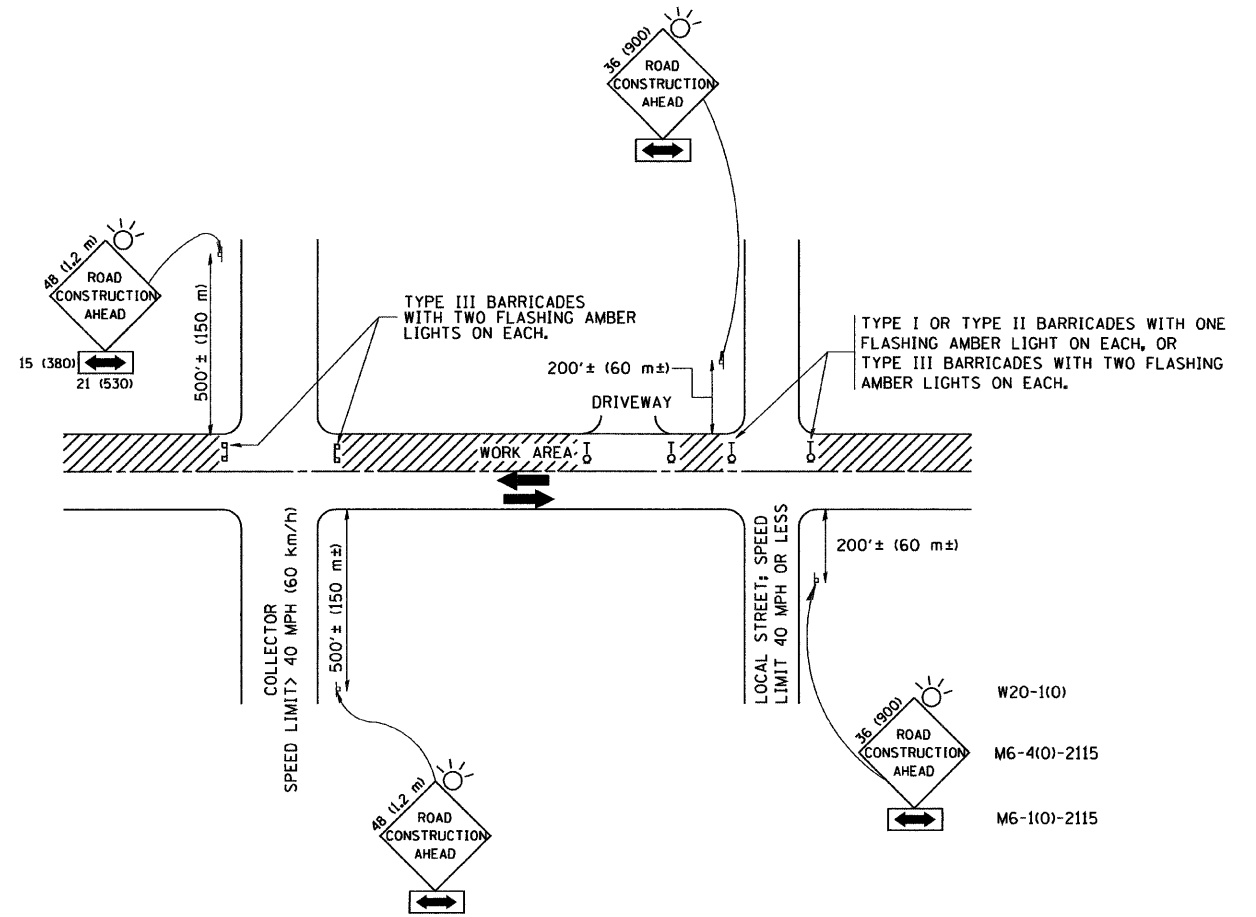
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 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.

FILE NAME = c:\projects\diststd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 50.000' / IN.	DRAWN -	REVISED - R. BORO 01-01-07			334	SY-2-N	LAKE	34	24	
	PLOT DATE = 10/27/2008	CHECKED -	REVISED - R. BORO 09-04-07			BD400-04 (BD-22)		CONTRACT NO. 60L68			
		DATE - 10-25-94	REVISED - K. ENG 10-27-08			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		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.

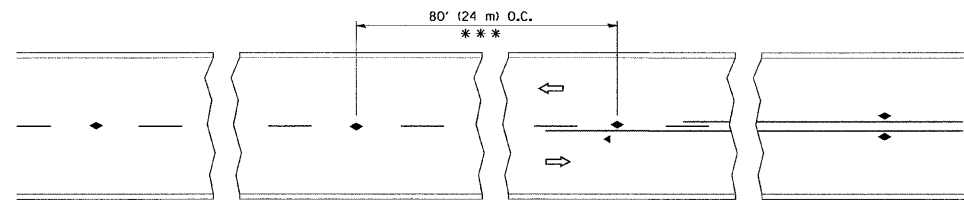
All dimensions are in millimeters (inches) unless otherwise shown.

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	PLOT DATE = 1/4/2008	CHECKED -	REVISED - A. HOUSEH 10-15-96
		DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

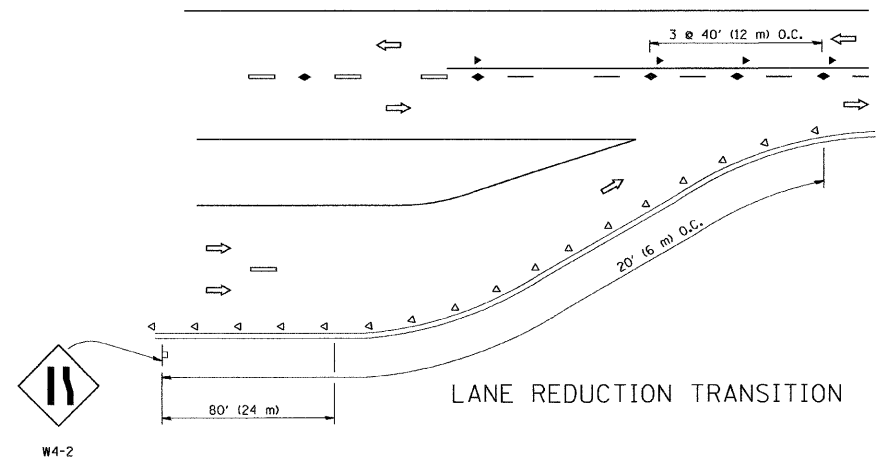
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

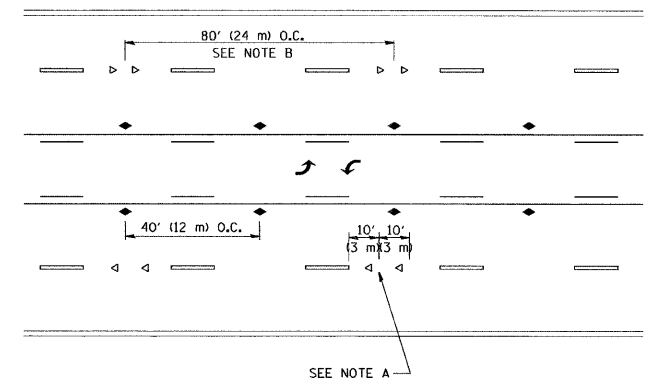
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	SY-2-N	LAKE	34	25
TC-10			CONTRACT NO. 60L68	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



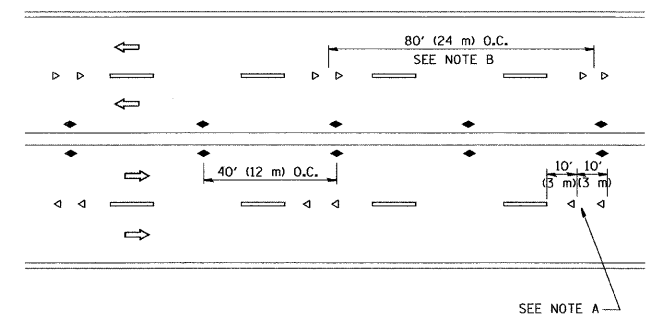
TWO-LANE/TWO-WAY



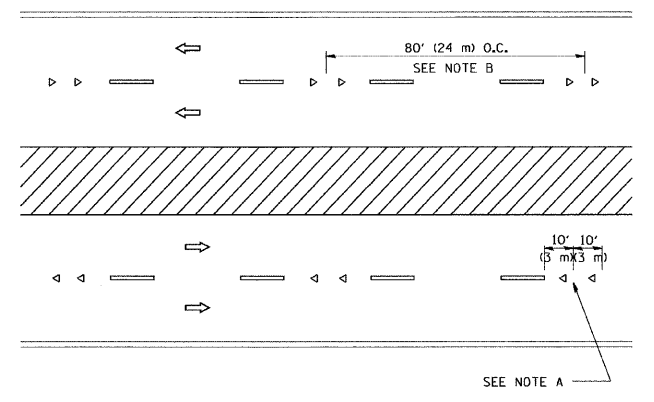
LANE REDUCTION TRANSITION



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

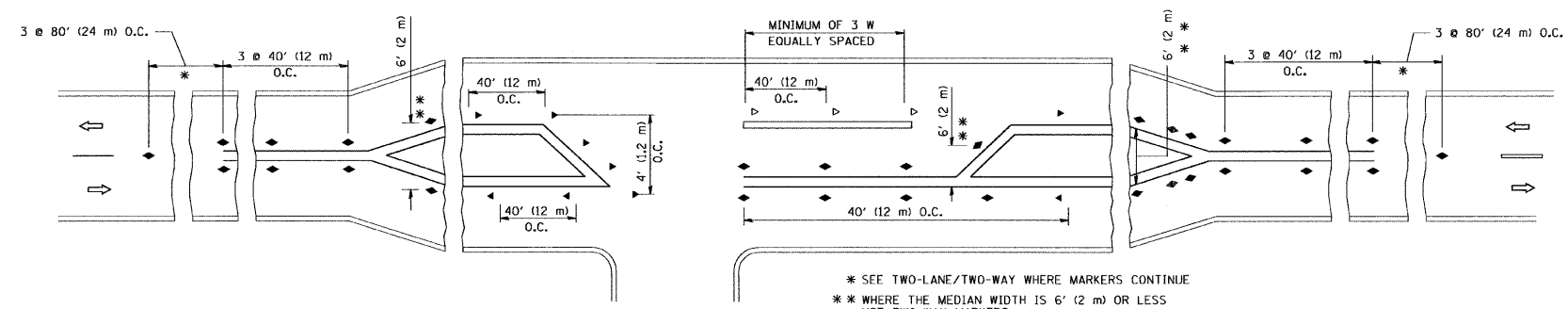
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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. (16 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

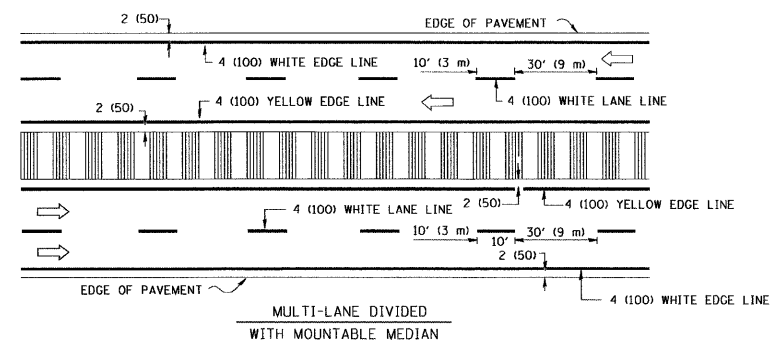
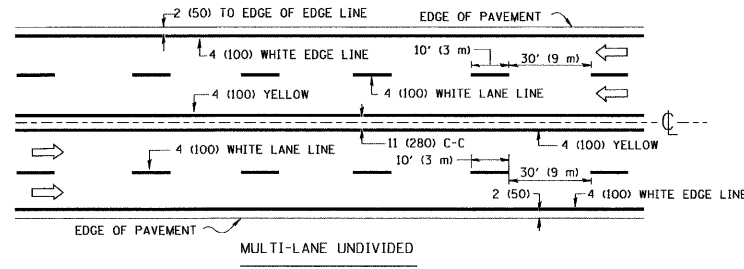
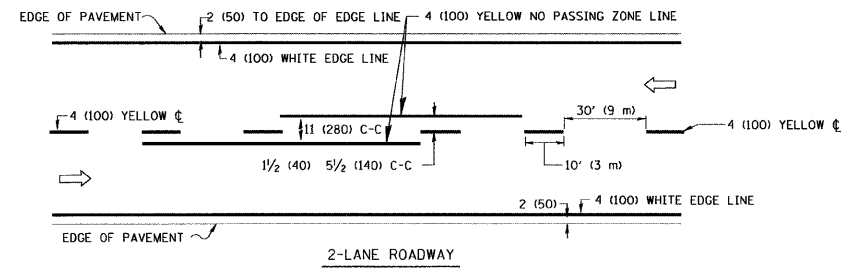
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

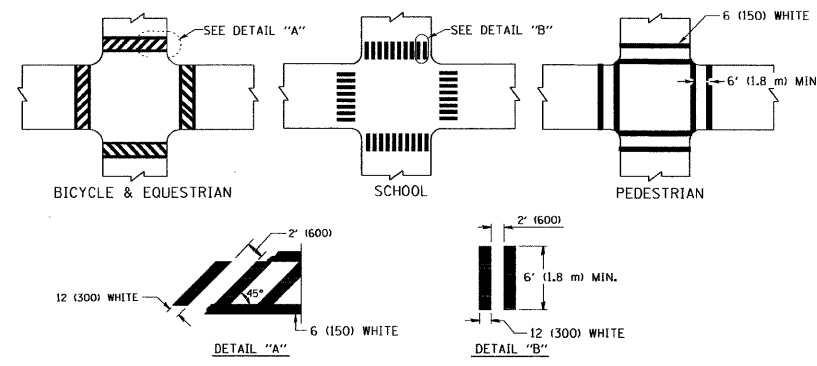
All dimensions are in inches (millimeters) unless otherwise shown.

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	PLOT SCALE = 50,000' / IN.	DRAWN -	REVISED - T. RAMMACHER 03-12-99		334	SY-2-N	LAKE	34	26			
	PLOT DATE = 9/9/2009	CHECKED -	REVISED - T. RAMMACHER 01-06-00		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.			TC-11		CONTRACT NO. 60L68		
	DATE -	REVISED - C. JUCIUS 09-09-09	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									

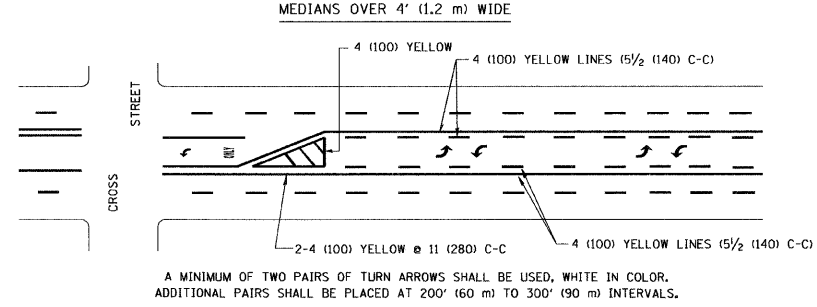
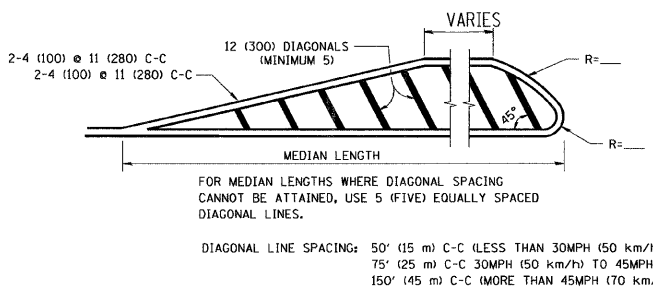
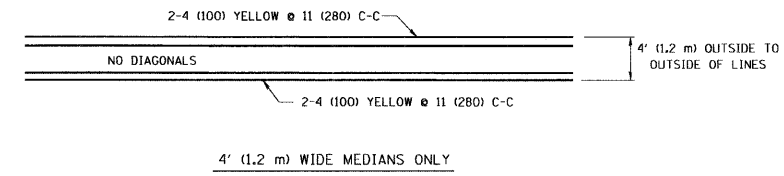


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

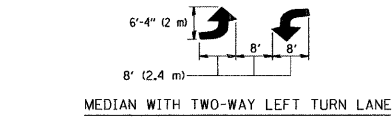
TYPICAL LANE AND EDGE LINE MARKING



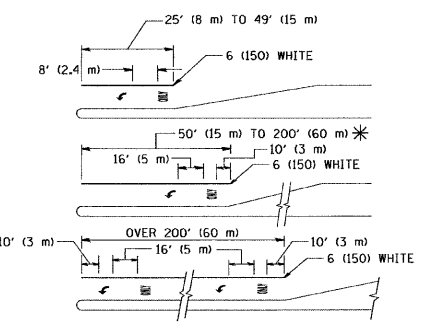
TYPICAL CROSSWALK MARKING



TYPICAL PAINTED MEDIAN MARKING



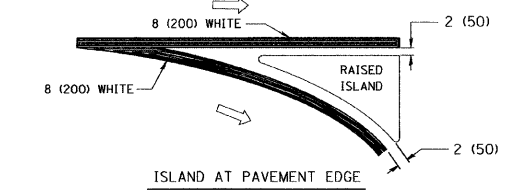
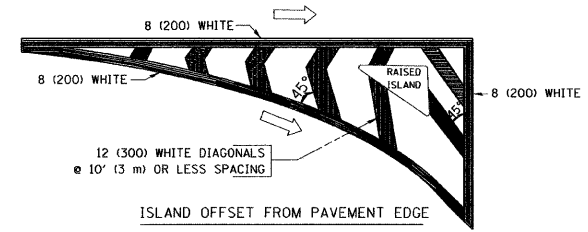
MEDIAN WITH TWO-WAY LEFT TURN LANE



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 * 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

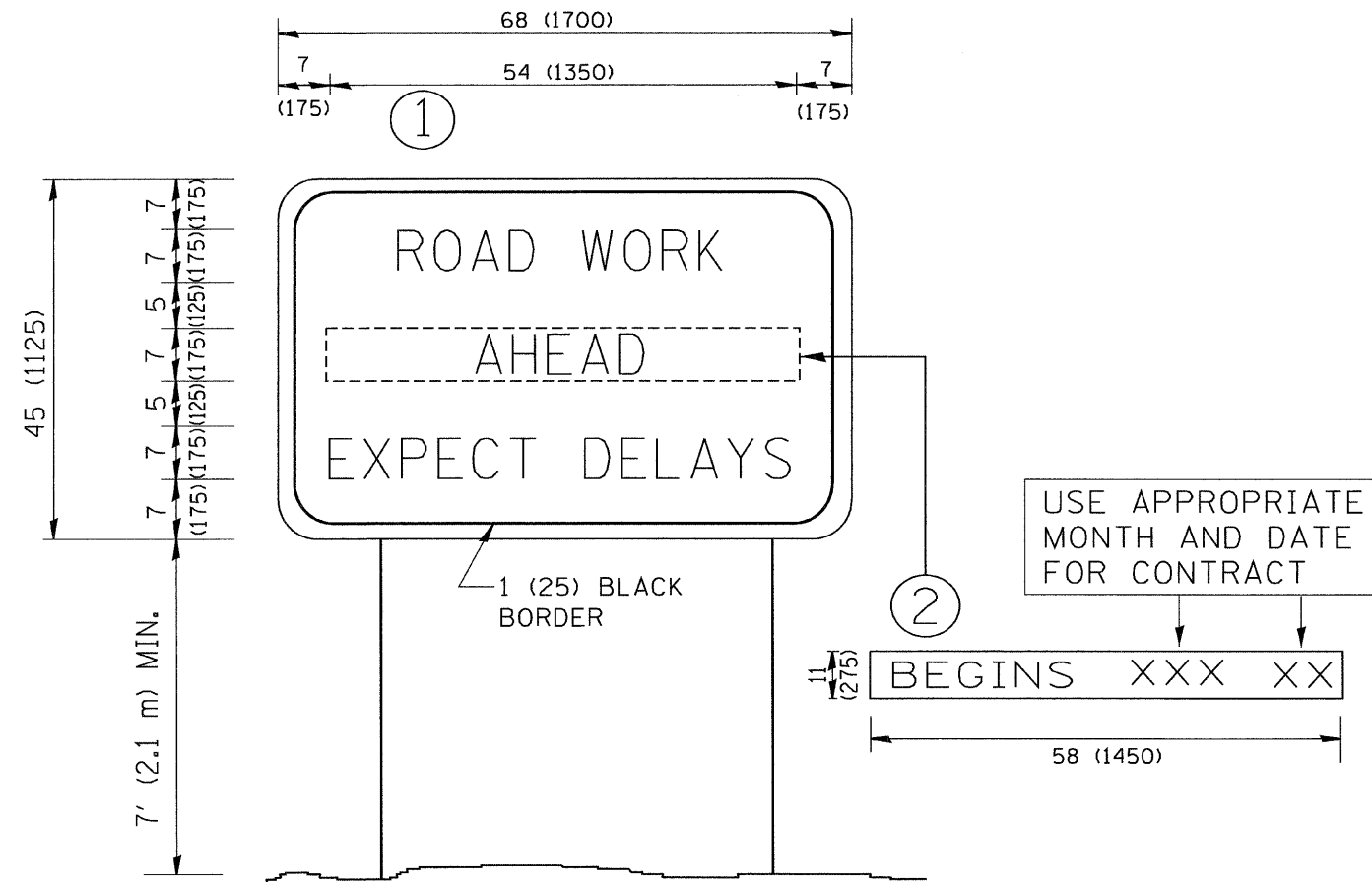


TYPICAL ISLAND MARKING

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	5/2 (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; 5/2 (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 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
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.



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.

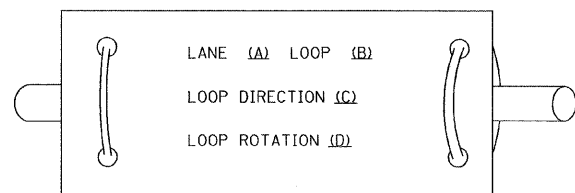
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\to22.dgn	USER NAME = ggglanobt	DESIGNED - DRAWN -	REVISED - REVISED -	R. MIRS 09-15-97 R. MIRS 12-11-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN			F.A.P. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 28
PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED -	REVISED -	T. RAMMACHER 02-02-99		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
PLOT DATE = 1/4/2008	DATE -	REVISED -	REVISED -	C. JUCIUS 01-31-07		CONTRACT NO. 60L68							

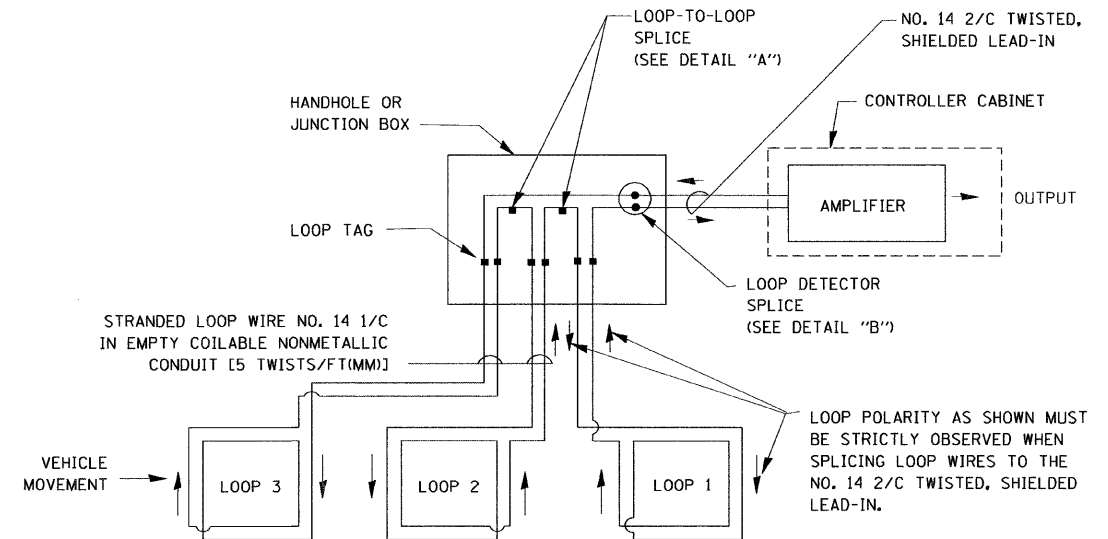
LOOP DETECTOR NOTES

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

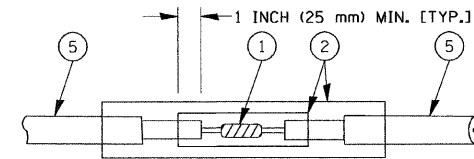


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

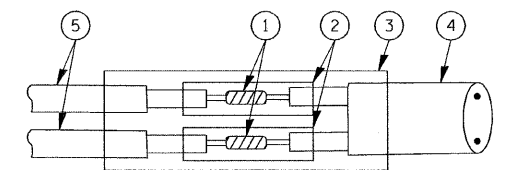


DETECTOR LOOP WIRING SCHEMATIC

- 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.

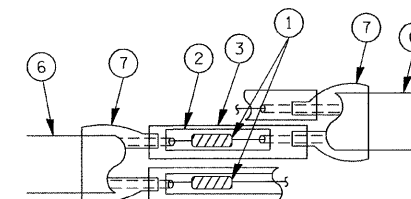


**DETAIL "A"
LOOP-TO-LOOP SPLICE**

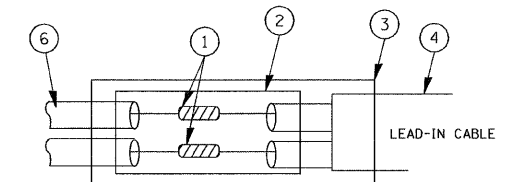


**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

TYPE I LOOP



**DETAIL "A"
LOOP-TO-LOOP SPLICE**



**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

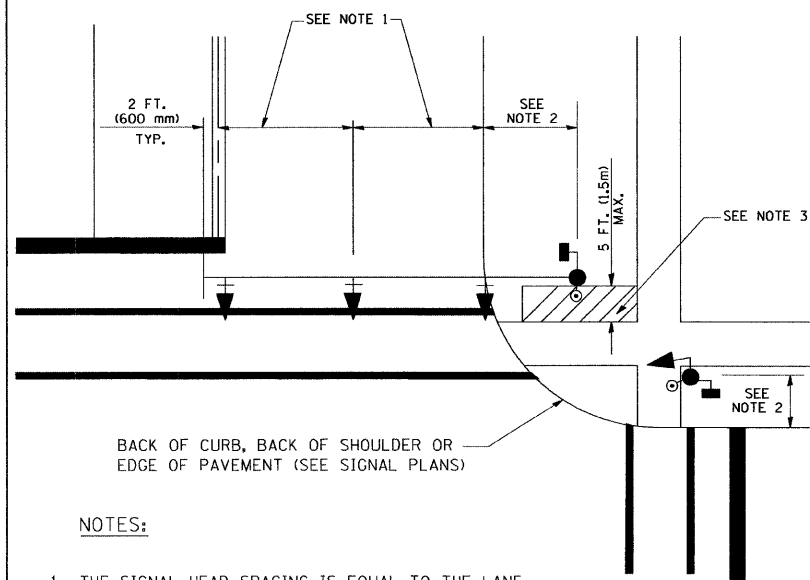
LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- PRE-FORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = bouer-dl	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca\pwork\PIW\01\BAUERDL\d0108315\ts05.dgn	DRAWN - BCK	REVISED -	334			SY-2-N	LAKE	34	29	
PLOT SCALE = 50,0000 "/ IN.	CHECKED - DAD	REVISED -	TS-05			CONTRACT NO. 60L68				
PLOT DATE = 11/4/2009	DATE - 10-28-09	REVISED -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
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TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

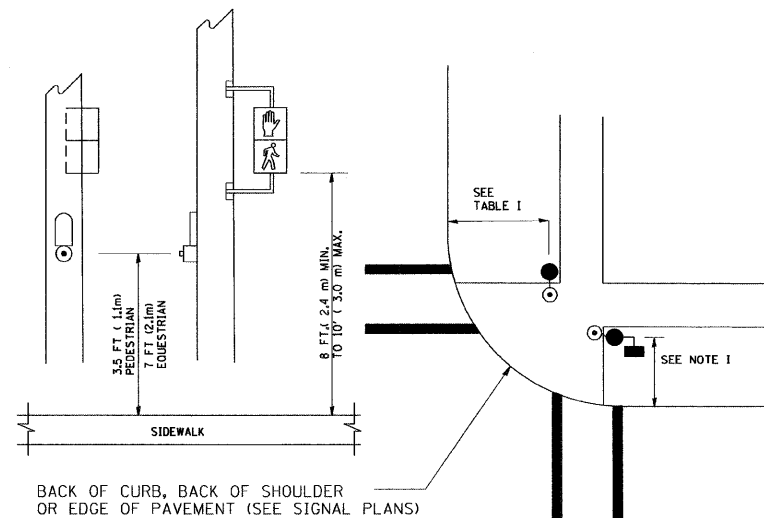
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

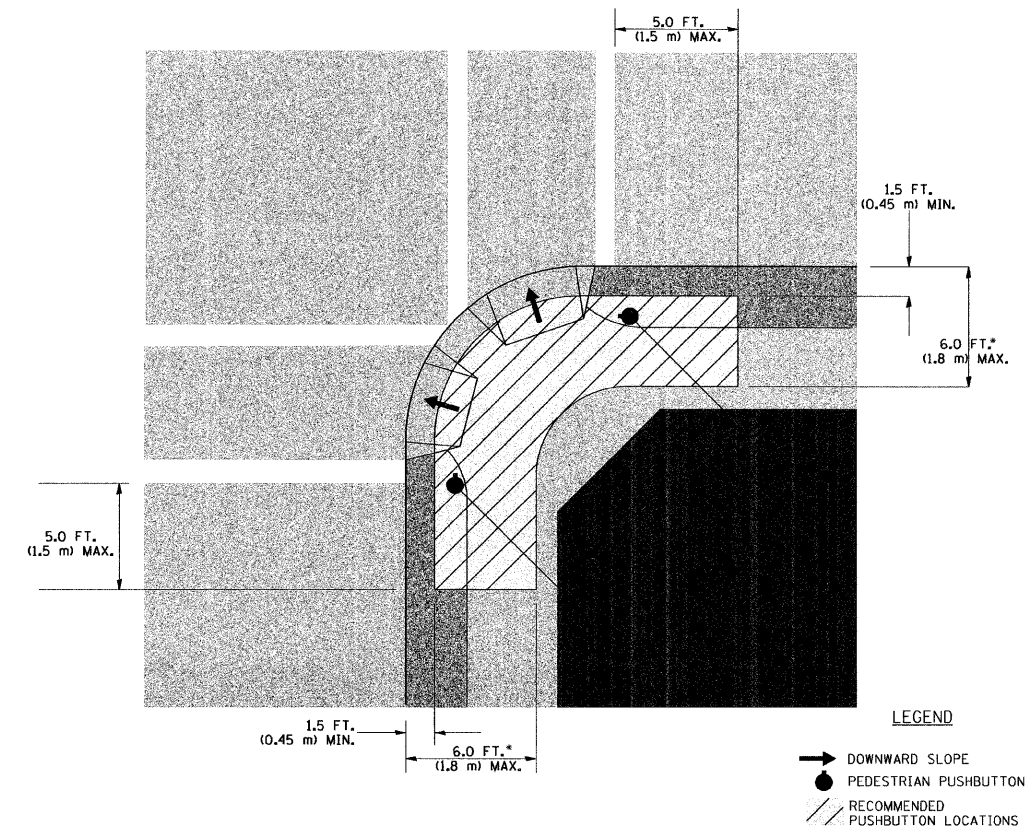
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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:

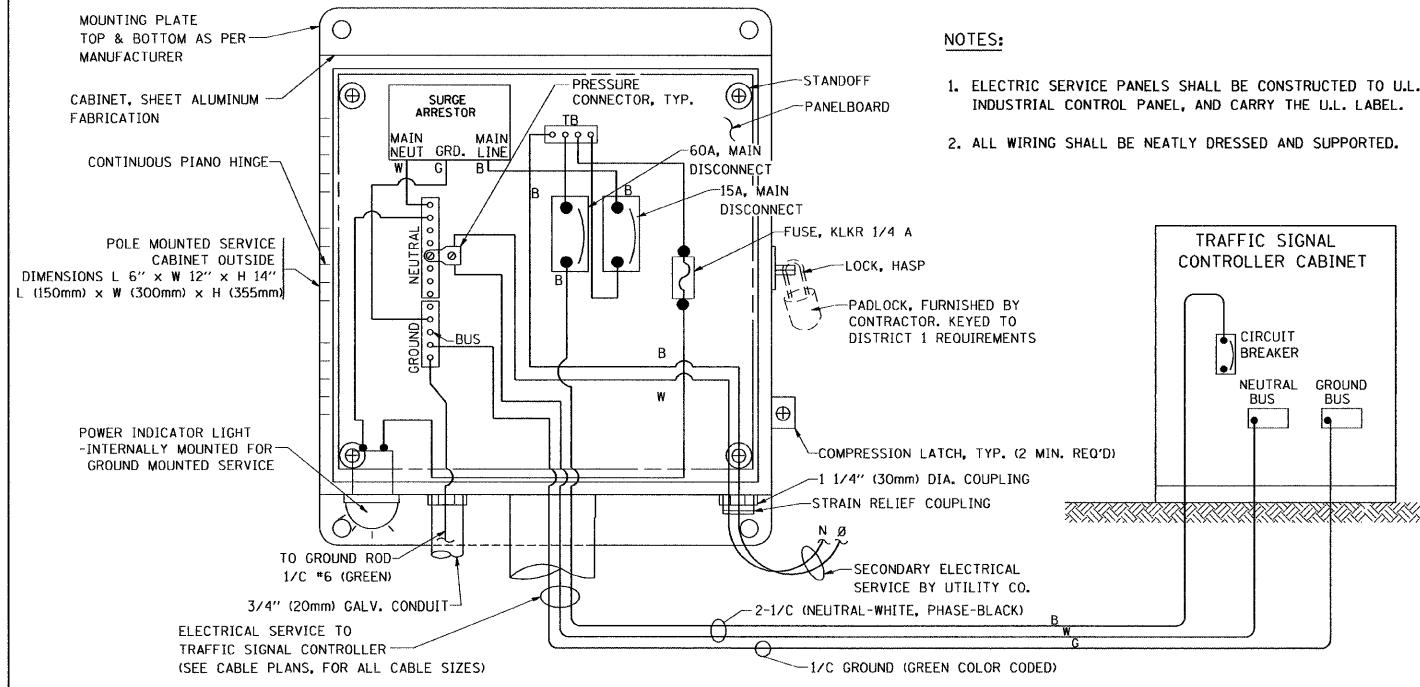
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM 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

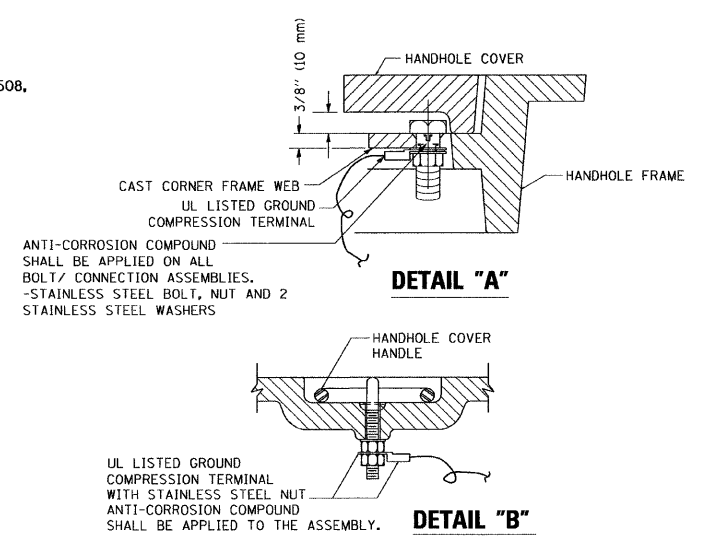
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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:

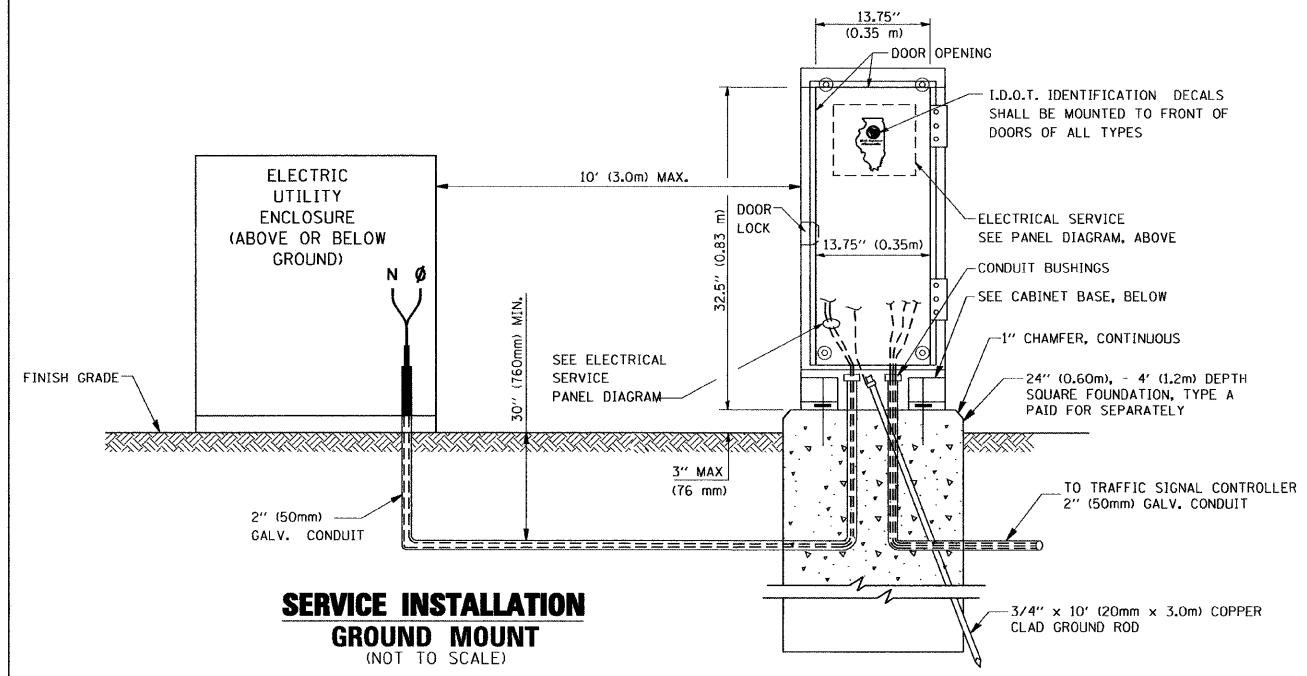
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM 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.



ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)

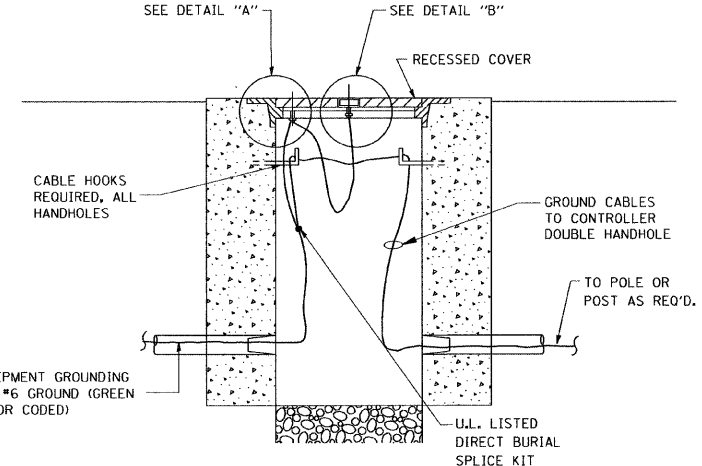
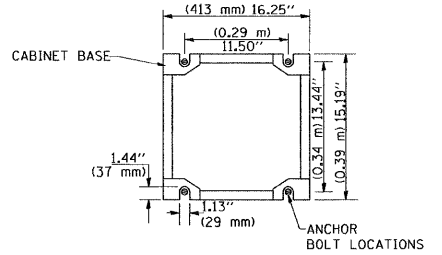


- NOTES:**
- GROUNDING SYSTEM**
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED 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.

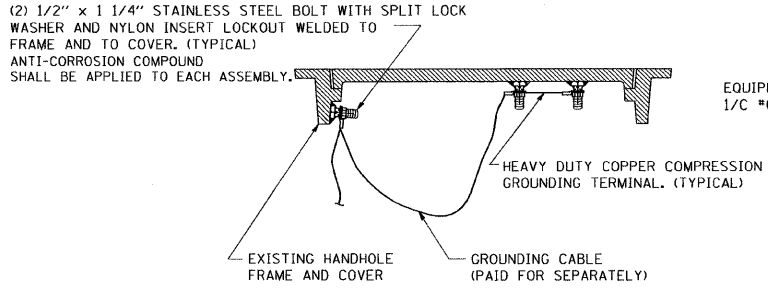


SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

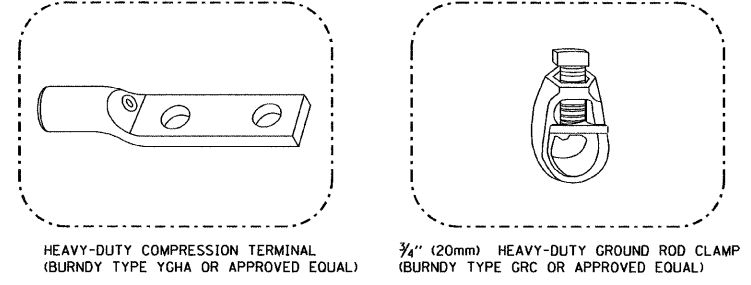
CABINET – BASE BOLT PATTERN
 (NOT TO SCALE)



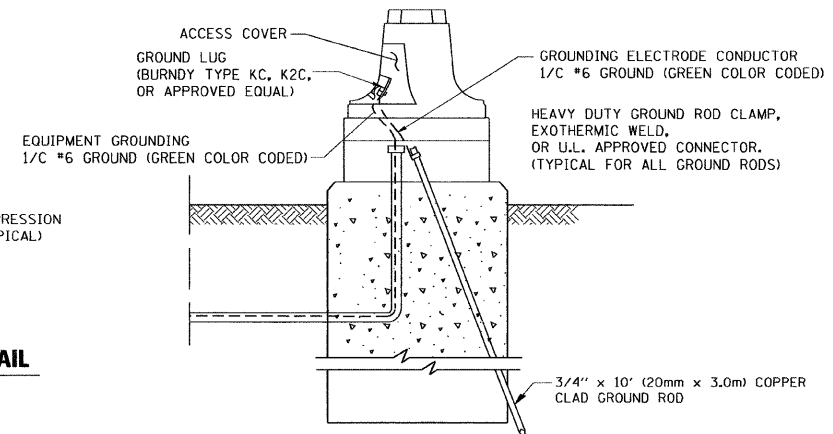
HANDHOLE COVER & FRAME – GROUNDING DETAIL
 (NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
 (NOT TO SCALE)

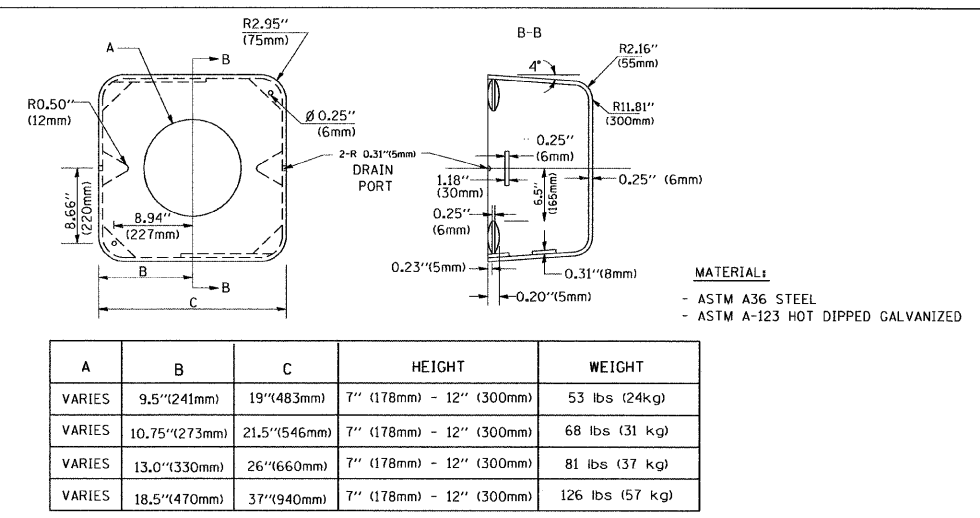
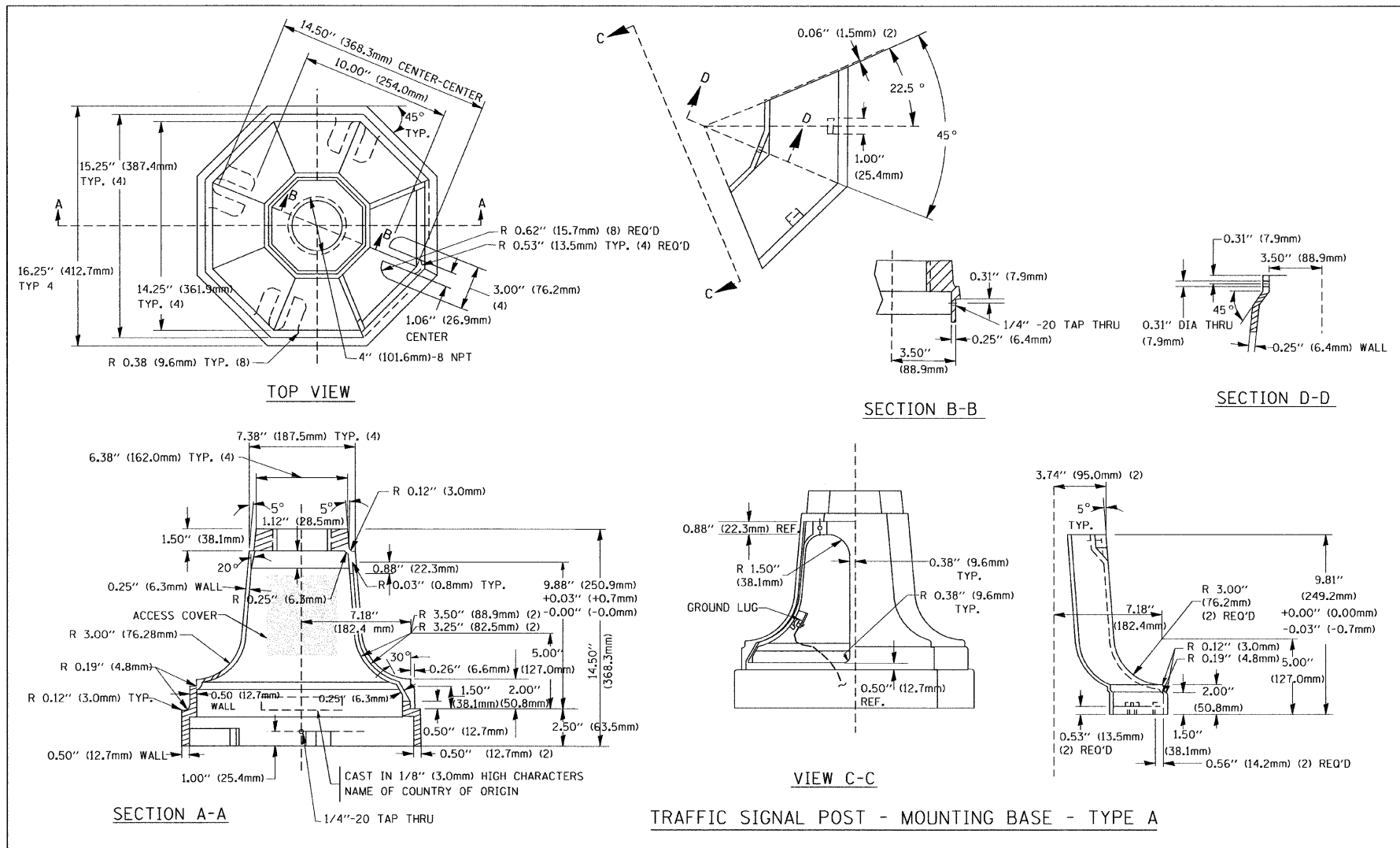


- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

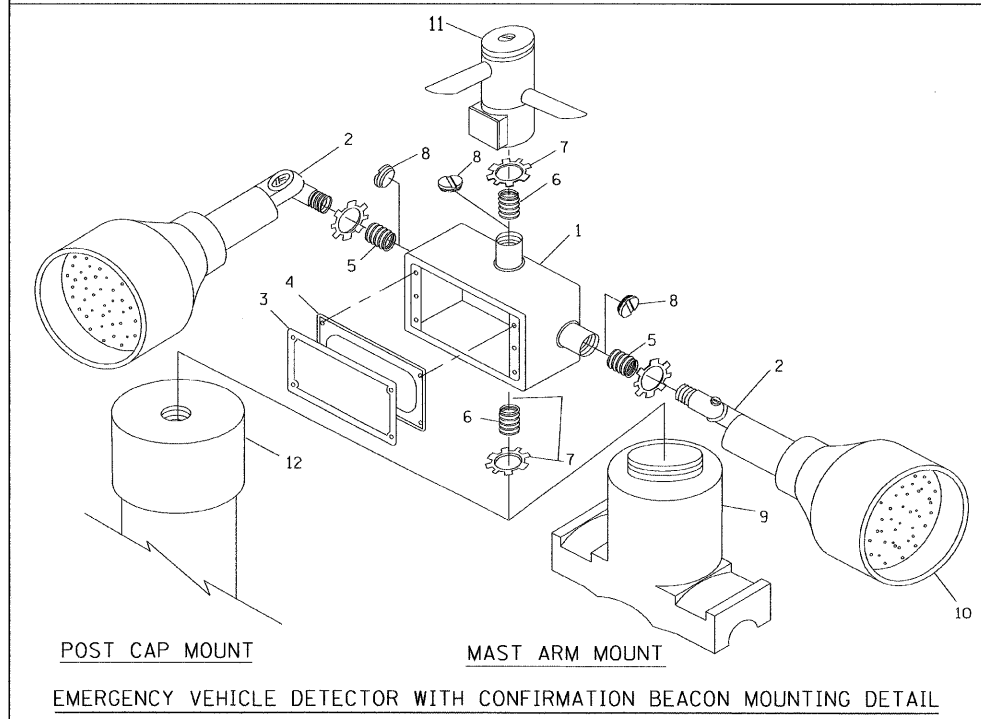
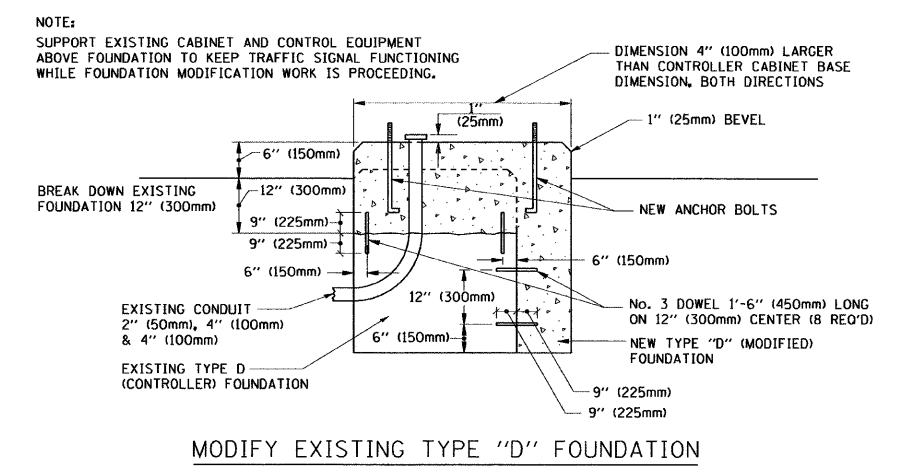


MAST ARM POLE / POST-GROUNDING DETAIL
 (NOT TO SCALE)

FILE NAME =	USER NAME = bauerl	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A.R. RTE. 334	SECTION SY-2-N	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 31
CONTRACT NO. 60L68	PLT SCALE = 50.0000' / IN.	DRAWN - BCK	REVISED -		SCALE: NONE	SHEET NO. 3 OF 6 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS	FED. AID PROJECT			
	PLT DATE = 11/4/2009	CHECKED - DAD	REVISED -									
		DATE - 10-28-09	REVISED -									

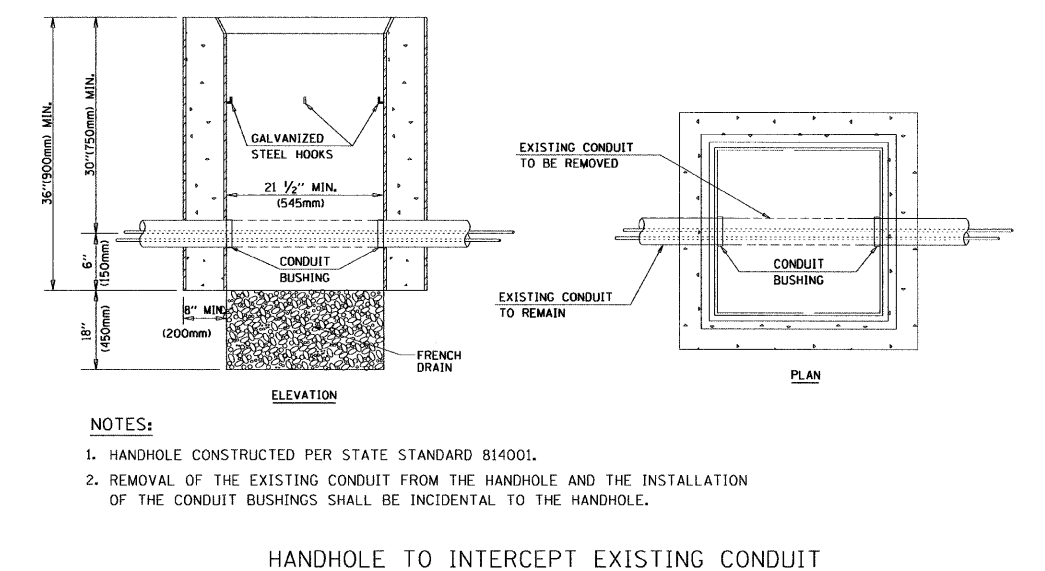


- NOTES:**
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
 - THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
 - THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

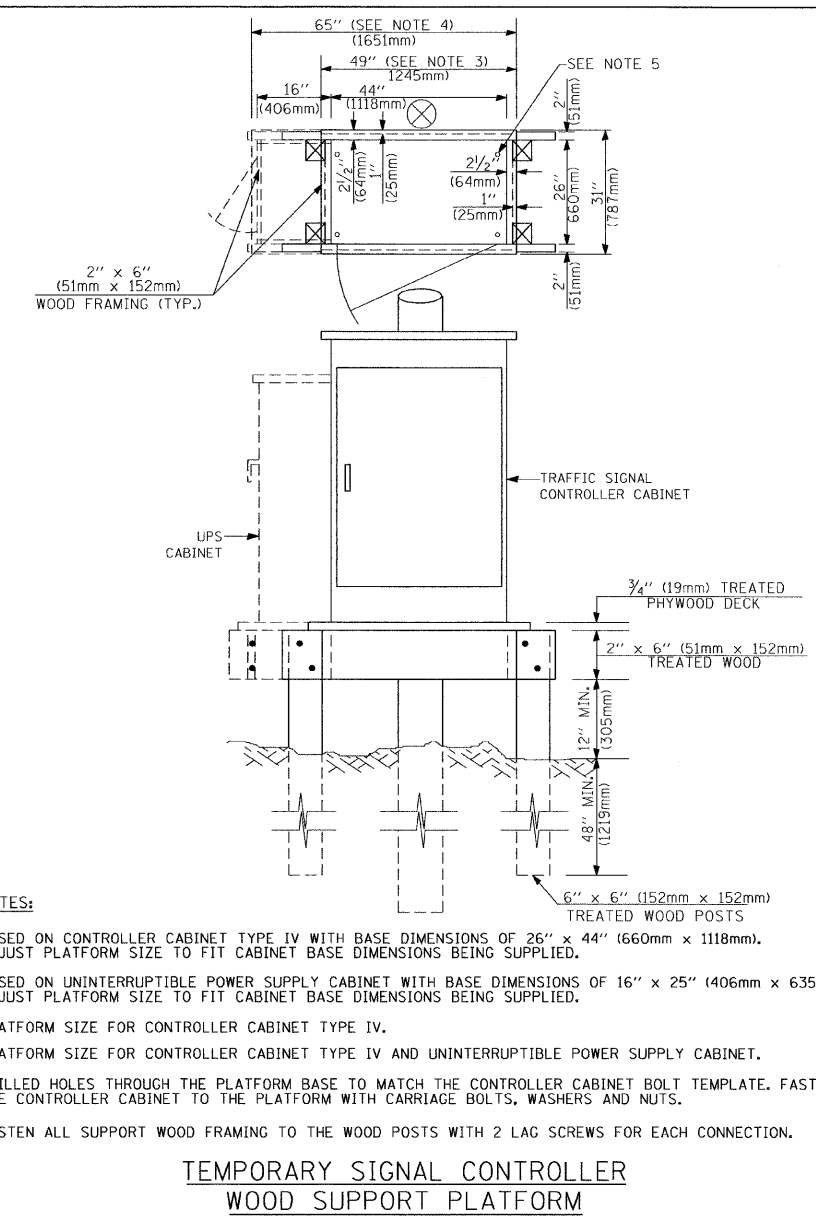
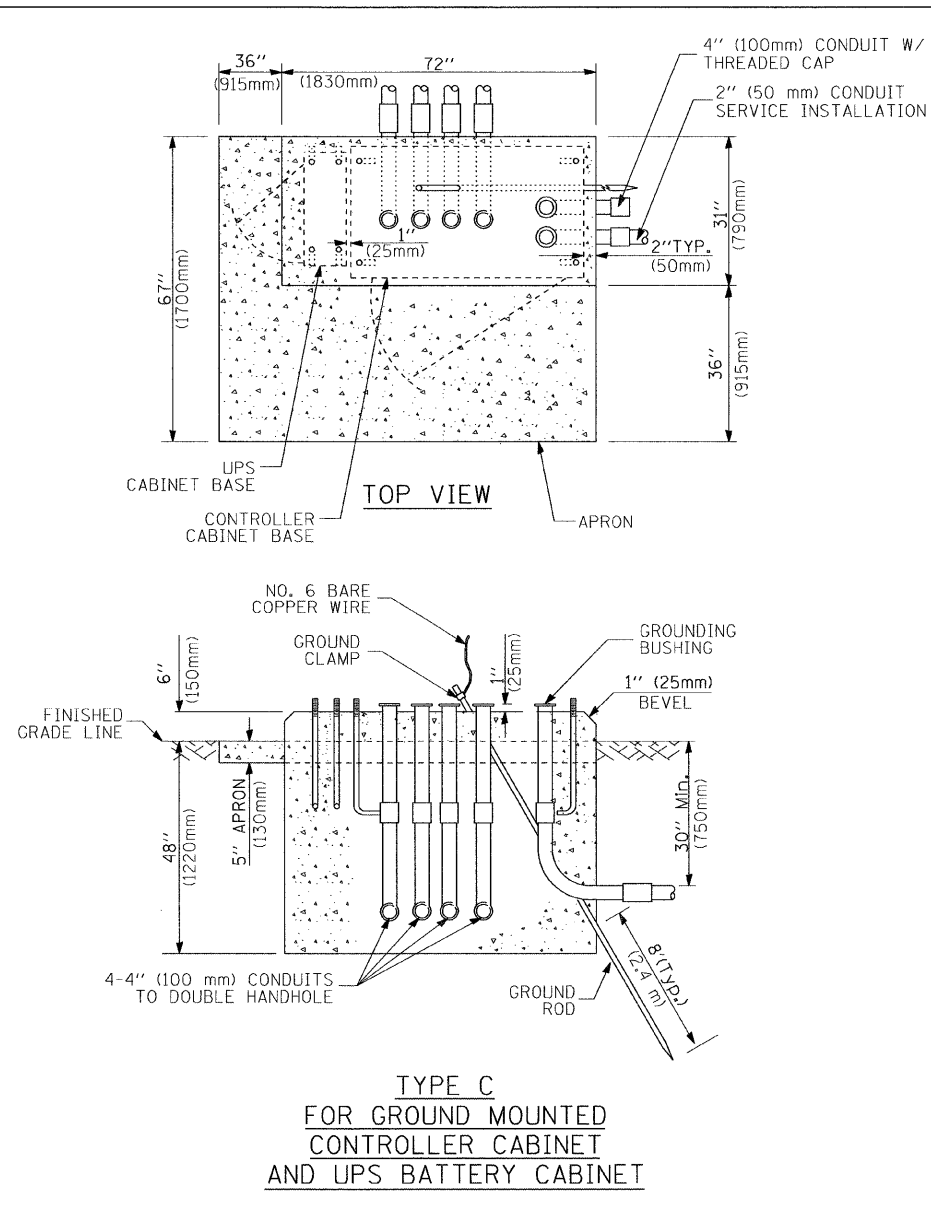
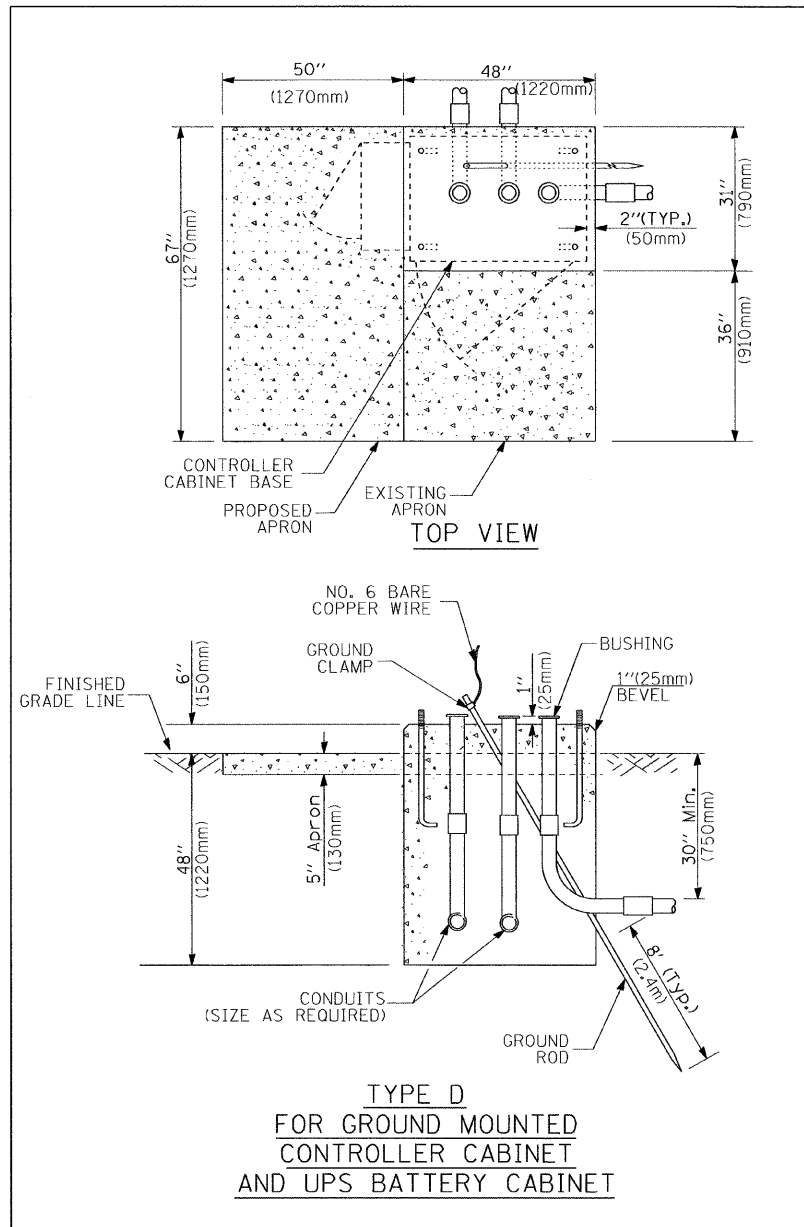


ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU. IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR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

- NOTES:**
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
 - 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
 - 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 3/4" (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.



- NOTES:**
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
 - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.



- NOTES:**
- 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.
 - 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.
 - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
 - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
 - 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.
 - FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

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)
	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- NOTES:**
- 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.
 - Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
 - Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
 - For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SMI2F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SMI2F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				RAILROAD SYMBOLS			
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				EXISTING		PROPOSED	
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				RAILROAD CONTROL CABINET			
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT				RAILROAD CANTILEVER MAST ARM			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER				FLASHING SIGNAL			
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED				CROSSING GATE			
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)				CROSSBUCK			
MICROWAVE VEHICLE SENSOR											
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											